Chapter 4

Financing Procedures and Rules for the Road Projects of the National Highway Authority of India (NHAI) Using the Public Private Partnership (PPP) Scheme

4.1 Introduction

Traditionally infrastructural services, including roads were often monopolistic in nature. They were characterized by large financial outlay requirements and long gestation period. The investment involved high upfront costs and long term financing since the payback period is long. Due to these reasons provision of roads have generally been vested in public sector. Budgetary resources from the governments have been the major source of financing for infrastructure such as the road projects in India. Investments in road sector in the post independence era have resulted in expansion of the road network from 0.4 million km in 1950-51 to 3.32 million km in 1995-96. In the corresponding period, kilometers of roads with the proper surface have increased from 0.156 million km to 1.517 million km. (Planning Commission 1997). On the other hand, between the period 1950-51 to 1995-96 the number of passenger buses has gone up 13 fold from 34,000 to 4,50,000 while the goods vehicle fleet has increased 22 fold from 82,000 to 1,785,000.

In order to keep pace with the growth in traffic, the Central Government’s five year plans have emphasized the need for improvement in the road network and the need to overcome inadequacies in the roads. The Seventh Five Year Plan (1985-90) indicated the need for further improvement in the road network as significant portion of the roads were single lane. The Eighth Five Year Plan (1992-97) also highlighted the need to overcome the problems of inadequate road pavement and breadth, thickness and presence of old, weak and narrow bridges and culverts. (Planning Commission 1992). The severe deficiencies in the road network and the growing disparities
between traffic needs and available infrastructure has resulted in severe capacity constraints, delays, congestion, fuel wastage and higher vehicle operating costs.

The decline in the allocation of funds over various plan periods in terms of percentage of the total plan outlay has been identified as one of the factors partly responsible for the inadequacies in the road network. The lack of investment manifested itself in the form of non-replacement of over aged stock, slowing down of modernisation and inadequate attention to maintenance (Planning Commission 1992). Besides the budgetary constraints, the traditional public procurement system has serious weakness in planning and implementation of road projects leading to time and cost overruns. In order to augment resources, the Indian Government has diverted from policy of state monopolies, from the Seventh Plan (1985-89) and the need to look for resources from non-conventional sources of funds and private sector participation in the road sector (Planning Commission 1980) was recognized.

The steady economic growth due to economic liberalization in the 1990 has resulted in high traffic growth with the highways becoming increasingly congested resulting in need for improved road transport. The upgrading of the Indian road network to world-class standards has occupied immense importance in the post-liberalization era; as delay on the roads could result in high inventory costs, thus affecting India’s competitiveness in the international market.

In the post-liberalization era, the Central Government and the State Government changed their policy in the mode of procurement of infrastructure such as road projects in India. The Central Government and the State Government have adopted the Public Private Partnership (PPP) resulting in private sector participation for the development of roads.

4.2 Meaning and Definition of the PPP Project

The Public Private Partnership (PPP) Project means a project based on contract or concession agreement, between a Government or a statutory entity on one side and a
Private Sector Company on the other side, for investing in construction and maintenance of infrastructure asset and/or delivering an infrastructure service.

4.3 Reasons for opting to use the PPP Scheme

Following are the main reasons for opting for the PPPs for infrastructure development:

- To increase the efficiency of infrastructure projects through a long-term collaboration between the public sector and private business.
- The PPPs facilitate the project to be implemented on time and within budget. The “no service – no pay” principle ensures that the private partner is given the incentive for timely delivery and operation of project assets.
- Traditional public procurements are often characterized by significant construction delays and cost overruns. Private partners on the other hand have better control over cost overruns.
- By transferring responsibilities and risks to the private partners, overall cost of risk is reduced.

4.4 The PPPs in National Highways

National Highways are the arterial roads of India that run through the width and breadth of the country connecting state capitals, ports, industrial and tourist centres and adjacent countries. The National Highways, with a total length of 65,659 km account for just 2% of the 3.3 million km road network, but carry 40% of the total traffic (DORTH 2007). In spite of the fact that National Highways have played a key role in the economic growth of the country, the Central Government has not been able to allocate sufficient budgetary resources to meet roadway needs due to competing demands from other sectors, especially the social sector.

Participation of private sector in the development of National Highways network is through the PPP models namely Build – Operate – Transfer (BOT) and Design and
Construction (or Design and Build / EPS) contract. The NHAI involved the Private Sector in the NHDP projects through two PPP Models namely the BOT (Toll) and the BOT (Annuity) through which capital from the private sector is invested in the development of road projects.

4.5 Framework for the PPPs in National Highways

The Government of India has introduced various reforms and initiatives in order to create an enabling framework for Private Sector participation in development of National Highways. One of the important steps taken up by the Central Government was the constitution of the NHAI with the enactment of National Highways Authority of India Act, 1988 (Ministry of Law and Justice 1988). The NHAI was put into operation in February 1995. It has been responsible for the development, maintenance and operation of National Highways allotted. The Government of India has also reformed the legal framework and paved the way for private sector participation in development of National Highways with the amendment of the National Highways Act, 1956 in June 1995. This act enabled private investors to levy toll and allowed participation in construction, maintenance and operation of National Highways.

Since the Government of India decided in April 1995, to involve private sector in road development, several institutional reforms and fiscal incentives have been introduced besides the legal reforms to encourage private sector participation in the upgradation of the National Highways Network. The road-sector-specific institutional reforms and the fiscal incentives introduced are highlighted below (DORTH 2009):

- The Government to bear the cost of project feasibility study, land for the right-of-way and wayside amenities, shifting of utilities, environment clearance, cutting of trees etc.

- Foreign Direct Investment upto 100% in road sector.

- Provision of subsidy upto 40% of project cost to make project viable, the quantum of subsidy will be decided on a case-by case basis.
- 100% tax exemption in any consecutive 10 out of 20 years of commissioning of the project.
- Duty free import of high capacity and modern construction equipment.
- Road Sector has been accorded the status of an industry via Section 18(1)(12) of the Infrastructure Act.
- Easier external commercial borrowing norms.

4.6 The PPP Database

This is one of the important prerequisite for the PPP projects. The PPP database is collection of project information on PPP projects undertaken in India. The database is maintained, on regular basis, on the sectors namely Airports, Education, Health Care, Ports, Power, Railways, Roads, Tourism and Urban Development. The data for the same is collected from various PPP nodal agencies of the Government and from project owners or investors.

The database contains general information about the project like, location, sector, type of the PPP project, status, bidding information (such as contract award method, contract signing date, financial closure etc.), project benefits and costs, legal instruments and financial information about investor holdings, total debt and equity etc.

The database captures all the PPP projects on the sectors from 1996 in India and is updated regularly with any new development – in the existing and under construction projects. The new projects are updated as and when they are in the public domain. The database covers only those projects that are approved by the Government of India, State Governments or local bodies.
4.7 The Model Concession Agreement (MCA)

As a part of initiative to encourage private sector participation, the Central Government of India has developed Model Concession Agreements (MCAs) for the PPPs in the Road Sector such as:

- The MCAs for major road projects costing more than INR 1 billion undertaken under the BOT (Toll) basis.
- The MCAs for minor road projects costing less than INR 1 billion undertaken under the BOT (Toll) basis.
- The MCAs for road projects undertaken under the BOT (Annuity) route.
- The MCAs developed by Planning Commission, Government of India for road projects taken upon a Design – Build – Finance – Operate (DBFO) basis.

These standard concession agreements will facilitate standardization of terms and conditions and ensure uniformity in various agreements for the PPP road projects (Planning Commission 2002). In addition, the MCAs also spell out the precise policy and regulatory framework put in place for the PPP road projects (Planning Commission 2006). This framework addresses the issues that are typically important for limited recourse financing of infrastructure projects, such as, mitigation and unbundling of risks, allocation of risks and rewards, symmetry of obligation between the principal parties, precision and predictability of costs and obligations and force majeure and termination.

In addition, standard documents have also been formulated for the two stage bidding process of the PPP projects. The first stage is generally referred to as the Request for Qualification (RFQ) stage which is to prequalify and short-list eligible bidders for stage two of the process. The second and final stage of the bidding process, which is generally referred to as the Request For Proposal (RFP) stage, is aimed at obtaining financial offers from pre-qualified bidders after the RFQ stage. Detailed guidelines for inviting applications for pre-qualification and short listing of bidders, submission of
financial offers and criteria for selection of bidders are provided in the model RFQ and RFP documents. The Government of India has also created different guidelines for the PPP projects of different project costs on the formulation, appraisal and approval of the projects in order to ensure speedy appraisal of projects and have uniformity in appraisal mechanism and guidelines. Finally a Public Private Partnership Approval Committee (PPPAC) has been set up, which will facilitate appraisal and approval of the PPP projects of all sectors, including projects under NHDP where the capital costs are above INR 5 billion. *(Department of Economic Affair 2005).*

### 4.8 The Public Private Partnership Approval Committee (PPPAC)

The Cabinet Committee on Economic Affairs (CCEA) in its meeting of 27th October, 2005 approved the procedure for approval of the PPP projects. The Public Private Partnership Approval Committee (PPPAC) was set up comprising of the following:

- Secretary, Department of Economic Affairs (in the chair).
- Secretary, Planning Commission.
- Secretary, Department of Expenditure.
- Secretary, Department of Legal Affairs.
- Secretary, Department of Sponsoring a Project.

The Committee would be serviced by the Department of Economic Affairs who has set up a special cell for servicing such proposals. The committee may co-opt experts as necessary.

Different guidelines for different categories of Central Sector PPP projects have been issued by the Government from time to time.

These are:–

- Guidelines for formulation, appraisal and approval of the PPP projects costing less than Rs. 100 Crores.
- Guidelines for formulation, appraisal and approval of the PPP projects
  
  i) Of all sectors costing more than Rs. 100 Crores and less than Rs. 250 Crores.
  
  ii) Under NDHP costing Rs. 250 Crores or more and less than Rs. 500 Crores.

- Procedure for approval of the PPP projects and guidelines for formulation, appraisal and approval of the PPP projects in Central Sector.

The Sponsoring Ministry will identify the projects to be taken up through the PPPs and undertake preparation of feasibility; studies project agreements etc. with the assistance of legal, financial and technical experts as necessary.

The appraisal mechanism for the PPP projects has been streamlined to ensure speedy appraisal of projects, remove red tape, adopt international best-practices and have uniformity in guidelines.

An appraisal mechanism has been notified including setting up of the Public Private Partnership Appraisal Committee (PPPAC) responsible for the appraisal of the PPP projects in the central sector. The Committee has mandated detailed guidelines for submitting proposals and follows a pre-determined time-frame for according approval to proposals submitted in a time-bound manner. Given the complex issues involved and the exposure of the Government in such contracts, Committee on Infrastructure has mandated issue of model documents. Government has decided to create standardized frameworks based on due diligence rather than evolving agreements on a project-by-project basis. The agreements will be based on international practices and will create a framework with right matrix of risk allocation obligation and returns. The MCA for National Highways has been issued by the Committee on Infrastructure. Planning Commission has also issued the MCAs for ports, state highways and operation and maintenance agreements for highways, though these are only for guidance and have not been approved by the Committee on Infrastructure.
4.9 Finance for the PPP Projects

The Government of India has taken various initiatives to extend financial support for the PPP Projects. Government of India provides financial support in the form of grants, one time or deferred, to the PPP projects with a view to make them commercially viable. It is a Plan Scheme administered by the Ministry of Finance. Suitable budgetary provisions are made in the Annual Plans on a year to year basis for the scheme. A Viability Gap Funding Scheme was launched in 2004 to meet the funding gap of economically essential projects and make it commercially viable for the PPPs. Setting up of infrastructure funds are also being encouraged and multilateral agencies such as Asian Development Bank have been permitted to raise Rupee bonds and carry out currency swaps to provide long term debt to the PPP projects.

4.9.1 India Infrastructure Project Development Fund (IIPDF)

Meaning:

This fund was introduced for providing financial support for quality project development activities for the PPP projects to the Central and State Governments and local bodies. Scheme and guidelines for India Infrastructure Project Development Fund (IIPDF) have been notified. The IIPDF would assist ordinarily upto 75% of the project development expenses. On successful completion of bidding process, the project development expenditure would be recovered from the successful bidder.

4.9.2 Purpose of the IIPDF

The procurement cost of the PPPs and particularly the costs of transaction advisors are significant and often pose a burden on the budget of the Sponsoring Authority. Department of Economic Affairs (DEA) has identified the IIPDF as a mechanism through which the Sponsoring Authority will be able to source funding to cover a portion of the PPP transaction costs, thereby reducing the impact of costs related to procurement on their budgets. From the Government of India’s perspective, the IIPDF
must increase the quality and quantity of ‘bankable projects’ that are processed through the Central or State’s project pipeline.

### 4.9.3 The Viability Gap Funding Scheme

The Viability Gap Funding (VGF) Scheme was launched in 2004 to meet the funding gap of economically essential projects and make it commercially viable for the PPP. Support under this scheme would be available only for infrastructure projects where private sector sponsors are selected through a process of competitive bidding. The total Viability Gap Funding under this scheme will not exceed 20% of total project cost, provided that the Government or statutory entity that owns the project may, if it so decides, provide additional grants out of its budget, but not exceeding a further twenty percent of total project cost.

The VGF under this scheme will normally be in the form of a capital grant at the stage of project constructions. Proposals for any other form of assistance may be considered by the Empowered Committee and sanctioned with the VGF up to Rs. 100 Crores for each project may be sanctioned by the Empowered Institution subject to the budgetary ceilings indicated by the Finance Ministry.

### 4.9.4 Eligibility Criteria for getting support under the VGF Scheme

In order to be eligible for funding under the VGF Scheme, a PPP project should meet the following criteria:

1) The project should be implemented i.e. developed, financed, constructed, maintained and operated for the Project Term by a Private Sector Company to be selected by the Government or a statutory entity through a process of open competitive bidding, provided that in case of railway projects that are not amenable to operation by a Private Sector Company, the Empowered Committee may relax this eligibility criterion.
2) The PPP project should be from one of the following sectors :-

- Airports.
- Education.
- Health Care.
- Ports.
- Power.
- Railways.
- Road.
- Tourism.
- Urban Development.

3) The project should provide a service against a payment of a predetermined tariff or user charge.

4) The concerned Government or the statutory entity should certify, with reasons:

- That the tariff / user charge cannot be increased to eliminate or reduce the viability gap of the PPP.
- That the Project Term cannot be increased for reducing the viability gap.
- That the Capital Costs are reasonable and based on the standards and specifications normally applicable to such projects and that the capital costs cannot be further restricted for reducing the viability gap.

Provided that the Empowered Committee may, with approval of the Finance Minister, add or delete sectors / sub-sectors from the aforesaid list.

4.9.5 Procedure for getting the VGF

Project proposals may be posed by a Government or the statutory entity which owns the underlying assets. The proposals shall include the requisite information necessary for satisfying the eligibility criteria specified above.
Projects based on standardized / model documents duly approved by the respective Government would be preferred. Stand alone documents may be subjected to detailed scrutiny by the Empowered Institution.

The Empowered Institution will consider the project proposals for the VGF and may seek the required details for satisfying the eligibility criteria.

Within 30 days of receipt of a project proposal, duly completed as aforesaid, the Empowered Institution will inform the sponsoring Government / statutory entity whether the project is eligible for financial assistance under this scheme. In case the project is based on standalone documents (not being duly approved model/standard documents), the approval process may require an additional sixty days.

In the event that the Empowered Institution needs any clarifications or instructions relating to the eligibility of a project, it may refer the case to the Empowered Committee for appropriate directions.

Notwithstanding the approvals granted under this scheme projects promoted by the Central Government or its statutory entities are approved and implemented in accordance with the procedures specified from time to time.

In cases where the VGF is budgeted under any on-going plan scheme of the Central Government, the inter-se allocation between such on-going scheme and this scheme is determined by the Empowered Committee.

**4.9.6 Disbursement of the VGF**

The VGF is disbursed only after the private sector company has subscribed and extended the equity contribution required for the project and is released in proportion to debt disbursements remaining to be disbursed thereafter.

- A grant under the VGF scheme is disbursed only after the Private Sector Company has subscribed and expended the equity contribution required for the project and is released in proportion to debt disbursements remaining to be disbursed thereafter.
• The Empowered Institution releases the Grant to the Lead Financial Institution as and when due and obtain reimbursement thereof from the Finance Ministry.

• The Empowered Institution, The Lead Financial Institution and the Private Sector Company enter into a Tripartite Agreement for the purposes of this scheme. The format of such Tripartite Agreement is prescribed by the Empowered Committee from time to time.

4.10 India Infrastructure Finance Company Limited (IIFCL)

The need for providing long term debt for financing infrastructure projects that typically involve long gestation period is imminent since debt finance for such projects should be of a sufficient tenure that enables cost recovery across the project life. Indian capital markets, however, are deficient in long-term debt instruments. Therefore the IIFCL is set up to bridge up this gap on January 5, 2006.

The IIFCL is set up with paid up capital of Rs. 10 Crores and an authorized capital of Rs. 1000 Crores. Apart from its equity, the IIFCL is funded through long term debt raised from the open market. To enable the company to do so, the Government extends a guarantee for repayment of principal and interest. The extent of guarantee provided by the Government of India in the first year of operations was Rs. 10,000 Crores.

The setting up of the IIFCL was a wholly owned Government Company redeemed the promise made in the Budget speech of 2005-2006. There were many infrastructure projects which were financially viable but in the current situations faced difficulties in raising resources. It was proposed that such projects in specified sectors – roads, ports, airports, tourism – be funded through a financial Special Purpose Vehicle (SPV). The SPV would lend funds especially debt of longer term maturity, directly to the eligible projects to supplement other loans from banks and financial institutions. The Government communicates the borrowing limit to the SPV at the beginning of each fiscal year. For 2005-2006, the borrowing limit was fixed at Rs. 10,000 Crores.
The IIFCL is the SPV created in keeping with the announcement made by the Finance Minister in his Budget Speech for the year 2005-2006. The company renders financial assistance through the following channels.

1) Direct lending to eligible projects.
2) Refinance to banks and financial institutions (FIs) for loans with period of 5 years or move.
3) Any other method approved by the Government of India.

The other salient features of infrastructure funding through the company are as under:

1) Loan assistance from the SPV shall not exceed 20% of the project cost.
2) A project awarded to a private sector company for development, financing, constructions through the PPP shall have overriding priority under the scheme.
3) Private sector companies will not be eligible for direct lending and only the refinancing option will be available in such cases. Further, the total lending to such projects will not be kept within 20% of the lending programme of the IIFCL.
4) The rate of interest charged by the IIFCL shall be such as to cover all fund costs including guarantee fee as well as administrative cost.

The IIFCL is expected to be a very lean organization such would keep overheads to the minimum and thus keep the cost of funds for infrastructure at a competitive level. The company would fill the gap for the long term infrastructure finance which the banks are not in a position to address owing to concerns relating to mismatch in assets and liabilities.

4.11 The BOT Variants used in National Highways Projects

The PPP in the development of road projects in the National Highways network takes place through the two variants of the BOT model namely the BOT (Toll) and the BOT (Annuity).
4.11.1 Meaning and Definition of the BOT

The BOT is a relatively new approach to infrastructure development, which enables direct private sector investment in large scale infrastructure projects.

The theory of the BOT is as follows:

**Build:** A private company (or consortium) agrees with a Government to invest in a public infrastructure project. The company then secures their own financing to construct the project.

**Operate:** The private developer then owns, maintains and manages the facility for an agreed concession period and recoups their investment through charges or tolls.

**Transfer:** After the concessionary period, the company transfers ownership and operation of the facility to the Government or relevant state authority.

4.11.2 Parties to the BOT Projects

There are number of major parties to any BOT project and all of them have particular reasons to be involved in the project. The contractual agreements between those parties and the allocation of risks can be complex. The major parties to a BOT project will usually include:

1) **The Government Agency:**

A Government department or statutory authority is a pivotal party. It will:

- Grant the sponsorers the “Concession” that is the right to build, own and operate the facility.
- Grant a long term lease of or sell the site to the sponsorers and
- Often acquire most or all of the service provided by the facility.

The Government’s cooperation is crucial in large projects. It may be required to assist in obtaining the necessary approvals, authorizations and consents for the construction
and operation of the project. It may also be required to provide comfort that the agency acquiring services from the facility will be in a position to honour its financial obligations.

The Government agency is normally the primary party. It will initiate the project, conduct the tendering process and evaluation of tenderers and will grant the Sponsor the concession, and wherever necessary, the offtake agreement.

2) The Sponsor

The sponsor is the party, usually a consortium of interested groups (typically including a construction group, an operator, a financing institution and other various groups) which in response to the invitation by the Government Department, prepares the proposal to construct, operate and finance the particular project. The sponsor may take the form of a company, a partnership, a limited partnership, a unit trust or an unincorporated joint venture.

3) The Construction Contractor

A construction company may also be one of the sponsors. It will take construction and completion risks that are the risk of completing the project on time within the budget and to the specifications.

4) The Operation and Maintenance Contractor

The operator will be expected to sign a long term contract with the sponsor for the operation and maintenance of the facility. Again the operator may also inject equity into the project.

5) The Financiers

In a large project there is likely to be a syndicate of banks providing the debt funds to the Sponsor. The banks will require a first security over the infrastructure created. The same or different banks will often provide a standby loan facility for any cost overruns not converted by the construction contract.
6) Other Parties

Other parties such as insurers, equipment suppliers and engineering and design consultants will also be involved. Most of the parties too will involve their lawyers and financiers and tax advisers.

The risk allocation process and the bidding process of the BOT (Toll) and the BOT (Annuity) models are discussed as follows:

4.11.3 The BOT (Toll) Model

In the BOT (Toll) Model, the commercial and technical risks relating to construction, operation and maintenance of the projects are allocated to the concessionaire. The traffic revenue risk, which is one of the critical risks associated with the PPP road projects in India, is also allocated to the Concessionaire. The risk allocation framework as per the MCA for the BOT (Toll) project developed by the Planning Commission is presented in Table 4.1, Risk Allocation Framework for the BOT (Toll) Project.

Through a two-stage bidding process, the concession is awarded to the Concessionaire. In the first stage (also known as qualification stage) bidders provide the information specified in the RFQ. The prequalified bidders are then invited to submit their bids. Bids could be invited for the project on the basis of the lowest financial grant that would be required for implementing the project. Instead of seeking a grant, the bidders could also offer to share the revenue or make upfront payment to the granting authority for award of the concession. The grant / revenue sharing constitute the sole criterion for evaluation of the bids and the concession is awarded to the bidder quoting the highest revenue sharing. In the event that the bidder is not sharing the revenue, then the concession is awarded to the bidder seeking the lowest grant.
<table>
<thead>
<tr>
<th>Risk</th>
<th>Allocated to</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permit/Approval</td>
<td>Granting authority/Concessionaire.</td>
<td>Applicable permits relating to environmental protection and conservation of the site to be obtained by the granting authority, other applicable permits are to be obtained by the Concessionaire.</td>
</tr>
<tr>
<td>Delay in land acquisition.</td>
<td>Granting authority.</td>
<td>Granting authority shall pay damages calculated at Rs 50 per day for every 1,000 sq. m commencing from 91st day of the date of financial closure and until such right–of-way is procured.</td>
</tr>
<tr>
<td>Delay in financial closure.</td>
<td>Concessionaire.</td>
<td>In case the financial closure does not happen within 300 days of signing concession agreement, then concession agreement shall be deemed to have been terminated by mutual agreement of the parties. The granting authorities can encash the bid security.</td>
</tr>
<tr>
<td>Traffic revenue risk.</td>
<td>Concessionaire.</td>
<td>MCAs provide 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.</td>
</tr>
<tr>
<td>Time overrun during construction.</td>
<td>Concessionaire.</td>
<td>In the event the Concessionaire fails to meet the project milestone, he or she has to pay damage at 0.1% of the performance security amount (which is about 5% of the total project cost) for each day of delay. However, the damages paid will be refunded in case the project achieves completion on or before the scheduled completion date. In case of delay in entry into commercial service, the Concessionaire shall pay damage at 0.1% of the performance security for delay of each day until COD is achieved.</td>
</tr>
<tr>
<td>Change of scope.</td>
<td>Granting authority/Concessionaire.</td>
<td>Granting authority will bear all the costs arising out of any change of scope order if the costs exceed 0.25% of the total project cost. Otherwise, the costs shall be borne by the Concessionaire.</td>
</tr>
<tr>
<td>Operation and maintenance risk.</td>
<td>Concessionaire.</td>
<td>In case of lane closure beyond the specified time limit, Concessionaire shall pay damage calculated at 0.1% of the average daily fee for every stretch of 250 m or part thereof, for each day of delay. In case the Concessionaire fails to meet the maintenance requirements, it shall pay damage calculated at higher of (a) 0.5% of average daily traffic, and (b) 0.1% of the cost of rectification.</td>
</tr>
<tr>
<td>Competing roads.</td>
<td>Granting authority.</td>
<td>The granting authority will pay the Concessionaire compensation equal to the difference between the realizable fee and the projected daily fee until the breach is cured.</td>
</tr>
<tr>
<td>Change in law.</td>
<td>Granting authority/Concessionaire.</td>
<td>The effects of the change in law in terms of increase in costs or reduction in costs shall be borne by granting authority and Concessionaire as per the agreed schedule.</td>
</tr>
<tr>
<td>Force majeure risk.</td>
<td>Granting authority/Concessionaire.</td>
<td>The parties shall bear their respective costs.</td>
</tr>
<tr>
<td>Indirect political risk.</td>
<td>Granting authority/Concessionaire.</td>
<td>One-half of all the costs exceeding the insurance cover shall be reimbursed by the granting authority to the Concessionaire in case the events happen after financial closure.</td>
</tr>
<tr>
<td>Political risk.</td>
<td>Granting authority.</td>
<td>All the costs attributable to the event will be reimbursed by the authority to the Concessionaire.</td>
</tr>
</tbody>
</table>
4.11.4 The BOT (Annuity) Model

The BOT (Annuity) is a traffic risk-neutral PPP Model. In this PPP model, the Concessionaire is selected through the two-stage bidding process. In the first stage, the interested parties are invited to furnish their technical and financial strength. The pre-qualified parties are then invited to submit the financial bid, which is the cost of construction, operation and maintenance of the facilities, and a percentage of returns thereon quoted on a semi-annual basis throughout the concession period. The contract is awarded to the bidder with the lowest quote of the annuity. The granting authority pays the Concessionaire annuities on each annuity payment date as per the annuity payment schedule, after adjusting for non-availability of the lane and delay or early achievement of commercial date.

In this PPP model, the Concessionaire assumes risks relating to construction, technical operation and maintenance, while the other critical risks relating to land acquisition, permit / approval, traffic risk, and toll collection risk are allocated to the granting authority. The risk allocation framework for the BOT (Annuity) projects as per the MCA for the BOT (Annuity) is presented in Table 4.2, Risk Allocation Framework for the BOT (Annuity) Project as follow.
<table>
<thead>
<tr>
<th>Risk</th>
<th>Allocated to</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-investment.</td>
<td>Granting authority</td>
<td>The expenses toward project development have been borne by granting authority with budgetary resources.</td>
</tr>
<tr>
<td>Resettlement and rehabilitation.</td>
<td>Granting authority</td>
<td>Resettlement and rehabilitation of the affected people has been carried out by the granting authority with the assistance of Central and State governments.</td>
</tr>
<tr>
<td>Permit/approval.</td>
<td>Granting authority</td>
<td>Granting authority has obtained all the clearances and grant approvals required for the implementation of the project.</td>
</tr>
<tr>
<td>Delay in land acquisition.</td>
<td>Granting authority</td>
<td>Granting authority has been responsible for acquisition of the project site and handing it over to Concessionaire.</td>
</tr>
<tr>
<td>Delay in financial closure</td>
<td>Concessionaire.</td>
<td>Failure to achieve financial closure before or on commencement would be construed as an event of default.</td>
</tr>
<tr>
<td>Time and cost overrun during construction.</td>
<td>Concessionaire.</td>
<td>Concessionaire has the right to start construction at its own risk. Concessionaire is entitled to receive bonus or incur penalty in early or late completion of construction. If the delay of commercial operation date from the scheduled project completion date is in excess of 120 days, then granting authority could terminate the concession agreement and appropriate the performance security.</td>
</tr>
<tr>
<td>Time and cost overrun during operation and maintenance.</td>
<td>Concessionaire.</td>
<td>If time overruns during operation and maintenance in an annuity period exceed 1000 lane km hours, then Concessionaire shall be deemed to be in material breach of operations and management requirements. No provision for escalation of annuity payment leads to cost overrun during operations and maintenance, which is borne by Concessionaire.</td>
</tr>
<tr>
<td>Delay in payment of annuity.</td>
<td>Granting authority</td>
<td>Granting authority is under the obligation to make payment to the Concessionaire within 90 days. Granting authority provides a revolving irrevocable letter of credit for one installment of the annuity. Granting authority pays the annuity in two equal semi-annual installments.</td>
</tr>
<tr>
<td>Change of scope.</td>
<td>Granting authority</td>
<td>Granting authority will bear the additional expenditure incurred due to change of scope.</td>
</tr>
<tr>
<td>Traffic revenue risk.</td>
<td>Granting authority</td>
<td>Granting authority will assume the risk. Granting authority can exercise its right to levy and collect toll.</td>
</tr>
<tr>
<td>Change in law.</td>
<td>Granting authority</td>
<td>The effect of the change in law in terms of increased capital expenditure and costs/taxes shall be borne by granting authority and Concessionaire as per an agreed schedule.</td>
</tr>
<tr>
<td>Non-political force majeure.</td>
<td>Concessionaire</td>
<td>Concessionaire shall bear this risk through insurance.</td>
</tr>
<tr>
<td>Political risk.</td>
<td>Granting authority</td>
<td>The Granting authority will bear the political risk due to any political event which has a material adverse effect. If failure to make good the effects of the political events occurs, granting authority will reimburse the affected party as the provisions of the termination event due to political risk.</td>
</tr>
<tr>
<td>Performance standards.</td>
<td>Concessionaire</td>
<td>In case of material breach of the operations and management requirements, the granting authority can terminate the agreement. Some of the circumstances leading to material breach include the following: 1. Riding quality below the prescribed acceptable level. 2. Non-availability during an annuity payment period exceeds 1000 lane km hours.</td>
</tr>
<tr>
<td>Lane availability.</td>
<td>Concessionaire</td>
<td>Non-availability of lane for reasons due to concessionaire failure to discharge its obligations leads to deduction in the annuity amount payable to concessionaire.</td>
</tr>
<tr>
<td>Interest rate risk.</td>
<td>Concessionaire</td>
<td>The interest rate risk has been factored in the annuity quoted by the Concessionaire.</td>
</tr>
</tbody>
</table>
4.11.5 Applicability of the BOT Models

The current policy framework for procurement of road projects through the PPP is to first offer the project on the BOT (Toll). If due diligence indicates the project to be unviable on the BOT (Toll) in the first instance itself then it should be offered on the BOT (Annuity) basis.

The BOT (Toll) Model is predominantly adopted for those stretches of the National Highways network with high/medium traffic density, which is financially viable. In certain stretches where there is a large number of commercial vehicles and a perceived low level of traffic revenue risk, the Concessionaire has even agreed to share the revenue. On the other hand, where there is perceived lack of users willingness to pay toll and the private sector is reluctant to assume traffic revenue risk, the BOT (Annuity) model is used in those projects.

4.11.6 Advantages of the BOT Projects

The BOT projects have several advantages such as:

1) The Government gets the benefit of the private sector to mobilize finances and to use the best management skills in the construction, operation and maintenance of the project.

2) The private participation also ensures efficiency and quality by using the best equipment.

3) The projects are conducted in a fully competitive bidding situation and are thus completed at the lowest possible cost.

4.12 Issues Limiting Greater Participation of the Private Sector in the PPP

The Government of India has undertaken to create an enabling framework for the PPP in the development of the National Highways network. There are, however, certain issues limiting greater participation of the private sector in the development of road projects through the PPP route. Following are some of the important issues:-
1) The current policy of offering the project first on the BOT (Toll), then on the BOT (Annuity) and then on engineer procure and construct (EPC) contract is likely to introduce delay in the implementation of the project since the Government approval is required at each stage.

2) In case of the BOT (Toll) model, the degree of risk exposure to the Concessionaire is high and the private sector is reluctant to take high risk exposure. On account of this, there has been very low private sector participation in bidding of projects that are to be developed through the BOT (Toll) route.

3) Though the BOT (Annuity) exposes the Concessionaire to the lower level of risk, the cost of the project procured through the BOT (Annuity) route is higher. The cost of private capital is comparatively higher compared with the sovereign cost of borrowing.

4) The bidding process for the PPP Road Projects has been standardized with the introduction of the model RFQs, and RFPs. There has been lack of investor interest in the PPP road projects on account of certain clauses in both the model documents.

   For instance, as per the model RFQ, only six applicants will be short listed for the bidding stage based on their respective aggregate experience score. And, as per the model RFP, the bidder will be ineligible for bidding if the bidder was:

   i) Pre-qualified for bid stage (second stage of bidding process) in relation to eight or more projects.

   ii) Declared as the selected bidder for undertaking four or more projects or

   iii) Unable to achieve financial closure for two projects within the stipulated time during the period of two months preceding the bid due date.

5) As per the MCA, risk allocation has been based on the underlying principle of allocating the risks to the parties best suited to manage them. However, there are certain risks such as land acquisition risk, which in spite of being allocated
to the party best suited to manage the risks, has been a major cause for delay in timely completion of the project.

National Highways play a key role in the economic growth of the country. The Government of India has taken various measures to upgrade the capacity and quality of the National Highways network. The PPP routes have been adopted by the Government to meet the funding gap and use techno managerial efficiencies of the private sector to obviate the inefficiencies in the traditional public procurement system. Various reforms have been introduced by the Government of India to create an enabling environment for participation of the private sector in the development of the road projects through the PPP route. Model concession agreements have been developed to facilitate standardization of terms and conditions and ensure uniformity in the various agreements for the PPP Road Projects.

The BOT (Toll) and the BOT (Annuity) are the two PPP models that have been used in procuring the National Highways projects in India. The BOT (Toll) model is predominantly used for development of projects in stretches with high traffic density and financial viability. On the other hand the BOT (Annuity) is the more attractive PPP model for development of road projects in those stretches of the National Highway network with medium / low traffic density. Hence, the risk profile of the projects and financial viability of the project influence the selection of the type of the PPP models. The risk allocation framework for each of these models has been discussed.