

# Overview of the framework

## Need for a framework

Economic growth has led to rapid urbanisation and as many as 29 cities in India have a million plus population while 2 mega cities have crossed the 10 million mark. This has caused a tremendous pressure on the existing infrastructure which requires renovation and augmentation. All the mega cities and some of the other large cities have been facing an acute shortage of public transport systems and are engaged in planning and/ or implementation of urban rail systems for their congested areas.

Urban rail projects require large investments that do not find place within the priorities of the Government. In any case, finding such large resources within the public sector would not only be difficult, it would also affect other priority areas such as education, health and rural development. It is, therefore, essential to explore the possibilities of attracting private capital for building and operating urban rail projects. These projects have been witnessing significant interest from both domestic as well as foreign investors following the policy initiatives taken by the Government of India to promote Public Private Partnerships (PPP) in building and operating the metro rail systems. However, the actual inflow of investment has been less than expected, and future prospects would depend on adoption of a comprehensive policy and regulatory framework necessary for addressing the complexities of PPP, and for balancing the interests of users and investors. Moreover, transformation of rules will have to be accompanied by a change in the institutional mindset.

For building and operating an urban rail system through PPP, a precise policy and regulatory framework is being spelt out in this Model Concession Agreement (MCA). This framework addresses the issues which are typically important for limited recourse financing of infrastructure projects, such as mitigation and unbundling of risks; allocation of risks and rewards; symmetry of obligations between the principal parties; precision and predictability of costs and obligations; reduction of transaction costs; force majeure; and termination. It also

**Need for private investment**

**A comprehensive framework is a pre-requisite for PPP**

addresses other important concerns such as user protection, independent monitoring, dispute resolution and financial support from the Government.

The MCA also provides the basis for commercialising urban rail systems in a planned and phased manner through optimal utilisation of resources on the one hand and adoption of international best practices on the other. The objective is to secure value for public money and provide efficient and cost-effective services to the users.

### **Elements of financial viability**

The four critical elements that determine the financial viability of an urban rail project are concession period; passenger volumes; user fees and revenue from real estate and capital cost. The concession period for such capital-intensive projects is normally between 50 and 60 years. This timeframe should enable a robust project structure and any further extension in the concession period would improve financial viability only marginally as the present value of projected revenues after 50 years would be comparatively low from the Concessionaire's perspective. Passenger volumes would rise gradually over time and cannot be altered significantly.

**User charges need to be affordable**

User fees would have to be kept low so that the urban rail systems become an affordable means of transport for the common man. To improve project viability, only the revenues from real estate can be increased substantially depending on the extent of development rights granted to the Concessionaire.

**Viability Gap Funding is necessary**

Three of the four parameters stated above would thus be virtually pre-determined, hence, capital cost is the variable that will determine the financial viability of an urban rail project. Adoption of cost-effective specifications as well as phasing of project components would be essential for reducing capital costs in order to improve viability. Yet the project may not attain financial viability on account of inadequate fare revenues for servicing the capital costs. Bidders may, therefore, seek an appropriate capital grant/subsidy from the Government in order to reduce their capital investment for arriving at an acceptable rate of return.

## Real estate development

Capital subsidies alone may not suffice in meeting the likely gap in operational expenses and it may, therefore, be necessary to provide development rights over real estate for generating additional revenue streams in order to make the project self-sustaining.

Provision for developing of real estate by the Concessionaire has been kept in the MCA. The Concessionaire can grant licences for the use of real estate and the same would revert back to the Government at the end of the concession period. Real estate in the form of developmental rights over other earmarked lands could also be provided.

## Technical parameters

Unlike the normal practice of focussing on construction specifications, the technical parameters proposed in the MCA are based mainly on output specifications, as these have a direct bearing on the level of service for users. Only the core requirements of design, construction, operation and maintenance of the rail system have been specified, leaving enough room for the Concessionaire to innovate and add value.

In sum, the framework focuses on the ‘what’ rather than the ‘how’ in relation to the delivery of services by the Concessionaire. This would provide the requisite flexibility to the Concessionaire in evolving and adopting cost-effective designs without compromising on the quality of service for users. Cost efficiencies would occur because the shift to output-based specifications would provide the private sector with a greater opportunity to innovate and optimise on designs in a way normally denied to it under conventional input-based procurement specifications.

## Performance standards

The Concessionaire would not only procure the civil works and equipment, it would also provide services in the form of transportation. The efficiency of its services would normally reflect in the quality of service provided to the users. The MCA, therefore, identifies the key performance indicators relating to operation of trains and stations, and stipulates penalties for failure

**Real estate can cross-subsidise fares**

**Technical parameters will focus on the level of service for the users**

**Performance standards to be enforced**

to achieve the requisite levels of performance, especially in relation to user services.

The key performance indicators specify the operating hours as well as the frequency of trains. The average speed of trains, their dwell time at stations, benchmarks for punctuality and the number of coaches during peak hours are also specified. Standards of performance at the ticket counters and entry/exit gates have been defined in terms of maximum permissible waiting time at each of these points. For monitoring the key performance indicators, monthly status reports and user surveys have been prescribed.

### **Selection of Concessionaire**

Selection of the Concessionaire will be based on open competitive bidding. All project parameters such as the concession period, fare, price indexation and technical parameters are to be clearly stated upfront, and short-listed bidders will be required to specify the grant they would seek from the Government. The bidder who seeks the lowest grant or offers the highest premium, as the case may be, should win the contract.

### **Concession fee**

Concession fee will be a fixed sum of Re. 1 per annum for the concession period. Where bidders do not seek any grant and are instead willing to make a financial offer to the Government, they will be invited to quote a premium on concession fee in the form of a share in revenues from user fee. In addition, the revenue share quoted for the initial year would be increased for each subsequent year by an additional 1 per cent of the revenues from user fee.

The rationale for the above fee structure is that in the initial years, debt service obligations would entail substantial outflows. Over the years, however, the Concessionaire will have an increasing surplus in its hands on account of the declining debt service on the one hand and rising revenues on the other. Recognising this cash flow pattern, the concession fee to be paid by the Concessionaire will be based on an ascending revenue-share.

**Competitive bidding on single parameter will be the norm**

**Concession fee should be levied only if revenue streams can sustain it**

## Risk allocation

As an underlying principle, risks have been allocated to the parties that are best suited to manage them. Project risks have, therefore, been assigned to the private sector to the extent it is capable of managing them. The transfer of such risks and responsibilities to the private sector would increase the scope of innovation leading to efficiencies in costs and services.

The commercial and technical risks relating to construction, operation and maintenance are being allocated to the Concessionaire, as it would be best suited to manage them. Other commercial risks such as the rate of growth of traffic have been allocated to the Concessionaire. On the other hand, all direct and indirect political risks are being assigned to the Government.

It is generally recognised that economic growth will have a direct influence on the growth of traffic and that the Concessionaire cannot in any manner manage or control this element. By way of risk mitigation, the MCA provides for extension of the concession period in the event of a lower than expected growth in traffic. Conversely, the concession period is proposed to be reduced if the traffic growth exceeds the expected level.

The MCA provides for a target traffic growth and stipulates an increase of up to 20 per cent of the concession period if the growth rate is lower than projected. For example, a shortfall of 10 per cent in the target traffic after 15 years from the date of Agreement will lead to extension of the concession period by 15 per cent. On the other hand, a reduction of up to 10 per cent is stipulated in the event of a higher than expected growth. For example, an increase of 6 per cent in the target traffic will reduce the concession period by 6 per cent.

## Financial close

Unlike other agreements for private infrastructure projects which neither define a time-frame for achieving financial close, nor specify the penal consequences for failure to do so, the MCA stipulates a time limit of 180 days for achieving financial close (extendable for another 120 days on payment of a penalty), failing which the bid security shall be forfeited. By prevalent standards, this is a tight schedule, which is achievable only if all the

**Risk allocation and mitigation is critical to private investment**

**Project implementation must commence as per agreed timeframe**

parameters are well defined and the requisite preparatory work has been undertaken.

The MCA represents the comprehensive framework necessary for enabling financial close within the stipulated period. Adherence to such time schedules will usher in a significant reduction in costs besides ensuring timely provision of needed infrastructure. This approach would also address the typical problem of infrastructure projects not achieving financial close for long periods.

### **Fare**

**Fares should be determined with care and precision**

A balanced and precise mechanism for determination of user fare has been specified for the entire concession period since this would be of fundamental importance in estimating the revenue streams of the project and, therefore, its viability. The user fare shall be based on the rates to be notified by the Government.

The MCA provides for indexation of the tariffs to the extent of 60 per cent thereof linked to WPI. Since repayment of debt would be substantially neutral to inflation, the said indexation of 60 per cent is considered adequate. A higher level of indexation is not favoured, as that would require the users to pay more when they should be receiving the benefit of a depreciated asset. A higher indexation would also add to uncertainties in the financial projections of the project.

### **Construction**

Handing over possession of the required land and obtaining of environmental clearances are being proposed as conditions precedent to be satisfied by the Government before financial close.

The MCA defines the scope of the project with precision in order to enable the Concessionaire to determine its costs and obligations. Additional works may be undertaken within a specified limit, but only if the entire cost thereof is borne by the Government.

**Service quality and safety must be ensured**

Before commencing the commercial operation of the rail system, the Concessionaire will be required to subject it to specified tests for ensuring compliance with the specifications relating to safety and quality of service for the users.

## **Operation and maintenance**

Operation and maintenance of the rail system is proposed to be governed by strict standards with a view to ensuring a high level of service for the users, and any violations thereof would attract stiff penalties. In sum, operational performance would be the most important test of service delivery.

**Maintenance standards will be enforced strictly**

The MCA provides for an elaborate and dynamic mechanism to evaluate and upgrade safety requirements on a continuing basis. The MCA also provides for traffic regulation, security and rescue operations.

## **Right of substitution**

The project assets may not constitute adequate security for lenders. It is the project revenue streams that constitute the mainstay of their security. Lenders would, therefore, require assignment and substitution rights so that the concession can be transferred to another company in the event of failure of the Concessionaire to operate the project successfully. The MCA accordingly provides for such substitution rights.

**Lenders will have the right of substitution**

## **Force majeure**

The MCA contains the requisite provisions for dealing with force majeure events. In particular, it affords protection to the Concessionaire against political actions that may have a material adverse effect on the project.

**Concessionaire will be protected against political actions**

## **Termination**

In the event of termination, the MCA provides for a compulsory buy-out by the Government, as neither the Concessionaire nor the lenders can use the rail system in any other manner for recovering their investments.

Termination payments have been quantified precisely as compared to the complex formulations in most agreements relating to private infrastructure projects. Political force majeure and defaults by the Government are proposed to qualify for adequate compensatory payments to the Concessionaire and will thus guard against any discriminatory or arbitrary action by the Government. Further, the project debt would be fully protected by the Government in the event of termination, except for two

**Pre-determined termination payments should provide predictability**

situations, namely, (a) when termination occurs as a result of default by the Concessionaire, 90 per cent of the debt will be protected, and (b) in the event of non-political force majeure such as Act of God (normally covered by insurance), 90 per cent of the debt not covered by insurance will be protected.

### **Monitoring and supervision**

**Independent supervision is essential**

Day-to-day interaction between the Government and the Concessionaire has been kept to the bare minimum by following a ‘hands-off’ approach, and the Government shall be entitled to intervene only in the event of a material default. Checks and balances have, however, been provided for ensuring full accountability of the Concessionaire.

Monitoring and supervision of construction, operation and maintenance is proposed to be undertaken through an Independent Engineer (a qualified firm) that will be selected by the Government through a transparent process. Its independence would provide added comfort to all stakeholders, besides improving the efficiency of project implementation. If required, a public sector consulting firm may discharge the functions of the Independent Engineer.

The MCA provides for a transparent procedure to ensure selection of well-reputed statutory auditors, as they would play a critical role in ensuring financial discipline. As a safeguard, the MCA also provides for appointment of additional or concurrent auditors.

To provide enhanced security to the lenders and greater stability to the project operations, all financial inflows and outflows of the project are proposed to be routed through an escrow account.

### **Support and guarantees by the Government**

**Support and guarantees by the Government are essential**

By way of comfort to the lenders, loan assistance from the Government has been stipulated for supporting debt service obligations in the event of a revenue shortfall resulting from political force majeure or default by the Government. Guarantees and/ or compensation have also been provided to protect the Concessionaire, though for a limited period, from construction of competing transport facility which can upset the revenue streams of the project.

## Manual of Specifications & Standards

The accountability for providing a safe and reliable urban rail system ultimately rests with the Government and the MCA therefore refers to a Manual of Specification and Standards that the Concessionaire must conform to. The Manual by reference forms an integral part of the Concession Agreement for the specific project and shall be binding on the Concessionaire. The manual is a key document in safeguarding user interest. The major elements that are covered are rolling stock, alignment and track work, signalling and train control, communication system, electrical power system, automatic fare collection system, accommodating structure, station planning, building services, operational control centre and maintenance depots.

**An effective dispute resolution mechanism is critical**

## Miscellaneous

A regular traffic census and annual survey has been stipulated for keeping track of traffic growth. Sample checks by the Government have also been provided for. As a safeguard against siphoning of revenue share by the Concessionaire, a floor level in present and projected traffic has also been stipulated.

The MCA addresses other important issues such as dispute resolution, suspension of rights, change in law, insurance, defects liability, indemnity, redressal of public grievances and disclosure of project documents.

## Conclusion

Together with the Schedules, the proposed contractual framework addresses the issues that are likely to arise in financing of urban rail system projects on DBFOT basis. The proposed regulatory and policy framework contained in the MCA is critical for attracting private investment with the concomitant efficiencies and lower costs, necessary for accelerating growth.

**Private participation should improve efficiencies and reduce costs**