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INFRASTRUCTURE: THE NEXT STEPS (PPPs)**  
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**GUIDELINES ON  
PRIVATE PUBLIC PARTNERSHIPS FOR  
INFRASTRUCTURE DEVELOPMENT**

**PREFACE**

These guidelines for Public Private Partnerships for Infrastructure Development have been prepared by the UN/ECE BOT Expert Advisory Group, mandated by the Committee on Trade, Industry and Enterprise Development and operating under the auspices of the Working Party on International Legal and Commercial Practice (WP.5).

They are still in draft form and are being produced here as background information for the WP.5 Forum on Public Private Partnerships for Infrastructure Development: The Next Steps (4 and 5 December 2000).

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# CONTENTS

## VOLUME I – BOT/PPP POLICY AND IMPLEMENTATION

- CHAPTER I      A STATEMENT OF PRINCIPLES [to be supplied]
- CHAPTER II     OVERVIEW OF CONCESSIONS AND PPPS - THEORY AND PRACTICE
- CHAPTER III    HOW TO LAUNCH A NATIONAL PUBLIC – PRIVATE PARTNERSHIP PROGRAMME

## VOLUME II – THE TECHNICAL CONSIDERATIONS

- CHAPTER I      POLITICAL AND INSTITUTIONAL ASPECTS OF BOT
- CHAPTER II     CONTRACTUAL ISSUES [Not yet available]
- CHAPTER III    AN INTRODUCTION TO THE FINANCING OF PROJECTS
- CHAPTER IV    INSURANCE AND RISK TRANSFER IN PPP, BOT AND PROJECT FINANCE

## VOLUME III – CASE STUDIES

- CHAPTER I      TRANSPORT:  
ARTICLE 1    – THE ARLANDABANAAN LIGHT RAIL  
ARTICLE 2    – SHADOW TOLL ROADS – THE UNITED KINGDOM EXPERIENCE  
ARTICLE 3    – THE CROSS ISRAEL HIGHWAY
- CHAPTER II     THE ENVIRONMENT [Not yet available]  
SYDNEY'S WATER – A PUBLIC PRIVATE PARTNERSHIP
- CHAPTER III    POWER GENERATION  
INDEPENDENT POWER PROJECTS
- CHAPTER IV    SOCIAL INFRASTRUCTURE  
PUBLIC PRIVATE PARTNERSHIPS IN EDUCATION IN ENGLAND

**VOLUME I**  
**BOT/PPP POLICY AND IMPLEMENTATION**

**CHAPTER I**  
**A STATEMENT OF PRINCIPLES**

**G. Hamilton to supply**

# VOLUME I – CHAPTER II

## OVERVIEW OF CONCESSIONS AND PPPs – THEORY AND PRACTICE

### Introduction and basic requirements

Municipal and national budgets are frequently insufficient to finance directly necessary and desired facilities. It is therefore essential to create or improve the pathways whereby private funds can be attracted to invest in programs of public works or services within a framework of suitable contractual arrangements (concessions or public private partnership – henceforth PPPs).

**Public private contracts cover different forms of long-term contracts drawn-up between legal entities and public authorities. They aim at financing, designing, implementing and operating Public Sector facilities and services.**

The normal terminology for these contracts describes more or less the functions they cover. Contracts that concern the largest number of functions are “Concession” and “Design, Build, Finance and Operate” contracts, since they cover all the above-mentioned elements: namely finance, design, management and maintenance. They are usually financed by user fees (drinking water, gas and electricity, telephone, public transport, etc.). Privately financed contracts for public facilities<sup>1</sup> and public works cover the same elements but in general are paid, for practical reasons, by a public authority and not by private users (public lighting, hospitals, schools, roads with shadow tolls).

Build Operate and Transfer (BOT) and lease and maintain contracts are also long-term contracts. They call for a specific service provided by a private company and, normally for more moderate investment than the first mentioned contracts.

<p style="text-align: center;"><b>PPP contract family</b></p> <p style="text-align: center;">Design, Build, Finance and Operate Build, Operate and Transfer Design, Construct, Maintain and Finance</p> <p style="text-align: center;">Concession Lease/Maintain Contracting-out public services</p>
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Public Private Partnerships thus cover all current legal/economic forms that make it possible for private funds to invest in public infrastructure and services.

Typically in a PPP, a public authority (federal or local) entrusts a private operator with the long-term implementation of a project. Frequently, this involves large-scale and complex construction and operation.

This type of partnership is based on a contract between a public body (the conceding authority) and a private company (the concessionaire).

PPPs must not be confused with privatisation.

- PPPs constitute an approach to introducing private management into public service by means of a long-term contractual bond between an operator and a public authority. Fundamentally, it secures all or part of the public service, so delegated by private funding and calls upon private sector know-how.

- Privatisation means transferring a public service or facility to the private sector, sometimes together with its ancillary activities, for it to be managed in accordance with market forces and within the framework of an exclusive right granted by a ministerial or parliamentary act (or sometimes a licence).

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<sup>1</sup> Appendix I describes the development and principle of Private Finance Initiative (PFI) in the United Kingdom since 1992.

The PPP contract is crucial since it must create the necessary conditions for a dynamic tension throughout its duration. This can only work successfully if it is fairly balanced: the concessionaire cannot operate at a loss nor manage over the long-term a service that shows a structural deficit. The public authority has to ensure the service operates correctly and that it conforms to the terms of contract. Financiers require a balanced contract and that the concessionaire's income assures the reimbursement of loaned capital.

The original negotiations should create this balance. Subsequently, there should be opportunity for contract revision to enable the contract to evolve satisfactorily over time.

This guide considers various problems that must be addressed satisfactorily for PPP procurement to be conducted satisfactorily while taking into account both public and private sectors' requirements.

## **I - Why embrace concessions or PPP contracts ?**

### **a) Objectives, means and results**

#### **A mission transfer**

By choosing to transfer the management of its services and public facilities to the private sector, a public authority must recognise that the private sector can match its own efficiency. It must consider that the private sector possesses the necessary competence and ability to fulfil the contract during the whole period. Lastly, it must have confidence that the concessionaire is able to find the necessary funds and then design, construct and manage the project it plans.

When a public authority transfers part of its own functions, it testifies to the private sector's ability.

#### **Optimum public management**

The method of public management which consists in the private sector bringing in investment, service and financing of public services is nowadays considered by a very large number of countries a standard and desirable management practice. Savings made as compared to management by the public authority have been regularly described and encouraged by various institutions including the World Bank.

It is no longer in doubt that the introduction of private management within the public sphere brings tangible savings and proven service quality.

Managing services and public infrastructure by way of a PPP represents optimum public management: the private sector regains its historical role in delivering public services and the public sector gains by the efficiencies so delivered.

The public sector loses none of its authority since private operators need to be supervised not only for the sake of sound contract management but to ensure that service quality is maintained.

### **b) Origins of concession and PPP contracts**

#### **1. Brief history**

In ancient times, many public works (harbours, public markets) and collective infrastructure (public baths) were conceded. Book 50 of the Digeste (public and private law book published in A.D.530) is entirely dedicated to public works. It shows clearly the existence of concession law and of a law governing public estate licensees.

This procedure disappeared during the 5th century with the fall of the Roman Empire and reappeared only during the Middle Ages for the construction of new fortified towns and the occupation of new lands in the south western region of France during the 12th and 13th centuries. Occupancy contracts for fortified towns concede whole villages to their occupants under collective emphyteutic contracts which compelled the occupants to improve the village.

During the 16th and 17th centuries, European sovereigns, and particularly in France, conceded public works to their “financial investors” generally called entrepreneurs. Such works included: riverbeds and canal construction, numerous public services such as road paving (actual road concessions), waste collection, public lighting, mail distribution, public transportation, general stores, and even opera houses.

This system existed in several European countries: e.g. the canal concessions in Britain (Oxford canal concession of 1791) and Spain (the longest concession being to Von Thurn und Taxis which lasted four centuries).

Concessions truly took off in Europe in the 19th century during which public works flourished not only for railroads, but also urban services which expanded rapidly as a consequence.

One can identify a **liberal convergence of approaches in Europe**, particularly for the creation of railways which took place under concessions in all European countries. In the North and the South, liberal ideas spawned by the French revolution and particularly the principle of free enterprise played an influential role in the systematic choice of the concession. This period was one of weak administrative structures in all fields of delegated public action.

20th century European wars reversed the trend. The role of the State was increased by wars, both in preparing for them as well as in dealing with their consequences. The disruption of countries, economies and long-term contracts was strongly felt in all European countries. Rare before 1914, inflation and its effect upon contracts became clear by 1918. The notion of state-owned companies was born to avoid the financial vulnerability of traditionally very long-term contracts. This movement grew throughout Europe during the two post-war periods.

The influence of ideology also plays a determining role with collectivism considered a viable and desirable alternative. Communist ideology upheld the idea of a strongly developed public sector during times of post-war turmoil.

1. In Europe, various public management methods were developed during the 20th century: state-owned companies, public-private joint ventures and nationalisation<sup>2</sup>. During both World Wars, concessions in various fields were arbitrarily cancelled. Consequently, the size of civil service administrations increased considerably.

## 2. What lessons should be drawn from public contracts?

The shift in public management methods has increased with the adoption of PPP contracts. The implementation of public works by means of such contracts indicates a growing acceptance of such as normal tools for administrative management. In parallel legislation for “public procurement” has been considerably developed through:

- ◆ The creation of specific rules dealing with services offered by several providers following a reduction in the number of standard concessions,
- ◆ Readoption of well-adapted concession rules in the context of public works contracts.

At all times and in most countries, one finds certain common themes in the object of these contracts. The “sovereign” nature of the most ancient contracts show that the “first” concessions were aimed at operating or improving legal public estates by investing. Functional operations (such as coin manufacture, tax collection, public notarising) and estate leasing had no other aim but to increase regal wealth.

During the 17th century large concession contracts mainly in the field of public works (canals, bridges, roads), combined

- ◆ an authorisation to operate over an extended term,
- ◆ a large scale investment in public works designed by entrepreneurs,
- ◆ the right to charge fees to users.

One finds a common fundamental objective that by allowing private funds to invest in the public estate, the greatest good can be offered to the greater number.

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<sup>2</sup> In France, nationalizations took place in classic concession fields: railways, electricity, canals, telephone, subway.

Similarly, local authorities were gradually allowed to levy user's fees, mainly on roads and ramparts. Thus public procurement laws also gradually developed *pari passu* with these early public works but in a modest fashion and within a strictly regulated framework.

**Eventually, two contractual systems emerged:**

- **In the PPP field**, the choice of service provider was based mainly upon criteria derived from the principle of “*intuiti personae*” because of the fundamental contribution of the entrepreneur in ideas, funds and know-how,
- **In the field of public works procurement** methods of impersonal choice were prevalent because of the simplicity of services proffered, the possibility for public authorities to choose from among numerous providers, together with the wish to contain costs while ensuring results.

Major contract types already existed in ancient times: *jus perpetuum* and *jus emphyteuticum* concessions, public procurement through *jus civile*, farming fiscal tax and land contracts through *location censoria* law.

These types remained and were revived under the monarchy and during modern times but under different names and within new frameworks.

Two major groups of contracts exist side by side throughout and nearly at all times. Their goals are on one hand the creation of public wealth and on the other, public estate management and the creation of infrastructure and permanent services for the public.

Major characteristics of these two groups are summed up below along with their fundamental differences.

The PPP group is based upon three fundamental indissoluble elements:

- ◆ long-term contracts
- ◆ investment dedicated to the project and/or corresponding services
- ◆ complex responsibilities phased over time: design, construction, finance, technical and commercial operation, maintenance and transfer to the public sector at the end of the contract.

The non-PPP groups of contracts have contrary characteristics *viz* non-dedicated investment, short-term, easy and simple services, close administrative control.

From this, it is clear that public contract rules and regulations refer to two very different sets of doctrines and applications.

Historically, Public authorities have welcomed, and even at times requested, private project proposals involving private investment, whether they choose to delegate functions and public property or to purchase works, supplies or services.

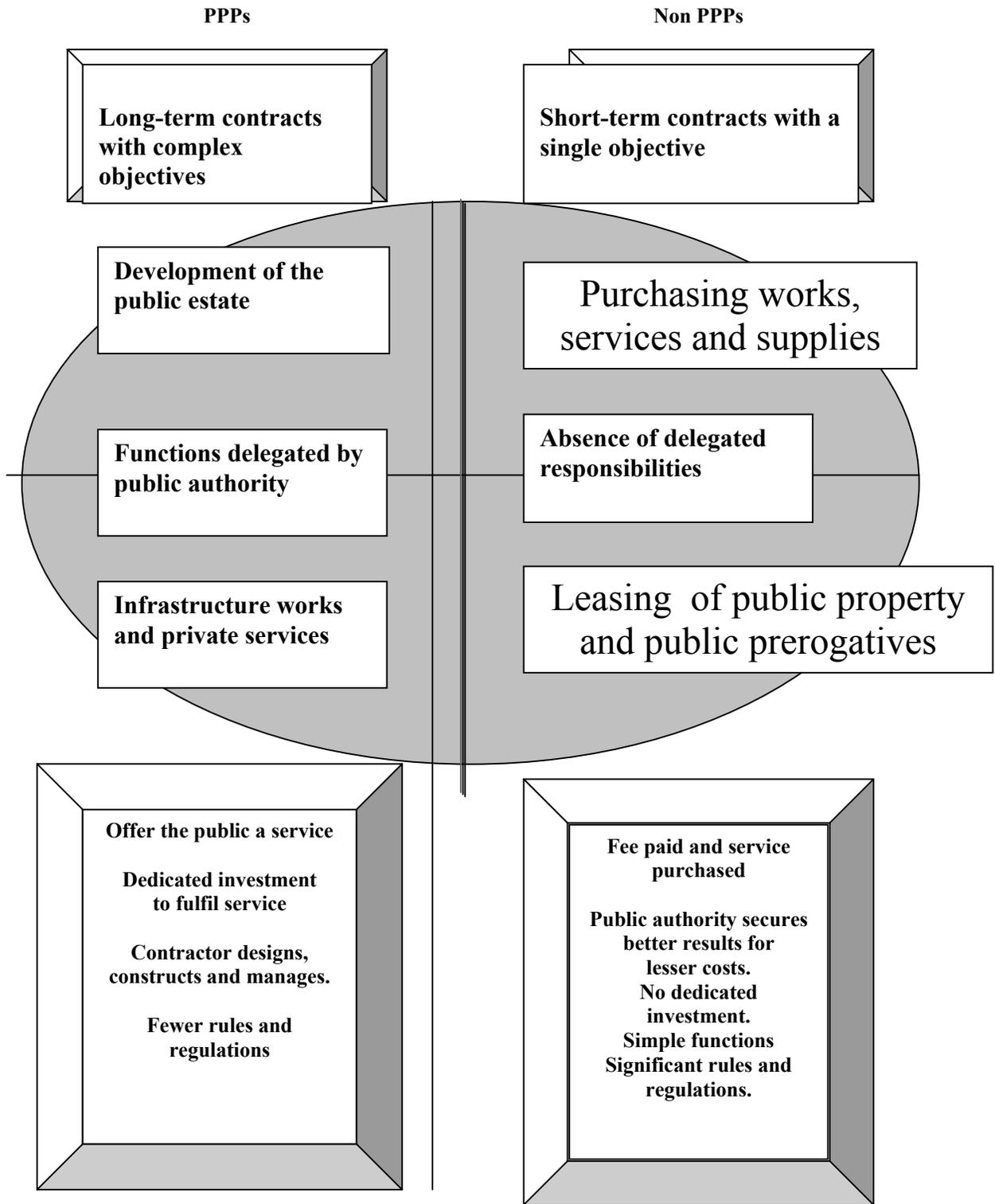
When offers became very numerous, as was the case at the turn of the 19th century, for the construction of bridges, and later railroads, a system putting offers into competition was established in order to preserve negotiation. Public authorities needed to ensure the means and the will of the candidates to complete the contract. It follows that nowadays it is also necessary to keep legal options open to welcome spontaneous proposals from promoter-entrepreneurs and more generally to preserve the negotiating process between concessionaires and public authorities.

It must be made equally clear that organising a public service or delegating an infrastructure to a person outside the administration must fit within a framework of responsibility transfer. This is quite distinct from signing a conventional public procurement contract in accordance with a pre-existent standardised and impersonal procedure. Taking candidates' references as to their capability and past performance, will play an important role in public authority's' decision-making.

One must preserve the notion that a PPP contract is based on the choice of a contractor who will bear responsibility on behalf of the Administration for a long time.

Conversely, the contractor's financial investment requires legal and fiscal protection commensurate with the length of contract.

**Public contracting: a historical topology**



□

### **The PPP revival in Europe during from 1990**

Several European states adopt PPPs to stimulate the economy. At the same time, they seek a better value for public monies, while respecting the proper rate of development for their basic infrastructure. The combined goals call for the use of alternative resources, private funds and cohesion funds. Generally, all states want to promote better budget management, greater efficiency in public management and respect for European public finance management criteria. The revival of private management methods stems from the notion that tax expansion is unacceptable and that it is necessary to find alternative ways to develop public infrastructure.

A PPP contract's strength is based on the best invest / design / operate ratio. Competition between optimised projects guarantees public authorities an informed choice.

### **A need for PPPs in Western Europe**

In the nineties, several countries set up taskforces to manage PPP programs. And, as mentioned in the introduction<sup>3</sup>, initiatives were taken to develop new contract forms.

#### **PPPs can have a significant impact on public finance by:**

- generating new sources of income, new infrastructures and new services,
- allowing new development for existing sources of revenue (public transportation, sanitation),
- promoting industrial development and as a consequence, increasing fiscal income,
- better directing public budgets (as in the case of railway networks).

By PPPs, it is also possible to redefine the State's direct role in economic processes. Private companies' expertise makes it more likely that complex projects are delivered successfully.

PPP is the State's answer to the need for private efficiency as **compared to public sector methods**. Thus it constitutes a way of increasing public services' production and of reducing the size of the State. Taxation can be reduced, and the re-directed resources contribute to the country's wealth. It therefore constitutes a better allotment of state revenues and guarantees a dynamic management of public finances and public infrastructure.

PPPs represent a new philosophy to set the State back into a framework which allows it to focus better on its original functions: representing the people and managing those State services that cannot be transferred to the private sector. Notwithstanding even within these latter sectors, there are supplies and equipment-related functions that the private sector carries out better than the public sector.

### **Trans-European Networks**

In addition, the Treaty of Rome's role cannot be underestimated. The enlarged European market is based on removing legal, technical and economic barriers and the progressive relinquishing of national monopolies and the prohibition of the creation of new ones. PPPs become especially relevant at the European level in respect of **trans-European networks** for all the reasons above, i.e. lack of public funds; need to mobilise funds and private sector know-how.

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<sup>3</sup> Two traditions underlie concessions in contemporary Europe with different impacts. This very ancient system goes back a long way in France. It was developed in the nineties in Spain and Portugal. The Private Finance Initiative system launched in Great Britain in 1992 is also now developing in the Netherlands. Italy created in 2000 a PPP Taskforce. Belgium enjoys extended and renewed rights concerning concessions. North European countries and Switzerland are now renewing the process, which was once part of their usual public procedure.

## Public management principles

The development of private financing methods is based on certain **essential principles**. The parties involved should determine by contract the public objectives, setting the scope of risk transfer and private sector management.

### Value for Money

This principle can be interpreted in different ways. However, the lowest bid may not represent the best value. A long-term perspective must be adopted: The public authority should base its choice on the evaluation of the whole life economics of the project in the light of the risks borne by the concessionaire.

The public authority must protect the Public Purse. Throughout the contract's lifespan, the private concessionaire must provide a high-level quality service which the public authority would have difficulty in matching.

### The principle of risk transfer

This principle is often expressed as follows: The party best able to manage a given risk is the party who should bear that risk. The public authority as a sovereign body is the guarantor of the long-term risk – political and systemic. The service provider is responsible for design, installation and maintenance as well as the financing. When it delegates a service, the public authority pays only on condition that the service has been carried out satisfactorily.

### Performance specifications and competition

When a public authority contracts for infrastructure and services in effect it “ purchases “ a service. The specifications should be neither technical nor indicate the means of delivery but be rather a definition of expected performance. The Public Sector as a client should express its needs in terms of service levels and standards, i.e. specifications in terms of performance or outputs. It should set the standard of service expected throughout the contract lifespan. It must not stipulate the methods to be used. Competition is established on the basis of requirements (or performance) and not prescriptively.

### Maintaining the value of public assets:

PPP contracts frequently do not transfer public property to the private sector. They do however establish the public assets maintenance level for very long periods (15 to 60 years), a discipline the public body often overlooks in public state-owned management. At the contract's term, public assets may revert to traditional public property management.

### The quest for innovation

**Competition stimulates innovation** in public management. The quest for innovation is clearly signalled as valuable in PPP contracting. The totality of the functions operated by the private sector invites new ideas in order to obtain better results. Competitive procedures must support this quest for innovation.

### Two traditions

In effect, two main traditions are found in Europe and around the world: the very old Latin notion<sup>4</sup> based on public law and the Anglo-Saxon tradition, also quite old, based on common law and essential principles which have been recently reaffirmed.

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<sup>4</sup> Two essential traits characterize the French notion: a great number of contracts in different fields of delegation (water, waste, electricity, ports, airports, museums, highways, all types of transport, ..) and the repetition of the general contract structure and of certain contract clauses. Born of a very old tradition in France, it draws on a very elaborate contractual framework. Experience has shown what difficulties long-term contracts can experience. As a result, a balanced contractual approach has been developed through case-law now incorporated into contract law.

British experience exemplifies an essential principle that in public management, public works and services may well be carried out by the private sector, while the public sector's role should focus on its core tasks (e.g. medical care and not hospital construction). It sets down new principles to conduct contract procedures in the very wide field of the delegations it promotes. The two main principles are Value for Money and Risk-Transfer. The policy of the Private Finance Initiative followed in Great Britain does not stop at infrastructure but includes service contracts or “assets and service clusters”.

One should not overstate any apparent contradiction between the two principles since they both share a common objective: addressing through similar means the difficult question of concluding long-term risk-taking contracts that bind the public sector to the private sector.

#### **d) PPP in the rest of the World**

The practice of delegating the management of public interest activities is spreading worldwide as are more particularly concessions and PPPs that allow the private sector to finance public facilities.

A World Bank report<sup>5</sup> estimated that currently the private sector finances 15% of infrastructure investments. It considers that around 250 billion dollars in infrastructure investments will be necessary throughout the next decade. This observation supports the need for the private sector's greater involvement as a necessary complement to public intervention otherwise the needs will not be met.

Most countries envisage or are adopting delegated management. Its revival is recent and dates back to the beginning of the nineties.

- ◆ The increased number of these contracts is due to the willingness of the State to involve private investment.
- ◆ The flexibility of negotiated contracts allows the tailoring of public objectives to private financing.
- ◆ Private sector operators can also promote private management in public interest fields drawing on their experience in BOT/concessions. Legal categories are not rigid and new types try to define contracts on the basis of their functional content.

Many international organisations do work in this; they generally recommend:

- to set the process within an overall plan,
- to adopt multiple mixed financing forms adapted to each individual case (no dogmatic approach to financing),
- to pay due regard to socio-economic outcomes and the cost-benefit balance,
- to draw a clear-cut division of risks and responsibilities,
- to pay attention to the project's social acceptability.

Many countries which have no tradition of delegated management have however developed delegated management or PFI models.

The outcome is that PPP gives positive results in infrastructures around the world. The volume, over all investment categories, doubled between 1993 and 1995, rising from 17 to 37 billion dollars.

Financing sources are becoming more diverse. Various, commercial banks, bond markets/pension funds and specialised companies finance PPPs.

A study covering 48 PPP projects shows that 80% of them have been carried out below forecast budget and that 60% have been completed earlier than planned. Furthermore, the service may improve for lower fees.

But on the other hand, 64% of public projects carried out by state-owned bodies were completed late.

#### **II - What to expect from PPP contracts: realism must prevail**

PPP is not a miracle cure that immediately and easily solves all heavy investment/or public service problems for public authorities by transferring their risks to a private partner.

It is a complex contract:

- because of the risks that will be allocated to the parties,
- and by its very content. It is difficult to draft as it must define unambiguously every element with the full agreement of the partner chosen by public authority.

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<sup>5</sup> 1995 SFI Report.

It is well therefore to understand the mechanisms from the concessionaire’s perspective (we will revert to this point in part III) and to understand the character of the contract.

Let us briefly recall the steps of a concession. Starting from the needs it has defined, a public authority engages in a consultation process followed by contract negotiations with pre-selected tenderers. The contract framework includes a forecast business and the funding necessary to the outcome. On signature, the building phase gets under way, followed by the operating phase of the delegated service. At the end of contract, the concessionaire normally returns the infrastructure to the public authority. Each phase is fairly long and must be accomplished correctly.

**a) Distinguishing concession or PPP contracts from purchase contracts**

The infrastructure concession approach is quite different from contracts for public works in all aspects: basic logic, financial logic, service conception, lifespan, risk allocation etc.

These differences arise because in essence a concession/PPP is a form of public management, while a conventional public procurement stipulates the delivery of a service, limited in time. A concession contract is necessarily negotiated and must protect original ideas. Strict conditions must determine the choice of a concessionaire.

The following table sums up these differences. Concessions and PPPs require private sector investments, which will only be committed on the basis of convincing profitability studies. A private view is given on the project. The concessionaire’s payback comes late in the project life and is a function of unknown future use and management costs. Between conventional public procurement and concessions it is not only terminology but also the commercial logic that differs.

**Main differences conventional public procurement and PPP/concessions**

	<b>Conventional public procurement</b>	<b>PPP/Concession contacts</b>
<b>Definitions</b>	Supply, works, or service as defined by public authority.	Private concessionaire creates facility and service on the basis of a negotiated agreement between public private sectors
<b>Main characteristics</b>	Single objective Short term No link to operation No public project delegation  <ul style="list-style-type: none"> <li>• Public authority direct operation</li> <li>• No prior financing, co-financing or project financing</li> <li>• No entrepreneurial investment</li> <li>• No project design freedom</li> <li>• Contract does not deal with service (secondary contract)</li> <li>• Entrepreneur is not project manager</li> <li>• No management freedom</li> <li>• No long-term occupancy of public property</li> </ul>	Multiple objectives Long term Linked to service management Public mission assignment  <ul style="list-style-type: none"> <li>• Operation directed by concessionaire</li> <li>• Financing, co-financing, mission financing by concessionaire</li> <li>• Investment by concessionaire</li> <li>• Project/service design freedom</li> <li>• Contract deals with service needed by public authority (“main contract”)</li> <li>• Concessionaire is project manager</li> <li>• Concessionaire is free to manage contract</li> <li>• Generally long-term occupancy</li> </ul>

## **b) Concessionaire's constraints: The Concession/PPP is a narrow window of opportunity**

The history of concession contracts exemplifies the difficulties of drafting contracts that are viable and serve their purpose despite political and legal risks.

It is not fair to say that concessions are a form of public management that meets precise and demanding criteria in order to achieve good results. If the conditions are not all brought together, there is little chance that the concession will reach a good outcome either for the concessionaire, the contractor or the users.

A concession/PPP is based on a transfer of risks from the public sector to the private sector. These risks that the parties must manage after signing the contract need to be clearly determined, estimated and understood.

The concessionaire must be aware of the risks he will incur over a long time span. He must be able to evaluate each risk connected to each period.

Each risk must be allocated clearly to the concessionaire or to the public authority so that it is managed if it arises. It is in the public authority's interest **to set out clearly the actual sequence of risks** during the contract negotiation phase. Otherwise problems can arise at later stages. On the other hand, the concessionaire who fails to evaluate risks will not find funds since the financial institutions will identify such shortcomings.

It is therefore crucial to identify, evaluate and allocate risks numerous as they are for concession/PPP contracts.

Public authorities must not only be prepared to negotiate risk sharing, but also be ready to retain some risks and share excessive risks. Negotiation must therefore remain reasonable and respect the contract's long-term perspective.

Two aspects must be considered in particular: over and above significant risks incurred by the concessionaire, there are specific risks involved in the competitive bidding process.

### **1. Risks necessarily incurred by the concessionaire**

These are numerous and onerous. Firstly, the private party runs the technical risks inherent in the design and build, the overall design being essential to the project's future viability.

- Technical risks involved in building the infrastructure may flow from a faulty estimate of services and works costs or from implementation delays that may prejudice contract competition. These all lead to the need for increased funding.
- The risk of possible accidents related to technical, underground or equipment failures.
- Risks related to delays
- Efficiency risk due to the service management difficulties.

Later, **commercial and financial** risks follow:

- Commercial risks stem from the facility's use and the evaluation of service and infrastructure cost. Traffic volumes/usage may not be realised at the tariff set, at all or for certain periods during the contract. Therefore, the concessionaire will experience an income shortfall. The price and demand elasticity is a fundamental consideration for concessions financed by users' fees.
- Financial risks are tied to the cost of works, their sound initial estimate, a correct evaluation of future inflation and of future movement in money rates. A concessionaire may incorrectly estimate the financial starting point, have difficulty finding funds or in refinancing or else suffer exposure to changes in interest or currency rates.
- Technical building risks can lead to cost overruns. In such cases, the concessionaire must meet the need for increased investment. This makes it essential for the concessionaire to be the project manager for the construction and thus usually is also the project promoter or belongs to a construction group.

The concessionaire must be free to design the project in full knowledge of the obstacles to success and be able to alter plans to counter frequent adverse eventualities (e.g. ground conditions, bad weather).

During the entire contract, the concessionaire will need to accept legal, political, force majeure risks, and the consequences of the evolution of the global and local economy:

- Political risk such as an arbitrary decision by the public authority to disregard certain contract clauses.
- Risk of unforeseen events leading to the suspension of the services or facilities.

It is therefore necessary to study the project in depth from the start in order to limit risks and allocate them to the party best able to deal with them. It is normal and necessary for risks taken to be paid for. It is obvious that no one will accept a significant risk without a compensating reward. Consequently potential benefits must be proportional to the risks assumed.

## **2. Competitive bidding related risks**

It is in the public authority's interest to receive all good possible proposals. The best way is to advertise the project so as to call on the most competent potential tenderers.

The authority must look to three essential points:

Bidders' creativity should be encouraged. The proposal must allow bidders to express their views, to apply their know-how and to offer variants.

It must judge all proposals received respecting intellectual property and paying due regard to the references of candidates.

The authority must reserve the right to choose a tenderer on the basis of known and qualitative abilities. The authority must not base its choice solely on financial criteria.

It is in the public authority's interest to preserve a certain amount of flexibility in its decision-making.

### **Initial conclusions on risks**

It is in the public authority's interest to define risks as early as possible, to evaluate them from its own viewpoint and to consider with the concessionaire how to reduce or limit them in order to make the project viable.

When a PPP contract fails due to faulty risk sharing, it is the public authority that bears the consequences since it will then have to incur directly the service costs. Consequently, risks have a two-sided effect that affects both partners.

## **c) The concessionaire's perspective**

No concessionaire will take on a project without applying his own methodology and asking the following questions:

- ◆ Is the concession's proposed object viable? Will users find it socially and economically acceptable?
- ◆ Does the public authority have a specialised unit studying the proposed concession?
- ◆ The analysis will be an iterative process which will be repeated three or four times throughout the consultation period. How much time for negotiation has the public authority reserved prior to signing?

At bid submission, concessionaires will present tariff and charges on the basis of their commercial studies and the predicted costs of the necessary investment. In some cases, subsidies are required and if the public authority agrees, the contract will be signed. Neither party can dispense with the economic analysis as it defines what is possible and what is not.

The parties must look to common objectives and consider the long-term.

The nature of the problem set by the public authority is often only expressed as a need. However, it is always better if the problem has been researched with care. Throughout the study phase, bidders will conduct an iterative option appraisal with focus sharpening throughout the period until the project is defined.

### **Three families of contracts**

PPP contracts belong to three families. Sometimes user or traffic risk is transferred to the private party; sometimes it is retained by the public authority or shared by both parties. The number of contract funders may vary from one (the public authority) to a whole population of users. Commercial risks and attendant guarantees will not be the same for different types of contracts.

Potable water projects are a case of transferred user risk. A private company assumes the risk that companies and households might or might not link-up depending on whether the commercial price is attractive; however, the price has to be fixed from the outset by commercial standards.

The second case is represented by hospitals, schools or public lighting when the public authority pays for the services either because the user is not in a realistic position, to pay, or the public authority would not want users to do so.

Lastly, intermediary examples are found, for instance, in waste collection where companies are in part financed by a public authority, which sometimes collects users' taxes, and in part by industrial clients who use the service.

These contracts can be distinguished as those with a captive client-base (e.g. water, electricity) and those contracts for facilities and services to a non-captive client-base.

This second case of a non-captive client base is more complex for bidders because it requires a users' study that is more difficult than for a captive client-base where the elements are better understood and more reliable.

We set out below the stages of an infrastructure project for a non-captive client-base.

### **Concessionaire's stages for projects with user risk-transfer**

The first stage consists in determining the number of potential users, assuming no fee paid for the service.

One weighs at this stage what economic advantage would be brought to users compared with the existing situation (e.g. for a highway, its advantage compared to existing itineraries and transport). Frequently an economic analysis will need to determine to what extent users would recognise the economic advantage offered by the project.

At the second stage a tariff matrix is calculated that will generate the highest revenue once the service is effectively available. A study is carried out evaluating tariffs taking into account such parameters as the time of day, social classes and potential users. The optimal tariff is the threshold beyond which total annual revenue start to fall.

Thirdly, the tenderer must study the optimum revenue's evolution over time, taking into account such criteria as population, consumption and income evolution, as well as changes in the economy. From this, he must infer usage throughout the project's lifetime, with averages and peak periods. This will enable determination of the facility's scale and phasing.

At the fourth stage, the tenderer can start determining the amount of private investment justified on the basis of revenues established during the previous stages. The concessionaire knows on one hand what investments he needs to amortise; on the other hand what revenues the service will generate over time. He has by now determined service operation costs.

For certainty, bidders must carry out sensitivity tests using higher or lower tariffs and different hypotheses of traffic or usage over time and, consequently, a variety of facility sizes.

At the fifth stage bidders can calculate what economic advantage the project will bring the general public beyond the direct users. These are called "externalities".

This calculation fixes the level of subsidy that can be requested from the public authority, if a reasonable user-fee does not generate sufficient income. This does not alter the risk the concessionaire takes, which remains even if subsidies are significant (50 % or more).

At the sixth stage a pre-design study is carried out. It estimates costs as well as building time because they affect the financial outcome. Tenderers seek to spread expenditure in time to fit the revenues.

At the end of these six study phases it can be determined if works or services are viable and if a subsidy is economically and politically justified.

- This process will be repeated several times before the concession contract is signed, since selected tenderers will return to the project to detail every step in order to submit their proposed contract to the public authority.

**The study of quantitative needs** is often established on the basis of complex mathematical models, especially for highway studies. These models take into account roads and traffic within boundaries around the planned construction; a census is then taken of potential users crossing the area, noting their starting points and destinations. Through trial and error, a mathematical model is derived which will evaluate how users will react to the new facility.

Optimum receipts for the length of the concession will be defined progressively through repeated trial and error. They will result from a hypothesis of traffic related to the use made of other roads and the size of the facility planned.

### **Concessionaires' choices prior to submitting their bids**

Given the contract's length, service and facility design will be based upon security. Thus the concessionaire will endeavour to eliminate all risks, technical as well as financial.

The bidders will seek to be very flexible in their proposals. A phased project implementation opens the way to revenues spread out over time and to the concessionaire controlling the progress of the operations. He can thus either slow down later phases or speed them up to keep pace with the initial income that should cover debt costs. One method of contractual flexibility will be to let concessionaires put first into service higher income earning sections of a highway. When a concessionaire is allowed to take over the management and tolls collection of an existing facility, it simplifies the sourcing of funds and financiers' backing for new related facilities.

**The financial study** comes in only at the end of the process. It must make it possible to find the necessary funds for a contract (works and launching of service) which has two essential characteristics, i.e. a very long period of amortisation and a de facto absence of a replaceable security.

- Lenders will read as proof of the concessionaire's interest the capital he brings to the operation (operating capital invested in the company from the start), and which generally constitutes the initial investment. The concessionaire must then find lenders to obtain the remaining capital. Such loans cannot be secured in the usual manner: on one hand because they are very large; on the other because the contract has no normal value.
- Banks and financial institutions funding concessions normally require a substitution right to protect them against negative eventualities during the contract.

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From this point of view, giving existing concessions' cash flow to a concessionaire constitutes a dynamic guarantee of his future income. Because it is difficult to amortise an infrastructure in under 30/35 years and because, traditionally, it has long been difficult to find loans for periods over 15 years, bankers will be more confident lending money to a concessionaire who already benefits from existing cash flows.

### **Project financing**

It is the question of the security interest which leads to non-recourse financing (project finance). The lender will analyse all risks involved in the project in order to validate its suitability for finance.

The lender not only checks the concessionaire's working hypotheses but also determines whether the payback will be achieved without difficulty. He will factor in possible negative eventualities. For each such, he will estimate how much income might be at risk. He will determine what amount of the loan funds would remain unpaid, and determine what further capital cover the concessionaire should bring. Mezzanine finance, more or less assimilable to equity, also qualifies as quasi capital. Guarantees (such as from the European Investment Fund) are also a feature of this type of financing.

It is clear that the concessionaire's capital has two features:

- It will earn a normal return during the concession period if all goes well. It will be lost totally if the concession fails or will only receive a delayed payback if negative factors encountered are subsequently overcome.
- The normal return will be the rate required by the market for risk capital.

**Consequently, and this is essential to understanding concessions, lenders are the ones who determine what capital is required in the form of an imposed percentage of the overall investment on a case by case basis.**

The concessionaire's capital contribution to the project should not be fixed by the concession project consultation document. This would be pointless and would go against the public authority's interests. Part of the private sector's innovation is in its financing.

In return, it is possible to ask bidders to indicate their own forecasts in the course of consultation so as to be able to verify at a later stage how realistic their commitment is.

The market for project funding is dynamic and competitive, with rates in constant evolution.

#### **d) Financiers' viewpoint**

For financial institutions and banks, future assets and partners' responsibilities must be clearly defined in the contract. The transfer to the private sector must be legally authorised. The project must generate a profit. Government or the public authority must back it unquestioningly. This is particularly important for granting permits (building or operating), to present the project to the public and validate it and to overcome difficulties that may arise during the project.

Reducing costs and insolvency risks is important to project financiers. The quality of project must deliver a real service to the public in order to be unquestioned. The public authority's objectives and the concessionaire's must coincide.

Support or protection granted to the concessionaire is seen as an essential element in the decision to finance the contract. Financiers like a project to be viable and to make use of established technologies.

The concessionaire must be competent and experienced in the type of contract.

The public authority's experience is also taken into account.

Everything needs to be done to stabilise and secure the contract. Its flexibility must make room for necessary adjustments over time. The contract must be able to face unforeseen future events.

To avoid problems, risks must be correctly allocated to each party (public authority, private capital investors, concessionaire, contractor, service companies, lenders, insurers) according to a risk-allocation matrix in which each has a place.

**Two principles must be respected:**

- Sound risk allocation,
- The party best qualified to do so should manage the project risks at the lowest cost.

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### III. LAUNCHING PPPS: ECONOMIC AND FINANCIAL ENVIRONMENT

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Launching a PPP policy requires that several prerequisites be met. These are as follows:

**a) Sovereign commitment: clear stable perspectives, a political will**

A State that considers launching a concession policy for several facilities or public services must announce firmly its intention to do so in an unequivocal manner.

No concessionaire should have to re-negotiate a contract with successive governments. Such a case would make it impossible in a given country for international concessionaires to raise funds needed for infrastructure projects and services.

In the perspective of setting up a PPP program it is important that a given country should create a policy framework to fit the process. It is not possible for foreign partners to understand public authorities' involvement in such a program with any precision without knowing what framework has been set up: strategy, means, management process and principles are all important elements in the private investors' evaluation.

Many countries have set up specialised workgroups for such contracts within national Treasury bodies. Indeed a "task force" is a sound tool for the development of methods and controls over public and private operators. It brings together a number of competencies and advises the public authority on the drafting of contracts.

**b) Appropriate legal frameworks**

It must be stressed that over and above the State making clear the political will to embrace concessions, a clear and stable legislative framework is essential. There must be a clear law on commercial contracts, laws governing the Public Estate or on the specific powers which determine the use of land required for the project. Tax law must set out the taxation of the concessionaire's business.

Constitutional law must allow and favour local authorities entering long-term concession contracts and delegating competence to private persons.

**c) Financial or budgetary context : privately financed concessions and mixed or publicly financed concessions**

Concessions can be granted within two main economic and financial contexts: either projects are economically viable in their own terms or public financial support is needed. This can be done two different ways: either through co-financing the project infrastructure or through total payment for the service to the concessionaire, where users cannot pay directly for practical reasons (public lighting), political (free access to schools or roads); or social reasons (free access to hospitals).

A given State's law can anticipate these cases and thus avoid legal obstacles during the establishing of concessions, at a time when essential decisions are being taken.

It is strongly advised to examine the laws concerning sectors in relation to PPPs to examine possible obstacles and eliminate them.

Altogether, it is wise to review what legislation provides for in respect of concessions.

**d) Laws concerning the concession's legal and fiscal status**

One of the main aspects investors examine before a possible PPP investment is the legal and fiscal environment of this type of contract. It is clear that a country with no such laws stands little chance attracting private funds to its facilities.

As far as foreign long-term investors are concerned it is necessary for a state to define stable legal rules if it wants to favour investments into its infrastructure.

## How to manage a project?: From project to contract

### Concession or PPP Contracts Inception

Actions	Steps and constraints
The project	Top political level agrees to PPP Social acceptance of project Technical and financial feasibility study Environment, land, needs, prices, solvency, technical approach, preliminary profitability study and potential professional bidders consultation Consultants chosen
Project launching	National law, foreign investors law, tax advantages, PPP regulations, country's financial standing, create a "task force", public estate laws
Consultation's framework	<ul style="list-style-type: none"> <li>• In performance (output) terms</li> <li>• Inviting alternatives / variants</li> <li>• Quality of contractor</li> </ul>
Consultation	<ul style="list-style-type: none"> <li>• International soliciting for tenders</li> <li>• Progressive selective procedure</li> <li>• Negotiation with pre-selected bidders</li> <li>• Risk transfer</li> <li>• Optimise Value for Money</li> </ul>
Finalising and signing the contract	<ul style="list-style-type: none"> <li>• Contract drafting with respect to final financial constraints</li> <li>• Company has free access to all necessary data (land, file,...)</li> </ul>
Launching the operation Contracts financial effects	<ul style="list-style-type: none"> <li>• Building and operating permits</li> <li>• Validate design – Works</li> <li>• Deliver project</li> <li>• Service delivered</li> </ul>

#### a) From collective needs to drafting the contract

Contracts studied here are concerned with public services either directly (water network or highways) or indirectly (hospitals, schools or local authority financed services). The end user is the "silent interlocutor" on behalf of whom public authority signs the contract regardless of the type of financing used. The public authority must necessarily understand fully under what conditions the client-user would accept that contract whether he pays a user-fee for the facility or through taxes pays for the concessionaire's service. These public needs are difficult to define in some cases; more so when one needs to determine the price users would be prepared to pay for the service. However, it is necessary for a public authority to study with precision these points, so as to prevent the contract being called into question post facto.

- The concessionaire company is not a philanthropic institution indifferent to contract equilibrium. It must work under normal economic conditions in order to bank dividends as soon as financial conditions allow. A contract financial plan will show during the long initial phase that the concessionaire carries very heavy investments and receives no funds. It is only at the end of that period that he recovers his funds and can invest again. The concessionaire may have a building company of its own or may choose one to do the work on its behalf. In the same manner, the concessionaire can operate the facilities directly (management, fees and tolls receipt, maintenance) or can choose subcontractors.
- The public authority defines and designs in totality the infrastructure and the service it must deliver. It solicits tenders. It will need to study the responses of pre-selected tenderers, then negotiate each proposal individually. In some cases, subsidies will be needed and the public authority will have to sign the concession contract with the concessionaire company.
- Financial institutions lend necessary funds for building and will start getting reimbursed when the facility or service opens.

Since concession operations are complex, it is important that contractual risks be correctly identified from the start. The fact that bidders may be builders, managers or strictly financial institutions, influences negotiations. The public authority must watch out that the parties do not overlook certain aspects in the course of negotiations: financiers deal more with risks, benefits and security (debt cover ratio) matters; while builders deal above all with contract implementation problems.

The public authority's consultants (technical and legal specialists) must carefully fulfil their part either validating the tenderers' proposals or criticizing them to uncover weak points.

The contract's main elements correspond to the different build, operate stages and the concession's term. Tenderers need to carefully analyse these three aspects and the solutions they propose need to be complete.

### **Accepting the concession process**

In a number of cases the public authority assigns a public service or a facility without having correctly evaluated the public's agreement to the new toll system. Whatever the process used (concession with user-tolls or "shadow tolls"), people may not accept to use the facility. The acceptability of the new service's offering (quality-price) must be determined by an in-depth preliminary analysis. Toll-fees, traffic conditions and service-use can all be tested. Clients want value for money and their needs to be met. Older facilities are partly relieved by new ones. At the same time, this creates better use conditions for all.

The public authority and the concessionaire must therefore correctly evaluate potential use and price.

## **b) Project prerequisites**

### **Project's public utility**

Before launching a specific project, some countries conduct public utility enquiries.

A public utility enquiry procedure must determine whether the project will create more advantages than disadvantages. The enquiry must take into account such factors as environmental consequences, the operation's financial cost or the restrictions to individuals' private property.

Often, the public interest is involved: transport speed and security and the contribution of the project to local or national development. During the public enquiry, all interested persons can express their observations concerning the project.

These enquiries are sometimes long and should necessarily be carried out before negotiations with the private sector start. These investigations must take the necessary amount of time to address the project's problems.

## Land

If public authority owns the lands needed for construction, then the concessionaire may use it freely – this is a form of subsidy - or in exchange for rent.

If the land belongs to one or several persons, an expropriation procedure is necessary. The public authority would usually take responsibility for expropriation and then become the new proprietor.

An investigator is commissioned to conduct a public investigation preliminary to any expropriation so as to advise how the project should be pursued, which owners to compensate and how much each should receive.

Respecting of individuals' property rights, this procedure takes a long time to determine the prejudice to each individual. The public authority must conduct it before starting negotiations with the private sector.

An expropriation procedure creates financial and economic constraints that need to be taken into account due to the delays it causes.

## Feasibility studies

Feasibility studies are an essential aspect to consider when the contract is drawn up. Several particular problems need to be mentioned. Sometimes the concessionaire must conduct the study himself. At other times, the Administration will give the concessionaire its own study or ones previously done by its consultants.

Here the public authority will have to define the nature of the study : is it binding or is it only a document indicating the future contract's known requirements, geological conditions or other elements; or is it a referential solution that will guide the contract until it is completed?

These studies are usually for information. They must, however disclose the public needs and the public authority's wishes.

They must indicate the authority's preliminary choices, their estimated cost and main options. They must not be too tightly drawn, otherwise they will restrict any variation when implementing the contract, when companies have to be able to express their overall view on the project.

Tenderers' original ideas and proposals must be protected. Indeed, it would be inadmissible to see other bidders benefiting from a novel solution offered by a given bidder for a specific project. The principles that must guide the authority are: confidential treatment of bids, no mixing of proposals, no new consultation based on competitive bids, a respect for the property of original ideas.

Next, the public investigation cost must be addressed. For important projects, the cost can be very high and only the selected tenderer is able to include the feasibility study cost into the contract. One must determine whether bidders who were not selected should be compensated for part of their study cost.

It is an important aspect which affects the competitive process since companies who feel they have little chance of winning a contract will be disinclined to submit proposals. Thus occasionally rejected bidders receive compensation.

### c) Establishing competition

A balanced and realistic approach is needed to trigger a truly competitive environment for a concession or a PPP project.

- European directive 93/37 deals with infrastructure concessions. It imposes only a duty to advertise for this type of contract. In fact, when public authorities want private industrialists to invest into the economy in areas other than infrastructure, there is no obligation for competition.

## There are no simple selection criteria :

- In Public works projects' price has little meaning since it is not the sole object of the contact between the public authority and the concessionaire.
- The amount of subsidies bidders ask for is not necessarily a deciding factor to the extent that they constrain the public authority.

- Tariffs or fees that vary as time goes by, and are modified to reflect the user's behaviour, are only an approximate reference point. Since the tariff needs to evolve in time, this criterion is hardly critical.
- It is difficult to appreciate service quality at the outset. It is defined by contract on the basis of standard reference criteria known to all parties.

All these criteria need to be considered but they are not independent: improving one may prejudice another. There is no arithmetic formula to balance them simultaneously.

Three recommendations can be made:

- ◆ When making a decision all variants must be taken into account.
- ◆ Negotiations concerning candidates' proposals should take place with due respect for the ideas of each.
- ◆ Choosing a bidder who offers a better project should be done according to a set of criteria, amongst which are service, price, competence and resources to implement the contract.

A real risk in over-specifying and in over-defining exists when a concessionaire is chosen. This can create a fiction whereby public authority feels it is master of its choice.

Disclosing the conceding authority's judgement criteria is a way to avoid poor responses. A private concession is an investment and a long-term financial commitment.

Soliciting innovative tenders will allow the private sector to make a better feasibility study since it will be able to review the real needs in detail.

Apart from the competitive process set up by public authority between different bidders and different projects, investors will also compete to obtain the best conditions to invest their capital. Investors are guided by best income/security ratio. Public authorities must understand that they must offer investors reasonable and attractive investment conditions. Invested funds in concessions must be as profitable and secure, as they would be in other types of investments.

#### d) The « step by step » negotiating method

The PFI selection is progressive and logically leads the public authority to choose the best contractor.

At first the public authority **defines the project** and the needs to be met. This is done in terms of outputs or performance.

Certain options are selected before defining a « reference project » that the authority will use for « comparison ».

**A team is selected** to manage the project. It must include the necessary experts to help select the concessionaire.

Tactical choices are made as to the step by step progression of the procurement.

During the following stage, an advertisement in the official press invites tenders and details the project theme. Companies are invited to submit and file their **candidature**.

**A preliminary qualification** of companies is done on the basis of criteria chosen to select the most competent.

A list of pre-selected bidders is established to whom a final tender is sent. Invited to negotiate, bidders send in their proposals. The administration evaluates the bids and compares them to the chosen referential project in order to classify them.

**Once the best bid is chosen**, the contract and the definitive financial terms can be signed. All parties sign and it will constitute their "law" for the duration of the contract.

#### e) Quest and protection of innovation

Authorities conducting concession and BOT processes are aware that the best projects come after the concessionaire conducts an in-depth study and consequently develops his concept. It is important to encourage the concessionaire's ideas. But it is also important to respect them so that others do not steal them.

Two cases can occur. Let us return to the concession's classic origins:

1. **A public authority launches a project:** it wants a concession contract to bring financing and know-how to create an item of infrastructure and provide a service to the public. This is the starting point of most concessions.

2. The other case is when an **independent private person presents the public authority** with a proposal to provide an item of infrastructure and/or service based on a new idea which can require not only the public authority's authorisation but also use of the public estate.

**In the first case**, the public authority will delineate precisely the infrastructure, service, financial clauses and other elements. The greater the complexity, however, the less chance there is for a satisfactory result. For instance, a delegating authority which requires financing provided over a given number of years, with specified financial backing and that the work be designed by itself, and that toll fees be at a predefined maximum price, will find that most bidders will withdraw.

Concessions need to be negotiated and need to draw on past concession experience. When one compares non-negotiated markets transactions to negotiated procedures, one sees that for public authorities, negotiation alone makes concession viable.

It would also be easy to demonstrate that overly harsh terms demanded during negotiation, lead to failure

An unfairly treated or insufficiently protected concessionaire:

- ◆ will not correctly implement the planned investment,
- ◆ will not be interested in other public authority's projects,
- ◆ will use all means to get out of the contract.

The concessionaire is not free to fix concession conditions unilaterally. Conditions are the result of a fruitful dialogue between the concessionaire and the public authority. Such is the case for fees and tariffs. In reality, some historical concession cases have given poor results because they had been subject to too little public authority negotiation.

It is also certain that flexibility must be respected; during negotiations for the tenderer to state his viewpoint, his ideas, his plan and vision of the service, as well as during contract execution. Contract clauses must allow the parties to renew the contract, allow examination of what can be and should be done reasonably to change the contract, and allow amendments to meet changes in circumstances.

**In the second case**, that of an entrepreneur-promoter, the three following possibilities should be considered:

- ◆ Either the public authority explicitly recognises that the promoter owns the idea (design, location or both) in accordance with intellectual property rights. In this case, it should allow one to one negotiation with the latter; even possibly refrain from negotiating with any other.
- ◆ Or the authority considers it alone is competent to design the project. In this case, it adopts the ideas and sets companies bidding into competition with each other, disregarding intellectual property rights
- ◆ Or it can open competition but must explicitly attribute a privilege to the legal entity or individual who brought the idea. In this case, the public authority grants a financial advantage to the inventor of the idea if he participates in the competition or compensates him if he does not. Such is the case in Italy, Japan, Peru and other countries.

## f) Important questions the contract must address

The contract fixes the parties' contractual obligations for very many long years. Consequently, this document has a fundamental.

This article will provide a brief overview of the issues and will cover the clauses concerning construction, service, contract balance or change and liability.

It is important to include a glossary since a concession must last for many years. The contract must specify the meaning of each term.

#### **a) Construction clauses**

The contract must define the work content, the phases and the course of operations. The concessionaire is responsible for the “initial construction”, and later for standard maintenance work, repairs and overhaul.

The contract must accurately define respective responsibilities for the project and the course of operations. In fact, one must forecast maintenance cost when dealing with large infrastructure conceded for a long period of time. Badly upkept facilities risk being returned to the public authority in a poor state. The public authority needs to control the work of the concessionaire. The latter needs to deploy the necessary means for the maintenance until the contract’s completion. In some cases, the concessionaire might have to deposit a security until the end of the contract in order to protect the public authority against faulty maintenance of the facility.

Referring to international and European norms can be useful. In particular for the contract’s technical aspects. It is necessary to keep in mind the technical coherence of initial work and upkeep in order to guarantee the facility’s proper maintenance. The contract schedules should include the implementation schedule and some of the plans; otherwise the contract can stipulate that the public authority be given the building plans at the contract’s term.

The contract must also specify how work will be determined. Sometimes contracts foresee that the implementation of certain types of works will be decided by common agreement. This occurs generally close to the contract’s term and may concern overhauling facilities or optional stages.

#### **b) Service and infrastructure operating clauses**

These clauses must clearly state the concessionaire’s obligations when he is in charge of operating the infrastructure and define the service’s characteristics and quality. The public authority must set out exactly what obligations can be modified at a later stage in exchange for compensation or with the concessionaire’s consent.

The public authority cannot delegate the totality of a public service delivery when its provision is its legal responsibility.

Operating clauses usually accurately define client-user relations with the concessionaire. The schedule of conditions must indicate how the user can access the service, the tariffs, user rights and the manner in which he can exercise them.

In general, operating conditions respect the general principles that rule public services.

In this context, certain principles should be mentioned:

*Continuity principle:* it states that the concessionaire must constantly keep the service available, without failure; the principle is a very old practice and is fundamental to concession law.

*Equality principle:* the clients’ population must have equal access to the service, which implies that the fees are the same for all.

*Adaptation or mutation principle:* concessionaire’s service must adapt to the evolution of users’ needs as well as to new technologies. This is sometimes difficult to draft and a contract that covers technological evolution must be specific enough about the matter to avoid ambiguity.

*Principle of Impartiality:* The service cannot discriminate between users on the basis of political or social differences.

A contract that conforms to these “rules” needs to set out under what circumstances they apply.

The concessionaire who installs and operates the public facility must have real and full management autonomy, as a traditional private sector entrepreneur would to fulfil his obligations. It would be a mistake for the public authority to interfere with the concessionaire’s day to day management. If this were the case, the public authority would assume the performance, responsibility instead of the concessionaire and thereby would violate the contract’s object.

Conversely, the public authority is obliged to supervise the concessionaire, and thereby must remain competent.

The concessionaire might have to purchase certain services from other companies, without transferring part of its mission to them.

When contracting with another company to realise part of the project, the concessionaire remains responsible for the concession contract. Such a purchase is a commercial transaction, not a subcontracting of responsibilities. Because he was personally selected, the concessionaire must personally fulfil his obligations. He bears the responsibility to implement the project and cannot transfer it to a third party unless the public authority consents to the transfer.

### **c) Contract balance clauses**

The concession's term varies depending on the type of investments and services. The more important the initial investment, the longer the contract must be, to allow the concessionaire to amortise building costs.

The contract must provide the concessionaire with a fair income proportional to the risk he incurs. The risks must be clearly delineated and in certain cases shared between the concessionaire and the public authority.

The contract must specify in what way the different types of risks are dealt with if encountered.

The technical risks are one preliminary feature of all infrastructure concessions. The second risk is linked to the changes in user habits or product and service price changes. Sometimes, one can identify risks related to new facilities/services that may disturb a concession's equilibrium.

The evolution of the economic and social context can create risks related to the social situation due say to strikes or other catastrophic events that may cause incidents.

The contract must not ignore risks linked to legislation and normative changes, which are becoming more important and costly.

The contract must share the risks between the public authority and the concessionaire. The former deals with legislation and normative risks, the latter deals with operating and technical risks. It is for the contract to determine how to share risks related to economic or political fluctuations.

It is frequent and fair to apply the theory of unforeseen events. If the implementation of a contract has been profoundly altered and unbalanced due to events or circumstances external to both parties and that neither party could have foreseen, the concessionaire may have the right to be compensated. « Force majeure » is applied in cases when both parties could not have reasonably foreseen such an event when the contract was signed.

Technological, normative or important political changes may be defined as force majeure events. However, this principle is not applied for simple changes. The contract may then suffer from an important and long-lasting imbalance. In this case, the concessionaire may have a right to ask for a review of the contract. But if the revision process does not produce a satisfactory new balance, the concessionaire can legitimately ask the public authority to terminate the contract.

The theory of unforeseen events is not the same as «**Sovereign act**». The latter occurs when the concessionaire demands compensation because the public authority unilaterally changes the contract's implementation terms. The public authority does so by means of a unilateral administrative act foreign to the contract but with heavy consequences for it. The concessionaire's compensation must be total in as much as public authority has unilaterally altered the contract.

### **Change mechanisms**

PPP contracts include specific mechanisms so as to allow contracts to evolve when needed. Unforeseen events clauses will allow a contract to evolve and bring the changes both parties require.

### **d) Liability clauses**

The contract must set out how responsibilities (liabilities) are shared between the public authority and the concessionaire in case of prejudice or injury caused to a user or a third party. A common rule stipulates that the concessionaire is responsible for all of the service operation.

It is important to know to what extent the concession is operated at the concessionaire's cost and risk. On the one hand, the concessionaire is responsible for service operation, which is why the public authority delegated the service and, on the other, the public authority may be held liable if the concessionaire commits a serious error or becomes insolvent.

The public authority's responsibility is invoked if it fails to supervise the concessionaire correctly. The damage can be done to the equipment, to the service or to the facility which might be badly maintained or supervised.

Once again, the contract must set the rules or refer to laws and regulations specific to the matter at hand. In respect of incidents of pollution caused by faulty purification or waste treatment equipment, be it sanitation equipment or waste disposal, the consequences can gravely affect the public authority.

The public sector is responsible for the concessionaire's work ante facto and post facto. The public authority can assign the concessionaire certain administrative audit functions within the limits of the contract.

## Contract's structure

### A – CONCESSIONAIRE'S OBLIGATIONS

The concessionaire has obligations towards third parties as well as to the public authorities to carry out work and/or service.

- 1/ - Obligations to build;
- 2/ - Obligations to maintain in good condition;
- 3/ - Obligations to operate;
- 4/ - Obligations to hand over the works to the contractor.

**1° - Concessionaire must carry out preliminary works (create the facility or set the service up) in accordance with terms set out by the contract and within timescales set by initial specifications.**

The public authority can monitor the work. The concessionaire cannot substitute a third person to carry it out due to the principle of *intuiti personae*. He has no real right over the works and must deliver the object he has contracted to provide.

**2° - Upkeep and maintenance.**

Delegated to install the facility, then to hand it over to the Administration, the concessionaire ensures its state of repair and its upkeep during use. This is part of initial concession contract's specifications.

**3° - Ensure running and performance planned by the contract.**

The public service object of the contract must be to offer constant availability; user-fees must be respected; and the service must be supervised by the public authority.

**4° - Handing over the work** at the end of the contract: it must be in good condition and done with respect to the contract terms.

The concessionaire is **penalised** if he fails to meet his obligations:

**a) The public authority can *distrain revenues* to force the concessionaire to execute his obligations.**

**b) *Sequestration*** is equivalent to putting public works under state-control. However, it differs from state-management since it is a temporary solution to respond to the concessionaire's failure to fulfil his obligations, either to complete the facility or to run it. The public authority receives all revenues in order to complete the facility.

**c) *Forfeiture*** – Termination contract law is applied to the concessionaire who has not met his obligations.

**d) *Withholding the guarantee.*** The state has the right to keep all sums it receives from the time forfeiture has been pronounced and obligations not met.

**e) *Liability.*** With regard to third parties, the concessionaire is liable for all damages caused by the building and use of public works and related to the concessionaire's obligations.

The concessionaire, as a substitute for the State, bears liability for damages caused by the work, as the State would if it had built the facility. Frequently, the initial specifications indicate what damage caused by the facility is to be the concessionaire's responsibility.

## B – CONCESSIONAIRE’S RIGHTS

Concessionaire’s rights can be analysed from three standpoints:

- 1° Rights concerning the counterparty,
- 2° Rights concerning third parties,
- 3° Rights relating to concession contract obligations.

**1) Rights concerning the counterparty:** arise from financial agreements, generally subsidies and tariff guarantees included in the contract.

- Rights included in the contract relating to the installation.

- The concessionaire has the right to operate the service. The concessionaire enjoys total independence and is not subject to instructions from the conceding authority.

The contract can forbid the conceding authority from giving a second concession, rival of the first. Absence of lawful monopolies does not prevent a contract signed by both parties to allow *de facto* monopolies.

**2) The concessionaire’s rights with respect to third parties.** These are especially important during the construction phase:

The concessionaire stands in for the State in order to install and operate the public facility. He is endowed with true public authority rights in respect of third parties. The law may even give him the right to resort to public utility expropriation.

Rights to use the facility include security and the right to receive fees. The right to take security measures results directly from the nature of the contract itself. The conceding authority is compelled to let the concessionaire operate freely. He may only supervise the quality of service. He does so on a delegated public authority, as indicated in the contract.

The right to receive a revenue is part of the contract. The concessionaire needs to benefit from the commercial freedom of private concessions – so as to adapt to needs and optimise the public facility’s use – within limits defined by public authority. Therefore, the administration determines the fees, but collaborates with the concessionaire in doing so.

### 3) Concessionaire’s rights over the facility

When they apply, public estate legislation dictates that a facility destined to public use is imprescriptible and undistrainable.

The concessionaire’s conceded right is not a temporary or perpetual right over the facility itself, but **the right to provide a public service.**

Consequently, no ownership right need be given to the concessionaire. He needs hold no real estate right. His rights can be immaterial rights, such as the right to levy payments (tolls, fees) for services rendered. The link between the public authority and the concessionaire is personal. The public authority lets the concessionaire use public estate. Sometimes, it even excludes its use by others or overrides this right in exchange for compensation.

The practical consequences are; on the one hand, the concessionaire normally cannot mortgage the facility; on the other, since the concessionaire holds no property right on the lands used for the public service, creditors hold no security right. The facility cannot be seized because it is a part of the public estate.

### 4) Third party rights

Concession contracts increasingly set out third party rights: financiers’ guarantees and, in general, lenders’ rights, the contract’s evolution in case of external change of regulation.

#### c) Concession’s term.

- Concessions end four different ways:

1° normal termination at term; 2° contract cancellation; 3° concessionaire’s forfeiture;

4° conceding authority buys back the concession.

1/ - Except in special cases, the State or a public authority steps in for the concessionaire at the contract's term. The latter must hand the facility back in a well-maintained condition. This handback demonstrates the concession's "leasing" character and constitutes one of its outstanding original features.

2/ - Some agreed cancellation event occurs. Concessionaires rarely request the contracts' termination.

3/ - Another original aspect of the contract is that the contracting authority may be able to cancel the contract and penalise the concessionaire if the latter is in default. Cancellation can only be invoked by the public authority if a contract clause allows it to do so.

4/ - A public authority has the right to buy back the facility before the actual term of the contract. Thus, the public authority substitutes itself for the concessionaire, but in exchange must compensate the latter. The public authority can only buy the concession back if it was so stated in the original contract terms.

## h) Methodology - good and bad: mistakes to avoid

The very specific character of concession contracts springs from their complexity. It is positioned at the limit of a licence to act, of a transfer of state powers (such as expropriation or public estate leases) and of an association between a public authority and a legal entity. From this very unusual contractual relationship comes a long lasting marriage from which a service or public facility is born.

This requires important investment and a series of actions to manage operations, design and implementation, run the service and ensure facility and equipment maintenance.

It is different from those public contracts that purchase works, supplies or services. Concession contracts describe a set of tasks that the public authority assigns for a long period of time. The public procurement regime deals are short-term contracts that include no delegation, mostly because there is no investment in the public service.

It is out of the question to mix both types of transaction and to apply solutions from one to the other. The short-term, simple contract has neither the same object, nor the nature of a long-term complex contract needing important investment.

It is interesting to consider what we can learn from historical experience about good and bad concession methods.

A flight-plan defines an aircraft's flightpath: If a pilot selects a configuration with inappropriate speed and angle considering the plane's characteristics, there is a good chance that it will crash. The complexity of a concession contract and the specific role played by both parties must be taken very seriously.

**The history of concession contracts provides clear and repeated examples of errors in method.** At times, they have to do with the agreement; and at times with the execution of the contract. They fall into two main categories, as we shall see. Let us deal with bad methods first. From there we will be able to conclude that the contract terms must be well suited to the object of the transaction and adapted to accommodate complex concession financing.

### I – Defective methods

If methods used to draw up concession contracts are defective, the public authority will bear the consequences and suffer the disastrous effects. However, contract content errors carry the most serious consequences : contracts have curtailed or failed and both parties have paid a heavy price.

#### **Beware when drawing up an agreement**

It is certainly sound to advise a public authority not to initiate a concession or a delegation contract for a public service if it has not thought out carefully how to negotiate suitable clauses for the object and organisation of the service it intends to transfer to a private legal entity.

## 1 – Two errors often found in concession contracts.

At the beginning of the 19th century, Adam Smith spoke of the market's invisible hand to picture the overall logic of multiple individual relationships that lead to supply and demand agreements.

There is a similar logic to concession contracts sometimes called "the single hand". In fact since the 16th century the concessionaire acts as an orchestra conductor: he designs, finds funds, builds, manages, maintains and supervises all actions.

If he assigns some functions, he never totally transfers them. He has overall control. This leads to one essential consequence: the concessionaire permanently weighs interactions between all elements of the contract because any change in any element of the contract has repercussions on other elements (e.g. design on build). If in the course of implementing the contract the question of change arises, he can either offer to negotiate that some other element in the contract be corrected or he can refuse a change that has very serious consequences on the contract.

One finds two major errors in concession contracts:

- **sub-dividing the contract into stages**, so as to distinguish each person in charge of each stage which amounts to violating the contract's essential logic;
- **a clause either too harsh or too lax that distorts the contract's object.**

## 2 – Sub-dividing the concession contract into artificial stages.

The confusion between concession and contracting-out is constant. For some public authorities, it is tempting to want to keep control over a number of operations falling under the concessionaire's responsibility in classic concession contracts. This lack of respect for the multifunctional logic under a "single hand" leads to very negative, even catastrophic consequences. A famous example, is the Channel tunnel concession, which created artificial divisions in the concession contract. Three separations destroyed the concession logic:

- design and build,
- operate and manage,
- finance and operate.

When no single concessionaire is master of all the different contract stages no balance can be reached in the contract.

**Such separations lead to breaking up the design, finance, build and implement contract logic.** The concession cannot be cut up into artificial stages with the goal to reconstitute market logic and assimilating to classic public sector management: one organisation to direct and manage the facility, one to carry out building work and lastly an independent designer (overall manager who is sometimes a member of the public authority), and the project manager himself possibly a special function independent of all other intervening parties. This model does not work for concessions, since the contract must be based on the synergy between all functional parts..

Reconstituting a conventional public project within a concessionaire, if the builder and designer are two different entities, often leads to insoluble problems. The example of the Channel tunnel demonstrates this quite well.

Evidently, the concessionaire must be the overall project manager and must constantly keep the contract in balance. He finds answers, reacts to maintain the contract's integrity when confronted with external constraints, clause modifications, and all the other difficulties that are encountered. He needs different types of leeway, otherwise the contract is doomed to fail.

He must endeavour to avoid contract modifications. If they are inevitable, he negotiates circumstances and terms. In a complex or difficult project, the concessionaire who is satisfied with accepting contract modifications and then negotiating post facto their consequences with subcontractors, fails to live up to classic concessionaire role. He is supposed constantly to solve the concession equation that revolves around the interaction of all four elements (design, construction, finance, management).

All the cases mentioned above are "at best" sources of litigation and "at worst" lead to contract termination.

### 3. An onerous contract term can distort the logic of the contract

Concession history is filled with contracts with terms either too harsh or, less often, too lax.

The first example implies that either the concessionaire takes excessive risks or the length of the contract is inappropriate.

Let us examine examples of harsh and lax clauses.

#### 2.1 - Clauses too harsh in the original specifications.

The first type is exemplified where **too demanding a performance is set by the contract**<sup>6</sup>. In some cases, it sometimes is totally unrealistic. Historically, concessions have been the cradle for unworkable ideas as well as for the most striking technological jumps in contemporary applied science.

Consequently, numerous contracts have been signed covering conditions unknown to both parties, public as well as private.

#### **Too short a period to amortise the concessionaire's financial investment.**

It is not rare for a public authority to shorten the length of concessions especially in the case of technological innovations.<sup>7</sup>

**Problems arising from very low tariffs within** the concession contract have created many notorious examples. When a public authority puts pressure on service prices, concessionaires agree to fees that are so low, that it may lead them to bankruptcy. This was the case of Paris waterworks for which the price had been set too low and caused the company to go bankrupt.

**The bond demanded is set too high for the concessionaire.** This explains why some concessionaires cannot marshal enough funds to finance both bonds and building work.

**An overambitious implementation plan** has also been the cause of bad concession contracts or of poor technical choices in the long run.

**The public authority which does not protect the concessionaire** from potential competitors can be the cause of litigation and enormous difficulties for the concessionaire. This happened with the very first concessions for marsh drainage.

More insidiously, **distributing rival concessions** leads to unfortunate consequences. Such was frequently the case for public transport and waste treatment companies.

**Absence of public co-financing** stopped the construction of quite a few projects and put a few others in jeopardy (Channel Tunnel). Bridges, urban development schemes, canals, railways, public transport generally received public co-financing that was both often considerable and at times negotiated. This helped build facilities that would never have been built otherwise.

**Unrealistic contract clauses that** relate to problems identified as urgent or potentially serious in the concession contract and are put off till later for a solution. Turning a blind eye is not more useful for concession contracts than any other contract. The famous technical progress clause for urban lighting at the end of last century caused considerable litigation between gas companies and towns who had inserted this clause in their contracts. Industrial gas companies could not rebuild public and lighting networks without completely revising the concession contract content.

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<sup>6</sup> In 1919, when the French Minister of transportation signed with Pierre Georges LATÉCOËRE the concession contract for the Toulouse-Rabat line, with planned a departure every other day. At the time no one could give any weather forecasts for aviators; security piloting methods were still primitive (no “ virtual horizon “ or radio beacon); and both engine and communication technology were still very immature.

<sup>7</sup> Electricity, telephone or aviation concessions were initially so short (4 to 15 years) that it prevented concessionaires from investing enough which led them to increase rates and at times not fulfil their contract correctly.

## 2.2 – Lax concession contract clauses.

City gas concessions are an important example. **From the outset, these contracts fixed service prices too high.** Public authorities obtained their reduction through litigation.

**A contract that lasts too long** makes it difficult for the authority to require the development of the concessionaire's service offering. Nowadays this does not normally occur since the practice of contract change is largely used.

Far more serious is the **fundamental change of the meaning of a contract.** This can be caused by clauses foreign to the contract. The forced merging of several concessionaires' profits and losses, as was done for railroads in France, radically transformed the equilibrium of the contracts and induced a set of excessive and negative responses from the concessionaires. The core of the problem was an imbalance between public responsibilities and private obligations, within inadequately thought-out contracts, so leading to bad results.

### **Poor concession letting methods.**

Trying to attract investors by legal measures is dubious since this leads to heavy procedures. Laws are too precise, create too many constraints and do not protect the freedom needed to set up complex concessions.

More often it is case law that has allowed concession contracts to evolve and prosper despite financial and technological evolutions that might have led to their disappearance.

We must then consider that the heavier and the more complex procedures are, the more the chances for a weak contract quite unintentionally, specific legislation often demonstrates this.

There are method problems in drawing up contracts. Indeed encountering the following problems is not rare:

- **Competition on fees or on expected use.** Public authorities generally invite competition over the contract's duration or over public subsidies requested. It wisely does not let concessionaires compete over tariffs which cuts out serious management problems subsequently and even bad quality service. Competition over expected use, found too often still, brings fanciful concessionaire bids that trigger unrealistic subsequent uplifts.

- **The lack of preliminary studies for very technical concessions** is no longer a frequent phenomenon. In order to avoid this, the potential concessionaire can be granted a period of time during which he can study tariffs, expected usage and facilities. At the end of the period if the bidder chooses to sign the concession, he is awarded the contract. Otherwise, he must pay for his own study costs.

- **Absence of candidate pre-selection** can lead to considering unreliable candidates who should not deserve a public authority's confidence and would not be able to create the facilities or arrange the finance.

Tenderers' references must be taken into consideration when choosing a concessionaire. The public authority cannot and must not attribute the service or facility to the lowest bidder backed by weak proposals that might be full of errors. The length of contract demands serious preliminary studies. Too many contractual requirements prior to financing and, at times, the use even of one-sided clauses, can turn consultations into a contorted game that can lead to an unrealistic contract, dangerous for all parties. Economic laws must be allowed to come into play within a clear, intelligent and honest framework.

- **Lack of visibility for the basic data given to tenderers** can also be a mistake: if the concession grantor does not express clearly what public funding to expect, as well as the legal and property status involved (most importantly environmental obligations), there is little chance that the concession will ever take place or work out in an equitable fashion; more so if public authority adds new elements to the contract along the way.

- Selection based entirely on pre-determined criteria is not the complete answer: because **concession contracts are complicated, the tender's content also must necessarily be negotiated.** Competing on ideas may seem the proper way at first sight, but in fact that approach can fail; bidders not sure of obtaining the contract and not knowing the outcome for their ideas, when faced with competition will not reveal their best solutions at an uncertain early stage.

#### 4 – The best methods.

Having reviewed the poor methods, it is easy to find counter examples and the best methods for drawing-up concession contracts. Advertising clearly public intentions in cofinancing and in the preferred approach to ecological risks will constitute positive points. A commitment similar to the British Government's in March 1994 concerning the source and ownership of concessionaries' ideas will incite companies to propose good projects.

It is inauspicious to launch a concession consultation when the public authority does not hold all the public assets needed. These must be appropriated beforehand, otherwise the public authority will have to transfer an expropriation right to the concessionaire.

The core problem a public authority sets forward in a concession consultation needs to be simple and the public authority must invite and accept innovative proposals. It must also show reticence in its preliminary definitions of specifications!

A highway concession in Los Angeles took root from a "Make propositions for City transportation" consultation.

In Great Britain the "Private Finance Initiative" is based on the will to test private sector ideas in matters of finance, implementation and management before any public investment is made. Thus it happens that contracts signed at the end of a long negotiation procedure may bear little resemblance to the initial ideas of consultation initiators. As a matter of fact, the public authority should invite and identify all pathways to enhance the profitability that can improve the project or make it viable. Annexed services, land transfers, new uses of land or buildings occupied can make concession projects viable.

A measured negotiation gives the concessionaire the opportunity to identify contract risks well, to allocate them clearly to the private or public party and to define their limits.

Drawing-up these contracts must respect their complexity. This implies necessary iterations with regard to the financing, designing, implementing and management.

##### **A well-defined contract content**

The importance of original specifications is considerable for the contract to progress well. The concessionaire is someone who takes on a binding obligation. He brings his innovation, directs design and commissioning. He bears full responsibility for the service. Performance levels are to be found from the outset in the "performance specifications" set.

**Well-planned contract duration** is an important factor. Generally, contract lifespans are very long to allow the concessionaire to amortise his investment. **The state gives what it has: time.** It is an essential element of the contract. Consequently, one should not create cumbersome obligations that would weigh on it.

**Well-identified, well-measured and analysed risks** must be clearly set out in the contract as well as the sharing out of risks between the public and private parties. Annexed financial plans are a good way to ascertain the sound financial progression of the contract.

**Public co-financing is frequent.** One must recall that the majority of historical concessions have been co-financed: waterworks, electricity, gas, highways, as well as other concessions (e.g. the Eiffel Tower). It makes it possible to balance the economic factors and to commit the public authority itself to the contract.

The contract must spell out **the promoter/concessionaire's freedom of action.** Proper supervision of the concessionaire must be organised in order to measure service delivery. Moreover, initial specifications must not be ambiguous. Too many concession contracts have failed due to the stifling of a concessionaire's freedom of action through fussy and multiple audits (technical, financial, administrative, management, etc.) which lead concessions into state-led management, i.e. a disguised form of contract management take-over by the State.

**Respecting the contract's term** is equally critical to concessions. If contracts change at the whim of central or local governments who refuse to be bound by previous administrations, all future concession candidates will be deterred.

# APPENDIX I

## AN INTRODUCTION TO PFI

### **I History and Development in the UK**

PFI or "The Private Finance Initiative" was launched in the United Kingdom in 1992 by the then Chancellor of the Exchequer, Norman Lamont. The original intention was to draw on and generalise certain one-off project finance type transactions whereby the Private Sector built financed and operated large pieces of infrastructure (e.g. the Dartford crossing, the Second Severn Bridge). The political motive was doubtless to boost economic activity at a time when the Government was facing an 8 % deficit and the general economy was still in recession. From the outset, there has been a barely suppressed subtext indicating that PFI financing was to count towards Government debt.

Importantly, from its earliest days, the Initiative has been under Treasury control and indeed promoted by the same officials who had pushed through privatisation. The hard-line Treasury position was and to some extent still is that the Public Sector is less competent at managing physical, human and financial resources than the Private Sector. Consequently, it is better for the taxpayer if Government determines policy and, wherever appropriate, the Private Sector becomes involved in public service delivery.

Thus PFI, as interpreted by the Treasury, became a third strand to complement privatisation and outsourcing. It addressed large and capital intensive elements of public services and facilities and was of a long-term nature. So here it resembled privatisation. But unlike privatisation there is frequently little or no income from users and control is exercised not by a Government Regulator, but through a contract with a Public Sector client as with outsourcing.

Typically, PFI transactions have concerned roads, prisons, hospitals, IT systems and schools. The Ministry of Defence has adopted PFI across a range of its purchases, and some Ministries, notably the Department of Social Security, have used PFI to renovate their property estate.

The arrival of the new Government in 1997 confirmed PFI as an enduring practice, although the 'Initiative' was then recast in a broader policy framework of Public-Private Partnerships (PPPs) and the quest for best value as enshrined in the policies of the new government. The presumption that the Private Sector always had the best solution was abandoned, but two of the key principles of PFI contracting were re-inforced: value for money and competition.

By 2000, the number of completed PFI transactions had moved past two hundred and fifty, with an ongoing rate of £ 3 - 4 billion of asset cost being transacted per year, or some 15 % of national spend on new infrastructure. In the medium-term, this figure is likely to increase as PFI procurement is gradually adopted more widely across local government. PFI is regarded as a success and is believed to be generating savings of 10-20 % over previous methods of procurement.

### **II. PFI methodology - the 4 key principles**

Although it took some years to develop, there is now an established methodology for PFI. Unlike certain forms of similar arrangements adopted elsewhere, PFI is firmly interpreted as a method of Public Sector procurement. Thus, to the extent it is a partnership, it is a partnership governed by a very detailed contract in which one party, the Public Sector is cast as the client and the other, being a Private Sector organisation, as the supplier. The nature of the supply is for a package of physical assets and the services derived from those assets over an extended period (anything from 7 to 50 or more years). The payment is normally made largely if not wholly by the Public Sector rather than by the users of the service. Crucially, payments made are entirely dependent upon the services being available for use at the appropriate standards, and to the extent that the supplier can influence or encourage use, as they are used. Therefore, no payments are made until the services are capable of being used (so no payments during build or development periods) and are then made monthly as the services are supplied. If the services are interrupted for any reason or fall below contracted standards, payments are suspended. During the course of the contract, any assets or facilities employed to provide the services belong to the supplier, although it is frequently negotiated that at the contract termination the Client has a right to acquire such.

In the development of PFI theory and practice, four key principles have been identified which are to be respected during the course of the process. These are **value for money**, appropriate **risk transfer** (or risk allocation), a contract based on **output specifications** and **competition** (to spur innovation and value).

## **Value for money (VFM)**

The concept of VFM is that the procurement should seek to achieve best value and not simply the cheapest price. To establish value, it is necessary to take a far broader perspective of the range of possible outcomes of a given project and to choose that option which provides the best balance between overall (or whole life) costs and the likelihood of cost and time overruns. In other words, VFM means not opting for what may look like the cheapest today, if that choice may prove the most expensive in the long term. The trade-off that has to be assessed is that between money and risks, which introduces the second key principle.

## **Risk Transfer**

This principle is often expressed as the maxim that the risks inherent in a project should be borne by the party best capable of managing those risks. This means, for instance, that it is presumed that the party best able to operate, maintain and plan lifetime costs of a facility should be the party that designed and installed it, i.e. the Private Sector supplier. Conversely, risks such as the obtaining of Outline Planning authorisation are deemed to rest more properly with the Public Sector client. Other risks such as whether the underlying facilities are correctly scoped and attract appropriate demand for services may be shared between supplier and client.

The way in which a PFI contract allocates risk is via the formulae for calculating payments (the payment mechanism). In the simplest examples, payments are made depending on the full service delivery but are reduced if services fall below pre-agreed standards. In more complex contracts where the supplier is in a position to influence the use of services/facilities, some part of the payment due will reflect additional use beyond pre-set thresholds. At the extreme, payments can be modulated to incentivise the supplier to meet collateral client objectives. Thus on certain PFI road contracts, the supplier receives greater payments if accident levels fall so incentivising quicker hazard removal.

## **Output Specifications**

The third principle links back to the notion of rational risk allocation and forward to that of competition. It is that if the supplier is to take responsibility for risks, it is not for the client to dictate how - and certainly not how in any detail - the supplier fulfils his obligations. The Public Sector client must express their requirements as levels and standards of service delivery (output specifications) and not by stipulating the engineering or the operating regimes. The client should, however, be satisfied that the technical underpinning of any bid is sound and compliant with relevant legislation.

## **Competition**

The thrust of the third principle is effectively to offer the problem to the Private Sector and to stimulate competition to find the solution (and hence the supplier) offering the best value, so introducing the fourth principle. The selection of a PFI partner is only made after a process which is clear and auditable and establishes that the partner chosen is offering an appropriate level of service at a better price after evaluating the allocation of risks. Hence, it may be judged better value to appoint a partner who is requiring higher monthly payments but is prepared to assume greater risks. Throughout the procurement process and beyond during the contract, it is in the interests of the client to spur the Private Sector supplier to innovate to enhance value. Experience has shown, however, that suppliers will only respond with their best ideas if they are certain that those ideas will not be shared with competitors. Therefore, the principle of competition, as applied in PFI, enshrines the notion that innovation will be the key to better value, but will only be offered if its source is respected.

## **III. PFI procurement - a very structured process**

### **A. Establishing value**

As value for money is the driving force behind PFI, and since public money is at stake, there are rigorous procedures which must be adhered to before and throughout the procurement process to demonstrate that value is being achieved.

Throughout, three basic questions must stay firmly in focus. Is the PFI procurement route offering better value than alternative methods of procurement? Which of the competing bids offers the best value? And, crucially, and to be addressed first, is the procurement affordable year by year as payments are made?

As with all major or capital investment initiatives by Public Bodies, the need and the proposed solution should be supported by a Business Case and an appraisal of the possible options.

This process is taken one stage further for PFI procurement whereby a preferred solution (or Reference Project) is costed and the cost expressed as the stream of annual charges that might be anticipated from a Private Sector PFI supplier. These annual charges must be affordable within the likely forward budgets of the sponsoring Public Body. For Local Authorities in receipt of a PFI Credit (special PFI funding controlled by the Treasury), the credit should be factored into the affordability assessment.

If these initial analyses indicate that a PFI procurement represents a potentially value-for-money and affordable route, the procurement may proceed. But the initial exercise is not abandoned. The Reference Project must be revisited at every major stage of the project and further refined so that it becomes the ultimate benchmark against which the final bid is compared (it is often referred to as the Public Sector Comparator – the PSC). Equally, as the likely prices of the bidders emerge, the affordability of the project should be re-assessed to ensure that the Public Body does not arrive at a position that at the end of the procurement it cannot afford the best value bid.

As fully priced bids emerge from tenderers under the competition, the assessment of value against the PSC runs in parallel to the comparison of those bids. It is to be anticipated that bidders will be offering differing prices and different allocations of risk. To compare and evaluate the risks inherent in the project, a tabulation is drawn and values are attributed to each (A Risk Matrix). Prices and the PSC need to be adjusted to be put on an equal footing to reflect where between client and supplier the risks (and their financial consequences) are accepted.

Final sanction to any transaction should not be given unless the public sector client is satisfied that this process has been well conducted and that value for money has been achieved. A clear audit trail of the evaluation process must be established as on "leading-edge" transactions subsequent examination by the relevant audit authority (NAO, Audit Commission) can be anticipated.

## **B. A fair competition**

Since PFI partnership has been assimilated to procurement, the full rigours of the European Directives governing Public Works procurement apply. Unfortunately, those directives were formulated prior to the evolution of PFI and there is poor fit between the applicable directive and what is practicable. The solution to date has been a well-structured tendering process mandated by Central Government and implicitly accepted by the Competition Directorate in Brussels. This process involves the following steps:

### **a) OJEC**

An advertisement in the Official Journal asking for Expressions of Interest from potential tenderers for a PFI procurement under the negotiated procedure which is allowed (exceptionally) by the Public Works Directive. The advertisement is a formal and short announcement but must stipulate that the contract award will be on "economically most advantageous" (so VFM) grounds.

### **b) Selection of first round tenderers (Longlist)**

From the respondents to the OJEC, a longlist of potential tenderers must be selected. The criteria for selection must be explicit and fairly applied. At this stage, respondents are subjected to a "negative test". Their responses disqualify them if they fail to prove they have the technical, financial or commercial competencies to be the PFI partner.

### **c) Selection of the second round tenderers (Shortlist)**

Those who qualify after the first round are asked to submit detailed responses to a pre-prepared PROJECT BRIEF. This sets out in considerable detail what is sought by the client. It delineates the risks that the supplier is likely to assume and requests a response that explains the proposed approach to satisfying the brief and possibly an indication of the remuneration sought. The PROJECT BRIEF will make clear the criteria by which bids will be evaluated and selection made. According to the responses, a shortlist of 3 to 4 tenderers will be selected.

### **d) Arriving at the preferred bidder**

The shortlisted candidates will be sent the master document which will dictate the most intense phase of the competition – THE INVITATION TO NEGOTIATE (ITN).

The ITN will contain:

- A clear description of the services sought expressed in terms of outputs
- A statement of the minimum technical standards that must be met
- A statement setting the scope for variant bids
- The criteria for evaluation
- A timetable for the negotiation phase
- A model draft contract wherein the client sets out its preferred risk allocation and proposes a payment mechanism

On receipt of the tenderers' submissions, a series of meetings will be held to clarify points of detailed. Great care should be taken to insulate the bids from one another. No advantage must be accorded to any one bidder by "leaking" the contents of a rival's offer.

The bids must be evaluated and compared to establish which offers the best value having made due allowance for different risk profiles and different service content (if variants have been proposed).

If the two best bidders are offering similar value, a final stage of negotiation may be entered with a run-off between the two, the client requesting "best and final offers" (the BAFO stage). After this, the client should be in a position to appoint a preferred bidder.

e) **Final negotiation and contract signature**

The preferred bidder should only be nominated when all commercial terms are substantially agreed. This stage should be taken up with final detailed contract drafting, and if project finance is required, satisfying the bankers as to the robustness of the transaction. The client will also have to seek final approval and certification, establishing clearly that the deal is value for money and affordable. When all these steps are completed the contract can be signed.

Every step of the process must be clearly documented to guarantee that the competition has been fair and the final choice made on fully sustainable grounds.

# VOLUME I – CHAPTER III

## HOW TO LAUNCH A NATIONAL PUBLIC-PRIVATE PARTNERSHIP PROGRAMME

During the 1990's as the theory and practice of Public Private Partnerships (PPP) has evolved in Europe and elsewhere in the World, certain national governments have taken a strategic and structured approach to the introduction of PPP's as a new and significant policy initiative. Such countries include the United Kingdom, the Netherlands, Ireland, Italy in Europe and Japan and the Republic of South Africa beyond. What distinguishes the approach taken in these countries is their intention to adopt PPP's as a new way for delivering infrastructure and related services across a range of sectors. Thus, a common approach is sought which can embrace for example road and rail transport projects, water supply and wastewater management, the provision of school and hospital establishments and even prisons.

This article attempts to draw the lessons from these initiatives in order to guide administrations in how to introduce a successful PPP programme.

### **PPPs – a policy at the heart of government: the need for a Taskforce**

For an administration to embark successfully on a programme of PPPs, this programme must be regarded as a very significant policy initiative requiring the clear support of politicians and the most senior officials at the heart of government.

This implies the serious involvement of the Prime Minister's Office, the Finance Ministry and Ministries responsible for Transport, Environmental, Health, Education, Public Works and Local Government matters and any other Ministry which may be considering PPP projects. To identify and co-ordinate the steps required to articulate the new policy and to put that policy into effect, it is necessary to create an expert Taskforce. Such taskforces are normally attached to the Finance Ministry, report to ministerial level and have high level access throughout the Administration.

To exercise the credibility and expertise required, the Taskforce needs to include experts across a range of disciplines (finance, law, civil engineering, planning and public policy) and for such experts to represent a mixture of Public and Private Sector experience. Critically, members of the Taskforce must be committed intellectually to the policy and have the presence and maturity to convince others. The work of the Taskforce will fall broadly into two activities, a division that is sometimes reflected in the organisation of the Taskforce itself:

Development and articulation of PPP policy such that it is consistent with other policies within the Administration's overall policy framework.

Helping to identify suitable first (pilot) projects, developing a partnership procurement methodology and the dissemination of PPP expertise.

These two principle 'tasks' of the Taskforce will be considered below.

### **Development and articulation of PPP policy such that it is consistent with other policies within the Administration's policy framework.**

#### **Public Finances**

One of the first questions that must be addressed is whether the PPP projects that are to be promoted will depend entirely on the users for the payment stream or whether the Administration or one of its dependent agencies will be partly or totally responsible for the payments. From this consideration flow two crucial issues:

Where the project concerns services which conventionally have not been paid or fully paid for by the user whether road, water waste, health or educational services, is the Administration prepared to introduce legislation to permit such charges? If so, is there commitment to enforce the collection of the charges and, where some categories of citizen are to be exempt from charges, is the Administration prepared to introduce for instance a voucher scheme, with the vouchers being paid for by the Administration? Obviously, if projects are to be included in the programme for services for which payment by the user is impossible (prisons, primary and secondary schools), the full payment obligation will inevitably fall to the Administration.

If it is determined that projects will be promoted which will be partly or fully funded by the Public Sector, the implications for Public Finance budgeting and accounting must be fully weighed. Where infrastructure and services subject to PPP are to benefit from a cashflow emanating from national or federal taxation, amendments will need to be made to the methodology by which annual amounts are allocated from the national budget to the relevant Ministries. A ministry sponsoring a PPP project must be certain that future payments against its PPP projects will be determined at project signing and remain outside periodic budget reviews and reallocation.

From the Finance Ministry's perspective, a decision must be taken on how future PPP obligations should be reflected in the National Accounts. The theoretical choice is clear. Either they are to be assimilated to new borrowings expressed as the discounted amount of future payments due or they are to be regarded as current expenditure in the year of payment on the basis that, if the private sector partner fails to deliver the benefits of the project, the payments will not be made.

## **Wider Policy Considerations**

Over and beyond the issue of user payment, the introduction of a PPP programme may invoke examination an array of policy considerations ranging from the constitutional to the legal, economic and social. One such key question, which in ways is also a political issue, is whether constitutionally an Administration can enter a long-term agreement which can survive its term in office. It will be of paramount importance to any prospective partner that the obligations of the Public Sector under the contract will be respected by subsequent governments and that the Courts will uphold the contractual rights reserved to Private Sector Partner throughout the life of the contract.

Other constitutional questions that are likely to be raised will focus on the powers of an Administration to delegate the responsibility to carry out certain public/service functions and/or the powers to allow formal or economic ownership of infrastructure and public service to pass into private hands. The introduction of a PPP may require the clarification if not change in the constitutional and legal position.

To clear the pathway for PPPs, other specific changes in the Law may be desirable or indeed imperative. Such changes may involve the introduction of a general concession law, amendments to procurement and tax laws. In relation to the first, experience has proven that it is better for a new law to express principles and introduce a general framework. At the early stages of a PPP initiative, it is normally counterproductive to attempt to enshrine in law a model contract.

PPP's may also require certain structural reforms in government which will require legislation. This can be the case where a public service is to be conducted by a Private Sector company where previously the service has been provided by a self-regulating State Body. It will then be necessary to create or appoint a Public Sector Agency to be responsible for policing the contract and protecting the consumer, public health, and environmental interests.

Beyond the need for formal legal clarification, the new PPP policy must be articulated in such a way that it is consistent with other economic and social objectives. Such objectives may include for instance regional development, the protection of employment and conditions of employment and the encouragement of small and medium sized enterprises. A programme of PPP's is most likely to involve the following two consequences: the redeployment of public sector workers into the private sector and a significant if not leading role for foreign operating and financing companies in the delivery of public services. The Prime Minister's office and other Ministries must be prepared to cope with the political fall-out from these changes both within the body of the public employees and the wider electorate.

## **Helping to identify first (pilot) projects, developing a partnership procurement methodology and the dissemination of PPP expertise.**

As important as the Taskforce's role in establishing a PPP policy within the overall constitutional and political context is the part it must play in the selection and delivery of the initial projects. There are examples of PPP policy being called into question not because it was flawed as a policy but in practice inappropriate projects were chosen for PPP procurement.

Experience has demonstrated certain rules of thumb for selecting appropriate PPP projects. The following are some of the more significant criteria:

- 1) The project must be one for which there is plainly a social and economic need and the delivery of which is recognised as important to most political opinions. It is well to eschew grandiose politically sponsored schemes.
- 2) The project should be one that involves known and tested technologies and for which there is a market place of potential suppliers with whom to enter partnership.
- 3) The project should be one that is on the main priority list of the sponsoring Ministry or Agency (there has been a tendency for sceptical Ministries to offer up their lower priority schemes for PPP procurement).
- 4) The project payment stream must be clearly affordable by the sponsoring Ministry or Agency (and/or supported by Ministry of Finance issued guarantees).
- 5) The project should be of a sufficient size to interest international financiers and concession companies.
- 6) Ideally, the initial pilot schemes should represent a range across the key public service sectors and be representative of likely future schemes. From the Public Sector's point of view, it is very important from the outset to be aiming to develop methods and methodologies, which will be replicable.

Once one or more pilot project(s) is/are selected, it is essential that the Central Taskforce should be closely involved in the process by which a Private Sector Partner is chosen. However, the lead responsibility for the Partner selection process should always be with the project's sponsoring Ministry or Agency.

The selection/procurement process should demonstrate certain characteristics if it is to be effective. It must be fair and transparent, it must conform with best international practice in competitive public procurement and it must arrive at a result whereby the Public Sector opts for the partner offering the best long term value by way of quality, security of provision and cost. However, as well as the process being one that leads to the selection of the best value bid, it must deliver a result which is demonstrably better value than would likely have been achieved by conventional infrastructure procurement. To this end, the Taskforce will be responsible for agreeing a method of comparing the eventual transaction with the probable economics under previous ways.

Developing an effective method and methodology for procurement and applying such during the procurement projects must go hand in hand with a well focussed programme whereby both Public Sector officials and the national construction and service supply companies are led to understand and appreciate the detail and merits of the process. Indeed, it is an explicit goal of many PPP Taskforces that they become not a pure centre of expertise but that they take a very active role in teaching and promoting the PPP message and become adept at countering the intellectual and emotional objections that the initiative inevitably engenders.

## **Concluding Remarks**

Since the political, constitutional, legal, economic, social and cultural circumstances of every country differ, there can probably be no blueprint of how to make a PPP programme work. Each Administration embarking on a PPP voyage must plot its own particular course. Nonetheless, all the experience of those who have gone before points to two clear pieces of advice. The journey to a PPP programme will be a long one. It takes several years to arrive at an up-and-running programme and certainly longer than one political cycle. Therefore, the policy must have very committed high level political support and as a policy it must be broadly acceptable to the majority of political opinion. Secondly, it has become clear that it is unlikely that any Public Administration has officials who can unaided introduce a PPP programme. It is paramount if the PPP introduction is to be a success that the Public administration is prepared to draw on and learn from experts in the field. For Governments and Administrations who have no budget for such help, the expertise can be made available through bilateral and multilateral assistance programmes.

# VOLUME II

## THE TECHNICAL CONSIDERATIONS

### CHAPTER I

#### POLITICAL, INSTITUTIONAL AND REGULATORY ASPECTS OF BOT

##### INTRODUCTION

In this article, the expression Public-Private Partnerships (PPP's) will be applied to contractual structures whereby the Private Sector takes the responsibility for constructing, financing, operating and maintaining infrastructure. Such projects can include transportation (motorways, railways, ports, airports, bridges, tunnels, etc.), telecommunication, water, power, and other public utilities. The private financing of such large infrastructure projects is usually termed project finance. The Build-Operate-Transfer (BOT) structure is one of the forms which project finance may take.

In the 19th century when industrialisation necessitated the construction of infrastructure works, most infrastructure was initiated, financed and operated by the private sector. Often, infrastructure was developed by way of a concession, a structure with a much older history. Early in the 20th century when the concept of the role of State changed from a rather restricted role to a more dominant one in social and economic life, existing infrastructure was nationalised and new infrastructure was initiated, financed and operated by the public sector. Infrastructure was considered to belong to the Public Domain and the State, as the guardian of public interest, was regarded to be best qualified to build and manage infrastructure. Financing was provided by the State budget or by extra-budgetary funds which were attracted by the treasury with the objective to finance a specific infrastructure project.

It must be conceded that this model has been predominant in Europe. It applied to a much lesser degree in the USA, where thinking about the role of the State as the guardian of public interest has always been different from that of European theoreticians. The freedom loving and free enterprise spirit of US citizens has always prevented a role for the State as dominant as in Europe, especially in the economy. Under the influence of the Chicago School economists, like Nobel Prize winner Milton Friedman, thinking about the role of the State in economic life gained new impetus. Freedom of man was mainly interpreted as economic freedom restricted by the extent of the public sector. The larger the appropriation of the national income by the State, the more substantial the encroachment by the State on the economic freedom of its citizens. The Chicago School has very much influenced politicians like the US president Mr. Reagan and the UK Prime Minister Mrs. Thatcher. The latter, in particular, started to reduce the public sector in favour of the private sector. Important industries which had been nationalised were prepared for privatisation and sold to the public in order to introduce popular capitalism. Mrs. Thatcher can be held responsible for initiating a world-wide trend toward reducing the Public Sector in favour of giving room for a larger role for the Private Sector.

At first, privatisation did not extend to infrastructure and public utilities based on the philosophy that the role of the State as guardian of public interest was best fulfilled by total State management of infrastructure and public utilities. Gradually, however, thinking in this realm shifted toward the totally liberal concept that private sector input could improve public services both through private finance and private management. The role of the State could be reduced to that of setting up the regulatory framework within which public interest is best served. In the UK, for instance, this idea led to the launching of the so-called Private Finance Initiatives aimed at promoting private capital investment in public services with the objective to promote efficiency, to improve services and to stimulate fresh flows of investment. Other countries also began to allow for private initiative in sectors that until then had been considered the exclusive domain of the State. In short, PPPs start where privatisation ends.

Below, the essential preconditions for initiating PPPs will be discussed, as well as the necessary institutional framework. First of all, however, a short overview of the various forms of PPPs project finance will be given.

## **Private sector involvement in the Public Sector activities**

### **Financing and operating a project**

Project finance can be subdivided into three main categories depending on the degree of involvement of the Public Sector. In this respect, two aspects must be distinguished:

- (1) who is financing the project? In this respect, financing can be fulfilled through equity, loans, or other financing methods, including export credit;
- (2) who is running the project? In this respect, several stages may be distinguished: preparation, design, construction, operation, management, maintenance, etc.

In principle, to both questions three answers can be given:

- (1) the Public Sector;
- (2) the Private Sector;
- (3) both sectors.

From the above, six different situations may result:

### **Public sector financing and operating**

If the Public Sector is both financing and operating a project, the situation exists which has been more or less standard in Europe since the beginning of this century. Financing may be provided by the State budget or by extra-budgetary funds which were especially attracted with the objective to finance the specific project. No private sector involvement is foreseen other than construction work within the framework of the project. As a result, this type of project finance is placed outside the scope of the present Guide.

### **Public Sector financing and private sector operating**

This type of separate responsibility divided between the public and private sectors takes the form in which the State finances the project within or off the State budget and sets up the framework within which the operation of a project is left to the private sector. As a rule, this construction is fulfilled through a concession or lease agreement. Although in principle any distribution of the operating costs, including maintenance, is possible, as a rule, such costs will be for the concessionaire or lessee.

### **Private sector financing and Public Sector operating**

This model of Private Sectors financing of Public Sector projects has been rather common and fits the concept that infrastructure projects should remain in the public domain. In fact, there is no role for the Private Sector other than making funds available for the construction of the project. Part of the financing, however, may come from public funds, including the State budget or public borrowing from the Private Sector. In this mode, management, operation, and maintenance are completely fulfilled by the Public Sector. Operational costs are borne by the budget or partially or entirely covered from the revenues of the project.

### **Private sector financing and operating**

The model of infrastructure projects being entirely financed and operated by private companies is a relatively recent concept (or the revival of a very old one). It requires a clear commitment of the state to allow the private sector to enter into areas which were considered the exclusive public domain. First of all, ruling politicians must fully support private initiative in infrastructure projects. Subsequently, a clear, transparent and consistent policy must be conceived, which then is laid down in clear regulations. Part of the commitment of the Public Sector is that the consequence of profits being made by the private sector as a result of their ventures in infrastructure projects must be accepted.

Some countries have included a policy statement in the relevant legislation. The 1992 Philippine BOT Law - as amended<sup>8</sup> for instance, starts with a declaration of policy, reading:

"SECTION 1. Declaration of Policy. - It is the declared policy of the State to recognise the indispensable role of the private sector as the main engine for national growth and development and provide the most appropriate incentives to mobilise private resources for the purpose of financing the construction, operation and maintenance of infrastructure and development projects normally financed and undertaken by the Government. Such incentives, aside from financial incentives as provided by law, shall include providing a climate of minimum government regulations and procedures and specific government undertakings in support of the private sector.

- As a rule, private initiative in the Public Sector is performed through the instruments of Build-Operate-Transfer (BOT) or Build-Own-Operate-Transfer (BOOT). Other BOT variants include
- Build-Own-Operate (BOO);
- Build-Lease-Transfer (BLT);
- Rehabilitate-Lease-Transfer (RLT);
- Rehabilitate-Operate-Transfer (ROT);
- Build-Rent-Transfer (BRT)

In this context, the widely accepted term BOT will be used to indicate the general concept of private sector involvement in both financing and operating infrastructure projects in its various forms.

The role of the Public Sector will be limited to enabling the project through providing the necessary regulatory framework, including legislation on public tendering, public procurement, concessions, lease, contracts, and, possibly, through offering financial and/or fiscal benefits. It is clear that under this model, the risk of implementation and operation of the project will entirely transferred to the private sector.

### **Public/private sector financing and operating**

In practice, BOT projects have appeared very complex to execute. Often, returns were quite below expectations. This has led to the idea that co-operation between the Public and Private sectors could prove more successful than putting all risks with the Private Sector. Given the volume and extent of infrastructure, the specific public interest - which sometimes entails that priority be given to availability of the utility rather than its profitability - and the long period required to recover costs, a kind of joint effort of both sectors is more and more deemed necessary.

Typically, under public-private partnerships (PPPs) - as such joint ventures are commonly named - a corporate structure is set up in which both sectors participate. The joint company is responsible for the preparation, attraction of necessary resources, construction, management, operation and maintenance of the project. Direct involvement of the Public Sector in financing and operating a project tends to raise the chances of success.

### **Public/private sector financing and private sector operating**

A last variant of financing and operating infrastructure works is the structure whereby financing is taken care of by the joint effort of both public and private sectors but operation of the project is left to the private sector. An example of this is the well-known Channel Tunnel Project where private capital failed to cover all necessary expenses and both France and UK had to provide additional financing.

### **Political prerequisites for infrastructure projects**

Apart from a clear signal from host governments favouring investment in infrastructure projects under BOT schemes, a more general investment friendly environment is an absolute prerequisite for domestic and foreign investors for attracting financial resources to infrastructure projects. Political, economic, monetary, fiscal and legal stability score high on investors lists of requirements for foreign direct investment flows to a specific country.

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<sup>8</sup> Act of 26 July 1996 amending certain sections of republic act no. 6957, entitled "an act authorising the financing, construction, operation and maintenance of infrastructure projects by the private sector, and for other purposes"

Some governments have indicated a number of specifically named sectors which will be open to private investment. Turkey, for instance, lists the following areas that are accessible for private capital under BOT schemes:

- Natural gas power plant
- Lignite power plant
- Hydroelectric power plant
- Establishment and operation of free zones
- Bridges and tunnels
- Highways and railways
- Seaports and airports
- Telecommunication projects.

Under the Philippines BOT Law, the following sectors are open for private investment:

"Power plants, highways, ports, airports, canals, dams, hydropower projects, water supply, irrigation, telecommunications, railroads and railways, transport systems, land reclamation projects, industrial estates or townships, housing, government buildings, tourism projects, markets, slaughterhouses, warehouses, solid waste management, information technology networks and database infrastructure, education and health facilities, sewerage, drainage, dredging, and other infrastructure and development projects as may be authorised by the appropriate agency pursuant to this Act."

### **BOT programme**

In order to formulate a policy regarding private capital investment in infrastructure projects, it may be considered by the government to draw up a special programme, which could be called a BOT Programme. Such a programme would identify potential infrastructure projects eligible for private sector participation. All such projects should fit in a national or regional overall infrastructure plan so that maximum benefits be ensured to the country's economy. For each project, thorough studies of the social, economic and financial implications of the project should be carried out. It should be clear that before a project obtains the required approval of the respective State bodies, all stages for such approval must be followed in order to prevent subsequent cancellation of licences required under relevant legislation. In this respect, one could think of permission under laws on zoning, protection of the environment, expropriation of land, use of underground water reserves, etc.

On the other hand, it must be borne in mind that a programme often lacks the flexible and pragmatic approach which is appropriate to changing circumstances and various evolving factors. A flexible approach allows governments to seize the opportunities as they arise and to tailor specific legal provisions and conditions to individual projects. Therefore, it should be stressed that if a government decides to draw up a special BOT Programme this should have the nature of a general framework setting forth clear criteria and rules for PPPs arrangements.

Upon completion of the above stages, the government can solicit the private sector to express its interest in participation in a given project. This can be done through a public or a restricted tender procedure. Under a public tender, all potential investors can be summoned to submit a proposal. As a rule, public tenders are announced through an advertisement in the national or international press and/or through the country's embassies. Restricted tenders on the other hand are conducted through the invitation to a restricted number of potential participants to submit a proposal for a specific project. The most important feature of both procedures is that the tendering takes place on a competitive basis and in full transparency which - in principle - will provide for the best quality at the lowest possible costs and reduced implementation time.

Apart from solicited projects, in practice, unsolicited projects may also be proposed by the private sector, often on the basis of an exclusive right for the proposer to initiate and operate the project for a certain period of time. Awarding of unsolicited projects may occur when the government is not competent to identify or evaluate possible infrastructure projects. For some projects, private sector interest is minimal or non-existent, in which case any interest - even unsolicited - may be welcome.

Support by the government in the successful implementation of an infrastructure project is a major *conditio sine qua non*. In the case of a project in the sector of public utilities, for instance, support often consists of a performance guarantee of the public utility's obligations set forth by the various contracts concluded with the operator. Certain force majeure and foreign exchange risks may also be shifted to the government.

It is also very important that all parties involved should feel confident that the contract is fair. Leaving one party with the feeling that the deal does not treat him fairly, could lead to uncooperativeness or even obstruction. Likewise, the transaction must be politically acceptable to those in power and to the General Public who are going to pay for the services rendered under the BOT scheme.

## **Institutional and regulatory framework**

### **Introduction**

A distinction must be made between the institutional and regulatory framework within which project finance agreements may be concluded and the legal framework providing for the legal issues that must be taken into account when concluding a specific project finance agreement (a distinction between project finance at the macro and micro level). Below, the most important features of the institutional and regulatory framework are discussed, whereas the legal issues at the micro level are highlighted elsewhere in this Guide.

### **Institutional framework**

With a view to securing the public interest in developing infrastructure projects, it is most advisable for governments to set up a specific government agency or designate a specific ministry to deal with such projects. In addition, infrastructure projects are very complex. An adequate body overseeing all aspects of project finance of infrastructure projects is necessary to plan, analyse, implement and monitor the entire process of such projects. Experience and know how can be accrued by such agencies in order to become better equipped to negotiate project finance agreements. The tasks of such an agency could be the co-ordination, preparation, promotion, negotiation and implementation of a long-term infrastructure project programme which is intended to be executed with the participation of the Private Sector. Involvement of the relevant government bodies is to be recommended. For instance, if there is a Ministry of Energy, it should be involved in negotiating and supervision of energy related projects. The same goes for the Ministry of Transportation, if the project is to be initiated in transport sector. Given the financial implications, involvement of the Ministry of Finance is indispensable as well. However, in order to avoid bureaucratic delay in processing the approval of a project financed under a PPP or similar scheme, it is absolutely recommendable to create a one stop approval shop that has final jurisdiction in all matters related to the project. At least, a kind of liaison office between the various agencies - including current investment boards or agencies as defined by the World Association of Investment Promotion Agencies (WAIPA) - dealing with PPP arrangements should be established.

A special problem exists in countries with a federal structure. If such countries consist of states with a high degree of autonomy, including jurisdiction to decide independently on infrastructure projects, it would be advisable to create project finance agencies in each state within the federal structure. In federal countries of a more hybrid character, where jurisdiction regarding infrastructure is divided between the federal and individual state level, it is necessary to set up one federal agency with sufficient participation of the federal states. On the one hand, bureaucratic overlap and confusion may thus be avoided, on the other hand, the federal distribution of power is respected. More or less the same goes for centralised states with a certain distribution of power between the centre and the provincial and/or municipal bodies. Public acceptance of large infrastructure projects will be enhanced by involving all administrative bodies that have jurisdiction in the processing of the project.

Apart from training of the officials of a PPP Agency, training of officials of the relevant ministries is highly advisable. Admission of the private sector into what was regarded as the exclusive public domain requires a certain degree of change of mentality by politicians and, above all, by public servants. In many cases, this turned out to be true also for civil servants in Western countries, who might otherwise be thought to be acquainted with private sector involvement in public affairs. But, in practice, no one is free of a certain degree of territorial instinct.

## Regulatory framework

### Introduction

At the macro level, a consistent, overall and up-to-date legal system should be in place to address all legal issues that arise when initiating infrastructure projects financed under PPP or similar schemes. Legislation fit to cover such legal issues should include at least the following laws:

- a foreign investment law providing adequate protection for foreign direct investment;
- legislation providing for a transparent, coherent, unambiguous and fair tax system;
- a civil code dealing inter alia with contracts, ownership, property rights, lease, secured transactions, guarantees, including performance bonds, and other types of security instruments securing the proper fulfilment of obligations under the various agreements pertaining to the PPP, etc.; or, at least separate laws covering these subjects;
- a company law which enables economic subjects to set up a separate legal entity with limited liability;
- a bankruptcy law that provides for a fair winding up of companies that have become insolvent; Creditor's rights should be protected in a balanced manner;
- a concession law which provides for a system, under which the government may grant a concession to an investor to operate a specific project;
- a law dealing with public procurement in order to stimulate competitive bids and transparency in the procedure for awarding contracts for Public Sectors works;
- a court system which is independent, impartial and well equipped to hear complex disputes between investors and State bodies;
- a code of civil procedure that lays down the rules for a fair trial;
- a legal system directed at prompt and adequate enforcement of court decisions, because winning a case is useless if there is no proper procedure for enforcing a court decision via the possibility of attachment of the defendants property through a bailiff;
- a commercial arbitration law: in view of the complexity of project finance deals, their requirement for confidentiality and a prompt resolution of disputes as, in many cases, commercial arbitration is preferable to proceedings in a State court of law;
- private international law or conflict of laws rules, according to which the applicable law is determined as well as the competent court, and the procedure for the recognition and enforcement of foreign court decisions and arbitration awards;
- some countries which have experience with infrastructure projects financed under BOT schemes have introduced a BOT law; such countries include The Philippines, Malaysia, Vietnam, Turkey, and Egypt;
- environmental legislation: since most infrastructure projects have an impact on the environment, a proper legal framework seeking the right balance between infrastructure development and the protection of the environment is required. Moreover, international donor organisations are bound to observe environmental standards when financing infrastructure projects;
- a law on zoning providing for a regulatory framework and for a standard procedure which should ensure an appropriate exploitation of land and other natural resources. Among the main purpose of such a law is to take into account and adequately to balance all interests involved in land development;
- a law on construction providing for standards which constructors have to comply with;
- intellectual property (IP) laws protecting IP rights involved in a PPP, protecting patents, know how, licenses, etc.

Below, the main features of such laws are discussed more in detail.

However, first of all, governments must examine whether, under the Constitution, the ownership, including its provision, operation and maintenance, of infrastructure shall not be regarded as remaining exclusively within the public domain. If this is the case, and a government wishes to enter into PPPs, then adjustment of the Constitution should be made before the first PPP contract is concluded.

Another constitutional issue that must be solved prior to entering into PPPs is whether collection of tolls, fees, duties and other payments - which in most countries are considered to be taxes - by a private concession company is consistent with the generally accepted principle that tax collection shall be regarded as an exclusive prerogative of the State, including local governments.

## **Foreign investment law**

So far, there is no multilateral agreement providing for the protection of foreign direct investment (FDI). With regard to FDI in the field of energy, however, a multilateral agreement has been signed but not entered into force yet: the European Energy Charter Treaty signed in December 1994 in Lisbon. This Treaty sets forth a number of principles regarding the protection of FDI.

As a rule, FDI is protected by a complex of bilateral treaties providing for the mutual promotion and protection of FDI. Many countries, in particular those which do not have a longstanding tradition of hosting FDI, have introduced special legislation providing for the protection of FDI. The most important principles laid down in such laws include:

- *national treatment*: FDI shall enjoy treatment no less favourable than that granted to national investors;
- *non-discrimination*: in principle, among foreign investors, no discrimination shall be allowed, unless - under strict conditions - on the ground of reciprocity;
- *stability of the FDI regime*: changes in FDI legislation should be avoided as much as possible; if not, a so-called grandfathering clause should provide for the application of the same regime under which the FDI was made during a fixed period (usually ten years);
- *transparency*: all legislation relevant to foreign investors should be made public in such a manner that foreign investors have normal access to the sources of publication;
- *protection*: all FDI's should enjoy protection by the host government;
- *nationalisation*: FDI should not be subject to nationalisation;
- *expropriation*: expropriation may be effectuated only in the case necessitated in the public interest; in that case, a prompt, adequate and effective compensation shall be awarded;
- *repatriation of revenues*: all revenues and other payments received, as well as amounts obtained upon the liquidation of the FDI, including those in local currency, must freely be repatriated in any currency at the foreign investor's choice;
- *liquidation of the FDI*: a foreign investor shall be free to liquidate his investment, if he so wishes, unless an investment agreement provides otherwise;
- *settlement of disputes*: the host country shall provide free access to international commercial arbitration, even if it is a party to the dispute itself.

## **Concessions**

The granting of concessions by the Public Sector to the Private Sector is used as a vehicle to have state-owned property operated by the private sector. Concessions may also be granted with regard to activities which are considered the exclusive jurisdiction of the state or municipal authorities, such as telecommunication services, the broadcasting system or the water and sewerage network. With regard to the legal regulation of concessions, there are basically two approaches:

- (1) concessions are provided for in the respective laws, such as the law on telecommunication; the law on oil and gas extraction; the law on motorways; etc.; the idea behind this concept is that each sector has its own characteristics which require a specific regulation of concessions; the Netherlands, for instance, and also Poland have opted for this system; or
- (2) there is one general law on concessions providing for the general rules by which the government authorises third parties to perform public services; the particulars required by the specific sector are included in substatutory regulations, in the concession agreement or in both; this system has been chosen for by a number of countries, including Hungary (1991), Venezuela (1994), Brazil (1995), Uzbekistan (1995), etc.

Typically, a generic law on concessions will include the following elements:

- *scope of the law*: the law may designate the various sectors to which it applies;
- *special concession granting agency*: the law may provide that a special state agency be established which will grant the concession;
- *pre-concession phase*: the granting authority (government, special agency, province, municipality) will publish a document describing the objective, area of activity and the term of the concession; publish a call for bids specifying the essential conditions of the contract; enter into negotiations with the prospective concessionaire(s); sign a concession agreement;
- *rights and duties of the various parties*: rights and duties of the granting authority, of the concessionaire, and of the users; fines and penalties for non or improper performance of the obligations assumed by any of the parties;

- *concession agreement*: a concession law would also specify the various elements to be contained in a concession agreement, including:
  - i. objective, scope, term, and conditions of the concession;
  - ii. criteria and parameters defining the quality of the service, as well as the contractual penalties for improper or non-performance;
  - iii. a method to monitor the fulfilment of the agreement;
  - iv. the price of the service and the criteria for reviewing and adjusting the price;
  - v. rights and duties and the granting authority, the concessionaire, and the users;
  - vi. the obligation to set up a concession company registered in the host country; the granting authority may wish to hold a stake in the concession company;
  - vii. assets to be returned at the end of the concession period and the criteria for compensation;
  - viii. rules for the termination and intervention of a concession;
  - ix. timetable for the project (in the case of infrastructure projects);
  - x. rules for extension of the concession;
  - xi. subconcessions, transfer of the concession, or change of ownership of the concessionaire.

## **Taxation**

It is self-evident that a BOT project will be subject to various taxes, including profit tax; turnover tax such as VAT or sales tax; land tax; excise duties; corporate property tax; securities tax; and local taxes for the concession company, as well as personal income tax and social insurance contributions for personnel including expatriate employees. Imported goods may be subject to customs duties, although often foreign investment legislation provides for exemption from customs duties for goods imported in the framework of the foreign investment. Furthermore, many countries with a non-convertible currency provide for a mandatory conversion of (a part of) foreign currency revenues from export. Obviously, foreign investors will not be deterred from their investment, if they have to pay taxes but they will be reluctant to invest if the aggregate amount of the taxes is too high. Tax benefits will help to attract foreign investors but if they apply to foreign investors only, domestic investors will feel discriminated against. In all cases, taxation must be transparent and predictable.

Important principles of taxation include:

- taxes should be levied upon the basis of a law; this shall apply to local taxes as well;
- no tax should be introduced retroactively;
- taxpayers should have the right to submit an appeal against decisions of the tax authorities to an independent court of law;
- double taxation should be avoided through the conclusion of treaties regarding the avoidance of tax treaties; many countries have concluded such treaties, often based on the OECD Model Treaty; in principle, the avoidance of double taxation is effected by (1) exemption from taxation in country A of income on which tax has been paid in country B; or (2) tax paid in country B will be set-off with tax due in country A;
- tax rates should be in line with international standards; for instance, the current average profit tax rate in EU countries amounts to 30-40%, with an exception for Germany where the profit tax rate is higher; however, much depends on opportunities for tax deduction of expenses, carry back and carry forward of losses, depreciation, and tax benefits;
- the phenomenon of tax competition - as the result of a progressive globalisation, countries compete with each other with regard to the most favourable tax regime - should lead to reaching an equitable balance between the attraction of foreign capital and sufficient revenues for the Treasury.

## **Civil legislation**

Since BOT contracts have many civil law aspects, it is self evident that a proper and adequate civil law should be in place. As BOT contracts tend to have a very complex and sophisticated structure, a proper legal safety net has to provide for reasonable and fair solutions where contracts fail. The two main pillars of civil law include contract and property. However, the 19th century concept of freedom of contract and unrestricted use of property has faded away. Both freedoms still stand but have been subject to many restrictions urged by social, political, economic, environmental and other considerations of public interest. Freedom of contract, for instance, is restricted by general provisions of public order, provisions of competition law, provisions of labour law in order to avoid effects undesired from the perspective of fair trading, stimulating competition, protecting employees, etc. In addition, unrestricted ownership of property is no longer existent. Ownership may be subject to environmental, zoning, building and similar rules which are aimed at protecting the public interest. A further restriction has been generally accepted in the form of the prohibition of misuse of property with the purpose to inflict damage upon other persons.

In most West European legal systems, a separate civil code had been introduced by the 19th century, all based on the Roman law tradition. Basically, two models can be distinguished: the French model and the German model. More modern civil codes like the Italian and Dutch Code have introduced a more layered structure, as a result of which general principles apply to more than one civil law concept. They have also combined both the former civil code and the commercial code, thus providing for such diverse subjects as the family, legal persons, obligations, including tort liability, security transactions, property and other rights *in rem*, transport law, and private international law.

One of the important issues of a civil code is whether such fundamental principles as that all civil law transactions must be governed by reasonableness and fairness have additional effect or may even have derogatory effect. The 1994 Russian civil code, for example, provides that where civil law or other law does not provide for a specific matter, the principles of reasonableness and fairness shall apply, whereas the 1992 Dutch civil code permits that said principle may set aside the contract. In other words, will legal security or justice prevail (*Rechtssicherheit vs Rechtferdigkeit*)?

Anglo-Saxon legal systems do not have a civil code but rather separate law dealing with contracts, property, company law, commercial transactions, like for instance the US Uniform Commercial Code. Basically, the difference consists in that in European countries, civil law is laid down in coherent, elaborated and comprehensive codes of law, whereas in Anglo-Saxon legal systems, one has opted for basic laws with a system of sophisticated case precedent setting out basic principles of civil law, too.

Central and East European countries are in spite of their socialist past part of the Roman law tradition and have basic civil codes, as well. Most Central European countries opted for upgrading their old civil codes, whereas the countries of the former USSR have either introduced a new Civil Code (Russia, Kazakhstan, Uzbekistan) or are in the process of drafting a new civil code which is either based on the CIS Model Civil Code - which in turn is modelled after the Russian Civil Code - or based on West European models (mainly, the German *Bürgerliches Gesetzbuch*). The structure of the Russian Civil Code and other codes based on the Russian model is that it sets forth the framework with basic provisions outlining the structure of a subordinate law that regulates a specific matter more in detail. For instance, the chapter on legal persons provides for the basic rules but leaves the elaboration to implementing laws on the trade register, cooperatives, limited liability companies, joint-stock companies, etc.

As regards the part of a civil code concerning obligations, this typically deals with notions as the formation of contracts, obligations of parties during the precontractual stage, the performance of a contract, cancellation of a contract, inadequate or non-performance, liability, *force majeure*, and also tort liability. As a rule, a civil code also contains a special part dealing with various types of contracts, including a sales contract, lease contract, agency, etc.

Concerning property, a civil code would provide for the basic rules of acquisition and transfer of property, in particular to provide for unambiguous rules in respect of ownership of real estate through public registers. Furthermore, it would provide for long-term lease of real property and other rights *in rem*, as well as for secured transactions, under which security is granted for loans.

### **Civil procedure and execution of court decisions**

Access to justice is the fundamental issue of any civil procedural law. If any party has a claim against another party which cannot be solved amicably, it must have access to a court of law to file his claim and commence proceedings. The principle of access to justice requires from a state that it guarantees through its laws that its subjects receive legal protection for their civil law relations.

Typically, civil procedural law will provide for the basic principles of civil proceedings, including rules on how to file a claim, matters of jurisdiction, submitting defences, court decision, publicity of the court hearing, possibility of appeal, execution of court decisions, special procedures, interim decisions, compromise, summary process, valuation of evidence, hearing of witnesses, etc. In continental law systems, a civil process is conducted according to a number of principles including:

- C the dispositive principle: the parties involved decide on the course of the process;
- C the rather passive role of the court: in principle, the court sticks to the arguments of parties and does not assume a very active role in finding evidence; the court establishes the facts;
- C observance of forms and a public hearing.

In countries where different types of courts exist, the rules of civil procedure will have to determine which court has jurisdiction in a given case. Germany, for instance, has separate courts for disputes in the field of labour, patents, and shipping. Countries like France and Belgium, but also Russia and the other states of CIS, have special courts hearing economic disputes. Apart from generic jurisdiction, civil procedural law should also provide for territorial jurisdiction. In principle, the court of the defendant's place of residence has jurisdiction but this rule may have exceptions.

Once the court has rendered a judgement and it became final, the stage of enforcement of the court judgement is reached. The rules concerning the enforcement of judgement should provide for a procedure in which the judgement is executed on account of the assets of the party against whom the court decision was rendered. Typically, this procedure will involve a state official or a private official vested with certain exclusive powers to attach assets of the party concerned in order to pay compensation or to perform the action to which it was ordered by the court. Most jurisdictions allow the possibility to challenge undue or improper execution of court decisions.

In practice, however, parties that lose a lawsuit tend to fulfil voluntarily their obligations under the court decision rendered.

### **Company law**

A company is usually defined as an association of a number of persons for a common purpose or common purposes. The main features of a company include:

- C a separate legal entity duly registered with its own capital, the minimum amount of which is stipulated by law;
- C in principle, the liability of the company is restricted to its own assets only, unless there are grounds for disregarding of the corporate form (usually, in the case of fraud or wilful damage to its creditors);
- C if the company's capital is divided by shares which are freely transferable, the entity is a public joint-stock company; or if the shares are transferable in a restricted manner only, then the entity is a private joint-stock company;
- C the management bodies of the company are usually the general meeting of shareholders, the board of directors, and for bigger companies the board of supervisors.

A company law would typically provide for the formation of companies and the drawing up of the necessary documents (agreement of association, articles of association or constitution); registration; pre-registration operation; commencement of business; subscription for shares; investment of capital in the company; status of the shareholders; functions and tasks of the management bodies; raising and decrease of capital; accounting and auditing; mergers and divisions; liquidation of the company through voluntary or forced dissolution.

### **Arbitration**

A manner of dispute resolution other than commencing a law suit is a arbitration which is performed on the basis of an agreement, explicit or tacit, prior or after the dispute arose. If the parties agreed on arbitration, as a rule, any ordinary court of law shall reject jurisdiction, at least if the relevant law so provides. Most countries have a law on commercial arbitration, some of which are based on the UNCITRAL Model Law on International Commercial Arbitration. Often, arbitration takes place with an institutional arbitration tribunal. In East-West arbitration, popular places to arbitrate include Stockholm, Paris (Arbitration Court of the International Chamber of Commerce), Zurich, Geneva, or London, all of which apply their own rules of procedure but allow also the application of other rules, such as UNCITRAL Rules. A Law on commercial arbitration would typically deal with the following issues:

- C party autonomy: parties are free to agree on submitting their (future) disputes to arbitration; an agreement need not necessarily be in writing;
- C appointment of arbitrators: parties shall be free to choose for a sole arbitrator or more than one arbitrators (usually three); who shall be the appointing authority; if there is a permanent arbitration tribunal, this will be the president of the tribunal;
- C parties are free to challenge an arbitrator on the grounds of partiality;
- C formal requirements as to the statement of claim and the statement of defence;
- C an arbitration tribunal shall have authority to rule on objections to its jurisdiction
- C time limits: most laws will set sharp time limits in order to preserve one of arbitration's biggest advantages, namely speed;
- C hearings are private unless the parties agree otherwise;
- C interim measures of protection ordered by the arbitration tribunal or ordered by a court (upon the request of the arbitration tribunal);

- C an arbitral award is rendered by the majority of the arbitrators; an award must be in writing, signed copies of which shall be communicated to the parties; awards need not necessarily be final;
- C the arbitration panel decides on the applicable law, if the parties failed to make a choice of law;
- C the award shall also rule on the division of costs for the procedure.

## **Construction law**

As a rule, construction is performed on the basis of comprehensive contracts governed by civil law provisions - in many cases, the civil code includes a chapter on construction contracts - and general conditions applicable in the construction sector. Issues that should be addressed in particular include prices (unit prices, fixed price); liability for defects caused by materials chosen by the principal; subcontracting and defects (*culpa in eligendo*); contractors liability for defects and delay; supervision, inspection and approval of the principal; application of the principle of *bona fides* or reasonability and justice; changed conditions (*clausula de rebus sic stantibus*); liability for defects after the completion of the work.

## **Public procurement**

Within the European Union (EU), strict rules for open government procurement apply. Several European Commission (EC) directives deal with public procurement of supplies and works, including the construction and the telecommunication sectors. The EC has the authority to impose sanctions for breach of EU competitive tendering rules in Public Sector procurement and construction. In addition, beneficiaries of EU funds must comply with EU competitive tendering rules when contracting third parties for the performance of projects financed under such funding. The main purpose of the EU directives is to set a standard procedure for the award of Public Sector contract in order to stimulate competition. Under EU legislation, in principle, public tendering is mandatory for contracts with a value over ECU 200,000. Within the EU, such directives must be transformed into national legislation.

The World Trade Organisation's General Agreement on Trade in Services is the first multilateral agreement which establishes rules regarding trade in services. Currently, the question of whether rules on government procurement should be added to the General Agreement is under discussion. An Agreement on Government Procurement is already available but it covers only a limited number of services, including construction, environmental services, computer services, and value-added telecommunications services.

Finally, in 1994 the UN Commission on International Trade Law adopted the UNCITRAL Model Law on Procurement of Goods, Construction and Services. The objectives of the UNCITRAL Model Law include promoting competition among suppliers and contractors; providing for fair and equitable treatment of all suppliers and contractors; achieving transparency in procurement procedures.

## **Private international law - Conflict of laws**

The increasing globalisation of trade and investment has brought about a further need for international legal standards governing international business. Many international organisations such as UNCITRAL, WTO, OECD, UNIDROIT have been working on drawing up international conventions or model laws providing for uniform rules on specific subjects or at least approximation of legislation. Where no international law applies and where it is not clear which national law applies, the application of private international law rules will designate the proper law. All legal systems have such conflict rules referring to a specific jurisdiction where the law of more than one state could be applicable. Many countries have codified their private international law provisions in a separate act, other countries have a system where private international law provisions are included in the various relevant laws. There are also countries where private international law is basically judge made law.

It will be clear that project finance deals, including BOTs will involve several legal systems, given its international nature. Private international law - or conflict of laws, to use the Anglo-Saxon term - usually distinguishes three levels: which law applies? Which court has jurisdiction? Recognition and enforcement of foreign court decisions. As regards the first level of the proper law, the principle of the choice of law prevails in most systems, unless it contradicts the principle of *ordre public*. If the parties involved did not make a choice of law governing their contractual relations, other points of reference will be taken into account to establish the proper law. Such reference points include the place where the contract had been concluded (*lex loci contractus*), the place where the party who is considered to fulfil the most characteristic performance has its residence or registered seat (*lex domicilii* or *lex loci registrationis*). Some international conventions, too, contain such reference rules, such as the 1973 Hague Product Liability Convention. According to Article 4 of said Convention, the law of the state in the territory of which the damage emerged shall apply.

Rules of private international law designate also the court that has jurisdiction in international disputes, if the parties failed to nominate the competent court of law or an arbitration tribunal. As regards the recognition and enforcement of foreign court decisions or arbitral awards, such will not happen other than in accordance with an international treaty, bilateral or multilateral. Examples of such treaties are the 1958 New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards and the EEC Execution Treaties.

Regarding BOT transactions, it will be clear that it will be of great importance to have an unambiguous choice of law and designation of the competent court. Given the fact that many countries have adhered to the 1958 New York Convention, arbitration will be preferred as the procedure for dispute settlement given the possibility of enforcement of arbitral awards in other countries.

### **Law on BOT Transactions**

Some countries have introduced a separate law on build-operate-transfer contracts. The Philippines was the first country to do so but in the meantime also countries like Malaysia, Vietnam, and Turkey have adopted legislation on BOT. The Philippines Law has the following structure:

- C declaration of policy in which the role of the private sector in developing infrastructure is recognised as indispensable;
- C a section providing definitions of the different types of project finance contracts and other relevant terms;
- C authorisation of all central and local government agencies dealing with infrastructure to enter into agreements with proponents of duly prequalified infrastructure projects;
- C a section dealing with how to proceed with unsolicited projects;
- C the procedure of public tendering of projects, including direct negotiation of projects;
- C repayment scheme;
- C termination of the BOT contract;
- C supervision and monitoring of the project;
- C incentives for investments;
- C outline of implementing rules and regulations.

### **Environmental law**

In most jurisdictions, legislation has been enacted with the objective to balance the interest of industrial development with that of the conservation of natural environment. Laws have been adopted to protect nature, water resources, air, the soil, clean up of polluted areas, as well as general legislation laying down the principles of protection of the environment, including the principle “he who pollutes shall pay”. Specific legislation specifies the standards of emission of noxious gases, waste materials, etc. In most cases, infrastructure works such as motorways, bridges, tunnels, power stations - not to mention nuclear power stations - will have a serious impact on the environment. Laws will provide for procedures to be followed for granting permissions and or potential adjustment of the project to the requirements of environmental policy. Typically, a central government agency will oversee and co-ordinate actions to control and reduce pollution by the setting of standards, monitoring and enforcement of environmental legislation in force. Enforcement can be performed in various manners including imposing sanctions for breach of environmental norms or through a licensing system with fees for emission of waste up to specific standards. Those who infringe upon environmental legislation may be held liable for damages through civil or criminal justice.

Given its cross-border nature, the protection of the environment is becoming more and more a subject of international law.

### **Law on land use planning (zoning)**

Many countries have legislation on land use planning (zoning), the most important objective of which is to designate a specific function to land. Such a law nominates the public bodies that have jurisdiction in the field of land use planning. Typically, these bodies include three or more levels: central, provincial, city and district agencies. In addition, a law would list the instruments for achieving the objective and the procedure for the realisation of land use planning. In principle, for each area of land a specific function is indicated under a law on the use of land, including residential, non-residential, industrial, agrarian, recreational, commercial, transportation protected nature, etc. Special procedures must be followed to change the function of an area.

## Conclusions

Public-Private Partnership relate to co-operation between the public and private sector with the objective to design, build, finance, operate en maintain infrastructure. Within the current context, infrastructure includes not only the fixed assets servicing transport such as roads, tunnels, bridges, maritime and air ports but also power plants, water supply and sewage installations, and telecom and postal services.

Although PPPs were already used in the 19<sup>th</sup> century, in particular in France (water supply, roads, and canals), they became quite common in the fourth quarter of the last century. Developed in Asia, PPPs received a special impetus in the UK under the so-called Private Finance Initiative under the then Prime-Minister John Major.

The emergence of PPPs is closely linked with a reconsideration of the role of the state in providing the necessary infrastructure. Rethinking the role of the state in the meaning that where the private sector is able to assume a role in the provision of infrastructure has led to a reduction of the state's role and left more room for the private sector to enter what was during a long regarded as the exclusive public domain.

In practice, private sector involvement in building and operating infrastructure has led to partnerships between both public and private sectors, as it soon became evident that many of the projects entail risks too many and too burdensome that they could be borne by the private sector alone.

A balance has had to be achieved between public and private sector involvement. As a rule, the public sector ensures the provision of the necessary land and other real property, as well as adequate support for the project. In addition, with a view to the project's viability and sustainability, the public sector often assumes a part of the financial risks in the form of guarantees and subsidies. The private sector's contribution would then consist of providing the necessary resources, expertise and know-how to design, build, operate and maintain the infrastructure work. Ideally, an optimal mix of both sectors' input will lead to the project's success.

In practice, it has appeared that a number of additional prerequisites are essential for the project's success, too. These prerequisites relate to support at various levels: political, administrative, legislative, and judicial support.

An unambiguous statement by the government can already give a clear signal to the private sector that infrastructure is no longer within the exclusive public domain and that private investors are welcome to be involved in building and operating infrastructure.

Support at the administrative level is necessary to build an investor-friendly environment. Also, the necessary administrative support can become visible through setting up a one-stop government agency dealing with all or most aspects of PPPs on behalf of the state. Also, in federal states, there should be a clear delimitation of powers between the central and other levels with regard to the decision-making process concerning PPPs. In this respect, training of civil servants is vital, too, with a view to broadening administrative support.

Legislative support is an absolute *conditio sine qua non*. The necessary legal framework should be in place in order to ensure that all important aspects of PPPs can be addressed.

Finally, an adequate legal framework is of little use, if a proper mechanism for the implementation and enforcement of laws is absent. Therefore, judicial support is vital to enforce contracts, to seek remedies, and to recognise and execute court decisions. Apart from addressing the state courts of law of the home country, where the investment is made, recourse to arbitration, including in third countries, should be available, too.

The necessary legal framework should explicitly allow private sector involvement in infrastructure. In some cases, a constitution would have to amended, if it states that infrastructure shall be within the public domain. As regards further legislation, the main requirement is that the legislative framework should provide for a sound business and investment environment offering a transparent, adequate, secure and predictable legal fundament for all legal subjects operating in the country where the investment is made. Keeping this in mind, a legal framework should comprise adequate legislation covering all the laws referred to earlier under the heading – Regulatory framework –

As the heart of a PPP is a concession agreement, a concession law may be necessary, too. Many countries – mostly developed market economies - do not have a separate concession law. However, countries that wish to attract private sector – domestic and foreign – investors in infrastructure may wish to consider introducing a separate concession law.

**As regards public-private partnerships (PPPs), there are two types of jurisdictions: those that have a specific law providing for concessions as a means to regulate PPPs and those countries that have not adopted such a law. Countries, which did not adopt such a law, include many Western countries with the exception of the Latin countries. Most Western countries hold the view that a concession is mere contractual relationship between various parties, one of which is the state or local government. According to them, states are entitled to enter into civil law contract with private sector parties on an equal footing. On the other hand, countries that have a less developed, market oriented legal system may seek to define the status of the state or local government vis-à-vis non-state legal entities in order to give a signal to the private sector about their reliability in contractual relationships. Legal certainty could be enhanced by such an approach. A different function of a concession law could be to instruct central state bodies and bodies of local government about the rules of the game. PPPs tend to be very complex schemes for the attraction of private capital into infrastructure projects. Thorough knowledge at various levels of central and local government is vital for a successful conclusion of PPPs. Thus, the character of a concession law may be twofold: (a) information for private sector investors (external effect); and (b) information for (local) government bodies (internal effect).**

A different legislative technique is to incorporate a concession scheme in a sectoral law like, for instance, on telecommunication. The advantage is this approach is clear: the concession scheme can be tailor-made to the specific requirements and features of the respective sector. Croatia, for instance, has opted for the approach to adopt a very concise general law including the basic principles on concessions, whereas the sector specific features of concession-schemes have been elaborated in sectoral laws like those on roads, power generation, water supply and sewerage, etc. In The Netherlands - to quote another example - there is no general law on concessions but concession or licensing schemes has been incorporated in, for instance, laws on mining and telecommunication. In addition, a concession scheme was laid down in a government policy document on market effect in regional public transport. In such a manner, a legal basis is missing for regional public transport concessions. The United Kingdom does not have a concession law either but is probably the country that uses the scheme most through its "Private Finance Initiative", the outlines of which have also been laid down in a policy document. It is likely, however, that such an approach is most effective in developed jurisdictions only.

Issues that as a rule are being dealt with in general concession laws include:

- a definition of concessions;
- a list of items that may be subject to concessions;
- issues ownership and other titles to the concession object;
- state bodies that have jurisdiction in concession matters (government, ministries, or a special concession body);
- preparation of concession transactions (selection of objects);
- public procurement (reference to a specific law on public procurement, if any); tender procedure; auction; direct negotiations; unsolicited projects;
- concession agreements and their contents;
- concession fees;
- duration of the concession;
- establishment of project company; possible participation by the state;
- quality control;
- amendment and termination of the concession agreement;
- assignment of the concessionaire's rights; subconcession;
- insurance;
- rights and duties of the parties involved (concessionaire);
- manner of calculation of the concessionaire's rates and tariffs due by users;
- settlement of disputes;
- proper law;
- compensation for damages;
- protection of know-how and other intellectual property;
- grandfather's clause;
- possibility of drawing up model concession agreements.

In conclusion, PPPs require a strong and unambiguous commitment by the public sector substantiated through an adequate, secure, transparent and predictable legal framework. Apart from legislative support, sufficient support by parliament and government, administration, and judiciary is a condition precedent for the eventual success of Public-Private Partnerships.

# **VOLUME II – CHAPTER II**

## **CONTRACTUAL ISSUES**

[Not yet available]

# VOLUME II – CHAPTER III

## AN INTRODUCTION TO PROJECT FINANCE

### 1) Introduction - What is Project Finance?

The term “Project Finance” relates to a financing structure at the centre of which there is a set of assets that forms an economic unit capable of running a project profitably and independently. Generally, a legal entity - a “Project Company” - is created to construct, own and operate/maintain such assets.

The financing structure typically involves:

- debt provided by financial institutions such as commercial banks or multilateral funders or, sometimes, capital market instruments such as bond issues; and
- equity injected into the Project Company by the sponsors (the “Sponsors”) of the project and possibly other investors.

A Project Financing transaction relies predominantly on the cash flow generated by the project. The project needs to generate enough cash flow to service its debt and, at the same time, produce a reasonable return on equity for the Sponsors.

A project will generally involve a number of parties with different responsibilities. For instance, the Project Company may sub-contract the construction, sometimes the operation, and the maintenance of the assets. There may also be an off-take contract with another party to guarantee that there is a market for the output of the project. Depending on the nature of the project, such parties are legally bound by various contracts. The aim is to allocate the risks in such a way that each party bears the risks it is best able to handle. The structuring of a project can therefore be very complex and time-consuming.

Project Finance is widely used for natural resources projects (energy and mining) as well as for large infrastructure projects (transportation (roads/motorways, mass transit) and water distribution/water treatment). There is also a substantial project financing activity in the telecommunication sector. Finally, some industrial projects are now undertaken on a project-financing basis. Transactions in the telecommunication and the industrial sector are sometimes seen as hybrid transactions between Project and Corporate Finance.

### a) The BOT or Public-Private Partnership (PPP)

A BOT or public-private partnership project involves a public authority providing a private company or consortium with a concession to build and operate a project. The Project Company created by the private company or consortium operates the project for the term of the concession (the concession period), receiving revenues in exchange for operating the assets. At the end of the concession period, the project assets are transferred to the public sector.

A PPP therefore constitutes a genuine joint undertaking between the private and the public sectors. The aim is to create a structure where both the private and the public sectors can contribute their particular strengths to a project, share the risks involved and, finally, share the returns derived from the project.

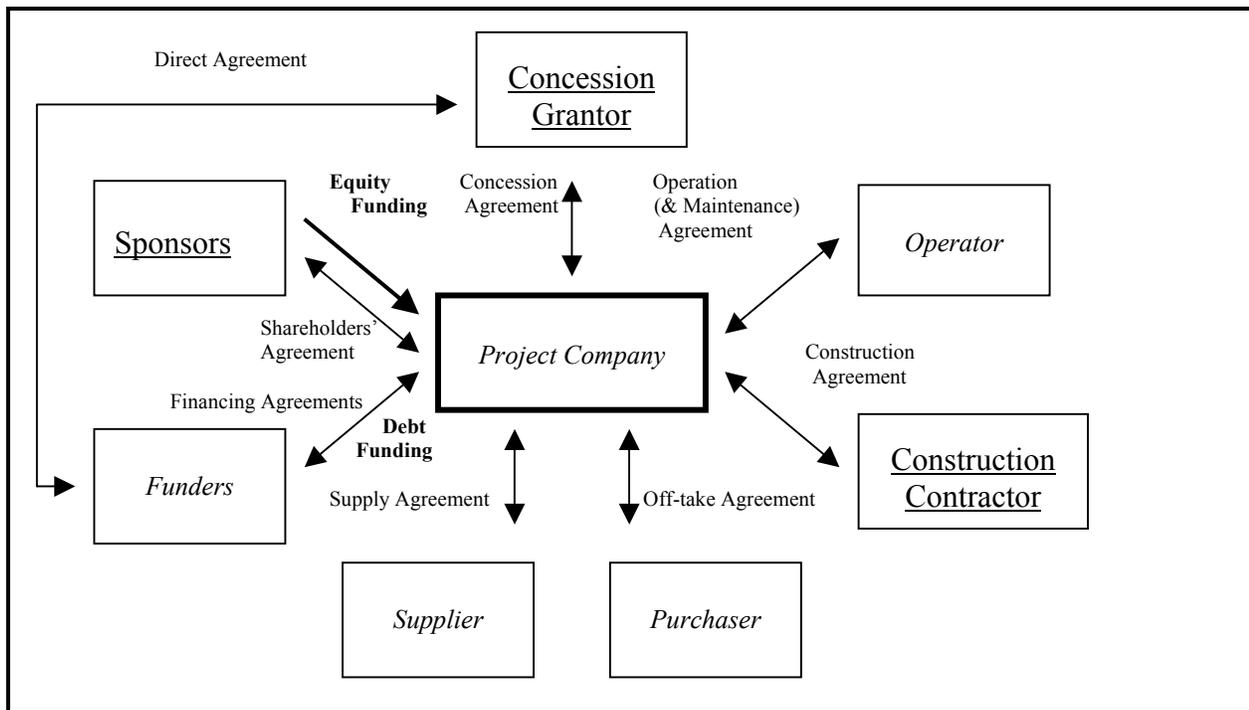
### b) *Non Recourse versus Limited Recourse Project Financing*

As mentioned above, the financing is based on the cash flow generated by the project. Non recourse funding means that the Sponsors limit their responsibility to their contribution of their share of the equity share capital of the Project Company.

In most projects, there is some form of recourse to the Sponsors (limited recourse transactions). The extent of such recourse may vary significantly from project to project. Depending on the risk profile of the project, the project funders may require, in certain circumstances, that the sponsors accept to assume certain risks or offer certain guarantees.

c) *The General Structure of a Project Finance Transaction*

A typical Project Finance structure is described schematically below:



**Figure 1: General Structure of a Project Finance Transaction**

Central to a project financing transaction is the concession agreement between the public sector (the “Concession Grantor”) and the Project Company regulating the terms and conditions of the concession.

The Sponsors, sometimes with other financial investors willing to provide additional equity to the project (e.g. infrastructure funds), enter into a Shareholders’ Agreement with the Project Company. Sometimes, there may be subordinated funding provided by mezzanine funds providers. The shareholders may also extend subordinated funding to the Project Company (this is sometimes done for tax reasons). Finally, the public sector may, in certain cases, be willing to provide part of the equity. This is the case, for instance, if the public sector intends, as one of its shareholders, to keep some further control over the Project Company (in addition to the rights under the project agreement).

The debt providers enter into Financing Agreements with the Project Company. There are various forms of funding. Commercial banks provide senior debt. Senior debt may also be extended by multilateral institutions like the European Bank for Reconstruction (EBRD) and Development or the European Investment Bank (EIB) and the involvement of such institutions often helps to enhance the credit of a project and thereby its bankability. Funding may also be provided by the capital markets e.g. bonds issues. With the expansion of the international bond markets this type of financing is becoming more and more important.

The construction costs are paid from the funds raised from debt and equity. Operating and maintenance costs are met directly from the project’s cash flow. The Project Company will generally enter into a Construction Agreement with a turnkey contractor (the “Contractor”) and an Operation Agreement with an operator (the “Operator”). In addition to operating the project, the Operator may be responsible for maintaining the assets during the operating phase. When a project needs a continuous and long-term supply (e.g. combustible for a power station), a long term Supply Agreement with a supplier may be necessary.

Finally, as mentioned above there may be a need for an off-take of the output of the project (particularly in power and mining projects). The Project Company and a purchaser will then enter into an Off-take Agreement. This is not always the case and, for instance in the telecommunication/cable sector, there are projects where the full demand risk rests with the Project Company.

**d) The Benefits of the Public-Private Partnership Approach**

The PPP approach offers a number of advantages for the public sector as well as the private sector and the general public.

**THE BENEFITS FOR THE PUBLIC SECTOR INCLUDES:**

- Improved efficiency, closely managed costs and earlier completion through private sector involvement;
- Efficient operation from the private sector;
- As a result of the two earlier points, better allocation of public sector funds and value for public sector money;
- Development of local capital markets and local banking industry and attraction of further commercial and multilateral foreign investment.

**THE BENEFITS FOR THE PRIVATE INVESTORS IN A PROJECT INCLUDE: -**

- To the extent the concession framework is appropriately established, the private sector will be in a position to leverage its project and take it off its balance sheet;
- If the private sector performs well, it will be able to derive attractive returns on its initial investment;
- The private sector investors will benefit from being involved in the project for the whole length of the concession, thereby enhancing their experience in managing long term projects and enhancing their profile in the market;
- There may also be potential benefits for the private sector through leasing and other structures.

**ULTIMATELY, IT SHOULD REALLY BE THE GENERAL PUBLIC THAT SHOULD BENEFIT FROM PUBLIC-PRIVATE PARTNERSHIPS. THE GENERAL PUBLIC DOES INDEED BENEFIT FOR THE FOLLOWING REASONS: -**

- Better allocation of tax-payer money;
- The benefits of efficiency gains made by the private sector are passed through to the end user through decreased user fees;
- The public benefits from better quality and better managed projects.

<b>e) The Process from Initial Project Feasibility Study to Financial Close</b>
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We describe below a step-by-step approach to the process of taking a transaction from initial structuring to financial close.

**Phase 1**

- Appointment of professional advisers (legal, technical, financial).
- Preparation of a strategy report for the implementation of the proposed project including the following:
  - Engineering aspects, including scope of contracts, performance criteria and standards, costing;
  - Preliminary environmental analysis;
  - Legislative analysis and recommendations for a new regulatory framework;
  - Financial analysis and preparation of a financial model exhibiting appropriate discount rate;
  - Analysis of budget implications and likely availability of project finance;
  - Risk transfer analysis;
  - Possibly some market sounding with potential investors/developers;
  - Preparation of an indicative financing plan;
  - Preparation of an outline tendering plan including the determination of the evaluation criteria.
- Preparation of public sector comparator.

**Phase 2**

- Pre-qualification of bidders;
- Management of the tender process with pre-qualified bidders including the following:-
  - Preparation of detailed tender documentation;
  - Comparison of the bids according to the evaluation criteria;
  - Selection of preferred bidder.

### Phase 3

- Negotiation with preferred bidder up to Financial Close

Taking a project from the Initial Feasibility Stage to Financial Close has been in numerous cases a very lengthy process. Much of the blame for the delays and high development cost of schemes has been laid at the door of a system that allowed funders to unpick a deal struck between the Public Authority and its preferred bidder. In effect, on a lot of transactions, time has been spent doing two deals: one with the bidder and a subsequent deal with the bidder's funders.

This process inevitably delays completion, increases costs and leads to negotiations carried out in the absence of competition and ultimately to the acceptance of terms less favourable to the public sector. To address these concerns, the public sector should require that the funders become involved in the procurement process at a much earlier stage and also confirm in principle that they are prepared to accept the commercial terms embodied in the Tender Documents and public sector guidance.

## 2) The Key Components of a “bankable” Project

In this section we explore what are the main determinants of the bankability of a project (i.e. its ability to attract funding). We focus on two key aspects which are the project economics and the risk transfer.

### *a) The Project Economics*

Senior lenders are concerned that the revenues generated by a project less its associated costs, expenses and fees will leave a satisfactory debt service coverage. Additionally, the financial viability of a project will depend on the existence of an appropriate return on equity to the shareholders. Since BOT projects are typically non-recourse or limited recourse project financing, the lenders will carry out a credit risk appraisal and look at various project economics to be comforted that the debt can be fully serviced from the project revenues.

#### *i. Debt service profile*

Senior debt is serviced before equity and subordinated debt. Therefore, given this lower risk, lenders will require an interest rate (fixed or floating) on debt lower than forecast return on equity. Repayment profile may be made on an annuity basis (equal debt service (interest + principal) payment), or on an equal principal repayment basis or, finally may be tailored to the cash flow. The lenders will usually grant a grace period on the repayment of the debt until the end of the construction phase so that the repayment starts as the project begins to generate cash flow from operation.

#### *ii. Debt to equity ratio*

The debt:equity ratio compares the amount of debt in the project against the amount of equity invested. Lenders will typically prefer a lower debt:equity ratio. Shareholders, on the other hand, will obviously look at a higher gearing, which will increase their return on equity since the cost of debt is lower than the cost of equity. Debt:equity ratios in project finance tend to range from 90:10 to 60:40 depending on the risks the project is facing.

#### *iii. Debt service cover ratio*

The debt service cover ratio (“DSCR”) compares the cash flow of the project after operating expenses (i.e. the cash flow available to meet the debt service) against the amount of debt service (interest and principal) payable over the same period. A high minimum DSCR provides comfort to the lenders that the project should be able to meet its debt service for each repayment debt throughout the maturity of the loan. The lenders will typically require target DSCR ranging from 1.2 to 1.5 when there is no demand/market risk for the output of the project and a higher level where there is demand/market risk.

**iv. Loan life cover ratio**

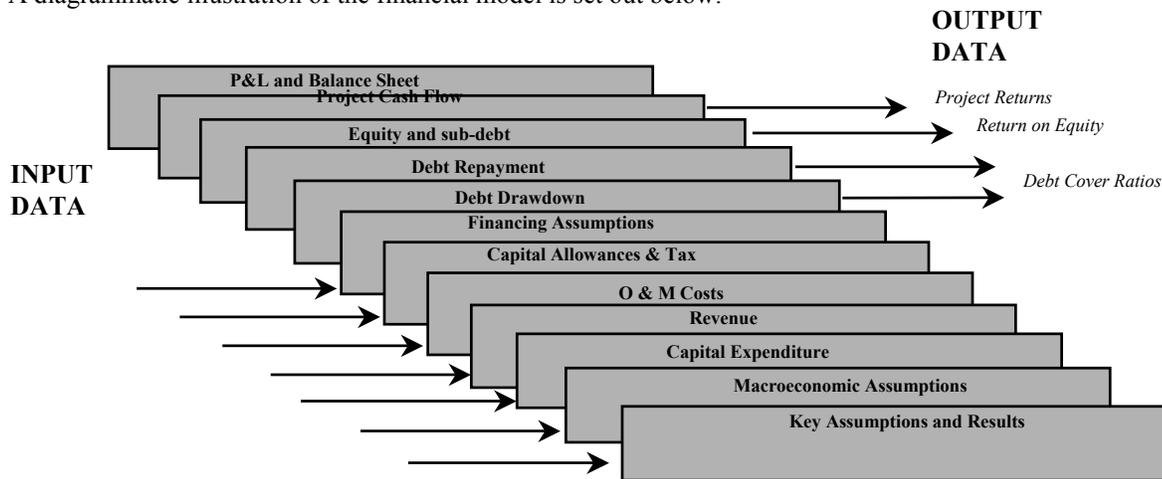
The loan life cover ratio (“LLCR”) measures the net present value of future cash flow available for debt service against the outstanding amount of debt. The Lenders want to ensure that the project has potentially the ability to meet the debt service throughout the life of the debt. Lenders usually require a minimum LLCR in the region of the DSCR.

**b) The Financial Model**

The construction of a computer generated discounted cashflow model is crucial to a thorough financial assessment of the project. The purpose of the Financial Model is as follows:

- To assist in the determination of an adequate tariff structure and determine the robustness of the transaction in economic and financial terms;
- To assist in the bid process in particularly to select the bids offering the best value for money;
- To determine the financial structure and accommodate a number of funding scenarios;
- To forecast the future cashflow of the project;
- To run sensitivities to changes in key parameters/assumptions.

A diagrammatic illustration of the financial model is set out below:



**c) The risk allocation/transfer**

Risk is the probability of an event occurring and the consequences of its occurrence. A key success point for a project is a thorough identification and a fair allocation of risks between the various parties involved. The driving principle for the risk allocation is that a risk should be borne by the party best able to manage it (subsidiarity principle):

- The risk is controlled and transferable by the party;
- The party is the one most able to manage the risk efficiently;
- The party is highly incentivised to manage the risk efficiently by receiving a benefit for managing the risk properly.

In a BOT project it is crucial to understand that since the Project Company raises finance primarily through the lenders, it must not take risks that the lenders would not be ready to bear for the interest rate they receive as their only compensation for taking the risk.

**i. Development risk**

The development phase includes all the preparation of the project before financial close and generally comprises the following:-

- the submission by the Sponsors of a bid in relation to which the Sponsors will have carried out preliminary planning and feasibility studies and also a technical, environmental, financial and legal assessment of the project; and
- negotiations with the Concession Grantor for the finalisation of the project documentation.

Since at this stage the lenders and the other parties are not committed yet, it is common practice that the development risk is borne by Sponsors (the Project Company does not have resources at this stage of the process). The Sponsors might want to recoup the costs incurred during this phase at financial close but until financial close is reached, the Sponsors will be at risk.

Sometimes, the Concession Grantor will be willing to reimburse part of the development costs of the pre-qualified bidders which have not been awarded the contract up to a pre-determined cap.

## **ii. Construction risk**

The construction risk includes the following:-

- The failure to complete the construction on time;
- The cost overrun risk; and
- The failure to meet design and construction requirements.

In accordance with the aforementioned subsidiarity principle, this risk is usually allocated to the construction contractor who is responsible for designing and building the project.

The Project Company will seek to protect itself typically through a fixed price date certain contract whereby the construction contractor will have to bear the risk of project delays and costs overrun within a pre-agreed scope of work.

The Concession Grantor may also need protections from the contractor such as liquidated damages (*e.g.* for late completion of the project), performance bonds, parent companies guarantees and long-stop date (date after which, if the construction is not completed, the concession agreement terminates).

## **Liquidated damages**

This represents a payment corresponding to the estimated losses or damages the Concession Grantor will suffer in the event of late completion/start of operation. This mechanism is obviously appropriate only if the Concession Grantor suffers such losses and if it offers the public sector value for money.

The senior lenders will seek protection by requiring the contractor to cover debt service for any period of delay through liquidated damages paid by the contractor. However the contractor will certainly price this requirement into the price it charges to the Project Company. The contractor may also be inclined to require a longer construction period in order to limit its exposure to potential delays in the construction. Therefore, the public sector will have to ensure that by imposing liquidated damages to obtain time certainty, the price charged by the contractor does not escalate to an extent that value for money is not met.

Generally, the public sector will impose drastic liquidated damages where it is critical that the project starts operating on a certain date. In other cases, a long-stop date on the completion will serve as sufficient incentive for the project company to perform.

## *Performance bonds*

The Project Company and the lenders may require from the Contractor a performance bond as a form of guarantee of completion (the amount guaranteed is usually a percentage of the construction price). This amount can be called when for example the start of operation is delayed. Again one should bear in mind that the contractor will be inclined to pass through the cost and timing effects of providing such a bond to the Project Company, which will in turn pass them to the Concession Grantor in its pricing for the project.

**iii. Technology risk**

The lenders are generally ready to bear performance risk only relying on proven technology and will seek warranties from the Contractor such as performance-related damages and latent defects liability.

**iv. Performance/Operation risk**

The operation of the project involves certain risks of operation, performance and maintenance. It is crucial that the project operates successfully and performs to specified levels in order to generate sufficient revenues for debt servicing and return for the shareholders.

The operation risk will be allocated primarily to the Operator. However, the Operator may wish to limit its overall liability to the profit it is to earn on operation costs. Thus, the Project Company may have to bear residual costs and risks but to the extent the Operator does not perform, the Project Company should have the ability to replace it (but only to the extent that the replacement Operator is of an equivalent standing).

The maintenance risk is a complex issue to resolve and generally a reserving mechanism will be implemented to address major maintenance requirements. The Operator may bear the risk of pricing the reserve requirements at the outset of the project.

To ensure that the Operator will have a continuing interest in maintaining the project even towards the end of the concession period prior to transferring the project, the Concession Grantor may also wish to impose handback requirements to ensure the viability of the project for a certain period after the transfer date.

**v. Market risk**

Project financiers are generally keen to limit their exposure to the market risk associated to a particular project. They will preferably require that this risk be passed to parties other than the Project Company.

Thus, they will require that the output price be not exposed to unforeseeable and unmanageable fluctuations or that this risk be borne by an off-take purchaser.

Similarly, they may require the Project Company to enter into a fixed price input supply agreement in order to avoid the input cost risk. Those mechanisms are often used for instance in the power sector for the purchase of gas and fuel and the power sale.

**vi. Political risk / Change in Law risk / change in tax risk**

Political risk includes multiple categories of risks such as war, changes in law, change in the public sector environment etc... Lenders are adverse to political risk because this cannot be controlled by the Project Company.

Some of these risks may be covered by insurance. For those that are not insurable, according to the subsidiarity principle, the public sector would be best placed to manage them and the Project Company therefore compensated adequately should such risks occur. The public sector would, in principle, obtain best value for money in doing so because there is a risk that the private sector would price, in a prohibitive manner, risks that it cannot control.

Lenders will also particularly concerned by change in budget/political environment risk and the change in law risk.

As far as the change in budget is concerned, many governments are reluctant to guarantee directly the obligations (related to projects) of the public entities which sponsor projects (e.g. local/municipal authorities).

To mitigate such concerns, some governments (such as the British Government) have in certain circumstances provided Letters of Comfort, whereby the government confirms that amounts necessary for the public sector entity to honour its commitments under the project documentation will be made available to the Concession Grantor and that such undertaking will not be affected by potential future Government savings.

The change in law risk can be a contentious issue between the public and the private sector. It is usually borne by the public sector. This would be certainly required by lenders in politically unstable countries. However, in many cases this one might seek some risk sharing between the public sector and the Project Company, particularly when the latter is able to pass the associated costs into the price or when the political system is reasonably stable. However, general premise is that in any case the Lenders will require the risk of a discriminatory change in law should remain with the public sector.

The tax risk allocation gives rise to debate. The private sector may claim that the Concession Grantor is the most appropriate party to manage tax risk while a public entity may argue that, albeit being part of the public sector, it might not be an entity exerting any influence on tax regulation.

As a result the public sector will probably bear the risk for discriminatory change in law and pass the remaining risk particularly when some of the project parties can reflect the associated costs in the prices.

**vii. *Interface risks***

The interface risk involves the risk relating to the management of parties acting together to ensure the performance of a specific aspect of a project. For instance the interface between the Contractor and the Operator of the project needs to be clearly defined so that there is no risk of the project suffering delays when the Operator takes over the project at the end of construction. There may be also other type of interface risks – for instance with other public authorities which may interfere with the project.

**viii. *Macro-economic factors***

The typical macro-economic risks facing a project are inflation risk, interest rate risk and currency risks.

Inflation risk: the inflation risk can be partly managed through construction and operation fixed price contracts. However, contractors may be reluctant to bear the inflation risk over a long period of time. In this case, there may be a possibility to index the revenue to inflation (e.g. the capacity payments).

Currency risk: the involvement of various international parties in the project may create an exposure to currency risk. This can be mitigated in several ways: by matching currency of funding to certain costs or revenues, by putting in place a multi-currency facility or a currency hedging strategy on the markets. Generally, where revenues are denominated in the local currency, it is best to try to maximise local funding in the overall financing structure. This is in order to avoid to the maximum extent currency mismatches.

Interest risk: the Project Company is generally able to deal with interest rate risk by obtaining fixed rather than floating interest rates. The lenders will have typically enter into an interest rate swap.

**ix. *Revenues risk***

The payment the Concession Grantor makes to the Project Company for the provision of service must establish incentives for the project company to deliver exactly the service required in a manner that gives value for money. In order to render the project bankable, the payment will depend more on availability and performance of the service rather than on usage. However, the revenues risk shall remain with the project company and the payment mechanism should not ring fence or guarantee the project company's finance charges.

**x. *Force Majeure risk***

The contractual framework must provide for a relief from liability to parties affected by Force Majeure event and, should the event continue for a certain period, the opportunity for parties to terminate the contract. The key principle is that such an event being not attributable to any of the parties, the inherent risk should lie where the event falls. Thus, during the period of Force Majeure, the public sector will only be liable to pay the Contractor for services actually received.

**xi. *Documentation risk***

Lenders will look at prerequisite conditions relating to the general legal framework prior to considering a project bankable such as stability of the legal and tax regime, enforceability of legal decisions and effectiveness of security.

### 3) Sources of Finance

**In the final section of this chapter, we set out below a summary of the many possible sources of finance that may be considered for public private partnership projects over and above simple commercial bank debt which is now available from a considerable number of national and international banks in infrastructure financing.**

#### a) **World Bank**

The World Bank comprises four association institutions:

- The International Bank for Reconstruction and Development (IBRD) generally referred to as World Bank;
- The International Development Agency (IDA);
- The International Finance Corporation (IFC);
- The Multilateral Investment Guarantee Agency (MIGA).

#### **i. IBRD and IDA**

The IBRD lends funds at fine margins to governments of creditworthy developing countries, on the strength of government guarantees, repayable generally over 12 to 15 years. The IDA provides assistance to countries with a very low GDP per capita.

#### ***ii. International Finance Corporation (IFC)***

The IFC promotes growth in the private sector by the provision of equity and loans (sometimes in co-operation with other investors) and, unlike IBRD, does not require government guarantees. Investments are normally up to US\$50m and usually restricted to no more than 25% of project cost.

#### ***iii. Multi-Lateral Guarantee Agency (MIGA)***

MIGA encourages foreign investment in developing countries by providing guarantees to companies involved in equity and equity-linked loan investments. The cover can be against the risks of currency transfer, expropriation, war and civil disturbance and breach of contract. Base premium rates range from 0.45% to 0.8% for each category of risk, but this will be adjusted up or down, depending on the risk profile of an investment. In the event that cover is sought for an investment, the application to MIGA should be made before the investment is irrevocably committed.

#### b) **European Bank for Reconstruction and Development (EBRD)**

The EBRD is a multinational institution set up with the specific aim of assisting the countries of Central and Eastern Europe. The EBRD seeks to promote the development of the private sector within these economies through its investment operations and through the mobilisation of foreign and domestic capital.

For development finance, both equity and debt can be contributed for up to a third of the project value. Maturity of the debt would be around 10 years, depending on the country. It is important to note that the EBRD will not support any individual bidder and will only get involved once a successful bidder has been announced.

#### c) **European Investment Bank (EIB)**

The EIB was set up in 1958 by the Treaty of Rome establishing the EEC in order to finance, on a non-profit basis, capital investment promoting the balanced development of the Community. The EIB provides finance for projects in all economic sectors, and its scope of action has been extended to many countries (and particularly Eastern Europe).

#### d) **European Investment Fund (EIF)**

The EIF was incorporated in 1994 as an international financial institution. The main objectives of the Fund are to support the development of trans-European networks in the areas of transport, telecommunications and energy infrastructure and the development of Small and Medium Enterprises by providing a guarantee for loans and, at a later stage, equity participations. The EIF can provide guarantees of up to the lesser of 50% of the project value or ECU176m (based on current subscribed capital) and cannot undertake more than 30% of its business with non-members.

Whilst the main activities of the EIF are focused on the EU, they may get involved in cross border projects between the EU and Eastern Europe.

**e) Overseas Economic Co-operation Fund (OECF)**

The OECF is a Japanese semi-governmental institution which specialises in concessional loans. The OECF is also a provider of untied finance on a bilateral basis. The approach for such finance is initiated by the government which will be the recipient, whereupon the finance will be made available after the project has been assessed in Tokyo. It is then up to the government to initiate an international tender for the award of any contract associated with this funding. The OECF also takes equity participations in major projects and they plan to support private sector infrastructure development projects in future.

**f) Foreign Aid**

Foreign aid is generally provided on a bilateral basis between two countries. Nearly all foreign aid is tied to the procurement of goods and services from the private sector of the country providing the aid.

**g) Overseas Private Investment Corporation (OPIC)**

OPIC is a US government agency assisting American investors through three principal activities:

- financing of businesses through loans and loan guarantees;
- insuring investments against a broad range of political risks; and
- providing a variety of investor services.

OPIC assistance is available for new investments, privatizations, and for expansions and modernisation of plants sponsored by US investors. Acquisitions of existing operations are eligible if the investor contributes additional capital for modernisation and/or expansion. In the case of a project with foreign ownership, only the portion relating to the US investor will be supported by OPIC. Support is not available if a project can attract adequate finance from commercial sources.

Political risk insurance is the main component of its business, with business volume projected at US\$6.5bn for 1995, compared to US\$2.5bn allocated for direct investment. The agency also sponsors 20 investment funds, geographically designated, which make equity investments on the premise that the investor will realise a profit in a 3 to 7 year investment period. OPIC itself does not invest directly in these funds, but acts as an adviser and a guarantor for up to 75% of the fund's capital.

**h) Export Credit Agencies (ECAs)**

The export credit agencies normally cover the export of capital goods and services from a specific country. ECAs play an important role in the financing of the development projects in as far as they will finance the export of capital equipment and services from specific countries.

**i) Institutional Lenders**

Institutional lenders have not played a major role in Eastern Europe so far, but may consider attractive opportunities.

**j) Central European and General Infrastructure Investment Funds**

Various investment funds with specific interest in Central Europe have been established. Whilst their investment is mainly focused on the emerging stock markets in these countries, some funds may consider other types of investments.

Various infrastructure investment funds have recently been established and there is a high likelihood that major players such as GE Capital may be keen to get involved.

**k) EU PHARE Programme**

PHARE stood originally for Poland and Hungary Assistance for Restructuring of the Economy, but the program has been extended to a financial and technical assistance for the countries of Central and Eastern Europe. The financial assistance granted under the scope of the PHARE programme is restricted to aid to small and medium sized companies in the establishment of joint ventures and the assistance of governments in the organisation of international bids.

## **l) General and Rule 144A Bond Issues**

The capital markets offer, in certain cases, significant advantages that project borrowers may not be able to realise in the bank market. First and foremost, they offer longer maturities and back-end weighted repayment structures that help to support equity returns.

This difference tends to be even more pronounced where there is a strong element of market risk. To this extent, capital market issues have often been used to take out short term construction loans offered by banks.

Secondly, the capital markets may offer attractive fixed rate pricing. After adjusting for the pricing difference between fixed and floating rate debt, most capital markets issues are priced on a par with bank loans for comparable project. This pricing comparability can become an absolute advantage in later years when banks deals usually have significant steps-up in pricing often accompanied by cash sweeps whereby positive cash balances must be deposited as collateral against the loan or applied to the early repayment of the debt.

Thirdly, the capital markets offer simplified governance procedures. Important business decisions like the incurrence of additional debt or the disposition of certain assets usually do not require lender's approval. The lengthy and labour-intensive process associated with seeking feedback from lenders is avoided. Instead, capital markets investors are very much dependent on pre-determined financial tests or the rating agencies to act as their agents. This can be a crucial consideration in choosing the appropriate financing avenue.

### **i. Bond issues**

The use of the public and private bond market for project financing has been increasing, primarily as a result of rating agencies such as Standard and Poor's playing an active role in providing project ratings. In the US, revenue bonds have been used extensively to finance infrastructure projects. Domestic bonds have been used in certain East European countries such as Hungary for project finance, but the market is generally still small.

### **ii. Private Placement**

This market is a sub-segment of the capital market. The investor base consists of large insurance companies that have the ability and the resources to analyse complex credits. The private placement market combines attributes of both the bank and the capital markets: it offers long term, fixed rate debt with the credit review and documentation process more closely resembling the process involved in a bank financing. Importantly, the instrument can be drawn-down on a delayed basis in either quarterly or semi annual draws. This feature better aligns the actual funding needs with available funds.

### **m) Medium Term Notes (MTN)**

An MTN programme is a shelf bond document which allows notes to be offered on a continuous basis to investors for maturities from 9 months to 30 years.

MTNs differ from bonds in the manner in which they are distributed to investors when they are initially sold. MTNs have traditionally been distributed on a best-effort basis by either an investment banking firm or other broker/dealers acting as agents. MTNs are usually sold in relatively small amounts on a continuous or an intermittent basis whilst bonds are sold in larger amounts where liquidity is important. Pricing, since note issuance is often satisfying particular investor demand, can frequently be better than larger, stand-alone bond issues. The setting up of an MTN programme may take a few months but the documentation issues are similar to standard bond issues. The pricing scheme depends largely on the rating of the company's debt and on the market conditions at the time of the issuance. Indeed, the notes may be issued from time to time in one or more series, within a maximum principal amount fixed by the programme. An issue of MTNs can be in almost any currency and on a floating rate or fixed rate basis.

It is highly unlikely that a company without a rating will participate in an MTN programme.

## VOLUME II – CHAPTER IV

### INSURANCE AND RISK TRANSFER IN PPP, BOT & PROJECT FINANCE.

Any BOT, PPP or concession project funded by experienced financiers will attract a high degree of due diligence, and the insurance arrangements will be closely controlled and monitored. In limited or non-recourse financing,<sup>9</sup> insurance forms an important part of the lender's security, and therefore the scope and quality of insurance protecting the project assets and revenue will be of particular importance. This is especially true in territories that may be unfamiliar to financiers

Definitions.

In order to prevent confusion, the following descriptions and definitions are used in this chapter;

- Bidder The party seeking appointment as the Contractor.
- Constructor. The party building or erecting the assets forming part of the project.
- Contractor. The party providing services (of any type) to the Public Sector Client.
- Employers Risks. A clause often found within Project Agreements outlining the risks retained by the Public Sector Client.
- Public Sector Client. The public sector; i.e. the Government agency or department procuring the project.
- Project Agreement. The principal contractual agreement determining the key responsibilities between the Public Sector Client and Contractor.
- Sponsors. Shareholders, investors, or joint-venture partners working with or supporting the Contractor

#### **Which Party Insures?**

State owned and operated assets are rarely insured. Government assets have an enormous aggregate value and are widely spread, consequently Governments undoubtedly find self-insurance a cheaper option.

BOT or PFI procurement is a form of out-sourcing and as Governments increasingly focus on procurement with the emphasis on service delivery rather than asset ownership, risk transfer to the private sector is a key objective. Consequently many Public Sector Clients seek to avoid all risks arising from property procurement, ownership and maintenance. Therefore assets provided by the private sector are almost always insured by the private sector, as are liabilities arising from the provision of public sector services by private sector Contractors.

Although it may be tempting for civil servants to believe that insurance is not their problem, at least during the bid preparation and negotiation period, insurance and risk allocation will have a high priority. By way of example, in the United Kingdom civil servants are encouraged to engage their own insurance adviser when preparing a PPP scheme, as there are several risk and insurance related issues that must be clarified within the scheme summary and bid documents released to potential Contractors. Before discussing a typical range of project insurances, general factors that will be of interest to potential Bidders include;

#### **Local Insurance Regulations.**

- Most territories have insurance regulations. Typically these will specify
- insurance regarded as 'mandatory'.
- Restrictions as to the establishment, statutory control, regulation and solvency of insurance companies.
- Those intermediaries authorised to transact insurance business
- Restrictions (often prohibiting the use of foreign insurers).
- Foreign investors will wish to support the domestic insurance market, but will need to be satisfied that they can procure an insurance programme that meets their requirements.

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<sup>9</sup> Financing where the lenders rely totally or mainly on the cashflows of the PPP or concession to remunerate and repay the debt they provide. (see Chapter III).

## Insurer Security

Financiers and foreign project Sponsors/investors will wish to establish that the project insurers; (i) have a good reputation for the fair and prompt handling of claims, (ii) are financially secure, and (iii) have adequate hard-currency reserves where project materials are procured from overseas suppliers.

If a financier is lending hundreds of millions of dollars, they will be reluctant to rely upon an insurer with a net worth less than their loan. It may be possible to seek approval for exemption from local insurance regulations, indeed some major infrastructure projects supported by international funding institutions are bid on this basis. In practice however satisfactory arrangements can usually be made with domestic insurers, although for major projects there may need to be a partnership between local and international insurers.

Many financiers and Sponsors have preferred policy wordings, and although some countries insurance regulations restrict cover to approved policy wordings, flexibility can usually be achieved given cooperation between the local and international insurers.

Insurance premium tax varies widely throughout territories, although this is primarily a concern for the Sponsors cost budget.

## Common Project Risks.

Most projects present risks in the following categories;

- *Natural & Catastrophe Risks.* The degree of risk is clearly country-specific, and project Sponsors will wish to assess exposures, and understand what insurance protection is available. The scope of cover granted by insurers is not consistent and in a number of territories full cover is procured by accessing both insurance companies and state managed risk-pooling arrangements. State pool systems are sometimes used to 'insure' major exposures such as damage arising from severe weather and terrorism.
- *Political.* Although Sponsors are likely to have satisfied themselves on the host-country risk, Sponsors will wish to see a clear distinction between true central political risk and regional government risk. This is significant as the acts of a regional authority or local government department may not be recognised as a true 'political risk'. This will have implications both to the contractual rights of the parties (in particular 'force majeure' entitlements) and the Sponsors or financiers political risk insurance that may be limited to the acts of central government only. Water projects where the raw water supply is dependent upon another region is an example where clarity will be needed.
- *External Political Risk.* Projects with reliance on other territories present additional risk. For example hydro-electric and dam schemes where water supply could be controlled from a neighbouring country will need careful structuring since Sponsors will be apprehensive about schemes that present multiple political risk exposures.
- *Pollution & Contamination.* There are a number of specialist insurers able to underwrite pollution risk, both project-site and third party risks. However Sponsors will be reluctant to accept historic or 'legacy risks', i.e. contamination arising from former use of the site. Sponsors willingness to accept 'legacy risk' will depend on the degree to which the risk can be assessed. Problems can be expected where the project site is close to other sites that continue to present a contamination hazard. Any lack of clarity in local pollution legislation will also frustrate progress since Sponsors will be worried that a change in law after project commencement could present them with an unbudgeted and uncertain cost exposure.
- *Project Interdependencies.* Sponsors and financiers will wish to be certain of a secure revenue stream, and factors that threaten delivery of the project output will need to be resolved through a combination of contractual risk sharing and extended insurance protection. Examples include private water or power projects reliant upon existing state owned grid or water storage and distribution infrastructure. Another example would be a power station where the feedstock (gas or oil supply) was supplied by a state owned utility. A similar exposure arises in schemes where the project output is wholly consumed by a single public sector entity, for example a BOT power station serving a state-owned mine. Damage to the mine reliant upon the power could have a catastrophic effect on the generators revenue, especially if there is little opportunity of finding an alternative customer. Coverage known as 'customer and supplier extensions' can reduce these exposures, although inevitably there will be additional risk sharing through the contract.
- *Assets transferred to the Private Sector.* Many projects involve transfer of state assets, examples include government buildings, road, rail or water distribution infrastructure. The public sector will often seek total risk transfer including transfer of responsibility for repair and maintenance of existing assets, assets that could be very old and possibly in poor condition. The PPP project for the London Underground rail system for example requires Contractors to accept

full responsibility for upgrading and maintenance of the existing infrastructure (tunnels platforms and other civil engineering works) some of which were constructed over 100 years ago. Although there are insurers willing to offer latent defects insurance, cover is usually limited to new structures and there would be considerable difficulties in delivering a fully insured solution. In practice a compromise is found within the contractual risk sharing arrangements. Contractors will naturally be reluctant to accept risk where it is difficult to assess the condition of existing assets.

- *Employee Transfer.* It is quite common for public sector employees to be transferred to the Contractor. Many territories have regulations designed to protect employee's rights, with the objective that the employee should enjoy equivalent employment benefits with his new private sector employer. Practical issues to be addressed include decisions as to whether the 'new' employer will be expected to compensate employment-related injuries undiscovered at transfer date. Risk sharing can be achieved by, for example, the private sector accepting claims to a specified financial value or by the former public sector employer accepting undiscovered or 'latent claims' reported within a agreed period after contract signature. These arrangements may impact on the Contractors employers liability or equivalent workers compensation arrangements. The adequacy of pensions funding may also be an important factor, although this is primarily a cost issue rather than an insurance issue.
- *Usage or Volume Risk.* Some concession contracts pass the usage risk to the Contractor. Typical examples include toll bridges and roads where the Public Sector Client offers no guarantees of the number of vehicles using the facility. For schemes with good historic usage statistics, Sponsors will often accept this exposure.

## Preparing The Bid

Although Bidders are free to make their own investigations, it is sensible to summarise the risk sharing proposals. Bidders pricing and willingness to participate will be influenced by their ability to investigate, assess and where appropriate, insure the key project exposures. Whilst those seeking bids will not wish to deter contractors, there is a balance to be struck. Although major project risks will inevitably be discovered during the Bidders due diligence procedures, the procurement period may be shortened if the bid documents carry basic information relating to major exposures such as those described above.

The invitation to bid documents should also contain a schedule specifying the minimum range of insurance to be maintained by the successful Bidder. These insurance requirements should also remind Bidders of the importance of compliance with local insurance regulations, which should be summarised for the benefit of foreign Bidders. A contractual requirement to maintain insurance does not of itself guarantee adequate risk transfer. Effective application of the insurance is reliant upon clear drafting of liability and indemnity clauses within the Project Agreement.

The Bidder may wish to procure insurance beyond that specified within the bid documents. The scope of this additional insurance will be largely determined by the contract, in particular clauses dealing with:

- extension of time,
- force majeure,
- 'delay and relief events' (Public Sector Client's risks) and
- termination provisions.

Consequently when negotiating major project financed projects, it is not uncommon to find insurance advisors engaged by all three parties; the Public Sector Client, the contractor and financiers.

## Insurance Required by the Project Agreement

So what insurance should be specified within the 'schedule of minimum insurance'? Although no two schemes are identical, Contractors should typically be asked to procure the following classes of insurance;

*Public & Products Liability. (Also Known as Third Party Liability).* . This cover protects the Contractor against claims following injury to third party persons and/or damage to third party property arising from the Contractors activities or products associated with the project. The cover should also extend to protect claims made directly against the Public Sector Client arising from acts of the Contractor.

Claim examples

1. Collapse of partially completed building damaging vehicles and injuring pedestrians.
2. Food poisoning arising from hospital catering, or illness arising from supply of contaminated drinking water.

The schedule should specify a minimum indemnity limit. The size of this will depend upon the type of project, its location and the legal system of the host country. For UK projects limits of £20m - £50m or more are typical, although limits considerably less than this may be considered appropriate in other European territories.

***Workers Compensation, or Employers Liability.***

This cover seeks to protect employment related injuries or illness sustained by employees of the Contractor. There is wide variance in employment legislation, although most territories follow one of three models;

**Employers Liability.** This system allows an injured employee to take legal action for compensation arising from employment related injuries, but only in circumstances where the employer can be held legally negligent in failing to provide a safe system and/or place of work. The measure of damages is related to the degree of disability and loss of earnings suffered. The policy protects the employer who is ultimately liable for the payment of damages. This is the model found in the UK.

**Workers Compensation.** This model provides for fixed compensation in the event that employees suffer specific work related injuries, irrespective of whether the employer has been negligent. Unlike the employers liability model, this arrangement pays no regard to the importance of the injury insofar as loss of earnings or affect on future employment prospects are concerned. Workers compensation protection is often provided by state social security arrangements, and sometimes by insurance companies.

Some territories adopt a mix of models 1 and 2, with injured employees able to claim statutory benefits, supplemented in circumstances where injury or illness has been caused by negligence attributable to the employer. In these circumstances cover is sometimes provided by extension of the Public Liability policy.

These arrangements are a matter for the Contractor, although care will be needed in projects involving employee transfer from public to private sector, (see earlier comments).

***Contractors 'All Risks' (Also known as Contract Works Insurance)***

This cover primarily protects the Constructor, although it is common to see cover issued in the joint names of the Public Sector Client, Contractor, Constructor and financiers. Cover responds following loss or damage to the works in progress. Examples are fire damage to buildings under construction, or theft of building materials from site.

'Engineering all risks' policies provide similar cover, and are applied to protect engineering projects such as the erection of power stations or water treatment plant.

Cover can be extended to include the Constructor's machinery and equipment, e.g. cranes, excavators and scaffolding. As risk of loss or damage to the Constructor's own plant should not rest with the Public Sector Client, this cover extension does not need to be shown as a requirement.

There is a range of cover available for damage to the works in progress caused by faulty design, workmanship or materials, although if the project is let on a 'design and build' basis, the problem is largely transferred to the Contractor. If the Public Sector Client provides (and has contractual liability for) technical designs or project materials, the scope of cover should be more closely examined and specified.

***Operational Property Insurance.***

After the project has been built, certified complete and fully operational, it is usual for cover to transfer to a traditional property insurance. The precise date of transfer from construction to operational insurance requires precision and should be defined within the Project Agreement.

These policies should show a sum insured sufficient to reinstate all the project assets in the event of total destruction. The sum insured should include allowances for inflation, debris removal and professional fees associated with repair or rebuilding works.

Cover is generally issued in the joint names of the Contractor and Public Sector Client, although the Project Agreement would usually require the Contractor to be responsible for administering insurance claims and ensuring that repairs are undertaken in a correct and prompt manner.

Property cover is increasingly being offered on an 'all risks' basis, as distinct from the fire and specified perils basis that was the traditional arrangement several years ago. 'All risks' cover is the preferred arrangement although this is not universally available.

If state owned assets, (e.g. existing Government buildings) are passed to the Contractor, it is recommended that the Contractor should be instructed to insure those assets that form part of, or are utilised in connection with the provision of the Contractors services. Property insurance usually excludes damage or collapse caused by latent defects attributable to normal wear and tear, poor design, workmanship or materials. Consequently, Contractors may be reluctant to accept unlimited responsibility for maintenance and repair of old buildings or structures, although some may be prepared to accept this exposure at additional cost.

Property insurance is traditionally annually renewable, although longer insurance periods are becoming popular as they offer greater certainty and premium stability.

#### *Business Interruption.(Delayed Completion).*

*The basis of non-or limited-recourse projects is that the revenue arising from the project should be sufficient to fund all the Contractors construction, financing & operational costs during the concession period. Consequently it is vital that the project assets are completed on time and generate revenue from the date predicted by the Contractor. Although financiers may agree to delay loan repayments following a minor delay in completion, they are unlikely to defer repayments in the event that completion is delayed for many months.*

The cost of delayed completion can be illustrated by this simple example. A \$250m project with a 25-year concession period needs to generate annual income of \$10m. A 12-month delay could therefore cost up to \$10m. This is an oversimplification, since financiers may be prepared to extend the loan facility and the timing of concession periods can be negotiated to run from either contract signature date, or the date at which the project becomes operational. The Contractor will also benefit from savings should project commencement be delayed since the asset will be idle. Projects where the feedstock (e.g. gas) is contracted on a 'take or pay' basis, will however be faced with the prospect of paying for feedstock that they cannot consume, and meeting finance repayment instalments, even though the project is not producing any revenue.

The question of whether the Contractor or Public Sector Client funds the cost of delayed completion is dealt with by the Project Agreement. Clauses that deal with this exposure are frequently known as delay events, Employers Risks or force majeure. These clauses may grant additional time for completion, but the question of which party meets the cost of delay will be outlined in the compensation events clause. Most contracts have a termination clause that entitles either party to abandon the project in the event that the project is not operational by a prescribed date, sometimes referred to by financiers as the "drop dead date". The consequences of delayed completion can also be affected by terms attached to grants or other interest free loans offered by governments or international development agencies that may be conditional upon completion by a prescribed date.

Let us accept therefore that delayed completion can give rise to enormous expense, expense that must be met by either the Contractor or the Public Sector Client. Although projects can be delayed through a multitude of reasons, serious delays are often caused by an event of damage to the works, building materials or machinery occurring during construction. Examples include weather damage, impact by heavy vehicles, theft, malicious damage, collapse, fire at site or suppliers premises, or loss of materials whilst in transit on board ships, aircraft or vehicles. These events can be insured by contractors 'all risks' and goods in transit or marine policies that reimburse the cost of replacing or repairing the item lost or damaged. Revenue protection is provided by policies known variously as Business Interruption, Consequential Loss, Advanced Loss of Revenue (ALOP) or Delay in Start-Up (DSU). These policies are designed to fund the financial losses that are directly attributable to a physical loss or damage claim covered by a material damage policy such as contractors 'all risks'.

There are wide variances in the degree of risk sharing insofar as delayed completion, compensation events, Public Sector Clients risks and force majeure is concerned. At one end of the scale a force majeure could be described as any event beyond the contemplation of the Contractor, whilst in contracts that seek full risk transfer to the Contractor, relief may be granted only following the occurrence of exceptional circumstances.

It is common practice for the Business Interruption cover to be taken out solely for the benefit of the Contractor. This means that the Public Sector Client could be exposed to meet major costs arising from an event of damage for which it accepts contractual liability, and yet was readily insurable at little or no additional expense. In an extreme case, the Public Sector Client may find itself funding large sums of money for a project that has no prospect of commencing operations for a year or more. It is therefore recommended that the Business Interruption policy be established in the joint names of the Contractor and the Public Sector Client and structured so that the indemnity is payable to whichever party has contractual responsibility following occurrence of an insured event. This arrangement requires careful drafting, and care will be needed to ensure that the arrangement is reflected both within the Project Agreement and insurance policy. The intention to structure cover in this way should also be outlined within the tender documents released to potential Bidders.

Business Interruption policies refer to indemnity periods and indemnity limits. Generally speaking the *indemnity period* is the longest anticipated period during which commencement of the project could be delayed by an insured event. Indemnity periods of 1, 2 or even 3 years are typical. The *Indemnity Limit* is the amount that could be lost during the entire indemnity period by the party/parties protected by the policy.

#### *Business Interruption (Operational Risks)*

Once the project has commenced full operations, it is still exposed to damage that could reduce or eliminate revenue until repairs have been completed.

Business Interruption policies indemnify loss of project revenue directly arising from an event insured by the operational insurances protecting the project assets. There may be a need for cover to be established in the joint names of Contractor and Public Sector Client for the reasons outlined above.

Risk sharing arrangements dealing with which party funds costs associated with loss of service during the operational period are often described within Project Agreements in a clause titled “relief events or Employers Risks”.

#### *Professional Indemnity (PI)*

This is a form of cover that is often requested but frequently misunderstood. The cover provides an indemnity to the named party only (“The Insured”), typically professional consultants such as architects, surveyors and engineers. Cover is also frequently held by Constructors who undertake ‘design and build’ work. Cover protects the insured against legal liability for damages arising from neglect error or omission in the execution of its professional duties. Constructors policies often exclude claims arising from poor workmanship or defective materials.

Claims examples include (i) a surveyor’s error leading to a building being constructed in the wrong position on site, (ii) an architect’s error in designing a lorry delivery bay with a roof lower than the height of the vehicles.(iii) an engineer designing inadequate foundations resulting in a building liable to cracking or collapse. Public Sector Clients should not place too much reliance on their Contractors PI insurance as:

- Consultants will usually fiercely deny any allegations of professional negligence
- Insurers will usually support their insured in resisting claims alleging professional negligence, indeed PI insurers biggest claims expense relates to legal costs defending actions.
- Legal actions may run for years without satisfactory resolution.
- Cover is rarely granted for more than 12 months, consequently there may be uncertainty in circumstances where a claim first emerges years after project completion.
- Policy wordings are usually treated as confidential, and thus there is a risk that a claim may fall foul of an unknown policy exclusion.
- Major problems on site are usually attributable to a complex mix of causes, of which professional error may be a minor contributor

Although the Public Sector Client can take some comfort that his consultants or Contractor has protection in the event of a major claim arising from professional negligence, far greater protection is likely to be achieved by structuring a contract that operates on a strict “no service/product, no revenue” basis. Thus failure of a project to open on schedule or operate correctly is a problem for the Contractor. The inclusion of additional contractual fines and penalties for delayed commencement of services will achieve even greater risk transfer This is the structure to be found in a number of UK PFI projects.

If the Public Sector Client provides project drawings, technical specifications, designs or professional site supervision, they face considerably greater risk and should seek advice from their insurance advisor. In these circumstances the Public Sector Client would achieve better protection by arranging to novate his professional team to the Contractor, thus transferring full design and build responsibility.

*Goods in Transit.*

Provided the Contractor bears full risk of delayed completion arising from loss or damage to project materials in transit or storage, the arrangement of adequate cover is usually a matter that can be left to the Contractor.

The Public Sector Client should take further advice if it intends to procure and directly supply materials for inclusion within the project.

### **Conclusion.**

Effective risk transfer will be achieved by a careful specification of project exposures and requirements, supported by a Project Agreement that addresses the risk-sharing regime in unambiguous terms. The Public Sector Client requirements and Project Agreement are the foundation upon which the insurance requirements need to be built.

Risk transfer is pointless unless the party accepting those risks has the financial strength to meet its obligations. Insurance and effective risk transfer therefore should be regarded as inseparable partners.

Readers may find the following checklist a helpful aide memoire:

1. The Public Sector Client should offer potential Bidders to a BOT project a clear summary of the
  - risk sharing proposals
  - insurance regulations applicable
  - key project risks.
2. Ensure that your invitation to bid documents contain a summary of the Project Agreement clauses dealing with ‘force majeure’, delay/relief events, Employers Risks, compensation and termination.
3. Specify the insurance that the Contractor will be expected to maintain. Check prior to contract signature that cover has been placed and establish an annual system of check to ensure that cover is maintained throughout the contract term.
4. Seek protection under the Contractors business interruption policy for those insurable risks for which you retain contractual responsibility.
5. Seek to avoid risk by transferring responsibility and risk to the Contractor, especially in respect of material selection, and procurement, design, specification, and establish a structure that requires payment conditional upon delivery of satisfactory service/products.

# **VOLUME III -CASE STUDIES**

## **CHAPTER I - TRANSPORT**

### **ARTICLE I**

#### **THE ARLANDABANAAN LIGHT RAIL**

##### **THE ARLANDABANAN PROJECT**

###### **A Case Study from Sweden**

“The Arlanda project marks the first private infrastructure project financing in Sweden, a country which up until the early 1990s relied on the State for planning and funding its infrastructure projects. In a country of only 8 million, it is not yet clear how and if the project finance experience will be repeated, but the scheme provides some interesting features for other private sector schemes” Rod Morrison (Project Finance International- IFR publications).

The Project Finance lending community, however, found out in the course of syndication, that this transaction was more than “the first Swedish project finance deal”. Arlanda is truly one of the first public/private partnership scheme of this scale in Europe. A partnership in the true spirit of the mood that presided over the negotiations and in the sharing of the risks and the financial costs of the project.

### **THE PROJECT**

#### **Project Description**

The Project is a design, build, finance and operate project to provide a rail link between central Stockholm in Sweden and the city’s international airport at Arlanda, some 42 kilometres by road to the north. the Project consists of two dedicated platforms and check-in facilities at Stockholm Central Railway Station, a new 20 kilometre rail loop, from a connection near Rosersberg, on the existing Stockholm-Uppsala main line to the Airport (and onwards to rejoin the main line near Odensala), three new underground stations at the Airport and seven train sets which provide a regular shuttle service.

#### **Background**

Over the year, a number of studies had been initiated by the government. BV, the Swedish Railway Company carried out a study in 1989 with the objective of avoiding or minimising the use of government funds, and therefore without impacting on the government budget. The BV report concluded that the project would cost SKr 6 billion (including expansion of capacity on the Rosersberg Section) and would need government funding as the revenue base could not cover such a capital amount.

A government-led ‘Committee for Infrastructure’ studied the prerequisites for private financing of the Arlandabanan in 1991, and concluded it could not be financed in its entirety by the private sector. A joint government-private sector financing solution was proposed. A set of principles was prepared and proposed in December 1992. The government instructed the Committee to negotiate an agreement with the appropriate parties.

The Committee conducted a prequalification procedure during the summer of 1993 in which numerous domestic and international contractors, individually and in consortia presented tenders<sup>10</sup>. In autumn 1993, two of prequalifying groups, the Arlanda Link Consortium and an ABB/Skanska/SJ joint venture, were requested to submit full tenders by February 1994.

This committee realised early on it was essential to put forward a business plan to potential bidders, rather than simply a project idea, to entice the bidders to spend the time and money on this project.

It also decided on a fixed-priced, fixed term construction strategy with much of the design work done at the planning (upstream) phase.

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<sup>10</sup> Eleven teams responded. The list was then reduced to four during the autumn.

It also undertook a series of roadshows in the main financial centres before it consulted the various “construction” interests **as the finance area was perceived as a major potential source of hold-up for a project of this nature.**

The Government incorporated a new state-owned company, the Arlanda rights Company (ARC) **to act as the vehicle which would then grant the necessary rights to the consortium awarded the Concession.** The appropriate legislation empowering the ARC received the approval of the Swedish Parliament in 1994. The ARC is the official signatory to the Project Agreement (and other relevant agreements). The nature and function of the ARC is discussed in Section 3.7.

## **PRINCIPAL PARTIES**

The structure chosen by the Sponsors and the Government has also created new roles for the governmental authorities represented by the ARC.

### **A-Train AB – the concessionaire**

The Concessionaire A-Train was awarded a 45-year Concession by the Swedish Government to operate the Project. The Concession provides the right to run dedicated Shuttle trains over the tracks between Stockholm and Arlanda. The rail loop to the Airport and one of the underground airport stations was also to be served by trains operated by the Swedish state-owned railway operating company SJ serving destination other than Stockholm Central.

A-trail has been established by the Sponsors to undertake the role of promoter and operator of the Project. The company has passed through two main phases. During construction, the main tasks were to monitor the performance of a Turnkey Contract, to ensure that those agreements with third parties which exist in outline form were entered into, and to ensure that appropriate permits, authorisations etc. were obtained punctually. During the final 12 months of the construction period A-Train undertook recruitment, training, testing, reorganisation and marketing when the organisation grew from 10 to some 120 people. At the Start of Operations, the company was geared up to be a commercial railway operator providing a high standard of services to attract passengers and optimise revenues.

During the construction period A-train established relationships with various parties to arrange both contractual and commercial aspects:

- The lenders, NIB and NBF (full names)
- The government through the ARC
- The Contractor
- Third parties, BV, SJ (full name) and LFV (full name) for operational agreements and permits
- Local authorities for construction permits and interfaces
- Residents, landowners and the public.

### **A-Banan Projekt AB (“ARC”)**

The ARC was formed by the Government of Sweden through an Act of Parliament to negotiate and supervise the arrangements for the construction and operation of the Project on behalf of the Swedish Government. It is owned equally by LFV and BV.

It was charged with ensuring that A-Train receives efficient co-operation during construction and operation of the Project from SJ, BV and LFV.

### Sponsors

The Sponsors comprise the following companies (or subsidiaries thereof):

- GEC ALSTHOM NV – one of Europe’s leading railway equipment suppliers and contractors.
- MCC AB and Siab AB – two of Sweden’s leading construction companies
- Vattenfall AB – Sweden’s largest electricity company
- John Mowlem & Company PLC – a UK construction company with significant experience in railway infrastructure.

## Projects costs

<b>BASE CASAE POROJECT COST</b>	
<b>Skr millions</b>	
Turkey Contract costs	3,838
Development costs	117
O&M costs during construction	174
ARC Development / Monitoring costs	9
Interest & Fees	377
Taxes	5
<b>Total Project Costs</b>	<b>4,520</b>

### Funding Arrangements

The following funding arrangements for the Project were put in place:

- a) Equity of SKr 400 million (8.8% of Base Case funding) which has been paid in full by the Sponsors;
- b) A Government Grant of SKr 850 million;
- c) Subordinated Debt to be provided by the Government (SKr 1,000 million) and the Sponsors (SKr 200 million);
- d) A rolling Stock Lease for SKr 754 million to be provided by Nordbanken Finans, and
- e) Senior Debt, consisting of a 25-year SKr 300 million loan facility to be provided by Nordic Investment Bank (initially guaranteed under the project finance facilities), and a project finance facilities SKr 1,000 million term loan (of which SKr 699 million drawn under Base Case assumptions) as described in Sections 1.10 and 5.4.3. below.

Additional funding consists of SKr 301 million of the project finance facilities above, the Base Case requirement to be drawn down in case of need. For drawings on the Project Finance Facility Loan in excess of SKr 800 million, a Subordinated Standby Loan of SKr 200 million to be provided by the Sponsors is to be drawn pari passu with the final SKr 200 million of the Project Finance Facility Loan. Funds available over and above the requirement identified in the Base Case amount to 11 % of Base Case costs (excluding additional funds available under the Rolling Stock Lease Agreement). Total Sponsor commitment is therefore SKr 800 million.

<b>BASE CASE AND ADDITIONAL FUNDING</b>		
<i>SKr million</i>	Base Funding	Additional Availability
<b>EQUITY</b>	400	-
<b>GOVERNMENT GRANT</b>	850	-
<b>SUBORDINATED DEBT</b>		
Shareholders' Loan	200	-
Government Loan	1,000	-
Shareholders' Subordinated Standby Loan	-	2000
<b>TOTAL SUBORDINATED DEBT</b>	<b>1,200</b>	<b>200</b>
<b>Senior Debt</b>		
Nordic Investment Bank	300	-
Project Finance Facility Loan	699	301
Rolling Stock lease	754	-
<b>Total Senior Debt</b>	<b>1,753</b>	<b>301</b>
<b>Total Financing</b>	<b>4,203</b>	<b>501</b>
Income during Construction	317	-
<b>Total Funding Sources</b>		<b>4,520</b>

### Construction

Construction was carried out under a fixed lump sum (SKr 2,470 million plus £ 118.1 million) date certain turnkey contract which was concluded on an arm's length basis with the Arlanda Link Consortium, a joint venture between members of the Sponsors' groups. The members of the Arlanda Link Consortium have joint and several liability for their performance under the turnkey contract ; where a number of the Consortium is a subsidiary company, its performance is guaranteed by its respective parent company.

The turnkey contractor was responsible for designing and building the project which included the seven four-car train sets, each having capacity for 190 seated passengers and their baggage for the Shuttle services.

The Turnkey contractor took the ground condition risk, including any unforeseen hydrological and geological conditions, or archaeological discoveries except on the Northern Bend where the ARC allowed an extension of time and agreed to pay any additional costs. (This is because all land required for the project except the Northern Bend has been extensively surveyed).

Liquidated damages was set at up to SKr 5 million to A-Train for each week of delay, capped at 5% of the turnkey contract price (representing approximately 42 weeks of cover).

Completion of the works to allow operation of the Shuttle service was scheduled for May 1999, with full completion permitting the operation of through services three months later.

(UPDATE HERE)

### **Traffic and Revenues**

Revenue for the project will be derived principally from the passengers using the Shuttle or from other operators using the Project's facilities. Growth in demand from air travellers at the Airport is expected to continue at a steady rate of 3.5 % p.a. In 1995, the Airport had 13.3 million passengers, a 7.0 % increase over 1993.

**A-Train will be free to set its own fares;** the standard fare in 1993 prices was expected to be SKr 80 per single journey; some reduced fares would be available to Airport workers and package tourists. SJ (and any other train operators) would be allowed access to the Airport, subject to payment of equivalent of 80% of the standard fare for each passenger joining or alighting from such through services at the airport. Services other than A-Train's own Shuttle trains carry only passengers making journeys by direct services originating at or terminating at destinations other than Stockholm Central.

The project is expected to capture 20% of all journeys to and from the Airport with most passengers converting from using the existing (and slower) bus service which currently has a 25% capture rate. The standard fare proposed for the Shuttle is slightly higher than the current SKr ... bus fare. It is significantly cheaper than the taxi fare or private vehicle costs, creating potential for higher levels of use.

### **The Project Documents**

– The Project Documents are summarised below.

#### **I) The Project Agreement (Concession Agreement)**

The Project Agreement set out the framework within which the Arlandaban project was to be constructed and operated. The basic principles are set out in this document, and the ARC provides undertakings as to the content and scope of other agreements between A-Train and various other state-owned entities. The ARC is charged with ensuring that these entities complete the relevant agreements with A-Train within the spirit of the legislation and the Project Agreement.

The key features are as follows:

The Concession to construct the Project and operate the Arlandaban is granted to A-Train for 45 years,

A-Train is responsible for the design, construction and completion of the Project, together with the procurement of the Rolling Stock and other equipment required for the operation of the Shuttle. A-Train also has responsibility for obtaining certain operational and other permits,

The ARC is responsible for making available the property required by A-Train, and for completing the improvements to the Rosersberg Section, in accordance with a specified time schedule. There is provision for the ARC to grant an extension of time and/or to reimburse A-Train for additional costs arising as a result of its failure to meet the specified time schedule,

The ARC bears the costs of any changes that it requests to the Project specifications during the construction period and grants extensions of time if appropriate,

A-Train transfers certain assets to the ARC. The ARC then leases those assets back to A-Train for the duration of the Concession. A-Train makes a single lease rental payment at the start of the lease, which equals the book value of these assets. (The combination of these two events means no cash is required).

A-Train retains ownership of those assets which are capable of removal from the system, which principally comprises the one train set which is not leased. This train set will revert to the ARC in the event that Senior Lenders do not exercise step-in rights and A-Train is unable to continue operation. However, the ARC will pay to Senior Lenders the initial cost of the train set less depreciation up to the time of reversion calculated on a 40-year straight-line basis,

The operation of the Shuttle must commence no later than 31<sup>st</sup> December 1999,

A-Train is responsible for the operation of the Shuttle and for the maintenance of the Project. It may operate up to 6 trains per hour in each direction from 0500 to 2300 hours daily, and 2 trains per hour in each direction during the remaining period,

A-Train pays annual lease rentals in relation to the land occupied at the Airport and the premises occupied at Stockholm Central,

No competing rail service will be supported by the ARC during the life of the Concession unless A-Train receives compensation,

A-Train is required, subject to certain qualifications, to grant traffic rights for a certain number of through trains to use the Arlanda Rink and to stop at the Airport, although such trains must not carry passengers to or from the Airport who start or complete their journey at stations within 15 kilometres from Stockholm Central, or any station between the Airport and Stockholm Central. A-Train is permitted to levy a fee of 80% of the standard Shuttle fare in respect of each passenger using such other operators' services boarding or alighting at the Airport.

The ARC is required to compensate a-Train in the event of any changes in Swedish laws or regulations which have a substantial adverse impact on the Project, including changes which cause the track charges payable to BV to exceed 10% of operating costs,

If there is discriminatory legislative action, or a change in Swedish law or regulations which results in the loss to Ass-Train of substantially all economic value of the Project, A-Train may elect to terminate the concession and to receive compensation from the ARC. The compensation payable will be sufficient to repay all outstanding debt (which will include the Project Finance Facilities) plus the shareholders' investment,

If performance is frustrated by various matters beyond either party's control (Events of Relief), including force majeure, and as a result Start of Operations is delayed for more than 12 months or the Shuttle is interrupted for more than 12 months in any 24-month period, then A-Train may elect to terminate the Concession. In this event, the ARC must repay all outstanding debt (which will include the Project Finance Facilities),

A number of termination events are defined in relation to the financial condition and performance of A-Train. The ARC will be required to notify lenders of the occurrence of an event which would allow it to terminate the Concession and to give lenders a period of time in which to cure the event if they so elect,

The remedies open to lenders include the possibility to transfer the rights of A-Train under the Project Agreement to another entity capable of performing the obligations of a-Train in a competent manner ("step-in rights"). A 365-day period is allowed for lenders to achieve this.

Government Bills (prop 1993:94/39 and prop 1993/94:212) have been passed authorising the creation of the ARC and the issuance of the Concession and associated funding.

#### Project Sponsors' Agreement

This agreement is between ARC and A-Train's shareholders, who undertake that A-Train will obtain an amount of risk capital from its shareholders and that A-Train will operate in accordance with the Project Agreement and all applicable laws, regulations, etc.

A-Train's shareholders agree to hold a majority interest in A-Train for a period of at least three years following the Start of Operations. The shareholders also agree to obtain the approval of ARC before making certain decisions of major importance.

In addition, the agreement contains rules governing accounting and reporting to ARC, as well as certain special commitments on the part of the Sponsors with respect to provisions of the Swedish Land Laws Code, confidentiality, arbitration of disputes, etc.

## **Arlandabanan Government Commitment**

The Government of Sweden undertakes to A-Train that the ARC will meet its obligations in accordance with the Project Agreement. The Government also undertakes that it will continue to own all the shares of the ARC during the period that the Project Documents are in effect.

### **Interface Agreements**

The Project Agreement sets out provisions in outline terms for co-operation between A-Train and BV, SJ and LFV to ensure the smooth operation of the Arlandabanan. The detailed arrangements will be set out in a number of more detailed agreements.

## **Integration and Future Developments**

The Sponsors (or their affiliates) entered into two agreements with a Negotiator appointed by the Government of Sweden which will facilitate the integration of national and local rail traffic to and from the Airport.

The Framework Agreement forms the basis of the agreements which may be made between A-Train, SJ and SL and any other operators relating to the fees and compensations which would be payable by other operators using the infrastructure built and operated by A-Train. The Negotiator will facilitate and monitor these agreements. The basis of the Framework Agreement is that A-Train will use the Base Case as a reference point for calculation of these fees and compensations.

# **VOLUME III – CASE STUDIES**

## **Transport**

### **CHAPTER I – ARTICLE 2**

#### **SHADOW TOLL ROADS – THE UNITED KINGDOM EXPERIENCE**

##### **The first eight shadow toll roads contracts procurement under PFI by the Highways Agency**

The Highways Agency is an agency of the Ministry of Transport (now combined with the Ministry of the Environment) responsible for the development and upkeep of the network of motorways and major trunk roads in England and Wales. In 1994, the Ministry decided to embark upon a series of road schemes under PFI to upgrade and extend some 600 km of the existing network. The schemes were launched in two batches of four schemes each.

Under the contracts, the PFI concessionaires were made responsible for the detail design, the road construction (new build/widening) or renovation, the operation and maintenance and the project financing. The term of the contracts was for thirty years, and all statutory approvals for the scheme were obtained before the procurement process was started. Since the Secretary of State for the Ministry cannot legally dispose of roads, throughout the life of the contract ownership of the road was retained by the State. The concessionaires were accorded rights of access and operation to enable them to carry out their responsibilities under the contracts.

As no tolls are levied on any highway in the UK, there was no new revenue stream to pay for the projects. Instead the notion of a “shadow” toll was introduced whereby the Highways Agency pays the concessionaire as a function of usage by motorists. The concessions were awarded to bidders who offered the most favourable toll level as predicted by the Highways Agency’s forecasts of future traffic volume.

##### **Elements of the contracts**

The following sections, set out how the contract allocated the key risks inherent in the projects between the parties.

##### **Usage or Demand Risk**

The Agency contracted to make payments to the concessionaires as a function of vehicle/kilometres of traffic per annum. Two categories of vehicles were identified: those with a vehicle length above 5.2 m and those below. There was no available method of identifying weight of vehicle, so length measurement was adopted as a proxy.

Bidders for the contract were requested to bid their tolls for vehicles per annum through the life of the contract in up to four bands or levels. Thus at the lowest level of traffic a certain toll would be charged, if that traffic level was exceeded, the excess in the next higher band would attract a different toll and so on. The Highways Agency stipulated that the toll for the highest level or band would be zero. This stratagem effectively capped the Highways Agency’s potential liability under the contract. The shadow toll payments increase over time in accordance with an indexation formula.

##### **Availability of Service and Performance**

For those projects which consisted in taking over existing stretches of road which were to be upgraded by a series of construction schemes, payments were reduced during the construction phase. If the road was open to use during construction, only 80 % of the full toll payment was due. Once the construction work was completed and certificated, the full toll became payable.

Lane closures and safety record:

Toll payments are adjusted to reflect two critical aspects of the roads performance: lane closure and safety. The contracts stipulate that deductions are to be made from the tolls due in respect of the length and number of lanes closed, the duration of the closure and the time of day of the closure (greater weight is accorded to closures during peak or business hours). However, lane closure deductions are only made for reasons within the concessionaires' control (e.g. maintenance) and not for closures required by the police or the utilities.

In order to encourage the introduction of new safety measures, the contract incentivises the concessionaire to propose such measures, and if the improvements are approved by the Agency, the concessionaire is rewarded by receiving 25 % of the economic of each personal injury accident avoided in the following five year period. Accidents avoided are calculated by reference to the accident rate in the three years prior to the implementation of the new measures.

### **Design and innovation**

Before the process of letting the concessions started the Highways Agency had gained full statutory approvals for all schemes. This meant that the outline design had been put to Public Inquiry and fixed in the statutory (legal) Orders which are necessary for land to be acquired and the schemes to proceed.

This outline design together with safety and environmental requirements were a mandatory feature of the contracts, being identified as "core requirements". The Agency also disclosed to bidders its own design proposals, but these were not mandatory being termed "illustrative requirements". It is significant that some bidders responded positively to the opportunity to propose numerous cost-effective changes to the Agency's "illustrative requirements".

### **Condition of the road at the expiry of the contract**

Although the contracts last thirty years, it was the intention of the Highways Agency that at the expiry of the contract, the roads would have at least a ten-year life before major renovation was required. Therefore, the contract specified the standards which the project roads must meet when they were handed back to the Highways Agency. Before the end of the contracts, the roads are to be inspected, the first inspection taking place five years before contract expiry when a programme of remedial works is to be agreed. To ensure that the agreed remedial works are carried out, the Highways Agency can withhold up to 40 % of toll fees due in the last five years of the contract up to the value of those works. The monies retained are to be applied to effecting the remedial works if the concessionaire has failed to do so. In the event that the amount retained is not sufficient to cover the remedial works if carried out by the Highways Agency, the concessionaire remains liable for the balance of cost.

### **Other special risks**

- a) Latent defect: As in nearly all contracts, the concessionaire was to take over an existing stretch of highway, there had to be allocation of this risk that a defect in the existing structure would give rise to unanticipated expense. Most bidders accepted this risk.
- b) Protestor action: new road building has attracted various degrees of protest action from environmental groups especially in certain rural areas. In most of the contracts, a negotiated position was arrived at whereby the Highways Agency and the concessionaire shared the financial consequences of such disruption.

### **The Procurement Process and selection of concessionaires**

As a public body, the Highways Agency has to comply with the European Union procurement regime for procuring contracts. The projects were advertised under the Public Works Contracts Regulations 1991 using the negotiated procedures. These regulations enshrine in English Law the European Union Directive on Public Works procurement. The projects were considered to be works contracts because there was no 'exploitation' revenue streams and although the contracts were to be for a mixture of works and services, the predominant purpose behind the contracts were road improvement schemes.

After the publication of a Prior Information Notice, indicating the Highway's intention to launch a procurement process, an advertisement was placed in the Official Journal which briefly described the projects and inviting interested parties to apply for an information pack.

On average, there were eight expressions of interest from various contractor groupings or consortia for each project. Therefore, a pre-qualification process was applied to the initial submissions in accordance with prescribed criteria to reduce the competitive fields to four bidders per project.

Each of the four shortlisted bidders was issued with the full tender documentation which included:

- A proposed form of contract
- Greater detail on the individual schemes
- The “core requirements” and “illustrative requirements” appertaining to each scheme (see above)
- The proposed payment structure and how bidders were to respond
- Indication of the latitude accorded to bidders to provide technically or commercially variant bids
- The criteria by which bids were to be evaluated.

After the bidders returned their bids, the process followed three stages. Firstly, the bids received were clarified to ensure they met the technical requirements, were financially sound and commercially acceptable. Secondly, there was a period of negotiation at the end of which the bidders were asked to submit their final commercial proposal. By evaluating these proposals a final preferred bidder was selected for each scheme. The final phase of the procurement process was taken up with resolving final contractual detail and confirming that appropriate funding had been committed to the project. On average, by the time each contract was signed, the procurement process had taken nineteen months.

## **The organisation of the procurement process**

The organisation of such simultaneous procurements was necessarily complex. Each procurement was negotiated by a local project team. The local team leader received his/her negotiating brief and parameters from a Central Team which was advised by external professionals and which consulted the Ministry’s PFI section. The role of Central Team was to co-ordinate the process and to focus the key decisions. These were then taken by the Confirming Committee – a committee of the Agency’s Board of Directors. Final recommendation of the award of a contract was submitted to the Transport Minister for approval.

### **The commercial and market outcomes**

The first eight PFI road schemes have been regarded as highly successful. On average, the Highways Agency estimated that some 15% of whole life costs would be saved over the likely outcome under conventional procurement (where, historically, costs have overrun budget by more than 25 %). Significant risks have been allocated to the concessionaires including traffic levels and protester action disruption, and more importantly a new road management industry has emerged made up of consortia of UK and non UK companies. Of the eight contracts, two consortia succeeded with two bids and four other consortia were awarded a scheme each.

Since the award of the first eight projects in 1995/96, a number of other road schemes in the UK have been let under PFI including roads under the jurisdiction of local authorities and the first urban highway scheme. Outside the United Kingdom in 1998/99, the equivalent Authority in Portugal to the Highways Agency and City of Madrid have launched highway schemes which draw on the UK’s shadow toll model.

# VOLUME III – CHAPTER I

## ARTICLE 3 THE CROSS ISRAEL HIGHWAY

### **The Cross Israel Highway – The Golden Path to Public – Private Partnerships in Israel**

Whilst Israel has a deservedly excellent reputation in being at the forefront of the high technology and internet age of the new millennium, its infrastructure is still firmly placed in the last millennium. The Israeli government has recognised that State funds alone are not sufficient to support the levels of investment required to ensure that its citizens enjoy the benefits of improved roads, railways, schools, hospitals etc. The Government of Israel is embracing the public private partnership philosophy and many BOT projects are currently in the pipeline both on a national and a regional level.

The Cross-Israel Highway Project achieved financial close in October 1999. It is structured on a build, operate and transfer (BOT) model. The Cross-Israel Highway will consist of an 86km toll road from Hadera to Gedera. The highway will have up to four lanes in each direction, 13 interchanges, 80 bridge structures, 100 km of agricultural roads and a 400 meter tunnel. The highway will be a toll road using sophisticated electronic tolling technology provided by Raytheon which allows Highway users to travel freely and uninterrupted by toll collection points. The system has already been operating successfully for several years on Highway 407 in Canada. The highway is the first toll road in Israel and represents the first major project finance transaction to be implemented in Israel. The highway is to be designed and constructed to the best international standards and incorporates state of the art technology as well as groundbreaking and innovative design and construction techniques.

In many ways, the Cross-Israel Highway is a benchmark project. Just the ability to reach financial close with an international consortium of sponsors and lenders was an enormous achievement. As construction of the highway now enters its second year, it is clear that BOT projects will increasingly become the means by which large infrastructure development is to be implemented in Israel.

From its inception, the Project has enjoyed broad political support, having continued uninterrupted through the governments of the late Yitchak Rabin, that of Benjamin Netanyahu and currently that of Ehud Barak.

In order to implement the Project, the Government of Israel established a special purpose state owned corporation known as Cross Israel Highway Ltd. (“CIHL”). CIHL was charged with the responsibility for taking forward the project, both from a planning perspective and in order to select a concessionaire through an open tender process. It was also given responsibility to coordinate between all government ministries to ensure efficient management of the Project from the government side.

Key to the success of securing international interest in the project was the level of governmental support available for the project. A pragmatic approach was also fundamental as each party, government, sponsors and lenders had to accept a logical allocation of risk. An appropriate allocation of risk is the cornerstone upon which a public private partnership can be built. Protracted negotiations between government, sponsors and lenders took place until the equilibrium was found. The equilibrium is now documented in literally thousands of pages of legal papers spanning six impressive leather bound volumes, which adorn many offices across the globe.

#### **Governmental Support**

The nature of governmental support was varied and included some of the following;

First, the Israeli parliament, the Knesset, enacted an important piece of legislation in support of the project. The Toll Road (Israel National Highway) Law – 1995, was enacted in which the basic terms of the concession (including the route of the highway, the right to charge tolls, powers to be awarded to the concessionaire and principles to be included in the concession agreement) were established and the method for requisition of the land of the site was determined. Thereafter, relevant ministers promulgated regulations in order to support activities by the concessionaire to enforce payment of the toll. Due to the fact that the highway is an electronic toll road without barriers, legislative support to enforce payment by drivers of the toll was of fundamental necessity.

Second, the State agreed to provide the project with a partial revenue guarantee which required the State to share in the traffic risk but also allowed the State to share in any better than forecast economic performance of the Project. If actual revenues fall below forecast revenues, the State will pay 80% of the shortfall to the concessionaire. However, if actual revenues exceed forecast revenues the concessionaire is required to pay 57% to the State.

Third, the State assumed responsibility for procuring land for the highway, clearing sites of antiquities, environmental hazards and munitions.

Fourth, whilst the tender process was being conducted, the State completed the initial phases of construction of two interchanges.

Fifth, the State agreed to incorporate a mechanism into the toll rate adjustment mechanism to reflect the actual cost of borrowing.

As part of the transaction structure, the State was also granted options for up to 49% of the equity of the Project company. The exercise price is determined in the Concession Contract and the options are exercisable following the completion of the construction works and until the end of the concession period. The State may exercise the options and enjoy the economic benefits of the Project without becoming a shareholder of the Project Company and the subsequent obligations that derive there from.

The tender process commenced in 1995 and four international consortia were pre-qualified to participate. In the first quarter of 1998, Derech Eretz Highways (1997) Ltd. ("DEC") was selected as preferred bidder for the project. CIHL conducted a highly organized and disciplined tender process over a period of 18 months, the result of which was the achievement of an extremely low toll rate.

The sponsors of DEC consist of two Israeli entities and one foreign consortium. The two Israeli entities include, Africa Israel Investments Ltd., a large Israeli investment company and Housing and Construction Holding Company, which through its subsidiary, Solel Boneh, is one of Israel's largest construction companies. The international consortium, Canadian Highways Investment Corporation, is a consortium consisting of, inter alia, Armbrö Enterprises Inc., BFC Construction Limited and Amec Inc. Canadian Highways was responsible for the construction and initial operation of Highway 407 in Toronto Canada, and therefore brought invaluable experience of electronic toll roads to DEC. The Israeli sponsors were pivotal in obtaining extremely aggressive financing arranged by Bank Hapoalim and CHIC was instrumental in obtaining the support of Newcourt Capital (now owned by the CIT Group).

In view of the groundbreaking nature of the Project, it being one of the first project finance projects in Israel, all concerned were involved in a steep learning curve. This included, the State, the sponsors and the lenders. Effectively it took 20 months to reach financial close following the selection of DEC.

In addition to the obligations placed upon the State as described above and the basic obligation of DEC to design, build and operate the highway for the entire concession period, the Concession Contract also included a requirement that upon the fulfilment of certain predetermined traffic triggers DEC would expand the highway. These traffic triggers are expected to be fulfilled every several years after construction completion and until the end of the concession period. The costs of the expansion of the highway had to be projected as part of the financial structure of the project, since additional debt cannot be incurred during the life of the project. In order to provide comfort that there will be enough funds available when required to implement the expansion, a dedicated reserve fund was established for this purpose.

Other features of the Concession Contract include, the obligation of DEC to construct four service stations along the route of the highway. A portion of the income from the service stations is payable to the State as an offset or supplement to the Partial Revenue Guarantee provided by the State. In addition to providing highway users with service areas for refuelling, recreational and rest purposes, the Service Stations will provide DEC with important non toll revenues with which to bolster the robustness of the financial model upon which the viability of the Project is examined.

The term of the concession is thirty years and although certain occurrences may entitle DEC to extensions of time to the deadline for completion of the construction works but not to the concession period itself, which remains capped at thirty years.

The Concession Contract includes restrictions upon the transferability of the concession and/or the shares of DEC.

## **The Financing Structure**

The project was structured with 90% debt and 10% equity. The bank debt was provided through a New Israeli Shekel (NIS) facility equivalent to \$850 million which was arranged and syndicated by Bank Hapoalim (one of Israel's largest banks). In addition \$250 million was provided by CIT Group in the form of a private placement.

The NIS syndicated loan consisted of two tranches. One tranche incorporated a sophisticated step margin that facilitated a lower toll in the earlier years of the project. The other tranche was at a fixed interest rate for the entire term. The facility is included a 6.5 year roll up of interest. The facility was based on a term of 28 years.

The note purchase facility was provided a rating of BBB- by Standard and Poors'. The term of the facility is also 28 years.

The senior lenders are protected through the establishment of several reserve funds and charges over the assets of DEC and the equity contributions by the shareholders.

## **Construction**

As part of the structure of the Project, DEC procured the construction services by a joint venture comprising of affiliates of the DEC sponsors. The Construction Agreement consists of a fixed price, lump sum, date certain turnkey contract. The Construction Agreement is based upon the principle that all construction risks are borne by the joint venture, unless and to the extent that any particular risk has been assumed by the State pursuant to the Concession Contract. The Construction Agreement is structured to pass construction and design risk to the construction joint venture.

The Project has also been structured to open in phases in order to provide a "run in" period prior to full scale opening. The joint venture has provided DEC with a guarantee of revenues to be collected during the "run in" or construction period.

The joint venture's obligations were supported by joint and several sponsor guarantees, a surety bond and several letters of credit.

## **Operation**

DEC is obligated to operate the highway through an operating company. The operating company is an Israeli company owned by affiliates of the Sponsors.

## **Conclusion**

The Cross-Israel Highway project served as the first major privately financed project to be implemented in Israel. It served as an important experience for the government, the lending institutions and the private sector. It will undoubtedly serve as an example for future projects in Israel. In 1999, the Project was named Transport Infrastructure Deal of the Year for the Middle East by the magazine "Project Finance

# **VOLUME III – CHAPTER II**

## **THE ENVIRONMENT**

**[Not yet available]**

# VOLUME III – CHAPTER III

## POWER GENERATION

### INDEPENDENT POWER GENERATION PROJECTS: MAIN ELEMENTS AND KEY ISSUES

#### 1. Introduction: The Parties and Their Roles

Until recently, investing in construction of new power plants has usually been carried out by national or regional electric utilities, that made use of their own resources or borrowed funds using their balance sheet (or the support of the government) as security. However, in recent years, power generation projects are frequently carried out by private or foreign investors, due to some or all of the following reasons:

- Fast increases in electricity demand can require large investments in new capacity.
- Limited financial resources of the utility or even the government can make impossible the development of the required new capacity.
- An obsolete or inefficient generation system can require a major upgrade.
- There is a need for incorporating state-of-the-art operation practice in the generation industry.

**In most cases, the incorporation of privately sponsored generation is carried out in the framework of an already existing, usually vertically integrated, utility, using BOT, BOO or other independent power schemes, that will usually have the following main parties:**

- An entity or group of entities that will be in charge of constructing and operating a power plant (**the generator or power producer**). Typically, the generator will be a consortium involving electricity companies, engineering firms, manufacturers of electrical equipment or other investors, that will be called the **project company**. Each of the members of the consortium is usually called a **sponsor**: the sponsors will be shareholders of the **generator**.
- An agent that will buy the power from the generator and distribute it to the final customers (the **utility**). The **utility** is frequently a state-owned, vertically integrated entity with monopoly rights on its area of service. In many cases, the role of the utility is carried out by the Ministry of Energy or equivalent authority.

The utility will usually pay to the generator a price consisting of two components; a **capacity price** (S/kW) and an **energy price** (S/kWh). The contract between the utility and the generator is frequently called (**power purchase agreement PPA**).

**Additionally, a privately financed power project involves other parties (see figure 1):**

- One or several **lenders** (bank or other financial institutions), that will provide the required loans. In many case, the lender is a consortium of entities, frequently involving multi-lateral agencies such as the European Bank for Reconstruction and Development.
- **Insurers**, that can assume some of the risks involved in the project.
- **Fuel suppliers**.
- **Contractors and sub-contractors**, responsible for the construction of the plant, as well as suppliers of equipment.
- **Operators**, that will be in charge of the operation and maintenance of the plant. The role of operators, as well as the contracts that will be established between them and the **generator**.

In the case of Eastern and Central Europe and the CIS, the European Union participates directly in the modernization of the energy sector through the TACIS and PHARE assistance programmes.

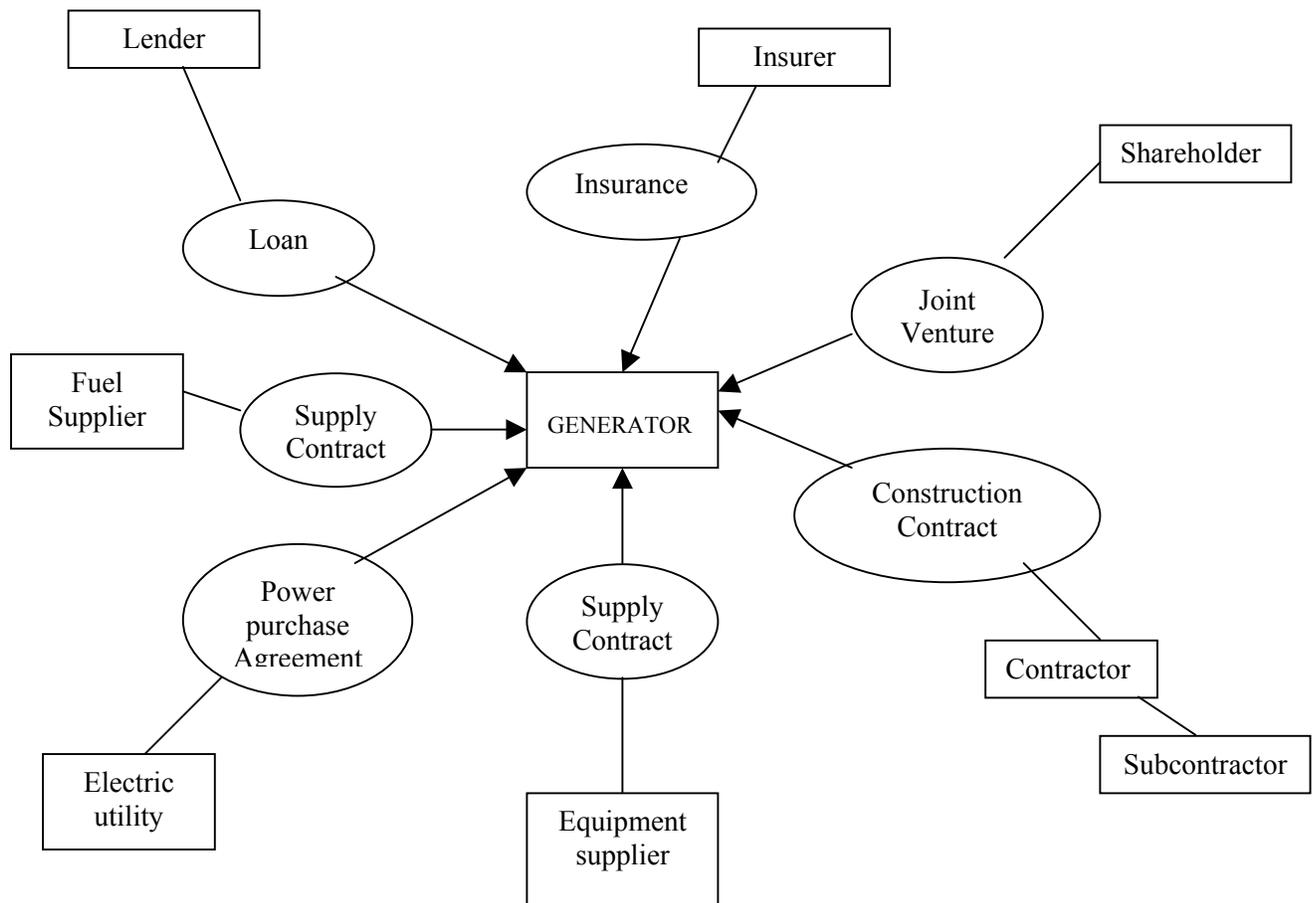


Figure 1. Simplified representation of the main relationships among parties in a BOT, BOO or similar energy project.

Given the current concerns about the security standards of the nuclear industry in some countries, the modernization of the nuclear industry has been the objective of several specific partnerships.

## **2 Risk Identification and Allocation<sup>11</sup>**

Risk evaluation and allocation are major concerns in independent power projects and have a fundamental impact in the total cost of the project. For instance, loans will be more expensive for even impossible if the lenders consider that the long term availability of fuel supply is unclear, or whenever there are reasonable doubts about the demand for the generator output in the long run.

Risks must be borne by the most appropriate partner for instance, the commissioning of the plant on the due date is a responsibility of its shareholders, that can be transmitted to the constructors through a turnkey construction contract. Given the number of involved parties and the complexity of the relationships among them, the optimal distribution of risk is probably the most difficult and important tasks in the process of designing an independent power project.

<sup>11</sup> In this section, only the definition of the risks involved in energy BOT arrangements, as well as the proposed ways of allocating and treating them will be discussed. Other topics are considered to be common to other areas of application of BOT and are discussed on the main part of these guidelines

The specific risks associated to energy projects can be classified into three groups:

- Price change risks
- Performance risks
- Market risks

There exist generic risks, not specific of energy projects, such as the construction cost overrun risks, solvency risks, foreign exchange risks loss or damage during construction, loss of revenue, etc. Political risks (changes of regulation and legislation, expropriation, political violence, conversion and transfer risks, payment prohibition and moratorium) are specially important, taking into account that the energy sector is undergoing severe re-structuring and deregulation processes in many countries.

The project sponsors are themselves an important source of risks. They are required to prove their actual commitment to the project (through an equity contribution typically ranging from 20% to 50%, as well as to demonstrate the required technical and managerial capabilities. Additionally, insurance companies, brokers and consultants play a major role in assessing and assuming risks. An adequate insurance coverage is usually required by the lenders.

Some of the risks can be treated through indexation, penalties and liquidated damage, as well as commitments regarding minimum amounts of energy to be bought by the utility to the generator to ensure its viability. These are among the main issues to be dealt with in the power purchase agreement .

It must be noticed that any unfair allocation of risks will be detrimental for the utility: if the generator must bear inappropriate risks, the prices it will charge will be higher; in the opposite case, it will not be encouraged to build and operate the unit in the most efficient way.

## **2.1 Price Indexation**

In General, the capacity price corresponds to the remuneration of the investment and the fixed operation and maintenance costs<sup>12</sup>. In many cases, it is fixed through the contract duration, or it can be indexed to the interest rates, the detail price index or any other relevant variable. A pre-determined evolution profile can also be established in the contract.

The energy price will frequently have the following structure (var. O & M costs stands for variable operation and maintenance costs):

$$\text{Energy price} = (\text{fuel price})(\text{heat rate}) - \text{var.O \& M costs}$$

In principle, the fuel price can be indexed to the fuel markets (for instance, the international coal prices, the gas spot price at a given hub or the average price of fuel used by the electricity industry in the country. The energy price could also be based on the actual fuel price paid by the generator (provided that the utility has the means to verify that this payment is real and the fuel supply arrangements are fair).

The purpose of the indexation of fuel price with international prices is to incentive the generator to look for low cost fuel; therefore, it is only adequate whenever the generator has access to a competitive fuel market. In some independent power projects, the fuel supplier is a state owned coal mine or gas company. In this case, prices are frequently influenced by the political will of supporting a national industry or other considerations and the generator cannot be held responsible for them: in this circumstances changes in the fuel price paid by the power plant should directly affect the price of the generated energy.

The trend in very competitive energy markets shows that generators are increasingly willing to accept fuel price risks, certain recent power purchase agreements index the energy price with variables unrelated to the fuel price showing that generators can be able to efficiently hedge that risks.

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<sup>12</sup> Sometimes the capacity price also includes a capacity term for fuel supply, that could correspond, for instance to the capacity component of a pipeline charge.

The **heat rate** is the key technical element of the energy price equation. It represents the efficiency of the plant, and is directly linked to the quality of its operation and maintenance. Its value is not constant throughout all the possible levels of use of the unit, and its expression in the contract should recognize this fact to guarantee an efficient use. A constant contract heat rate can impose artificial limits on the flexibility of the plant, since the payment received by the generator for low load factors (associated to higher actual heat rates) could be lower than its actual costs: this would lead to the generator reducing its flexibility for the dispatch.

Since the heat rate is not only a function of the load factor, but also depends on the ageing of the plant, it could be associated to a “bonus system” providing an incentive to the generator to keep the heat rate as low as possible. An additional bonus should be granted to the generator if it provides ancillary services such as frequency control and load following (primary, secondary and tertiary power reserves) and voltage control and reactive management.

The contract arrangements could also include an indexation for the operation and maintenance cost as well as start-up prices (although these are frequently irrelevant). Both the fixed and the variable operation and maintenance costs are particularly dependent on the mode of operation and have therefore to be assessed.

## **2.2. Performance Risks**

A key element of the regulation of the electricity supply is the obligation to serve, that (in the more traditional structures of the electricity industry) is usually borne by the vertically integrated monopolies. The appearance of new agents (generators that are not integrated in the monopoly) requires to assign them their fair share of this duty. This is usually accomplished through a threshold availability that the generator is expected to provide. Typical values of this desired availability range from 80% to 95% depending on the technology.

The penalty or liquidated damages associated to violations of this threshold can be associated to the capacity price typically between 10% and 15% of the annual payment for each percentage point of unavailability below the threshold (i.e., 0,27% and 4% of the total capacity payment for each additional day of unavailability). Penalties or liquidated damages could be expressed in terms of the days of unavailability that are needed to cancel the full capacity payment.

The contract can also establish penalties for deviations with respect to the dispatching. Additionally, it should specify capacity tests to ensure that the generator is actually providing the contracted capacity.

Delays in the commissioning can be penalized through a completion security that will be progressively held back by the utility as long as the project is delayed. Typical guarantees can range from 10 to 30 S/Kw. It must be taken into account that a frequent cause for delays is the bureaucracy involved in construction permits: it is important to make sure that the generator is not penalized for delays that are beyond its control, since this would again lead to higher prices.

The availability of the power plant is closely related to operation and maintenance. These activities are frequently subcontracted to a separate entity, the operator, as will be discussed in section 7.

## **2.3. Market Risks**

The long term economic feasibility of a power project depends on the demand for its output; therefore, a power purchase agreement (i.e. a long term commitment by a utility about buying the energy produced is usually required by the lenders. These contracts frequently include minimum take provisions as well as other limits, such as maximum number of start-ups minimum number of utilization hours, etc.

In some countries (such as the United Kingdom, Sweden or Norway) independent power projects are required to participate in a competitive generation market, and therefore can bear a significant uncertainty concerning the actual demand for their output. In these cases, contracts with distribution companies or large customers can play the same role of a power purchase agreement.

Technical reasons will require to establish the ramp rate, the load factor limits, the minimum time required for start-up, minimum time up and down, as well as any other dispatchability constraints.

## **2.4. Other Relevant Issues**

Power purchase agreements can include other electricity-specific aspects:

The utility can limit the flexibility given to the generator to schedule the maintenance of the plant by requiring it to coordinate it with the electricity consumption patterns and the maintenance schedule of other plants in the system.

The price could include a term corresponding to the use of the transmission network, that, in general, will be higher whenever the plant is located far from the load centres.

The situation can become rather complex if the generator sells electricity to several different recipients (such as several vertically integrated utilities or even industrial customers that have been allowed to contract directly with a generator. This situation would require a detailed specification of the priorities, rights and duties of each recipient.

Electricity generation, transmission and supply require a set of auxiliary elements, the so-called ancillary services: frequency/active power control, different levels of reserve, voltage/reactive power management etc. The contract should specify the different obligations that the generator will bear concerning this. Ideally, ancillary services should be unbundled from the basic generation activities; thus, the supply of these services could be an additional source of income for a generator.

## **3 - Political and Institutional Preconditions**

There is a significant trends toward the introduction of more competition in the electricity industry. In an increasing number of countries the new structure of the electricity industry is based on:

- Regulated transmission and distribution activities
- A competitive generation market, with free entrance and dispatching based on bids submitted to a power pool or direct contracts involving generators and customers.
- An unregulated marketing activity, that allows customers to buy their electricity from suppliers different from the utilities operating in their geographical areas.

**The evolution from a traditional regulation, where generators receive capacity and energy payments based on their costs, to a market-based situation where some generators can be more competitive than others, is a complex process, whose difficulty is even bigger where private ownership of the generators exists, since the existing commitments (such as power purchase agreements) must be respected.**

Some countries (such as the United Kingdom, Sweden, Norway, Argentina, Chile and others) have significant experience concerning competitive generation markets. In Eastern and Central Europe and the CIS this does not seem to be the option chosen by most of the governments. However, there are exceptions such as Ukraine. In this country, the regulations passed in 1994 established a competitive structure consisting of:

- 27 joint stock corporations in charge of distribution and supply:
- A state-owned transmission company.
- The Energomarket, a wholesale electricity market or power pool, based on daily price bids on an hourly basis.
- Seven generation companies that bid into the Energomarket.

The government interested in setting an independent power scheme for new generation must have a clear strategy for its electricity supply industry. If there is a short term perspective of deregulation and competition in the electricity industry, a BOT, BOO or similar procedure is probably not the best solution, since it adds long term constraints to the liberalization process. In this case, it could be better to open the generation market to new agents immediately.

The selection of generation alternatives to be implemented through independent power schemes leaves an important margin to apply the government's energy and environment policies. The criteria that will be based to evaluate and select alternatives must take into account the national priorities regarding fuel diversification and environmental impact, as well as the interest in promoting or protecting certain regions or areas. Short term economic considerations should not receive an excessive weight: for instance, cheaper generation technologies are not always better, since they could have associated risks of fuel price volatility or dependency on unreliable suppliers. In any case, this should be done through transparent and objective procedures.

#### **4. Commercial Preconditions**

A BOT, BOO or similar procedure for new generation should be started whenever additional capacity is needed in the system. The assessment of this need requires a planning process that must be based on forecasts of electricity demand, evolution of fuel prices, useful life of the existing plants and performance of the available generation technologies. These forecasts are especially difficult to obtain in a context of economic uncertainty. The planning process should pay special attention to the estimated impact of demand side management actions on energy efficiency and consumption, to gradually cope with international trends.

The results of the planning process should include all the information that is needed to evaluate generation alternatives:

- How much capacity is required (the supply block )as well as its expected dispatching niche (base, intermediate or peaking units).
- A tentative distribution of generation technologies. The utility should not impose too many constraints on this issue, since creative generators could provide innovative solutions not forecasted by the planning agency.
- The costs of the generation alternatives that have been selected in the planning process (the so-called avoided costs i.e. the cost that the construction of the required capacity would mean to the utility), as well as other relevant economic and technical information (marginal costs of the system, nodal prices, reliability indexes, etc).

It is unclear how much of this information must be disclosed. It has been verified that the publication of the avoided costs has a significant impact: the generators tend to ask for a price close to the avoided cost, rather than sticking to their actual costs. Nevertheless, the avoided cost provides a valuable information to the interested investors regarding their possibilities of succeeding as independent power producers. Moreover, even if this information is kept secret, it could be filtered to some of the potential generators, causing unfair discrimination.

#### **4.1. Supply And Demand Side Alternatives**

Demand side management actions are sometimes treated as fully fledged alternatives to generation capacity. They can be used to decrease the level of the peak load of the system to reduce the total energy consumed or to shift consumption from a given time of the day to another, thus they can sometimes reduce the need for additional capacity.

In the United States there is some experience on competitive tender procedures where demand-side and supply side alternatives are compared with similar criteria and procedures. Nevertheless, this approach does not seem to be adequate, because of several reasons:

- Demand side management actions have significant uncertainties: they usually involve the participation of the users, whose response can sometimes be unexpected: the effect of a given investment in demand activities is extremely difficult to predict. This drawback is even more severe in countries where there is not enough experience in this kind of activity (as happens in Central and Eastern Europe and the CIS). On the other hand, the performance of generation plants can be estimated with accuracy.
- The results of a demand side management activity are also hard to measure, since they can involve behaviour patterns that could have been adopted even without the demand side action.
- The size and time scales of supply and demand side activities are completely different: the construction of a generation facility requires months or years of negotiation, large investments, complex approval and permit issuance procedure, etc. On the other hand, most of demand-side activities do not need big investments and can be executed in a few months.

- Demand side management involves a close participation of the customer that makes long term planning difficult to accomplish: customers can disappear, the use of buildings (and so the energy consumption patterns) can change, etc.
- In general terms, demand side management is a marketing and retail activity, while generation is a wholesale business.
- Experience shows that assessing both demand side and supply side options with the same criteria leads to biased results.

Therefore, the most appropriate approach to demand side actions is their treatment in separate evaluation and selection processes. Since the time needed for their implementation is considerably shorter, demand side management can be used to complement supply side alternatives.

Nevertheless, demand side actions should be assessed during the planning stage previous to the selection of generation alternatives. Thus, the size and characteristics of the supply block will be determined taking into account the best demand side options.

## **5. Legal Issues**

Independent power contracts should be established through competitive tender. There are a significant number of companies active in this area, that guarantees a fair degree of competition and therefore lower costs for the utility. Additionally, a transparent bidding process, with clearly defined technical and economical selection criteria, makes decisions more difficult to reverse and minimize the risks associated to political changes<sup>13</sup>

The initial requirement for a fair competitive bidding process is an adequate call for tenders, that should have the following characteristics:

- It should be open to all kind of potential generators, both domestic and foreigners.
- It should include all the relevant technical and economic information (generated during the planning process) that could be required by the bidders.
- A model contract should be proposed defining those aspects that are specially relevant for the utility, but leaving open those issues where the creativity of the bidder can be of use (mainly the pricing arrangements).
- A participation fee or bid bond should be required. This will make sure that all the participants are really committed to the project.

The call for tenders should provide enough information on the evaluation procedure to be used. Bid evaluation is a complex task since:

- Bids are defined in terms of several heterogeneous attributes
- The assessment of each bid depends on external random factors, such as unavailability, demand hydraulic conditions etc.
- The assessment of a given generation alternative cannot be carried out independently, since it depends on the other alternatives that could be combined with it.

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<sup>13</sup> A recent highly publicised, case involving a power plant being built by Enran and the Indisan state of Maharashtra, clearly shows the danger of a non-competitive approach to BOT. A contract was established between Enran and the previous state government without competitive bidding. When a different party came to power, it considered the deal to be unfair and the prices to be too high, among accusations of corruption addressed on officials of the previous government. A complex negotiation has been opened again, and a final agreement, involving a substantial reduction in prices seems to have been reached.

In principle, the bid evaluation process is similar to a traditional generation planning problem, involving the comparison of different alternatives with adequate power system models. Nevertheless, a competitive tender process makes this task more difficult, due to several reasons:

- All attributes must be explicitly assessed, to guarantee an open and transparent process.
- There is the need to attract a maximum number of new agents into the system, and this will require extreme guarantees of fairness and transparency.
- These new agents, that do not know the local conditions and are not known by the local authorities can add new risk factors and uncertainties.

A detailed description of the available bid evaluation procedures is beyond the objectives of this document. In any case, the selected methods should consider the following attributes:

- **Price**, including capacity and energy terms. This is obviously related to the forecasted dispatching of the generator and therefore has significant uncertainty.
- **Capacity**. The utility can be interested in bids smaller than the supply block, to avoid the concentration of risks in a single project.
- **Quality and other technical attributes**, related to stability, voltage/reactive control capabilities, frequency control capabilities, availability for black start, etc.
- **Reliability** of the proposed technology, also associated to the proposed operation and maintenance plan.
- **Dispatchability**, i.e. flexibility offered by the generator to the dispatching.
- Impact on the **transmission network**.
- **Feasibility** of the proposed technology.
- **Financial and technical** background of the bidder.
- **Fuel**: certain fuels have more volatile prices than others. A lower price in the short term can be associated to significant price uncertainties in the long term.
- **Environmental impact**

The disclosure of the evaluation process is a critical issue. Bidders usually prefer highly transparent and open procedures, based on relatively simple weights and scores, since that allows them to tailor their offers to the desired characteristics. Nevertheless, the use of a simple evaluation procedure for such a complex product can lead to inadequate solutions. Moreover, a fixed method will not be able to treat innovative solutions that could be proposed by a bidder. Therefore, the entity that organizes the bidding procedure has good reasons to prefer a relatively closed approach, disclosing only a description of the relevant criteria but keeping enough flexibility to deal with unexpected bids.

### **5.1. Environmental Impact**

The environmental impact can be a significant asset or drawback or a generation alternative. This attribute can be highly significant, and its treatment can determine the result of a competitive tender process. Roughly, there are two basic approaches to it :

- Use of standards. Most Eastern and Central European countries already have or are trying to prepare environmental standards similar to the ones used within the European Union. These standards usually establish emission limits for different pollutants, as well as other constraints. Nevertheless, this approach is usually too local, and either fails to capture many subtle aspects of the environmental impact of generation or can be too restrictive. Whenever standards are used? Any generation alternative that complies with them will be acceptable, and the environmental impact will no longer be an evaluation attribute, but a previous requirement. An alternative that goes beyond the level required by the standard will not get any benefit from that.
- Internalization of the external costs. This approach is based on a detailed economical assessment of the different costs associated to the fuel cycle, from its extraction to the elimination of waste. Its purpose is to assign an extra cost (that could be negative) to each generation alternative, according to its forecasted impact. This is a rather complex objective and there is no finished and widely accepted methodology for it. The extern project funded by the European Union and other organizations, is the most ambitious effort to design a comprehensive approach to the accurate evaluation of environmental externalities : nevertheless, it is still far from complete. In any case, an approximate treatment of this factor would allow to compare different technologies in a relatively fair way.

In nuclear power, the potential environmental impact is closely related to security issues. In this technology, the estimated effect on the environment depends on complex assumptions involving extremely low probabilities of accident and very long-term horizons. In any case, the selection of nuclear generation as an alternative should require the compliance with international standards and regulations, including the ratification of the Vienna convention on nuclear safety. Annex B presents a check-list of the main issues in a government indemnity statement covering nuclear incidents.

## **6. Operation and Maintenance Contracts**

Operation and maintenance (O & M) of a newly constructed or rehabilitated power plant is a critical aspect of any BOT, BOO or similar scheme. The investor of consortium that is investing in the power plant (the project company) can arrange the provision of this service in several ways :

- a) O & M can be directly provided by the project company, when it is an experienced utility ;
- b) O & M can be provided by a specialized entity, the operator company with the participation of the investor project company ;
- c) It can be arranged by a subcontractor, without the participation of the project company.

In case of engagement in a country in which the project company or relevant consortium members do not have their own business activity, only options b) and c) can be carried out, because of cost reasons.

In any case, operation and maintenance activities will be covered by an O & M contract, that could include some of the following issues.

- Technical assistance, making use of the operator's expertise
- Advising the project company on the business plan with reference to :
  - Investment decisions
  - Allocation of manpower
  - Implementation of management systems
  - Drawing-up long-term maintenance plans
  - Introducing and maintaining safety standards
  - Spare parts
  - Reporting system
  - Analyzing fuel supply
- Assistance with fulfilling the requirements of the power purchase agreement
- Financial and business administration assistance

The remuneration received by the operator should depend on the business risk that is taking. For example, if the operator agrees to guarantee that certain operational performances will be met a bonus/malus system could be applied : the O & M company receives the remuneration according to the load factor of the plan.

In a case where the O & M company is owned by the investor or is part of the consortium, a fixed O & M charge could be agreed upon with the project company as it is in the investor's/O & M company's best interest to optimize the running of the plant.

If the O & M company is reluctant to take responsibility, a cost plus fee basis could be agreed. The O & M company will be reimbursed for its costs plus a negotiated margin.

### **6.1 Rehabilitation Projects**

In this case, the consortium or project company invests in an existing power plant, in order to increase its efficiency.

The operation and maintenance work is carried out by the personnel of the existing plant. The project company will contribute, in addition to the financial means, its experience and knowledge in order to improve the efficiency and the load factor of the plant.

The project company enters into a form of consultancy contract with the existing power plant. The purpose of such a contract is to define the duties and responsibilities of the investor. Usually, experts in the field of engineering or business administration will join the existing power plant for a limited period of time, to ensure an improved operation. The aims of this contract will be the following :

- Return on investment and return on equity (as soon as possible)
- The preservation of the plant, long-term security of the company's operation.

The success of this scheme will depend on some preconditions, such as :

- the plant should be operations, regarding authorizations, technology and fuel
- the plant staff must have the appropriate "know-how" (relevant company experience) and responsibility
- there is available fuel supply.

Operation and maintenance costs depend on factors such as size, quality of the components, technical concept, utilization (base and peak load), duration of operation and standards of distribution. Construction flaws or overloading leads to higher maintenance expenditure and need for replacement investments. An optimum can therefore be reached if operational and maintenance aspects of the plant's design, including quality tests and documentation, are taken into account when establishing the contract. Specific local and environmental characteristics play an important role in this regard.

## **6.2 Personnel for Operation and Maintenance Work**

Both in newly constructed and rehabilitated power plants, operation and maintenance personnel will be a key aspect of a successful operation. The operator can contribute staff to the plant in two ways :

- delegation of an experienced core team, with highly qualified specialists and key personnel :
  - to be assigned by the investor (in part or in whole) ;
  - to be recruited from the O & M companies ;
  - to be recruited from local firms : component producers, electricity suppliers, similar companies or competitors.
- Topping-up the workforce with less qualified workers :
  - recruitment from the labour market ;
  - recruitment from nearby companies ;
  - recruitment from similar industries or from the investor companies which are not directly linked with the industry, or from the operating company.

An optimal coordination with the future operation can be achieved if the basic personnel, comprising responsible executives, specialists and qualified employees is already integrated in the engineering phase. The core workforce will gradually be completed, and the rest of the personnel will be built-up step by step during the construction process.

Concerning the core team, an exact and full introduction by the plant operator has to take place on commissioning of the plant. Preparatory or subsequent training will take place in other plants that are operated by the operator at national or international level.

Unskilled workers must be introduced and trained during the test period or in tandem at similar plants. In-house training will be provided by a core team of the investors or O & M specialists or by external experts.

### **6.2.1 Development of the Company and Management Factors**

The aims of the operation of the newly constructed or rehabilitated power plant will be to obtain a high availability of the unit, higher output and low operation costs, as well as to minimize replacement investments.

These goals will be achieved through :

- detailed and precise operational manuals (appropriate documentation with exact targets and business instructions)
- trained management and specialist staff
- sense of responsibility, motivation (productivity incentives)
- measurable productivity criteria
- control mechanisms (both internal and external) reports management, information systems etc.

A precise management contract will be established with the operator. This can be done in the form of a performance contract, by means of detailed performance instructions and payment of Cost + Fee, or as a company contract, with independent business arrangements and freely disposable financial means, independent operational execution and financial disposition.

In both cases, the exact proof of expenditures and a detailed company plan are necessary, including :

- operation and turnover planning,
- operation costs and maintenance budget,
- investment plan (replacement, extension and rationalization investment),
- finance plan

for the short and medium term horizons.

In the preparation of the underlying technological plan, the on-site, local and company specific facts, as well as the existing company environment should be taken into account. This optimization, in accordance with plant targets, and also with the best possible utilization of financial means, is the reason for the integration of the employees in the results of the company (performance incentive).

The optimal technical extent of the contract must comprise :

- supervision of the maintenance and revision cycles (in accordance with the use of different fuels and input materials),
- process controls and process optimization,
- fuel analysis, quality controls,
- material economy with quality demands and maintenance strategy,
- observation of environmental requirements.

During the start-up phase, active support of the “normal” operation personnel will be necessary. As a rule, qualified employees from the project company, the subcontractor or external sources, familiar with the industry, will be employed with the operator for a limited period. It may take one or two years before the power station runs smoothly.

In conclusion, an O & M company has to undertake a meaningful share of the responsibility for the plant. It should already be integrated in the engineering phase, in order to achieve an economically viable company and to prepare it for the specific requirements of the plant.

This means that a commitment should not and may not be restricted to that of a purely financial nature, if the risk in the operating domain should be minimized. An active exertion of influence and involvement in management and control by the O & M company are of paramount interest.

## VOLUME III – CHAPTER IV

### PUBLIC PRIVATE PARTNERSHIPS IN EDUCATION IN ENGLAND

#### Introduction

The development of public-private partnerships (PPPs) in education in England has taken place against a backdrop of historic under-investment in the new buildings necessary to deliver modern education services. This has been exacerbated by low levels of repair, refurbishment and maintenance. There is therefore an accumulated need for investment that far outstrips the available public sector capital.

The direct investment of public sector capital has increased dramatically in the last three years but PPPs continue to play a highly significant part in providing new, upgraded and rationalised provision. In the five years to September 2000, 43 deals were signed with a capital value of approximately £580m.

Since the launch of PPPs in education there have been a number of inter-related policy goals for their development:

- to see individual projects deliver value for money through optimising risk allocation and harnessing private sector skills;
- to lever in significant amounts of overall investment from the private sector; and
- to see PPPs become a well established and familiar option for local education authorities (LEAs) and schools, for further education colleges and for universities seeking new investment.

Those policy goals have been directly complemented by potential partners from the private sector looking to establish new markets and build new businesses, rather than just do single deals.

Achieving the goals of both public and private sector has been difficult given the innovative nature of PPPs, the expertise they require on both sides and the costs of development. But this difficulty has been compounded by the fact that, for education, central government is not the procuring authority: PPP deals are done by individual LEAs, schools, colleges and universities. These factors of innovation, cost and devolved procurement have generated issues and potential barriers that have had to be tackled in order to make progress in establishing PPPs in education:

- Market knowledge and expectations
- Market capacity and capability
- Client expertise
- Affordability

#### Market knowledge and expectations

Interesting the private sector in opportunities for PPPs in education has required them first to understand how schools, colleges and universities are funded and controlled. Many potential partners and their funders understand the school and university sectors through past involvement and provision of debt. They know less about the more recent college sector. The private sector has raised concerns about the powers of LEAs to enter into PPP deals and, for universities and colleges, about their financial stability or covenant strength. Each of these concerns has been successfully addressed: in the case of LEAs through amending regulations; and for universities and colleges through publishing material clarifying how the funding councils work with individual institutions to ensure their viability and financial stability.

In addition, the private sector has had to be convinced that the projected flow of funds to education institutions is such that the volume of future business will be sufficient to justify the outlay necessary to gear up to enter into partnerships. The first PPP deals have involved prospective partners in significant investment in order to assemble the teams needed to complete the deal and cover other costs of bidding (such as legal fees).

Clear government plans showing a rising line of funding for education have helped to convince the private sector that in principle institutions will be able to afford entering into PPP deals. The development of substantial earmarked funding for deals in the schools sector has however made the biggest difference. LEAs can apply for additional revenue support from central government ("PFI credits") to help meet the costs of a PPP deal throughout its duration. In total, revenue to support over £1.3 billion of investment is being made available over the period 1997-2002. This additional funding gives an assured volume of future business within a defined period.

Other private sector concerns have focused on whether:

- PPP deals in education would be large enough to be viable;
- despite a healthy flow of projects, costs would remain high because approaches developed in one project would not be replicable in another; and
- the quality of projects coming to market would be reliable. Variation in quality would increase the risk that that some projects on which bid costs had been incurred would not prove to be viable.

Issues of deal size have principally concerned the costs of developing a bid and undertaking negotiations, and the cost and availability of capital. The vast majority of completed deals have been below £20 million in capital value, with many involving less than £10 million of investment - rather less than early estimates of the minimum viable deal size. These deals have proved viable principally because the potential size of the market has proved highly attractive to the private sector. Some progress in tackling the key causes of high procurement and bid costs through increased standardisation has probably also contributed. The developing expertise of professional advisers and bidders may be another factor.

Interest in achieving greater economies of scale, however, still remains high. Both public and private sectors frequently express interest in 'bundling' of deals so that costs can be shared and documentation re-used. 'Bundling' also offers the prospect of access to cheaper sources of funding.

Unlike in other service areas, such as prisons or roads, PPPs in education have not taken a single, standardised form. Over the last four years the range of PPPs completed or in procurement has expanded in response to the diverse needs and circumstances of different LEAs, colleges and universities. For example, PPPs have been brought to market for:

- re-placing or building a single school
- repair, refurbishment and rationalisation of a group of schools or all of an LEA's school estate
- IT services for a further education college
- IT services for all the schools under an LEA
- rationalising further education college accommodation
- catering to all schools and social services in an LEA
- combined heat and power for a group of universities
- arts, music, sports or leisure facilities for a group of or single institution(s)
- residential accommodation for universities

As well as varying in the need they meet, the structure of these deals has taken a variety of forms. Some are capital intensive but others involve little or no up-front investment and are effectively service-led deals. Many have a design, build, finance and operate (DBFO) structure. But in others an established estate is taken over and investment planned for various times during the life of the deal. Yet other deals are arranged more as joint ventures (although not necessarily formally constituted as such), involving both private and public sector capital or assets and funded in part by revenues from third parties.

This diversity means that there are opportunities for a broad range of private sector parties. Not all of these opportunities will readily or quickly bring the advantages of 'repeat business' but amongst the variety some dominant forms of PPP are emerging which offer do offer that prospect. These forms - such as new or replacement single school or deals covering a group of schools - are increasingly susceptible to standardisation and hence to faster, simpler and cheaper procurement. And we are seeing a growing private sector interest in some particular types of project, such as student residential accommodation, where it sees scope for offering a 'standard' product.

The Department of Education and Employment<sup>14</sup> - in conjunction with other parts of government - and the funding councils have played a crucial role in ensuring that PPPs that come to market are viable and properly prepared. In each of the three education sectors<sup>15</sup> a form of 'sign-off' procedure has been put in place. This arrangement addresses the private sector

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<sup>14</sup> The Central Ministry charged with education for England.

<sup>15</sup> Schools, colleges and universities.

concern, borne of experience in other service areas, that projects may come to market before they are ready or without viability having been proven. Both carry the risk of higher or abortive costs. The exact criteria for 'sign-off' differ between the sectors but key requirements include seeing that the procuring bodies have:

- a clear business need and a strategic plan which calls for the project
- demonstrated commitment to the project
- undertaken a 'soft-market test' to gauge likely levels of market interest
- conducted a formal option appraisal and provisionally assessed value for money
- involved key stakeholders in generating the project proposal and set out the requirement in output-based terms
- modelled likely cashflows in order to assess the affordability of the project
- a realistic timetable
- a project with characteristics likely to favour PPP, such as scope to transfer risk, opportunities for third party income, potential to exploit surplus assets

### **Market capacity and capability**

Early expectations were that PPPs in education would follow the same DBFO (BOT) model seen in other service areas. This carried with it an expectation that bidding consortia would be led by construction companies. This will obviously be the case only for projects involving building. But it has raised some issues for long term contracts in which the key element of performance is the effective delivery of a service over 25 years or more.

The importance of service delivery is recognised. Construction company led consortia will almost invariably involve experienced facilities management companies but often as junior partners when arguably the latter have the most enduring interest. There have been various responses to this difficulty. Some large companies have been able to call on their facilities management arm to take the lead on delivery once construction is complete. Others have actively sought liaison with facilities management companies, or even acquired them as subsidiaries. A few large facilities management companies have taken the lead role, effectively sub-contracting construction. Equally, some construction companies have sought to transfer performance risk, using sub-contractors for service delivery and tasks such as routine maintenance and repair. This departs from the idea of a consortium but does bring the advantage of opening up business to local small and medium sized companies .

The market for PPPs in education is still evolving but alongside the construction led bids there are now consortia in which the facilities management provider and/or the funder plays a major if not lead role. The clear benefits are that the objectives and commitment to the partnership on public and private sector sides are more closely aligned.

### **Client Expertise and Culture**

The devolved nature of responsibility within the education system in England means that there are over 700 local education authorities, colleges and universities, as well as some individual schools, which have responsibility for their own procurement. Many of these bodies would not routinely have access to the full range of skills required for a PPP procurement. They need, for example, highly developed skills of project management, option appraisal and whole life costing, output specification, stakeholder management, negotiation and contract management. This difficulty is compounded by the fact that most will undertake a PPP procurement only very rarely, with the risk that the skills developed will be under-utilised or lost.

We have sought to tackle this problem principally by setting up within the Department for Education and Employment, and within the funding councils, special units to provide advice and support to projects. For these we have had to find individuals with a good grounding in public sector finance and knowledge - or the ability to learn quickly - about private sector finance. These units have benefited from the expertise of secondees from the private sector. The role of the PPP units has evolved as PPPs have become more established: early tasks often involved tackling major barriers that arose from the broader policy, regulatory or funding frameworks. Subsequently the focus changed to improving the process and flow of projects coming through.

These special units have worked by:

- Providing support and advice to individual projects. This has included tackling generic barriers and helping to find solutions to project-specific problems
- Establishing and supporting 'pathfinder' projects to test new approaches and identify lessons from which other projects can benefit
- Providing training and workshops for those undertaking PPPs, drawing on emerging good practice and case studies
- Drawing on the expertise of a central government 'taskforce' staffed by people with relevant private sector expertise
- Supporting networks designed to allow those involved in one project to benefit from the experience of another
- Publishing case studies, guidance and standard documentation based on emerging good practice.

The sign-off arrangements described above have also imposed a discipline on the public sector client with well-defined criteria that have to be met. This has not meant that the public sector has found it easy to satisfy these criteria but it has set a useful benchmark and communicated clear expectations.

Alongside issues of skill and experience we have had to address, using the approaches detailed above, some cultural resistance to the concept of PPPs. This has involved both fear of change and suspicion of the private sector. We have sought to counter this by increasingly drawing on the experience of successful PPPs and stressing the benefits in terms of education as well as value for money.

Some public sector bodies have also shown a reluctance to let the private sector come up with their own proposal on the detail of a building or design: specifying inputs rather than outputs. Conversely, other clients have not specified outputs in sufficient detail, expecting the private sector to bring their creativity to bear in responding to vague requirements.

We have also had to support the client side in understanding the principles of risk transfer: allocating risk to the party best able to manage it and not just transferring all risks that the private sector would in principle take on, because that might not deliver value for money.

### **Value for Money and Affordability**

Any project needs to demonstrate that a PPP would offer good value for money before it can go ahead. In the United Kingdom, Value for money must be tested using a comparator that reflects what it would cost the public sector, using its own capital to fund a traditional procurement, to secure the same outputs.

As in all service sectors, analysis of the risks to be transferred has been a crucial and challenging part of generating a comparator. Drawing up an output specification runs counter to what estates and procurement professionals are used to doing. The information base with which to estimate the value and likelihood of a risk occurring is rarely complete. And either data has to be generated or assumptions have to be rigorously tested. Ensuring that projects have access to good advice and benefit from the work of other projects is particularly important in this area.

Affordability focuses on whether there will be a sufficient cash flow to meet the cost of the outputs sought. This has been a particular issue in education because educational institutions work in a cash-limited environment and the historic levels of investment in routine repair and maintenance have generally fallen short of what is required to maintain the value of the capital investment. This means that a PPP may offer value for money but still require the public sector to lay out more than it would traditionally expect to do.

The opportunity to enter into a PPP has also led some procuring bodies to seek a type or level of outputs that they cannot afford. This is usually due to over-optimistic estimates of what the private sector can provide at what cost. This over-specification can slow down individual projects by requiring changes to the output specification at a late stage. It can also damage private sector confidence that all projects brought to market are well prepared and viable.

Again, the client side needs access to good advice to ensure that its specification is realistic in the light of its expected cashflows.

## **Conclusion**

The Department of Education and Employment believes that significant progress has been made in establishing PPPs for education in England on the basis of the approach described above. The number of deals completed or in procurement are evidence of that. The agenda of issues listed is however still a live one. Through building on what we have achieved so far we expect many more PPP projects to come to fruition.

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