

Inception Report

The World Bank & Government of Maharashtra
PPIAF-SNTA program

Financing Strategy and Advice: Group 1: Municipal Corporation of Greater Mumbai

April 10

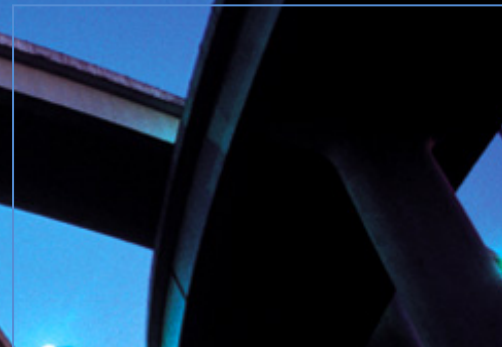
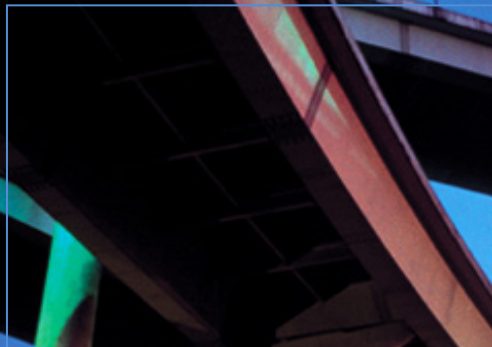


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1 Introduction

1.1 Structure of the Report

This inception report is divided into three sections:

Section 1 presents the background and objective of the assignment and the proposed methodology with indicative deliverables and time lines.

Section 2 presents a brief description and an overview of Municipal Corporation of Greater Mumbai (MCGM), review of various plans for MCGM and its ongoing projects. The key output of this section shall be a shelf of priority projects for MCGM

Section 3, based on the above review, consolidates the physical demand for infrastructure, the investment requirement and the investment gap

Section 4 presents an overview of municipal finances for MCGM, the approach and objective of the financing plan, including our methodology, and data requirement

Section 5 lists the likely projects that may be taken up for detailed financing plan.

1.2 Background to the Study

The Jawaharlal Nehru National Urban Renewal Mission (JNNURM), a fast-track reform linked program of Government of India for infrastructure investment, covers twelve cities in Maharashtra, with Mumbai being one of them. The Mission provides grants for partial financing of urban infrastructure projects. The balance is contributed by the state and ULB through various sources including their own reserves and borrowings. Under the Mission, Mumbai has envisaged investment requirement for priority urban projects to the tune of about Rs. 6473 Crore¹, 50 % which is to be borne by the MCGM through its own sources or mobilised from other sources.

Quite apart from the JNNURM pipeline, it is clear that given the rapidly rising demand for growth promoting infrastructure (roads and transport), as well as environmental enhancing investments (water and sanitation), public sources of finances have to be leveraged with private capital if Mumbai is to meet these demands. This implies a need to link up Mumbai's debt demands with domestic markets through direct offerings or through intermediation. Mumbai, like other major growing cities like Johannesburg, Mexico City and Shanghai, needs a sustainable financing framework, moving away from ad hoc grant financing, and indeed one of the cardinal aims of JNNURM itself is to move cities towards a sustainable financing.

This World Bank sponsored study aims to assist the MCGM in developing their financing strategy, identifying the projects which are of high priority, assessment of the suitable utilization of owned reserve capital for these projects and thereafter advising in raising the balance financing for these projects from various external sources.

PricewaterhouseCoopers has been engaged to perform the aforementioned tasks for the Municipal Corporation of Greater Mumbai.

1.3 Objective of this Study

The objective of the assignment is to provide practical guidance to Mumbai to develop an action plan to access private sources of finance over a medium time frame. It therefore aims at developing a financing plan for priority city-level infrastructure projects, including assessment of potential for market-based financing and demonstrate such through pilot transaction. The specific objectives are to:

¹ Mumbai City Development Plan prepared under JNNURM

- Assist Mumbai in leveraging JNNURM grant funds through a robust financing plan for select city-level priority urban projects
- Assist cities to prepare for market borrowing options for viable urban infrastructure projects through pilot transaction and provide a basis for eventual scale up.

In order to achieve this, the study envisages:

1. Overall assessment of city's finances, which shall include
 - Review and analysis of CDP, Business Plan, Vision Mumbai, credit rating report and other relevant documents
 - Assessment of current status of infrastructure demand and supply
 - Assessment of City's finances
2. Developing a medium term financing strategy for the MCGM, which shall include
 - Review and analysis of MCGM's financials for the last five years, and preparation of a financial model to assess financial impacts of various reforms
 - Preparation of 'Financial Improvement Action Plan' over a 10 year period and with a set of priority projects, in consultation with the MCGM
 - Financial feasibility of priority projects, based on project reports available, to explore / identify those that can be developed under PPP arrangement
 - Identifying a shelf of projects which have the potential to attract market financing
 - Assessment of legal and regulatory provisions that would enable or constraint market based financing or borrowing / PPP, with specific reference to the shelf of projects
3. Developing a Project-level Financing Plan, which shall look at:
 - Detailed financial analysis of 2 revenue generating priority projects (preferably those for which, preparatory studies and DPR are complete) finalised in consultation with the ULB
 - Recommending financing plan for the project, including time-bound actions to implement the financing plan
4. Preparation for market borrowing, which shall include:
 - Support to Government of Maharashtra in selection of a project for the market borrowing demonstration
 - Assessment of legal and regulatory feasibility for borrowing
 - Assessment of options for market-based financing
 - Preparation of Project Information Memorandum covering all information required for bankers

The Government of Maharashtra has nominated MUINFRA (Mumbai Urban Infrastructure Development Company Limited) as the nodal agency of behalf of the state government for coordinating the assignment, which has in turn requested MCGM to co-ordinate with PwC. The MCGM has appointed a nodal officer who would be interacting with PwC for the assignment period. Till the time of preparation of this Inception Report, PwC have had one round of meetings with nodal officer and his representatives in the MCGM. We have also collected some basic data and information. The Inception Report presents:

- Some key issues based on understanding and preliminary analysis undertaken;
- Further refinement in our understanding of the scope of work for preparation of financing plan for MCGM and financing plan for projects
- Our methodology

In our subsequent reports (i.e the financial assessment report, medium-term financial reform plan, project financing plan, final report, project information memorandum) we propose to

complete the analysis based on the methodology described herein and develop appropriate financing plan for MCGM.

1.4 Key Outputs of the Assignment

The assignment is in two phases.

The key outputs of Phase I shall be a financial model for MCGM based on which PwC shall recommend a medium term financing strategy for MCGM. A project financing plan shall also be prepared for prioritized projects. A broad structure of the outputs proposed in Phase I under the assignment is presented below. We propose to refine and conduct further analysis within this broad framework as we go along the assignment.

Section 1 presents the background and objective of the assignment and the broad proposed methodology with indicative deliverables and time lines. Some of the key tasks / sub-sections covered under this section shall include:

- 1.1 Background to the study
- 1.2 Objective of this study
- 1.3 Key outputs of the assignment
- 1.4 Deliverables
- 1.5 Work-plan and timelines
- 1.6 Structure of reports to be prepared under the assignment

Section 2 shall provide a brief description and an overview of MCGM, review of various plans for MCGM and its ongoing projects. Based on the review, we shall consolidate the physical demand for infrastructure, the investment requirement and the investment gap. The section shall cover:

- 2.1 Overview of MCGM
- 2.2 Legal and regulatory framework
- 2.3 Review of MCGM plan documents - Review of City Development Plan prepared under JNNURM, business plan for MMR, Vision Mumbai, other relevant documents.
- 2.4 Status of infrastructure development
- 2.5 Infrastructure gap and investment requirement for fill up the gap
- 2.6 Demand-supply gap (investment gap) - Estimation of demand for finance; a multi-year monetised investment gap

Section 3 shall present the financial assessment of MCGM for the past five years at an overall institution level, for 'A, B & E' budget and for 'G' budget, and determining the need for finance. Based on the analysis a financial model shall be developed. We shall identify set of priority infrastructure projects in consultation with MCGM / other key stakeholders. The section shall include:

- 3.1. Financial assessment of MCGM for the past 5 years - for overall ULB; 'A, B & E' budget and 'G' budget
 - Assessment of revenue and expenditure
 - Assessment of debt - analysis of earlier debt, analysis of credit history of bonds raised earlier
 - Surplus available
- 3.2. Assessment of borrowing capacity (over the next 10 years)
- 3.3. Assessment of finance gap (investment gap minus borrowing capacity)
- 3.4. Measures to bridge the finance gap

- Measures already undertaken under JNNURM, works being undertaken through MCGMs own accruals, works being undertaken with support for funding agencies (World Bank / other FIs)
 - Prioritization of infrastructure works and projects
- 3.5. Other possible measures
- financial management measures
 - reforms
- 3.6. Financial assessment
- other agencies ratios (including the credit rating report for MCGM)
 - generate ratios based on PwCs financial model
- 3.7. Prioritisation of projects
- Identification, technical review and need analysis of projects – selected from CDP / other relevant documents, new projects suggested by MCGM / other key stakeholders, PwCs analysis, etc.
 - Selection of priority works in consultation with MCGM
 - Selection of list of projects with PPP potential

In **Section 4**, we shall run the financial model, assess various scenarios, and suggest reform measures to improve MCGMs financials. A financial improvement action plan shall be prepared detailed financial projections for next 10 years. The section shall attempt to draw on the international and national experiences on project financing. The section shall include:

- 4.1 Estimate of finance gap
- 4.2 Measures to bridge finance gap
- Revenue side measures
 - Expenditure side measures
 - Other measures like PPP, etc.
- 4.3 Financial model - With projects loaded
- for overall; for 'A, B & E' budget and for 'G' budget
 - With grants / without grants
 - Assessment of implications on finances of MCGM
- 4.4 Financial Assessment Options
- Options 1: Business as usual
 - Use OP, DSF, CR, Grants
 - Option 2: Strategic city investment
 - Start leveraging through issue of bonds, use existing surplus to borrow 4 times,
 - Experiences with bonds - international experience of large cities - Jo'berg, Shanghai; Indian Experiences of 8 cities; key learning's
 - Options 3 – Accessing debt market
 - Using PFDF structure
 - Experiences with pooled finance - international – US, other countries; national – TNUDF, KUIDFC, etc.

Section 5 shall present the project financing plan for 2 prioritised projects. This section shall include:

- 5.1 Technical assessment of Project 1 and Project 2
- Need
 - Preparedness
 - Project implementation schedule

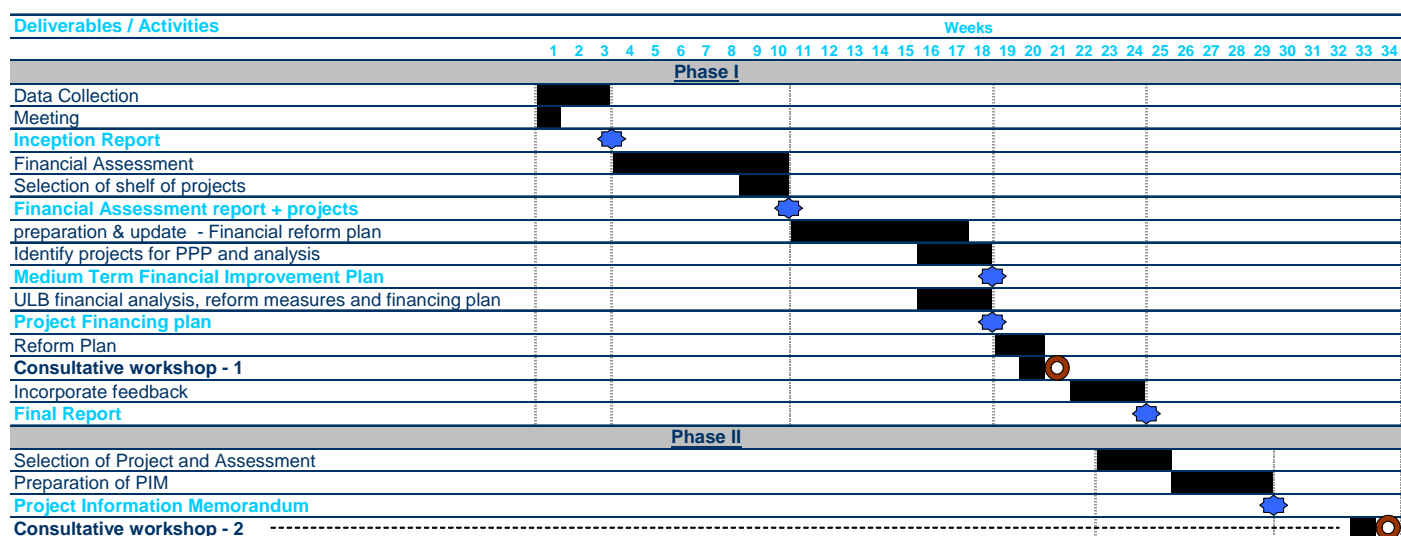
- Need for finance
- 5.2 Cash flow analysis for Project 1 and Project 2 – with grants / without grants
- Base case
 - With reform measures – change of tariff - to get non-negative cash flow
- 5.3 Recommendations for financing
- Preferred option
 - Reform measures to be done along with preferred option
 - Means of finance – debt / grant / own sources

In **Section 6**, we shall carry out preparatory activities for accessing market finance and draw up the Project Information Memorandum for one of the selected projects

It was understood during the kick-off meeting with MCGM that based on the outputs of Phase I; MCGM shall assess the time-frame and its readiness for Phase II – ground work for market borrowing.

1.5 Deliverables and Time Lines

The indicative timelines for the deliverables are as follows:



The deliverable content shall be as follows:

Deliverables	Content
Phase I	
Inception report	<ul style="list-style-type: none"> • Refinement of our understanding of the work, and methodology • Work-plan and indicative milestones • Preliminary issues emerging based on discussion • Situation analysis of MCGM, review of plans and projects • Data requirement
Draft financial assessment report	<ul style="list-style-type: none"> • Assessment of MCGM's financials, budget and cash-flows • Financial Model for MCGM • Set of priority projects
Financial improvement action plan for MCGM	<ul style="list-style-type: none"> • Recommend reform measures • List of potential PPP projects
Project financing plan	<ul style="list-style-type: none"> • Financing plan for 2 selected projects

Deliverables	Content
Workshop 1	<ul style="list-style-type: none"> • Discussion and feedback on financial improvement action plan • Finalization of actions for improvement
Final Report	<ul style="list-style-type: none"> • Project financing plan, after incorporating feedback from workshop • Time-bound action plan for implementing the financing plan • Borrowing plan, including, demand for finance, tenure, potential sources, etc
Phase II	
Assessment for market borrowing	<ul style="list-style-type: none"> • Selection of project and its financing model • Assessment of demand for finances and financial market appetite • Assessment of legal feasibility for market borrowing • Assessment of options for market based financing, and its terms and conditions, and list of potential lenders / banks / FIs
Project Information Memorandum	<ul style="list-style-type: none"> • Project Information document, including: <ul style="list-style-type: none"> ○ MCGM financial information and Project financial information ○ Term sheet for borrowing ○ Security structures ○ Legal aspects ○ other related documentations
Workshop 2	<ul style="list-style-type: none"> • Workshop on issues of municipal finance, financing instruments, project structuring, etc • Share international and national experience • Disseminate learning's

We propose that a meeting be held with the nodal officer before the submission of each deliverable as mentioned above. In each of these meetings we will discuss with them the findings of the reports before submitting the final deliverable.

2 Overview of Municipal Corporation of Greater Mumbai

In this section of the report we present an overview of MCGM, its mandate and plans, its financial status, and status of infrastructure works.

2.1 Introduction

Greater Mumbai is the largest city in India, with an estimated population of 11.9 million (as per census 2001).

The population is expected to touch about 16.5 million (optimistic estimates) by 2031, bringing along with it huge social, economic and infrastructure challenges. The city, spread across 227 municipal electoral wards within an area of 438 sq. km, is severely constrained due to limited areas availability for spatial growth. A substantial portion of the pressure on city infrastructure will be due to growth in tertiary sector (as per trends, growth is expected to be in areas like wholesale trade, finance and international trade, etc.).

Greater Mumbai is administered by the Municipal Corporation of Greater Mumbai

Some key achievements

The MCGM is among the most financially and procedurally evolved urban local bodies (ULBs) in India. The ULB is consistently financially stable and has received an “AA” rating from Fitch Ratings in 2008. Some of the key achievements of MCGM which contribute toward its advantageous position are as follows:

- A double-entry accrual based accounting system has been adopted since FY07 for maintaining the ULB accounts.
- Low reliance on grants from Govt. of Maharashtra – revenue from MCGM’s sources, including octroi and property tax, is sufficient to cover most of the requirements of the ULB
- Underleveraged with reference to both public and private sources of debt
- Track record of raising market finance and a good credit history, with no delays or defaults in repayments on loans raised in the early 1990’s
- Ring-fenced operation of road-based public transportation services through the BEST undertaking
- Ring-fenced budget for water and sewerage through ‘G’ budget
- Universal metering and telescopic water rates being implemented to control demand for water; although condition of these meters needs to be assessed
- Water and energy audits being carried out to reduce Unaccounted-For Water (UFW) and operational costs
- Operating efficiency of water and sewerage departments is well over 100%
- Serves 43% of commuters using public transport through road-based BEST bus services, including air-conditioned buses over certain routes
- Achievements in education are significant – its boasts of largest urban primary education system in Asia with over 4.85 lakh children availing facility through 1188 schools managed and maintained by MCGM
- Operates medical colleges and hospitals – 3 major hospitals and 1 dental hospital, each having an educational institution attached. It also provides for and manages 16 peripheral hospitals in suburbs and extended suburbs, and 5 specialised hospitals for tuberculosis, leprosy, ENT, eye care and infectious diseases. This function may be unique to MCGM across all ULBs in Asia.
- The municipality is currently implementing an Enterprise Resource Planning (ERP) system (SAP) for e-governance purposes
- Process for GIS mapping of utilities as well as properties within the city is currently underway. MCGM planned to shift to a new regime for property tax, based on the self-assessment system, when the GIS mapping process is completed.

These achievements by MCGM are positive indicators for the possibility of raising finances in the future. It is anticipated that further progress on SAP implementation, improved reporting on accounts, GIS mapping and ease of property tax payment will further enhance the position of the municipal corporation.

2.2 Review of MCGMs responsibilities, its legal and regulatory framework

The MCGM is formed and guided based on the Mumbai Municipal Corporation Act (MMCA), 1888, amended with Maharashtra Municipal Corporations (Amendment) Ordinance, 2007.

The MMCA details out all the functions of the municipality, its officials and powers, sources of revenue and heads of expenditure. It forms the comprehensive regulatory framework for the entire operations of the municipality. In order to analyse the municipality and its financials as a whole, an overview of the Act is essential.

MCGM's responsibilities

Mandatory responsibilities

- Drains and Drainage works, including public convenience
- Water Supply
- Waste management and cleaning of streets
- Fire services
- Securing and removal of dangerous buildings
- Schools for primary education
- Prevention and checking spread of dangerous diseases
- Crematorium and burial ground
- Registration of birth and death
- Public vaccination

Discretionary duties

- Slum improvement and upgrading
- Maintenance of parks, library, museum etc.
- Transportation System (BEST)
- Provision of electricity and gas
- Furtherance of education, other than obligatory functions
- Welfare of backward classes

Apart from an overall analysis of the Act and its provisions, certain key components of the Act and the details are proposed to be reviewed and analysed going forward.

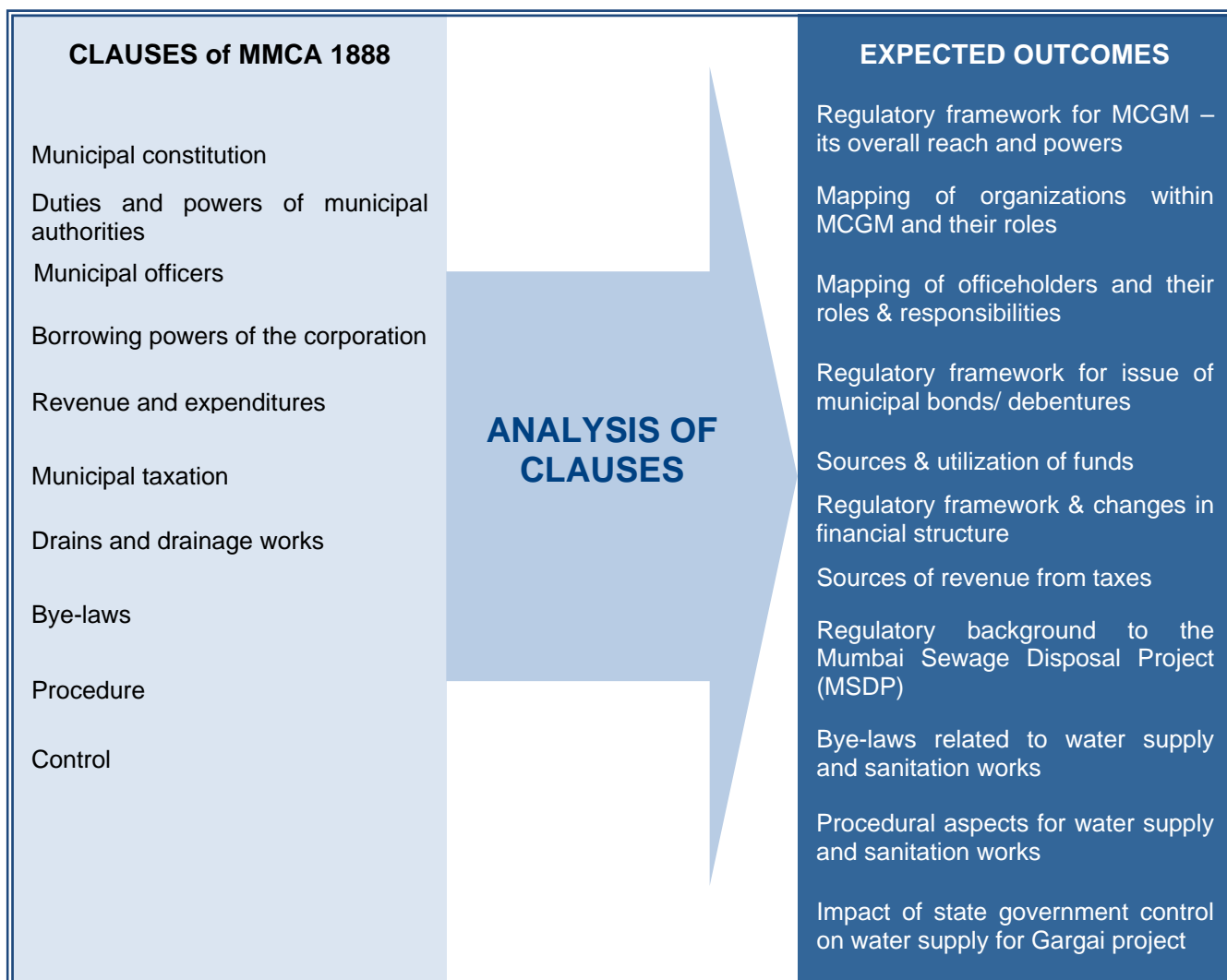
Chapter	Key Points
Municipal Constitution	<ul style="list-style-type: none"> • Definition of municipal authorities • Duration of the corporation term of office for councilors • Qualification and disqualification criteria for voters and councilors • Municipal election rolls, including State Election Commissioner and voting wards • Process for election of councilors • Provisions regarding proceedings of the corporation • Role and powers of the mayor • Honoraria fees and allowances • Formation, members and nature of various committees within the corporation • Formation and powers of Wards Committees and Area Sabhas • Provisions regarding validity of proceedings • Appointment of Municipal Commissioner, Deputy Municipal Commissioner, Director, General Manager and Chief Accounts Officer
Duties and powers of municipal authorities	<ul style="list-style-type: none"> • Obligatory and discretionary functions • Powers and procedures related to contracts
Municipal officers	<ul style="list-style-type: none"> • Roles and responsibilities • Disqualification • Leave of absence • Acting appointments
Municipal property and liabilities	<ul style="list-style-type: none"> • Acquisition of property • Disposal of property • Liabilities • Repayment of dues to government
Borrowing	<ul style="list-style-type: none"> • Power to borrow from Central and State governments

Chapter	Key Points
powers of the corporation	<ul style="list-style-type: none"> • Mortgage of taxes or any immovable property • Investment of sinking fund and surplus moneys in debentures issued by the corporation • Power to borrow from banks against government promissory notes or securities • Taking advance from banks and granting mortgage
Revenue and expenditures	<ul style="list-style-type: none"> • The municipal fund, its constitution, annual grant from State government, purpose of the fund • Special funds, including consolidated water supply and sewage disposal local fund, water and sewage fund, fines fund, welfare fund and others • Disposal of surplus balances • Accounts to be maintained • Estimation of annual budget, procedures, formats • Scrutiny and audit of accounts
Municipal taxation	<ul style="list-style-type: none"> • Definition • Property taxes, rates, applicability, liability • Transfer, valuation of property, assessment book for properties, refund for vacancies • Special provisions for water and sewerage taxes • Tax on dogs • Theater tax • Education cess • Street tax • Supplementary taxation • Collection of taxes • Appeals against valuation and taxes
Drains and drainage works	<ul style="list-style-type: none"> • Power to construct and maintain municipal drains • Power to connect drains of private streets and premises, responsibilities and obligations • Disposal of sewage • Powers and responsibilities for water closets, privies and urinals • Inspection of drainage facilities • General provisions regarding drainage works
Water supply	<ul style="list-style-type: none"> • Construction and maintenance of municipal water works • Public water supply (free of charge) • Connection of private water supply • Inspection of facilities • Cutting off private water supply and criteria for the same • General provisions regarding water supply
Regulation of street construction, maintenance and improvement of public streets	<ul style="list-style-type: none"> • Rights and responsibilities with regard to construction and maintenance of public streets • Preservation of regular line in public streets • Rights and provisions regarding private streets • Regulations dealing with projections and obstructions • Regulations regarding temporary erections • Provisions regarding works to be executed in or near to streets • Provisions for parking or halting places/lots • Naming of streets • Regulations on sky-signs and advertisements • Regulations for maintenance of dangerous places • Lighting of streets • Watering of streets
Building regulations	<ul style="list-style-type: none"> • Notices required for erection of buildings and execution of other works • Process for commencement of other works, provisions for structure materials etc. • Inspection of works • Procedures regarding dangerous structures and unlawful works • Regulation of class of buildings in particular localities
City improvement	<ul style="list-style-type: none"> • Improvement schemes • Police accommodation schemes • Clearance areas • Re-development areas • Provision of accommodation to poor • Land acquisition provision • Levy of betterment charges • Granting building loans • Provisions relating to lands comprised in Schedules W, Y & Z

Chapter	Key Points
Licensing of surveyors and plumbers	<ul style="list-style-type: none"> • Grant of licenses, fees and charges, proper execution of work
Municipal fire brigade	<ul style="list-style-type: none"> • Maintenance of fire brigade • Powers of officers, aid from other municipal officers and police • Reporting of fires
Sanitary provisions	<ul style="list-style-type: none"> • Cleaning of streets and removal of refuse • Inspection and sanitary regulation of premises • Keeping and destruction of animals; disposal of carcasses • Regulation of public bathing and washing • Regulation of factories and trades • Maintenance and regulation of markets and slaughter houses • Licensing of butchers; prohibition of sale of animals outside markets • Inspection of places selling meat • Regulations for prevention of spread of dangerous diseases • Special sanitary measures to be taken on outbreak of dangerous disease • Disposal of the dead
The Brihan Mumbai Electric Supply and Transport (BEST) Undertaking	<ul style="list-style-type: none"> • Operation of undertaking, construction and maintenance of works • Fixing fares and charges • Contracts to be entered into • Acquisition and disposal of property • Officers and servants – appointment, power to frame service regulations, leave of absence, acting appointments • Revenue and expenditure – the Brihan Mumbai Electric Supply and Transport Fund • Special funds • Disposal of balances • Payment out of surplus balance • Accounts
Bye-laws	<ul style="list-style-type: none"> • Bye-laws for purposes other than BEST • Bye-laws for BEST • Punishment for breach of bye-laws • Applicability of bye-laws, access to documents, process for repeal etc.
Penalties	<ul style="list-style-type: none"> • Offences and punishment, including fines and penal action
Procedure	<ul style="list-style-type: none"> • Licenses, situation under which they may be granted, fees for the same • Public notices and advertisements • Service of notices • Powers of entry and eviction • Enforcement of orders to execute works • Recovery of expenses by the Commissioner and General Manager • Payment of compensation • Recovery of expenses or compensation in case of dispute • Proceedings before the Chief Judge of the Small Cause Court • Proceedings before the Magistrate • Arrest of offenders and legal proceedings
Control	<ul style="list-style-type: none"> • Control of state government and emergency provisions for water

2.2.1 Our approach to analysis

While we would carry out an overall assessment of the Act, certain chapters may be considered as focus areas for the purpose of this engagement. The chapters to be focused on and the expected outcomes of the study are presented below.



2.2.2 Output

A mapping of clauses within the MMC Act with roles, duties and functions within the corporation would be prepared. A brief note capturing the key clauses pertaining to financing of projects, would be prepared which would present their impact on the financing plans.

2.2.3 Information Requirement

The Mumbai Municipal Corporation Act, 1888 as amended up to date would form the primary reference for the analysis. A copy of the Act and its interpretation is currently available with the PwC team. Certain clarifications may be sought from the MCGM officials in future, if required.

2.3 Review of past recommendations

The review attempts to identify relevant recommendations, in context of the assignment, and to assess their status.

2.3.1 Past studies and their recommendations

A number of studies have been conducted by MCGM and GoM in the past including the City Development Plan for Mumbai under JNNURM, Vision Mumbai report, Credit Rating Report of MCGM prepared under JNNURM and the business plan for Mumbai Metropolitan Region (of which MCGM is a part). These studies have recommended certain short, medium and long term projects and measures as a part of MCGM's improvement plan. Some of these

recommendations are not relevant in the current context, while others have already been implemented by MCGM. It is important that we consider the relevant recommendations in consultation with the key stakeholders. A brief summary of the key recommendation / projects and their status is presented below:

Recommendations	Status / Relevance in the Current Context
<p>1. Water Supply - The projects proposed to meet the demand for 2021 are</p> <ul style="list-style-type: none"> • III-A Mumbai Water Supply Project (ongoing project for augmenting 455 MLD of water in 2 phases from Bhatsa Dam), MCGM • Middle Vaitarna Water Supply Project (for augmenting 477 MLD of water), MCGM • Gargai project (for augmenting 455 MLD of water), MCGM • Pinjal project (for augmenting 765 MLD water), MCGM • Implement five-year plan for priority works to be undertaken to improve the distribution system performance, comprising replacement and rehabilitation of pipes at a overall cost of Rs. 500 Crore, MCGM • Install zonal and district meters at appropriate locations 	<p>The III-A Mumbai Water Supply Project and the Middle Vaitarna Water Supply Project are under implementation.</p> <p>The other projects continue to remain relevant</p>
<p>2. Sewerage and sanitation - The projects proposed are:</p> <ul style="list-style-type: none"> • The Mumbai Sewage Disposal Project II (to be completed by 2025 at a cost of over Rs. 10,019 Crore, will augment sewage treatment and disposal capacity and other additional works), MCGM • Slum Sanitation Project (for provision of sanitation facilities in slums), MCGM 	<p>A portion of the MSDP II project is being implemented under JNNURM program, with support for Government of India and Government of Maharashtra</p> <p>The remaining portions of MSDP II (revised master plan for achieving full coverage and environmentally safe disposal) and the other projects are important and continue to remain relevant.</p>
<p>3. Storm Water Drainage – Key project proposed for managing flooding are:</p> <ul style="list-style-type: none"> • Brihanmumbai Storm Water Drainage Project (BRIMSTOWAD) (costing Rs. 1800 Crore), MCGM • Meethi River Development Project (to be implemented by 2011 for development and improvement of a portion of Meethi river at a cost of Rs. 1300 Core), MCGM / MMRDA 	<p>The BRIMSTOWAD project is being implemented with funding support from the Government of India</p> <p>The Meethi River Development Project is important and continues to remain relevant. Although it was proposed under JNNURM, the GoM prioritized water supply and sewerage projects given the limited resources</p>
<p>4. Solid Waste Management</p> <ul style="list-style-type: none"> • Project for development of sanitary landfills (at an estimated cost of Rs. 400 Crore), MCGM 	<p>The Mumbai Solid Waste Management Project is being implemented under JNNURM. Other works for augmentation of the sanitary landfill sites and treatment capacity is also under implementation by MCGM. Hence, the project is no longer relevant.</p> <p>Any additional component, if required, may be considered under this assignment</p>
<p>5. Urban Transport</p> <ul style="list-style-type: none"> • Mumbai Urban Transport Project (for augmenting capacity of rail transport system and roads), MMRDA & MCGM • Mumbai Urban Transport Project II (for further improvement of railways system, at a cost of Rs. 3700 Crore), MRVC 	<p>Projects which are ongoing / have been completed include:</p> <ul style="list-style-type: none"> • MUTP Phase-I was scheduled for completion in 2008

Recommendations

Status / Relevance in the Current Context

<ul style="list-style-type: none"> • Mumbai Urban Infrastructure Project (MUIP) (for strengthening existing transport network in eastern suburb, western suburb and the island city, at a total cost of Rs .2648 crore), MCGM, MMRDA & MSRDC • Mumbai Metro Rail Project (PPP project for augmenting the suburban rail system at a total project cost of Rs. 19,500 crore), MMRDA • Western Sea Link (Bandra Worli Sea Link), MSRDC: The project comprises of a north-south link at a project cost was about Rs. 2,545 crore • Mumbai Trans-Harbor Link (PPP project with integrated rail-road link connecting Sewri to Nhava Sheva, at a estimated cost of Rs. 4,028 Crore), MSRDC • Development of freeways (including Eastern Freeway, Eastern Express Highway, Western Express Highway and Link Road) • Inner Ring Freeway: An expressway from Bandra to Worli to Nariman Point meeting the East Island Freeway and then going west to Bandra • Reengineering (Expansion) of Sion – Panvel Highway. (Estimated cost: Rs. 700 crore), MSRDC • High Capacity Bus Transit System and Dedicated Bus lane, MCGM • Development of Truck Terminus at Wadala, with an Inter-State Bus Terminus (ISBT) • Inland Passenger Water Transport • Mass Rapid Train System: An Inner ring rail loop between Goregaon, Andheri, Bandra, BKC, Kurla and Ghatkopar, TMC 	<ul style="list-style-type: none"> • Western Sea Link project has been completed in 2009 and is now operational. • Mumbai Metro Rail Project is under implementation • Re-engineering of Sion-Panvel Highway is under implementation and is expected to complete by 2009 <p>Other projects than are still important and relevant in the context of the assignment include</p> <ul style="list-style-type: none"> • MUIP works under the purview of MCGM • Development of freeways - The major freeway standard roads under active consideration in MMR are Western Freeway from Worli to Nariman Point (WFSL) and Eastern Freeway • Inner Ring Freeway • High Capacity Bust Transit System • Development of Truck Terminus at Wadala, with an Inter-State Bus Terminus (ISBT) <p>Most transport projects, other than road construction and maintenance are being implemented by agencies other than MCGM</p> <p>Other important proposed projects are MUTP Phase II, Trans-Harbor link, Inland Passenger Water Transport Project, Mass Rapid Train System; however these are outside the scope of this assignment since these are not being executed by MCGM alone.</p>
<p>6. Health – Key project proposed under this sector include:</p> <ul style="list-style-type: none"> • Modernization of 16 peripheral hospitals (Estimated cost Rs. 50 crore), MCGM • Strengthening of Health Outposts (estimated cost Rs. 50 crore), MCGM • Upgradation of King Edward Memorial Hospital (estimated cost Rs. 500 crore), MCGM • Setting up of Health City 	<p>All projects remain important. All projects, except the Health City, are being implemented by MCGM. It is understood that the project for setting-up a Health City is in formative stages, hence, it readiness for inclusion under this assignment shall be assessed in consultation with MCGM</p>
<p>7. Education – Key project proposed for improvement of the sector is:</p> <ul style="list-style-type: none"> • Upgradation of municipal school infrastructure project (Estimated Cost Rs. 500 crore) 	<p>The project is being currently executed by MCGM.</p>
<p>8. Garden and Recreation</p> <ul style="list-style-type: none"> • Garden and City beautification project (PPP project with an estimated cost of Rs. 100 crore), MCGM • Heritage conservation project (PPP project with an estimated cost of 125 crore) 	<p>All projects remain important and relevant.</p>

Recommendations

Status / Relevance in the Current Context

9. Economic Growth – Focus on specific economic initiatives like:

- Target four high-end services – financial services, healthcare, IT/ITES (IT enabled services) and media/entertainment/telecom
- Create jobs in three low-end service sectors – construction, hotels/tourism/recreation and modern format retail
- Convert the hinterland into a manufacturing and logistics hub, by initiatives like:
 - Accelerate the announced SEZs
 - Build infrastructure by deepening the Nhava Sheva port (JNPT), build an international airport (outside the MCGM area), creating a trans-harbor link and privatization of the current Mumbai airport
 - Convert the hinterland shore into a residential, commercial, retail and entertainment complex
- Lower tax rates to make Mumbai a consumption centre

The initiatives are important, however most of it may not confirm to the current scope of the assignment.

The relevant initiatives / projects shall be considered for further analysis, in consultation with MCGM

10. Housing and Spatial growth management

- Systematically develop 4-5 emerging Central Business District (CBDs) and improving their connectivity with each other and with key residential areas
- Create 800,000 low-income houses to rehabilitate existing slum-dwellers by redesigning the Slum Rehabilitation Authority (SRA) process
- Build 300,00 additional low-income housing units by creating “Special Housing Zones” (SHZs) through targeted incentives
- Create islands of housing and commercial excellence through integrated development
- Redevelop the city block-by-block
- Financial Service SEZ housing the IFC

The initiatives are important, however most of it may not confirm to the current scope of the assignment.

The SEZ project is relevant

11. Environment and other infrastructure

- Reduce air pollution by Improving fuel quality and phasing-out older vehicles
- Increase the availability and reduce the contamination of water
- Create a safer law and order environment by strengthening the police force

The initiatives are important, however most of it may not confirm to the current scope of the assignment.

12. Raising Finances

- The Government will need to put in around Rs.1,500 crore per year (Rs. 15,000 crore over the next ten years) to finance the Rs. 50,000 crore, the rest coming from long-term loans that can be financed based on user charges and increased tax collections.

The initiative is important and relevant in context of this assignment

13. Governance

- Make the concerned agencies accountable by instituting target setting, MoUs and monitoring processes
- Streamlining key processes: The key governance processes should be streamlined so that unnecessary hassles and costs are reduced
 - Redesigning the building approval process: creating a “green channel” would reduce the average time taken from

The initiatives are important, however they are not relevant in context of this assignment

- between 90 and 180 days to 45 days
- Using IT interventions at all levels of Government interaction (using E-Governance based approach)
- Create the right structure: government should corporatize those departments which need to be completely integrated across the city and have economy of scale while decentralizing those functions best conducted at the ward level
- Make key agencies (like the MCGM, MMRDA, MSRDC, SRA, MHADA and BEST) accountable for results
- Create a single co-ordination body: Mumbai is governed by over ten different agencies. A single body accountable for all of Mumbai is necessary to facilitate this transformation

2.3.2 Output

We shall ascertain the status and relevance of the recommendations in context of this assignment. It is proposed to draw up a shelf of projects, including relevant projects from the above list, through a process of detailed consultation with MCGM. We shall identify key initiatives and recommendation that can form part of the Financial Improvement Action Plan

2.3.3 Information required

Going forward, it is proposed to review the status of these recommendations with the MCGM officials and with Mumbai Transformation Support Unit (MTSU) that monitors the implementation of these recommendations.

2.4 Review of Infrastructure provision

The section attempts to review the status of various infrastructure works being executed in Mumbai, those mentioned in the above recommendations and other being implemented by MCGM, so as to meet the projected demand for infrastructure services

2.4.1 Infrastructure works being executed / proposed

Infrastructure projects currently being executed under by MCGM can be summarized as follows:

Infrastructure	Project Name	Planned Investment (Rs. Crore)	Timeframe
1. Water source development	Middle Vaitarna Water Supply Project	1,600	2006-2012
2. Water distribution system	Strengthening of Distribution system for water supply	1,300	2009-2012
3. Slum improvement	Slum Sanitation Program (SSP) - 35000 toilet seats in major slum colonies	NA	NA
4. Sewerage system improvement	Mumbai Sewage Disposal Project- II (Some activities in Phase III & IV)	4,500	2010-2015
5. Storm water drainage	Brihanmumbai Storm Water Drainage (BRIMSTOWAD) Project	1,800	2005-2011
6. Storm water drainage	Meethi River Development Project - portion of river under MCGM	1,000*	2007-2011
7. Solid waste management	Development of Sanitary Landfills	400	2010-2015
8. Urban transport	Mumbai Urban Transport Project (MUTP) - I	878	2004-2011

Infrastructure	Project Name	Planned Investment (Rs. Crore)	Timeframe
9. Healthcare	Modernization of 16 Peripheral Hospitals	50	2006-2011
10. Healthcare	Strengthening of Health Outposts	50	2006-2011
11. Healthcare	Upgradation of King Edward Memorial Hospital	500	2006-2009
12. Primary education	Upgradation of municipal school infrastructure	500	2006-2011
13. City improvement	Gardens & City Beautification - PPP project	100	2006-2011
14. Fire services	Computerization of facilities, GIS/GPS based vehicle tracking systems, staff training, emergency medical system	275	2006-2009

*MCGM share of total block cost

The highlighted projects above are currently being implemented or at an advanced stage of approval and are likely to require fund allocation to the in the next few years. In case of some projects partial funding support is being, however MCGM will still need to generate the balance amount.

- In case of Middle Vaitarna Project and Solid Waste Management Project, 50 % of the cost is being borne by MCGM, which amount to about to a total of about Rs. 1000 Crore

In addition, as per MCGM, certain additional projects are to be taken up in future years, leading to additional capital requirement:

- Further activities under Phases III, IV and V of the MSDP to be carried out at a cost of Rs. 3000 crore from 2011 to 2026, subject to approval of detailed project reports.
- Replacement of water pipeline from Tarali to Tansa being carried out at a cost of Rs. 897 crore from 2009 to 2012
- Replacement of water pipeline by tunnel from Gundavali to Bhandup Complex at a cost of Rs. 1383 crore from 2010 to 2014
- Source development at Gargai dam at a cost of Rs. 1500 Crore from 2014 to 2018
- Desalination plant for 100 MLD at a cost of Rs. 1000 crore to be taken up from 2011 to 2020
- Further development of sanitary landfills to be taken up on PPP basis – cost estimates being prepared.

2.4.2 Estimates of demand for finance

Assuming uniform investment across years for the projects, the year-wise investment may be projected as presented below.

Project	Planned Investment (Rs. crore)	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Time-frame
1. Middle Vaitarna Water Supply Project	1,600	229	229	229	229	229	229	230				2006-2012
2. Strengthening of Distribution system for water supply	1,300				433	433	434					2009-2011
3. Replacement of water pipeline from Tarali to Tansa	897				224	224	224	225				2009-2012

Project	Planned Investment (Rs. crore)	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Time-frame
4. Replacement of pipeline by tunnel from Gundavali to Bhandup complex	1,383						346	346	346	346		2010-2014
5. Gargai dam and ancillary works	1,500									300	300	2014-2018
6. Desalination plant for 100 MLD	1,000						100	100	100	100	100	2011-2020
7. Mumbai Sewerage Disposal Project- II (Some activities in Phase III & IV)	4,500					750	750	750	750	750	750	2010-2015
8. Mumbai Sewerage Disposal Project- II (Balance activities in Phase III, IV & V)	3,000						200	200	200	200	200	2011-2026
9. Brihanmumbai Storm Water Drainage (BRIMSTOWAD) Project	1,800	257	257	257	257	257	257					2005-2011
10. Meethi River Development Project - portion of river under MCGM	1,000		200	200	200	200	200					2007-2011
11. Development of Sanitary Landfills	400					67	67	67	67	67	67	2010-2015
12. Mumbai Urban Transport Project (MUTP) - I	878	110	110	110	110	110	110					2004-2011
Total (Rs. Crore)	19,258	596	796	796	1,453	2,615	2,915	1,915	1,462	1,762	1,417	

As may be observed, the total demand for funds is close to **Rs. 9,500 crore** in the period from 2011 to 2015.

Some of this demand is being met by grants from government (like in case of BRIMSTOWAD project) and from programs such as JNNURM (as in case of Middle Vaitarna Project, Solid Waste Management Project, etc) and MUTP, however, **the bulk of demand is estimated to be met by MCGM from its internal finances or through other financing methods.**

Going forward, we would analyse the availability and sources of funds for such capital expenditure. Following this analysis, we will arrive at the financial requirement to be considered while analyzing the funding options.

2.4.3 Output

Going forward, it is proposed to fine-tune the list and develop a shelf of projects that will be important and relevant to the context of this assignment. These projects shall also be the basis for selection of 2 projects for preparation of Project Financing Plan.

The assessment of demand for finance shall be fine-tuned, as we go along the assignment and as list of priority projects is prepared, which shall become an integral part of Medium Term Financial Improvement Plan for MCGM

2.4.4 Information Requirement

This preliminary analysis is based upon information from the following sources:

- Project information available in the public domain
- Future fund requirements as presented by MCGM in its meeting with the high-powered expert committee at New Delhi in July 2009.
- Preliminary discussions with MCGM

Detailed project reports and year-wise cost estimates are required in order to carry out projections for financial analysis. Also, planned source of funds for each project is required prior to detailed demand-supply analysis in the next phase of this engagement

3 Assessment of finances

In this section of the report we present an overview of the finances of MCGM, its status, our approach to the study and information requirements.

3.1 Overview

Chapter VII of the MMC Act relates to the revenue and expenditure of the MCGM. The sources of municipal funds are broadly defined as the following:

- Proceeds of disposal of property by or on behalf of the MCGM
- Rents from MCGM properties
- Money raised through municipal taxes under the MMC Act
- Fees and fines levied by MCGM under the MMC Act
- Balances, after expenses, for granting of licenses for public conveyances by the Police Commissioner
- Balances, after expenses, from fees for licenses for playing music in public places
- Funds received by MCGM from government or private individuals as grant, gift or deposit
- Interest and profits from investments and transactions on money belonging to MCGM
- Grants by the State Government from collections of entertainment tax levied

Only sums covered by the budget grant may be paid out from the municipal fund. Expenditures are generally required to be sanctioned by the Standing Committee of MCGM, except in case of temporary payments for works urgently required in the public service and other exceptional circumstances.

‘Consolidated Water Supply and Sewage Disposal Loan’ and ‘Water and Sewage’ funds are established under the MMC Act to be used for expenditure on capital works for water and sewerage systems and repayment of loans raised for financing such works.

Investment of surplus funds is permitted in deposits with nationalized banks, deposits with the state government or any statutory corporation approved by the state government, or investments with public securities.

Annual budgets are prepared by the MCGM for each official year, from 1st April of one calendar year to 31st March of the following calendar year. These budgets address the following broad considerations:

- Income and expenditure estimates of the corporation for the following year, chiefly from octroi and municipal taxes
- Estimates of all balances for reappropriation of expenditure at the start of the next year
- Estimates of MCGM’s receipts and income for the next year other than that from taxation, from BEST, cash balance required to be maintained and income from water and sewerage charges under Chapters IX and X of the MMC Act
- Estimate of amount to be transferred to the municipal fund under fixed annual payment and disposal of surplus balance from BEST
- Statement of proposals as to taxation necessary in the next year
- Income and expenditure estimates for spending due to transfer of powers, duties, assets and liabilities from the Board of Trustees for improvement of the city to the corporation
- Income and expenditure estimates for BEST
- Income from and expenditure on water supply and sewerage systems, as per Chapters IX and X of the MMC Act
- Expenditure on payment of wages as per clause (q) of section 61

The budgets are classified as follows:

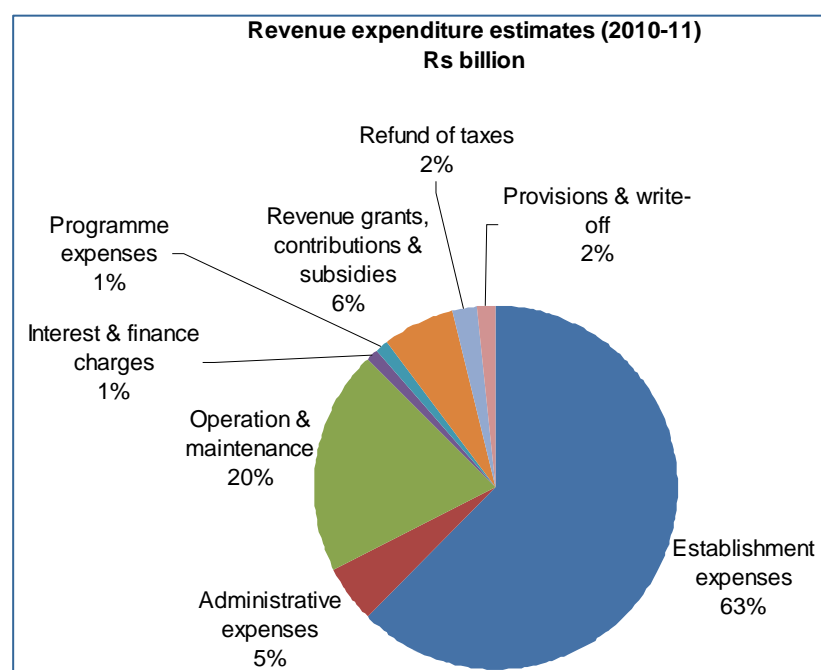
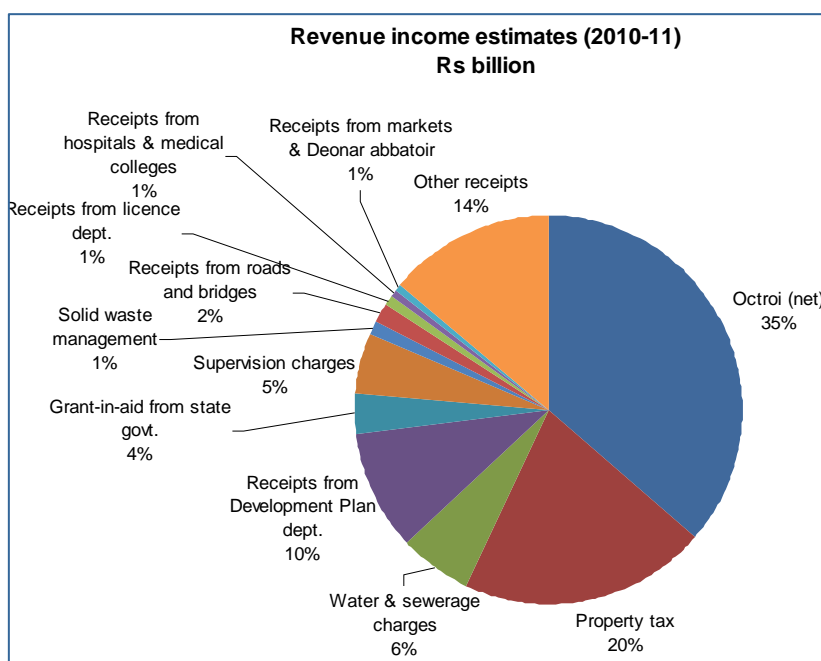
- Budget 'A': General budget consisting of incomes and expenses pertaining to general tax, octroi, wheel tax, fire tax, license tax, market fee, secondary education, Deonar abattoir and entertainment tax
- Budget 'B': Incomes and expenses pertaining to improvement schemes of trust properties taken over by the Corporation in 1933
- Budget 'C': Incomes and expenses pertaining to BEST undertaking
- Budget 'E': Incomes and expenses pertaining to primary education such as education cess and receipt on account of government grants
- Budget G: Incomes and expenses relating to water and sewerage projects being undertaken by MCGM
- Tree Authority Board: Preservation, plantation and maintenance of trees in the Greater Mumbai area

MCGM financials have migrated from a cash-based accounting system to double-entry accrual based accounting system in 2007, as formerly mentioned. However, owing to data migration issues with the SAP ERP system implemented, audited annual accounts are available only up to FY2006-07. Budget estimates are available for MCGM up to the current financial year, i.e. FY2010-11.

MCGM's revenue income has increased from INR 48.9 billion in FY2003-04 to over INR 70 billion in FY2006-07, a CAGR of over 12%.

Octroi is the largest contributor to the overall revenue, at a projected 36% in 2010-11, while grants-in-aid from the Government of Maharashtra make up only 3% of MCGM's revenue. The composition of the overall revenue of MCGM (A, B, E, G and Tree Authority budgets) as per latest budget estimates is presented below:

Internal loan forms over 40% of MCGM's capital receipts as per FY2010-11 budget estimates, while grants form 14%. The latter are typically project-specific grants, such as the World Bank loan/grant for MUTP, grant for BRIMSTOWAD and JnNURM



grants.

Establishment expenses form the majority of revenue expenditure, growing from 56.6% in FY2003-04 to a budgeted 58% in FY2010-11. The operating ratio has remained within a narrow range, from 79.7% in FY2003-04 to 84.1% in FY2006-07.

Water supply projects make up a key component of MCGM's capital expenditure, forming one-third of the total expenditure, as budgeted for FY2010-11. Other significant areas of expenditure include roads & bridges, storm water drains and sewage disposal in descending order of planned capital expenditure.

3.2 Our Approach

Given the purpose of this assignment is a medium term financing framework for MCGM at least three strategic options would be explored First, the base case wherein MCGM continues to finance based on grants and internal resources, second wherein private sources leverage grant finance and third, impact of alternative sources of private capital – direct issues, intermediation etc. We would develop this basic financial model for MCGM, along with a financing plan for the identified projects on the premise that a city such as Mumbai would need serious investment in water and sanitation in the medium term.

At the outset, we would develop an as-is scenario for the MCGM. In order to prepare this scenario, we would take into consideration the existing sources of funds as well as expenditure of funds. We would then prepare a medium-term projection for the municipality, considering the existing scenario.

Following the as-is analysis, we would consider the impact of the planned project investment on the financial projections and identify the need for raising finances.

We would then evaluate various financing options in consultation with MCGM, in order to arrive at an optimum scenario for financing of the identified projects. This would take into account the tenor of finance, cost of finance, ability to service debt and need for further government grants or private investment (through PPP).

We would carry out sensitivity analysis to present the impact of various scenarios on MCGM's finances and would present the outcomes across the options.

3.3 Information Requirement

As mentioned previously, the water and sewerage related operations of MCGM operate in a completely ring-fenced manner, with financials being reflected in the 'G' budget for which accounts are separately available. Consolidated accounts for 'A', 'B' and 'E' budgets are also available for analysis.

We have collected the following documents from MCGM:

- Audited annual accounts for FY2003-04 to FY2006-07 for 'A' & 'B' budgets
- Audited annual accounts for FY2004-05 to FY2006-07 for 'G' budget
- Consolidated annual accounts for FY2004-05 to FY2006-07 for 'A', 'B' and 'E' budgets
- Budget estimates for FY2007-08 to FY2010-11 for 'G' budget
- Statement of Municipal Commissioner while presenting the budget estimates 'A', 'B', and 'G' for FY2010-11 to the standing Committee of MCGM
- Annual octroi receipts from FY1991-92 to FY2011-12 – budget estimates, revised estimates and actual as available
- Details of MCGM loans – statement of principal amounts by source and statement of loan outstanding as on 31st March 2010
- Capital accounts for FY2005-06 to FY2010-11 for 'A', 'B' and 'E' budgets – budget estimates, revised estimates and actual as available

- Capital receipts for FY2001-02 to FY2010-11 for 'A', 'B' and 'E' budgets – budget estimates, revised estimates and actual as available
- Revenue receipts for FY2006-07 to FY2009-10 for 'A', 'B' and 'E' budgets – budget estimates, revised estimates and actual as available
- Revenue receipts account for FY2003-04 to FY2009-10 for 'A', 'B' and 'E' budgets – budget estimates, revised estimates and actual as available
- Revenue expenditure for FY2002-03 to FY2009-10 for 'A', 'B' and 'E' budgets – budget estimates, revised estimates and actual as available
- Property taxes categorized for FY1991-92 to FY2010-11 for 'A', 'B' and 'E' budgets – budget estimates, revised estimates and actual as available
- Income and expenditure statement for FY2003-04 to FY2010-11 for 'G' budget – budget estimates, revised estimates and actual as available
- Rates of water charges and taxes for 'G' budget from 1976 onwards

We further require the following:

- Consolidated accounts for MCGM as a whole
- Detailed cost estimates for identified projects to be taken up for consideration
- Year-wise investment estimates for identified projects
- Existing assumptions regarding financing mechanisms for projects and their phases (PPP, grant, debt)

3.4 Output

- Financial projections for MCGM, taking into account planned projects
- Impact assessment of project implementation on MCGM financials and cash flows
- Sensitivity analysis on the projections
- Plan for raising funds for financing of identified projects
- Model for the financial plan which considers impact of debt servicing capability, cost of funds and need for grants or private investment, if any

4 Prioritisation of Projects

The section attempts to list the projects that have been indicated by MCGM and GoM, as priority for Project Financing Plan.

4.1 Projects identified during preliminary discussions

Two projects were prioritised by GoM and MCGM to be taken up for Project Financial Analysis:

- Mumbai Sewage Disposal Project Phase II
- Water Desalination Plant for Mumbai

Further to the initial meetings, with MCGM, it is understood that the project report for Water Desalination Plant project is in preliminary stages. Hence, MCGM suggested another project which may be considered for detailed financial feasibility and financing plan. The suggested project is 'Gargai Water Supply Project'.

In our subsequent meetings, we propose to understand the detailed status of the mentioned project reports and its readiness for undertaking detailed financial feasibility analysis.

4.2 Output

As mentioned previously, we shall prepare a detailed financing plan for the projects and prepare one project for market borrowing.

4.3 Information Requirement

- Detailed project report for the identified projects
- Other relevant studies, on cost recovery, tariff, etc.

5 Annexure I - List of Officers met from GoM, MCGM, WB and PPIAF

S. No	Name	Functional Area
1.	Mr. Manu Srivastava	Secretary UD, Government of Maharashtra
2.	Mrs. Ashwini Bhide	Jt. Metropolitan Commissioner, MMRDA
3.	Mr. Ashish Kumar Singh	Additional Municipal Commissioner, Municipal Corporation of Greater Mumbai
4.	Mr. Anil Diggikar	Additional Municipal Commissioner – Projects, Municipal Corporation of Greater Mumbai
5.	Mr. Ajay Saxena	PPP Expert, Government of Maharashtra
6.	Ms. Bhavna Bhatia	Regional Program Leader, Public Private Infrastructure Advisory Facility
7.	Mr. Paul Reddel	Regional Program Leader, Public Private Infrastructure Advisory Facility
8.	Mr. Tarun Shankar	Infrastructure Specialist, Public Private Infrastructure Advisory Facility
9.	Ms. Vasudha Sarda Thawakar	The World Bank
10.	Mr. Ram Dhas	Chief Accountant, Municipal Corporation of Greater Mumbai
11.	Mr. Kulkarni	Municipal Corporation of Greater Mumbai
12.	Mr. SS Palav	Municipal Corporation of Greater Mumbai
13.	Mr. Charankar	Municipal Corporation of Greater Mumbai
14.	Mr. PS Awate	Executive Engg. SWM, Municipal Corporation of Greater Mumbai
15.	Mr. Sanjay Devnani	Project Manager, Mumbai Sewage Disposal Project

