Private sector

Concessionaire

BOT- type projects

PPPs involving the award of a road concession to the private sector are usually structured around a special purpose vehicle (SPV). These project companies are usually incorporated in the project country which is virtually always the country where the Contracting Authority awarding the concession is located.

The project company allows its Equity Investors to isolate the project from their other activities. Such a mechanism has several advantages:

- it provides a common structure to manage the project when several investors are involved
- it allows investors to limit the risks to their contribution in the SPV equity

Operation and maintenance concessions

If no major construction or rehabilitation works are planned within the scope of the project, the required investment will be limited. In such a case contractors or road operators with adequate expertise, financial capacity and equipment might decide to sign the concession contract directly with the Government. In this case, they usually still choose to set up a special purpose vehicle (SPV). Such a company may be the only equity investor, thus having full control over the concessionaire. Activities under the project's scope of work falling outside their expertise are contracted by the SPV to a qualified firm.

Equity investors

Equity investors are generally private firms or organizations that have a share in the capital of the SPV set up to manage the project under the concession agreement.

Equity investors comprise sponsors, passive investors and, increasingly, equity infrastructure funds.

Sponsors

Sponsors are private investors actively involved in the promotion of the project. They typically identify the project at an early stage (in the event of unsolicited proposals, even before the public sector has identified it) and conduct a preliminary assessment of its potential profitability. In order to best control the various risks of the project,

the initiator of the project will seek to interest other private firms with complementary expertise and resources and form a sponsors' consortium.

The type of parties that might be involved depends on the specificities of the project (and the scope of work in particular). Typically they comprise:

- **Contractors**, which are often key sponsors in PPPs due to the magnitude of construction, rehabilitation and/or maintenance works for the success of the project.
- **Road operators**
- **Engineering consultants**, and
- **Local investors**, which often participate in a consortium of sponsors and contribute their specific technical expertise or knowledge of the project environment.

The objective of the Sponsors is to develop a sound, profitable project that generates sufficient cash in order to repay the project debt and distribute dividends.

The Sponsors expect to be rewarded for the risk they are taking in the project. This reward can be provided in the form of:

- profit generated through conducting their individual activity in the project;
- profit generated by the concession company and distributed to them in the form of dividends in proportion to their individual share in the project (Equity).

Passive investors

Passive investors are only driven by financial considerations. They participate in the equity of the SPV when they identify a potential return on equity in the project that exceeds expected profits on alternative investments. They do not intend to participate in operational decisions around the project.

Typical passive investors are:

- Investment funds
- Individual investors in the project country,

since profitable private investments are not necessarily numerous in low- and middle-income countries and PPPs can provide good opportunities for private investors to diversify their portfolio and generate profits.

Equity investors' approach to risk

Equity investors are typically inclined to accept more risks than the lenders for the following reasons:

- they are better armed to control the various project risks (construction and operation risks in particular),
- they are usually involved during the entire project life including the later operation period when the project generates more revenue and when risks have considerably lessened,
- they are less averse to risks in the expectation of a larger remuneration.

Each investor will assess its own individual risk profile as follows:

- **for all investors:** their share in the project equity. All partners will in this regard have the common goal of minimizing and mitigating the risks borne by the SPV by transferring most risks to external actors (Government, lenders, insurers, IFIs).
- **for sponsors only:** their particular role in the project implementation that should reflect their field of expertise. Each partner usually bears the risks related to its activity.

Project evaluation criteria

Sponsors will evaluate the project with various perspectives in mind:

- overall profitability of the project regardless of the financing scheme finally set up,
- capacity of the project to generate sufficient dividends and the timing thereof resulting in an appropriate Return on Equity in IRR terms,
- potential profits attained through conducting their specific activity in the project.

Investment funds

Equity Infrastructure Funds lend money as risk capital in circumstances where they can realize equity and quasi-equity participation through warrants, stock and convertible subordinated debt. Such funds are knowledgeable and focussed investors who are increasingly taking lead investor positions in toll roads.

Approach to risk

Equity Infrastructure Funds are usually prepared to take most project risks. However, as they are unlikely to accept project development risks, they will usually seek to inject their equity after such conditions have been waived by the project company but prior to the 1st draw on debt.

Project evaluation criteria

Equity infrastructure funds will usually conduct a due diligence in order to evaluate, from an investor's point of view, the project strengths and its ability to distribute dividends.

Requirements

Equity participation freed from any pledge, etc.

Return on Equity requirement not less than a certain threshold depending on the risk assumed to be taken. Investment finds' share of the total project equity is always limited.

Commercial lenders

Commercial lenders remain the largest source of PPP financing. Banks have long been traditional key partners of Sponsors in project development and as such have developed expertise in understanding and appraising credit risks.

Bank loans take the form of secured or unsecured loans and possibly stand-by credit facilities which may involve one or several lenders or be syndicated.

The great advantage of banks in project finance is their ability to offer a flexible transaction which can respond dynamically to the project cash-flows that sometimes change dramatically throughout the project life. Project finance is a very attractive business for banks. Well-structured projects are a potential source of medium to long-term revenue for them.

- In a corporate finance type of deal, loans are guaranteed by the assets of the investors. Such arrangements are however rare: due to the massive investments required in road projects and the consequent magnitude of the commercial loans, private investors are unable or reluctant to give such guarantees.
- In project finance, loans are structured on a non-recourse or limited recourse basis. Lenders have to rely on the expected project revenue to be reimbursed.

Approach to risk

Bankers will always say that their business is to provide finance but not to take risks. Because the commercial loans mobilized often represent over 60% of the total project cost, bankers want to have all possible guarantees of recovering their loans.

In corporate finance, bankers will mainly assess the reliability of their clients (investors) and their financial capacity to meet their commitments and reimburse the loan even if the project fails. A company's financial situation and in particular its credit profile will be screened and will influence the conditions of the loan.

Whereas in project finance, the reliability of the partners is also a key parameter in the assessment of project risk, lenders will mostly rely on a detailed financial simulation of the project, using a financial model as a basis to precisely evaluate the forecast project cash flows. This simulation is a key element during negotiations and is often annexed to the financing documentation because it allows the recalculation of ratios (annual debt service cover ratio, loan life cover ratio, etc.). These ratios are used as project indicators in order to establish whether the project has the capacity to face the yearly repayments of the loans with a sufficient margin of security.

Lenders will generally participate in the project as a group, in order to share the risk and reduce the individual exposure of each participant. The bank syndicate designates a lead bank to represent all the other participants in most of the project negotiation sessions.

The techniques adopted by the lenders to restrict their risks also include various other measures including letters of support or commitments by the government, domiciliation of revenue or debt, assignment of debt, technical and financial performance bonds, etc.

Project evaluation criteria

The lenders are primarily looking for a project capable of repaying its debts. They consequently adjust the amount of the debt and the repayment profile according to the annual and actuarial debt coverage ratios (see the second part of this Module for a precise definition of these concepts).

Apart from these safety ratios, the lenders frequently impose other constraints on the Sponsors, in order to ensure their continued commitment throughout the defined repayment period. This stems partly from the fact that the loans are not (or only partially) guaranteed by the project assets, which are not realizable, but principally from the forecast cash flows for the loan period.

In order to obtain the approval of their credit committee, the lead bank will probably conduct an extensive technical, legal and financial due diligence and will likely rely on internal specialists, engineers and external consulting/retainer personnel. Indeed, as most of the concession projects are limited recourse, the lenders have to make a substantial analysis in order to ensure that the factors of success are all met. In some cases, lenders are selected well before the signature of the concession contract and have a very active role during contract negotiations.

Capital markets

Capital Markets are often solicited in project-finance debt because of:

- their usually long-term nature
- their relatively low price
- the greater flexibility and standardization of commercial and legal covenants enabling a financial close to be reached more quickly
- the tradable nature of the bond

A decline in the guiding interest rate and the spread/margin will benefit project financing which provides greater yield. The growing trend to rate project-finance deals by major rating agencies also increases their marketability.

Market appetite for project finance will depend on:

- general market sentiment,
- the market sentiment for a specific type of project, a country risk, etc.

The approach to capital markets is a complex task which should be entrusted to a reputable financial adviser whose knowledge and relationship with the market is well-tried and proven.

Approach to risk

As risk is priced into the bond spread, misunderstanding of the project risks, potential volatility in the capital markets at the time of issuing the bonds and the effects of less developed capital markets in emerging countries could all have substantial impacts on the viability of a project's finances. In order to reduce these spreads, it is possible to

back the bond issue by monoline insurers, who provide guarantees to issuers, often in the form of credit wraps, that enhance the credit of the issuer.

Project evaluation criteria

Fund managers will usually rely on country and project ratings and will require less credit work if a project has been rated by two reputable rating agencies.

Pricing and covenants will heavily depend on the ratings of these agencies.

Contractors - construction companies

In most countries, the construction market is well developed and very competitive. The profile and motivation of the contractors involved in PPPs should however correspond to

- the scope of work of the project. Road construction, rehabilitation and maintenance projects require specific expertise, equipment and labor,
- the technical difficulties of the project,
- a requisite long-term partnership with the public sector and other actors

Contractors are always key actors in PPPs due to:

- the fact that they are the only entity which really controls the construction risk that will considerably influence the success of the project through the efficiency of the infrastructure, construction cost and duration of the construction period.
- their large financial capacity. For PPPs involving project finance, contractors are often the only companies able and ready to mobilize a substantial share of the required capital funds (Equity investors).

Maintenance contractors

Maintenance contracts are usually entrusted to well-established Contractors who usually have the required expertise, qualified personnel and equipment. However, the main difference between construction and maintenance contracts lies in the long-term relationship between the client (the government or the private concessionaire) and the contractor. Provisions should be contained in the maintenance contract to ensure that the Contractor has sufficient incentive to keep the road up to an adequate level of service.

Performance-based maintenance contracts will require experienced Contractors with sufficient reliability and autonomy to define their own methodologies, activity schedules and in-house quality control plans. Remuneration under the contract is linked to the satisfaction of quality control indicators.

Maintenance activities and in particular routine maintenance were traditionally performed by public entities. Privatization of such services sometimes requires specific training programs for local contractors.

Approach to risk

There is a wide consensus that Contractors should bear construction risks because they are in the best position to assess and control them. Lump sum contracts and liquidated damages are the main contractual provisions that will transfer the risks associated with cost overruns and delays in construction to the Contractors.

Other actors (including the government) should however be realistic and not ask Contractors to take responsibility for all construction-related risks in all circumstances. Particularly adverse or unforeseeable geotechnical conditions in particular should be subject to detailed investigations at an early stage. Geotechnical risks for Contractors could also be reduced by providing a government or IFI guarantee.

Sub-contractors

Main contractors will usually rely on a number of smaller sub-contractors which will generally assume their responsibilities on a back-to-back basis. It is therefore in the interest of the various stakeholders that the contract signed between the project company and the construction company be drafted on arm's length basis. It is also recommended that the main sub-contractor (e.g. toll equipment supplier) should participate actively in the negotiation of the lump sum contract thus avoiding big discrepancies which might slacken the development phase.

Operators

The scope of work of road operators usually consists of:

- traffic management (information to users, safety, accident prevention, accident detection, information to the police, etc.),
- toll collection and fraud control,
- routine maintenance activities typically sub-contracted to local contractors through a specific contract.

Governments sometimes prefer Operators to be state-owned companies because this role is traditionally performed by the public sector and because of the direct contact they have with road users (both toll collection and safety management are sensitive issues). When PPPs involve not only a road link but part of the network, such arrangements can facilitate the setting up of a pooling system and the use of cross subsidies.

Private operators operate through a specific contract signed with the SPV. In most cases a specific company is set up to conduct operation and maintenance activities (operation and maintenance contract). Private firms specialized in road operating can therefore participate in projects as Equity Investors in the main SPV or limit their involvement to the operation and maintenance company.

Attitude towards risk

Risk sharing is defined in the O&M Agreement.

Tasks and risks supported by the operator are commensurate with its financial capacity. Responsibility and risks related to periodic maintenance activities usually remain with the concessionaire (SPV) or are transferred to Contractors through specific rehabilitation contracts (construction contracts).

It should be noted that the Operator may also rely on various maintenance sub-contractors to perform all or specific maintenance tasks.

Insurance companies

Insurance companies are crucial actors in the project finance framework as they usually back all the major risks required to be covered by the Lenders and the public sector

- Natural risks: earthquakes, fire, contingent business interruption,
- Financial risks: exchange rate, interest rate,
- Operational risks: theft, information security,
- Employment risks: employer's liability, etc.,
- Liability risks: errors and omissions, director's and officers' liability, physical loss or damage to a third party; consequential loss,
- General Construction risk: loss and/or damage to physical property,
- Employment risks: employer's liability, etc.,
- Liability risks: errors and omissions, director and officers liability,
- Revenue shortfall risk,
- Political risk,
- Insurance for Liquidated Damages.

Approach to risk

Insurance companies examine and map the project cash flow and risk across the whole project and review the core insurance policies and program to be implemented.

Advisors / consultants

Due to the diversity and the complexity of issues involved in the design and implementation of PPPs, the public sector should not hesitate to seek consultancy services from qualified advisors in all fields where their in-house resources are not very experienced.

Design and supervision consultants

Engineering-based consulting inputs shall be required for

- project design comprising conduct preliminary studies, cost-benefit analysis, feasibility studies and environmental impact assessments.
- works supervision for PBC contracts and possibly operation and maintenance concessions. In BOT type contracts and sometimes for operation and maintenance

concessions, the Supervision consultant's role is taken on by an Independent Engineer who has different responsibilities.

Traffic consultants for demand analysis

Demand forecasting is a very specific and delicate aspect of the consultancy services required in the design of PPP projects (Module 3-> Sector Planning and Strategy -> Planning and Policy Making -> Demand Forecasting). Over-estimation of traffic volumes during the planning stage is without doubt one of the main causes of failure of PPP highway projects.

Hiring well-established consultants with proven international expertise in demand forecasting will not ensure a 100% reliable traffic analysis but is essential to evaluate the feasibility of the project within an acceptable margin of accuracy.

Prior to embarking on a project, sponsors will usually conduct their own analysis and/ or check the reliability of the existing study. Depending on the time available and the resources they are ready to mobilize at this stage, they may conduct a comprehensive study including traffic counts and O/D surveys at required locations, prepare a traffic model of that part of the network that will be affected by the project and carry out a full sensitivity analysis. Reliable studies conducted by the public sector are a key factor of success for the project.

When selecting traffic consultants, the public sector and private firms should particularly focus on screening their experience and expertise in:

- conducting traffic studies for similar highway projects, in particular toll projects,
- modeling traffic on complex road networks, particularly when alternative routes exist,
- macro-economic analysis to estimate generated traffic and integrate various network development scenarios,
- performing sensitivity analysis on how toll rates will influence traffic volumes and structure,
- international expertise and ability to calibrate traffic models to local conditions

Legal adviser

Hiring an international and a local legal adviser with substantial experience in similar projects is necessary for the sponsors to draft a watertight contractual structure.

Financial adviser

The Sponsors of infrastructure project financing usually seek the assistance of a financial adviser in conducting the preliminary financial studies and planning and arranging the

project financing. Commercial banks or major financial companies with a good reputation, standing in the market place, and knowledge of the sector and the country are often hired as financial advisors.

To assist policy makers in the procurement of these services, the PPIAF is financing the design of a Toolkit for Hiring and Managing Advisors for the PPI Process.

The purpose of this Toolkit is to provide a comprehensive reference guide for a wide range of government officials who need to understand about procurement and the use of financial, economic, legal, regulatory, labor and human resources advisors in the infrastructure reform process. Several documents, totaling 400 to 500 pages, will be enclosed in a box that also contains a CD-ROM. A summary version of the Toolkit in http will be posted on the PPIAF website.

Independent engineer

In operation and maintenance concessions and in BOT-type projects, it is in the Government's interest to mobilize an experienced consultant as the Independent Engineer during the construction period. The role of the Independent Engineer is mainly to ensure that construction works are performed to high standards and in accordance with the specifications. Unlike the Supervision Consultant mobilized for traditional construction projects and for maintenance contracts, the Independent Engineer mostly works on behalf of the concession company and has to report to both the government and the Lenders, even though the concession company is solely responsible for paying the fees of the Independent Engineer.

The Independent Engineer is generally responsible for issuing the completion certificates and supervising any tests that have been contractually agreed as well as establishing that payments to the Contractor can be made. Although the roles of the Independent Engineer will differ from project to project, the Independent Engineer is generally very much restricted in taking any decision that involves changes (particularly if such changes lead to increased costs).

The Independent Engineer can also act, in the first instance, as an arbitrator between the Contractor, the concession company and the public sector in case of problems. Whether or not he can make decisions and instruct the Contractor depends on the project specifications.