

PART III

PPP STRUCTURE AND FINANCIAL PLAN

CHAPTER 10

REVIEW AND ANALYSIS ON PPP IN EGYPT AND OTHER COUNTRIES

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10.1 BENEFITS OF PROMOTING PPP

There exists considerable variety in development stages of PPP legislation and regulations. Inevitably in this report experiences of the most advanced PPP jurisdictions, namely Europe, especially UK are more fully observed while those in developing countries are less accounted for because of limitation in experiences and records. Let us start with introduction of PPP.

10.1.1 Definitions of PPPs

First of all, there is no widely accepted definition of PPPs. This creates a challenge in developing legislation on PPPs: If a narrow definition is taken, this can result in legislation which only applies to a narrow range of project types or structures, which may be of limited practical value. Following are examples of defining remarks about PPP.

“There is no overarching definition for public-private partnerships. PPP is an umbrella notion covering a wide range of economic activity and is in constant evolution.”
(Speech by Commissioner Frits Bolkenstein, DG Internal Market)

“Public private partnership (PPPs) are a generic term for the relationships formed between the private sector and public bodies often with the aim of introducing private sector resources and/or expertise in order to help provide and deliver public sector assets and services. The term PPP is used to describe a wide variety of working arrangements from loose, informal and strategic partnerships to design-build-finance-operate (DBFO) type service contracts and formal joint venture companies.”
(4Ps, UK local government procurement agency)

While there is no single definition of PPPs, there are some common characteristics which are often associated with PPPs. These include contracting between the public and private sectors for infrastructure development and management where risks are shared between the parties. Risks are allocated to the party which is best able to manage, and therefore minimize, the cost of risks. The need to utilize private sector management and expertise, not only the capability of raising finance, is also common.

The term PPP covers a range of different structures which can be used to deliver a

project or a service. Depending on the country and the politics of the time, the term can cover a spectrum from relatively short term management contracts (with little or no capital expenditure); through concession contracts (which may encompass the design and build of substantial capital assets along with the provision of a range of services and the financing of the entire construction and operation); to joint ventures and partial privatizations where there is a sharing of ownership between the public and private sectors. Figure 10.1-1 illustrates that PPPs fill a space between traditionally procured government projects and full privatization, where government no longer has a direct role in ongoing operations. PPP enables to develop projects which do not have enough profitability with revenues only from projects and are not self-sustaining.

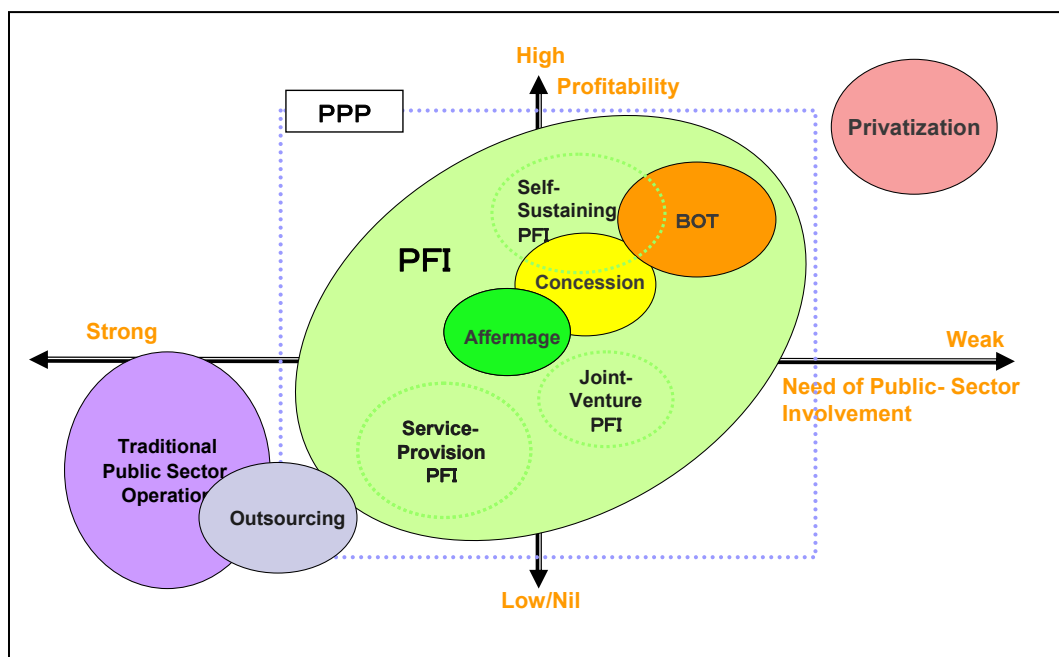


Figure 10.1-1 PPP Structures

Under traditional public sector approach, the public sector designs, builds, operates, and maintains infrastructure, and sets level of quantity and standards of service quality, while under privatization approach, the private sector conducts all of these aspects in place of the public sector. Under PPP approach, the public sector is ultimately accountable for service provisions, although the private sector designs, builds, operates and maintains infrastructure. PPP ensures provision of services to general public, but at lower cost and better quality by the use of private-sector management skills and finance capabilities.

10.1.2 Objectives of PPPs

There are a range of reasons as to why governments undertake PPPs. The objective of

achieving improved value for money, or improved services for the same amount of money as the public sector would spend, is often stated as the prime objective. But other objectives may also be important. These can include the desire to provide increased infrastructure provision and services within imposed budgetary constraints by utilizing private sources of finance, if possible, via off balance sheet structures (in other words such expenditure is not accounted for in government balance sheet, giving rating agencies and multilateral institutions a more favorable spin to its fiscal position), or to accelerate delivery of projects which might otherwise have to be delayed. PPPs experience in UK has demonstrated satisfactory results.

- A report commissioned by the Treasury Taskforce found that the average percentage estimated saving against the Public Sector Comparator was 17%.
- 89% of project were delivered on time or earlier.
- 77% of public sector managers stated that their project was meeting their initial expectations.

In considering the appropriateness of any particular PPP structure it is important to bear in mind the competencies and capacity of the procuring entity and the environment in which the procurement is carried out.

10.1.3 Progress in PPPs

While there exists growing interest in PPPs globally, experience of PPPs is actually limited. UK stands out as having the longest and most substantial experience of PPPs. Progress of countries appears to have more to do with the interest in PPPs and the political will to promote them shown by individual governments than any other factor. Some countries have been reviewing the use of PPPs and developing pilot procurements for some time, but with limited results in terms of projects procured and financed. Others, which have only recently adopted PPPs as a valid method of procuring public services, have moved rapidly and have procured pilot projects within relatively short time scales. Even in the most advanced European countries there exists substantial variety of progress in PPPs by country and sector. Refer to Table 10.1-1.

In addition to reviewing the progress of PPPs in terms of project procurements, Table 10.1-2 summarizes two elements of institutional developments which are often associated with the progress of PPPs, the setting up of one or more PPP units at a certain development level and the promotion of generic PPP legislation. Although Table 10.1-1 & -2 demonstrate the relatively limited progress which has been achieved in Europe to date, the use of PPPs is growing. In 2003, ninety PPP projects were financed in Europe amounting to \$21.65billion.

Table 10.1-1 Summary of PPPs by Country and Sector in Europe

	Airport	Defence	Housing	Health / Hospital	IT	Port	Prisons	Heavy Railway	Light Railway	Road	School	Sport/Leisure	Water/Wastewater
Austria													
Belgium													
Denmark													
Finland													
France													
Germany													
Greece													
Ireland													
Italy													
Luxembourg													
Netherlands													
Norway													
Portugal													
Spain													
Sweden													
UK													
Cyprus													
Czech Rep.													
Estonia													
Hungary													
Latvia													
Lithuania													
Malta													
Poland													
Slovakia													
Slovenia													
Bulgaria													
Romania													
Turkey													

Legend:

- Substantial number of closed projects, majority of them in operation
- Substantial number of closed projects
- Many procured projects, some projects closed
- Projects in procurements
- Discussions ongoing

Table 10.1-2 Summary of PPP Institutional Development in Europe

Country	PPP Unit	PPP Law	Country	PPP Unit	PPP Law
Austria		-	Cyprus	-	-
Belgium			Czech Rep.		
Denmark		-	Estonia		-
Finland	-		Hungary		
France			Latvia		
Germany			Lithuania	-	-
Greece			Malta		-
Ireland			Poland		
Italy			Slovakia	-	-
Luxembourg	-	-	Slovenia	-	-
Netherlands		-	Bulgaria		
Norway		-	Romania		
Portugal			Turkey	-	
Spain	-	*1	UK		-
Sweden	-	-			

PPP Unit

PPP unit existing (actively involved in PPP promotion)

PPP unit in progress (or existing but in a purely consultative capacity)

Need for PPP unit identified and some action taken (or only a regional PPP unit existing)

PPP Law

Comprehensive legislation in place

Comprehensive legislation being drafted/ some sector specific legislation in place

Legislation being proposed

Even where there is strong political will to develop PPPs, the complexities of individual procurements and the needs to develop both an institutional capability and capacity and an 'enabling environment' results in progress being slow initially. Figure 10.1-2 shows that even in UK it took some time for results to come through.

Development of PPPs in UK

- Government Reform under Thatcher Administration (1979 -)
 - Privatization of State-owned/Public Enterprises
 - Government executive branches converted into Agencies
- Introduction of market mechanism (1988)
 - Compulsory Competitive Tendering for government services
 - Wide spread outsourcing of government operations
- Launch of Citizen's Charter (1991)
 - To find better ways of converting money into better services
- Maastricht Pact (1992)
 - Target set for reduction of deficit/public debt for EU members

- Launch of PFI (1992)
 - Initiative by Chancellor Lamont for Value for Money (VFM)
 - PFI has been developed into PPP under the Labor Administration

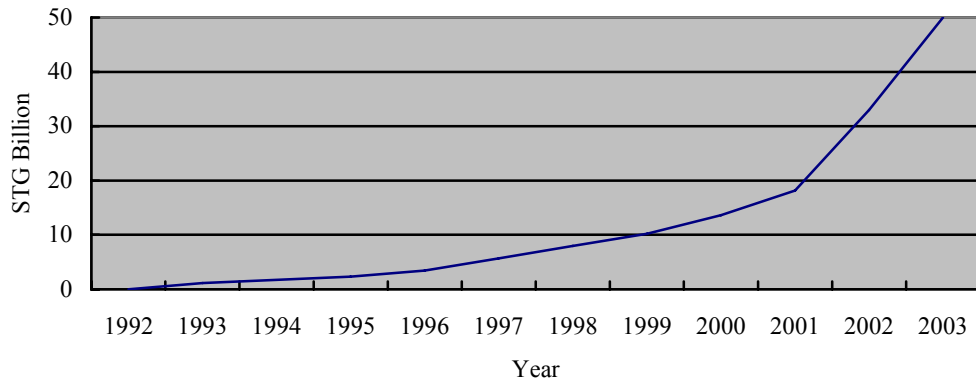


Figure 10.1-2 Cumulative Capital Value of PPPs in UK

Figure 10.1-3 is the PPP market in a global context which demonstrates European, especially UK dominance. European countries account for 86% and UK alone for 66% of PPPs worldwide in 2003. It coincides with a slower spread of PPP outside UK/Europe than expected.

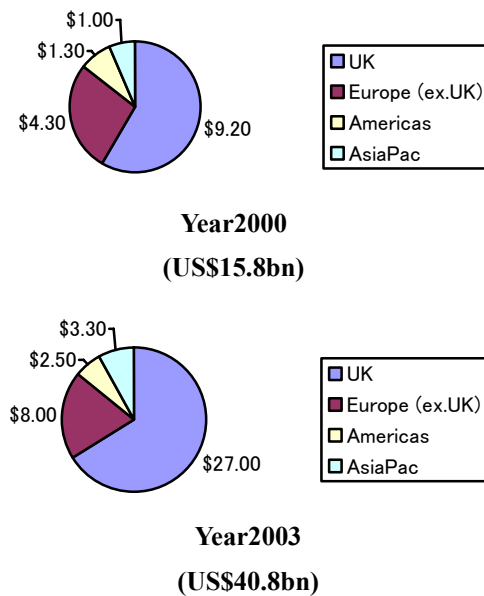


Figure 10.1-3 Capital Value of Closed PPP Deals

This slow progress in the past has often related to deficiencies in legal and institutional

frameworks in various countries and also to questions about whether value for money is being provided in the PPP format. However, with many countries now initiating legislative changes and developing institutions to encourage PPP, a surge in these transactions elsewhere in the world may be expected.

10.1.4 Survey of PPP Progress by Areas

Commonwealth countries such as Australia and Canada have developed a local framework through drawing upon the UK experience. European neighbors have also adopted techniques and learned lessons relevant to the rollout of PFI transactions in their own countries. After facing problems in their earlier attempts to introduce private investment in infrastructure in the 1990s, a more mature approach to PPP is now being seen in some emerging economies in Latin America and Asia. A survey of PPP progress by areas other than UK is summarized in Appendix 10.1.

Summary of Survey

As stated at the beginning of this chapter, there is no widely accepted definition of PPP. There are, however, some common characteristics which are often associated with PPP. These include contracting between the public and private sectors for infrastructure development and management where risks are shared between the parties.

Conventional BOT vs PPP. Being a broad and flexible concept, PPP may comprehend BOT as its variant. But in comparison with ‘traditional’ BOT, PPP has following fundamental difference both in objectives and principles. In ‘traditional’ BOT the single most important objective is to secure finance. Often BOT has been attempted where there is no alternative other than securing private finance because of budget-constraint. As such, the public sector plays little role there and ‘leaves it solely to the private sector.’ Risks are often imposed to the private sector as much as possible regardless of the capacity and capability, all of which has led to failure of many projects.

On the contrary, even though mobilizing private finance is one of the main objectives, the prime PPP objective is to achieve VFM. In PPP, following a transparent and competitive process, whether to achieve higher quality services at lower cost compared with the traditional public procurement is strictly evaluated, verified and monitored, both quantitatively and qualitatively. If proved otherwise, PPP is dismissed. Risks are allocated to the party best able to manage, and therefore minimize the cost of risks. Full utilization of superior private management and expertise, not only the capability of raising finance, is highly encouraged in PPP. Allocation of risks and responsibilities between the public and private is clearly described in PPP contracts.

For example, under a conventional BOT scheme in road projects, the private sector takes demand risks and recovers its investment from toll revenues. On the other hand, under PPP scheme, the public sector and the private sector share demand risks and the private sector recovers its investment from the public sector's payments based primarily on availability and/or toll revenues. *Therefore, PPP can be applied to low-volume roads, whereas the conventional BOT is applied to high-volume roads.*

Political Environment for PPP. There exists considerable variety in development of PPP by countries and sectors. While there exists growing interest in PPP globally (including emerging countries), experience of PPP is actually limited. UK stands out as having the longest and most substantial experience of PPP.

Difference in PPP progress by countries appears to have more to do with the interest in PPP and the political will to promote them, shown by individual governments than any other factor. Even where there is strong political will to develop PPP, however, the complexities of individual procurements and the needs to develop both an institutional capability and capacity and an 'enabling environment' results in progress being slow initially. Even in UK it took considerable time for results to come through.

This slow progress in the past has often related to deficiencies in legal and institutional frameworks in various countries and also to questions about whether VFM is being provided in the PPP format. But with many countries now initiating legislative changes and developing institutions to encourage PPP, e.g., a new concession law in Spain (2003), a PPP Law in Portugal (2003) and a new PPP enabling legislation in France (2004), a surge in these projects elsewhere in the world may be expected.

Government structure and consistency in policy have a significant impact on PPP development. For example, one of the reasons of the slow PPP progress in Germany is attributed to its decentralized government structure, because of which effective policy implementation is hampered. On the contrary, rapid progress of PPP in Spain owes a lot to the government's strong initiative. Reflecting private sector's needs properly, Spanish government is effectively promoting PPP pursuant to consistent policy agenda.

10.2 FACTORS FOR SUCCESS AND FAILURE FROM INTERNATIONAL EXPERIENCES

This section reviews international experience in PPP of road projects and summarize main factors for success and failure.

10.2.1 Road PPP in Europe

Generally speaking, budget deficit pressures and sensitivities across Western Europe will maintain interest in tolled highway concessions, at least in the short to medium term. PPP-style concessions and variants thereof will be a requirement for many countries in Central and Eastern Europe, owing to ongoing domestic budgetary constraints. Europe is not a homogenous market. Some countries such as Spain may have a very strong requirement for toll road financings, whereas others may not, not always for the same reasons. Concession programs are advancing at very different rates in different countries, from small-scale demonstration projects to mature programs entering into a refinancing phase. Although shadow toll payment mechanisms partly mitigate traffic risk, these transactions are not completely risk free. Following is an overview of road PPP in Europe partly overlapping with observation in 10.1.

(1) UK and Ireland

UK has a well-established market for design, build, finance, and operate (DBFO) road transactions, whereas the Republic of Ireland remains at the early stages of its own program. In recent years the U.K.'s road concession activity has fallen short of the expectations raised by the high volume of transactions in the mid-1990s, in part due to a change in government in 1997. Future central government-promoted PPP road deals look set to focus on large motorway widening projects (affecting the M25, the M1 East Midlands, and the Birmingham-Manchester stretch of the M6). The procurement method for these contracts has yet to be announced and the documentation is reported to be one year from completion. In the meantime, market activity is likely to be characterized by regionally promoted transactions such as Newcastle-upon-Tyne's New Tyne Crossing and Northern Ireland's highway widening and intersection improvement concessions. UK's DBFO road experience is explained more in detail in 10.2.3.

In Ireland, after a lengthy development stage, the first Irish road transaction--the €270 million, 39 kilometer (km) N4/N6 between Kinnegad and Kilcock--reached financial close in March 2003. The €150 million Dundalk Western Bypass transaction reached financial close in February 2004, and that for the €136 million N8 closed in June 2004. The Irish government's National Development Plan for 2000-2006 placed PPP road concessions at the heart of its infrastructure development strategy. The plan called for an injection of €1.3 billion of private capital, representing 23% of the National Roads Authority investment program, and identified 11 potential PPP road schemes.

As the Irish PPP road concession program evolves and matures, early concerns about some aspects of the credit quality of these transactions have been addressed. As in

many European countries, however, the further highway projects are located away from major centers of population and employment, the more uncertainty there is about the willingness of drivers to pay for small time savings or marginal improvements in journey time reliability. This uncertainty has the potential to erode credit quality. The development of creditworthy PPP-style road projects in less-populated regions is a challenge that will face a number of European countries over coming years.

(2) Spain

Spain remains at the forefront of toll road financings. Experienced local sponsors--who are also important international participants in the toll road sector--a strong track record of successful roads operation, and a supportive concession framework have driven a large number of transactions. The previous government introduced a revised concession framework regarded as supportive of toll road financings. Some of the more mature concessions in the Spanish sector are likely to be refinanced over the next couple of years, and the list of new and potential transactions indicates that Spain will continue to be one of the most dynamic European markets for toll road financings. A key question, however, is the degree to which traditional Spanish enthusiasm for highway concessions will be sustained in coming years. In Spain, although performance figures have historically shown strong growth, there are signs that this may be leveling off. Spain's autonomous communities (regional governments) have increasingly used their devolved powers in recent times, and as a result a number of them have adopted the role of highway concession grantor. Whereas central government concessions tend to look to user-paid tolls, the regional governments have favored shadow tolling solutions. The spread of ETC technology across Europe has prompted the European Commission to look closely at system compatibility, standardization, and interoperability. In these matters, Spain has taken a lead. Spain's "Via-T" initiative enables patrons to use any ETC-equipped toll road, irrespective of operator. This negates the need for users to maintain separate accounts (and separate in-vehicle equipment) for use on different parts of the network. This initiative is largely led by banks. Banks distribute the in-vehicle equipment (transponders) and host the customer-interface functions, while contractual provisions require that concessionaires participate in the interoperable scheme. As the need to ensure compatibility becomes an issue in other countries, Spain's contractual requirements and bank-led approach could act as a model for others.

(3) Portugal

Portugal has actively embraced the PPP concept for infrastructure development and service delivery. Although the focus has recently switched to the health sector, Portugal's early experience with concession highways has been extensive and largely

successful. The concession program covered 17 highway projects, seven of which were shadow tolls, called SCUTs in Portugal. Such is the maturity of the Portuguese sector that some of the earlier concessions are now in their operational phase and have already been refinanced.

A potential conversion to real tolls and the refinancing of existing debt for concessionaires may present challenges in future. The recent economic recession in Portugal was accompanied by negative traffic growth across parts of the country. Portugal made early use of capital market financing. The SCUT do Algarve concession, on Portugal's south coast, used a wrapped bond in tandem with an EIB loan, the first long-term Euro infrastructure bond in Continental Europe. The path taken by SCUT do Algarve is likely to be followed by other Portuguese concessionaires. Under the SCUT concessions, the government retains the right to convert from shadow tolls to user-paid tolls while compensating the concessionaire. Budgetary pressures, in part caused by the scale of the SCUT program and its associated government payment obligations, may prompt Portugal to consider reverting to user-paid tolls sooner rather than later, at least on those projects that have yet to be opened to traffic. SCUT payments represent 0.04% of GDP in Portugal, but, from 2007, these obligations will increase tenfold, to 0.4% of GDP. Lessons from this migration, if it does occur, will be of interest to other concession grantors who have initially favored a shadow toll approach, but have reserved the right to impose point-of-use charges if and when they wish. The majority of shadow toll concession agreements reviewed by Standard & Poor's contain such provisions. All of the U.K.'s DBFO shadow toll roads, for example, explicitly contemplate user-paid tolls, albeit with adequate compensation for concessionaires to cover lost revenue. The switch from shadow tolls to user-paid tolls involves far more than the installation of toll collecting infrastructure, however. A number of shadow toll roads in Portugal and beyond have been designed with numerous entrances and exits, many of which would require some form of traffic control for effective toll collection. This may constrain aspirations to move to point-of-use charging on a number of shadow tolls roads in Europe. Road-related construction delays have also been observed in Portugal, mainly resulting from increasing environmental awareness, legislation, and, consequently, objections - trends evident across many European countries. Local environmental impact assessment and approvals procedures have become stricter as Portugal falls in line with EU environmental laws. BRISA estimates that environmental approval setbacks will delay completion of its toll road network to 2006, two years later than envisaged in the concession contract. In the absence of appropriate mitigants, such delays have the potential to disrupt construction schedules and impair the early flow of project revenues. Given the increasing environmental sensitivities, any exposure to schedule and protester risk will continue to impair transactions' credit quality.

(4) France

French toll roads appear to favor private participation far more than other sectors in the country. Nevertheless, the ownership of French toll roads has historically been dominated by public sector highway concessionaires known as Sociétés d'Economie Mixte Concessionnaires d'Autoroutes (SEMCA). Of the three main SEMCAs, the largest, Autoroutes du Sud de la France S.A., was 49% privatized in 2002. All French toll road sector ratings are supported by favorable concession contracts. There may be partial privatizations of the two other SEMCAs in France in 2004-2005. Société des Autoroutes Paris-Rhin-Rhône could be part-privatized by the end of 2004, and Société des Autoroutes du Nord et de l'Est de la France in the first half of 2005. Initially, the government is expected to sell about 20%-30% of its stake in these companies. Majority state ownership is nevertheless expected to be retained in the long term, as indicated by the government in policy statements at the end of 2003. In a separate but related development, the French government has announced its intention to establish from 2005 a state-owned entity called Agence de Financement des Infrastructures (AFIT), which will contribute to the financing of infrastructure (primarily transport) investment. Part of the funding for the agency is expected to come from dividends from the state's majority stakes in the toll road operators.

In addition, increasing numbers of individual toll road projects are being undertaken by the private sector. The current list of French candidate PPP projects reflects this strategy.

(5) Italy

In 2003, Italian motorway traffic grew by a healthy 2.8%, despite GDP growth of only 0.4%. Ongoing delays to the €860 million Bre-Be-Mi project, Italy's first PPP-type road concession, however, continue to concern those interested in developing project finance-based infrastructure projects in the country. The 20-year contract for the construction and operation of a 60 km highway from Milan to Brescia was awarded early in 2003, but local authorities along the route are demanding changes to the original design. The potential for changes to the terms of a concession after it has been awarded is considered negative in terms of the short-term development of project finance in the country. Despite considerable interest in PPP transactions, revised enabling legislation, the establishment of a dedicated Italian PPP unit, and the identification of specific PPP-candidate projects, project finance has not yet been used for road transactions in Italy. It remains to be seen whether any of the €43 billion identified for highway projects in the country's 2001 Strategic Infrastructure Investment Program will be provided by the private sector.

(6) Germany and Austria

For some years, Germany has been viewed as an exciting source of PPP-style road transactions. It is Austria, however, which has been more proactive in the field. Ongoing delays to the implementation of TollCollect, the satellite-based truck tolling system were a significant setback for the German toll road sector. In addition, the first PPP-style road financing to start operations in Germany, the Warnow Tunnel, has been hampered by traffic volumes initially 65% lower than projections. The failure to introduce innovative, satellite-based toll collection technology for trucks dominated Germany's toll road sector news in 2004. Originally scheduled to be launched in August 2003, technical problems have pushed this date back to January 2005, and initial implementation is now described as "scaled down". Full nationwide implementation is slated for late 2005, with significant incentives in place. In March, the TollCollect consortium, including DaimlerCrysler AG, Deutsche Telekom AG, and COFIROUTE agreed to pay the German government €780 million per year in case of future delays, and €1 billion in damages if the system fails during operation. In contrast, in January 2004 Austria successfully introduced its electronic road-user charging scheme for trucks weighing more than 3.5 tons. The microwave-based, dedicated short-range communications transponder scheme is operated by Euroypass, a subsidiary of Autostrade, under a 10-year, €195 million project-financed concession with ASFiNAG. Net revenues are estimated at about €600 million per year, to be used by ASFiNAG for the operation, maintenance, and development of its highway network.

The German experience highlights the increasing potential for technology risk to disrupt toll road projects. In theory, blue-sky technologies may be capable of automating the toll collection process, offering significant benefits to operators and users. To date, however, only lower-level wireless-based solutions have been widely deployed. Owing to the problems encountered in Germany, a number of European countries remain cautious about the use of innovative technology for collecting road-user charges, and may elect to avoid early implementation of satellite-tracking solutions in favor of more mature technologies that rely on vehicle communications with roadside infrastructure. The integrity of the underlying toll collection technology used by any initiatives designed to securitize the revenues from truck tolling will need to be closely scrutinized. Legislative barriers, political resistance, and the delays to Toll Collect have slowed the development of private sector toll roads in Germany. In recent years, Germany has proposed two approaches, through which it intends to take forward private participation in its roads sector. The A-model is essentially a motorway widening and maintenance program. The F-Model, however, is a DBFO variant to be used for tunnels, bridges, and certain classes of mountain road. To date, two F-Model concessions have been let and a number of A-Model proposals are being developed.

Experience with Germany's first F-Model toll facility, however, has not been the strongest foundation upon which to roll out an entire concession program. The Warnow Tunnel in Rostock opened in late 2003, with initial traffic volumes at about 35% of forecasts. Ongoing project underperformance subsequently prompted the owner, Macquarie, to write off its £153 million investment in the project. ASFiNAG has developed four highway concession packages. These packaged concessions, with a 30-year term, will employ a payment mechanism 30% based on shadow tolls and 70% on asset availability. The value of the concession program is estimated at about €3 billion. The €1 billion Package 1, part of ASFiNAG's Ostregion PPP, will comprise the 23 km A5 South, the 12 km S1 East, the 12 km S1 West, and the 4 km S2, improving the important commuter corridor from Mistelbach in the north to Vienna. The procurement process is due to begin in September 2004, with contract award scheduled for late 2005. The remaining packages will be rolled out from 2005.

(7) Scandinavia

Of the Scandinavian countries, Norway and Finland are the most active in terms of toll road concessions, although both countries demonstrate a cautious approach to embracing PPP. In 2001, the Norwegian Ministry of Transport and Communications identified three road projects it would use to test PPPs with regard to realizing efficiencies, in advance of extending the procurement approach beyond the highway sector. The payment mechanism does not pass any traffic risk to concessionaires. Instead, it comprises availability, safety, and performance elements. Traffic payments may be made, but only when traffic volumes are significantly higher than projected.

The decision to exclude traffic risk altogether from a concession payment mechanism is a unusual feature of the Norwegian program. In practice, however, the absence of traffic risk often encourages scheme promoters to embrace financing structures even tighter than the sector norm. These very aggressive financing structures then tend to constrain the credit quality of toll road transactions. Finland's first privately financed DBFO road concession, the €100 million, 69 km shadow toll motorway extension between Helsinki and Lahti, was awarded in 1997. A 15-year concession term was used for this road widening, operations, and maintenance contract. The project was financed by Finnish banks. After this, no new transactions were pursued until early 2004, when the Finnish Roads Agency announced that the €335 million, 50 km E18 Helsinki to Turku road would be procured as a PPP concession. This is the largest road project in Finland. The Scandinavian countries represent challenges for toll road operations. Apart from their difficult terrain and topography (and the related need for a multitude of bridges and tunnels), the large distances involved, combined with low traffic volumes, make stand-alone toll financings economically unviable. The Norwegian and the Finnish

experience demonstrates, however, that appropriately structured toll road transactions can work and attract the attention of international contractors and investors.

(8) Central and Eastern Europe

The toll road sector in Central and Eastern Europe reflects a spectrum of development activity. Some countries, such as Poland and Hungary, have active PPP concession programs, while Bulgaria or the Baltic States have no current toll road aspirations. Serbia is not developing road concessions because domestic traffic volumes do not justify such an approach. Slovenia, on the other hand, is not developing road concessions because its strategic road network is largely complete.

Croatia

In 2003, Croatia successfully awarded its first DBFO toll road concession to Bina-Istra, the Bouygues S.A.-led consortium. Bina-Istra is financing, constructing, operating, and maintaining Phase 1B of the Istrian Motorway Project. The Bina-Istra transaction represented the first infrastructure project bond in Central and Eastern Europe. At the heart of the financial structure lies a financial contribution from the Croatian government, administered through an annually replenishing debt-service reserve account. The financial contribution, after deducting toll revenues, covers all of Bina-Istra's operations and maintenance costs and debt-service obligations, and guarantees a fixed return for equity investors. The Bina-Istra transaction perhaps represents a model for financial structuring that could be replicated across Central and Eastern Europe.

Hungary

Hungary's unfortunate experiences with its early PPP toll road concessions in the 1990s are well documented and useful lessons were learned, of benefit to Hungary and the region as a whole, both then and now. In summary, Hungary attempted to develop domestic toll road concessions with little or no financial involvement from the state--and failed. On the M1 and M15 motorways, for example, high toll tariffs led to traffic and revenue performance well below projections, and the legislative framework exposed the concessionaire to a successful legal challenge resulting in capped tariffs. High toll tariffs were also an issue on the M5 concession, resulting in the introduction of a comprehensive discount program and state compensation for the concessionaire. Ten years later, Hungary is advancing its new portfolio of toll road concessions. The payment mechanism reflects asset availability (the largest component of the mechanism), safety performance, and truck use. The failure of the early Hungarian road deals served to underscore the fact that drivers' willingness to pay was such that few, if any, fully stand-alone toll road projects in developing and transitioning economies

would prove to be not viable. Active, strong, and sustained government involvement will continue to be an essential element of any similar transaction structure.

Poland

In late 2000, Poland signed a concession agreement for the construction of its first DBFO toll road: the 150 km Nowy Tomysi-Konin section of the A2 motorway. The A2 is an important strategic route linking Western and Central Europe. Subsequently, 61 km of the A4 between Katowice and Karkow was tolled under a DBFO procurement model. In August 2004, the Polish Ministry of Infrastructure announced that it had signed a 35-year concession agreement with a Skanska-led consortium to construct and operate the €500 million A1 motorway project from Gdansk to Torun. Bids have also been received for the second concession on the A4 motorway (Katowice-Wroclaw) and are under review. In the longer term, the Ministry of Infrastructure is known to favor the DBFO model for the completion of the A2, A4, and A1 motorways. There have been some legislative hurdles to the rollout of PPP-type concessions in Poland. Polish law makes it difficult for the government to make contributions to projects developed as private concessions. Poland's early focus on tolling some of its busier motorway sections is a consequence of this difficulty. Revised PPP legislation is being prepared to broaden the applicability of concession-based schemes in Poland.

Romania

Although Romania appears to be pursuing PPPs as a procurement alternative, existing tendering and best practice issues may continue to act as barriers to inward private sector investment.

10.2.2 Road BOT Experiences in Asia

With regard to Asian BOT projects, after more than a decade of efforts, however, implementation experience has not matched expectation. Following is the observation of Asian road BOT projects by Asian Development Bank (ADB) – ‘Developing Best Practices for Promoting Private Sector Investment in infrastructure (Roads) 2000’;

- Surprisingly little has been implemented – just 21 projects are operational in Asia outside the People’s Republic of China (PRC),
- Those projects implemented have usually required substantial, unexpected government support (the Asian crisis is bringing home the impact of contingent guarantee). Very few projects are profitable on a stand-alone basis without substantial government support,

- Projects have had unexpected adverse impacts, sometimes contrary to government policy. In particular, they have led to a concentration of government support in and near the capital cities and along existing major corridors,
- Their cumulative impact upon the problems of the roads sector has been small. Most BOT projects have been concentrated where traffic is high and BOT has had little impacts on problems elsewhere,
- There has been concern that financial objections have been the sole determinant of what happens to the detriment of development and social objectives;
- There has been concern that corruption, nepotism and cronyism have sometimes reduced the prospective benefits for road users.

Table 10.2-1 Expressway BOT Concessions in Asia (as at ADB observation)

Country	Open	Construction	Planning	Pre-Planning	Abandoned	Total
Bangladesh			1			1
Myanmar						
Hong Kong	4	1				5
India			11	4		15
Indonesia	2	6	7	20		35
Lao PDR			1			1
Malaysia	9	15	8	8		40
Pakistan	1		3			4
Philippines		5	9	1		15
Sri Lanka			1			1
Taipei, China						
Thailand	5	5	2	1	2	15
Viet Nam				1		1
Total	21	32	43	35	2	133
PRC	21		11	3		35

Note PRC is exceptional. Firstly in PRC railway has dominated its public transportation so there existed little free alternative roads. Secondly PRC has experienced high economic and population growth. Thirdly jointly promoted by local governments, a project's capital cost is quite low with cheap labor. All of these factors have made PRC road projects feasible. Also the fact historically little protests have been made by the public against government-imposed tariffs is also encouraging.

Table 10.2-2 Operational Expressway BOT (as at ADB observation)

Country	Project Name	Opening	Length (km)	Cost (\$b)
Hong Kong	Western Harbor Crossing	1997	-	0.7
	Tate's Cairn Tunnel	1991	4	
	Eastern Harbor Crossing	1989	2	0.5
	Cross Harbor Crossing	1972	2	
Indonesia	Jakarta N-S	1989	17	
	Jakarta Outer Ring Road (South)	1996	14.83	
Malaysia	Butterworth-Kulim Expressway	1996		24
	Second Malaysia-Singapore Crossing	1998	5	0.3
	KL-Karak Highway Upgrading	1994	60	0.1
	Penang Bridge	1996		14
	North-South Expressway Central Link	1996		0.3
	North-South Expressway	1988/94	848	1.6
	Seremban-Port Dickson Highway	1998	23	0.1
Thailand	New Klang Valley Expressway	1994		
	Shah Alam Expressway	1995/98	35	0.5
	Islamabad-Lahore Motorway	1997	340	0.7
	Bangkok-Chonburi Highway	1997/99	83	0.3
	Don Muang Tollway	1995/97	15	0.3
Thailand	Second Stage Expressway System	1993	39	1.1
	First Stage Expressway System	1987	27	
	Ekamai-Ram Indra Expressway	1994/97	19	0.85

Appendix 10.2 includes details of ADB observation of BOT experience in Asia as modified, represented by 4 countries, namely Philippines, Malaysia, Thailand and Hong Kong.

10.2.3 DBFO Road Experience in UK

UK has developed a sophisticated PPP structure in the road sector using DBFO (Design, Build, Finance, and Operate) scheme. The Highway Agency in UK discloses the details of DBFO road projects, and this report is mostly relied on publicly disclosed materials. Details of DBFO history, structure, and procedures are attached in Appendix 10.3.

The UK Highway Agency formally launched its use of PFI to procure a road service on parts of the motorway and trunk road network in August 1994. The Agency's objectives for each DBFO project were:

- to ensure that the project road is designed, maintained and operated safely and

satisfactorily so as to minimise any adverse impact on the environment and maximise benefit to road users;

- to transfer the appropriate level of risk to the private sector;
- to promote innovation, not only in technical and operational matters, but also in financial and commercial arrangements;
- to foster the development of a private sector road-operating industry in the UK; and
- to minimise the financial contribution required from the public sector.

Contracts for the first 8 DBFO projects (Tranches 1 & 1A) were all awarded in 1996. These involve the private sector in managing about 600km network and delivering 11 road improvement schemes with an estimated capital value in excess of £550m. Reimbursement on these contracts is primarily by means of shadow tolls paid according to usage of the project road, plus bonus elements for safety enhancements and charges for lane closures and penalty points for not achieving set operating standards. Under the DBFO method of procuring road improvements and maintenance, value-for-money savings averaging 20% have been delivered.

(1) Policy

UK has a successful track record of public and private partnerships for trunk roads. It is expected that around 25 % by value of current and new major schemes will be procured using private finance contracts, including DBFO contracts. Under DBFO, the emphasis rests on the provision of an operating service rather than an asset, over the 30-year life of a contract, with the private sector assuming responsibility for the operation and maintenance of a length of existing road (where appropriate) and for building specified improvement schemes. The principal benefit of DBFO lies in the increased value for money to the taxpayer of procuring a road service in this way. This is achieved through a combination of transfer of risk and the introduction of private-sector innovations.

(2) Principles

The main principles of PPP inherent in DBFO contracts are:

Transfer of Risk

The allocation of risk and reward between the contracting parties should be clearly defined and private sector returns should be genuinely subject to risk. A special purpose company (DBFO Co) will be expected to assume the majority of the risks associated with the design, construction, maintenance, operation and financing of the Project. These risks will include the risks of construction and maintenance to time and to budget and making whole life cost judgments.

Value for Money

The government will establish whether the proposed levels of payment are justified by the benefits of the Project. Part of the assessment of whether the project constitutes value for money involves using a public sector comparator which makes allowance for risk transferred.

Managerial Responsibility

Managerial, operational and maintenance responsibility for the project road will be undertaken by the DBFO Co.

Payment for Service

The government will make payment in relation to the receipt of a service and payments may be adjusted to reflect the satisfaction of certain performance criteria. Under the terms of the DBFO contract the government appoints representatives to monitor the construction, operation and maintenance carried out by the DBFO Co to ensure that it complies with its contractual obligations. The DBFO contracts contain a penalty point mechanism which attributes points, for failure to perform under the contract. The allocation of penalty points have specific threshold triggers and increase monitoring requirements. Once a specified number of penalty points has been exceeded, the government has the right to terminate the contract. The government also has a number of other remedies arising from non-performance, including the right to remedy any default and invoice DBFO Co for its costs.

Partnership

The government is committed to establishing an effective partnership with the DBFO Co's in particular to ensure co-operative and non-adversarial working practices, well aligned objectives and constructive arrangements for quickly resolving differences.

Private-sector Innovation

Transferring many of the risks to the private sector has resulted in increased innovation and efficiency (for example, in matching design and construction with long-term service needs), which has led to significant savings in comparison with traditional procurement methods. The DBFO concept encourages a productive partnership between the public and private sectors, harnessing private capital and commercial expertise to fund initial construction and long-term maintenance of DBFO roads.

(3) Mechanism for Demand Risk Sharing - Shadow Toll Scheme

The Highways Agency pays each DBFO Co an amount, which is based on the number and type of vehicles using the road, with adjustments made for lane closure and safety

performance. These are known as shadow tolls as opposed to real tolls, as payment for usage is made by the Highways Agency rather than by the road user. The payment mechanism was structured to meet government policy objectives for the trunk road network and PFI requirements, and incorporates payment based on (i) usage/demand, (ii) availability of service, and (iii) performance.

By changing a unit payment to the private sector according to the level of traffic, the public sector can share demand risks with the private sector. The public sector provides additional unit payments for the provision of services when traffic demand is low, and the private sector can mitigate the impact of demand decrease to some extent (Figure 10.2-1).

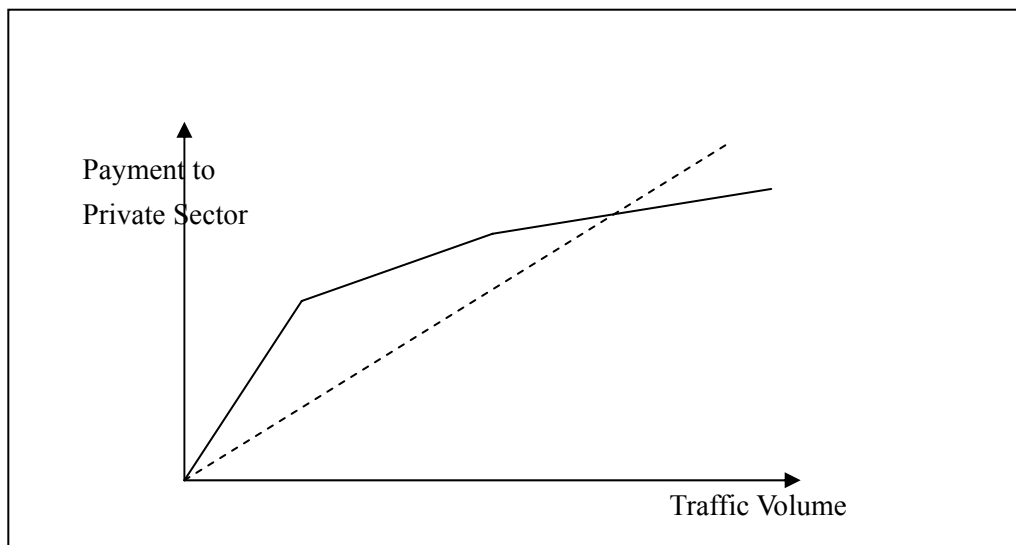


Figure 10.2-1 Shadow Toll Scheme

10.2.4 Lessons Learned from International Experience: Main Factors for Successful and Failed PPPs

Aside from the most sophisticated and successful UK's DBFO road PPPs (which have achieved more than 20% VFM on average), results of PPP varies among countries; some are quite successful, while others have experienced miserable failure. Optimal risk allocation and political commitment are two key factors making successful PPPs.

(1) Main Factors for Failed PPPs

Excess Risk Transfer to the Private Sector.

- For example, Hungary's unfortunate experiences with its early PPP toll road concessions in the 1990s provide useful lessons. In summary, Hungary attempted to develop domestic toll road concessions with little or no financial involvement

of the state and failed. The failure of the early Hungarian road projects serves to underscore the fact that drivers' willingness to pay was such that few, if any, fully stand-alone toll road projects in developing and transitioning economies would prove to be not viable.

- Hong Kong, China transferred in the past vast majority of risks to concessionaires and provided no guarantees, but now recognizes it has to assume a greater proportion of risk if private sector financing of road infrastructure is to be forthcoming.

Weak Political Commitment.

- In Philippines, failure to recognize the valid use of public support based upon erroneous assumption that expressways are profitable is part of reasons behind its slow progress.
- Objectives to introduce BOT must be deliberately considered and clearly defined in view of promoting public interest. As in Philippines often privately-funded expressways are solely driven by the small public investment budget (“there is no alternative to turning to private funds”) even to the detriment of development and social objectives. There has been no discussion of use of tolling strategy as a matter of transportation policy to improve efficiency of resources allocation, to promote social equity, etc., which lead to lack in social support, policy inconsistency, and ultimately failure of the projects.
- Soundly-based transport policies and their consistency are crucial. Their absence leads to chaotic situation of conflicts among projects and agencies. Institutional conflicts, often caused by lack of well defined government planning constitute major obstacle to road BOT implementation. The lessons have been painfully experienced in Philippines and Thailand. In Philippines, local governments have occasionally opposed to national government plans. This has been particularly problematic for land acquisition. Thailand has suffered from increasing institutional conflicts between the related agencies and almost all major corridors had mega projects which conflicted with each other, often using the same airspace. These institutional conflicts, policy inconsistency and process difficulties damaged at least one project and caused two other serious contractual problems.
- Reliability of government promise occasionally became a critical issue. In Thailand, there have been problems of failure in toll increase even though justified under the contract. For example, the government’s delay in promised removal of flyovers on the competing parallel road and no increase of toll during this delay almost forced bankruptcy of sponsors.

2) Main Factors for Successful PPPs

Optimal Risk Allocation.

- In UK, payments by the government are based on combination of traffic, service availability, and performance. Unit payments are set at a higher level when demand is low in order to mitigate demand risk for the private sector.
- As one of the major financial risks, foreign exchange risk is extremely important for domestic infrastructure projects. In Malaysia, virtually all debt has been domestic under the strong government protection.

Strong Government Commitment.

- As for Asian road BOT, after more than a decade of efforts, however, surprisingly little have been implemented except in the People's Republic of China (PRC). Generally speaking Hong Kong, China with effective government planning and transparent bidding process is regarded successful while Philippines and Thailand are not considered so. Hong Kong, China government's effective and integrated land use/transport planning system reduces uncertainty as to future development as well as future transport network and has suitable BOT projects to be identified.
- It must be recognized that very few road BOT projects are viable on a stand-alone basis, so without substantial government supports they are not getting through. Malaysian government's commitment to promote road BOT and its strong supports are no doubt the prime contributor to the early achievements in that country. Later such aggressive expansion of government guarantee proved to be a serious risk.
- A transparent process associated with well-done project preparation under strong government initiative is extremely important since it stimulates private participation and allows project implementation to proceed with predictable consequences. Hong Kong, China is highly regarded with its thorough, transparent and effective process under the government leadership. It follows on from the government feasibility study and preliminary design and leads to production of detailed project brief and conforming design.
- In Hong Kong, China, its detailed toll increase schedule and size, clearly defined range of allowable financial internal rates of return for the project, etc. at the outset of a project strongly encourage private participation.

10.3 LESSONS FROM EXISTING BOT PROJECTS IN EGYPT

10.3.1 History of Privatization in Egypt

Following is a brief history of privatization in Egypt, owing to, among others, CARANA Reports.

a) Massive Government Intervention (1952-1973)

After the 1952 revolution, the Egyptian government took strong initiative in economic development and fully involved itself into business. The Government's involvement started with establishment of iron, steel, construction and cement industries. In 1956, through application of Law 258 the Government nationalized private companies and the Suez Canal. Because of such massive intervention by the government, the public sector now dominated the Egyptian economy with its 80-90% share in total investment and 37% share in GDP. Though dominant in national economy, performance of the public enterprises had continued to be inefficient and poor so that the government had suffered from huge deficits and heavy debt burden.

b) “*Infetah*” (1974-1985) and Stagflation (1986-1990)

Thanks to introduction of the open door policy (“*Infetah*”), Egypt achieved sound economic growth for a decade starting in 1974. Since 1986, however, Egypt had suffered from a drastic fall in growth and macroeconomic imbalances. By the end of 80s, Egypt had a budget deficit of 17% of GDP, around 15% inflation rate and a balance of payment deficit running at a rate of LE11.4billion. In 1991, the government introduced policies to stabilize the economy, including the *Economic Reform and Structural Adjustment Program* designed with assistance of IMF and the World Bank. The main objective of the reforms was to establish a market-oriented economy in which the private sector would play the leading role. Among others, the most challenging agenda was privatization of the public sector enterprises.

c) Toward Privatization (1991-)

Egyptian privatization program started in earnest with the passage of Law 203 in June 1991. The Law, among others, stipulated that a “holding company” would replace the “organization” of the public sector. The numbers of public sector companies to be privatized were determined as 314 (total assets and employees of which were LE104billion and 1.08 million respectively) affiliated with 27 holding companies. The pace of privatization was slow up to 1993 in order to prepare necessary legislation and

regulations. Also socio-economic culture of the country had not been yet ready to accept the concept of privatization. Once the enabling mechanisms were set in place, privatization gained the momentum in the second half of 1990s after a favorable ruling by the constitutional court upholding the government's right to privatize the public sector. Since 1999, privatization has made slow progress for a number of reasons: downturn in the economy and Egyptian stock and capital markets and to some degree the less attractive investment opportunities in the remaining companies in the Law 203 portfolio.

On the fiscal side, privatization has had major impact upon reducing the burden on Government's fiscal resources by not only cutting future losses of the PEs but also bringing in revenues from the sales.

10.3.2 Current Situation of BOT Laws & Regulations in Egypt

Under the current governmental framework, the Ministry of Investment is responsible for privatization of state-owned enterprises and PPP while finance itself is the responsibility of Ministry of Finance. National committee to make decisions over priority among the projects is composed of Ministries of Planning, Finance, Investment and International Cooperation.

With regard to tax, under the current investment encouragement tax treatment, depending upon the location of the project, 5/10/15 years tax exemptions are awarded. The more remote is the location of a project, the longer is the tax exempt period. Upon the new tax law to be enacted in a few months, such investment encouraging tax treatments are to be abolished, but it is regarded giving little impact on the BOT investments because in general a BOT project is supposed to generate loss in the start-up period. BOT law & regulation will be revised shortly in order to integrate Government BOT promotion functions and to establish effective procedures.

10.3.3 Data Source and Qualification

In order to collect information about previous BOT projects in Egypt, extensive interviews and documents research have been conducted. One of the most useful surveys of a recent progress in Egyptian PPP is a quarterly report published by CARANA Corporation under USAID program. Throughout JICA research, due to limited availability of written records, we must heavily rely on interviews, which are, however, occasionally contradicting one another by interviewees. Accordingly it should be noted that this part is subject to qualification and to be examined further.

10.3.4 Previous BOT Projects in Egypt

Table 10.3-1 quoted from the most recent documentary record, the April-June 2002 CARANA Report, illustrates current status of BOT projects in Egypt by sectors. Some updating is made (noting that the name of the ministry in charge is the name at the time of CARANA report):

Table 10.3-1 Projects Sponsored by Ministry of Electricity and Energy
(US\$ million, years)

Project	Cost	Period	Sponcer	Status
Sidi Krir 3&4 Power Plant	480	20	EdF	Operational (2002)
Suez Gulf Power Plant	340	20	EdF	Operational (2003)
Port Said East Power Plant	340	20	Bechtel - Intergen	Operational (2003)
El Kureimat	-	-		suspended or withdrawn
Nubaria (1) and (2)	-	-		Reverted to state project
Zafarana (6)	-	-		suspended or withdrawn
Zafarana (7)	-	-		suspended or withdrawn
Borg El Arab (1)	-	-		suspended or withdrawn
El Kureimat (3)				suspended or withdrawn

(Source: Interviews conducted by the Study Team)

Three BOT power plant projects are currently operational, namely, Sidi Krir 3 & 4 (Note 1 & 2 are conventional state projects.), Suez Gulf and Port Said East. For Sidi Krir, Government provided a full supporting package, containing a guaranteed fuel supply and off-take with price adjustment mechanism set in place based upon Price Index as well as foreign exchange protection. Because of such comprehensive protection for a private sponcer, the government believes the private sponsor can enjoy a return on investment basically risk-free on the US dollar basis. In addition, required finance was secured from local financial institutions, with no interests of introducing international capitals. Judging from this kind of BOT scheme nonsense by the government, Project Nubaria was reverted to a conventional state project. Other projects in the list are either suspended or withdrawn.

Table 10.3-2 Projects Sponsored by Ministry of Transport (Airport Sector)*

Project	Cost	Period (Year)	Contractor	Status
Sham El Sheikh (Expansion)	US\$170m	25		Reverted to state project
Hurghada Terminal	US\$15m	10	JV Artoc & GOE	Operational (1999)
Marsa Allam	US\$40m	49	Khorafi	Operational (2001)
Borg El Arab				Reverted to state project
Luxor Airport	US\$70m	25		suspended or withdrawn
Assuit Airport				suspended or withdrawn
El Alamein Airport	LE200M	50		Operational (2002)
Bahariya and Farafra	DM200MX2	50	ABB-Manheim	Cancelled
East Oweinat Airport				suspended or withdrawn
Sohag Airport				suspended or withdrawn

(Source: Interviews conducted by the Study Team)

Table 10.3-2 presents projects sponsored by Ministry of Transport in the Airport Sector. Marsa Allam is a highly successful airport BOT project, the sponsor of which is a Kuwaiti capital (Horafi Company). The sponsor was successfully awarded a 49 year concession from MOT while awarded a franchise over neighboring land of 20million square meters from the Ministry of Tourism. The awarded land was developed by the sponsor's own funds to a splendid resort, which produced a huge profit to the sponsor. Considering it too much to a private sponsor, the Government reverted the Sham El Sheikh Airport Project to a conventional state project as Sham El Sheikh was already an established resort so it was too apparent that awarding franchise of land in that area would give too much benefit to the private sponsor. El Alamein Airport Project is now operational. Borg El Arab Airport Project is proceeding as a state own project with JBIC loan. Other projects are either suspended or withdrawn.

Table 10.3-3 Projects Sponsored by Ministry of Transport (Maritime Sector)
(US\$ million, Year)

Project	Cost	Period	Status
Petroleum Quay (Alexandria/Dakahlia)	45	30	Operational (2001)
East Port Said Port	481	30	Operational (2004)
North Sokhna Port	176	25	Operational (2002)
Damietta for Liquid Gas Export	1,600	25	Operational (2003)

(Source: Interviews conducted by the Study Team)

Maritime BOT projects are presented in Table 10.3-3. All of the projects in the list are considered successful, in which generally the government constructs the infrastructure while the private sponsor constructs affiliated facilities and undertakes O&M.

Table 10.3-4 Projects Sponsored by Ministry of Transport (Road Sector)
(LE million, Km)

Project	Cost	Length	Contractors	Status
Katamia-Ain Sokhna	300	118	National Company	Operational (2004)
Alexandria-Fayoum+Exits	700	199		
Development of Cairo-Alex-Matrouh	900	520	7-8 companies shows their interests	Started pre-qualification evaluation and shortlist by Feb. 25, 06
Development of Cairo-Ismailia-Port Said	500	180		
Sohag-Hurghada (Red Sea)	500	250	Prep. By GARBLT	Plan to open bid in February 06
Luxor-Hurghada Desert Road	450	220	Prep. By GARBLT	Under Study for offer
Fayoum-Assiut	500	260	Prep. By GARBLT	Under Study for offer
Daytout-Farafra	500	263	Prep. By GARBLT	Under Study for offer
Cairo-Center of Alexandria	400	180	Prep. By GARBLT	Under Study for offer
Ain Sokhna-Marsa Allam	1200	630	Prep. By GARBLT	Under Study for offer
Cairo-Aswan (west of Nile)	1500	800	Prep. By GARBLT	Under Study for offer
Helwan – Koraimat		90	National Company	Construction has finished about 50-60%

(Source: Interviews conducted by the Study Team)

There have been no road BOT projects except Katamia-Ain Sokhna, which is sponsored by the Ministry of Defense. This road was constructed by the National Company (Ministry of Defense), which was awarded toll revenues (LE5.0-25.0 per car) and public land. Sohag-Hurghada is regarded as a pilot BOT road project.

Several projects were cancelled after the tender announcement; partly because costs for resettlement and reallocation of water, electricity facilities exceeded the estimated level and related authorities were not able to support them. In addition, the government tried to provide sponsors with rights to develop some public land in order to subsidize toll revenues lower than a cost recovery basis. However, the government was not able to reach an agreement with related ministries and governmental agencies, especially among ministries of housing, agriculture and defence, with regard to the land which should be provided.

A long lasting argument on the interpretation of BOT Law (Law No.229/1996) was another factor which delayed road BOT projects. The argument was whether upgrading of existing road will be included in the targeted freeways for concession or not. It was clarified by the State Council in 2002 and agreed that road concession can include upgrading of existing roads. Moreover, it took a long time to build a consensus among Ministry of Transport on the priority route for BOT project.

Table 10.3-5 presents projects under the railway sector. No further information with regard to the Railway Sector and Water & Wastewater Sector projects under the Ministry of Housing.

Table 10.3-5 Ministry of Transport (Railway Sector)

Project	Cost	Length (km)	Contractor	Status
Ein Shams-Tenth of Ramadan	LE1.7bil	40		Study Underway
Ismailia-Rafah	\$268m	225		Offered
Giza-Sidi Gaber				Announced
Marsa Matrouh-El Saloum	LE50m	260		Bidding Underway
Alexandria-Marsa Matrouh		300		Bidding Underway
Sidi Gaber/Borg Al Arab	\$150m	60		Study Underway
Alexandria/Aswan (Supertrain)	LE10bil	-	Spanish Railway Authority	FS to be conducted
Cairo-Tebbeen	\$75m	225		Offered
Sinai-Saloum	\$230m	-		Offered
Dayrout-Rafah	\$400m	165miles		Offered
Saloum-Natron	\$520m	315miles		Offered
Saloum-Morocco	LE780m	-		Study Underway
Borg El Arab-Alexandria	LE850m	-	Supervised by Int'l British Company	-

10.3.5 Lessons Learned from Existing Road BOT Projects in Egypt

Main factors of failed BOT projects in Egypt and recommended actions for future PPP project development are summarized below.

(1) Inappropriate allocation of risks between public and private sector. (power)

The government successfully concluded three BOT agreements on power plants in the US-dollar basis, bearing foreign exchange risks. However, the Government doubts whether it was necessary to bear all the foreign exchange risks. Since Egypt reintroduced an effective peg system in 2003, market soundings will be required to identify whether a private sector would be able to absorb a part of foreign exchange risks and how the risk will be allocated among sponsors, financiers, and the public sectors.

(2) High income tax rate and long procedures of approval

Corporate tax was about 42% and was considered one of the constraints to invest in Egypt. However the corporate income tax was reduced later to about 20%. Another common complaint from the private sector was a long procedure of government approval. It took several months to take the approval. The Government plans to finalize the draft so-called PPP Law to standardize the procedure and promote private sector investment by 2006. With regard to the on-going road BOT project, Cairo-Alexandria-Matrouh route, GARBLT plans to utilize Spanish consultants to prepare a BOT procedure and contracts under global standard.

(3) Uncertainty on toll revenues

Two factors were constantly raised during the development of road BOTs, i.e. acceptability of a toll and credibility of traffic demand forecasts. It was recognized that perceptual and cultural barriers to a toll system exist both at a policy maker side and a user side. It is considered that toll revenue risk will overwhelm the private sector's appetite to invest in the road sector in Egypt, and strong political commitment to enforce an appropriate toll level to the Urban Expressway will be required. It is also recommended to structure a PPP program which the public sector undertakes a part of demand risk. For example, the government's providing a partial traffic demand/toll revenue guarantee or introducing a shadow toll whose level varies depending on the actual demand level will encourage the private sector participation in road infrastructure.

- (4) Lack of coordination among related ministries and authorities and changes on government policies

Some road BOT projects were cancelled after the tender announcement due to political reasons. Partly because some ministries and governmental agencies were not able to reach the agreement on priorities of routes, land compensation mechanism, and toll levels. Again, strong political commitment which covers cross-Ministerial decision making and focus on urban expressway will be required.

CHAPTER 11

NETWORK DEVELOPMENT APPROACH WITH PRIVATE SECTOR PARTICIPATION

CHAPTER 11

NETWORK DEVELOPMENT APPROACH WITH PRIVATE SECTOR PARTICIPATION

11.1 PHASED APPROACH

11.1.1 Proposed Phased Approach

A primary objective of GOE is to implement the whole network of urban expressway efficiently and timely with private sector participation. In order to achieve this objective, JICA study team proposes a phased approach as shown below in Figure 11.1-1.

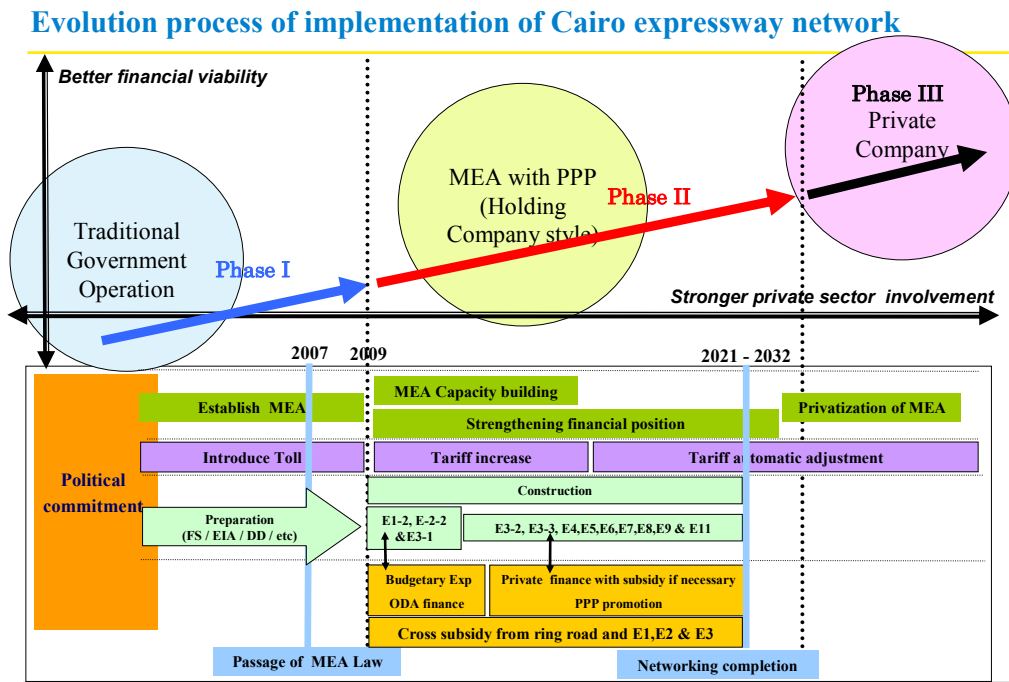


Figure 11.1-1 Evolution Map of PPP

The integrated network of expressways in Cairo has three phases for PPP. Detailed implementation schedule is shown in Appendix 11.1.

Phase I: Establishing implementation framework and building capacity

Phase II: Promoting Public Private Partnership

Phase III: Increasing private participation, such as privatizing MEA

Phase I is expected to start in 2006 until the end of 2008. It is proposed that the

government will build and strengthen its foundation for implementation of network development and operation during three years. In the first phase, a preparatory phase, four key steps need to be taken: establishment of MEA whose legal status is a holding company¹ with cross subsidy of toll revenue from the network; introduction of toll system; preparation of detail engineering design; and mobilization of funds from budget and/or concessional finance.

Phase II will start from 2009 until either MEA's finances will turn into self sustainable or MEA's repayment of commercial borrowings will be mostly completed. MEA will implement high priorities routes by itself in the beginning of this Phase, while MEA will start implementing other routes with private sector participation as early as possible. The private sector will finance a part of Expressway network, covering its costs by tolls from users and, if necessary, government's/MEA's payments for the services the private sector provides. Network is assumed to be completed between 2021 at earliest, under a base case scenario².

In phase III, as MEA will gain strong profitability and credit standing, GOE as the major sponsor of MEA will utilize the asset for the benefit of the public along GOE's policy. For example, GOE will be allowed to privatize MEA in order to accept privatization benefits. Or GOE will be able to either reduce a tariff level or utilize a part of toll revenue for other road development in Egypt while MEA would be under GOE control.

11.1.2 Necessary Conditions for the Phased Approach and Its Benefit

The following four points are necessary conditions to realize the phased approach.

- Strong political commitment at the beginning and continuous GOE involvement for achieving self-sustainable Expressway network system and gaining confidence from the private sector confidence.
- A strong, financially sound, and independent executing entity
- Flexible utilization of toll revenues as cross subsidy for future expansion and upgrading of necessary but less profitable routes
- Private participation framework

The following four points are benefits of the phased approach.

- Reduction in life cycle costs of the network development
- Better service delivery
- Contribution to private sector development
- Mitigation of GOE's budget constraints

¹ Holding company is stipulated in the public business sector company law (Law No. 203 of 1991).

² Network completion later than 2021 is a more realistic target as our preliminary financial study compared 2021 completion case and 2031 completion case.

Condition I - Strong political commitment at the beginning and continuous GOE involvement for achieving self-sustainable Expressway network system and gaining confidence from the private sector confidence

As there are obviously no magic solutions to implement the expressway network without any efforts and costs, the political commitment is an essential starting point, paving the way for the successful network development with private sector participation.

Political commitment is very important and an effective institutional framework cannot substitute for it. However, without an effective institutional framework it is difficult to translate political commitment into action. Furthermore, establishing an effective institutional framework is a key signal to show a political commitment and will build confidence required among the private sector. Thus effective institutions and political commitment go hand in hand.

As the first step, MEA has to be established to handle implementing construction and operation with independent responsibility and manage cross subsidy mechanism with accountability and financial discipline. After setting up MEA, a single body will become dominantly responsible for executing contractual agreements with the private sector under PPP scheme. Therefore the establishment of MEA which has enough capacity and appropriate legal foundation is one of key immediate actions to be taken by the government and show its strong commitment.

Introduction of toll system is prerequisite to establish a cross subsidy mechanism and implement the integrated network responding to rapid traffic demand growth. Total project cost is estimated at more than LE17,000 million and it could take more than 45 years to finance the project if the project only relies on MOT budget³. If the government wants to construct expressway network with the aim of addressing rapid traffic growth, a possible solution for finance is the introduction of toll system which relies on payment for usage made by expressway users rather than payment from the government. Needless to say, a policy for toll introduction can not be decided and controlled by the private sector at all and the policy formulation must remain in GOE hand. GOE should build consensus on introducing toll among stakeholders for the purpose of modernizing transportation system in the grater Cairo region⁴. Furthermore, an automatic toll adjustment mechanism reflecting inflation indexation will be required to be built in the toll system. The mechanism will absorb cost fluctuation due to inflation and support healthy financial position of MEA. Under PPP scheme, private investors and lenders will require a functional and reliable toll system to be in effect

³ In fiscal year 2003/04, the budget of MOT was about LE378 million. Repayment period is calculated by dividing total investment cost estimates by the MOT budget.

⁴ Road use is more frequent and daily basis in urban roads than intercity roads such as Cairo – Alexandria, and the social impact of toll introduction to the former will be larger than that to the latter.

with good historical records. It will be necessary that Egyptian government commit to building a sound and clear toll system with necessary legal foundation, eliminating political interference.

Establishment of MEA and the introduction of toll system are not sufficient. It is not realistic that GOE attracts the private sector to participate in the implementation without enough good track records of the network implementation framework or full government guarantee for private finance with fair return⁵. It would take several years to stabilize the system in the society and economy of Cairo and gain trust from the private sector.

In our proposed plan, we consider Phase I and first several years in Phase II as a stabilization period of the system. It is assumed that MEA will introduce toll system in the Ring Road and high priority routes (tentative candidates are E-1, E-2 & E3-1) at the first stage and gradually convinces the society of necessity of toll system. If the society get more understanding on the toll system and MEA receives sufficient toll revenue, the private sector will start to trust the proposed framework. It is assumed that MEA will allow private sector participation in implementing E3-2, E3-3 or E-4 with necessary subsidy for construction to improve financial viability of the projects.

Condition II – A strong, financially sound, and independent executing agency

Current institutional structure will not be adequate and efficient for implementation of the expressway network, since many government organizations will be involved to implement the network which is geographically spread out among three governorates and requires complex multi functions for implementation.

Implementing road infrastructure differs from other infrastructure such as water supply or telecommunication which is usually implemented by a single body in planning and implementing them, because there are actually many government organizations involved in some aspects as shown in Figure11.1-2. Since each entity has different policy objectives, a priority of projects and interests, decision making and successful coordination among organizations to achieve entire objectives are always very difficult and time consuming.

Moreover, it is highlighted that the government budget needs to be approved from the parliament every year and the level of the government budget used for capital expenditure would depend on economic and fiscal conditions. In addition to the budget constraint issue, different entities competing for getting budget to fulfill each plan and policy makes implementation more complicate and difficult.

⁵ This is very costly option for GOE as it had experience of PPA agreements with independent power producers and unacceptable requirements requested from private bidders of Katamia – Ain Skhna toll road project.

Historical facts clearly shows evidence of its inadequacy and inefficiency of the current institutional framework, as existing elevated routes E-1 and E-2 had taken more than 20 years to accomplish the current length 14.1 km.

Complex institutional structure for roads in Cairo

Planning		
MOT	TPA (Transport Planning Authority)	National level transport planning
MOT	GARBLT (General authority for roads, bridges and land transport)	Intercity national road network planning
MOT	ENIT (Egyptian national institute of transport)	Transport planning, engineering & economics
MOHUUC	GOPP (General organization for physical planning)	Ring roads, etc
MOI	Traffic police directorates	Traffic planning, vehicle inspection, driver license
MOP	Transportation sector	5 year development plan, coordinating for budget
3 Governorates	Cairo, Giza and Qalyobeya	Planning within each area

Construction & Land Acquisition (LA)		
MOT	GARBLT (General authority for roads, bridges and land transport)	Intercity national road network Const & LA
MOT	NAT (National authority for tunnels)	Car tunnels Construction & LA
MOHUUC	CDO (Central development organization)	Ring road Construction and LA
MOHUUC	DONCNC (Development organization for new cities & communities)	Construction & LA in new communities
3 Governorates	Cairo, Giza and Qalyobeya	Construction and Land acquisition within each area

Operation & Maintenance		
MOT	GARBLT (General authority for roads, bridges and land transport)	O&M for intercity national road network
MOI	Traffic police directorates	Traffic management and control
3 Governorates	Cairo, Giza and Qalyobeya	O&M within each area

PRICEWATERHOUSECOOPERS

Figure 11.1-2 Current Complex Government Institutional Structure

To cope with an anticipated rapid traffic demand increase in Cairo in a timely manner, it would be effective to delegate functions and roles for road construction and operation which are currently separately conducted by multiple government organizations (Figure 11.1-2) to a newly established entity. The entity, MEA, is a unique strong implementation vehicle for construction and operation of the integrated expressways network. In principle, it is required that MEA will construct and operate expressways in the integrated network, with taking own financial position and expected toll revenue stream into account.

Legal Form of MEA. Under current laws in Egypt, a holding company will be a suitable legal form for MEA. This option provides other than the government retaining all functions as well as all risks associated with the integrate network of expressways in Cairo, in early stage of PPP evolution process.

In principle, a holding company has greater flexibility and freedom in management and financing with less government intervention than a department of ministry and a public corporation with more eternality of existence. MEA has to run its business on a full cost recovery basis with financial and managerial accountability, and a holding company is a suitable form to meet this principle (Detail is in Appendix 11-2) ⁶.

⁶ According to World Bank, international experience shows that the impact and effectiveness of public sector

Adoption of a holding company form will not exclude the possibility of government support for MEA. In order to keep MEA's financial discipline and accountability and avoid moral hazard, the government should define the rule of financial support to MEA in advance of the establishment of MEA. Possible areas of government's financial support to MEA includes: (i) capital contribution for paid in capital when MEA is established and starts implementation in a new route; (ii) specifically in the early stage, operational subsidy, such as subsidy for MEA's interest payments in order to avoid mounting debt; and (iii) capital subsidy for construction of the specific projects which has to be implemented urgently due to political, social and/or economic reasons.

In addition, an independent executing agency will play an important role to achieve an efficient and effective operation. Design and safety standards of expressways should be uniformly controlled by MEA even if the private sector operates some routes inside the network. Environment management of expressways in the network is another area to be uniformly supervised and monitored by a single entity. Traffic management, collection and supply of traffic information of expressways in the network should be integrated and conducted by MEA.

Condition III - Flexible use of toll revenues as cross subsidy for future expansion and upgrading of necessary but less profitable routes

Some sections of the Cairo urban expressway network will not be financially viable while other sections are profitable⁷. A successful expressway network hinges on the existence on an entire network. Cases of privately operated expressways can be found in some countries but, obviously, no private business would want to build a financially unviable road.

As timing of actual disbursement of capital expenditure is uncertain due to political interaction and frequent policy changes in Egypt, cross subsidy scheme will be effective to utilize toll revenues for building necessary but unprofitable routes without depending on the government budget. Clearly, there will be a strong need of one organization which plans and manages feasibility of the whole network.

In order to keep flexibility, soundness, and independence of cross subsidy system, a separate entity from the Government with an independent accounting system, such as MEA, will be suitable to manage the system.

agencies can be improved through the introduction of such accountability mechanisms as: performance evaluations for senior management, performance based budgets, unified accounting rules for the treatment of SOE profits, strengthened legislatures (e.g., budget and finance committees or public accounts committees with enhanced powers of scrutiny over the budget) and greater information disclosure about service delivery targets and achievements. Government is presently formulating plans for public sector administrative reforms that encompass some of these objectives.

⁷ Main factors defining profitability of each route are traffic volume, construction work volume, and the nominal unit cost of construction (per km).

Condition IV - Private sector participation framework

One single entity with enough power and functions will be responsible for all PPP projects associated with the integrated network of expressways and the Ring Road in Cairo. The private sector surely requires a single agency handling all PPP projects and coordinating with concerned parties. Concentrating all necessary functions into the MEA will be a private sector friendly framework and, the framework can help promoting Public Private Partnership (PPP).

Besides that, necessary coordination with not only the concerned governmental organizations but also the private sector is indispensable for the success of the integrated network. It will be difficult for the private sector to initiate coordination among the private participants under PPP scheme, and MEA will have to take an active role to coordinate activities among the private participants.

MEA will need to define integrated requirements that will be imposed on private concessionaires. Moreover, Egyptian government has to define a concrete development plan of Cairo urban expressway and conduct its implementation without any delays and significant changes because they can deteriorate profitability of private concessionaires. However, according to a historical record on transportation development in Cairo, the implementation without delays and significant changes are unrealistic. When delay and/or significant change happen, MEA has to coordinate with different concessionaires to keep consistency among all concession agreements⁸.

Since it will be difficult to manage and avoid any delays and significant changes in urban transportation development in Cairo, a single entity MEA is more efficient and less expensive to handle coordination and compensation rather than either current traditional government framework or pure private sector driven framework.

Benefit I – Reduction in life cycle costs of the network development

By promoting private sector participation, government burden can be reduced rather than the present traditional government operation on the following three aspects.

- Replacing budgetary expenditure (i.e. taxpayer money) on construction with long term private funds based on future toll revenue stream (i.e. users money)
- Reducing lifecycle cost by utilizing private sector (innovative construction, innovative design technique, tighter cost control, optimum risk allocation, more

⁸ This includes amendment of a concession agreement and compensation cost to the private sector when an unexpected event or situation occurs. Necessary support and compensation provided by the government in case of changes in an external factor must be usually agreed in a concession agreement with private sector. Sometimes, GOE has to revise concession agreements to keep consistency among concessionaires. This is very costly activity and one single entity handling all contracts will be most cost effective and efficient.

linking construction and operation, effective bidding process with transparent and competitive procedure), which generates VFM as shown in Figure 11.1-3.

- Transferring appropriate risks associated with functions from public to private by linking planning, design, construction and operation (Under the traditional construction contract, changing orders leaves most of the risk with the public sector and there is typically no penalty for late completion of work.).

Effective PPP bidding contributes to reduce life cycle cost

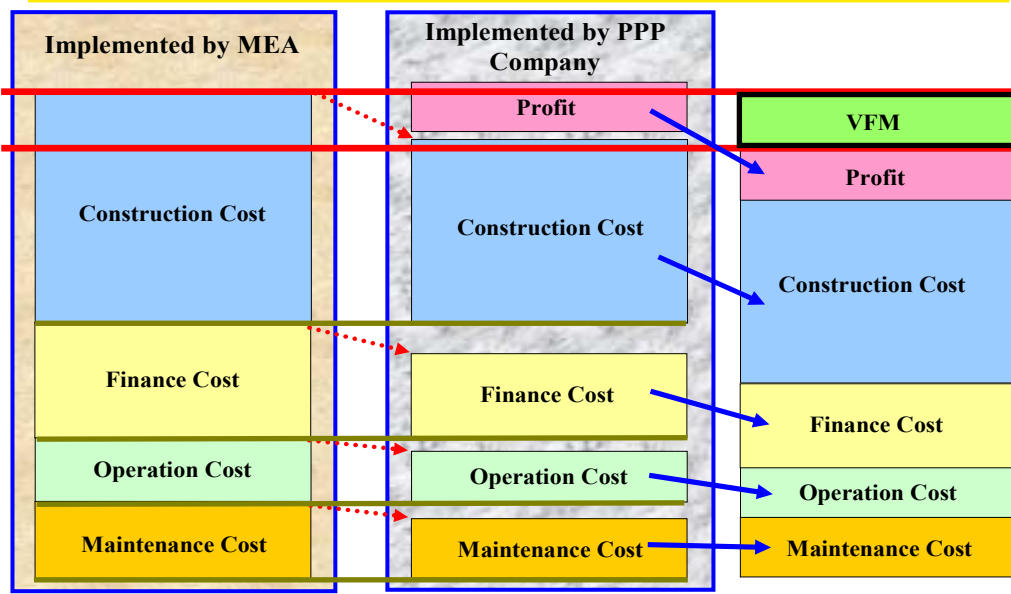


Figure 11.1-3 Source of Value for Money (VFM)

Benefit II - Better service delivery

From the view points of better expressway service delivery, expected private sector participation will have following benefits;

- Sustaining the network financially throughout its life cycle
- Better service delivery (output based contract with private sector, effective monitoring on private sector performance by MEA)
- Redefining and unbundling of requirements and priorities so that each requirement is more explicitly acknowledged than the normal practice under public sector provision
- Improve revenue collection through reducing to some extent of revenue leakage

Benefit III - Contribution to private sector development

According to the World Bank⁹, the present Government has announced facilitation of

⁹ World Bank discusses this issue in “Annex 3: Private Sector Development Strategy”, COUNTRY ASSISTANCE

private sector development. PPP enables more private sector participation than the government retaining all functions as well as all risks. The present government has begun to consider ways to increase and improve public infrastructure (in roads, electricity, telecommunications, ports, and education), in part through new public investments and in part through facilitating private investment in relevant areas. There are already some examples including variants of BOOT arrangements in electricity, ports and airports.

In road sector, private participation is relatively limited to other sectors. The government has managed construction and operation, and construction works and maintenance works are partially¹⁰ implemented by the private sector based on a traditional contract. All six toll roads at present in Egypt are operated by the public sector.

PPP options such as toll collection outsourcing, a performance based operation management contract, design-build-operate, design-build-finance-operate are potentially applicable in implementation of the integrated network, eventually contributing to the private sector development in Egypt.

Benefit IV - Contributing to GOE budget in the long run

GOE collects corporate income tax from MEA and private concessionaires in the medium run. And GOE would receive significant dividend from MEA after its completion of debt repayment. GOE has an option to privatize MEA to get privatization revenue. Those revenues can be utilized for other road infrastructure development and attacking air pollution inside the greater Cairo region.

11.2 PROPOSED PUBLIC PRIVATE PARTNERSHIP

11.2.1 Basic Principle

The task of this study is to identify practical ways of involving the private sector in the design, construction, operation and even financing of expressways of the network.

Theoretically speaking, if Egyptian government chooses a pure public sector project, all tasks are undertaken by Egyptian government. However, there have already been some experiences of private participation in Egypt. For instance construction of expressways and bridges were undertaken by private construction firms although public sector companies such as subsidiaries of holding companies owned by MOT¹¹ and MOHUUD¹² also undertook the construction works.

STRATEGY FOR THE ARAB REPUBLIC OF EGYPT FOR THE PERIOD FY06-FY09.

¹⁰ Holding companies owned by ministries are regarded as a part of the public sector.

¹¹ Ministry of Transportation

¹² Ministry of Housing, Utilities and Urban Development

It is preferable to share the implementation and related risk with the private sector, when the public sector is less flexible and efficient than the private sector. Some core and important tasks will remain in the public sector's hand if risks are too high for the private sector to take. Political or social objectives may justify some tasks to be retained in the public sector. For expressways in general, land acquisition and relocation work are usually remained in the public sector.

Ownership of the road assets is another item which needs to be considered. Usually this is retained by the party which also bears the financing risks as assets are often utilized and required as security for mobilizing funds. In Egypt, concessionaires had been generally not allowed to own infrastructure assets¹³. However, in order to relax this constraint for private sector participation, Presidential Decrees on the Organizational, Legal, Technical, Financial and Economic Regulations of National and Local BOOT, BOT and BOO projects were issued in July 2003¹⁴.

Although the private sector is allowed to own expressways from the legal perspective, it will be recommended that expressway assets will be owned by the public sector/MEA. The reasons include: (a) expressways constitute a strong public asset that cannot be liquidated; and (b) MEA who mainly takes financing risks is a preferable entity to own expressway assets¹⁵.

We assume that design, construction management, construction work, toll collection, clearance of traffic accident, maintenance management, maintenance work, and rehabilitation work will be transferred to the private sector. Toll collection is a labor intensive work so that this function will be transferred to private sector in order to avoid enlarging MEA unnecessarily and raising operation cost. Output based and package contract will delegate construction and maintenance management to the private sector in an efficient manner and minimize MEA's role and organization.

On the other hand, the government including MEA would be responsible for core roles such as setting up a new institutional framework, conducting overall planning, coordinating and undertaking most of the financing responsibilities and related risk including currency risk.

11.3 FRAMEWORK DEVELOPMENT STAGE - PHASE I –

11.3.1 Phase I - Introduction

In phase I, the government has to build and strengthen the implementation framework

¹³ In case of airport sector, concession holder could not normally own airport asset, including land development and buildings erected on it, which deprived lenders of collateral rights and resulted in less favorable financing terms.

¹⁴ Referred to World Bank project appraisal document on Airports Development Project dated on March 5, 2005

¹⁵ This issue should be more discussed and examined with GALBLT, banks and potential investors.

and show good track records that would enhance investor's confidence and accountability, paving the way towards further private participation. Establishment of MEA, introduction of tariff system, and necessary legislation would be key actions to build the implementation framework during phase I. In line with addressing the above structural issues, engineering and environmental study should be conducted.

As during Phase I it is required to have tight workload, intensive discussion, deep analysis, huge paperwork, strong coordination among government organizations, and political consensus building, JICA study team proposes to set up a strong and independent MEA secretariat under supervision of Minister of Transport.

The MEA secretariat in MOT led by person at one of under secretary of the Minister level is principally responsible for drafting necessary documents, consulting and coordinating with stakeholders, with support from capable contracted consulting firms if necessary. Needless to say, the MEA secretariat in MOT needs necessary full time staff and sufficient budget to achieve its task. The MEA secretariat and its staff are expected to be transferred to a part of MEA after its establishment.

11.3.2 Phase I - Establishment of MEA

It is essential to review following issues in order to establish MEA. The MEA secretariat should be responsible for drafting and defining them. Regarding the company structure, it is emphasized that a smaller and flexible organization by realizing earlier private sector participation is better than creating an inefficient and giant organization..

- Defining power and function of MEA
- Clear allocation of roles, powers and responsibilities among concerned government organizations
- Determination of one MEA supervision ministry/authority, its power and its function
- Defining role and obligation of MEA's board
- Defining the company structure
- Drafting preliminary MEA financing plan

After defining the above key concepts, the following steps should be taken.

- Drafting three year MEA business plan including detailed financing plan
- Defining own management with necessary delegation of decision making
- Defining corporate oversight structure
- Defining management information system to generate enough operation and financial data
- Defining own accounting and financial management system
- Defining business procedures and process
- Laying down own human resource regulation

- Selecting candidates of MEA staff from MOT & other ministries
- Due diligence and asset valuation on existing elevated road and ring road

At the same time or after the establishment of MEA, the following actions are necessary.

- Transferring human resource from line ministries and three governorates
- Recruiting necessary professional staff from private sector
- Appointment of president director (or chairman)
- Appointments of board of directors
- Transferring road assets to MEA
- Necessary capital injection into MEA
- Commercial registration

11.3.3 Phase I - Toll System Introduction

In case of Egypt, people usually do not have custom and feeling that they pay for road. Since impact of toll introduction is not small in any country, introduction of toll system in Egypt must need strong government commitment from the President / Prime Minister level, and, cautious socialization activities.

In order to realize introduction of sustainable toll system, the MEA secretariat should conduct initial work on tariff level and tariff adjustment formula, and development of strategy on public awareness campaign at first. Specifically, the proposed implementation plan depends on toll revenue from ring road, which would be studied by Spanish grant survey starting in March 2006.

The proposed tariff system in detailed is explained in Chapter 7 and key issues for further study are as shown in Appendix 11.3.

- Specific willingness to pay survey for high priorities routes (E-1, E-2 & E-3) and ring road
- Defining tariff system on internal expressways (Flat system or distance dependent system, etc)
- Defining tariff system on ring road (Flat system or distance dependent system, etc)
- Defining cross subsidy system
- Defining first tariff setting for E-1, E-2 & E-3
- Defining first tariff setting for ring road
- Drafting tariff increase schedule up to the economic level
- Defining tariff adjustment mechanism and approval process
- Defining tariff adjustment formula
- Initial work on tariff system between MEA and private concessionaires for first PPP project
- Developing strategy on public awareness campaign

11.3.4 Phase I – Necessary Legislation

JICA study team thinks that the following legislation are necessary to secure the establishment of MEA and toll system introduction into the network.

- Issuance of MEA decree by Prime Minister
- Issuance of article of MEA association by Minister of Transport
- Amendment of public road law by Minister of Transport

11.4 IMPLEMENTATION STAGE - PHASE II -

11.4.1 Early Stage after Establishment of MEA

While MEA receives existing road assets and transferred staff, MEA will start to operate existing routes and construct route E-3 for the first several years by using cross subsidy, concessional loan from bilateral/multilateral source, and, government subsidy if necessary.

11.4.2 Capacity Development of MEA

Through the period, MEA would consolidate the organization, accumulate experience and know how and strengthen the capacity, while the government would successfully stay the tariff system with the society. MEA is required to continuously address the following issues.

Internal issues

- Strengthen and modify its organization
- Standardize flow of works with making manuals
- Specify job descriptions
- Specify output levels of works
- Strengthen financial viability
- More delegation of power and decision making to appropriate level and section
- Build necessary capacity to handle and negotiate with private sector
- Improve management information system
- Strengthen related data collection and analysis capacity

External issues

- Installation of traffic information system
- Provision of traffic information collection
- Provision of traffic information supply

11.4.3 Network Development with Gradual Private Sector Participation

Evolution of PPP scheme – Scheme of network development will be transformed from the public sector/MEA's implementation in the early stage to MEA - private partnership implementation stage.

In the early stage, while MEA will strengthen operational capacity and organization by operating existing E1-1, E-2 and the Ring Road, MEA will implement priority routes such as E1-2, E2-2 and E3-1 by itself as shown in Figure 11.4-1.

Although this report assumes that there would be capable private road operators in Egypt and some extent of operational works on these three prioritized routes would be delegated to the private sector, MEA will be required to review MEA's own capacity, the level of the private sector development, and government policy.

	Construction work & Maintenance work	Toll collection	Traffic management & Maintenance	Management of design, construction, rehabilitation & upgrading	Finance & owning assets	Land acquisition	Planning & Regulating	Type of PPP
A	E3-2, E3-3, E4, E5, E6, E7, E8, E9, E11				Concession Concession right Subsidy		Entrustment of corridor management Supervision Dividend Capital injection	BOT
B	PPP promotion stage				Construction contract Entrustment of operation Lease fee Lease of asset Subsidy		Entrustment of corridor management Supervision Dividend Capital injection	DBO/DBFO
C	E1-2, E2-2 & E3-1		Entrustment of operation Lease of asset Lease fee	ODA Early stage			Entrustment of corridor management Supervision Dividend Capital injection	Outsourcing (Performance based management contract)
D	Existing E1-1, E2-2 & Ring road						Entrustment of corridor management Supervision Dividend	Traditional government operation
	Private sector		MEA			Government		

Figure 11.4-1 Comparison of Proposed PPP Options

In PPP promotion stage, MEA would attract private sector to finance, construct and operate remaining routes (E3-2, E3-3, E4, E5, E6, E7, E8, E9 and E11). Possible three schemes (BOT, DBO and DBFO) would be chosen by MEA based on project economics of planned routes, how much competition would occur, toll system, required level of engineering and so on.

Contractual arrangement in early stage - As anticipated contractual structure in Phase I is shown in Figure 11.4-2, major functions remain in MEA's hand. Private sector participation will be limited to construction and maintenance work. Toll collection outsourcing will be possible to be implemented by the private sector.

In order to minimize functions of MEA and promote private sector activities, toll collection can be delegated to private sector from the beginning when the toll system would firstly start in the Ring Road. MEA is basically responsible for toll system development and management, and toll collection work itself is outsourced to private sector. As vehicle

kilometer is a usual counting unit of traffic volume, vehicle detectors enable MEA to count traffic volume route by route. Using traffic volume information from vehicle detectors, MEA could execute payments to private sector based on tariff volumes.

The government may be required to provide some subsidy for interest payment and construction to MEA if the government intends to speed up the installation.

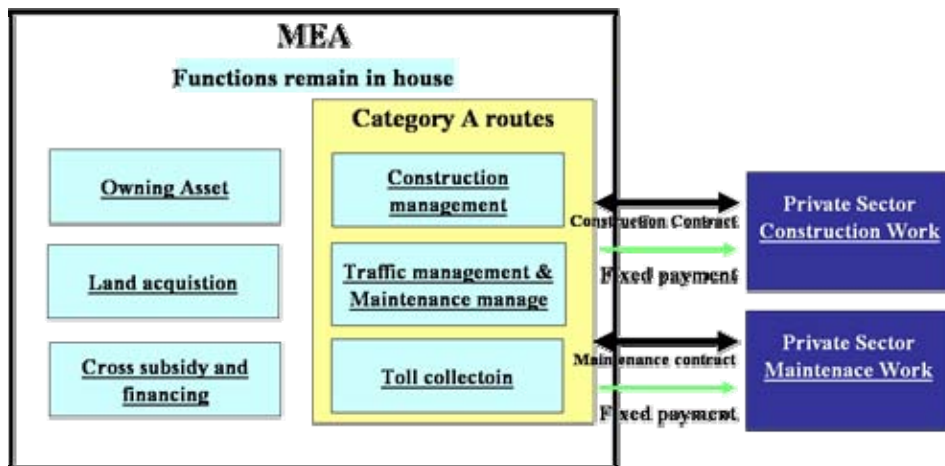


Figure 11.4-2 Contractual Arrangements at the Phase I

Contractual arrangement after PPP - While private sector takes role of only construction work and maintenance work in phase I, private sector responsibility should be gradually expanded in line with progress of MEA capacity building, track record of toll system and MEA financial position.

Image of contractual structure in Phase II is shown in Figure 11.4-3. There are two types of PPP which are relatively easy to implement. One is toll collection outsourcing, and the other is performance based operation management contract out which includes toll collection, traffic management and maintenance.

MEA will be able to start RO (Rehabilitate & Operate), DBO (Design, Build & Operate) and DBFO (Design, Build, Finance & Operate) through transparent and competitive bidding process. Assuming toll revenue stream will become strengthened, MEA will be able to utilize cross subsidy mechanism for new constructions and rehabilitations effectively.

Regarding financial support from the government, MEA will require subsidy occasionally for interest payment and for construction if the government intends to speed up the installation.

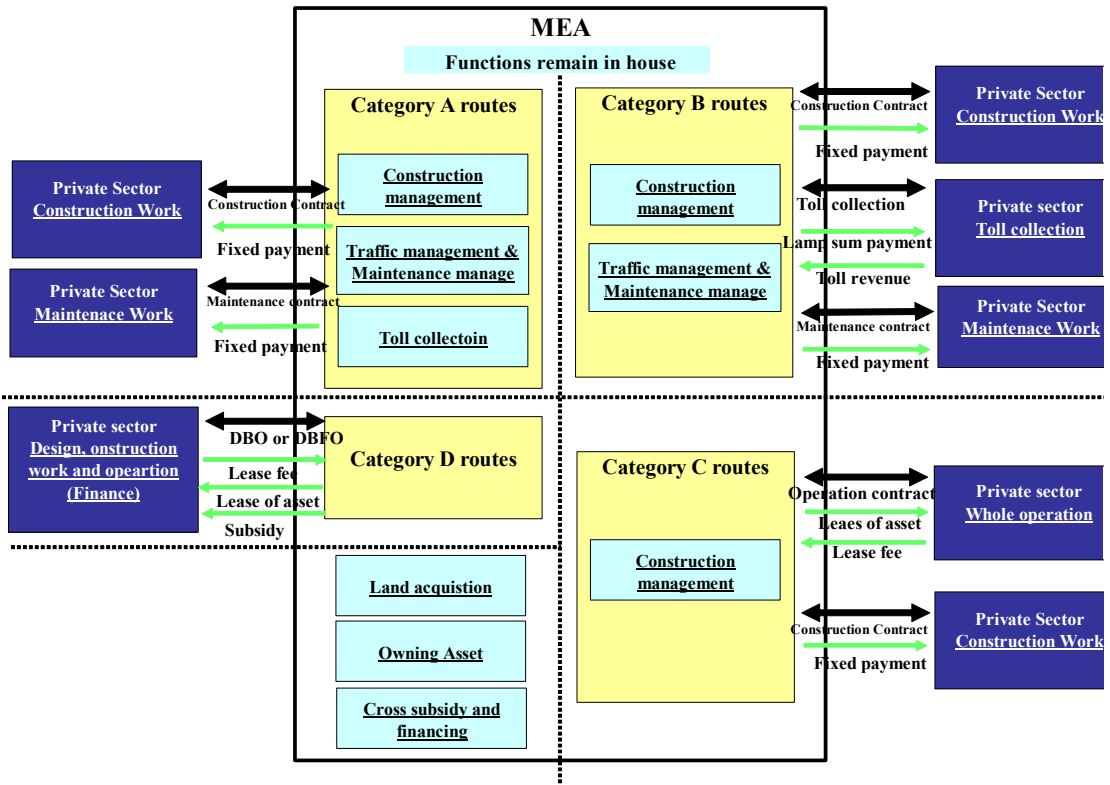


Figure 11.4-3 Contractual Arrangements at the Phase II

CHAPTER 12

FINANCING PLAN AND CASH FLOW ANALYSIS FOR NETWORK

CHAPTER 12
FINANCING PLAN AND CASH FLOW ANALYSIS
FOR NETWORK

12.1 FINANCIAL MARKET AND FISCAL SECTOR IN EGYPT

12.1.1 Recent Development of Egyptian Financial Market

Overview on financial market in Egypt - Since the early 90s, the Egyptian financial system with its three main sectors: the banking, equity market, capital market and insurance, has been undergoing ambitious legislative reforms to enhance performance and encourage competition especially from the private sector. For your reference, financial markets can be divided into three principle categories; (1) Credit markets including banking, (2) Equity markets and (3) Capital markets as shown in Figure12.1-1.

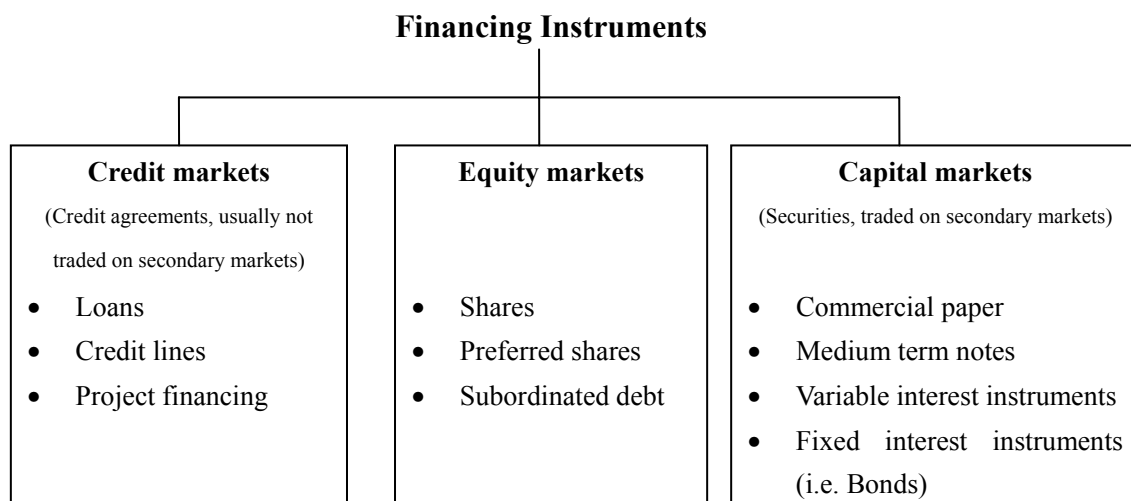


Figure12.1-1 Financing Forms

Since 1993, the government has stopped intervening directly in the financial sector, and instead has been using indirect measures to control monetary aggregates such as bond issues. The government is currently focusing on reactivating the bond market, creating new financial institutions and building strategic links with international financial institutions. Serious efforts are also being done to divest state ownership of joint venture and public banks and insurance companies, and increase private sector involvement in the financial sector.

Full private sector ownership, including foreign ownership, has been allowed in the banking and insurance sectors. Thereby, several financial intermediaries representing large international financial institutions in the areas of commercial and investment

banking, mutual funds, insurance and securities trading are now operating in Egypt. The recent enactment of the mortgage law is also expected to bring liquidity to the market and enhance the retail-banking sector.

In 2004, the Egyptian stock market experienced several booms. CASE (The Cairo & Alexandria Stock Exchanges) 30 Index reached 2,568 points, recording an unprecedented 119-percent increase. Egypt ranked second on the S&P/IFCG indicator, with 100.5 percent annual change, and first on the S&P/IFCI indicator with 118.6 percent annual change. It also ranked second on the Morgan Stanley Capital International (MSCI) index, with 114.6 percent annual change.

Credit Market in Egypt - Credit markets are constituted of credit agreements between lender and borrower. Credit agreements are not normally traded, even on secondary market¹. There are three categories of credit agreement: loans², credit lines³ and project financing⁴.

Credit markets are major financing source in Egypt. As Egypt is also dominated by banks, currently, the state owned banks control over 56% of banking assets⁵ and Egypt has one of the lowest levels of private sector control share. The Banking sector in Egypt is governed by Law No. 163/1957 and its amendments, Law 37/1992, Law 101/1993 and Law 97/1996; regulate the activities of the banking system. The Banking Law requires capital adequacy requirements to be established by the Minister of Foreign Trade in consultation with the CBE (Central Bank of Egypt)⁶. Capital adequacy rules are based on a bank's assets and liabilities in accordance with the Basle rules.

Lending to big corporate companies including planned MEA and project financing such as electricity sector BOT projects are mostly conducted by four state owned banks such as National Bank of Egypt, Bank Misr, the Bank of Alexandria and the Banque du Caire. Although, GOE has plan to cut the number of banks roughly in half and raising the market share of private banks significantly above the present level as shown in Table 12.1-1.

¹ However, in advanced countries such as U.S.A and Japan, there are secondary markets to securitize credit agreements.

² A loan can be made between a lender and borrower. In certain circumstances, the lender may be in the form of syndicate comprising several financial institutions. Loans may be secured or unsecured by some form of assets. Unsecured loans normally incur considerably higher rates of interest, which may be either fixed or variable.

³ Credits lines are established to ensure that there is sufficient working capital at all times. In some organizations, expenditures greatly outweigh revenues at particular points of the business cycle or the calendar year.

⁴ Project financing covers credit extended with little or even no recourse to the assets of the borrower other than the income generated from the project under finance.

⁵ According to IMF, Egypt banking sector as of June 2005 has total assets of about US\$ 100 billions and consists of 54 banks: six state banks (54% of total assets), 35 joint venture banks (38 percent) and 13 foreign banks (6%).

⁶ The CBE retains significant powers to undertake remedial measures when the provisions of the Banking Law are violated. For example, the CBE retains the right to send its own auditors to verify the accuracy of any bank's records and can order the bank to increase its capital reserves if a violation is found.

Table 12.1-1 Number of Banks in Egyptian Banking Sector

	Commercial Banks		Non-Commercial Banks			Total
	Public Sector Banks	Private & Joint Venture Banks **	Business & Investment Banks		Specialized Banks ++	
			Private & Joint Venture Banks	Off-Shore Banks +		
1970	5				20	25
1975	4		1	2	20	27
1980	4	15	7	22	4	52
1985	4	39	11	22	4	80
1986	4	40	11	22	4	81
1987	4	40	11	22	4	81
1988	4	40	11	22	4	81
1989	4	40	11	22	4	81
1990	4	40	11	22	4	81
1991	4	40	11	22	4	81
1992	4	40	11	22	4	81
1993	4	26	11	21	4	66
1994	4	24	11	21	4	64
1995	4	24	11	21	4	64
1996	4	24	11	21	4	64
1997	4	24	11	21	4	64
1998	4	24	11	20	4	63
1999	4	24	11	20	4	63
2000	4	24	11	20	3	62
2001	4	24	11	20	3	62
2002	4	24	11	20	3	62
2003	4	24	11	20	3	62

Source : Central Bank of Egypt

* Egyptian banks abroad are not included , also two banks established under private laws and are not registered with CBE : the Arab International Bank ,and Nasser Social Bank.

** 13 banks of the development banks had been merged into the National bank for Development in Cairo in 1992 and 2 banks in 1994, also bank of Credit and Commerce (Egypt) had been merged into Misr Bank in 1993.

+ One branch of the foreign banks operating in Egypt was crossed out in 1993 and other in 1998.

++ Specialized banks divided into "the Egyptian Industrial Development Bank, "Real Estate Bank" and "Principle Bank for Development & Agriculture Credit (PBDAC)". The Egyptian Real Estate Bank had been merged in the Arab Real Estate Bank in December 1999 according to the CBE decision in 21/6/1999 to be only one real estate bank. 17 PBDACs were marged to one PBDAC in second half of 1970.

Although credit market would be major fund raising channel for the proposed project because banks dominate providing funds for corporations and projects, short term funding such as deposit is the main source for the banks to fund the balance sheet assets, and lack of long term funding makes providing long term loan for project financing difficult. It is emphasized that MEA will face difficulty in a long-term financing at the middle phase of network development and be required to rely on new funding instruments. According to National Bank of Egypt, maturity period of corporate finance is ranged from 5 to 10 years and interest rate is revised every five years in usual.

Equity market in Egypt - Financing via equity markets is a method of long term finance and a form of financial instrument where there is a potential for trading the instrument on the primary or secondary market. There are three categories of equity

markets; shares⁷, preferred shares⁸ and subordinated debt⁹. The Capital Markets Law No. 95/1992 regulates the operations of the equity market in Egypt.

Egyptian equity market¹⁰ is also seen as under developed and shallow market depth compared to peers, with only a minority of liquid companies. In terms of market capitalization, Egypt has been losing ground relative to a number of Arab markets such as Saudi Arabia and Kuwait as shown in Table 12.1-2. In addition, equity financing is generally uncommon in toll road in the world although the shares of road companies are held by governments and are not publicly traded. Therefore, equity market cannot be promising fund raising channel for the proposed project in near future.

Table 12.1-2 Arab Equity Market as of June 2003

	Total market value (US \$ millions)	No. of Listed companies	Vol / day (US \$ millions)
Saudi Arabia	127,249	69	374
Kuwait	37,193	96	135
Egypt	24,808	1,122	13
Abu Dhabi	20,729	29	2
Qatar	11,694	25	6
Morocco	11,018	53	3
Dubai	9,997	13	2
Jordan	8,306	159	6
Bahrain	8,057	42	1
Oman	4,936	96	4
Tunisia	2,213	46	1
Lebanon	1,528	13	1
New York	17,300,000	2,750	-
Tokyo(end of 2003) ¹¹	2,958,624	-	9,208

Source: The reform of the Egyptian financial sector (BSAC of American Chamber of commerce in Egypt), New York stock exchange, London stock exchange and Tokyo stock exchange

⁷ The shareholders receive a portion of profits via dividends or capital appreciation of share value. Losses should occur and the shareholder fully participates in these. It is normal practice that the shareholder, in return for taking a full risk on the profitability of the venture, retains voting rights in the conduct and management of the enterprise at its general meeting by means of an equity share.

⁸ Preferred shares are a limited form of equity holding. The preferred shareholders participate fully in all losses, but if profitability ensures that funds are available, this shareholder receives a guaranteed fixed dividend income prior to the declaration of any dividend to the ordinary shareholder. It is not usual for preferred shares to convey the same voting rights as ordinary shares, and in many ventures, preferred shareholders have no voting right at all.

⁹ Subordinated debt is not usually traded on the markets. However, it is traded as part of the equity market in that lenders accept terms of debt repayment that place liability after ordinate debt but before shareholder interests.

Lenders of subordinated debt require a high rate of interest as recompense for the higher risk involved.

¹⁰ The Egyptian Stock exchange is one of the oldest in the world, and the Cairo & Alexandria Stock Exchange (CASE) was the fifth largest capital market in the world during the 1940s. After that, an era of a government controlled capital market was until 1991 with the onset of Economic reform program.

¹¹ Total market value is 316,484 billions Yen. Trading value per day is 985 billions Yen. Yen per dollar at the end of 2003 is equal to 106.97.

Capital market in Egypt - Capital markets, otherwise known as bonds or securities, come in many forms, which are traded on the secondary markets. Four principal subcategories of securities can be identified: Bond (linked to interest, currency, or equity)¹², Variable – interest instruments¹³, Medium-term notes¹⁴ and Commercial paper¹⁵.

The Egyptian capital market is still predominantly based on stocks trading despite the growth in the trading volume of bonds. Trading volume had grown to LE14.3 billion as of December 2002 versus LE1.1 billion in 1998. The Egyptian bond market lags behind similar bond markets. Bond market suffers from low liquidity, pricing and lack of depth and bond market is immature and dominated by government bond issues. Treasury bills account for almost 95% of total volumes. Apart from the treasury, issues of bonds are mainly banks and large private sector companies. Investors in both primary and secondary markets are mainly financial institutions such as banks, insurance companies and investment funds.

After financial position and credit standing of MEA become viable based on sufficient and stable toll revenue, bond might be an alternative financing instrument. Bond is roughly categorized two types: General obligation bond and Revenue bond. General obligation bond is secured by the full faith and credit of the entity issuing the bond, which is called as MEA bond. The issuing entity pledges that it will pay interest and principal as scheduled over the life of the bond, and the issuer is responsible for to provide this payment from whatever sources of money are available. Revenue bond is secured by a pledge of toll revenue and not by the full faith and credit of the issuer and this bond is called as MEA toll revenue bond. The issuing entity pledges that it will pay interest and principle as scheduled over the life of the bond, to the extent that sufficient toll revenue is available to make such payments.

¹² A bond is a contract between two parties that specifies the manner for the repayment obligation. Typically, the repayment is made through periodic scheduled interest payments (usually semiannual) over the life of the bond, with the principle amount due at maturity.

¹³ Variable interest instruments may be divided into two categories: Floating rate notes and Capped floating rate notes.

¹⁴ Medium term notes market has been developed for investors who are looking for assets with specific medium term maturities and currencies. It may be also useful for borrowers with specific medium term borrowing requirements. These notes may be regarded as an extension of the more usual commercial paper market into the medium term of one to five years.

¹⁵ Commercial paper is a method of providing short term finance to corporations (usually for up to six months) by investors through a dealer system.

12.1.2 Recent Fiscal Development and Road Sector Budget

Government Budget - Table 12.1-3 shows the fiscal operation of the General Government budget during the last six (6) years and Figure 12.1-2 shows the Government revenue and expenditure structure in 2003/04. According to this table, the following observations can be highlighted:

- The revenue is gradually increasing annually with an average growth rate of 6.7 % per year while the expenditure is increasing higher than the revenue with an average growth rate of 10.1% per year.
- As a result, the general budget faces large increase in the amount of deficits from LE 8.9 billion in 1998/99 to LE 28.7 billion in 2003/04. The overall deficits in 2003/04 record about 6% of the total GDP.
- Due to the large amount of financial deficits, the capital expenditure (investment expenditure) in 2003/04 is only shared at 14% of total expenditures.

Table 12.1-3 Fiscal Operation of Government Budget, 98/99 - 03/04
(Actual Basis, LE million)

	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04
Total Revenues and Grants	71,072	75,399	76,139	78,968	86,484	99,665
Total Revenues	69,423	73,626	74,568	75,255	83,530	96,253
Current Revenues	67,207	72,504	72,776	74,060	81,449	93,601
Tax Revenues	46,543	49,621	51,358	51,726	57,486	64,793
Income Tax	16,740	20,104	21,235	21,625	21,189	26,903
Good and Services	18,584	20,085	20,793	20,580	22,782	25,757
International Trade	11,048	9,295	9,184	9,323	11,354	11,970
Other	171	137	146	198	161	163
Non Tax Revenue	20,664	22,883	21,418	22,334	23,963	28,808
Capital Revenue	2,216	1,122	1,792	1,195	2,081	2,652
Grants	1,649	1,773	1,571	3,713	2,954	3,412
Total Expenditure and Net Lending	79,995	88,600	96,121	101,153	111,913	128,324
Total Expenditure	78,724	86,464	95,942	100,739	111,786	127,511
Current Expenditure	61,183	69,758	80,843	85,472	95,226	109,189
Wages and Salaries	19,562	22,180	25,217	28,238	31,549	35,950
Defence	8,107	8,516	9,731	10,218	11,215	12,400
Interest	16,406	18,597	20,907	22,903	26,849	31,706
Domestic	14,081	16,800	19,074	20,570	24,498	28,740
Foreign	2,325	1,797	1,833	2,333	2,351	2,966
Other	17,108	20,465	24,988	24,113	25,613	29,133
Capital Expenditure	17,541	16,706	15,099	15,267	16,560	18,322
Lending minus Repayments	1,271	2,136	179	414	127	813
Overall Deficit / Surplus	-8,923	-13,201	-19,982	-22,185	-25,429	-28,659
GDP	307,600	340,100	358,700	378,500	415,000	474,400
Percentage of GDP						
Overall Deficit / Surplus	-2.9	-3.9	-5.6	-5.9	-6.1	-6.0
Total Revenue and Grant	23.1	22.2	21.2	20.9	20.8	21.0
Total Expenditure and Net Lending	26.0	26.1	26.8	26.7	27.0	27.0

Source: Quarterly Economic Digest, January – March 2005, Ministry of Foreign Trade and industry

Notes: General government budget only, but not including NIB, GASC, and SIF

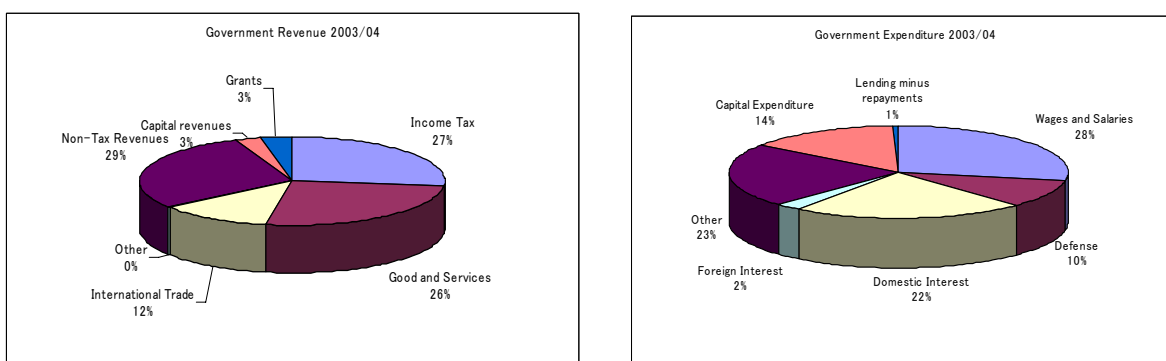


Figure 12.1-2 Government Revenue and Expenditure Structure, 2003/04

Public Investments - The public investment to these executive bodies during fourth five year plan period was LE 141 billion while that during fifth five year plan period was LE 180.3 billion. The growth rate of public investment is about 30% as shown in Table 12.1-4. In Egypt, government bodies are categorized five types¹⁶.

Table 12.1-4 Public Investments for Five-Year Plans (LE Billion)

	Fourth Five-Year Plan (A) '1997/98 – 2001/02	Fifth Five-Year Plan (B) (2002/03 – 2006/07)	Growth Rate (B/A)
1. Administrative Agencies	41.9	57.7	1.4
2. Local Government	7.4	7.5	1.0
3. Public Service Authorities	41.6	55.8	1.3
S-Total	90.9	121.0	1.3
4. Economic Authorities	39.0	43.2	1.1
5. Public Enterprises	11.6	16.1	1.4
Total	141.5	180.3	1.3

Source: The Fifth Five-Year Plan for Socio Economic Development

Notes: 1) Fourth five-year plan: Actual investment
2) Fifth five-year plan: Planned investment, excluding private enterprises

Table 12.1-5 show the investment utilizations of the economic sectors during last (5) five years (1999/00 - 2003/04). Total amount of investments during last five years are about LE 8.8 billion and its growth rate of the investments is about 9% per annum. The share of transportation investment has been slightly decreasing yearly due to the Government investment policy. This may imply that the Government investment policy to the transport sector, such as construction, rehabilitation and maintenance projects, has been moving to BOT.

¹⁶ A. Administration agencies: are defined as Government administration bodies. All ministries belong under this category.
B. Local administrations: are defined as local governorates. At present, there are 27 local governorates.
C. Servicing authorities: are defined as non-profit government authorities and/or organizations and services to the public. This category includes GARBLT of MOT.
D. Economic authorities: are defined as operation of business in commercial basis. There are 48 economic authorities.
E. Public sector enterprises: are defined as companies subject to the Law No. 97.

Table 12.1-5 Public Investment Utilizations (Budget Basis)

(LE Million)

	1999/00	2000/01	2001/02	2002/03	2003/04	AAGR (1999/00-2003/04)
Agriculture	2,834.6	3,241.9	3,320.1	4,218.3	4,026.3	9.2
Industry	272.7	519.9	1,196.2	417.3	512.3	17.1
Oil	0.0	0.0	0.0	0.0	0.0	0.0
Electricity	229.5	236.4	206.1	339.4	420.3	16.3
Contractings	64.3	70.3	70.0	114.0	109.6	14.3
Commodities Sectors	3,401.1	4,068.5	4,792.4	5,089.0	5,068.5	10.5
Transportation, communications and warehousing	1,407.2	1,814.8	1,385.4	2,215.8	1,983.1	9.0
The Suez Canal	0.0	0.0	0.0	0.0	0.0	0.0
Trade	10.3	10.5	4.5	0.5	0.2	-62.7
Money & Insurance	0.7	1.5	2.3	1.5	3.5	49.5
Tourism	46.7	98.4	96.7	207.0	367.5	67.5
Productive Service Sectors	1,464.9	1,925.2	1,488.9	2,424.8	2,354.3	12.6
Housing	76.0	96.9	98.8	23.5	48.0	-10.9
Utilities	2,830.8	3,300.5	3,525.4	5,019.6	4,643.3	13.2
Education	1,983.1	2,171.5	2,312.3	3,589.2	2,852.5	9.5
Health	977.5	1,051.3	1,133.5	1,861.5	1,551.4	12.2
Other services	1,559.6	1,834.6	1,915.8	2,417.1	2,596.4	13.6
Social Services Sectors	7,427.0	8,454.8	8,985.8	12,910.9	11,691.6	12.0
Total	12,293.0	14,448.5	15,267.1	20,424.7	19,114.4	11.7
Special Budgets & Others	0.0	0.0	0.0	0.0	1,288.0	-
Total	12,293.0	14,448.5	15,267.1	20,424.7	20,402.4	13.5

	1999/00	2000/01	2001/02	2002/03	2003/04
Transportation, communications and warehousing / Total public investment (%)	11.4%	12.6%	9.1%	10.8%	9.7%

Source: The State's General Budget

Note: Government institutions only

12.2 OPTIONS FOR FINANCING URBAN EXPRESSWAY NETWORK

12.2.1 Basic Structure of Cairo Urban Expressway Network Development

MEA supervised by Ministry of Transport is a main vehicle for implementing the network development and operation of urban expressways in Cairo including executing contracts with private entities such as BOT (Build Operate Transfer), DBFO (Design Build Finance Operate) and DBO (Design Build Operate) as shown in Figure 12.2-1.

Basically, main source of funds for development of the expressways are toll business surplus retained earnings generated in prior periods and government subsidy for equity injection. Nevertheless, when MEA doesn't have enough cash flow to cover investment, MEA would mobilize funds from financial market based on future toll revenue if MEA is bankable. In turn, PPP project companies would contract with MEA and sometimes finance implementing routes by themselves based on revenue stated in a contract with MEA¹⁷.

¹⁷ Flow of funds from toll revenue and payment mechanism between MEA and PPP project companies should be discussed and defined in future.

The proposed structure of Cairo PPP expressway network

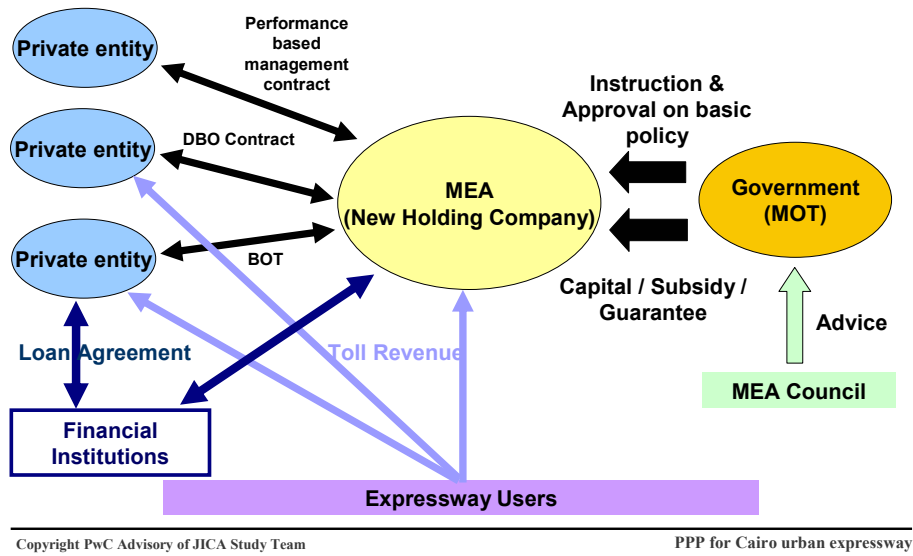


Figure 12.2-1 Basic Structure

Even if cross subsidy system would be utilized, not only socially accepted tariff but also revenue maximizing tariff¹⁸ would not reach full cost recovery level, and gap in affordability must be covered by other sources as shown in Figure 12.2-2. Cross subsidy and subsidy from the budget are the most probable and necessary financing source. Other business revenue, tax allowance and guarantee for MEA borrowing would also contribute to fill in financing gap partially.

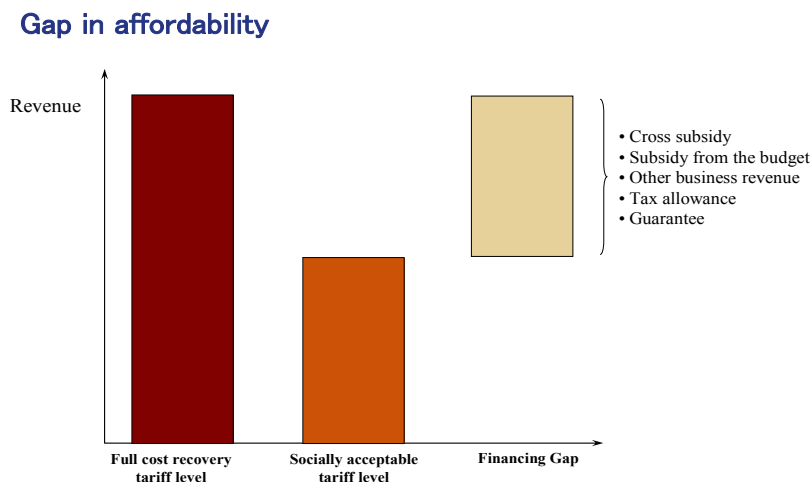


Figure 12.2-2 Financing Gap

¹⁸ Revenue maximizing tariff is to the tariff level to maximize toll revenue which is multiplied by tariff for one trip and number of expressway users.

12.2.2 MEA as a Financial Vehicle for the Network Development

Cross subsidy - Under cross subsidy system, MEA might finance construction cost of expressways mainly through bank loan, whose repayment are basically dependent on future toll revenue. Cross subsidy system gives more flexible financing to MEA other than government budget which needs parliament approval every year, following single year budgeting principle. The basic concept of cross subsidy for the network development is as shown in Figure 12.2-3.

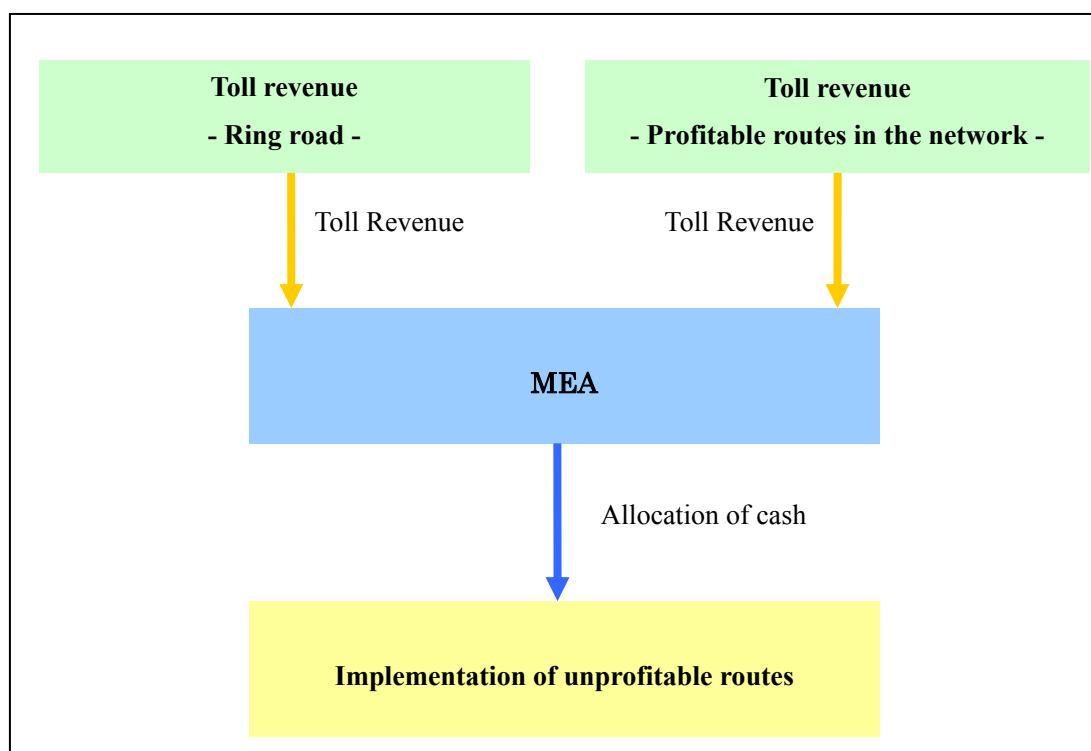


Figure12.2-3 Concept of Cross Subsidy

Budgetary subsidy - In addition to cross subsidy, it is believed that subsidy from the government could be important source. However, from macroeconomic point of view, capital expenditure might suddenly not increase to enable more fund allocation to infrastructure development according to World Bank¹⁹. However, the financial projection (referred to Section 12.3), indicates necessity of some extent of budgetary support in terms of capital contribution to MEA and additional capital injection for construction.

¹⁹ COUNTRY ASSISTANCE STRATEGY FOR THE ARAB REPUBLIC OF EGYPT FOR THE PERIOD FY06-FY09.

Effective government support must be designed and specified at the time when the project is being prepared by relevant agency for execution, which might be a predecessor of MEA, with cooperation from MOI and MOF. Specification and design of budget support package is an integral part of achieving the financial viability of MEA.

It is thought that ODA borrowing from multilateral/ bilateral agency such as JBIC is one of the best alternatives to address government budget constraint especially because of (a) expressway, which needs huge up-front initial cost with late revenue inflow, favors long grace period and (b) low interest rate improves financial viability. Table 12.2-1 indicates significant advantage to utilize Japanese ODA Yen loan, as compared with commercial borrowing from the domestic financial market.

Table 12.2-1 Terms and Conditions Comparison

	Interest rate	Maturity period	Grace period
Japanese ODA Yen loan (Yen)	1.3%	25 years	7 years
GOE treasury bill ²⁰ (LE)	10.0%	1 year	0 years
Commercial borrowing (LE) ²¹	13.4%	1 year	0 years

Notably, ODA borrowing is better to used only for the first new routes construction, which might be E1-2, E2-2 & E3-1, after the establishment of MEA, in order to strengthen business competence and revenue source, paving the way for an autonomous and financial sound entity. Terms of conditions of ODA borrowing is concessional, a grant element (G.E.)²² of at least 25%, to avoid severe burdens on developing countries.

As ODA borrowing gives exposure to exchange rate risk to the government or MEA, the government, which can manage exchange rate risk better than MEA, should take the exchange rate risk. MEA revenue base is in Egyptian Pound and MEA will not have enough capacity to bear exchange rate risk, on the other hand, GOE has a portfolio in foreign currencies and has better knowledge and capacity to deal with foreign exchange market.

GOE would provide funds in local currencies with same grace period, same maturity

²⁰ Data source is Central Bank of Egypt. The figure is 2004/05 Q4 number.

²¹ Data source is Central Bank of Egypt. Average interest rate 2003 July to 2004 June.

²² Grant element is an indicator of the "softness" of lending conditions. The lower the interest rate and the longer the repayment period, the greater the "grant element," and the more advantageous the loan is for the recipient country (developing countries). In the case of grant aid, the grant element is equal to 100%. Loans must exhibit a grant element of at least 25% to be counted as ODA.

period and original lending rate plus reasonable exchange rate premium (roughly speaking 1.0-3.0%) to MEA. Those terms and conditions should be stipulated in a subsidiary loan agreement between MOF and MEA.

Loans from public and private banks – Availability and terms and condition of bank loan depend on toll revenue stream, MEA’s corporate credit standing, and, susceptible to political interference in not only route selection but also in the toll increase mechanism. Although expressways require usually long term debt – 15 year or more – maturity period of corporate finance is usually fewer five years in Egypt. Generally speaking, there is simply no deposit structure to permit long term funding on a matched basis²³.

Limit of domestic bank borrowing might be one of the serious obstacles for MEA. Under the current banking regulation, a bank has a lending limit to a single client or a project²⁴. Approximately, maximum amount of MEA borrowing from the domestic banking sector might be about LE 7.0 billions at most²⁵ while preliminary project cost is estimated at LE 18 billions²⁶. In addition, road asset is public domain and is not suitable for collateral.

High and volatile inflation rates also shorten the investment horizon and distort banking activities. Under current high inflation environment, loans might be provided at a high nominal interest, inflation –adjusted interest rates are not a viable solution. High inflation creates problematic cash flows, not solve by compressing loan repayment schedule.

Placemen of revenue bond²⁷ – There is an option that MEA would issue revenue bond to mobilize fund in the domestic market. Repayment of revenue bond is basically dependent on toll revenue. Fixed income investors prefer low risk or strong guarantee to secure their investment. It is decisive factor in developing long term fixed income securities that are so necessary in financing major infrastructure projects. If inflation is

²³ There is possibility that public banks provide with policy lending with longer maturity than commercial basis. For example, National Bank of Egypt and Bank Misr co-financed Cairo metro line III project at special terms and conditions (Total cost: 6 billions LE, Government equity: 3.6 billions LE, Debt amount: 2.6 billion LE, Maturity period: 20 years, Grace period: 4 years, Interest rate: 11%, Number of trenches: 4, Borrower: National Authority for Tunnels) because of government guarantee, which is regarded as public debt and listed on every year budget.

²⁴ According to interview with National Bank of Egypt (NBE), NBE has the lending limit at LE 2.7 billion (equivalent to 470 million USD) to a single client/project. NBE is the biggest bank with over 40 % of total banking sector asset.

²⁵ $7.0 = 2.8$ (NBE lending limit) / 40 % (NBE share of total banking sector asset).

²⁶ This number includes 5% price escalation year on year.

²⁷ Bond issuance needs further survey and interviews with MOF and investors in Egypt.

likely to change rapidly, investors will seek shorter terms and floating rates instruments to protect against swings in real interest.

As expressway project has more risk in early stage than later stage, placement of revenue bond might become more practical after passing several years after introduction of tariff because good track record only can satisfy fixed income investors. Even if toll system works well, the first and the second placement might require for government guarantee.

Foreign commercial borrowing – If the government budget support and/or domestic borrowing are not available, then an element of foreign funding is necessary. However, foreign currency risk for the portion of the funded borrowed in foreign currency and repayable in foreign currency must be covered by either the government taking the risk or in the toll. Therefore, foreign currency commercial borrowing should be minimized as much as possible.

Implication on optimal financing – Combinations of cross subsidy, budgetary subsidy and bank loan would be major financing sources for the network development for the time being as shown in Table12.2-2. More cross subsidy and budgetary subsidy could clearly contribute to speed up the implementation.

Table12.2-2 Expected Mixture of Financing Sources

Financing options	Used or not	Remarks
Cross subsidy	Yes	This can be main sources for financing the projects
Budgetary subsidy	Yes	In order to speed up the implementation, GOE is required to provide budgetary support. Without budgetary source,
Bank loan	Yes	Bank loan is expected to be major financing source. Availability of bank loan depends on bankability of the project.
Revenue bond	Potentially Yes	Revenue bond might be available and effective toll subject to that the private sector believes in the project in the medium term.
Foreign commercial borrowing	No	In order to alleviate exchange rate risk, local commercial borrowing is preferable rather than foreign commercial borrowing.

12.2.3 Financing of PPP Project Companies

Typical financing structure for PPP Project Company – The funding structure for expressway project financing typically comprises (a) Bank senior debt, (b) subordinated debt- capital and (c) equity. Bank senior debt has first call on the available cash flows and subordinated debt – capital has second call. Lastly, equity is fully at risk.

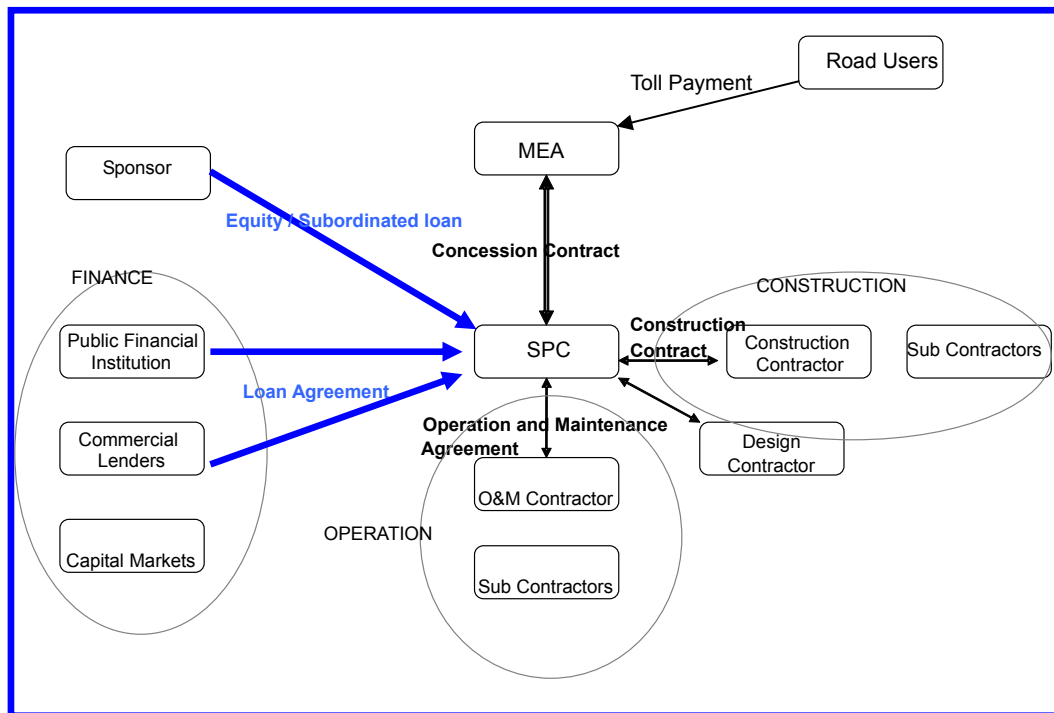


Figure 12.2-4 Financial Structure for PPP Project Company (SPC Type)

Expectation of fund provider – Table 12.2-3 summarizes fund providers' expectation. Sponsors or promoters of expressway project financing are frequently principle equity providers. Expressways are relatively low-tech infrastructure rather than power stations, telecommunication, railways or airports. Their ambition is often to make a sufficient profit in construction, then to exit once the project is open. The returns from operating expressways over 20 year are less important to them. Institutional investor requires a risk –adjusted return on their investment (usually expressed in US\$ or some hard currency) of at least 20 percent before tax. 30 – 40% of the project cost is often covered by equity and subordinated capital - debt.

Discerning banks will expect a soundly based project where the risks have been realistically identified and allocated to establish general creditworthiness. The bank will consider security package offered in support of the transaction in the event that the project cash flows don't materialize as planned. The amount and term of senior debt is

usually determined by the ratio of the project cash flow to the debt service requirements. Bank senior debt typically covers 60 - 70 %²⁸ of the total project costs, including interest during construction and inflation. Banks requires that all equity be paid into the project company in advance of withdrawing senior loan. In Egypt, maturity period of project financing is 8 to 12 year in general and Spread on senior debt, which depends on financing structure, ranges from 200 bps and 300 bps plus benchmark rate (currently around 10%).

Table 12.2-3 Objective and Principle of Fund Providers

Type	Source	Objectives/Principle
Equity	Sponsor	* Minimizing injected capital * Expand profitability * Prefer possibility of exit (selling stock, etc.)
Subordinated Equity	Third Party	* Maximize dividend profit * Require exit right (selling stock, etc.)
Debt	Foreign banks	* Expand asset portfolio * Prefers hard currency based payment
Debt	Public/private banks	* Expand asset portfolio * To finance bankable project
Debt	Placement of bond	* Prefer low risk project or government guarantee

²⁸ In the case of Sidi Kreir Power Plant (No3&No4), which is the first BOT project in Egypt, the debt equity ratio is 70 / 30.

12.3 WHOLE NETWORK IMPLEMENTATION - SCENARIO SETTING AND ASSUMPTION FOR CASH FLOW ANALYSIS

12.3.1 Introduction

Common framework - This study assumes that Metropolitan Expressway Agency called as MEA, established in 2008, would be responsible for finance the integrated network of expressways in Cairo and tariff system would be introduced in 2009 for existing ring road and toll collection in the internal network would be started in 2011 just before completion of existing routes extension E1-2 and E2-2. According to CREATS study, 2022 is set at the targeted year to complete the maximum network, which consists of planned urban expressways as shown in Figure 6.2-1.

We assume that MEA uses cross subsidy including some extent of revenue from the ring road. In order to alleviate debt repayment profile and improve feasibility of 2022 completion, concessional borrowing such as Japanese ODA Yen loan is recommended to construct first prioritized route, probably route E1-2, E2-2 & E3-1. For the financial projection, the JICA study team simplifies implementation schedule and the structure as shown in Figure 12.3-1 and Figure 12.3-2.

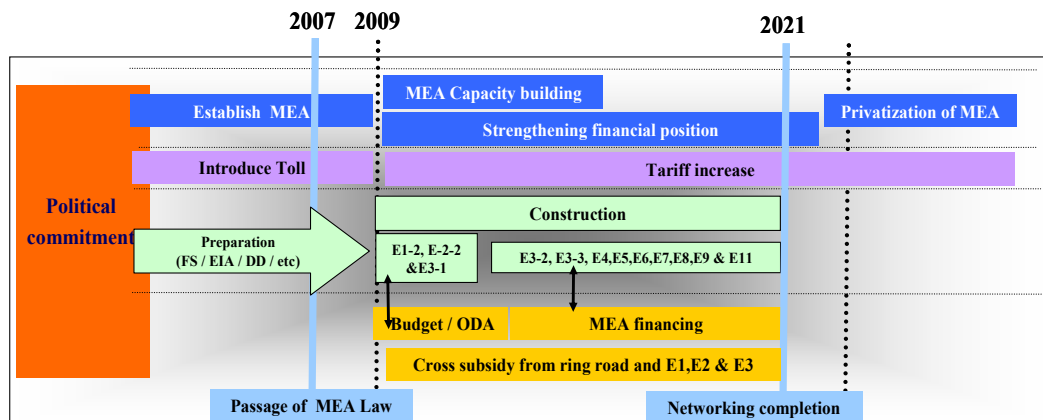


Figure 12.3-1 Simplified Implementation Schedule for Cash Flow Analysis

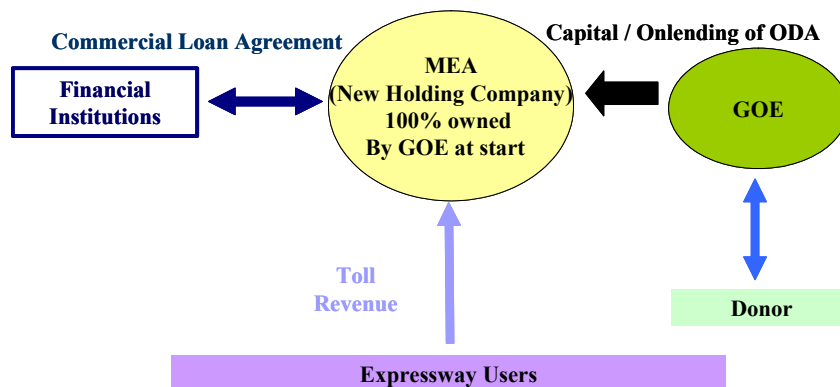


Figure 12.3-2 Simplified Structure for Cash Flow Analysis

Objectives of the projection - For the financial study, we presume that GOE tentatively has two scenarios in respect of the network development as shown in Figure 12.3-1. This financial projection in this study focus on (a) assessing optimal burden sharing between expressway users and tax payers, and, (b) assessing financial sustainability of the whole network development only by MEA.

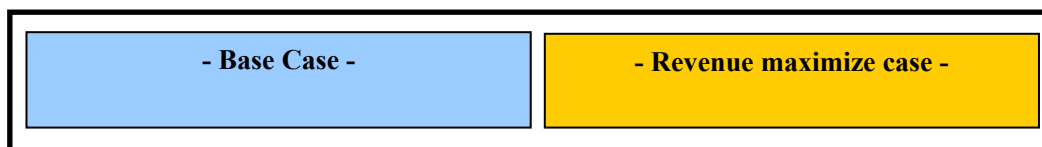


Figure12.3-3 Two Scenarios

12.3.2 Key Assumption for Both Cases

Traffic demand – Base case traffic demand including the ring road would grow at 11.6 % per annum from 2011 to 2021, or 103 millions per year in 2011 to 309 millions per year in 2021. In the developed stage from 2021 to 2031, growth rate is assumed at 5.7%, or vehicles per year would reach 537 millions per year in 2031 as shown in Table 12.3-1.

In revenue max case, higher toll revenue discourages traffic demand and total traffic demand is lower than base case. The demand would grow from 64 millions in 2011 to 266 millions in 2031.

Table12.3-1 Traffic Demand

Base Case			
Number of daily vehicles (millions)	2011	2021	2031
Total traffic demand	103	309	537
Internal networks	55	235	402
Ring road	48	74	136
Growth rate (period average)	2011-2021 Networking stage	2021-2031 Developed stage	2031-2041 Advanced stage
Total traffic demand	11.6%	5.7%	2.9%
Internal networks	15.6%	5.5%	2.7%
Ring road	4.3%	6.3%	3.2%
Revenue max Case			
Number of daily vehicles	2011	2021	2031
Total traffic demand	64	178	266
Internal networks	16	104	130
Ring road	48	74	136
Period average rate	2011-2021 Networking stage	2021-2031 Developed stage	2031-2041 Advanced stage
Total traffic demand	10.8%	4.1%	3.0%
Internal networks	21.0%	2.2%	2.9%
Ring road	4.3%	6.3%	3.2%

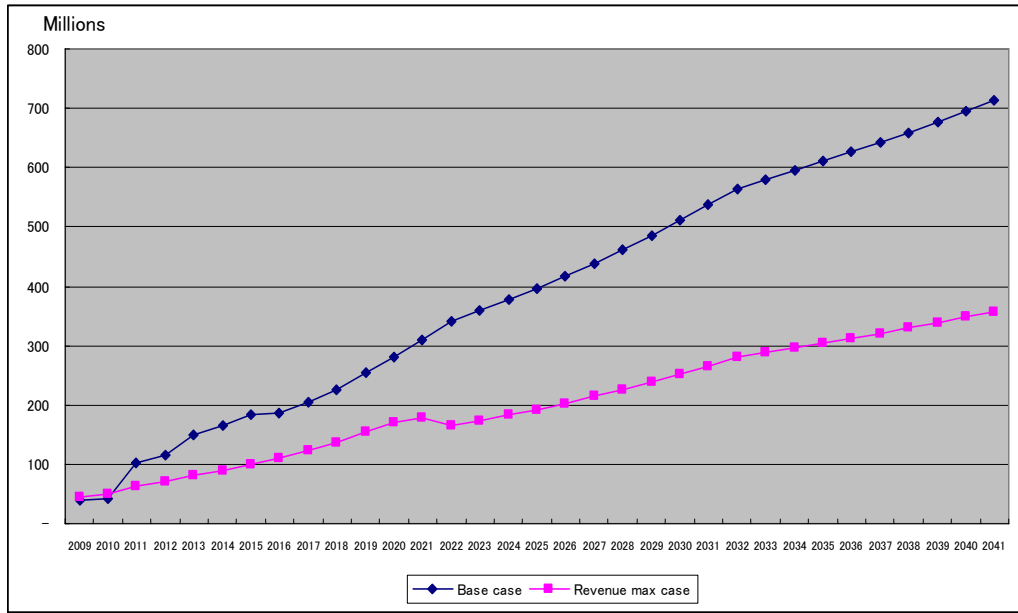


Figure 12.3-4 Traffic Demand (Annual number of vehicles)

Tariff structure – This project assumes that MEA would apply uniform tariff system in the network with just two tariff layers (light vehicle and heavy vehicle). In case of base case, tariff would start toll collection in 2009 at LE 2 per trip. After that, tariff would be increased to LE 3 in 2016 and LE 5 in 2019 after the new routes would be connected to the network, seeing Figure 12.3-5. From 2022 just after the completion of networking year, the tariff would be annually and automatically adjusted to inflation index (this financial study assumes 5% annual inflation increase) and to productivity gain (assuming 2.0% annual productivity gain).

In revenue max case, toll level for light vehicle would start at LE 5 and increase up to LE 6 in 2013. Not only toll level is higher but also pace of increase is more frequent than base case.

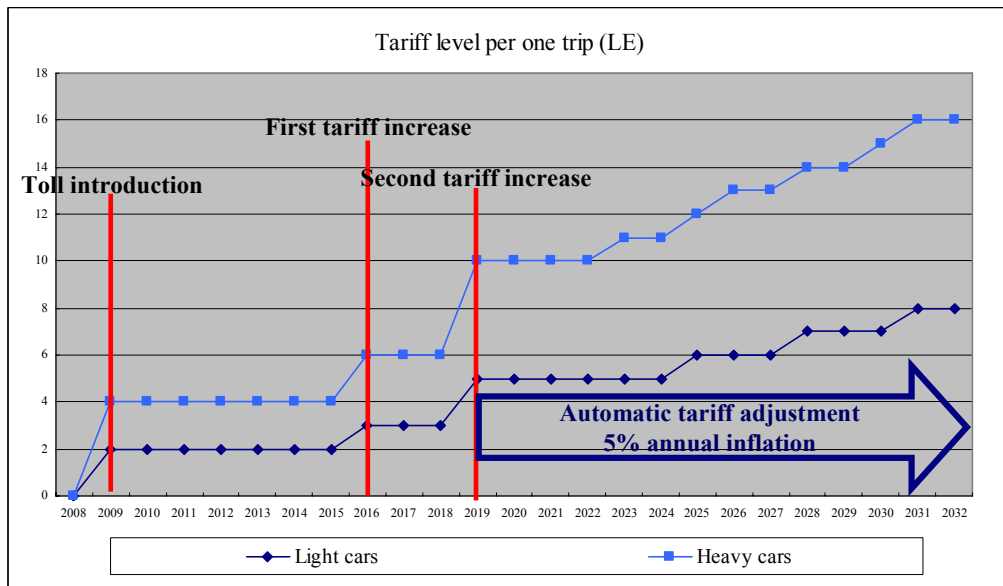


Figure 12.3-5 Toll Level (LE per one trip) Base Case

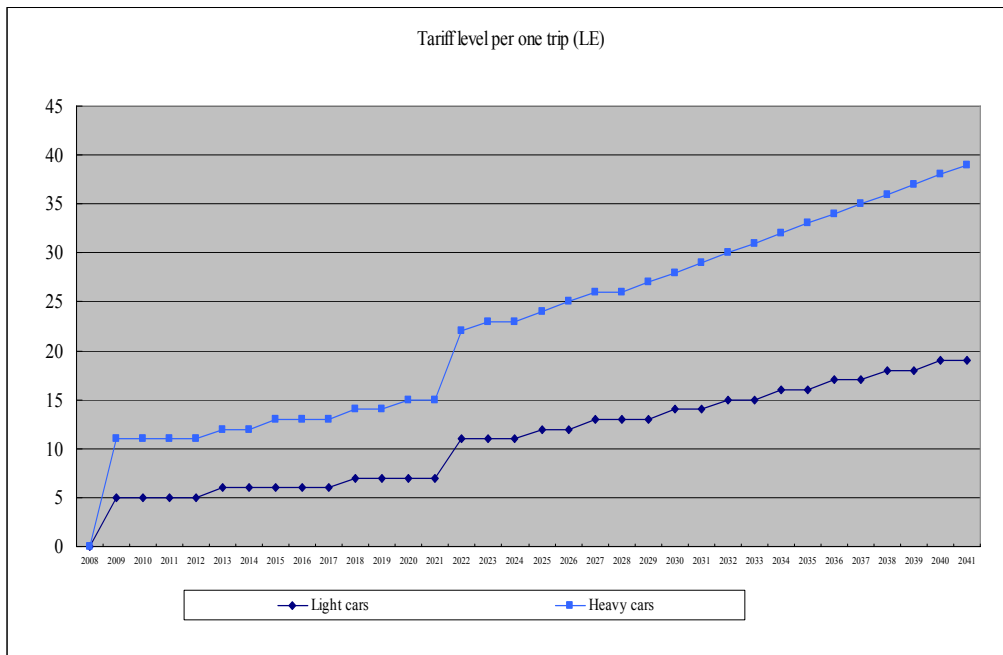


Figure 12.3-6 Toll Level (LE per one trip) Revenue Maximize Case

In case of Tokyo Metropolitan expressway, price charge had increased 4.13 times for 42 years from 1963 to 2004 while consumer price index in the 23 ward in Tokyo had 100% to 441%. In our study, toll tariff starts at LE 2 in 2009 and increase to LE 19 in 2051 or 9.5 times as the level in 2009.

Investment cost - Investment cost is estimated at 17,081 millions of LE (approximately 2,945\$US), taking 5% annual inflation and 2% annual land price increase into account. Mainline construction is the major portion, estimated at 13,944 millions of LE, the second is interchange construction, estimated at 2,916 millions of LE. The composition is summarized in Table 12.3-2 and Figure 12.3-7.

Table 12.3-2 Construction Cost

	Total	Mainline	Interchange	Land acquisition	Traffic information system
Millions of LE	17,081	13,944	2,916	22	199

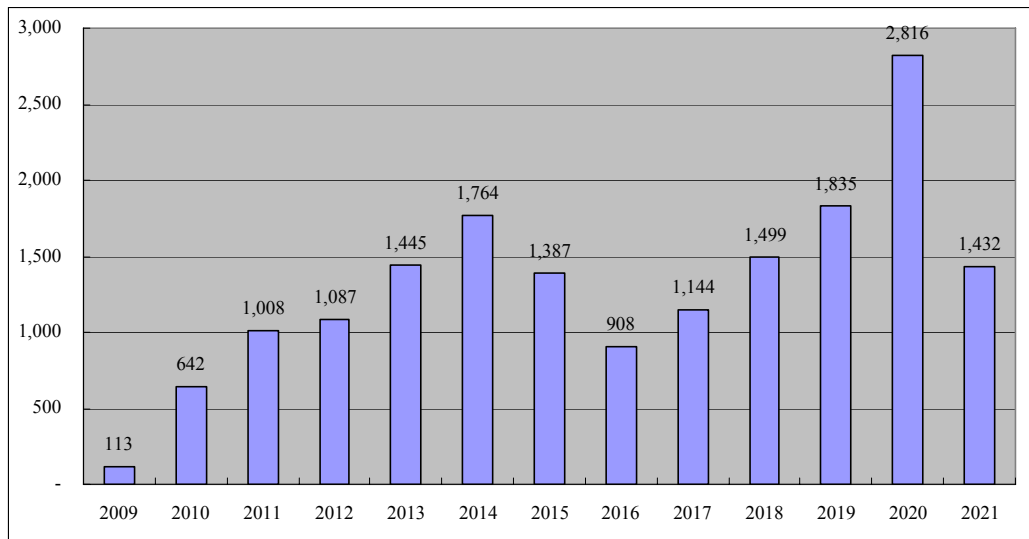


Figure 12.3-7 Construction Cost Schedule (millions of LE)

Financing – MEA would basically finance construction works by commercial borrowing and concessional borrowing, besides capital injection into MEA. Financing policy and conditions in detailed is as shown in Figure 12.3-8. GOE inject capital not only at the establishment of MEA but also implement a new route. However, additional capital injection for base case is 12% of construction cost and the rate for revenue max case is 2%.

Terms of conditions of the senior loan are presumed to set 7 years maturity period and 13% interest rate. If current DSCR (Debt Service Coverage Ratio) is below 100%, MEA can't withdraw commercial loan and financing gap should be financed by GOE funds such as GOE sub loan.

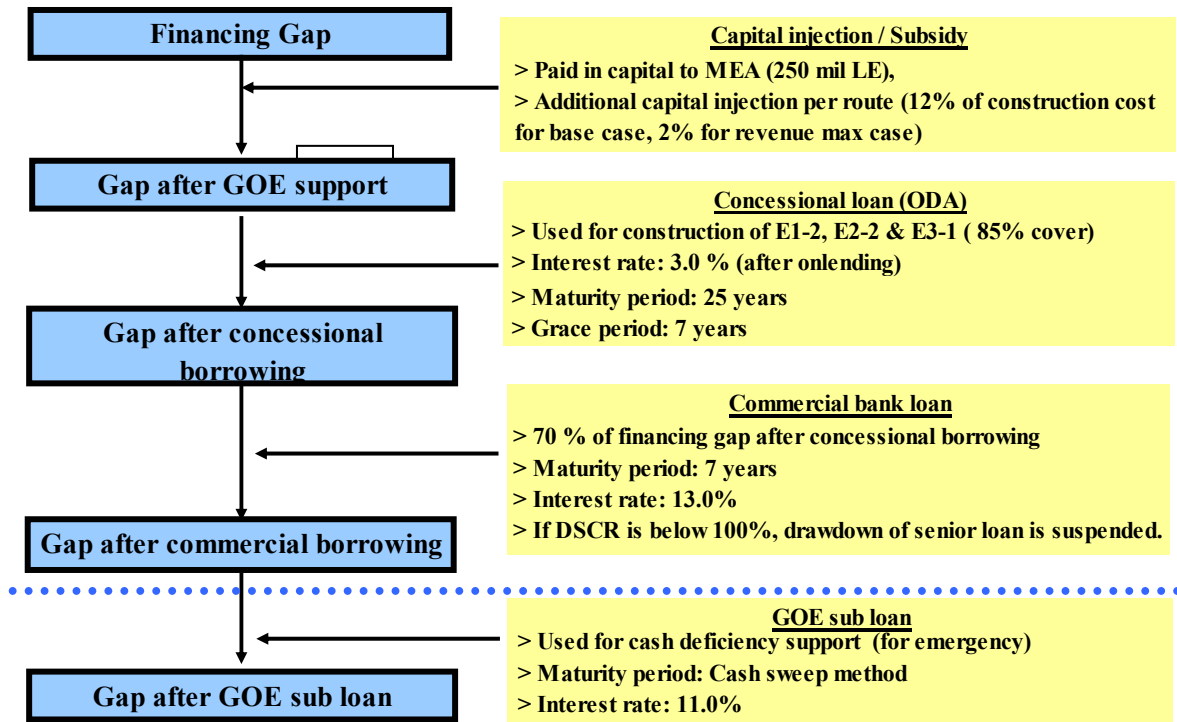


Figure 12.3-8 Assumption on Financing Policy and Conditions

Depreciation - This financial study presumes that both expressway and interchange would be depreciated over 30 years²⁹ and traffic information system would be depreciated over 7 years. Other asset such as vehicles owned by MEA is not considered in depreciation calculation because those are small number.

Operating expense - Operation & maintenance cost and general administration cost would increase in relation to inflation at five percent per annum, extending number of toll gates and length of the network.

Other revenue - Typically 95 percent of the project revenue is from levied toll with remaining five percent from other revenue such as advertising and small concession.

²⁹ Egypt established uniform accounting system in 1962 which defines depreciation rate on public sector assets, indicating that road asset depreciation rate is ranged from 2.5% to 3.0% year on year.

12.4 WHOLE NETWORK IMPLEMENTATION - RESULTS OF CASH FLOW PROJECTION

Base case – The financial projection shows operating cash flow will pick up gradually while investment will be concentrated between 2011 until 2021. Although lack of funds will be financed by senior loans in the early implementation stage (i.e. 2009 – 2013), it will be difficult for MEA to mobilize commercial borrowing during 2014 and 2019 because MEA debt sustainability will be uncertain at that moment. Summary of base case is as shown in Table12.4-1 and the detailed is referred to Appendix 1.

Table12.4-1 Summary of Financial Projection for Base Case (2008- 2031)

Year	2008	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Income statement																									
Revenue	0	98	109	252	279	366	405	447	674	745	824	1,527	1,684	1,858	2,050	2,157	2,327	2,448	2,576	3,171	3,336	3,585	3,771	3,968	
Operating expense	0	50	55	65	91	100	127	133	143	152	161	173	182	196	207	218	229	241	253	266	280	295	310	326	
Depreciation	0	0	3	23	53	85	129	182	223	250	285	329	384	469	512	512	512	512	512	512	512	512	512	512	
Income from continuing operations	0	47	51	164	135	180	149	133	308	343	378	1,025	1,119	1,193	1,331	1,427	1,587	1,696	1,811	2,392	2,544	2,778	2,949	3,130	
Other revenue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Interest payment	0	0	1	25	61	154	305	473	619	710	827	984	1,118	1,376	1,485	1,449	1,398	1,328	1,242	1,140	981	802	588	342	
Net income	0	36	37	104	55	20	-156	-340	-311	-367	-449	31	0	-183	-154	-22	141	276	427	939	1,172	1,482	1,771	2,091	
Cash flow statement																									
Revenue	0	98	109	252	279	366	405	447	674	745	824	1,527	1,684	1,858	2,050	2,157	2,327	2,448	2,576	3,171	3,336	3,585	3,771	3,968	
- Operating expenses	0	41	46	56	82	90	116	122	131	139	148	159	167	181	191	200	210	221	232	243	255	268	282	296	
- General administration expens	0	9	9	9	10	10	11	11	12	12	13	14	15	16	17	18	19	20	22	23	25	27	29	31	
Operating cash flow	0	47	54	187	187	266	278	315	532	593	663	1,354	1,503	1,661	1,843	1,939	2,098	2,208	2,323	2,904	3,055	3,290	3,461	3,641	
- Investment in construction	0	113	642	1,008	1,087	1,445	1,764	1,387	908	1,144	1,499	1,835	2,816	1,432	0	0	0	0	0	0	0	0	0	0	
- Investment in rehabilitation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Project cash flow	0	-78	-600	-856	-918	-1,186	-1,485	-1,072	-376	-551	-836	-490	-1,314	229	1,843	1,939	2,051	2,116	2,180	2,591	2,665	2,796	2,871	2,944	
+ Common stock	250	14	80	126	135	180	220	173	113	143	187	229	351	178	0	0	0	0	0	0	0	0	0	0	
+ Concessional loan	0	58	432	624	165	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+ Senior loan	0	6	90	140	703	1,255	0	0	0	0	0	0	1,350	0	0	0	0	0	0	0	0	0	0	0	
+ Construction Subsidy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total funding	250	78	602	890	1,003	1,435	220	173	113	143	187	229	1,701	179	0	0	0	0	0	0	0	0	0	0	
Cash flow for debt service	250	0	2	34	85	249	-1,266	-900	-263	-408	-650	-262	387	408	1,843	1,939	2,051	2,116	2,180	2,591	2,665	2,796	2,871	2,944	
Cash flow after senior debt service	250	0	1	13	32	37	-1,761	-1,395	-759	-902	-1,124	-704	104	103	1,538	1,634	1,746	1,811	1,875	2,286	2,665	2,796	2,871	2,944	
- Concessional loan interest	0	0	1	13	32	37	37	37	37	37	37	36	33	32	30	28	26	24	21	19	17	15	13	10	
- Principle payment	0	0	0	0	0	0	0	0	0	0	3	27	62	71	71	71	71	71	71	71	71	71	71	71	
Cash flow after ODA debt service	250	0	-0	0	0	0	-1,798	-1,432	-796	-942	-1,188	-802	0	0	1,437	1,535	1,649	1,716	1,783	2,196	2,577	2,710	2,787	2,863	
+ GOE sub loan drawdown	0	0	0	0	0	0	1,798	1,432	796	942	1,188	802	0	0	0	0	0	0	0	0	0	0	0	0	
- Interest payment	0	0	0	0	0	0	0	-198	-377	-506	-665	-869	-1,053	-1,169	-1,297	-1,282	-1,254	-1,211	-1,155	-1,086	-964	-787	-575	-332	
+ increase in principle	0	0	0	0	0	0	0	198	377	506	665	869	1,053	1,169	0	0	0	0	0	0	0	0	0	0	
- accumulated principle amortization	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-140	-253	-395	-505	-628	-1,110	-1,613	-194	0	
- original principle amortization	0	0	0	-0	0	0	0	-0	0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-1,729	-2,212	-2,532	
Cash flow for shareholders	250	0	0	0	0	0	0	0	-0	0	0	0	-0	0	0	0	0	0	0	0	0	0	0	0	
Opening cash balance	0	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	
Total available cash for shareholders	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	
- dividend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Closing cash balance	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	
Memorandum indicators																									
Number of cars	millions	0	39	43	103	114	151	167	184	185	205	226	254	280	309	341	358	377	396	417	439	461	485	511	537
Light cars	millions	0	31	35	86	96	127	140	155	156	173	191	217	239	263	291	306	321	338	356	374	393	414	435	458
Heavy cars	millions	0	8	9	17	19	24	26	29	29	32	35	37	41	45	50	53	55	58	61	65	68	72	75	79
Toll revenue	0	93	104	240	266	349	385	426	642	710	784	1,454	1,604	1,769	1,953	2,054	2,216	2,332	2,453	3,020	3,177	3,414	3,592	3,779	
Internal expressways	0	0	0	124	137	209	229	252	396	435	478	1,099	1,208	1,328	1,462	1,535	1,649	1,732	1,818	2,240	2,352	2,517	2,642	2,774	
Ring road	0	93	104	116	129	140	156	174	246	275	306	355	396	441	490	519	567	600	635	780	825	897	949	1,004	
Toll level																									
Light cars		0	2	2	2	2	2	2	3	3	3	5	5	5	5	5	5	5	5	6	6	6	6	6	
Heavy cars		0	4	4	4	4	4	4	6	6	6	10	10	10	10	10	10	10	11	11	11	12	12	13	13
Government burden																									
Budgetary expense	2,128	250	14	80	126	135	180	220	173	113	143	187	229	351	178	0	0	0	0	0	0	0	0	0	0
Construction cost	17,081	0	113	642	1,008	1,087	1,445	1,764	1,387	908	1,144	1,499	1,835	2,816	1,432	0	0	0	0	0	0	0	0	0	0
in millions of \$US	2,945																								

Under this circumstance, in order to accomplish network completion by 2021, GOE must provide funds, either equity or sub loan, to MEA, without toll revenue would be shifted to upside. This toll revenue seems relatively reasonable and it is estimated that

there is little room to shift toll revenue stream upside. If GOE is unable to provide those funds as shown in Figure12.4-1, network completion must be behind the expected schedule.

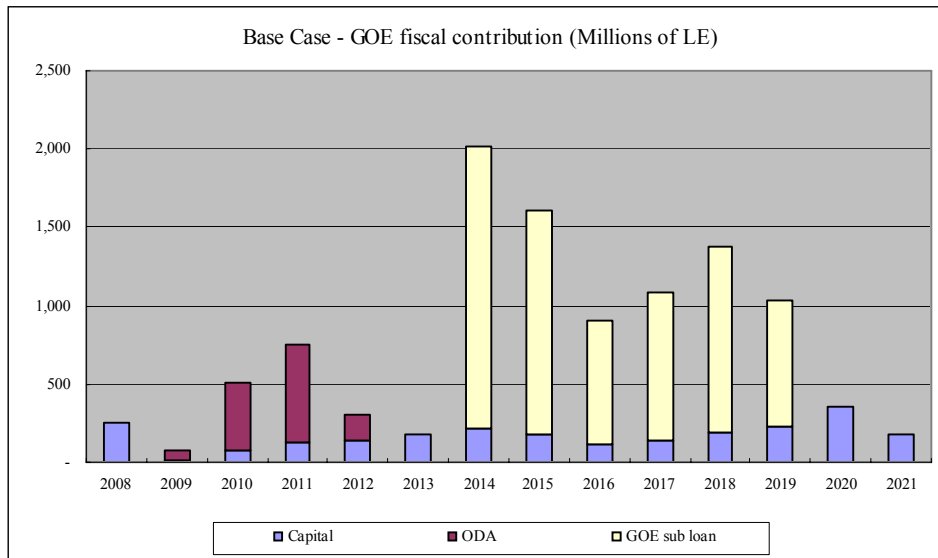


Figure12.4-1 GOE Fiscal Contribution – Base Case

Revenue max case – Toll revenue picking up at faster case would reduce commercial borrowing and GOE burden (equity and GOE sub loan) as shown in Figure12.4-2 and Table12.4-2 (the detailed is referred to Appendix 2). However, we think this toll level assumption is not realistic and socially unaccepted, and network would not be completed by 2021.

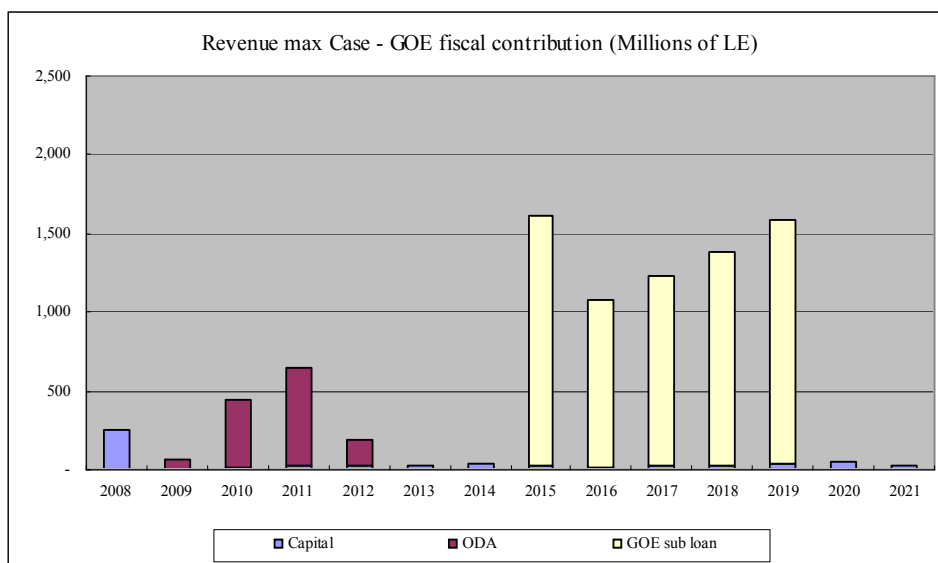


Figure12.4-2 GOE Fiscal Contribution – Revenue Maximize Case

Table12.4-2 Summary of Financial Projection for Revenue Max Case (2008- 2031)

Year	2008	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Income statement																								
Revenue	0	288	321	408	454	603	671	766	836	929	1,176	1,318	1,488	1,546	2,208	2,359	2,489	2,828	3,019	3,411	3,599	3,839	4,315	4,599
Operating expense	0	50	55	66	92	101	127	134	144	153	162	174	183	198	209	220	231	243	256	269	283	298	314	330
Depreciation	0	0	3	23	53	85	129	182	223	250	285	329	384	469	512	512	512	512	512	512	512	512	512	512
Income from continuing operations	0	238	263	320	310	417	415	450	469	526	729	814	920	879	1,487	1,627	1,746	2,073	2,252	2,630	2,804	3,029	3,489	3,756
Other revenue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Interest payment	0	0	1	13	46	135	281	476	600	679	781	908	1,072	1,390	1,565	1,516	1,449	1,365	1,245	1,100	912	701	458	157
Net income	0	178	196	230	198	212	101	-26	-130	-152	-52	-94	-152	-510	-78	83	223	532	755	1,147	1,419	1,746	2,273	2,700
Cash flow statement																								
Revenue	0	288	321	408	454	603	671	766	836	929	1,176	1,318	1,488	1,546	2,208	2,359	2,489	2,828	3,019	3,411	3,599	3,839	4,315	4,599
- Operating expenses	0	41	46	56	82	90	116	122	131	139	148	159	167	181	191	200	210	221	232	243	255	268	282	296
- General administration expens	0	9	9	10	10	11	11	12	13	13	14	15	16	17	18	20	21	22	24	26	28	30	32	35
Operating cash flow	0	238	266	343	362	502	544	632	692	777	1,014	1,143	1,304	1,348	1,999	2,139	2,258	2,585	2,763	3,142	3,316	3,541	4,001	4,268
- Investment in construction	0	113	642	1,008	1,087	1,445	1,764	1,387	908	1,144	1,499	1,835	2,816	1,432	0	0	0	0	0	0	0	0	0	0
- Investment in rehabilitation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project cash flow	0	65	-441	-742	-791	-1,013	-1,253	-755	-216	-368	-485	-691	-1,512	-84	1,999	2,111	2,184	2,408	2,512	2,759	2,842	2,959	3,243	3,368
+ Common stock	250	2	13	20	22	29	35	28	18	23	30	37	56	29	0	0	0	0	0	0	0	0	0	0
+ Concessional loan	0	58	432	624	165	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+ Senior loan	0	0	0	111	661	1,195	1,699	0	0	0	0	0	2,214	1,042	0	0	0	0	0	0	0	0	0	0
+ Construction Subsidy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total funding	250	60	445	755	847	1,224	1,735	28	18	23	30	37	2,270	1,071	0	0	0	0	0	0	0	0	0	0
Cash flow for debt service	250	125	4	13	57	210	481	-727	-197	-345	-455	-655	758	987	1,999	2,111	2,184	2,408	2,512	2,759	2,842	2,959	3,243	3,368
Cash flow after senior debt service	250	125	4	13	32	37	37	-1,556	-1,026	-1,173	-1,283	-1,458	104	103	1,263	1,375	1,448	1,672	1,776	2,024	2,607	2,959	3,243	3,368
- Concessional loan interest	0	0	1	13	32	37	37	37	37	37	37	36	33	32	30	28	26	24	21	19	17	15	13	10
- Principle payment	0	0	0	0	0	0	0	0	0	3	27	62	71	71	71	71	71	71	71	71	71	71	71	71
Cash flow after ODA debt service	250	125	3	0	0	-0	0	-1,593	-1,063	-1,213	-1,348	-1,556	0	0	1,162	1,276	1,351	1,577	1,684	1,934	2,519	2,873	3,159	3,287
+ GOE sub loan drawdown	0	0	0	0	0	0	0	1,586	1,063	1,213	1,348	1,556	0	0	0	0	0	0	0	0	0	0	0	0
- Interest payment	0	0	0	0	0	0	0	0	-175	-311	-478	-679	-925	-1,027	-1,140	-1,137	-1,122	-1,097	-1,044	-973	-868	-686	-445	-147
+ increase in principle	0	0	0	0	0	0	0	175	311	478	679	925	1,027	0	0	0	0	0	0	0	0	0	0	0
- accumulated principle amortization	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-22	-139	-229	-481	-641	-960	-1,122	0	0	0
- original principle amortization	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-0	-0	0	0	0	0	0	-530	-2,187	-2,714
Cash flow for shareholders	250	125	3	0	0	-0	0	-6	-0	0	0	0	-0	0	0	0	0	0	-0	-0	-0	0	0	1,805
Opening cash balance	0	250	256	256	256	256	256	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250
Total available cash for shareholders	250	375	259	256	256	256	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	2,055
- dividend	0	119	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,714
Closing cash balance	250	256	256	256	256	256	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250
Memorandum indicators																								
Number of cars	0	45	50	64	71	81	90	100	110	123	136	155	172	178	164	173	183	193	203	214	226	239	252	266
Light cars	0	36	40	52	58	67	74	82	91	101	113	131	145	150	137	145	152	161	170	179	189	199	210	222
Heavy cars	0	9	9	12	13	15	16	18	19	21	24	24	27	28	27	29	30	32	34	35	37	40	42	44
Toll revenue	0	274	306	389	433	575	639	729	796	885	1,120	1,255	1,417	1,473	2,102	2,247	2,370	2,693	2,875	3,248	3,427	3,656	4,109	4,380
Internal expressways	0	34	38	90	100	154	170	192	290	320	405	758	849	840	1,024	1,088	1,145	1,300	1,381	1,559	1,639	1,740	1,954	2,072
Ring road	0	240	268	299	333	420	469	537	507	565	715	497	567	633	1,079	1,158	1,226	1,394	1,495	1,690	1,788	1,916	2,155	2,307
Toll level	0	5	5	5	5	6	6	6	6	6	7	7	7	7	11	11	11	12	12	13	13	13	14	14
Light cars	0	11	11	11	11	12	12	13	13	13	14	14	15	15	22	23	23	24	25	26	26	27	28	29
Heavy cars	0	11	11	11	11	12	12	13	13	13	14	14	15	15	22	23	23	24	25	26	26	27	28	29
Government burden	342	250	2	13	20	22	29	35	28	18	23	30	37	56	29	0	0	0	0	0	0	0	0	0
Budgetary expense	342	250	2	13	20	22	29	35	28	18	23	30	37	56	29	0	0	0	0	0	0	0	0	0
Construction cost	17,081	0	113	642	1,008	1,087	1,445	1,764	1,387	908	1,144	1,499	1,835	2,816	1,432	0	0	0	0	0	0	0	0	0
in millions of SUS	2,945																							

Implication – There are no magic solution to finance expressways of the network. The expressways need to be financed by toll revenue or government budget. If GOE wants to reduce GOE burden, it is necessary to raise expressway users’ contribution. As we compare the base case with the revenue max case in order to highlight the importance of GOE contribution, GOE is required to contribute to a certain part of financing even if toll system would successfully be introduced.

Under the base case, GOE has to provide equity of LE 2,378 million and sub-loan (semi-commercial) of LE 11,795 million. Under revenue maximize case, equity of LE 592 million and SOE sub-loan of LE 10,359 million are necessary.

In addition, the financial projection indicates that persisting network completion in 2021 will impose huge burden on GOE (or taxpayers) and expressway users. It is

estimated that the completion in 2021 will not be a realistic target from the viewpoint of availability of financing.

Table12.4-3 Comparison on Financial Summary

	Base case	Revenue max case
Stable positive net income	begin in 2024	begin in 2023
Total GOE equity (2009-2046)	2,378 millions of LE	592 millions of LE
Total GOE sub loan borrowing (2009-2046) (including increase in principle)	11,795 millions of LE	10,359 millions of LE
Completion of repayment of GOE sub debt	2031	2030
Total senior loan borrowing (2009-2046)	3,543 millions of LE	6,922 millions of LE
Completion of repayment of senior debt	2027	2027
Minimum DSCR for senior debt	27% (Year 2015)	54% (Year 2015)

12.5 WHOLE NETWORK IMPLEMENTATION - SENSITIVITY ANALYSIS

Construction cost and toll revenue are major risk factors on financial viability of the network development. JICA study team assumes the following parameters for a preliminary sensitivity analysis. The sensitivity analysis sets two downside cases and one upside case. Traffic demand and toll revenue forecast are uncertain and the biggest risk factors for toll road business. Construction cost is chosen as a parameter, since estimates of construction cost are still preliminary figures due to the lack of data on costs of right of ways.

Table12.5-1 Sensitivity Factors

	Construction cost	Traffic demand growth rate
Base case	100 %	100 %
Downside case1	120%	100%
Downside case2	100%	80%
Upside case	80 %	100 %

Downside case 1 which assumes construction cost increase by 20% requires more government burden than other cases. Downside case 2 which assumes lower traffic demand growth rate by 20% results in the longest period of net deficits. Upside case which assumes reduction in construction cost by 20% improves the performance considerably. Summary of sensitivity analysis is as shown in Table 12.5-2.

Table 12.5-2 Summary of Sensitivity Analysis

	Base case	Downside1*	Downside2*	Upside
Stable positive net income	begin in 2024	begin in 2027	begin in 2029	begin in 2019
Excess liabilities period	None	2018-2031	2018-2035	None
Total GOE equity (2009-2046)	2,378 millions of LE	2,783 millions of LE	2,378 millions of LE	1,972 millions of LE
Total GOE sub loan borrowing (2009-2046) (including increase in principle)	11,795 millions of LE	17,079 millions of LE	15,820 millions of LE	7,826 millions of LE
Completion of repayment of GOE sub debt	2031	2035	2039	2029

* With assumption to GOE provide subloan to meet MEA's obligation to creditors, MEA could continue to be solvent despite excess liabilities.

12.6 ANALYSIS ON PRIORITIZED ROUTES IMPLEMENTATION

Framework and schedule – It is assumed that MEA will be established in 2008 and responsible for financing high priority routes (E1-2, E2-2, E3-1, E3-2 & E3-3) of expressways in Cairo. Tariff system will be introduced in 2009 for existing Ring Road, and toll collection in the internal network will be started in 2011 before completion of extension of existing routes, E1-2 and E2-2. Scope of high priority case is shown bold red lines in Figure 12.6-1. Overall schedule on five prioritized routes implementation is similar to the whole network completion case as shown in 12.3-1.

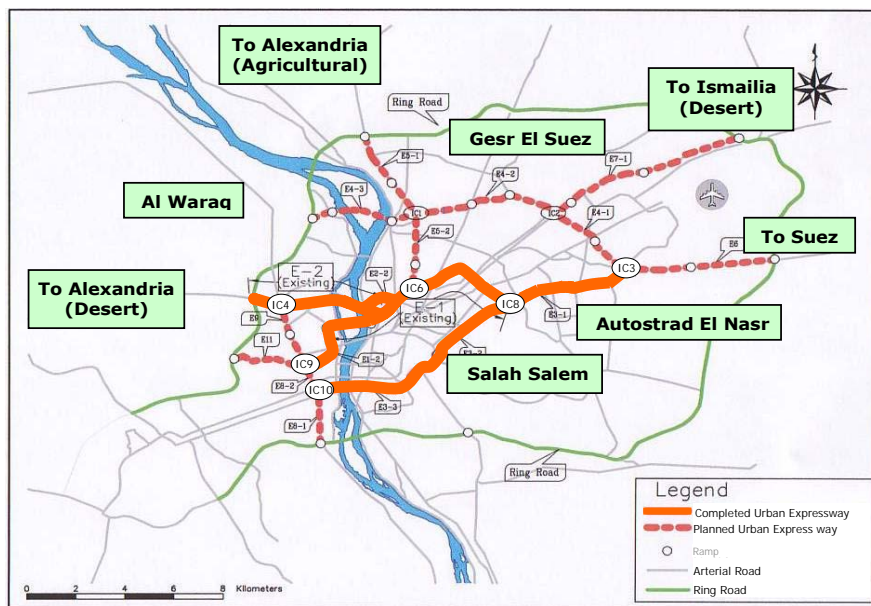


Figure 12.6-1 Scope of High Priority Cases

It is assumed that MEA will introduce cross subsidies including a part of the revenue from the Ring Road. In order to alleviate debt repayment profile, concessional borrowing is recommended to construct first prioritized routes (i.e. E1-2, E2-2 and E3-1), which are selected in Chapter 9. It is assumed that those three routes would be

financed by MEA based on onlending of concessional loan, such as ODA borrowing, (85% of total cost) and government budgetary support (remaining 15% covered by capital injection from GOE and cross subsidy). It is also assumed that MEA will finance other two routes such as E3-2 and E3-3 by commercial bank loan. Simplified structure is as shown in Figure 12.6-2.

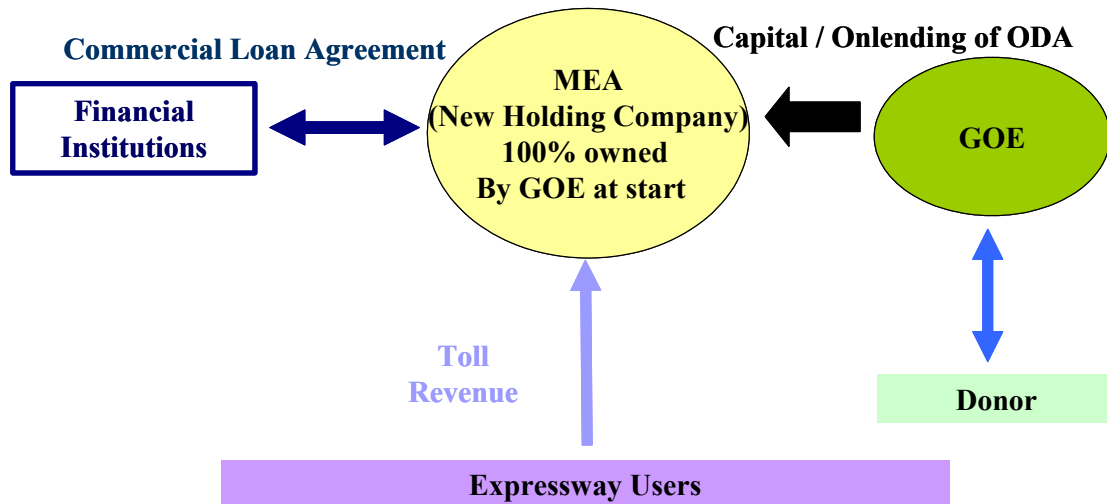


Figure 12.6-2 Simplified Structure for the Analysis on Five Prioritized Routes

Toll revenue and construction cost – Toll schedule is assumed as same as the whole network implementation case. Traffic demand of expressway users on the Ring Road, E1, E2, and E3 is shown in Figure 12.6-3. Figure 12.6-4, which shows toll revenue and construction cost, implies that toll revenue from high priority routes will be used for investment on other routes in future.

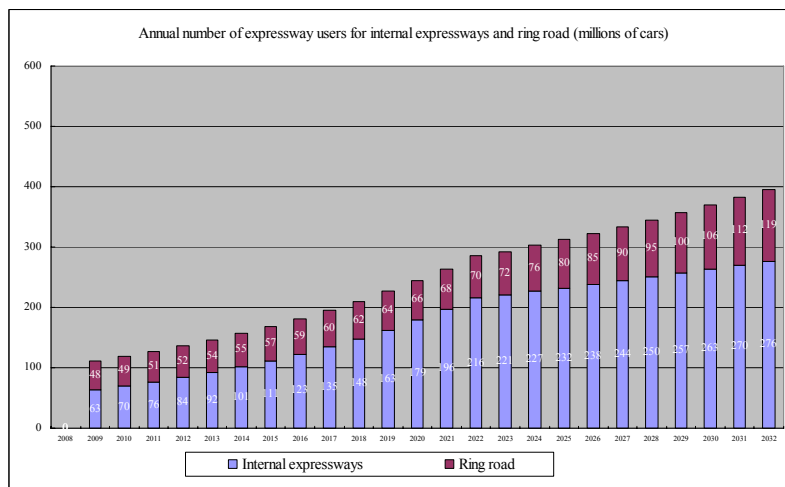


Figure 12.6-3 Number of Vehicles

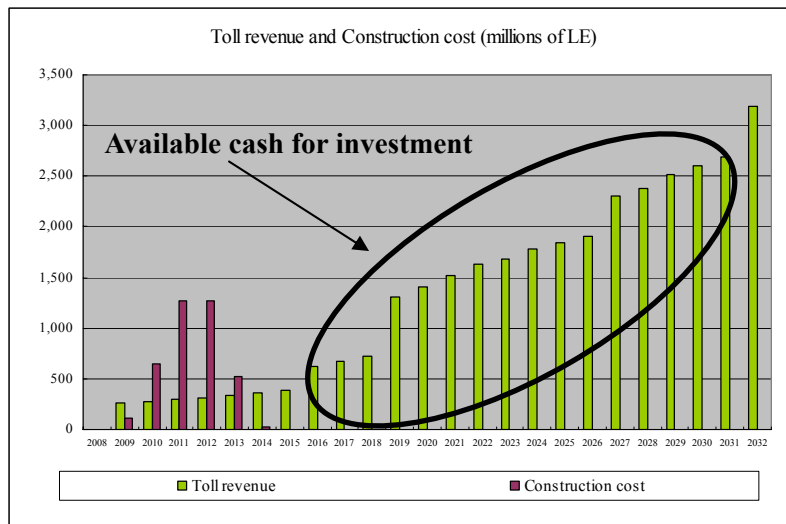


Figure 12.6-4 Toll Revenue Stream and Construction Cost

The financial projection shows operating cash flow will increase gradually, while investment will be concentrated during 2011 and 2012. Although lack of funds will be financed by senior loans in the early implementation stage (i.e. 2009 – 2013), it would be difficult for MEA to mobilize commercial borrowing during 2014 and 2019, and MEA debt sustainability will be uncertain. Senior debt would be repaid in 2020. Senior debt service coverage ratio will reach to above 100% in 2016 as shown in Appendix 12.3.

Based on the financial projection, MEA would successfully retain free cash flow from around 2019, enabling MEA to utilize free cash flow for new investment as shown in Figure 12.6-5. However, implementation will be required to slow down³⁰ compared to the targeted schedule in order to keep MEA’s financial position bankable.

³⁰ E4-1(2012 → 2018), E4-2(2012 → 2020), E4-3(2012 → 2022)

Table 12.6-1 Summary of Financial Projection for Five Prioritized Routes (2008- 2031)

Year	2008	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Income statement																								
Revenue	0	271	290	310	331	355	380	408	658	707	761	1,367	1,474	1,591	1,719	1,763	1,869	1,932	1,997	2,416	2,499	2,641	2,733	2,828
Operating expense	0	65	70	77	103	112	139	146	153	161	169	178	187	196	206	217	228	240	252	265	279	294	309	325
Depreciation	0	0	3	23	53	82	109	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117
Income from continuing operations	0	206	216	210	176	160	132	145	387	429	475	1,072	1,170	1,278	1,395	1,429	1,524	1,575	1,628	2,034	2,103	2,230	2,307	2,386
Other revenue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Interest payment	0	0	1	13	43	119	204	230	223	191	155	112	68	40	30	28	26	24	21	19	17	15	13	10
Net income	0	155	161	148	100	31	-72	-85	124	179	240	720	827	928	1,024	1,051	1,123	1,163	1,205	1,511	1,564	1,662	1,720	1,782
Cash flow statement																								
Revenue	0	271	290	310	331	355	380	408	658	707	761	1,367	1,474	1,591	1,719	1,763	1,869	1,932	1,997	2,416	2,499	2,641	2,733	2,828
- Operating expenses	0	56	61	68	93	102	128	134	141	148	156	163	172	180	189	199	209	219	230	241	253	266	279	293
- General administration expenses	0	9	9	10	10	11	11	12	12	13	14	15	16	17	18	20	21	22	24	26	28	30	32	
Operating cash flow	0	206	219	232	229	243	241	262	504	546	592	1,189	1,287	1,395	1,512	1,546	1,641	1,692	1,745	2,151	2,220	2,347	2,424	2,503
- Investment in construction	0	113	642	1,008	990	877	271	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Investment in rehabilitation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project cash flow	0	42	-476	-824	-795	-644	-30	262	463	487	512	949	1,012	1,085	1,171	1,196	1,266	1,304	1,343	1,647	1,698	1,793	1,850	1,909
+ Common stock	250	14	80	126	123	109	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+ Concessional loan	0	58	432	624	165	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+ Senior loan	0	0	0	88	558	717	341	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+ Construction Subsidy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total funding	250	72	512	837	846	827	374	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cash flow for debt service	250	114	36	13	51	182	344	262	463	487	512	949	1,012	1,085	1,171	1,196	1,266	1,304	1,343	1,647	1,698	1,793	1,850	1,909
Cash flow after senior debt service	250	114	36	13	32	37	37	-122	78	102	127	584	773	1,009	1,171	1,196	1,266	1,304	1,343	1,647	1,698	1,793	1,850	1,909
- Concessional loan interest	0	0	1	13	32	37	37	37	37	37	37	36	33	32	30	28	26	24	21	19	17	15	13	10
- Principle payment	0	0	0	0	0	0	0	0	0	3	27	62	71	71	71	71	71	71	71	71	71	71	71	71
Cash flow after ODA debt service	250	114	35	-0	-0	-0	-159	41	62	63	486	669	906	1,070	1,097	1,169	1,209	1,251	1,557	1,610	1,707	1,766	1,828	
+ GOE sub loan drawdown	0	0	0	0	0	0	152	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Interest payment	0	0	0	0	0	0	0	-17	-14	-9	-3	0	0	0	0	0	0	0	0	0	0	0	0	
+ increase in principle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- accumulated principle amortization	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- original principle amortization	0	0	0	0	0	0	0	-24	-48	-54	-25	0	0	0	0	0	0	0	0	0	0	0	0	
Cash flow for shareholders	250	114	35	-0	-0	-0	-7	0	0	0	458	669	906	1,070	1,097	1,169	1,209	1,251	1,557	1,610	1,707	1,766	1,828	
Opening cash balance	0	250	256	257	257	257	257	250	250	250	250	250	273	306	352	449	547	649	753	859	981	1,105	1,234	1,366
Total available cash for shareholders	250	364	290	257	257	257	250	250	250	250	708	942	1,212	1,421	1,546	1,716	1,858	2,004	2,416	2,591	2,812	3,000	3,194	
- dividend	0	108	33	0	0	0	0	0	0	0	435	635	861	973	998	1,067	1,105	1,145	1,436	1,486	1,578	1,634	1,693	
Closing cash balance	250	256	257	257	257	257	250	250	250	250	273	306	352	449	547	649	753	859	981	1,105	1,234	1,366	1,501	
Memorandum indicators																								
Number of cars millions	0	111	119	127	136	146	157	168	181	195	210	226	244	264	285	293	302	313	323	334	345	357	369	382
Light cars millions	0	94	100	107	115	123	133	143	154	165	178	193	208	225	243	250	258	266	275	284	294	303	314	324
Heavy cars millions	0	18	19	20	21	23	24	26	28	30	32	34	36	39	42	43	45	46	48	50	52	53	55	58
Toll revenue	0	258	276	295	315	338	362	389	626	674	725	1,302	1,404	1,515	1,637	1,679	1,780	1,840	1,902	2,301	2,380	2,515	2,603	2,694
Internal expressways	0	143	157	173	190	209	229	252	415	456	502	919	1,010	1,110	1,220	1,250	1,311	1,344	1,377	1,656	1,697	1,773	1,817	1,863
Ring road	0	115	119	122	126	129	133	137	211	217	223	383	394	405	417	429	469	496	525	645	683	742	785	831
Toll level																								
Light cars	0	2	2	2	2	2	2	2	3	3	3	5	5	5	5	5	5	5	5	6	6	6	6	6
Heavy cars	0	4	4	4	4	4	4	4	6	6	6	10	10	10	10	10	10	11	11	11	12	12	13	13
Government burden																								
Budgetary expense	486	250	14	80	126	123	109	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Construction cost in millions of \$US	3,901	673	0	113	642	1,008	990	877	271	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

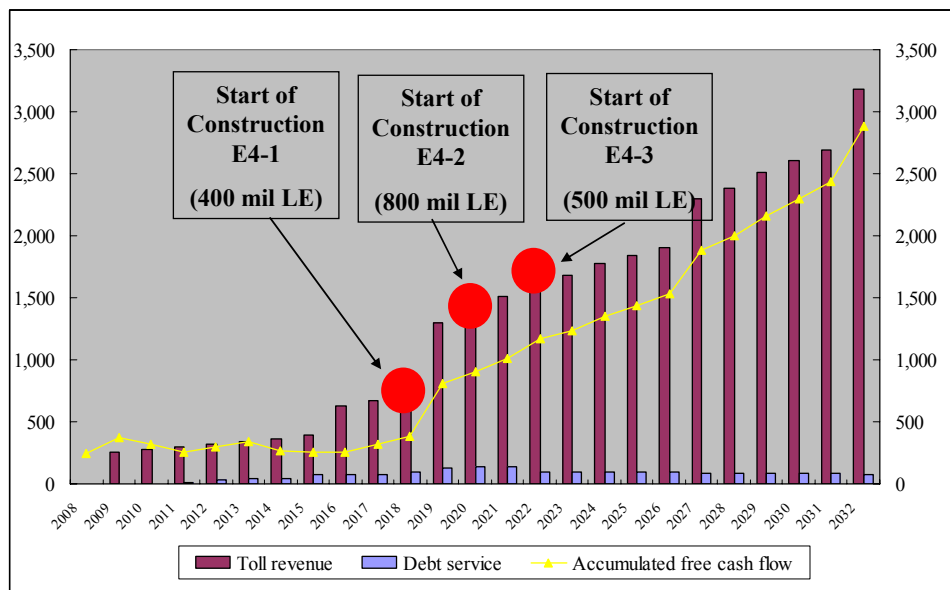


Figure 12.6-5 Self Sustainable Investment Schedule

12.7 CONCLUSION

From the financial analysis, targeted completion year 2022 is not realistic because it requires huge budgetary subsidy from GOE and availability of cross subsidy is uncertain. Therefore, actual implementation schedule must be based on available cash. According to the preliminary analysis on five prioritized routes, a realistic scenario will be that to start additional investment from 2019 as shown in Figure 12.6-5.

CHAPTER 13

LEGISLATION AND PROCEDURE FOR PPP

CHAPTER 13

LEGISLATION AND PROCEDURES FOR PPP

13.1 OVERVIEW ON PPP STRUCTURE

PPP scheme is a way to implement public works and services and the public sector sets the level of service provisions. However, it involves a number of different players, and their rights and obligations are more complex than the traditional public work procurement. The details will be defined in legal agreements among participants and it is important that the country has proper legislative framework and procedures assuring certainty of these legal agreements. Figure 13.1-1 shows an example of participants and contractual arrangement of PPP project.

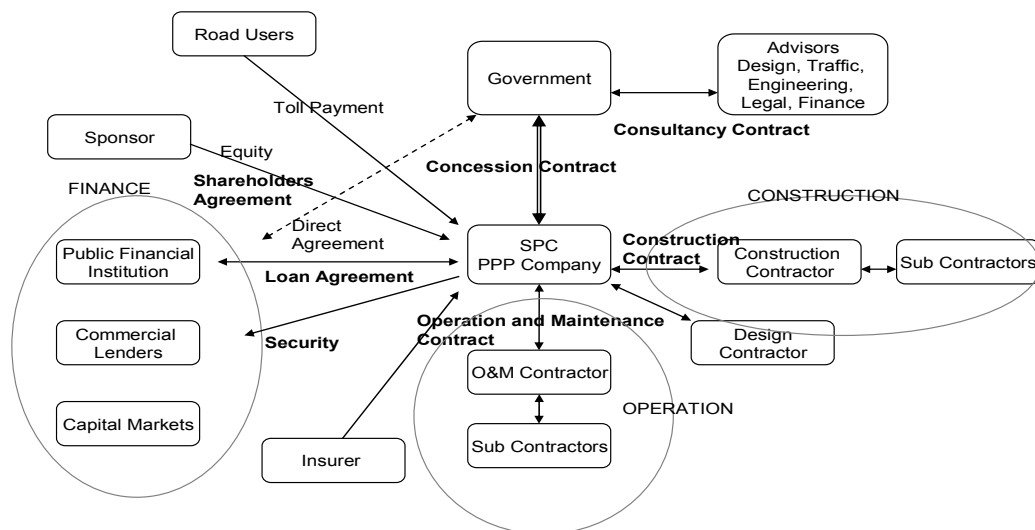


Figure 13.1-1 Contractual Arrangement

Under PPP scheme, the private sector is in charge of design, construction, operation, maintenance, and management of public facilities. However, most of the cases it would be difficult to find out a company which can conduct all of these tasks on its own capacity. At the same time, it is important for the public sector that the business itself will not stop at anytime. Therefore, it will be necessary to establish a consortium among several companies to share tasks. Special Purpose Company (SPC) will be established by the consortium, while the government will award a concession agreement to SPC. The rights and obligations of both the government and SPC will be defined in the agreement. SPC will allocate all the risks to consortium members who will best manage

these risks. Depending on the ownership of assets, BTO, BOO, or BOT will be applied. Depending on the project economics, the payments from the public sector to the private sector for its services will be stipulated in a contract while some projects could be only financed by its own revenues on the project finance basis. Financial institutions have Direct Agreement in order to retain control in case SPC becomes difficult to continue its business and obligation.

Main factors for the success of PPP projects from legislative point of view can be summarized in three areas: (i) appropriate and effective transfer of businesses from public to private; (ii) effective and efficient selection process of proposals from private sector; (iii) appropriate risk allocation among public sector and private participants. This chapter provides main issues and recommended solutions on (ii) and (iii). The Chapter includes overviews on legislation related to PPP in Egypt, recommended selection procedures, and a standard contract defining risk allocation of each participant.

Under this study, it is recommended that PPP scheme will be constructed in the second phase, followed by MOT's building foundation for institutional and economical aspects. (Please see Chapter 11 for the details.) Specific legal contracts and procedures must be designed and drafted at the time a specific project will be implemented under PPP scheme. Therefore, we limit our scope of this chapter to summarizing main concepts of the procedures and contracts.

13.2 OVERVIEW ON CURRENT PPP RELATED LEGISLATION AND PROCEDURES IN EGYPT

We reviewed the progress in privatization and BOT projects in Egypt and the initiative of preparing a new PPP law and a tax law and revising so-called BOT law and regulations in the Interim Report. However, as the World Bank report noted, it is still the strategic challenge for the Government to facilitate an increase in private investment through improving the business climate and through making complementary public investments, although it has announced measures as well as intentions to improve the investment climate through reforms in finance, trade, taxation, and regulatory policy¹.

In Egypt, concession is allowed until 99 years. PPP and/or BOT road projects are not regulated by a general law, but Prime Minister decree is issued instead for an each project according to the sector law based on the article 12 (Bis-E) of law No. 84 of the year 1968 in connection with the public roads added as per law No. 129 of the year 1996.

¹ The World Bank, "Country Assistance Strategy," May 2005.

13.2.1 Roads Legislation

(1) General

Under any law-abiding states, any Government actions are principally implemented based on the laws/regulations. As far as the road administration is concerned, the principal items in the laws and regulations consist of the followings essential items:

- a. Definition of 'Public Road' and 'Road Classification'
- b. Authorities and responsibilities of roads and bridges
- c. Road financing

In addition, the following items in the laws and/or regulations concerned to implementation of the road projects and maintenance and management are as follows:

- a. Environmental impact assessment
- b. Procurement of consultants and contractors
- c. Land acquisition and relocation of project affected people (PAP)
- d. Traffic roles and regulations
- e. Road transport ordinance and regulation

(2) Framework of Law for Roads

The framework of laws on Roads in Egypt is illustrated in Figure 13.2-1.

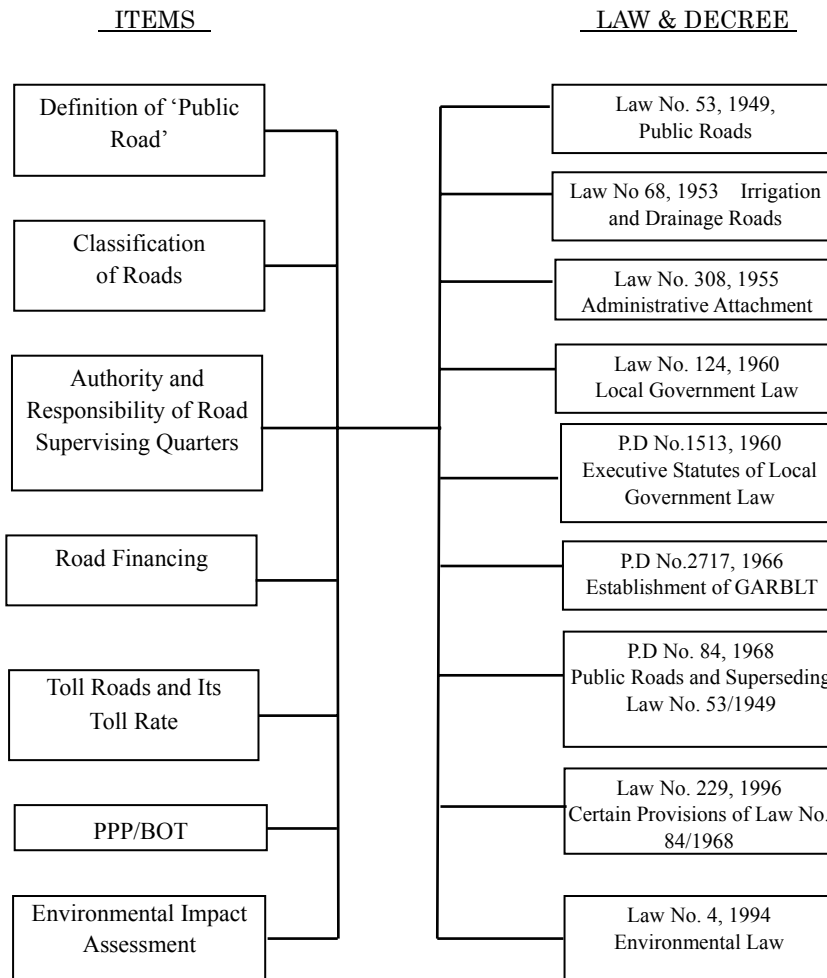


Figure 13.2-1 Framework of Law on Roads in Egypt

The Presidential Law No. 229 of the year 1996 on Public Roads is amending certain provisions of Law No. 84 of the year 1968 on Public Roads as described in the following sections.

(3) Authority and Responsibility of Roads

The authority and responsibility of the roads is defined in Article 1 of the Public Roads Law, which states that *'Freeway, highways and main roads shall be established and modified. And their types shall be determined by the virtue of a decree of the Ministry of Transport. The General Authority for Roads, Bridges and Land Transport shall supervise these roads while the Local Government Units shall supervise the local roads'*.

This provision has some exceptions of the following:

- a. All roads lying within the limits of Greater Cairo and those of Alexandria Governorate,

- b. Local roads lying within the limits of towns and villages that have town councils or village councils, but fast-traffic roads and main roads shall be subject to these provisions.
- c. Embankments of the River Nile, canals, drains, basins and public enclosures as supervised by the Ministry of Irrigation.

(4) Financing of Roads

According to this item, road financing is defined in Article 3 (*) of the Public Road Law, which states that *“the Public Treasury of the State shall sustain the costs of building freeways, fast-traffic, main roads, the road structure necessary therefore and their maintenance, while the local government units shall sustain the forgoing costs with regard to the local roads”*.

Under the Law 229/1996 that amends Law 84/1968 the new Article sub No. (12-bis) regarding public roads is added, reading as follows: *“In exception of the provisions of Articles 1,3 and 9-bis of this law, public utility concessions may be granted to local and foreign investors, whether natural or moral persons, for the purpose of building freeways, highways and main roads, and for their management, exploitation and maintenance along with collecting traffic charges, without being restricted by the provisions of law No. 129 of the year 1947 concerning Public Utility Concessions and law No. 61 of the year 1958 concerning the grant of concessions connected with investment of natural wealth resources and public utilities, and the amendment of the concession conditions”*.

(5) Toll Roads and Toll Rates

The Public Road Law Part 2 article 9-Bis (*), which includes *“for the fast traffic roads as determined by decree of the Prime Minister, and which have alternatives to replace them, fees on their use by vehicles may be collected according to the following rates:*

- Private cars LE 1
- Pick up vehicles LE 2
- Buses LE 2
- Trucks or lorries LE 3
- Heavy duty vehicles LE 5

This law mentioned that an application to the toll road shall be necessarily provided alternative route to replace vehicle users.

Regarding to the toll rates, based on the suggestion made by the Ministry of Transport (MOT), an application of toll road or non toll road and its toll rate are determined by

the Prime Minister with issuing Prime Ministers' decree. It was noted that municipal consent will not be required to introduce toll when MOT holds a contract with a concessionaire. However the level of toll will need to be negotiated among these stakeholders.² Current level of toll is varied depending on the route.

(6) PPP / BOT

The Road Law is Item 12-Bis (*) of the Public Road Law, which includes “*public utility concessions may be granted to local and foreign investors, whether normal or juridical, for **building** freeways, fast traffic roads*”.

It was understood that only newly constructed roads can be under BOT system, not projects for upgrading existing roads. In January 2002, the Councilors of the Cabinet re-defined the word “**building**” to include construction works of interchanges and toll gates that will upgrade existing roads to freeways. Therefore, the upgrading of Cairo-Alexandria-Matroh and other roads is legalized now. A new PPP law is under preparation that regulates concessions for exploitation of public utilities.

13.2.2 GOE's Investment Promotion Policy

Investment Law No. 8 of 1997 and Companies Law No. 3 of 1998 are two key laws that regulate the investment environment for foreign investors in Egypt:

1) Investment Incentives and Guarantees Law 8 of 1997

Law 8 of 1997 succeeded Investment Law 230 of 1989. It made one authority responsible for investor incentives and guarantees--the General Authority for Investment and Free Zones (GAFI). It also grouped some 20 exemptions and incentives under one law, and specified activities that would automatically accrue benefits to investors. It allows 100% foreign ownership of ventures and guarantees the right to remit income earned in Egypt and to repatriate capital.

Key provisions include: the guarantee against confiscation, sequestration and nationalization; the right to own land; the right to maintain foreign currency bank accounts; freedom from administrative attachment; the right to repatriate capital and profits; free hiring of Egyptian staff, absence of price control or restrictions, exemption of foreign expatriates' salaries from income tax if they reside in Egypt for less than a year, and equal treatment regardless of nationality.

² Interview with State Council on February 26, 2006.

Under Law 8, investments are approved automatically for projects in 16 distinct fields, effectively creating a "positive list." These fields include land reclamation; fish, poultry and animal production; industry and mining; tourism (covering hotels, motels, tourist villages and transportation); maritime transportation; refrigerated transportation for agricultural products and processed food; air transportation and related services; housing; real estate development; oil production and related services; hospitals and medical centers that offer 10% of their services free of charge; water pumping stations; venture capital; computer software production; projects financed by the Social Fund for Development; leasing; and guarantees for subscription in securities³.

In April 2000, new activities were added to the package of incentives to include development of new urban zones, software design and production of electronics, establishment and management of technology zones, credit classification, deductions, river transportation activities, management of industrial projects and utilities, and waste collection and treatment projects.

Law 8/1997 also establishes that a one-stop shop for investors will be located at the General Authority for Investment and Free Zones (GAFI) to facilitate and simplify approval, registration, licensing and certification for new projects instead of having to go to 25 separate ministries.

2) Companies Law

Companies Law 3 of 1998, amending law 159 of 1981, covers investors in any sector not covered by Law 8 of 1997; including shareholders, joint stock, and limited liability companies and representative and branch offices.

The law allows for automatic registration of a company upon presentation of the application to "the Companies Department" at the Ministry of Foreign Trade and for acquisition of legal status 15 days after appearance in the Commercial Register.

Founders of joint stock and limited liability companies must submit a bank certificate showing a 10% deposit of the issued capital to the Companies Department. The law also provides for the right of petition for denial of incorporation, removes the restriction that 49% of shareholders must be Egyptian, allows 100% foreign representation on the board of directors, and redefines accounting standards.

³ However, some projects still require prior approval from relevant ministries in addition to GAFI, including investments in Sinai; all military products and related industries; and tobacco and tobacco products.

13.2.3 Challenges in Facilitating Private Investment in Infrastructure

The World Bank report noted that more and better infrastructure is needed in Egypt to help the private sector become more competitive. While certain infrastructure services are provided at subsidized prices (e.g. power and water), inefficient or inadequate provision of other services (e.g., transportation) increase costs for the private sector. In most cases, pricing and management reforms are called for while, in some cases, additional public investments are also needed. In addition, institutional arrangements for infrastructure financing need to be addressed in many infrastructure sub-sectors in order to improve their overall efficiency.

With respect to facilitating the involvement of the private sector in infrastructure services, priority concerns which the report pointed out include:

- Removal of unjustified restrictions on private sector participation in infrastructure projects and creation of a level playing field between public and private sector players;
- Improvement of the regulatory framework for the private sector participation;
- Review of the BOOT regulations for infrastructure; and
- Establishing tariff structures and targeted subsidy systems compatible with opening of the sector to competition.

Recent legislative movement

Preparation of new PPP law is underway in Egypt. It, however, has not yet been discussed in the parliament as of the end of February 2006 and may take at least another one year to be approved and enacted. The main objective of the new law is introducing more transparent selection criteria and bidding process in order to attract local and international private sectors for infrastructure investments.⁴

The study team reviewed the summary of the draft new PPP law. Main points discussed include selection of concessionaires, monitoring procedures, the government roles. It describes that the selection of concessionaire is to be in a competitive, open, and transparent way to guarantee selecting the best bidder from the technical, financial, economical and environmental aspects. It also requests monitoring procedures and penalty clauses when a concessionaire falls short of its obligation should be determined. The maximum concession period is defined as 40 years and is different from the generally accepted rules of 99 years in Egypt. The draft new law also states that: (i) the President determines the level of monitoring and supervision; (ii) Cabinet will decide

⁴ Interview with Ministry of Investment on December 27, 2005.

the interests of general public which will be the bases of granting concession, determining its conditions and provisions, modifying them, determining the government's interests for a project, and renewing the concession period partially or completely. The draft law states that after the Cabinet approval, the authority granting the concession can reach an agreement with the concessionaire upon modifying the conditions of the concession whenever it is required for the general public's interests or unforeseen events beyond control of concessionaire.

13.3 GENERAL LEGISLATIVE GUIDELINES FOR PPP DEVELOPMENT

There are two useful references which are considered as possible standard documents for legislative guidelines for PPP development. One is "Standardizations of PFI contracts" published by the United Kingdom's economics and finance ministry, HM Treasury. The aim was to provide guidance on the key issues that arise in PFI projects in order to promote the achievement of commercially balanced Contracts, and enable public sector procurers to meet their requirements and deliver best value for money. The first edition was published in July 1999 followed by the second and third editions which were published in 2002 and 2003 and incorporated a number of improvements which had been identified over the period⁵.

Another reference is "Legislative Guide on Privately Financed Infrastructure Projects" (Guide) published by the United Nations Commission on International Trade Law (UNCITRAL). The purpose of the present Guide is to assist in the establishment of a legal framework favorable to private investment in public infrastructure. The advice provided in the Guide aims at achieving a balance between the desire to facilitate and encourage private participation in infrastructure projects, on the one hand, and various public interest concerns of the host country, on the other. The Guide discusses a number of concerns of fundamental public interest, which, despite numerous differences of policy and legislative treatment, are recognized in most legal systems. The Guide contains a set of recommended legislative principles entitled "legislative recommendations". The legislative recommendations are intended to assist in the establishment of a legislative framework favorable to privately financed infrastructure projects. The Guide is intended to be used as a reference by national authorities and legislative bodies when preparing new laws or reviewing the adequacy of existing laws and regulations⁶.

The process of PPP includes a wide range of actions and it is not easy to describe PPP processes comprehensively. Based on these references, this chapter shows areas of law

⁵ HM Treasury, "Standardizations of PFI contracts," April 2004.

⁶ UNCITRAL, "Legislative Guide on Privately Financed Infrastructure Projects," 2001

that are typically most relevant to private capital investment in public infrastructure projects and discusses the content of those laws which would be conducive to attracting private capital, national and foreign.

13.3.1 General Legislative and Institutional Framework

UNCITRAL identifies general guiding principles that may inspire the legal framework for privately financed infrastructure projects. It further points out the possible implications that the constitutional law of the country may have for the implementation of these projects and possible choices to be made regarding the level and type of instrument that might need to be enacted and their scope of application.

(1) General guiding principles for a favorable constitutional and legislative framework

In considering the establishment of an enabling legal framework or in reviewing the adequacy of the existing framework, domestic legislators may wish to take into account some general principles that have inspired recent legislative actions in various countries. UNCITRAL pointed out three key points, transparency, fairness, and long-term sustainability.

(a) Transparency

A transparent legal framework is characterized by clear and readily accessible rules and by efficient procedures for their application. Transparent laws and administrative procedures create predictability, enabling potential investors to estimate the costs and risks of their investment and thus to offer their most advantageous terms. Transparent laws and administrative procedures may also foster openness through provisions requiring the publication of administrative decisions, including, when appropriate, an obligation to state the grounds on which they are based and to disclose other information of public relevance.

(b) Fairness

The legal framework is both the means by which Governments regulate and ensure the provision of public services to their citizens and the means by which public service providers and their customers may protect their rights. A fair legal framework takes into account the various (and sometimes possibly conflicting) interests of the Government, the public service providers and their customers and seeks to achieve an equitable balance between them. The private sector's business considerations, the users' right to adequate services, both in terms of quality and price, the Government's responsibility for ensuring the continuous provision of essential services and its role in promoting national infrastructure development are but a few of the interests that deserve appropriate recognition in the law.

(c) Long-term sustainability

An important objective of domestic legislation on infrastructure development is to ensure the long-term provision of public services, with increasing attention being paid to environmental sustainability. Inadequate arrangements for the operation and maintenance of public infrastructure severely limit efficiency in all sectors of infrastructure and result directly in reduced service quality and increased costs for users. From a legislative perspective, it is important to ensure that the host country has the institutional capacity to undertake the various tasks entrusted to public authorities involved in infrastructure projects throughout their phases of implementation. Another measure to enhance the long-term sustainability of a national infrastructure policy is to achieve a correct balance between competitive and monopolistic provision of public services.

(2) Scope of authority to award concessions

(a) Authorized agencies and relevant fields of activity.

It is particularly important to state clearly in the law the authority to entrust entities other than public authorities of the country with the right to provide certain public services. Where general legislation is adopted, it is also advisable to identify clearly the public authorities or levels of government competent to award infrastructure projects and to act as contracting authorities. In order to avoid unnecessary delay, it is particularly advisable to have rules in place that make it possible to ascertain the persons or offices that have the authority to enter into commitments on behalf of the contracting authority (and, as appropriate, of other public authorities) at different stages of negotiation and to sign the project agreement.

(b) Purpose and scope of concessions

It may be useful for the law to define the nature and purpose of privately financed infrastructure projects for which concessions may be awarded in the country. One possible approach may be to define the various categories of projects according to the extent of the rights and obligations assumed by the concessionaire. However, given the wide variety of schemes that may come into play in connection with private investment in infrastructure, it may be difficult to provide exhaustive definitions of all of them. As an alternative, the law could generally provide that concessions may be awarded for the purpose of entrusting an entity, private or public, with the obligation to carry out infrastructure works and deliver certain public services, in exchange for the right to charge a price for the use of the facility or premises or for the service or goods it generates, or for other payment or remuneration agreed to by the parties. The law could further clarify that concessions may be awarded for the construction and operation of a new infrastructure facility or system or for maintenance, repair, refurbishment, modernization, expansion and operation of existing infrastructure facilities and systems, or only for the management and delivery of a public service.

Another important issue concerns the nature of the rights vested in the concessionaire, in particular whether the right to provide the service is exclusive or whether the concessionaire will face competition from other infrastructure facilities or service providers. The decision whether or not to grant exclusivity rights to a certain project or category of projects should be taken in the light of the host country's policy for the sector concerned. As discussed earlier, the scope for competition varies considerably in different infrastructure sectors. While certain sectors, or segments thereof, have the characteristics of natural monopolies, in which case open competition is usually not an economically viable alternative, other infrastructure sectors have been successfully opened to free competition.

It is desirable therefore to deal with the issue of exclusivity in a flexible manner. Rather than excluding or prescribing exclusive concessions, it may be preferable for the law to authorize the grant of exclusive concessions when it is deemed to be in the public interest, such as in cases where the exclusivity is justified for the purpose of ensuring the technical or economical viability of the project. The contracting authority may be required to state the reasons for envisaging an exclusive concession prior to starting the procedure to select the concessionaire. Such general legislation may be supplemented by sector-specific laws regulating the issue of exclusivity in a manner suitable for each particular sector.

(3) Authority to regulate infrastructure services

The Guide assumes that the host country has in place the proper institutional and bureaucratic structures and human resources necessary for the implementation of privately financed infrastructure projects. Nevertheless, as a contribution to domestic legislatures considering the need for, and desirability of, establishing regulatory agencies for monitoring the provision of public services, this section discusses some of the main institutional and procedural issues that may arise in that connection.

The Guide provided five instructive recommendations on regulatory body.

- The authority to regulate infrastructure services should not be entrusted to entities that directly or indirectly provide infrastructure services.
- Regulatory competence should be entrusted to functionally independent bodies with a level of autonomy sufficient to ensure that their decisions are taken without political interference or inappropriate pressures from infrastructure operators and public service providers.
- The rules governing regulatory procedures should be made public. Regulatory decisions should state the reasons on which they are based and should be accessible to interested parties through publication or other means.
- The law should establish transparent procedures whereby the concessionaire may

request a review of regulatory decisions by an independent and impartial body, which may include court review, and should set forth the grounds on which such a review may be based.

- Where appropriate, special procedures should be established for handling disputes among public service providers concerning alleged violations of laws and regulations governing the relevant sector.

13.4 ILLUSTRATIVE PPP PROCESS

Once the country defines a possible PPP project under a legislative framework, the project will enter into a preparation and implementation stage. As we described in Chapter 11, PPP includes a wide range of schemes for public-private initiative. This section provides an illustrative PPP process.

13.4.1 Preparation Stage

(1) Clear Objective and Priority of PPP

It is essential to clarify the objective of PPP in order to promote PPP with stakeholders who have different incentives. In addition, the prioritization of these purposes is a necessary step. PPP cannot be done with satisfying all parties at the same time. For example, if the country introduces a market competition and weakens a monopoly power of government function, it will be difficult to maximize the sales profits of the existing functional assets. Maximizing fiscal gains and reducing price and revitalizing the industry by the introduction of competition can be a tread-off.

(2) Basic Structure

- **Methodology: On a Case-by-case Basis or with a Master Plan**

We can see two types of countries: some countries proceed PPP on a case by case basis; and other countries proceed PPP under the comprehensive master plan. The countries which privatize relatively small sized enterprises adopted the former method in order to manage characteristics of specific cases. On the other hand, PPP/privatization program under a comprehensive master plan can promote the program efficiently. In addition, it attracts investors and private sectors if they can expect a series of PPP/privatization program in order to invest their resources.

- **Government Institutional Structure: One agency or Separate agencies**

If countries plan relatively a large number of PPP/privatization or different ministries have to coordinate to implement legislative framework, one agency approach is preferable. The most frequently recognized structure is Ministry of Finance initiates the

PPP/Privatization, since the fiscal merit is considered to be the highest incentive. Sometimes special taskforce is established outside of the existing Ministries, so that the objective of the taskforce becomes clear and taskforce members can concentrate the task and promote quick decision-making. However, it is important what kind of authority the taskforce has and members who have enough knowledge can proceed PPP/Privatization in due fairness. On the other hand, a competent authority of targeted business can be a main actor who proceeds PPP/Privatization. Sometimes it is difficult to attract private participation, since each authority adopts different procedures.

- **Legislative Framework: Comprehensive or Sector-Specific**

It is not unusual to enact a new law for PPP/Privatization. Some countries, for example, France, Italy, Austria, take a comprehensive approach to build a general legislative framework for providing a uniform treatment to issues that are common to privately financed projects in different sectors. In other countries, such as England and Germany, adopt specific legislation in respect of individual enterprises/projects. It is difficult to include all issues which are regulated under existing law in order to adopt a comprehensive law, and the amendment of existing law and the supplementary enactment of new law for a specific case will be required.

13.4.2 Implementation Stage

This section considers a broad PPP process which includes PFI, concession, BOT/BOO, and outsourcing. Although these methods have different characteristics on the range of business which will be transferred to the private sector, asset ownership, financiers, duration, and risk sharing, they have a common procedure on selection of private partners.

The first step is clarifying the objectives of the business itself and private participation. The government has to clarify what it expects to the private sector and what kind of knowledge and skills should be required. At the next step, feasibility study will be conducted in order to examine what would be the benefits of introducing PPP, what are the challenges, how can the government deal with these issues, which scheme will be most appropriate, how public and private share works and risks, etc. If the feasibility study shows that adopting PPP method is appropriate, the government will start the selection of private partners. PPP requires financial, legal, technical expertise and professional advisors should be selected. Advisors will support the government to set up practical schemes of PPP projects, legal documents, conditions for bidding, and evaluation methods. After defining detail procedures, the government will issue bidding announcement to the public and request a bid. If there are many bidders, long and short lists will be prepared, and the detailed proposals or price will be requested to the bidders for final selection. The public sector will select the private participant which submitted the most favorable proposal for the public sector, and award the contract.

Please refer the basic PPP procedures at Figure 13.4-1. Procedures are described in Section 13.5.

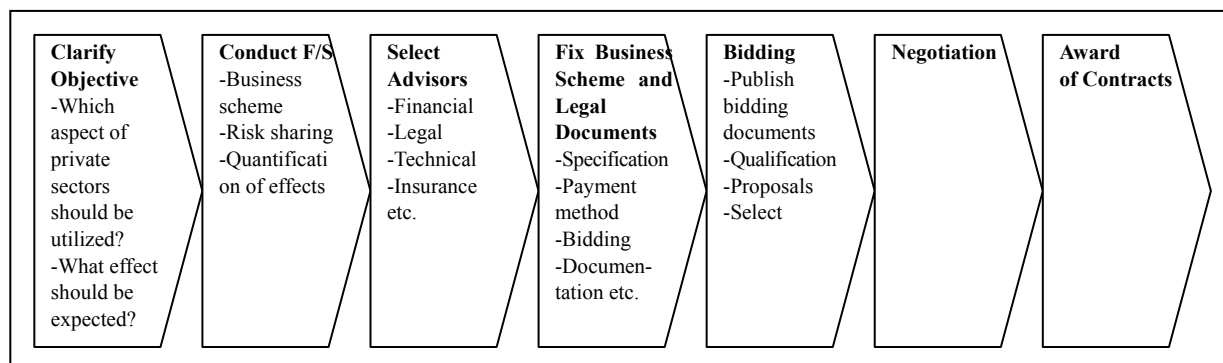


Figure 13.4-1 Procedure of PPP

13.4.3 Tender Regulation

1) General

The Tenders Law 89/1998 governs all supply, service and construction contracts signed with an Egyptian governmental entity and stipulates thresholds of applicable procurement methods depending on the nature of the bidding. In addition, guidelines on tendering (1367/98) was issued by MOF. Government contracting on the purchase of goods, works, and services, including transport, consultancy studies, and technical works, must be by way of public tenders or by public practices (negotiations). A decree issued from a competent authority according to circumstances and the nature of the contract will define any one of the two methods the tender will adopt. Nevertheless, a decree issued from part of the competent authority will exceptionally permit and justify to enter into contract by way of (i) limited tender, (ii) local tender, (iii) the limited practice (negotiation), and (iv) direct agreement.

(i) A limited tender may be used where the nature of the contract requires certain types of suppliers, contractors, consultants, technicians or other experts in Egypt or abroad, provided that they shall have technical and financial efficiency as well as good reputation provisions.

(ii) A local tender may be used where all contracts (up to a value of LE 200,000) are confined to local suppliers.

(iii) Limited practice (negotiations) may be used where items manufactured are only available from certain contractors or certain production locations, where technical works require certain specialists or where national security dictates confidentiality.

(iv) Direct contracting would take place in urgent cases which cannot tolerate applying the tender or the practice (negotiation) procedures, when contract amounts less than LE50,000 for goods and services and LE100,000 for works.

There is no standard government contract except the guideline from MOF. Each Ministry or Government agency uses its own form of contract (conforming to the provisions of the Tenders Law). Public tenders must be advertised in a daily newspaper locally or abroad, depending on the nature of the contract and must ensure equal opportunity and free competition. Although a government contract must be awarded on the basis of the best qualified and lowest bid, and Egyptian domestic contractor is accorded priority if its bid does not exceed the lowest foreign bid by more than 15%.

Each tender must be accompanied by the payment of a provisional deposit up to 2%, which is returned to unsuccessful tenders. A final deposit of up to 5% must be paid by the winner within 10 days of their tender being accepted. The contract may be cancelled if payment of the final deposits is not made and any losses suffered as a direct result may be recovered. A maximum fine of up to 10% of the value of construction contracts and up to 3% of the value of supply contracts and up to 4% for technical assistance contracts may be levied on contractors for late performance or late delivery. The Public Tender Law permits government entities to terminate contracts where the bidder has acted fraudulently, declared bankruptcy or induced government officials to act contrary to the provisions of the Public Tender Law. Tenders may be rejected upon receipt.

2) Public interest and welfare.

If only one tender was submitted, or the lowest tendered price exceeds the estimated value of the contract, a contract may be terminated by the government entity at any time if the contracting party defaults. In case of late performance or non-performance, the concept of force majeure is recognized in accordance with principles of the Egyptian Civil Code, under which certain types of hindrances must be clearly stated in the contract if they are to be considered force majeure (e.g. strikes and shipping delays).

13.5 GUIDELINES FOR SELECTION PROCEDURES AND EVALUATION CRITERIA

13.5.1 Three Objectives of Selection Procedures by UNCITRAL

For the award of contracts for infrastructure projects, the contracting authority may either apply methods and procedures already provided in the laws of the country or establish procedures specifically designed for that purpose. In either situation, it is

important to ensure that such procedures are generally conducive to attaining the fundamental objectives of rules governing the award of public contracts. UNCITRAL set out (i) economy and efficiency, (ii) promotion of the integrity and confidence in the selection process, and (iii) transparency of laws and procedures as general objectives of selection procedures.

(1) Economy and efficiency

In connection with infrastructure projects, “economy” refers to the selection of a concessionaire that is capable of performing works and delivering services of the desired quality at the most advantageous price or that offers the best commercial proposal. In most cases, economy is best achieved by means of procedures that promote competition among bidders. Competition provides them with incentives to offer their most advantageous terms and it can encourage them to adopt efficient or innovative technologies or production methods in order to do so.

“Efficiency” refers to selection of a concessionaire within a reasonable amount of time, with minimal administrative burdens and at reasonable cost both to the contracting authority and to participating bidders. In addition to the losses that can accrue directly to the contracting authority from inefficient selection procedures (owing, for example, to delayed selection or high administrative costs), excessively costly and burdensome procedures can lead to increases in the overall project costs or even discourage competent companies from participating in the selection proceedings altogether.

(2) Promotion of the integrity of and confidence in the selection process

Another important objective of rules governing the selection of the concessionaire is to promote the integrity of and confidence in the process. Thus, an adequate selection system will usually contain provisions designed to ensure fair treatment of bidders, to reduce or discourage unintentional or intentional abuses of the selection process by persons administering it or by companies participating in it and to ensure that selection decisions are taken on a proper basis.

(3) Transparency of laws and procedures

Transparency of laws and procedures governing the selection of the concessionaire will help to achieve a number of the policy objectives. Transparent laws are those in which the rules and procedures to be followed by the contracting authority and by bidders are fully disclosed, are not unduly complex and are presented in a systematic and understandable way. Transparent procedures are those which enable the bidders to ascertain what procedures have been followed by the contracting authority and the basis of decisions taken by it.

One of the most important ways to promote transparency and accountability is to include provisions requiring that the contracting authority maintain a record of the selection proceedings. A record summarizing key information concerning those proceedings facilitates the exercise of the right of aggrieved bidders to seek review. That in turn will help to ensure that the rules governing the selection proceedings are, to the extent possible, self-policing and self-enforcing. Furthermore, adequate record requirements in the law will facilitate the work of public authorities exercising an audit or control function and promote the accountability of contracting authorities to the public at large as regards the award of infrastructure projects.

An important corollary of the objectives of economy, efficiency, integrity and transparency is the availability of administrative and judicial procedures for the review of decisions made by the authorities involved in the selection proceedings.

13.5.2 Special Features of Selection Procedures for Privately Financed Infrastructure Projects

The traditional public procurement also adopts a competitive procedure as a principle. Competitive procedure assures optimal conditions for economy, transparency, and efficiency. Under the traditional selection procedure of goods, services, and works, the specifications and conditions for procurement are set out in advance and proposed price from bidders is the primary factor for the selection of suppliers. On the other hand, PPP approach has several characteristics which require a different methodology for procurement. Under PPP approach, (i) a contract lasts for a long-term; (ii) since the main purpose of the project agreement is not only building a facility but also providing public services, the private sector holds a wide range of responsibility and is not be able to be awarded in a simple contract; (iii) it is not always the best way that the public sector sets out all the details of procurement conditions and a price becomes a dominant factor for the selection; and (iv) rights and duties of the public and private sectors are different from the traditional public sector procurement. These characteristics make it difficult for the government to adopt a simple procurement procedure.

International experience in the award of privately financed infrastructure projects has in fact revealed some limitations of traditional forms of competitive selection procedures, such as the tendering method. In view of the particular issues raised by privately financed infrastructure projects, UNCITRAL set out four areas for the Government to consider adapting particular procedures for the selection of the concessionaire. These four areas include (a) range of bidders to be invited, (b) definition of project requirements, (c) evaluation criteria, and (d) negotiations with bidders. These are partly because (a) PPP projects typically involve complex, time-consuming and expensive proceedings, (b) the output expected from the project is more emphasized than technical details of the works to be performed, and (c) projects are typically expected to be

financially self-sustainable, with the development and operational costs being recovered from the project's own revenue.

13.5.3 Selection and Contract Award

Public and private partners embarking on a PPP choose to develop a long relationship; they want it to last and to be as fruitful and peaceful as possible. For each party, the choice of the adequate partner is of paramount importance. The objective of the bidding process is to choose a suitable partner, on the best possible terms—a partner with the skills, experience, and resources necessary to secure the desired improvements in services to consumers in the most efficient way possible.

To bid or not to Bid. During the selection and award process, the public entity launching the PPP will make efforts to attract the best potential partners. On their side, private firms are eager to find the adequate project in the adequate environment, promoted by public parties with whom they will be willing to enter into partnership. Except in very specific cases, experience has shown the greater efficiency of competitive bidding over direct negotiation. Competition is all the more important when private companies are bidding for a monopoly right to provide services over some period of time (3 to 5 years for a management contract, 25 to 30 years for a concession). On both public and private sides however, not everyone is convinced that competitive bidding is the best way to initiate the close relationship required to develop successful PPPs. Choosing the appropriate selection process should be a Government's first task. This section addresses the question of how to design a bidding process so as to bring this kind of competitive pressure to bear and to get the best possible outcome.

The bidding process is not an isolated event. Rather, it is the beginning of a partnership between the government and a private sector partner. The institutional and regulatory framework established to guide that relationship may, over the long term, have an even more important impact on the quality of outcomes for consumers than the bidding process—and bidders can be expected to take this fact into account. Issues relating to this framework are discussed further in the next section.

The first part of this section discusses the relative strengths of competitive bidding processes and negotiated contracting. The next two parts assume that a competitive approach has been chosen and focus on the design of prequalification procedures and the design of bidding processes. The fourth part looks at final negotiations with the selected private partner and financial closure.

Choosing a Process for Awarding the Contract

Although there are a wide variety of possible contract bidding and award procedures, they can be grouped into three categories:

- Competitive bidding.
- Competitive negotiations.
- Direct negotiations.

Competitive bidding. The International Financial Institutions emphasized the importance of the competition⁷. Competition "in the market is not easily introduced in PPPs. Such projects are regulated by long-term contracts and once the agreement is signed, the private party enjoys a quasi-monopolistic situation. When the private operator is being paid by the Government, prices are usually pre-determined by the contract and only fluctuate to a very limited extent. When the operator gets its revenue from road users (mainly toll roads), the competition it faces is limited to possible alternative free roads that the user could use if not satisfied by the service offered for the price he pays.

The selection process provides an opportunity to bring in fair competition "for" the market and optimize the quality of the services to be delivered over the cost of the project for the community.

A competitive bidding process generally has the following parts:

- Public notification of the government's intention to seek a private partner for the provision of public services, including a request for expressions of interest from private companies.
- Distribution of bidding documents and draft contracts to potential bidders.
- A formal process for screening potential bidders and finalizing a list of qualified bidders.
- A formal, public process for presenting proposals, evaluating them, and selecting a winner.

The main advantages of competitive bidding: (i) It ensures transparency; (ii) it provides a market mechanism for selecting the best proposal; and (iii) it stimulates interest among a broad range of potential partners.

The main disadvantages: It works best where outputs are standardized and all technical parameters can be clearly defined. It may encourage underbidding if renegotiation is possible later.

Designing a competitive bidding process—and getting the best possible result with it—is easiest when the product or service required is a fairly standard one and the technical outputs can be defined with reasonably certainty in the bidding documents.

⁷ The World Bank, Toolkit for Public Private Partnership.

Competitive negotiations. Competitive negotiations, a variant on competitive bidding, generally involve the following stages:

- The government specifies its service objectives, and seeks proposals from private operators for meeting these objectives, through a request for proposals.
- The government reviews the proposals and selects those that are technically responsive to the request for proposals.
- The government then negotiates contract terms and conditions with the selected bidders.

Competitive negotiations may involve simultaneous negotiations with two or more bidders with the objective of awarding one contract, or they may result in the award of several contracts. Competitive negotiations are well suited to projects in which many technical variations are possible, there is much scope for innovation, and it would be difficult to secure project financing on the basis of standardized contract documents.

The approach has some risks, however. In particular, it is less transparent than a pure competitive bidding approach. Evaluating proposals on a variety of technical and price grounds increases the opportunities for giving preference to favored bidders. The government can try to reduce this risk by specifying publicly, and as clearly as possible, what the evaluation criteria will be, by standardizing the negotiation processes across bidders, and by keeping a detailed record of the process.

The main advantages of competitive negotiations: (i) They permit bidders to be more creative and innovative; (ii) they reduce the incentive for bidders to deliberately underbid in order to win projects; and (iii) they offer a richer means of screening bidders than price alone.

The main disadvantages: (i) Bids can be difficult to compare; and (ii) competition is less transparent than with competitive bidding.

Direct Negotiations. Direct negotiations occur most often where a project idea originates with a private sector sponsor rather than with the government. A developer or operator seeks to negotiate directly with a government or a public utility the terms and conditions for a management contract, BOT, or concession. Allowing direct negotiations can be a good way of attracting innovative projects and securing private sector involvement in smaller cities and towns (where the costs of entering competitive bidding contests may be high relative to the expected returns). But direct negotiations make it difficult to ensure transparency in the selection process and an efficient outcome. Without competition, it is much harder to assess the reasonableness and cost-effectiveness of a proposal. And direct negotiations can increase the risk of reversal for a contract, especially where there is some public resistance to privatization.

The main advantages of direct negotiations: (i) They provide incentives for private companies to find innovative solutions to local service problems; and (ii) where the costs of competitive bidding would be high relative to expected revenues (as in small towns), they increase the chance of private sector interest.

The main disadvantages: (i) The approach lacks transparency; (ii) the absence of competition reduces pressures for cost-effectiveness; and (iii) political sustainability may be a problem.

If direct negotiations are allowed, governments must take extra steps to ensure transparency and efficiency. For example, a government might establish an independent advisory panel to advise on whether direct negotiations are appropriate for a particular project. Requiring all contracts to be approved by the representative body of the government (national or local) and audited by the government auditor could enhance transparency. And assessing proposed projects using benchmark comparisons of construction costs or service tariffs from comparable projects and operations could increase the chances of an efficient outcome. (But comparable projects might not be easily identified.)

Although most governments state a preference for competitive bidding to select private partners, some allow direct negotiations under certain circumstances and have adopted rules for handling them aimed at reducing their risks.

Summary

In general, the more competitive and transparent the process for choosing a contractual partner, the greater the likelihood that the best possible deal will be achieved and that the deal will be politically sustainable. For these reasons, most governments—and also multilateral agencies such as the World Bank—favor or explicitly require competitive bidding of private sector contracts. As many countries have laws that explicitly forbid direct negotiations, in Egypt the direct contracting is limited to mainly at urgent cases.

As indicated above, however, there may be circumstances that make it difficult to achieve perfectly competitive bidding. If information about what is being bid is substantially incomplete, for example, or there are a range of possible solutions to the service problems the government tries to solve, the government may wish to enter into a dialogue with potential bidders to work out how best to specify the contracts. This approach does not preclude competition, but it does reduce transparency and the chance that bidders will be able to bid on equal terms. In these cases governments might need to implement special rules, processes, and auditing procedures to ensure that the best possible partner is found, on the best possible terms, and that the resulting deal will stand up to political scrutiny.

13.5.4 Bidding Procedure

Pre-qualifying Bidders

A government entering into a contract for private sector participation in infrastructure is establishing a long-term relationship with its contractual partner. To be confident that the relationship will work, it needs to be able to assess the quality of the partner's bid (what it promises to do and on what terms), but also whether the partner is truly qualified to do what is needed. Prequalification is a way to ensure that potential bidders have the technical and financial capacity the task demands and a track record in performing similar tasks.

Prequalification can also reduce the costs of bidding processes. Those involving large numbers of bidders can be complex and costly—without necessarily increasing the quality of the winning bid. For this reason, governments often choose to limit bidding to a few prequalified firms. Limiting the number of bidders can also increase firms' motivation to participate in bidding, because it increases each bidder's chance of winning.

Prequalification criteria generally include some combination of the following:

- Minimum share capital of the bidder company.
- Length of experience in the business.
- Size of the customer base currently served by the bidder company.
- Number of countries in which the bidder has similar experience.
- Efficiency and performance of recent projects.

The criteria may be either qualitative or quantitative. Qualitative criteria allow greater flexibility and discretion, but they are also less transparent and more likely to produce complaints by bidders that fail to prequalify.

The Bidding

In a bidding process, prospective private partners make proposals that set out the terms under which they are willing to provide the services required by the government. Ensuring that the proposals are high quality requires detailed planning and decision-making by the government. The first step is to design the bidding process, which calls for decisions about:

- The information to be provided to bidders and the form in which it is to be provided.
- The extent to which there will be discussions with bidders before the formal bidding begins and the form these discussions will take.

- The instructions to bidders on what their proposals should contain.
- The rules and scoring mechanisms that will be used to evaluate bids.
- How complaints and appeals will be handled.
- The timetable for bidding.

Information for Bidders

The better the information available to bidders about the state of business and about what the government wants a private partner to do, the better the chance that:

- Bidders will be able to prepare bids that are responsive to the government's requirements.
- Bidders will have a common understanding of what is needed and can enter bids that are competitive with one another.
- The risk of complaints about fairness and transparency—both from bidders and from political critics—will be kept to a minimum.

Preparing and assembling this information will be one of the primary tasks of the advisers assisting the government with the transaction. Information which will be made available for bidders include:

- (i) the set of bidding documents provided to bidders, focus on the form of private sector arrangement that the government seeks and the form that proposals should take, including draft contractual documents; and
- (ii) the state of the infrastructure business including the results of technical audits and evaluations, financial information, information on staffing.

Bidding documents often include background (National development plan, the rationale of PPP tender, project description, authority in the Government), schedule of the tender, requirements for submission of tender, technical information required (conceptual design and work details, operation and maintenance details, tolling system, traffic forecasts), commercial information required (implementation entity, guarantee and/or insurance), financial information required (financial strategy and funding commitment), and evaluation criteria.

Prebid Contacts with Bidders

In deciding what form a private sector arrangement should take, governments need to think not only about what they would like to happen, but also about how the private sector is likely to react to their proposals. For example, a government might want the private sector to make large investments in new capacity and take all the commercial risks associated with them—only to find that the private sector judges its country to be too high a risk to do so. Or a government might assume that local circumstances are so

unattractive that the best it can hope for is a fixed fee management contract—and unknowingly preclude initiatives by private companies that would be prepared to take more commercial risk.

To come up with the best possible private sector arrangement—and avoid surprises at the bidding stage—it is generally a good idea to have informal discussions with bidders before finalizing the bidding documents. Bidder feedback on early drafts of the bidding documents or regulatory design can help identify changes that would make the transaction more attractive to private firms with no loss to the government or other stakeholders—and result in better, more affordable bids.

13.5.5 Selection Criteria and Phases of the Procedure

There are two broad approaches to establish bid selection criteria⁸. The first is based on a qualitative scoring of technical and financial proposals: the second is based on objective and quantifiable factors such as the maximum toll rate or the minimum government contribution to the project. The qualitative scoring approach allows the selection committee to consider a range of important factors in choosing a concessionaire. It also affords the concessionaire the flexibility to propose innovative solutions. This approach, however, generally requires comparing non-uniform proposals on a somewhat subjective basis, and thus reduces the transparency and competitiveness of the process.

The objective approach allows for a transparent and competitive process focused on the factors of most importance to the government. This approach, however, requires that all other actors, such as road design and risk-sharing terms, be held constant. Doing so may limit the private sector's flexibility to propose what it considers to be an optimal project. In addition, when this approach uses numerous factors that are evaluated through a formula, the competitive focus on the one or two most important factors may be diluted.

The decision between having a single or a two-stage procedure for requesting proposals will depend on the nature of the contract, on how precisely the technical requirements can be defined and whether output results are used for selection of the concessionaire.

UNCITRAL recommends a two-stage procedure for privately financed infrastructure projects, when it is not feasible for the contracting authority to formulate project specifications or performance indicators and contractual terms in a manner sufficiently detailed and precise to permit final proposals to be formulated⁹.

⁸ The World Bank, "Private Financing of Toll Roads," 1996

⁹ UNCITRAL Recommendations

One-stage procedure. When the Government has a precise idea on the technical options and specifications to be chosen, private participants are asked to submit bids in strict accordance with the specifications imposed by the Government. Final selection is made on a price basis alone and little room for negotiation is left to the selected candidate.

Two-stages procedure. In particular when uncertainties remain on technical options to be retained, it may be undesirable or impractical to prepare complete technical specifications in advance. This is typical for large and complex PPP projects. In such a case, a two-stages bidding procedure may be used. In stage one, technical proposals based on a conceptual design or performance specifications are invited. They then are subject to technical and commercial clarifications and adjustments. In stage two, amended bidding documents are issued and final technical proposals and priced bids are submitted and evaluated.

Bid Contents and Evaluation

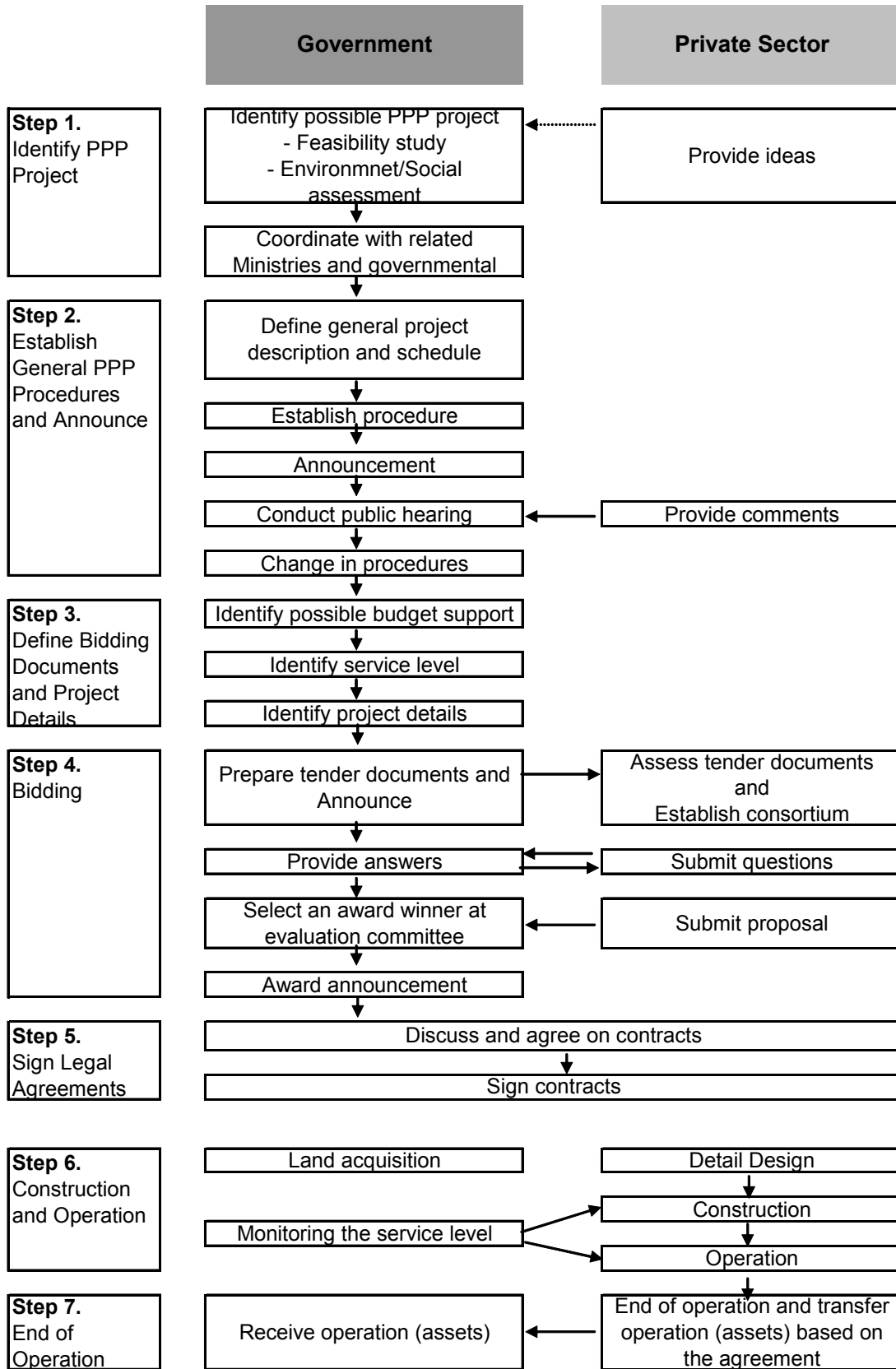
Bid requirements and evaluations will differ according to such factors as:

- What kind of private sector arrangement is sought (bids for management contracts will differ from bids for concessions).
- How complete the available information is.
- How fully the services being sought can be technically specified.

Most projects use a two-stage bidding system in which bidders submit a technical envelope and a financial envelope.

The technical envelope may have purposes ranging from simply obtaining an indication of firms' fitness and willingness to participate in bidding, to eliciting detailed proposals from bidders on how they would satisfy the government's requirements.

Illustrative PPP Process



13.6 CONTRACT

13.6.1 Types of Contract

(1) Service Contracts

Service contracts secure private sector assistance for performing specific tasks—installing or reading meters, monitoring losses, repairing pipes, or collecting accounts. They are typically for short periods, from six months to two years. Their main benefit is that they take advantage of private sector expertise for technical tasks or open these tasks to competition. They leave the responsibility for coordinating these tasks with the public utility managers. They also leave the responsibility for investment with the public sector.

Although relatively simple, service contracts must be carefully specified and monitored. If a utility is poorly managed, its service contracts probably will be too. Service contracts are at best a cost-effective way to meet special technical needs for a utility that is already well managed and commercially viable. They cannot substitute for reform in a utility plagued by inefficient management and poor cost recovery.

(2) Management Contracts

Management contracts transfer responsibility for the operation and maintenance of government-owned businesses to the private sector. These contracts are generally for three to five years. The simplest involve paying a private firm a fixed fee for performing managerial tasks. More sophisticated management contracts can introduce greater incentives for efficiency, by defining performance targets and basing remuneration at least in part on their fulfillment. To be worthwhile, these more complex management contracts must produce efficiency gains large enough to offset the regulatory costs of establishing targets and monitoring performance against them.

Specifying clear and indisputable targets is often difficult, especially when information about a system's current performance is limited. Some targets may be beyond the private sector partner's power to achieve. Because management contracts leave all responsibility for investment with the government, they are not a good option if a government has as one of its main objectives accessing private finance for new investments. And because they do not necessarily transfer any of the commercial risk to the management contractor, they draw little on private sector incentives to reduce costs and improve the quality of services.

Management contracts are most likely to be useful where the main objective is to rapidly enhance a utility's technical capacity and its efficiency in performing specific tasks, or to prepare for greater private involvement.

Management contracts-a step towards greater private sector participation

Management contracts can be a good first step toward more full-fledged private sector involvement where conditions make it difficult for the government to commit to a long-term arrangement or to induce the private sector to undertake capital investment or accept commercial or political risk. A management contract might be chosen, for example, where:

- Tariffs/user fees are too low to support a commercial operation, and the government needs time to increase tariffs/user fees or develop a system of public subsidies compatible with private sector participation.
- The regulatory framework has defects that need to be remedied before a long-term private sector arrangement can be secured.
- The country lacks a good track record in public-private partnerships.
- The government faces difficulties in getting key stakeholders to agree to long-term involvement of the private sector.

In such conditions a management contract can provide a window of opportunity for developing trust between the public and private sectors and for the government to create an environment more conducive to private sector risk-taking.

Where lack of information about the system is a problem, a requirement to collect and disseminate this information can be included in the management contract. But making the contract holder responsible for gathering information could give it an advantage in bidding for a longer-term lease or concession. Appointing an independent engineer or auditor can help ensure equitable access to the information produced by the management contractor.

(3) Leases

Under a lease arrangement a private firm leases the assets of a utility from the government and takes on the responsibility for operating and maintaining them. Because the lessor effectively buys the rights to the income stream from the utility's operations (minus the lease payment), it assumes much of the commercial risk of the operations. Under a well-structured contract the lessor's profitability will depend on how much it can reduce costs (while still meeting the quality standards in the lease contract), so it has incentives to improve operating efficiency.

Leases leave the responsibility for financing and planning investments with the government. So if major new investments are needed, the government must raise the finance and coordinate its investment program with the operator's operational and commercial program.

Leases are most appropriate where there is scope for big gains in operating efficiency but only limited need or scope for new investments. Leases have also sometimes been advocated as stepping stones toward more full-fledged private sector involvement through concessions. But their administrative complexity and the demands they place on governments for commitment are nearly as great as those of concessions, so a lease is a much bigger first step than a management contract.

"Pure" leases are rare, however. Most place some responsibility for investment on the private partner, if only for rehabilitation works. These contracts operate as a hybrid between a lease and a concession contract.

(4) Concessions

A concession gives the private partner responsibility not only for the operation and maintenance of a utility's assets but also for investments. Asset ownership remains with the government, however, and full use rights to all the assets, including those created by the private partner, revert to the government when the contract ends—usually after 25 to 30 years. Concessions are often bid by price: the bidder that proposes to operate the utility and meet the investment targets for the lowest tariff wins the concession. The concession is governed by a contract that sets out such conditions as the main performance targets (coverage, quality), performance standards, arrangements for capital investment, mechanisms for adjusting tariffs, and arrangements for arbitrating disputes.

The main advantage of a concession is that it passes full responsibility for operations and investment to the private sector and so brings to bear incentives for efficiency in all the utility's activities. The concession is therefore an attractive option where large investments are needed to expand the coverage or improve the quality of services.

On the government's side, administering a concession is a complex business, however, because it confers a long-term monopoly on the concessionaire. The quality of regulation is therefore important in determining the success of the concession, particularly the distribution of its benefits between the concessionaire (in profits) and consumers (in lower prices and better service).

(5) Build-Operate-Transfers Contracts –

Build-operate-transfer (BOT) arrangements resemble concessions for providing bulk services but are normally used for greenfield projects. In a typical BOT arrangement a private firm might undertake to construct a new infrastructure, operate them for a number of years, and at the end of the contract relinquish all rights to them to the public entity. The government or the utilities would pay the BOT partner for services from the

project, at a price calculated over the life of the contract to cover its construction and operating costs and provide a reasonable return. The contract between the BOT concessionaire and the utility is usually on a take-or-pay basis, obligating the utility to pay for a specified quantity of services whether or not that quantity is consumed. This places all demand risk on the utility. Alternatively, the utility might pay a capacity charge and a consumption charge, an arrangement that shares the demand risk between the utility and the BOT concessionaire.

(6) Full or Partial Divestiture

Divestiture of infrastructure assets—through a sale of assets or shares or through a management buyout—can be partial or complete. A complete divestiture, like a concession, gives the private sector full responsibility for operations, maintenance, and investment. But unlike a concession, a divestiture transfers ownership of the assets to the private sector, so the nature of the public-private partnership differs slightly. A concession assigns the government two primary tasks: to ensure that the utility's assets—which the government continues to own—are used well and returned in good condition at the end of the concession and, through regulation, to protect consumers from monopolistic pricing and poor service. A divestiture leaves the government only the task of regulation, since, in theory, the private company should be concerned about maintaining its asset base.

But private companies may not always take the long view. Even with an asset sale, the regulator may need to scrutinize the utility's plans for renovating or enhancing its assets. In England and Wales the regulator requires utilities to report the serviceability of their assets.

13.6.2 Contents of Contractual and Regulatory Documents

Basic factors to be included

Each of the three types of contract—concession, BOT, and management—needs to address the following issues:

- parties to the contracts that constitute the arrangement
- object and scope of the contractual arrangement
- duration of the arrangement, events for early termination
- obligations and rights of the concessionaire
- obligations of the Government
- key regulatory provisions
- key risks to be managed

- performance to be measured and monitored; key performance indicators
- assets (including land) transfer
- consents required
- disputes resolution

Details check points for Concession Contract are in the Appendix 13.1.

13.7 PRINCIPLE OF WORK AND RISK SHARING BETWEEN THE PRIVATE AND PUBLIC SECTORS

Basic Concept of Work and Risk Sharing

The substance of the project agreement is defining risk allocation between the public sector and the private sector and clarifying who takes what kind of risks according to the project structure. When cashflow generated by the project will be used as a source to pay back the funding costs under PPP scheme, the project agreement needs to identify factors which will affect project cashflow and define entities who will take a responsibility for additional costs due to the change of these factors during the contract period.

Although each risk associated with the project specifics needs to be reviewed for the decision of risk sharing, in principle, the implementation/operating risks of the project will be undertaken by the project implementing agency who are allowed to define detail services. Each risk transfer from the public sector to the private sector must be realized when the private sector is best able to manage or absorb each particular risk. Excess risk transfer will cause additional costs for the private sector and the project will not be able to achieve maximum VFM.

In this sense, the project agreement has to be tailored for each project. However, the illustrative work and risk sharing is discussed in this section, assuming set-up of MEA and gradual shift to DBFO scheme. Details are in the Appendix 13.2 and 13.3.

13.7.1 Illustrative Work Sharing for Cairo Expressway PPP

Even when the government conducts public services on road under a traditional public procurement, a part of public works, such as construction and maintenance, has been undertaken by the private sector. The major interest of the government is procuring the cheapest upfront capital expenditure, while the private sector is responsible for delivering an asset on time and budget.

In contrast, PPP requires the private sector to compete to deliver services over the

long-term at the most economically advantageous price. The public sector is not interested in simply procuring the cheapest upfront capital expenditure, as with traditional procurement where the private sector is indifferent to higher maintenance costs thereafter. With PPP, the public sector is looking to achieve the best value over the life of the asset and project. Private sector has to design and implement projects with a view to their long-term cost to the taxpayer rather than the immediate capital spend.

For expressways in general, land acquisition and relocation works are usually remained in the public sector. Ownership of the road assets is another item which needs to be considered. Usually this is retained by the party that also bears the financing risks as the assets are often utilized and required as security for mobilizing funding. In Egypt, concessionaires had not been generally allowed to own infrastructure assets¹⁰. However, in order to correct this constraint for private sector participation, Presidential Decrees have been issued on each BOT transaction.

We assume that design, construction management, construction work, toll collection, clearance of traffic accident, maintenance management, maintenance work, and rehabilitation work will be transferred to the private sector. Toll collection is a labor intensive work so that this function will be transferred to the private sector in order to avoid enlarging MEA and increasing operation cost. Output based and package contract will delegate construction and maintenance management to the private sector in an efficient manner and minimize MEA's role and organization.

On the other hand, the government including MEA would be responsible for core roles such as setting up a new institutional framework, conducting overall planning, coordinating, undertaking most of the financing responsibilities and related risk including currency risk.

Based on our analysis on the expressway projects and road sector development, we provide general concept of work sharing between GOE/MEA and the private sector as shown in Table 13.7-1. Detailed proposed work sharing is in Appendix 13.2.

¹⁰ In case of airport sector, concession holder could not normally own airport asset, including land development and buildings erected on it, which deprived lenders of collateral rights and resulted in less favorable financing terms.

Table 13.7-1 Summary of Work Sharing among GOE, MEA and Private

Work sharing	GOE	MEA	Private
Establishing institutional framework	++	*	
Network planning	*	++	
Financing	*	++	*
Negotiation and monitoring private sector		++	
Land acquisition	*	++	
Design approval & Construction management		*(early stage)	++
Design & construction work			++
Traffic management	*	++	
Toll collection		*	++
Clearance of traffic accident			++
Maintenance management		*(early stage)	++
Maintenance work			++
Upgrading & rehabilitation planning		++	
Upgrading & rehabilitation work			++

++: main , *: sub

13.7.2 General Principle of Risk Sharing for Cairo Expressway PPP

Various risks are defined and allocated to appropriate parties who are able to manage risks in minimum costs. Taking the above assumption on work sharing into account, proposed risk sharing matrix is shown in Table 13.7-2. Detailed proposed risk sharing is in Appendix 13.3. UNCITRAL defines main risks as noted below.

Force Majeure: The parties face the risk that the project may be disrupted by unforeseen or extraordinary events outside their control, which may be of a physical nature, such as natural disasters—floods, storms or earthquakes—or the result of human action, such as war, riots or terrorist attacks. Such unforeseen or extraordinary events may cause a temporary interruption of the project execution or the operation of

the facility, resulting in construction delay, loss of revenue and other losses. Severe events may cause physical damage to the facility or even destruction beyond repair. This risk will be

Political Risk: The project company and the lenders face the risk that the project execution may be negatively affected by acts of the contracting authority, another agency of the Government or the host country's legislature. Such risks are often referred to as "political risks" and may be divided into three broad categories: "traditional" political risks (for example, nationalization of the project company's assets or imposition of new taxes that jeopardize the project company's prospects of debt repayment and investment recovery); "regulatory" risks (for example, introduction of more stringent standards for service delivery or opening of a sector to competition) and "quasi-commercial" risks (for example, breaches by the contracting authority or project interruptions due to changes in the contracting authority's priorities and plans). In addition to political risks originating from the host country, some political risks may result from acts of a foreign Government, such as blockades, embargoes or boycotts imposed by the Governments of the investors' home countries.

Construction and Operation Risks: The main risks that the parties may face during the construction phase are the risks that the facility cannot be completed at all or cannot be delivered according to the agreed schedule (completion risk); that the construction cost exceeds the original estimates (construction cost overrun risk); or that the facility fails to meet performance criteria at completion (performance risk). Similarly, during the operational phase the parties may face the risk that the completed facility cannot be effectively operated or maintained to produce the expected capacity, output or efficiency (performance risk); or that the operating costs exceed the original estimates (operation cost overrun). It should be noted that construction and operation risks do not affect only the private sector.

Commercial Risks (Traffic demand and toll revenue risks): "Commercial risks" relate to the possibility that the project cannot generate the expected revenue because of changes in market prices or demand for the goods or services it generates. Both of these forms of commercial risk may seriously impair the project company's capacity to service its debt and may compromise the financial viability of the project.

Exchange rate and other financial risks: Exchange rate risk relates to the possibility that changes in foreign exchange rates alter the exchange value of cash flows from the project. Prices and user fees charged to local users or customers will most likely be paid for in local currency, while the loan facilities and sometimes also equipment or fuel costs may be denominated in foreign currency. In addition to exchange rate fluctuations, the project company may face the risk that foreign exchange control or lowering reserves of foreign exchange may limit the availability in the local market of

foreign currency needed by the project company to service its debt or repay the original investment.

Another risk faced by the project company concerns the possibility that interest rates may rise, forcing the project to bear additional financing costs. This risk may be significant in infrastructure projects given the usually large sums borrowed and the long duration of projects, with some loans extending over a period of several years.

Risk Category	Allocation
Political/Legislative and Regulatory	The Government is often best placed to control regulatory and legislative risks.
Force Majeure	Neither the Government/MEA nor the private sector can control this risk. However, the Government is often takes or shares the risks, since the risk will not be able to be managed by the private sector.
Network Planning	The national and local government will be responsible for their own development plan, while MEA will be responsible for technical network planning.
Devaluation and Exchange Rate	The Government will have a control on exchange rate policy and often plans for currency risk mitigation measures with its foreign reserve. An implementing agency (MEA or the private sector) will take some exchange rate risks which can be mitigate by tools available in foreign exchange markets.
Other Financing	An implementing agency will take interest rate risks and other financial risks and some risks will be able to be mitigate by tools available in financial markets.
Inflation	Inflation risks on the price of basic utilities are often transferred to consumers and will be able to indexed in the toll level setting.
Land Acquisition	Land acquisition often requires the Government commitment on the land acquisition plan, and MEA which conducts land acquisition will take a main financial and implementational risks.
Traffic Demand and Toll Revenue	Traffic demand in urban area is difficult to forecast and it depends on building alternative routes and urban transportation. The risks will be retained by the Government/MEA or shared with the private sector.
Design, construction and operation	The risks will be transferred to contractor.

Table 13.7-2 Summary of Risk Sharing among, GOE, MEA, Private and Expressway Users

Risk Category	GOE	MEA	Private	Expressway Users
Political risk	++			
Legislative and regulatory risk	++	*		
Force majeure	*	++		
Network planning risk	*	++		
Devaluation and exchange rate risk	++	*		
Interest rate risk		++	*	
Financing risk		++	*	
Inflation risk		*	*	++
Land acquisition risk	*	++		
Traffic demand and toll revenue risk	*	++	*	
Design and construction risk			++	
Operation risk (MEA's responsibility)		++		
Operation risk (Private sector's responsibility)			++	

++: main, *: sub

CHAPTER 14

CONCLUSIONS AND RECOMMENDATIONS

CHAPTER 14

CONCLUSIONS AND RECOMMENDATIONS

14.1 CONCLUSIONS

Justification of Cairo Urban Toll Expressway Network:

- Cairo Urban Toll Expressway Network is formulated under the comprehensive Urban Transport Master Plan of “CREATS”, and reviewed under this “Cairo PPP” Study as a component of the systematic approach to cope with present and future transport and traffic issues and problems in Greater Cairo Region.
- The development of Cairo Urban Toll Expressway Network has the objectives of:
 - To reduce traffic congestion in Greater Cairo Region
 - To provide alternative high level-of-service facility of expressways to roads users
 - To increase traffic efficiency on the at-grade street network
 - To contribute to the provision of preferable social and urban environment.
 - To contribute to the national, regional and urban socioeconomic development
 - To promote planned urban development and new communities
- The urgent need to implement the Urban Toll Expressway Network is recognized through the existing traffic problematic situations with huge losses in the transport cost and deterioration in urban environment. For the maximum efficiency of the Urban Transport Master Plan (CREATS), a total length of about 80 kilometres of elevated expressways should be constructed by the target year of 2022.
- With the current traffic and transport problems in Greater Cairo, more road network capacity is basically required. However, it is extremely difficult to widen the existing streets and in the same time it is almost impossible to construct new major streets in the highly dense areas in Cairo. The option of constructing elevated expressways is a viable option taking into consideration that there is no need for acquiring land for the Right of Way or for the resettlement of people.
- The evaluation results of the expressway plan show high traffic efficiency parameters, such as the increase in average travel speed of all vehicles on the at-grade network by about 25% and on the elevated expressways by about 80%. However, the decrease in the average volume/capacity ratio is expected to come down from 1.95 to 0.92 on the elevated expressways and only from 1.45 to 1.38 on

the at-grade network and from 1.95 to 0.92 on the elevated expressways.

- The Plan is justified to be economically feasible with the following economic indicators (based on an annual discounted rate of 10% and constant 2005 prices):

EIRR:	38.8%
NPV:	11,508 L.E. million
B/C:	3.44

- In addition to the direct and indirect benefits of the Expressway Network, such as promoting urban and national socioeconomic development and improving living standards, the Expressway Network is also financially viable with 17.2% of FIRR (based on constant 2005 prices) and a revenue/cost ratio of 1.41.
- The Cairo Urban Toll Expressway Network can be implemented by applying normal construction methods and techniques for most of the network sections. There are 2 newly planned bridges on the River Nile that may require advanced techniques in order to match the scenic view and landscape.
- Still, however, a detailed economic, environmental and technical feasibility study on the high priority expressways is required to be carried out as early as possible as presented in the implementation schedule of the network.

Urban Toll Expressway Network Development:

- For the sustainable development of the expressway network, a multi-functional prioritization criterion is established, in line with the objectives of the expressway network, to provide optimum efficiency for each implementation stage.
- The implementation program of the Expressway projects provides a timeframe on an annual basis up to CREATS target year of 2022. In addition, more expressways are proposed for later years that can be introduced based on the updating process of network function and requirements as far as financial resources are secured.
- When comparing the different scenarios of applying toll on expressway sections, it is concluded that applying toll on the newly constructed expressways together with the existing elevated roads of 6th of October (E1) and 15th of May (E2) as well as the Ring Road is the most optimum scenario. It gives the highest economic and financial viability and also provides a part of the PPP financing program toward the development of the whole expressway network.

- For the successful implementation of the Urban Toll Expressway Network, a new autonomous organization, called “Metropolitan Expressway Authority (MEA)”, with new ideas and energy is required to be established as an irreplaceable prerequisite. It will function as the Core Task Force for the promotion of the project and for managing both public and private sector activities through the implementation, maintenance and operation of the expressway network.
- A flat toll rate is applied for two categories of vehicles; light and heavy, based on the analysis of different socioeconomic parameters and the completed sections of the expressway network, however, more social and political aspects should be considered under future feasibility and updating studies.

	<u>Light</u>	<u>Heavy</u>
2012 – 2015	LE 2	4
2016 – 2018	3	6
2019 – 2022	5	10

- The toll rate will be subject to an adjustment mechanism that considers inflation rates, foreign exchange rates and the transport cost of other modes in addition to the total length of the expressway network under operation.

High Priority Expressways:

- Results of the Study show that early implementation of High Priority Expressways is urgently required. More detailed feasibility studies on several issues, including technical, financial, institutional, social and environmental aspects, should start as early as possible to cope with present traffic situations and to transit from planning stage to implantation stage.
- High priority expressways include the extensions of existing elevated roads of 6th of October (E1) and 15th of May (E2) in addition to E3 that runs from Nasr City to Giza Square along the Autostrade and Salah Salem roads.
- The total cost required for the 22.8 km length of the High Priority Expressways is about LE Billion 2.5 (excluding price escalation), including one new bridge over the River Nile (beside the existing Giza Bridge). Benefits by implementing these roads prove high economic and environmental viability, with the following economic indicators (based on a discounted rate of 10% and constant 2005 prices):

E1+E2:

EIRR :	48.7%
NPV:	4,945 L.E. million

B/C: 9.84

E3; which includes the 3 sections of E3-1, E3-2 and E3-3:

EIRR : 20.4%

NPV: 3,331 L.E. million

B/C: 2.85

- Annual reduction in air pollutants for the year 2022 by implementing the High Priority Expressways (E1+E2+E3) is estimated as:

HC: 19.82 Ton

CO: 163.74 Ton

NOx: 19.35 Ton

- The above findings and indicators should be verified during the feasibility study on the high priority toll expressways, which is to include the design and other aspects for technical, economic and financial viability. In addition, it may include a detailed environmental impact assessment study that is required to provide mitigating measures for any negative social or physical impact that may occur.

PPP Program:

- As a prior, the PPP program for the implementation of Cairo Urban Expressway Network should be launched by the Government as the political commitment in order to establish MEA and other steps required to proceed in the implementation process.
- PPP involves contracts between the public and private sectors for infrastructure development and management where risks are shared between the parties. Risks are allocated to the party which is best able to manage, and therefore minimize, the cost of risks. The term PPP covers a range of different structures which can be used to deliver a project or a service from relatively short term management contracts through concession contracts to joint ventures and partial privatizations.
- Under PPP approach, the public sector is ultimately accountable for service provisions, although the private sector designs, builds, operates and maintains infrastructure. PPP ensures provision of services by using private-sector management skills and finance capabilities at lower cost and better quality.
- While growing interest in PPPs exists globally, experience of PPPs is limited. UK stands out as having the longest and most substantial experience of PPPs. Progress of countries appears to have more to do with the interest in PPPs and the political

will to promote them shown by individual governments. The complexities of procurements and the needs to develop an institutional capability resulted in progress being slow initially.

- The slow progress has often related to deficiencies in legal and institutional frameworks in various countries and also to questions about whether value for money is being provided in the PPP. However, with many countries now initiating legislative changes and developing institutions to encourage PPP, a surge in these transactions elsewhere in the world may be expected.
- For the Cairo Urban Toll Expressway Network, the phased approach is proposed:
 - Phase I: establishing implementation framework and building capacity
 - Phase II: implementing network development with promoting PPP
 - Phase III: increasing private participation, such as privatizing MEA
- In the first phase, the government will build and strengthen its basic structure for project implementation, such as establishing a new organization which promotes Cairo Urban Expressway, introducing toll systems with inflation adjustment rule, and adopting necessary legislation. Private participation will be promoted but limited to outsourcing of toll collection and operation and maintenance functions under performance based contracts.
- In the second phase, the private sector will finance a part of the Expressway network, covering its costs by tolls from users through cross subsidy mechanism and, if necessary, government's payments for the services private sector provides. Payments from the government will be paid based on the service level of the private sector.
- In the third phase, which may be considered in later years after completing the urban toll expressway network in 2022, the private sector participation may be increased through the privatization of MEA.
- Government funding will be required, but due to the relatively large size of the project, it is not realistic for the government to cover all capital and operation costs of the Expressway network. At the same time, although toll revenue is expected to be substantial resources for future construction and operation of the network, it will be difficult to collect enough toll revenues to cover all costs for the initial construction of the network.
- It is proposed to utilize concessional loans, such as ODA (Official Development

Assistance) funds and national bank loans, to lower financial burden for an organization owns the network. In addition, private sector participation will require capital subsidy from the government and demand risk sharing with the government in order to lower financing requirements of the private sector down to the level affordable by toll revenues.

- Main factors for the success of PPP projects with regard to legislative issues can be summarized in three areas: (i) appropriate and effective transfer of businesses from the public sector to the private sector; (ii) effective and efficient selection process of proposals from the private sector; (iii) appropriate risk allocation among the public sector and private participants.
- Analysis of the cash-flow of the “Base Case” (in which the network will be implemented by 2022 applying the previously presented low flat toll rates) of toll setting shows high funds requirement in periods of construction of new Expressways, especially the period during 2014-18, which requires private sector participation for network financing for the sustainable development.

14.2 RECOMMENDATIONS

Political Commitment:

- The Master Plan authorization is vital for systematic implementation of the planned expressways as scheduled, so that all efforts can be integrated toward the same targets at the optimum timing.
- The institutional set-up toward the establishment of autonomous MEA is a very important issue because building the institutional framework obviously needs huge coordination, negotiation, consultation and documentation with timely decision making. The MEA secretariat should be led by a high ranking official who has sufficient power delegated from Minister of Transport with experts of different related fields on full-time basis as a core for future MEA. This Secretariat should be provided with appropriate initial budget that allows it to efficiently handle all the required activities and to join all future studies.
- Projects in the expressway network should be included in the Five Year Development Plan to secure required funds and to assure the sustainable development of the network based on the established schedule for the smooth implementation and maximum efficiency.

Establishment of MEA:

- The implementation, operation and maintenance of the urban toll expressway network include a large number of road and structure projects which require large investments and implementation capability. An effective organization for systematical implementation of the network is the vital key for the successful realization and sustainable development of the network.
- Capacity development of MEA is required during different implementation and operation stages on the network. Training of MEA staff on urban expressway issues should be provided on regular basis in such fields of assets management, design management, maintenance management, traffic management and information, toll setting and toll collection systems, PPP structuring schemes, PPP negotiation and contracting, transport economy, financing and accounting.

Early Implementation of High Priority Expressways:

- For the sustainable development of the expressway network, it is important to maintain the momentum of this Study and continue in required steps and studies toward the implementation of high priority expressways as scheduled.
- To implement projects as scheduled, feasibility studies and other social and environmental studies should be conducted few years before the project schedule in order to secure required financial resources and to avoid delay.

Toll Rate Setting

- Two cases of toll rate are considered in the cash-flow analysis; Base Case with low toll rates concluded based on Willingness-to-Pay survey and other social factors such as affordability and household income and Revenue Maximize Case which resulting in higher toll rates. It is recommended to carry out social studies and public awareness campaigns before introducing the toll rate to be applied.
- The flat rate is recommended to be applied at the beginning of toll collection with the limited length of the expressway network under operation. Here, manual toll collection system with prepaid touch-and-go cards can be applied in first stages of operation. With the increase in the length of the network in the future, the distance-dependent toll system can be applied through the use of advanced ETC systems in toll collection.

- A toll adjustment mechanism based on the actual rates of inflation and foreign exchange is required in order to promote PPP programs and encourage the participation of the private sector. Governmental subsidy, in terms of shadow toll for example, may be required when taking the social dimension into consideration.
- With introducing electronic toll collection (ETC) system in the future, distance-

PPP Promotion:

- It is desirable that utilizing concessional loans, such as ODA funds and national bank loans, for high priority expressways in the first stage in order to reduce financial costs of network development and build a foundation of PPP scheme.
- It is recommended to introduce toll systems for E1, E2 and the Ring Road to lower financial burden of the government and to increase the efficiency of the network.
- In addition, initial capital subsidy from the government and/or demand risk sharing with the government will be recommended in order to lower financing requirements of the private sector down to the level affordable by toll revenues.
- According to expected project economics of selected routes for PPP, details of transfer of businesses from the public sector to the private sector and risk allocation among the public sector and the private participants need to be developed and defined in the project agreement. Excess risk transfer to the private sector and weak political commitment are main factors for failed PPPs. On the other hand, optimal risk allocation and strong political commitment are two key factors making good PPP projects.
- Several legislative initiatives are underway in Egypt including drafting a new PPP Law and reviewing BOT procedure at GARBLT. In this regard full coordination among different agencies in charge is recommended.
- With regard to PPP procedure, it is recommended to assure competitive procedure enables optimal conditions for economy, transparency and efficiency. At the same time, it is desirable to take into account characteristics of the PPP approach which involves a long-term contract, requires the private sector a wide range of responsibilities, and encourages the private sector's free ideas for better services at lower costs.

Environmental Considerations:

- The planning process of the expressway network aim to minimize any negative impact on both natural and social environmental conditions, and coordination with the environmental agencies is important to be done throughout the different stages of project implementation.
- When implementing road projects in areas where land acquisition is required, acquisition and resettlement schemes should be prepared in early stages together with the allocation of required fund.

Coordination with other related Agencies:

- Implementation of the expressway projects should be carried out as scheduled and in complete coordination with other infrastructure and socioeconomic development plans and major projects to provide optimum integration and maximum benefits.
- Good understanding and supporting by policy makers and budgeting agencies, such as the Ministry of Development and Ministry of Finance, are indispensable for successful implementation of the expressway network. MOT and MEA should exert full effort to obtain understanding of those policy-makers and agencies.
- A Feasibility Study on high priority expressways is an important task that should be carried out as scheduled in the implementation plan of this study. The Feasibility Study will include the design and other aspects for technical, economic and financial viability. In addition, it may include a detailed environmental impact assessment study that is required to provide mitigating measures for any negative social or physical impact that may occur.