



**Sub-Saharan Africa Transport Policy Program**  
**The World Bank and Economic Commission for Africa**



SSATP Working Paper N° 26

# ***Privately Financed Road Infrastructure***

## ***A Concession Company's Point of View***

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**Mai 1996**

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The World Bank



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## Foreword

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One of the most important challenges facing road planners in Africa, is how to mobilize sufficient funds to build, improve and maintain a network of high capacity freeways to serve the needs of the region's rapidly growing road transport industry. Given the acute shortage of government revenues, many governments are increasingly turning to the private sector for assistance. Why not let the private sector come in to build and operate these roads under concession agreements?

It was against this background that the Government of Ghana invited the Road Maintenance Initiative (RMI) to organize a regional seminar to explore the scope for private sector involvement in toll roads. The resulting seminar was held in Accra from 26 to 28 June, 1995, and was sponsored by the Ministry of Roads and Highways (MRH) and The World Bank. Participants included representatives from Benin, Burkina Faso, Côte d'Ivoire, Ghana, Kenya, Nigeria, Mozambique, South Africa and Zimbabwe. Topics covered included the bankers', operators' and concessionaires' perspectives of private sector toll roads, the experience of the International Finance Corporation (IFC) with toll roads, and the use of World Bank guarantees to underwrite some of the commercial risks associated with toll roads. This paper, *Privately Financed Infrastructure: A Concession Company's Point of View*, was one of the main resource papers prepared for the seminar.

The general consensus emerging from the seminar was that concessioning is not as easy as it seems. Briefly, the seminar concluded that:

- In Africa, the greatest scope for private sector involvement in toll roads, is as managers and operators of facilities owned by the government.
- With traffic volumes of over 3,500 per day, revenues will usually be sufficient to cover operating costs, and routine and periodic maintenance.
- Tolling is generally not economical when traffic volumes are less than 3,500 per day.
- True concessions require much higher traffic volumes.
- Management contracts require an effective operating company (the concessionaire) and a clear contract between the government and the concessionaire. Some form of government guarantee is almost essential.
- A true concession requires an operating company, domestic (and often international) finance, a contract between the government and the concessionaire, a contract between the concessionaire and the lenders, and extensive government guarantees.
- Revenue leakage is a major problem. The South Africans reported collecting nearly 100 percent of the revenue payable, but this cost up to 30 percent of revenue. Lower collection costs lead to higher leakage and less net revenue.
- Governments had to carefully evaluate private toll road proposals. The concessionaire rarely loses out and the government often ends up having to bail out poorly designed schemes.

The RMI program which organized the seminar is a component of the Sub-Saharan Africa Transport Policy program (SSATP) which is a collaborative framework initiated by the Bank and the ECA to improve country response to key aspects of transport policies and to build up related implementation capacity in Africa. SSATP outputs are addressed to policy makers and to managers and planners engaged in the task of improving the delivery of transport services. They are also intended to facilitate consensus building among external support agencies.

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## **Privately Financed Infrastructure: A Concession Company's Point of View**

In the past concessions have been used to finance infrastructure projects, and they are again being adopted by both industrial and developing countries. In view of the state of economic development in Africa, it is particularly worthwhile that the use of concessions be examined within the African context. The aim of this paper is to provide some insight into what concession companies, or rather those investing in concession companies, require.

### **A Description of Concession Systems**

Under a concession system the state grants a franchise the right to finance, build, own, operate, and maintain a public infrastructure for a given period, and to charge users for that service. Concessions are normally stand-alone, single-purpose entities that are expected to finance themselves eventually, if not initially, without recourse to their shareholders. They are independent corporate entities run by a dedicated staff that seeks career advancement within the concession company. Invariably, the successful concession has been created because of a compelling economic need.

This paper refers mainly to toll roads. However, a concession system can be used to run many other public services, such as bridges, telecommunications, and airports.

In order for a concession to be successful, the State's granting authority must be clearly defined. Typically, this authority is vested in the Ministry of Transport, and the road that needs to be built is approved as part of a national highway plan. The Ministry exercises its authority under a special law. But there are exceptions to this design. In the United Kingdom concessions have been authorized by special acts of Parliament. Examples include the Dartford River Crossing and the Channel Tunnel High Speed Rail Link, for which a bill is pending in Parliament.

Motorway concessions can vary in length, averaging about thirty years. In general, the concession should run for a period of time long enough to enable the company to service all debt and earn the required return on equity. But there are no hard and fast rules. For example, the Birmingham Northern Relief Road has a concession length of fifty-two years, and the duration of Dulles Greenway's concession expires ten years beyond the final maturity of the longest-term debt used in the initial financing (making the concession forty-two years). In Mexico the initial concession period can be as short as seven years, although this length has proven to be nonviable.

The land for the project is usually acquired by the State under its compulsory purchase rights and then leased at a nominal rent to the concession company for the life of the concession. The cost of land acquisition is usually borne by the concession company. Interestingly, the concession company for the Dulles Greenway acquired the land by private negotiation, meaning that the concession company determined the final alignment as a function of its land acquisition. At the end of the concession period the land and road will be handed over to the highway authority, a procedure characteristic of most concessions. The highway authority often drafts the preliminary design of the road, and the detailed design is completed by the concession company or its contractor. But for both the Dulles Greenway and the Birmingham Northern Relief Road the complete design was developed by the concession company, though approved by the highway authority. The concession companies considered it important to have full control over design because the tolling policy that they adopted would influence road design.

Standards or specifications for road construction and design are always required to be at least as strict as those of the highway authority. The standards of the concession company are often higher because it realizes that the road is its income-producing asset. Further, most good concession companies feel that they are offering a service to the public. If the road is not maintained properly or service deteriorates (including toll collection), drivers will use alternative routes or object to toll payments.

Concession companies may be public or private sector entities, or a mixture of both. In France there are seven publicly owned concession companies, or Sociétés d'Economie Mixte (SEMs), and one private company, Cofiroute. In Italy there are eighteen publicly owned concession companies, operating 97 percent of the tolled road network, and one privately held concession, operating the road between Milan and Turin. Of the publicly owned Italian companies, Autostrade S.p.A. is the largest by far, operating approximately 55 percent of the tolled road network—more than 3,000 kilometers of toll roads. This amount is equal to the total motorway network in the United Kingdom.

The United States has a long history of state turnpike or toll road authorities, the New Jersey and Pennsylvania Turnpike Authorities being best known. But in the 1990s state and federal governments are turning from state-owned concession companies to the private sector to provide new roads and bridges.

Concession companies typically have a financial structure consisting of modest amounts of equity and substantial amounts of debt raised from domestic and international financial markets. The debt is serviced by revenue from tolls, which also covers operating and maintenance costs. Revenue from other activities, such as rent from motorway service areas, may be considered as a source of debt service, but gains from property development are not normally accepted as reliable sources for this purpose. Motorway concessions are always faced with high initial construction costs and slowly growing revenue. During the initial operating period, they almost always make losses and, more importantly, have a negative cash flow. These cash deficits must be covered—a problem that is a significant part of concession financing. In general, if the concession is going to operate with deficits for a long time, private promoters and banks will require government subsidies to cover these deficits. The amount of subsidy and the length of time that it is provided is a matter for negotiation.

All concession systems must confront the thorny problem of determining toll rates. In almost all cases the state is the final authority. But it is essential that the concession company, particularly if it is privately owned, be assured by statute or by the concession agreement that it can set tolls at sufficient levels and in a timely manner so that debt can be serviced and the required return on equity obtained.

It is interesting to note that the concession company for the Birmingham Northern Relief Road has an unfettered right to set whatever toll level it chooses. The philosophy of the government at that time was the competition arising from the existing free M6 would provide sufficient restraint on toll levels to protect the public interest.

### **History of Concessions**

Concessions were widely used in the nineteenth century to finance railways, tramways, and highways in Europe and the Americas. There are still a few small bridges in the United Kingdom that date their right to collect tolls to the seventeenth century. Unfortunately, the right

to set toll levels was left with Parliament, with the result that tolls have not been increased, and so few improvements have been made.

One of the best known infrastructure concessions is the Suez Canal, which was a financial success until it was nationalized in the mid-1950s. Unfortunately, many other large nineteenth century infrastructure projects foundered, and large amounts of money were lost.

In the United States the concept of toll roads is well established. Between 1789 and 1900 there were more than 2,000 private corporations operating turnpikes in Pennsylvania, New York, Ohio, Michigan, and elsewhere because governments were not able to provide adequate highways.

The world's first modern tolled motorway opened in 1924 in Italy. It was 48 kilometers long, running from Milan to the Lakes. The first motorways in France and Italy were constructed in the 1950s and 1960s, when concessions were awarded to publicly owned motorway companies. In the same period the idea of establishing a network concession to manage profitable and unprofitable sections of motorways emerged in Italy, where Autostrade S.p.A. was set up under the auspices of the State Institute of Industrial Reconstruction.

Spain embarked on its motorway program in the mid-1960s, a full decade after France and Italy. The national budget was deemed inadequate to meet the demands of a booming tourist industry. The solution adopted was to develop toll roads through concession companies. Spain benefited from the experience of France and Italy. The new Spanish motorway companies were all private entities, although they were subjected to a high degree of state monitoring and control.

Towards the end of the 1960s a new policy began to emerge in France, favoring a reduction in state intervention and recourse to private participation. This policy led to the creation of four private concession companies and to a greater degree of autonomy being given to the SEMs.

The energy crises of the 1970s had a severe impact on motorway development in France, Italy, and Spain. Construction costs rose dramatically, and loan finance was available over only short periods and at high interest rates. Traffic growth slowed, and actual and predicted revenue fell. In Italy state grants had to be applied to support motorway companies, and motorway development was temporarily halted. In France the SEMs received advances from the state to help cover unforeseen annual deficits. The private companies were forced to refinance with loans offered at unfavorable terms. Two of the four private companies were forced to call on state guarantees in 1982, followed by a third in 1985. The state took over these companies and assimilated them into the public system of SEMs. From this point most of motorway development in France was channeled through the public sector.

A similar development in Spain led in 1983 to the collapse of three companies, representing about 15 percent of the motorway sector. The public sector acquired their assets under a new State-owned holding company.

By the late 1980s the fortunes of the motorway companies had revived because of improved economic conditions and unexpectedly high traffic growth. By 1982-83 the Italian companies as a whole were able to cover operating costs and financing charges with toll revenue. And by 1987 the Spanish motorway sector was showing an overall profit for the first time. Today, the concession companies in Italy and Spain are profitable, and the shares of some are actively traded on the local stock exchanges.

## **Concession Types and Structures**

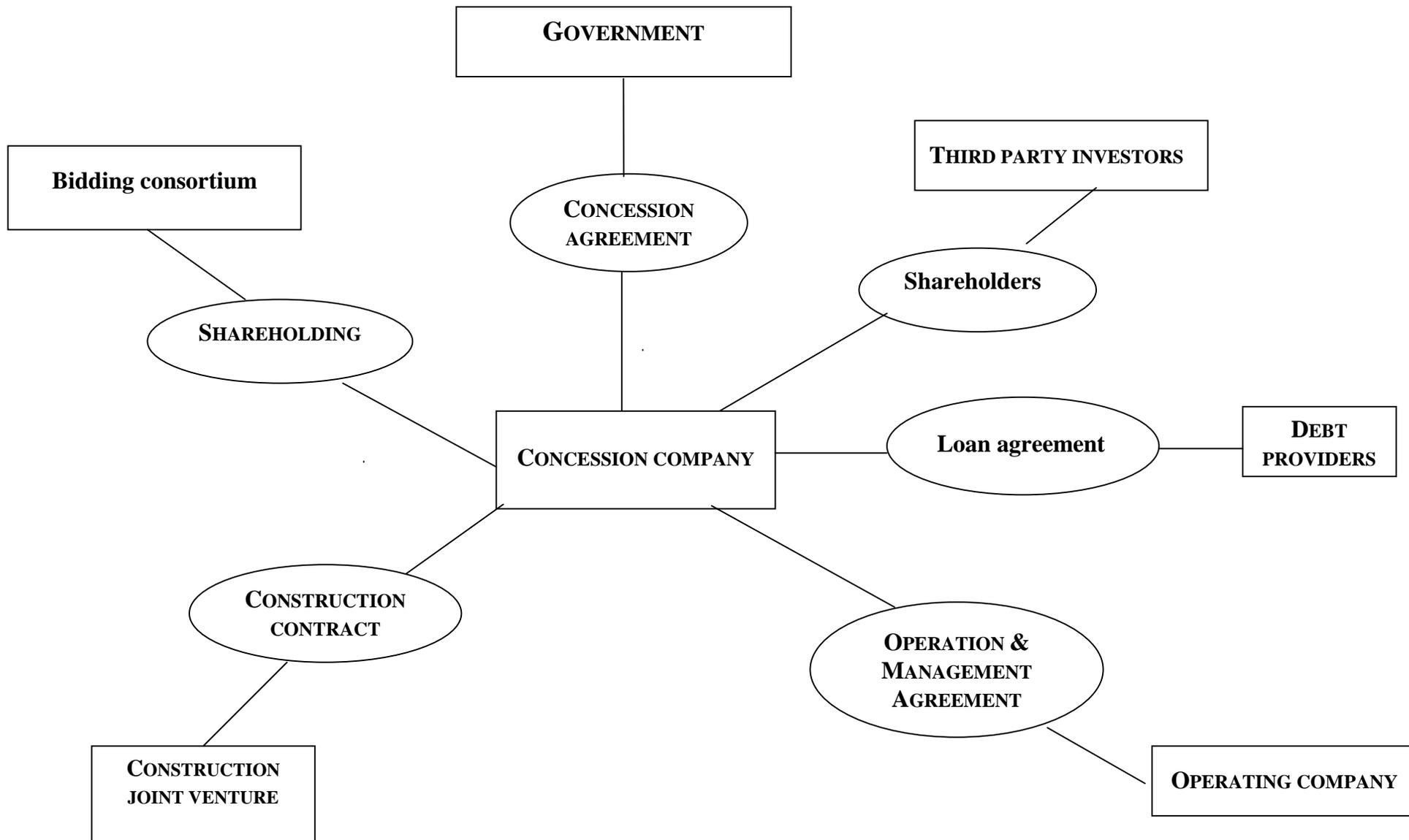
Discussion so far has been on the general characteristics of toll road concessions and their applicability in the historic development of road networks in Europe and North America. In the U.K. the situation is different. The motorway network has been built by the State and there are no direct user charges. Similar to other governments, the U.K. government now does not have enough funds to finance new roads or the widening of existing roads or, as important, the maintenance of roads to the standard which is required.

The Department of Transport has set out a new program to encourage private sector involvement called DBFO (Design, Build, Finance, and Operate). There are eight DBFO projects presently being bid for and for many of the projects there is a minimum amount of construction and a substantial amount of maintenance. An example is a project on the M40 between London and Birmingham. The total length of the road is 122 kilometers while the amount of road widening is approximately 12 kilometers at an estimated cost of £37 million.

Tolls will not be charged on the DBFO projects. Instead, the government will pay an agreed amount for each vehicle that uses the road over a period of up to thirty years. This practice is called "shadow tolling." The trick is to correctly estimate the traffic flows over thirty years and then to negotiate with the government on the shadow toll per vehicle. The important point to be made is that the U.K. government is awarding road concessions not to build new roads, but to widen, operate, and maintain existing roads. The government's declared aim is to "foster the development of a private sector road operating industry in the U.K."

There are no fixed structures for concession companies or for the flow of contractual obligations regarding construction and operation. A typical example would see the concession company owned by the bidding consortium and possibly third-party institutional investors (Table A). The concession company would enter into contracts with:

# TYPICAL CONSTRUCTION STRUCTURE



The government—the concession agreement.

- A construction joint venture—the construction contract, usually on a fixed-price basis. The construction contract is often of a design-and-construct nature.
- An operating company—the operations and maintenance agreement, whereby an experienced operator maintains the road to the required standard and ensures that the toll collection facilities operate at an agreed performance level. It is not unusual to have a 99 percent collection requirement. In some cases the shareholder of the operating company is the supplier of the toll collection equipment, or, if not, the operator is allowed significant input into equipment specification.
- Debt providers—all of the loan agreements will be entered into by the concession company. The banks' construction, operation, and maintenance requirements will flow through the concession company, not directly to the construction joint venture or the operating company.

The above is an example of a structure that works and in which the shareholders of the concession company, the construction joint venture, and the operation company have different interests. If the shareholding is the same for all aspects of the project, it may be possible to combine all activities within the concession company.

### **Concession Company Investors**

Who invests in toll road concession companies? In France and Italy governments have historically been the primary initial investors, preferring to use concession companies rather than the ministry of works to construct highways. In Spain, on the other hand, banks, construction companies, insurance companies, and wealthy individuals were the initial investors.

Today, equity investors include large construction companies; road operating companies such as Autostrade, Transroute, and Cofiroute; toll equipment suppliers; banks or long-term financial institutions; newly formed infrastructure funds or emerging market funds; multilateral institutions such as the International Finance Corporation; and newly created infrastructure companies.

Construction companies were originally thought to be natural investors because they expect to receive the construction contract and to recover their equity investment from their construction profit. But this view is beginning to change. In both Europe and North America the construction business is cyclical, and as a result many construction companies were devastated by the recession of the early 1990s. Now, many are interested in obtaining road or other infrastructure concessions to ensure non cyclical earnings. This view has been encouraged by stock exchange commentators. Examples of such construction companies include Trafalgar House, John Laing, Mowlem, Amec, and Wimpey in the United Kingdom; GTM-Entrepose, Spie Batignolles, and Bouygues in France; Philipp Holzmann and Hochtief in Germany; and Bechtel Group, Kiewit, and Morrison Knudsen in the United States.

Road operators such as Autostrade, Transroute, and Cofiroute have made and continue to make investments in concession companies. Typically, they expect to act as road operator or to provide

toll equipment systems, and these undertakings are generally welcomed by banks financing the projects. Financial institutions, such as banks or insurance companies, prefer not to take an equity stake during the development or the construction period. However, there are exceptions to this and it is always worthwhile to explore this possibility. In the past few years specialist infrastructure companies have formed, such as United Infrastructure in the United States, while companies such as G.E. Capital have created separate divisions devoted to toll road investment. There are not many investors of this type, but the number is certainly larger than it was five years ago, and is increasing.

Toll road concession companies almost always start out as a consortium of mixed interests that have come together to bid for a concession. Within the consortium there is always a strong local partner who is able to navigate through the political and bureaucratic seas. Concession company investors are primarily interested in the rate of return that they can earn from their investment. Included in their calculation may be the profit that they will earn from providing a service or good, such as construction or toll equipment, but the return on equity investment must also be sufficiently high. In Mexico it is estimated that the combined rate of return was about 40 percent.

Investors in European or North American projects seek a rate of return of at least 20 to 25 percent if they invest at the beginning of construction. If they invest at the beginning of the bidding or development period, they expect a higher rate of return. It is sometimes difficult for governments to realize that equity investors are involved in a project solely because they want to earn a return commensurate with the risks they are taking. If the return is too low, they will invest elsewhere because around the world there are many other infrastructure projects available for investment.

Still, governments do not want to enable investors to make a "killing" by exploiting a monopolistic situation. The problem of balancing these two interests is complex and calls for creative government regulation.

In Italy, where virtually all the concession companies are owned by the state, the Concession Law established a limitation of 8 percent on share capital payable as dividends. Because the Italian government plans to privatize Autostrade and some of the other concessions, this restriction will soon be lifted and a new system of regulation introduced.

In California, where four private concession projects are underway, the Department of Transport has negotiated permissible levels of the rates of return on total capital employed. The concession company can set toll levels relatively freely, but if the return is greater than the agreed amount, the excess goes to the Department of Transport. A similar regulation is in place for the Dulles Greenway.

The above are examples of concessions that investors and the government believe will stand on their own without government financial support. But if projects are not financially viable, the government must step in. An example of this is the Channel Tunnel High-Speed Rail Link. The cost of building the highspeed line is so large that private finance would not undertake the project without government support. The government's concern in this case is not the expected rate of return, but the level of financial support that it must provide and the risks that it must assume. Obviously, the lower the rate of return required by investors and the more risks that they are willing take, the lower the needed government contribution.

## **Risk Allocation**

Virtually all concessions are now awarded by competitive tendering, and an essential element in choosing the winning bidder is the allocation of risk between the concession company and the government. Several types of risks must be dealt with in all toll road concession agreements. Broadly speaking, they are risks pertaining to revenue or traffic, construction, completion, operation, political repercussions, planning, the environment, third parties, and financing.

The only source of *revenue* for toll roads is the amount of tolls collected. Three factors influence this: the level of tolls, the amount of traffic, and the efficiency of collection. We have already discussed the risk relating to the establishment of toll levels. Clearly, the concession company investor must be satisfied with the mechanism for establishing toll levels or it will not invest.

The allocation of *traffic risk* will depend on the estimated road usage with and without a toll. If surrounding roads are heavily used, the concession company will absorb the traffic risk, believing that even if a toll is charged a sufficient number of motorists will pay to save time and avoid congestion. This reasoning is applied in the cases of SR91 in Orange County, California, the Dulles Greenway, and the Birmingham Northern Relief Road. If there is not enough regular traffic or if "induced traffic" is expected to be significant, then the concession company is not willing to take the full traffic risk, nor will the banks. In this case a minimum level of support must come from the government. The form of support can vary according to circumstances and may last for a limited period. There are many ways to confront this problem, and allocating this risk is a major area of negotiation.

Ensuring the efficiency of toll collection is a risk assumed by the concession company. However, the concession company will insist that the government does not impose onerous employment requirements, and to the greatest extent possible will want to automate toll collection and install efficient security systems.

The amount of *construction risk* that the concession company and its contractor are prepared to assume will depend on the extent and quality of the design proposed by the highway authority when the concession is awarded. An important element in assessing this risk is knowledge of the terrain and local construction conditions. It is thus essential to involve a local contractor. Items that may lead to long negotiations are ground conditions, archaeology, force majeure, and design risks. Normally, the concession company enters into a construction contract with a contractor who is a shareholder in the concession company. The concession company and the banks will attempt to push as much of the design and construction risk as possible on to the contractor.

Invariably, the banks will require that the construction price be fixed, which is very difficult to do if only an outline of a design has been provided. Because of this requirement, the construction price may initially appear much higher than if the road were built by the government, as a large contingency will be included in the price. However, the length of time taken for construction and the amount of change orders and variations should be substantially less.

Banks will insist on and, presumably, the government will require adequate assurances from the contractors, including performance bonds or guarantees, regarding *completion* of the project. For this reason sufficient funding to finance construction, including cost overruns, must be available. For usual construction matters the contractors would be expected to give fixed time and prices

backed by liquidated damages provisions. The government would be expected to provide assurances regarding all necessary consents and approvals.

The concession company would be expected to assume *operation risks* once the road was open. These risks include not only toll collection and routine maintenance, such as grass cutting and maintenance of signs, but also repaving and rebuilding so that the road is returned to the government in good condition (as defined by state standards for comparable roads).

The concession company would expect the government to accept all *political risks*, including nationalization, revocation of the concession without cause, war, riots, and civil disobedience. It would also expect protection from punitive laws, including unusual taxation provisions aimed at the concession. The concession company must have adequate means of obtaining compensation for these risks, spelled out in the law authorizing the concession or in the concession agreement.

One of the biggest concerns of a concession company is construction delay resulting from problems in obtaining essential *planning* consents or the necessary licenses to operate the road. Delays cost money, and so the concession company will demand that the government provide the necessary federal, state, and local authorizations, including health and safety regulations. Such appropriate clearance was not provided in the case of the Channel Tunnel where the Intergovernmental Commission imposed stringent safety regulations during construction, causing massive cost overruns. Another example is the Birmingham Northern Relief Road, in which construction was scheduled to begin in 1994 but because of the delay caused by the Public Inquiry, construction will not begin until 1997 or 1998. Concession companies learn from experience and are unlikely to take these risks again.

*Environmental requirements* established at the time of the concession agreement signing should be accepted by the concession company, but any requirements passed during the construction period must be undertaken by the government.

The allocation of risk regarding damages to third parties, arising from events such as accidents, is a matter of considerable concern. In California, a very litigious state, the Department of Transport has accepted this risk. For the Dulles Greenway and the Birmingham Northern Relief Road, the concession company have assumed this risk, which they will offset with insurance.

Typically, the concession company accepts the *financing risk*. However, the extent of their responsibility varies according to the country concerned, the characteristics of the concession, and the availability of finance from financial markets. In Spain and Italy government guarantees were initially available on the debt raised by the concession companies. Clearly, this is a matter for negotiation.

## **Financing**

The potential concession company investor must be sure that the project is financially viable and that adequate finance will be available. It is important to make this distinction because there are many projects that are in themselves financially sensible, but, for reasons external to the project, such as the general credit standing of the host country, unstable financial markets, failure of a similar project in another country, or foreign exchange concerns, banks and financial institutions will not provide finance.

The potential investor or consortium bidding for a concession will establish his or own taskforce to examine the project. A great deal of analysis will be conducted on traffic forecasts, estimated construction and operating costs, government regulations, and the political situation to the extent that it affects the likelihood of raising finance and winning the bid. Evaluating the political situation may involve assessing how level the playing field will be, that is, whether it will be tilted in favor of those bidders who know well the politicians and senior civil servants who are awarding the tender.

The importance of sound traffic forecasts should not be underestimated because the providers of equity and debt are dependent on road usage to pay back their loans and generate the required equity returns. Often the government offers its traffic forecasts at the time of tender. The bidding consortium will make its own traffic forecasts, followed by the debt providers, who will commission their own analysis. With three traffic forecasts, there is plenty of room for disagreement. Negotiations call for a great deal of skill and tact to arrive at a common view that is financeable.

A cash flow forecast will emerge from the traffic analysis, and judgements will be made on the likelihood that the forecasts will be met and on the availability of finance. An estimate of the relative percentage of debt and equity required for financing must be made. There is no hard and fast rule for making this estimate—it will depend on the robustness of the project. But it would not be unreasonable to expect a minimum equity level of 20 to 30 percent of total financing requirements.

When considering providing what could be a substantial amount of equity, investors will need to be comfortable with the level of foreign exchange risk, the ease of repatriation of dividends and equity, the tax regime, and the overall government attitude toward foreign investment. Discussion will be held with the lead bank over the availability and likely terms of debt finance. A major problem is the maturity of the debt. Toll road projects require long-term finance, and this can be very difficult to obtain. It is logical for a toll road concession company to consider the option of refinancing when calculating equity returns. However, banks do not usually assume the refinancing risk, and thus expect the project to pay off the debt on time.

There is an inherent conflict between the equity and debt providers. Debt receives first claim on all cash flows and invariably imposes onerous conditions on equity before any dividends can be paid. As well, debt providers impose stringent performance requirements on the concession company and may require additional support if these are not met.

For projects in countries that don't have large capital markets, foreign sources of finance must be obtained. Because toll revenues are collected in local currency, a foreign exchange risk arises. It must be clearly established who takes this risk. Financing arrangements for projects in the Far East have fallen apart because neither the banks nor the concession company were prepared to take this risk. In the 1960s and 1970s the Spanish government accepted the foreign exchange risk for the foreign borrowings made by concession companies, but by the mid-1980s the cost of doing so had become very high.

Thus, concession financing is both complex and expensive to arrange. It is also difficult to meet annual carrying costs. Toll road concessions typically rely on at least five main legal agreements:

- Concession agreement.

- Shareholders agreement.
- Financing agreements.
- Construction contract.
- Operating contract.

In addition to these, agreements will be made regarding insurance, authorizations, licenses, etc. The difficulties inherent in the financing agreements should not be underestimated, particularly if there are different classes of lenders. The issues that arise between creditors, when, for example, a multilateral aid agency is involved, can be daunting. Further, all of the above-mentioned agreements require teams of lawyers, which are very expensive.

### **Government Support**

The decision to create a toll road concession requires a firm government policy. However, some may see such a policy as an indication that the government does not have the financial and human resources needed to carry out those functions traditionally expected of it. This view creates complications that can adversely affect the concession company, and, therefore it is essential that government support be provided. A successful concession requires a feeling of partnership between the government and the concession company. If government employees feel that their jobs are threatened or if a concession company adopts a "we know better than you" attitude, difficulties will arise. In adopting a concession policy for infrastructure development, the government must convince its employees that such a policy is a positive step, not the result of desperation.

But what does positive government support mean? Government support can be given in several ways:

- Creating the appropriate legislative structure within which the concession can operate effectively.
- Providing an equitable regulatory environment so that tolls can be set in a simple, objective manner, so that a reasonable return reflecting the balance between risk and reward can be earned by the concession company.
- Helping the concession company to overcome bureaucratic opposition to the project.
- Providing qualified personnel in adequate numbers to represent the public interest in negotiations and to expedite legislative issues.
- Developing a clear and effective program to allow public participation in the planning process and to deal with environmental issues.
- Providing a tax regime that is clearly understood.
- Protecting the concession companies from competition, at least during the early years of operation.

- Refraining from interfering after the concession agreement is signed. If the government must be involved, its role should be clearly defined from the start.

### **Infrastructural Concessions: Pros and Cons**

In many countries that are using or considering using the concession system, arguments for and against the system have been put forward by academics, businessmen and civil servants. A clear consensus has not emerged.

Some of the arguments in favor of the concession system include:

- Projects are brought on stream much more quickly than they would be in the public sector because of the constraints on government spending.
- The cost to society is borne by those who use or benefit from the project, not by the taxpayers.
- The concession company is devoted to the development, construction, and operation of the specific infrastructure. It develops its own cadre of workers who are dedicated to the commercial development and operation of the project. Their career development and management organization are unique to the project, not dispersed or constantly changing, as happens in a government department.
- If properly structured, the concession system will complete the construction of the project on time and within budget. The Dulles Greenway will be completed six months early and only slightly over budget. The Queen Elizabeth bridge at Dartford came in on time and on budget. The Channel Tunnel for which the concessioning was not properly structured, has come in 100 percent over budget and at least a year late.
- The concession system can create road operating companies that expand beyond the initial project, forming a network.

Arguments against the concession system include:

- The initial cost of a road or other infrastructure project is less if undertaken by government because the government can acquire financing at lower rates and for longer maturities than other borrowers within its borders. Although this argument may hold in industrial countries, it most likely does not in developing countries. Further, this argument takes no account of the efficiencies that the private sector brings to design, construction, and operation, particularly if a company's own money is at risk.
- The time taken from the beginning of the bidding process to the completion of construction for a privately financed infrastructure project is much longer than a publicly funded project. The reason for this is that new systems, methods of control, regulation, and so on must be adopted by government, not to mention the complexities of negotiating concession agreements and arranging finance. This

argument may hold for the initial concession awards, but after experience is gained and structures are in place the time required to award concessions becomes less. The important question is whether to spend the time establishing a system whereby toll roads are privately owned and financed or wait until funds become available from the public purse.

- Building infrastructure by concessions is much more complex than if the public sector is relied upon. But the more concessions that are awarded, the more familiar the government and the private sector become with the structure of such a system. After all, concession agreements and their financing involve nothing more than the allocation of risk, and at a price all risk can be allocated.

On balance, if the government does not have the public funds to finance needed infrastructure, then the use of privately financed infrastructure concessions makes sense.

### **Establishment of a Concession System**

Five rules should be helpful in establishing a concession system for toll roads or bridges in a specific country:

- The political decision must be made and backed at the highest level of government. Establishing tolls is politically controversial, particularly if citizens are used to using roads without charge.
- To begin, choose projects that have solid economic justification. Perform an initial analysis to determine whether the road is economically viable with or without government support. If government support is required, estimate how much will be needed and determine if this amount is available from the general budget.
- Take sounding within the country and abroad to determine the potential interest of investors. Discuss with international banks, the World Bank/IFC, and others the extent of support they could provide.
- Hire financial and legal advisors who are experienced in project or non recourse finance and the negotiation of concession agreements.
- Appoint a senior person from government who knows how the relevant government departments work and who has a commercial sense. This individual, who should be given overall responsibility, must realize that he or she is acting as a midwife to the birth of a business that will greatly benefit the country and run for many years.