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PROJECT FINANCING in CONSTRUCTION PROJECTS

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SUMMARY

Project finance refers to the financing of long-term infrastructure, industrial projects and public services based upon a non-recourse or limited recourse financial structure where project debt and equity used to finance the project are paid back from the cashflow generated by the project.

The study focuses on Project financing in six main sections. The first section defines the project finance and differences from other traditional corporate financing. It examines the structure and life-cycle of this financing technique. The general participants and risks involved in Project Financing are explained with the advantages and benefits of the Project Financing.

The second section provides a statistical overview of project finance transactions to take a picture of the status of transaction values in Project Financing. It also gives information about the rankings of the countries and tendency of sectors financed by Project Financing.

The third section mainly focuses on the project development and management including the contractual relationships formed between the participants which are required for the provision of the loan.

The fourth section gives information about the programs of financial institutions, the Export Credit Agencies (ECAs) and Bilateral Lending Agencies (BLAs) and Multilateral Lending Agencies (MLAs) take place as the lenders or guarantors in the project finance transaction, comprising their project finance programs, the scope, conditions, application procedures, repayment terms and statistical data.

The fifth section describes the loan provision activities in Turkey in the past comparing the recent techniques. It focuses on the project financed investments in Turkey.

The final sixth section analyzes three projects as case studies which are funded by project finance. The studies include the very beginning of the project, the contracts signed between the participants, life-cycle of the transaction including the causes of failure and achievement of the project.

Keywords: project finance, non-recourse, infrastructure, debt, leverage

ÖZET

Proje Finansmanı, uzun vadeli alt yapı, endüstriyel veya büyük çaptaki kamu projelerinin yapımı için sağlanan kredi olarak tanımlanmaktadır. Bu finansman modelinde, diğer finansman modellerinden farklı olarak, kredi geri ödemesi için ipotek edilen kaynaklar krediyi kullanan tarafın varlıkları değil, projeden elde edilecek olan nakit akışıdır. Bu özelliğinden dolayı Proje Finansmanı için gayri kabulürücü (non-recourse) veya kısmi gayri kabulü rücu (limited recourse) finansman terimleri kullanılmaktadır.

Bu çalışma proje finansmanının ne olduğunu tanımlamak ve inşaat projelerinde nasıl kullanıldığını ortaya koymayı amaçlamaktadır. Yeni bir finansman tekniği olarak kabul edilen proje finansmanın yapısı, proje öncesi ve sonrası, yeralan taraflar, kredi alınması için karşılanması gereken şartların yanısıra, istatistiksel verilerle bu tekniğin gelişimi hakkında genel bir bakış açısı oluşturulmaya çalışılmıştır.

Proje finansmanını altı ana bölümde incelenmiştir. İlk bölümde proje finansmanı hakkında genel bilgiler verilerek, diğer geleneksel finansman şekillerinden farklı olan yönleri açıklanmıştır. Proje Finansmanı'nın yapısı, finansman öncesinde ve sonrasında yeralan taraflar, barındırdığı riskler ve avantajları ile finansman süreci anlatılmıştır.

İkinci bölümde, istatistiksel veriler ile proje finansmanının 1994-2003 yılları arasındaki gelişimini ve gelecek yıllardaki eğilimini göstermek açısından, karşılaştırmalı olarak proje finansmanı ile gerçekleştirilen yatırım hacimleri gösterilmiştir. Bunun yanısıra global anlamda ülke, sektör ve kredi veren önemli kuruluşların sıralamaları verilmiştir.

Üçüncü bölümde proje finansmanı ile gerçekleştirilen projelerin geliştirilmesi ve yönetiminde önemli olan noktalara değinilmektedir. Kredi sağlanabilmesi için taraflar arasında kurulması gereken sözleşme ilişkileri ve şartları detaylı olarak anlatılmıştır.

Dördüncü bölümde, kredi sağlayan finans kuruluşlarının proje finansmanındaki rolü ve kuruluşlardan kredi alınabilmesi için sağlanması gereken şartlar genel hatlarıyla belirtilmiştir. Ülkelerin ithalat-ihracat bankaları ile uluslararası kalkınma bankalarının proje finansman programları hakkında genel bilgilerle birlikte, bu kuruluşlar tarafından proje finansman programı altında uluslararası projeler için sağlanan kredi miktar sıralamaları verilmiştir.

Beşinci bölümde, Türkiye’de kamu altyapı projelerinin finansmanında kullanılan kaynakların nasıl sağlandığı üzerinde durulmuştur. Proje finansmanının Türkiye’de kullanılmaya başlanmasının nedenleri açıklanmış, geçmişte ve son yıllarda kullanılan finansman modellerinin mukayesesi yapılmıştır. İç ve dış kaynaklardan alınan veriler ile Türkiye’de proje finansmanı ile gerçekleştirilmiş olan projelerin listesi de sunulmuştur.

Son olarak altıncı bölümde, proje finansmanı ile gerçekleştirilen üç proje incelenmiştir. Projenin başlangıcından başlayarak, proje tarafları ile finansman süreci anlatılmıştır. Proje finansmanı kullanımının getirdiği kazançlar ve finansman öncesi ve sonrası yapılan hataların nedenleri ortaya konulmuştur.

Anahtar kelimeler: proje finansmanı, gayri kabülü rücu, altyapı, kredi, borç.

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Project Finance Acronyms*

ADB	Asian Development Bank
AfD	Agence Française de Développement
AfDB	African Development Bank
AfDF	African Development Fund
BLA	Bilateral Agency (e.g., U.S. Export-Import Bank)
BLT	Build-Lease-Transfer
BOO	Build-Own-Operate
BOOT	Build-Own-Operate-Transfer
BOT	Build-Own-Transfer
COFACE	Compagnie Française d'Assurance pour le Commerce Extérieur (French export credit agency)
EBRD	European Bank for Reconstruction and Development
ECA	Export Credit Agency
ECGD	Export Credit Guarantee Department (U.K. export credit agency)
EDC	Export Development Canada (Canadian export credit agency)
EFIC	Export Finance and Insurance Corporation (Australian export credit agency)
EIB	European Investment Bank
EMEA	Europe-Middle East-Africa
EPC	Engineering, Procurement, and Construction
ERBD	European Bank for Reconstruction and Development (targeted to Eastern Europe and the former Soviet Union)
EU	European Union

* Adapted from Harvard Business School's "Project Finance" Portal

IA	Implementation Agreement
IBRD	International Bank for Reconstruction and Development (a member of the World Bank Group)
IDA	International Development Association (a member of the World Bank Group)
IDB	Inter-American Development Bank
IFC	International Finance Corporation (a member of the World Bank Group)
IIC	Inter-American Investment Corporation
JBIC	Japan Bank for International Cooperation
JEXIM	Japan Export-Import Bank
KExim	Korean Export-Import Bank
KfW	Kreditanstalt für Wiederaufbau
kWh	Kilowatt-Hour
LIBOR	London Inter-Bank Offered Rate
L/C	Letter of Credit
MIGA	Multilateral Investment Guarantee Association (a member of the World Bank Group)
MLA	Mandated Lead Arranger
MLA	Multilateral Agency (e.g., International Finance Corporation)
MW	Megawatt (1,000 Watts)
OECD	Organization for Economic Cooperation and Development
O&M	Operation and Maintenance
OPEC	Organization of Petroleum Exporting Countries
OPIC	Overseas Private Investment Corporation

PFI	Project Finance International (a trade journal)
PPA	Power Purchase Agreement
PURPA	Public Utilities Regulatory Policy Act (of 1978)
SACE	Istituto per i Servizi Assicurativi del Commercio Estero (Italian export credit agency)
UNCITRAL	United Nations Commission on International Trade Law
USAID	United States Agency for International Development
USEXIM	Export–Import Bank of the United States (U.S. export credit agency)
VAT	Value-added Tax
WTO	World Trade Organization

INTRODUCTION

A Project is a temporary endeavor/work/job undertaken to create a unique product or service in a limited time of progress (PMBOK, 1996).

The target in a project is to complete the phases in the required time with optimum values and high gains. Construction of a building or facility is a unique project comprising its own elements and parameters which requires an evaluation and analysis of the objectives and factors before the commencement.

Development projects are either social or self benefit. It may be government-assisted or enterprise programs that may involve residential, commercial or industrial construction projects to provide civilization while meeting the needs of society and the country or for investment to make profit.

To understand and analyze the inputs and outputs of a specific project, a feasibility analysis is made to see the productibility, profitability and buildability of the project considering the function, budget, time and technology. Project Feasibility defines the objectives, identifies and selects convenient options, examines options in terms of engineering and economic feasibility, and recommends preferred options. After a decision is made to continue to develop project, the main constraint will be the financing. Obtaining finance is the first problem to be solved for funding capital and recurrent costs in the project.

Project finance refers to the financing of long-term infrastructure, industrial projects and public services based upon a non-recourse or limited recourse financial structure where project debt and equity used to finance the project are paid back from the cashflow generated by the project.

Project finance is used by private sector companies as a means of funding major projects off balance sheet. At the heart of the project finance transaction is the concession

company, a Project Company which consists of the consortium shareholders who may be investors or have other interests in the project (such as contractor or operator). The Project Company is created as an independent legal entity which enters into contractual agreements with a number of other parties necessary in a project finance deal.

The government, municipality or other public body (often known as the Concession Authority) awards the Project Company a concession granting it a "license" in which it has exclusive ownership of a specified facility or asset for a fixed number of years and at the end of the concession the asset is handed back to the public sector in a specified condition. The concession (sometimes known as the implementation or project agreement) is the primary contract between the government and the Project Company and forms the contractual basis from which other contracts are developed in the structure shown. The concession normally entitles the Project Company to build, finance and operate the facility for a fixed period although there are other variants.

The attractiveness of project finance is the ability to fund projects off balance sheet with limited or no recourse to the equity investors i.e. if a project fails, the project lenders recourse is to ownership of the actual project and they are unable to pursue the equity investors for debt. For this reason lenders focus on the projects cashflow as this is the main source for repaying project debt.

Project Company looks to the commercial banks and institutions to fund the remainder of the project costs. Debt from these lenders is referred to as "Senior Debt" as in the case of project default, senior debt lenders have first right to the projects assets and cash over providers of equity and subordinated funds. Debt funding can either consist of bank debt or financing from bond issues or a combination of both.

In certain countries commercial lenders may not be willing to lend to a project unless a multilateral agency such as the EBRD or IFC are involved to cover political and other risks. The lenders may also demand sovereign guarantees from the host government where the project is situated as well as involvement of Export Credit Agencies (ECA's).

In the case of developing countries and those countries with weak economies, the involvement of the multilateral agencies may be essential to attract commercial lending to the project as their involvement underpins the project and covers risks which may be unacceptable to the private sector.

Central to the project finance transaction are the contractual agreements put in place between all the parties. These contracts set out and define each party's role and make clear their liabilities and expected roles within the transaction.

The contract structure defines the apportionment of risks between the numerous parties to the complex agreements. The agreements are designed to fit within the overall legal framework of the host country for the project.

The agreements deal with the methods of construction, financing and operation of the facility and agreed procedures to be implemented in the event of default, failure to complete the construction and failure to perform during the operational period; they also cover what should happen in the event of unforeseen circumstances (such as war and earthquake).

If the project finance deal is a new build project, the Project Company will enter into a Construction Agreement with a contractor who will be responsible for designing and building the project. The contract is normally awarded on a lump sum or turnkey basis where the contractor has an agreed price for project construction with any cost overruns and late completion the responsibility of the contractor who will have to bear any extra costs. The contractor is quite often a Shareholder in the Project Company and may either retain his share after construction or sell his stake to fellow shareholders or an external source.

During the construction phase, equity and debt funds are used to finance the project construction with funds generated from the project cashflow covering the Operation and Maintenance period. Lenders will not normally demand repayment of capital on the

loans until the construction phase has been completed and the project is generating cash. Once the construction phase is completed, the project enters its operational phase overseen by the project operator. The Operator is responsible for day to day running and maintaining of the project over the life of the concession. If the concession is to be handed back to a public authority at the end of the concession, a specified standard of maintenance will have been agreed at the start of the project.

The further two components of a project finance structure are the Supplier and Purchaser Agreements, which can be best illustrated using a project financed power station as an example. If a long-term and continuous supply is needed for the project such as fuel for a power station, a long-term Supply Agreement will be entered into which will guarantee a fixed supply and quantity of fuel at a fixed price for an agreed period. At the output end, the Project Company may enter into an Off-Take Agreement i.e. purchaser of a power station's electricity such as a utility or national grid, to ensure that there is a guaranteed purchaser for the electricity that is produced and at a guaranteed price, something that project lenders will demand is in place before agreeing to lend funds. Project financing is being used throughout the world across a wide range of industries and sectors. This funding technique is growing in popularity as governments seek to involve the private sector in the funding and operation of public infrastructure. Private sector investment and management of public sector assets is being openly encouraged by governments and multilateral agencies that recognize that private sector companies are better equipped and more efficient than governments in developing and managing major public services.

Project financing has begun to be used in the oil, natural resources, gas and mining sectors, followed with transportation, water and power generation in the world. In Turkey, the project-financed investments commences with a power generation project; the Birecik Dam and HES Project in year 1995 which is conducted utilizing BOT. As Project Financing is a high-leveraged financing technique, it is essential to foresee the risks, and decide whether the project is appropriate to be financed.

AIM OF THE STUDY

This study intends to provide an introduction to a new method of financing large-scale infrastructure projects, which is called Project Finance.

Total project-financed investment has grown from less than \$10 billion per year in the late 1980s to almost \$220 billion in 2001 (Esty, 2002a). Within the United States, firms financed \$68 billion of capital expenditures through project companies in 2001, approximately twice the amount raised in initial public offerings (IPOs) or invested by venture capital firms.

The study gives a general overview of the Project Finance and describes its usage in construction sector by explaining the advantages and disadvantages. It shows the rise of Project Finance throughout the world and looks for the reasons and current trends.

As it is a complex type of financing technique, the conditions of the participants' especially the lenders or investors are examined. The eligibility criteria for the provision of the loan are described in detailed. In addition statistical data is presented to show the past and current trends which also can lead to make assumptions the future trends in Project Financing.

Turkey; which is considered to be one of the Big Emerging Market (BEM) in United States' National Export Strategy (NES), does require large infrastructure investments in coming years (Lash, 1995). The infrastructure demand in Turkey is growing rapidly. The estimates in only power generation capacity show that Turkey will require approximately USD 3-4 billion in annual investment by 2020 (U.S. & Foreign Commercial Service and U.S. Department of States Turkey Country Commercial Guide FY 2002). Therefore many infrastructure and development projects will require private investment to maintain the current rate of economic development in coming years.

This leads us to analyze the role of the project financing and allocate the risks to gain high benefits from the projects.

RESEARCH METHOD

It focuses on project-financed private sector investment in infrastructure projects throughout the world as well as in Turkey. The study mainly comprises three parts which are the general characteristics of project finance, the statistical data and case-studies. Initially, a literature search is made from the research papers, books and article on project finance.

The statistical data and information regarding financial institutions given in this study is adapted from financial agencies' annual reports and the graphical instruments are formed by the thesis writer to show the tendency of PF in global manner.

In the entire study including case studies, the information has been provided from the Project Finance International Magazines and Thomson Financial Securities Data who had given a temporary access to their databank. The data collected from Thomson, has been used to form graphs and tables to make comparisons between sectors, transaction values during years 1994-2003 and ranking of participants. The analysis is made to take the picture of PF.

Finally, in the examination of case-studies, the internet sources including papers of researchers with different nationalities and the books are extensively used. In the Adapazarı-Gebze-İzmir Power Project, interviews are carried out with Mr. Yavuz Aktürk from ENKA has been helpful in the examination of the case-study.

1

PROJECT FINANCE TRANSACTIONS

There are several definitions for project finance where almost all of them draw attention to the same issue: “non-recourse or limited recourse debt” which differs it from other traditional financing methods. International Project Finance Association defines it as:

“The financing of long-term infrastructure, industrial projects and public services based upon a non-recourse or limited recourse financial structure where project debt and equity used to finance the project are paid back from the cash flow generated by the project” while Scott L. Hoffman defines it as:

“... a non-recourse or limited recourse financing structure in which debt, equity, and credit enhancement are combined for the construction and operation, or the refinancing, of a particular facility in a capital-intensive industry, in which lenders base credit appraisals on the projected revenues from the operation of the facility, rather than the general assets or the credit of the sponsor of the facility, and rely on the assets of the facility, including any revenue-producing contracts and other cash flow generated by the facility, as collateral for the debt” (Hoffman, 2001).

The terms “limited recourse” or “non-recourse” mean that the lenders have limited or no claim against the borrower if the collateral is insufficient to repay the debt. The collateral here refers to the “project” itself. In other words the lenders subsidize the loan to the project not the corporate body, relying on the performance and cash flows generated after the completion of the project.

There are three key decisions related to the use of project finance. First, there is an investment decision involving an industrial asset which means infrastructure project, followed by an organizational decision to create a legally independent entity to own the asset that enables an off-balance sheet finance as the project assets and liabilities do not appear on the sponsor’s balance sheet but in the new entity’s, the Project Company.

Finally the financing decision involves a non-recourse or limited recourse debt (Sessia and Esty, 2002).

The key issues in project finance transactions are to plan engineered financing plan, assess the risks, and design the contractual relationships between the Project Company and direct and indirect participants of the project. Because of the extensive use of contracts, project financing is also referred as “contractual finance” besides “off-balance sheet” and “non-recourse” definitions.

1.1 Structure of Project Finance Transaction

The definition non-recourse debt described above is the one of main characteristics of the project finance transaction which differs from other types of debt financing. In traditional forms of financing, the lenders subsidize loans taking into consideration of the balance sheet of the borrowing company. However, in project finance transaction the lenders rely on the cash-flows that will be generated by the project. The reason is a new company is established by the sponsor only for the purpose of the project with a limited time. Hence, there is no balance-sheet or historical background of this new company which is also referred as Project Company or Special Purpose Company or Special Purpose Vehicle. In this case the main security for the lenders is the contracts and licenses, as the assets of the company is not at worth of debt provided by the lenders. (Yescombe, 2002) By doing so, the sponsor delegates the biggest portion of his risks to the other participants of the project by the contracts which will also satisfy the lenders with credit risk.

Project-financed projects are generally large in scale and require important amount of capital investment. Because of the factors mentioned above, the important issue of project finance is the identification and allocation of risk.

A complex contractual structure is required to be established with lenders asking for maximum guarantees and securities from other parties of the project.

The ability to obtain financing for a project, and the structure of the financing depends on the nature and characteristics of each project. The most critical issue in project financing is that it does include a high degree of risks in itself. The structure of the debt-financing is built upon the projections of the project where there are always possibilities that the assumptions, feasibilities may go wrong. Generally the risks which are required to be allocated is construction risk, currency risk, political risk, market risk, timing risk, and also other types of risk. As a result, lenders require assurances that the project will be put into service and the project will constitute an economically viable undertaking. Sponsors, in this respect, have to convince the lenders and guarantors that the project is technically feasible and economically viable. (Finnerty, 2000).

1.1.1 Life cycle of a typical PF transaction

Life cycle of a typical PF transaction is as follows;

- Sponsors approve project feasibility study
- Appoint project's financial advisor, legal counsel and other advisors (insurance, fuel supply, etc)
- Agree on borrowing structure
- Establish project vehicle
- Agree project documents with contractor(s)/operator(s)/supplier(s)/Offtaker(s)
- Develop financing term sheet
- Prepare information memorandum
- Select banks to underwrite/arrange financing
- Banks conduct due diligence to ensure credit-worthy structure
- Agree loan documentation
- Agree security and other documentation
- Obtain all consents and permits for project
- Obtain approval from sponsor/project shareholder's board and shareholders
- Banks' technical advisor to approve technical aspects of project

- Agree financial model
- Agree legal opinions
- Finalize conditions precedent
- Signing and financial close
- First drawdown
- Construction to commence
- Project is completed and starts operation
- Start loan repayment
- Full repayment of loan

1.2 Advantages of Project Finance

Project Financing is indeed a very complex financing technique, and it is costly to arrange the contractual relationships and providing guarantees. First of all time is very important as it requires a longer time than corporate financing for the documentation. The sponsors are expected to bear the costs. However, the parties of a project that is appropriate for PF can benefit the advantages of this project which can be summarized as given below.

1.2.1 High Leverage

The main reason on deciding to use PF finance is the main difference in demands of bank and sponsors. The sponsors do always want higher gains of equity put in a project, where on the other hand banks normally accept a lower in return. The key point using PF is that high leverage enhances the return for the sponsor.

Table 1.1 sets out simply the difference of the sponsor's equity return by in low and high leverage. Both of the leverage columns relate the same amount of investment of 1,000 and produces revenue of 100. If it is financed with 30% debt, as in the low-leverage column, the return equity is 12 %. On the other hand, if it is financed with 80% in PF style, the return of equity is realized as 22%.

Table 0-1 Benefit of Leverage on Investors's Return

	Low Leverage	High Leverage
Project Cost	1.000	1.000
(a) Debt	300	800
(b) Equity	700	200
(c) Revenue form Project	100	100
(d) Interest rate on debt (annual)	5%	7%
(e) Interest payable [(a)x(d)]	15	56
(f) Profit [(c)-(e)]	85	44
Return on Equity [(f):(b)]	12%	22%

1.2.2 Tax Benefits

PF is advantageous as the interest is tax deductible. The tax obligations on the profit of the project are subject to tax of the host country. If we assume a 50% tax is payable thane in the example set out in Table 1.1, the low leverage project is subject to $42,5=(50\% \times 85)$ and high leverage is $22=(50\% \times 44)$. In this case the equity return for the investors in low leverage is realized as 6% and the high leverage is 11 %.

1.2.3 Off-Balance-sheet Financing

The PF is also referred as off-balance-sheet financing which sponsors keep the debt off the consolidated balance sheet. As the debt is given to a new Project Company the debt is not shown in sponsors' liabilities where this also does not affect the borrowing capacity of the sponsors.

1.2.4 Long-term finance

The PF loans have longer repayment period than the corporate loans. The repayment starts typically with the start-up of the project and revenue generated. Therefore loans for power projects often run nearly 20 years and longer for infrastructure projects.

However the oil and gas, and telecommunications projects have shorter because the reserves extracted deplete more quickly and technology involved has a short life (Yescombe, 2002).

1.2.5 Enhanced Credit

In PF, the loans are given to the creditability of not only the sponsors, but also the other involved parties. Although the sole creditability of the sponsors is not being adequate for a project, the lenders may give the loan in spite of the other parties such as Offtaker of the project.

1.2.6 Risk Transfer

Project financing transfers the risks of the public sector to the private sector and the risks of the sponsor to the other parties involved. By structuring the contracts the responsibility and obligations of the participants are defined in detailed, and this enables the allocation of risks to the specialized parties comprising contracting, operating, purchasing and financing.

1.2.7 Transparency

The project-financed investments are transparent and open to measurement and monitoring form the initial stage of the project.

1.2.8 Technology Transfer

For developing countries, the PF provides new technology to the market where the local economy does not have the resources, skills and technology.

1.3 Assessment of Project Risks

In project financing, the lenders demand guarantees for certain risks of the project from the beginning phase to after-completion phase. The lenders do not want to bear financial risks.

The assessment of project risks and allocating to concerned parties is one of the initial and most important issues in the funding process. The analysis of the project feasibility is made by financial advisers and consultants as well as the loan structure. The project company does not have a past record prior to completion; therefore the viability and feasibility of certain aspects are also important in the assessment and allocation of risks. According to Finnerty (2001), obtaining the financing needed to fund the construction cost of a project requires satisfying prospective long-term lenders (and prospective outside equity investors) of the project's technical feasibility, economic viability and creditworthiness.

Investors are concerned about all the risks a project involves, who will bear each of them and whether their returns will be adequate to compensate them for the risks they are being asked to bear.

Prior to commencement of construction work, the sponsors of the project must undertake extensive engineering work to verify the technological processes and design of the proposed facility (Finnerty, 2001). If the project requires new or unproven technology, test facilities or a pilot plant will normally have to be constructed to test the feasibility of the processes involved. As the project's technology has not been proven, this new tried project does comprise higher risk than other projects. For example, a large petrochemical project had been abandoned when it is discovered that the production processes did not work properly although a small pilot had worked well, however the scaled up project did not perform as designed because of the chemicals did not react properly in large quantities. The key point in PF is to construct the project facilities within the time schedule proposed, to assure that the facilities is capable of operating as

planned upon the completion of construction and to prove that the construction cost estimates with contingencies is adequate for completion of the project.

In addition to technical feasibility, economic feasibility is important to see the input-output cost and profit of the project. The marketing study is done to confirm that demand will be sufficient to absorb the planned output of the project at a price that will cover the full cost of production, enable the project to repay its debt, and provide an acceptable rate of return to equity investors. In the economic viability operating costs and project's cost of capital is also determined.

The third important issue is the creditworthiness of the project that does not have an operating history. In general, a project's credit strength derives from the values of assets included in the project, the expected profitability of the project, the amount of equity invested in the project and the risks they bear and the creditworthiness of the parties or sponsors involved in the project including MLAs and ECAs also.

In the PF, the equity to debt ratio is very important as it shows the risks of the investors where the greater amount of ratio of equity to debt is the greater amount of risks of the project sponsors.

The various types of risks that a project financing structure attempts to mitigate could be as follows (Finnerty, 2001 and Yescombe, 2002):

1.3.1 Performance risk

The risk emanating from lack of reliability, expertise and credit worthiness of various parties such as borrowers, guarantors, contractors, suppliers, operators, project users, insurers etc. These risks can cause a project to fail if not properly identified and addressed. Management expertise is of paramount importance here.

1.3.2 Construction and development risk

The risks arising from factors such as shortfall in expected natural resources to be extracted or construction material, low capacity output and low efficiency, cost overruns, delays in completion, lack of availability of infrastructure and work force, force majeure, shipping delays which delay arrival of imported items critical for the project, technical problems, non availability of infrastructure etc.

1.3.3 Market and operating risk

These arise from competition and lack of existence of local or international markets for the output, barriers to entry in markets, product obsolescence, smuggling, cheaper imports etc.

1.3.4 Financial risk

The risk arising from adverse movement of exchange and interest rates, world prices, inflation; these all impact ability of borrower to repay.

1.3.5 Political risk

Political risk arises in a cross border financing due to risk of change in tax laws, exchange transfer restrictions, nationalization, cancellation of financial hedges etc.

1.3.6 Legal risk

Risks arising from the differences in the legal systems of the lenders and the host country, or the state of development of legal system in host country. Usually documentation states which country's governing law will apply in event of dispute / enforcement of security.

1.3.7 Environmental risk

Some projects have higher environmental risks than others, while there is always the need to comply with the environmental laws of the host country. These can delay the project, besides organized protest groups.

1.3.8 Disputes

These can arise after the project is completed e.g. tariff and pricing issues which can adversely impact cash flows. Also disputes can arise between contractors, sponsors, suppliers etc. all of which can jeopardize a project. The documentation should normally have a procedure for handling disputes and arbitration procedures. Usually it is better and quicker if the parties resolve the dispute amongst themselves, rather than resort to legal measures unless absolutely necessary.

1.4 The Participants

In a typical project financing the participants and relationships are generally similar in structure and liabilities. The participants are the sponsors, host government, Export Credit Agencies (ECAs), multilateral development banks and commercial banks, contractor, purchaser and supplier. As indicated in Figure 1.1 in the center the key participant of project finance is without a doubt: the Project Company.

A project company is established by the sponsors as either a partnership or as a corporation. The sponsors are the legal owner of the assets of the project and will be usually legally responsible for the repayment of all financing used to support the construction and operation of the project (Work 159). In many cases, the project company has a limited life that lasts till the debt is fully repaid back to the lenders. The sponsors invest equity in the project company and generally form a JV or consortium which comprises the contractor, financier and operator of the project like in TAV consortia in Atatürk Airport BOT project. The Project Company enters into contract

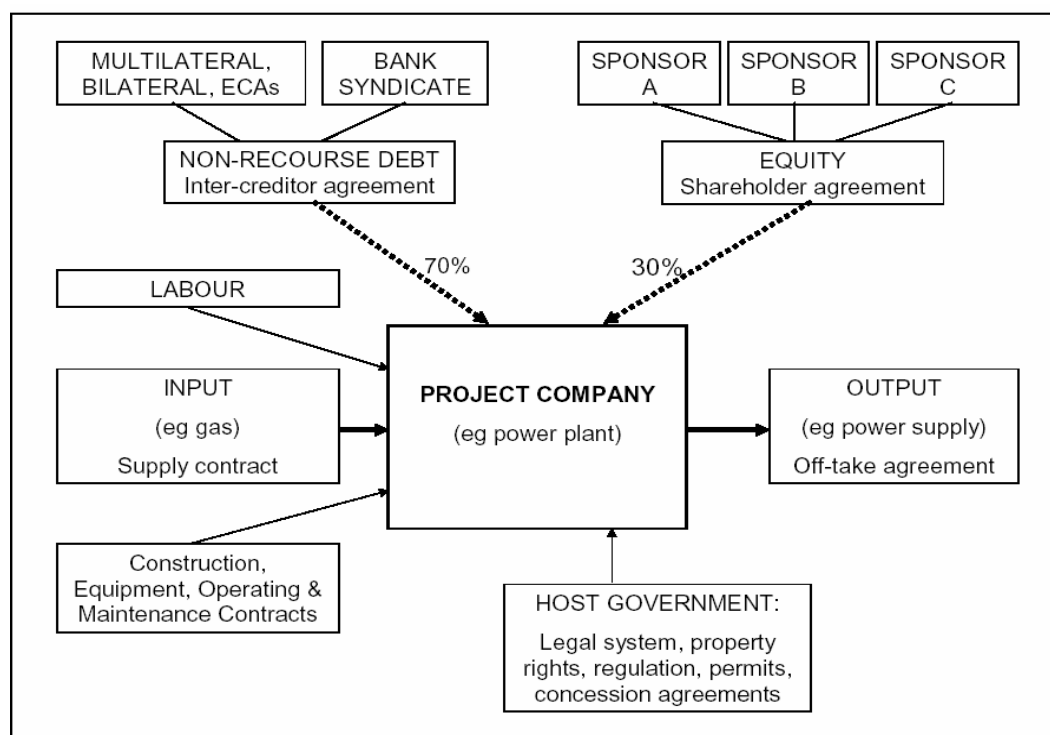
with the Contractor (which is often fixed price EPC contract), and Operator (Operation and Maintenance Contract). A major portion of the financing is in the form of debt from the banks and guarantees or direct loans from the ECAs.

The Project Company has direct relationship with Host Government where the Project will be built and operated. Unless the project is not an investment to the country, in other words a public project, the host government does not have a direct role in this PF transaction. However the government generally does offer incentives in taxes or land rental prices to attract foreign investors and provide an income to their country. In case of a BOT or BO project, the government plays an important role as the guarantor by the Treasury for the debt.

In this case the government, municipality or other public body is referred to Concession Authority as it awards the Project Company a concession by granting it a "license". By this license the Project Company has an exclusive ownership of a specified facility or asset for a fixed number of years and at the end of the concession the asset is handed back to the public sector. The concession agreement is the primary contract between the government and the Project Company and forms the contractual basis from which other contracts are developed in the structure as shown in Figure 1.1. The concession normally entitles the Project Company to build, finance and operate the facility for a fixed period.

After the equity is invested in, the Project Company seeks out for loan from commercial bank in form of direct loan and sometimes bonds. The combination of finance used will vary from project to project. There are advantages and disadvantages in the use of bonds as opposed to commercial debt; bank debt can have fixed or floating interest rates whereas bonds are generally fixed, bank debt tends to allow project sponsors increased financial flexibility which can be essential if financial predictions and revenue streams vary from the predicted targets. However, bank debt tends to be more expensive than bonds with higher rates and shorter tenors (loan duration) and bonds can offer longer loan periods at lower interest rates. There is now genuine competition between the two

sources of finance for project funding and as new players enter the project finance sector, project sponsors look set to benefit from more competitive rates and growing tenors. The



Source: Adapted from Esty (2003a).

Figure 0-1 Typical Project Finance Transaction

The lender profile is also widening with mortgage banks and institutional lenders such as pension funds coming into project finance. These players already have a long-term outlook as they are used to lending on a 20 to 25 year basis and are looking to match their portfolios with suitable loans. Once a project has completed the development phase (often including construction) the risk profile reduces and with a positive cash flow, the project sponsors will wish to refinance the project to obtain better financing terms and lower rates for the rest of its projected life. (IPFA-International Project Finance Association)

In the financing generally a wide range of institutions take part. These are multilateral development banks and Export Credit Agencies. These institutions involve in the transaction as equity investor, direct loan or guarantees for commercial and political risk of the country. The guarantees issued by the ECAs and Multilateral Development Banks enable the commercial banks to provide loans with more convenient options in proportion to the risk reduction. The ECAs generally subsidize loans to the materials or services used in the project with their country origin. However, some ECAs do provide Project Finance programs also. On the other hand, the multilateral development banks take place according to their transaction policies which differs on basis. For example, World Bank does not participate in projects which are not environmentally safe. Hence, the borrower and the project must exactly fulfill the requirements to get awarded. In the case of developing countries and those countries with weak economies, the involvement of the multilateral agencies may be essential to attract commercial lending to the project as their involvement underpins the project and covers risks which may be unacceptable to the private sector.

The further two participants of a project finance structure are the Supplier and Purchaser. If a long-term and continuous supply is needed for the project such as fuel for a power station, a long-term Supply Agreement is entered into which will guarantee a fixed supply and quantity of fuel at a fixed price for an agreed period. At the output end, the Project Company enters into a contract with Off-Taker who guarantees to purchase the output of the project. These two parties are demanded by the lenders before agreeing to lend funds.

The contracts entered into by the Project Company provide support for the project finance, particularly by transferring risks form the project company to the other parties to the Project Contract, and form the lenders' security package (Yescombe, 2002). The Project Contracts may include the following:

- A *Project Agreement* which maybe an Off-take contract (e.g. power purchase agreement) under which the product produced by the project will be sold on a long-term pricing formula, or, a Concession Agreement with the government or another public authority, which gives the Project Company the right to construct the project and earn revenues from it providing a service either to the public sector (e.g. a public building) or directly to the general public (e.g. a toll road).
- A Turnkey Engineering, Procurement and Construction (EPC) Contract, under which the project will be designed and built for a fixed price, and completed by a fixed date,
- An Input Supply Contract, under which fuel or other raw material for the project will be provided on a long-term pricing formula in agreed quantities,
- An Operating and Maintenance (O&M) Contract, under which third party will be responsible for the running of the project after it has been built,
- A Government Support Agreement, which may provide various kinds of support such as guarantees for the Offtaker or tax incentives for the investment in the project.

In general the participants, indicated in Figure 1.1, take place in a PF transaction. However, Yescombe (2002) draws attention that these contracts and participants do not always take place as every project is unique and has to set up its own structure. For example; if the product of the project is a commodity for which there is a wide market (e.g. oil), there is not necessarily a need for an Off take Contract, a toll road project has a Concession Agreement but no Off take Contract, a project for a mobile phone network is usually built without a fixed price, date-certain EPC Contract and has no Off take Contract, a mining or oil and gas extraction project is based on a concession or license to extract the raw materials, but the Project Company may sell its products into the market without an Off take Contract, a project that does not use fuel or a similar raw material

does not require an Input Supply Contract, Government Supported Agreements are normally found in projects in developing countries like in Turkey.

Table 1.2, Figure 1.3, Figure 1.4 and 1.5 show the rankings of the global participants comprising the Export Credit Agencies (ECAs), Multilateral Development Agencies (MLA), Bilateral Development Agencies (BLAs) and commercial banks in terms of the total value transactions based on the years 1991, 1995, 1996, 1997 and 1998 .

1.5 The Sectors

Project finance has become a new financing tool in the early 1990s. But it is said that the history goes back to 13th century where it is first used by the English crown that has provided a loan from a merchant bank in the financing of the Devon silver mines. (Esty et al 1988). The advent of project finance really began in 1980s as the US scrambled to build new power plants. (Esty, 2000). The PF trends in Turkey have been set initially in mid 1980s with the Build-Operate-Transfer (BOT) project model development by Turgut Ozal which is also referred as Özal Formula. (Yerlikaya, 2003) The first BOT project is İlisu Dam which is the first PF investment in mid 1990s.

In global manner the PF technique is widely used in the following sectors: (International Project Finance Association)

- Oil and Gas; from the financing of oil and gas rigs to oil refineries and pipelines, oil & gas companies are increasingly using project financing as a method of reducing corporate debt by taking heavy capital investment off balance sheet.
- Mining; In Latin America and parts of Africa, mining companies are using project financing techniques to fund their mining development and reduce company debt and shareholder exposure.
- Electricity Generation; as electricity markets are liberalized and government monopolies removed, private sector companies are playing a pivotal role in

funding new power stations using project finance with off take agreements guaranteeing electricity sales with surplus output sold into electricity pools. Project finance has enabled competition to flourish in the electricity markets with the end result that consumers enjoy lower prices and guaranteed supplies. In emerging countries, the electricity sector is the key area of industry that helps to kick start growth of an economy. Private energy suppliers are investing on a project finance basis through government concessions in many countries helping to stimulate and provide reliable and consistent sources of energy for industry and business, increasing growth and raising standards of living. Coal, oil and gas fired power plants, hydro-electric, combined heat and power and renewable energy plants are being successfully delivered on a project finance basis around the world.

- Water - Throughout the world, private sector investment and expertise are redefining the water industry. Project finance is helping companies to invest on a long-term basis by modernizing existing water facilities as well as providing the finance to build and operate new water plants and waste water disposal facilities on a concession basis.
- Telecommunications - Telecoms sector has witnessed a rapid advancement in the field of mobile telecoms and a growing trend of using project financing techniques to fund and rollout new telecom infrastructures. As telecom companies debt profiles have turned into Debt Mountains, project financing may be the way forward for funding new telecom infrastructure projects without requiring rights issues to fund investment for future development.
- Roads and Highways - National road networks are cracking under the strain of increased user demand and falling government budgets for maintenance and future expansion. Private sector companies are now encouraged to build, fund

and operate new and existing roads on either a real or shadow toll basis using public authority concessions.

- Railways and Metro Systems - Outdated railways require massive and urgent investment. Project finance is playing a central role in the funding required for the modernization of and development of new railway infrastructure. This method of funding is also being used to provide new city mass transit systems, both coach and rail.

- Public Services - Previously the domain of governments who believed it was their role to provide such services, across Europe private sector companies and public authorities are entering into Public Private Partnerships (PPP's) where concessions are granted to private sector consortiums to design, build, finance and maintain public services such as schools, hospitals, roads, government accommodation, government services, public lighting etc. PPP's which are a variant of the Build, Operate, Transfer (BOT) and Design, Build, Finance and Operate (DBFO) concepts, have been widely accepted and implemented by a number of European governments and looks set to be a mainstay of public procurement for the future.

2

STATISTICAL OVERVIEW OF PROJECT FINANCE

The PF is extensively being used throughout the world in several industries. The economical status of global economy also affects the PF transactions. In this part statistical data is adapted from a trade journal Thomson Financial Database in terms of the amount of PF loans and bonds, the sectors, participants and countries overview with comparisons between the years 1997-2004. The comparisons are given according to regions which include Americas (America countries), EMEA (Europe, Middle East, and Africa) and Pacific Region (Asian countries) to give a perspective of its usage in global manner. In addition, the data regarding Turkey is evaluated individually.

As given in Table 2.1, the total volume of PF lending in terms of loans and bonds is approximately US \$ 770 billion (bn) between the years 1994 and 2004's first half. The total global project finance investment in the form of commercial bank loans, bonds as well as investments made by international finance institutions (IFIs-development banks and export credit agencies) totaled approximately US \$ 1,400 bn between these years.

In 1994 the PF stood at US \$41, 3 bn and then it has grown steadily four times to an approximate value of US \$ 156 bn in 2003 finally. During this decade, the PF market has been influenced by the economic fluctuations and emerging market in the global world. In 1995, the growth has been realized 55% and reached US 63,9bn. The market rose from US \$ 95 bn in 1996 to US \$138,5 bn in 1997 with a jump nearly 50%. The growth has been realized in all regions: Americas, EMEA and Asia Pacific.

In 1998, the PF financing dropped 10% to US \$ 138, 5 bn from US \$ 124, 9 bn in 1998 which is the first reverse in the market since the league tables began in 1994. The Euro tunnel project financing of US \$ 14 bn was the highest transaction of the year.

The first highest score has been achieved in PF market with a rise of 37% in 2000 from US \$ 155,7 bn in 1999 to US \$ 213,4 bn. The rise was said to be due to continuing US power plant demand, big growth in European telecoms and general increase in credit activity. In this year project lending into the project lending into the emerging markets returned with Brazil. Turkey and Russia jumped up too with heavily credit agency backed project loans. The total commercial debt value was US\$ 2,8 bn for the power plants of Intergen in Adapazarı, İzmit and Gebze. In 2001, the loan market was fairly static overall in 2001, US \$ 217,5 bn, compared with US \$ 213,4 bn in 2000. The bond market however jumped to US \$ 25 bn from US \$ 20,8 bn. The net debt raise 1,9 %. The US power market continued to provide nearly one third of the US \$ 108,5 bn global loan market and over half of the US \$ 25 bn global bond market. Elsewhere the Middle East doubled in size to US \$ 8,6 bn in commercial debt.

In 2002, a sharp decrease came after a rise in the past seven years. The total PF market 38 % to US \$ 135,7 bn from US \$ 214,5 bn in 2001. The reason was said to be by Thomson financiers because of Enron collapse in the USA.

In 2003 the show net debt increased back over US \$ 100 bn in 2003. The increase in total investment happened in 15 % and with a total value US \$ 156 bn. The major growth in this year was without a doubt in bond sector, where in the project sphere volume leap from US \$ 13,8 bn to US \$ 32,2 bn. (Figure 2-1) In the first half of 2004, global commercial loan are up to 60 % rise, and increased to US \$ 46,5 bn compared to US \$ 29,2 bn in the first half of 2003.

Table 0-1 Project Financed Investments (1994-2003)

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	1994-2003
Bank Loans	13.680	23.330	42.830	67.425	56.651	72.392	110.885	108.478	62.173	69.558	547.562
Bonds	3.990	3.790	4.790	7.497	9.792	19.966	20.811	25.003	13.788	32.164	129.021
Total project lending	17.670	27.120	47.620	74.922	66.443	92.358	131.696	133.481	75.961	101.722	676.583
Year-to-Year change in lending		53%	76%	57%	-11%	39%	43%	1%	-43%	34%	
MLA/BLA development agencies	11.250	17.590	18.960	22.050	20.970	16.620	17.690	18.750	18.750	17.400	162.630
Equity financing (estimate)	12.390	19.160	28.540	41.560	37.460	46.700	64.020	62.240	40.610	36.966	389.646
Total project sector investment (inc. debt and equity)	41.310	63.870	95.120	138.532	124.873	155.678	213.406	214.471	135.321	156.088	1,228.859
	Percent of Lending by Type of Debt										
	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	1994-2003
Bank Loans (%)	77	86	90	90	85	78	84	81	82	68	81
Bonds (%)	23	14	10	10	15	22	16	19	18	32	19
Total											

The shaded values are the thesis writer estimates. The MLA/BLA development agencies values are adapted from B.J.Esty. The remaining values are adapted from Project Finance International, Issues 161, 185, 209, 233, 254, 257, 282, 293 and 1997 Legal Review

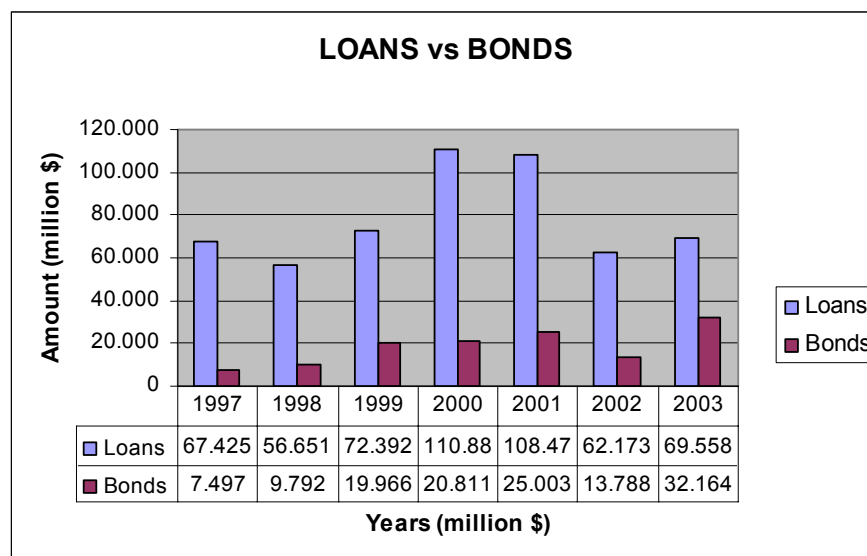


Figure 0-1 Loans vs Bonds (1997-2003)

Finally, the total commercial lending of Turkey happened as US \$ 4,67 bn, beginning from 1998 with US \$ 576 m, and proceeded as US \$ 351 m in 1999. (PFI Journal) The peak realized in 2000 with a total amount US \$ 2,83 and decreased to US \$ 362 m in 2001. The total loan and bond activity in Turkey was US \$ 366 m and US \$ 186 m in 2002 and 2003 respectively which sets Turkey in the sixteenth rank in global countries table.

Table 0-2 Country Rankings in terms of Loans (1997-2003)

Rank	Country	Total Value (US\$ m)
1	USA	122.190
2	UK	60.713
3	Italy	39.027
4	Australia	38.363
5	Brazil	25.328
6	Germany	19.009
7	Spain	15.608
8	Mexico	11.373
9	China	9.037
10	Canada	8.643

The project finance commercial debt by countries is given in Figure15 where the United States is on the first rank with more than US \$ 120 bn. (Table 2-2)

During years 1997-2003, nearly 548 billion dollars have been provided by project finance loans to the various sectors globally. As given in Figure 2-2, Power sector is the most invested sector with more than 200 billion loans and a percentage of 36,55. The second sector is the telecoms sector with the total loan amount more than 127 billions and a percentage of 23,26 the total. These two sectors constitute more than the third quarter of the 547 billions loans. When these leading sectors are compared, it is seen that the telecoms sector loses its popularity between the years of 1997 and 2003 where power increases and reaches the peak point in 2000 and 2001 with the loan amounts 44,5 and 47,3 billions respectively as shown in Table 2-3, Not only the power sector but also the volume of PF loans reaches the peak in those years right before the big decrease in year 2002. Turkey also becomes the seventh country in the ranking of countries in 2000 with a 2,834 billion dollars loan which is provided for power plants constructed in Adapazarı, İzmir and Gebze.

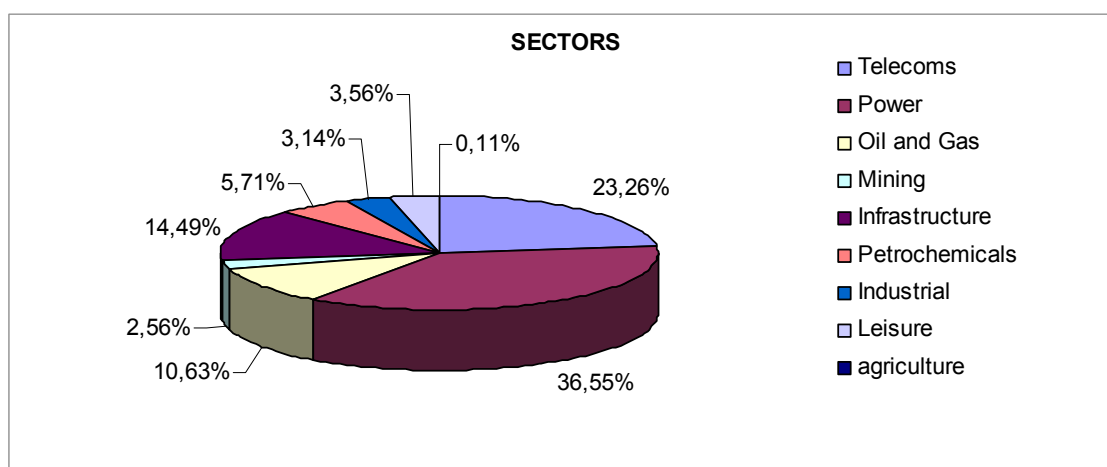


Figure 0-2 Sector Distribution 1997-2003 (In terms of loans)

Source: Adapted from Project Finance International, Issues 161, 185, 209, 233, 254, 257, 282, 293 and 1997 Legal Review

Table 0-3 Project Finance Lending (in terms of Loans) by Sectors, 1997-2003

	<u>1997</u>		<u>1998</u>		<u>1999</u>		<u>2000</u>		<u>2001</u>		<u>2002</u>		<u>2003</u>		<u>Total</u>
	\$ (m)	%	\$ (m)	%	\$ (m)	%	\$ (m)	%	\$ (m)	%	\$ (m)	%	\$ (m)	%	\$ (m)
Telecoms	18.614	27,61	14.063	24,82	19.702	27,22	34.699	31,29	23.958	22,09	7.286	11,72	9.026	12,98	127.348
Power	16.811	24,93	17.205	30,37	29.992	41,43	44.592	40,21	47.255	43,56	20.202	32,49	24.071	34,61	200.128
Oil and Gas	14.386	21,34	9.336	16,48	4.970	6,87	9.267	8,36	8.825	8,14	6.441	10,36	4.985	7,17	58.210
Mining	5.377	7,97	2.209	3,90	1.377	1,90	629	0,57	2.323	2,14	997	1,60	1.110	1,60	14.022
Infrastructure	5.025	7,45	7.699	13,59	8.997	12,43	13.361	12,05	12.043	11,10	15.706	25,26	16.507	23,73	79.338
Petrochemicals	4.603	6,83	3.129	5,52	4.684	6,47	3.337	3,01	3.898	3,59	5.708	9,18	5.880	8,45	31.239
Industrial	2.144	3,18	2.641	4,66	1.396	1,93	3.362	3,03	3.646	3,36	824	1,33	3.179	4,57	17.192
Leisure	465	0,69	369	0,65	1.274	1,76	1.638	1,48	6.530	6,02	4.759	7,65	4.435	6,38	19.470
Agriculture	0	0,00	0	0,00	0	0,00	0	0,00	0	0,00	250	0,40	365	0,52	615
Total	67.425		56.651		72.392		110.885		108.478		62.173		69.558		547.562

Source: Adapted from Project Finance International, Issues 161, 185, 209, 233, 254, 257, 282, 293 and 1997 Legal Review.

As given in Figure 2-2, the power and telecoms sectors are followed by Oil and Gas and Infrastructure with the shares of 10, 63 and 14, 49 respectively. (Infrastructure comprises transportation and waste water treatment also).

The Figures from 2.3 to 2.7 show the tendency of the popular sectors between “1997-2003”. As given in Table 2.3, Power sector starts from a volume of 16,8 billions in 1997 and reaches 2001 47,2 billions with a growth of nearly %300 in 4 years. The stability crashes in 2002 and fell back to 20 billions but still maintained the first rank.

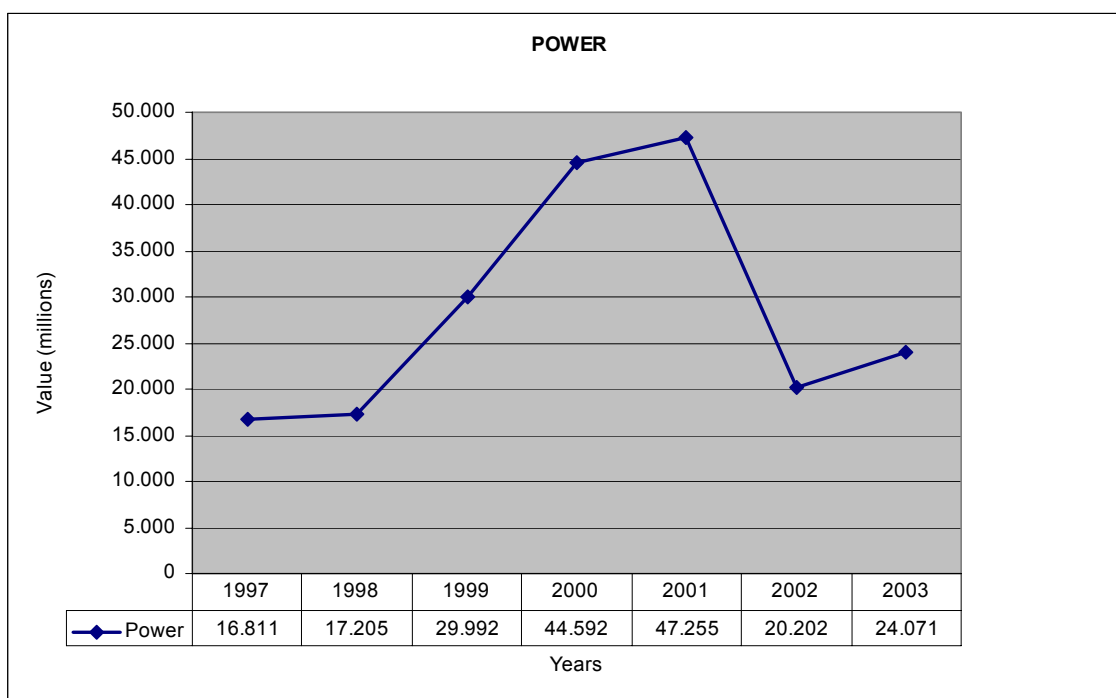


Figure 0-3 Power Sector Tendency

Table 2-4 shows that Telecom sector did have a stable rise and fall during the years 1997-2003. The top sector of 1997 reduced in 1998 and had a linear increase to the year 2000 at its peak. After 2000, with the same tendency Telecoms start to fall and 2002 gives the second rank to Infrastructure sector with a nearly 11 percent fall in overall.

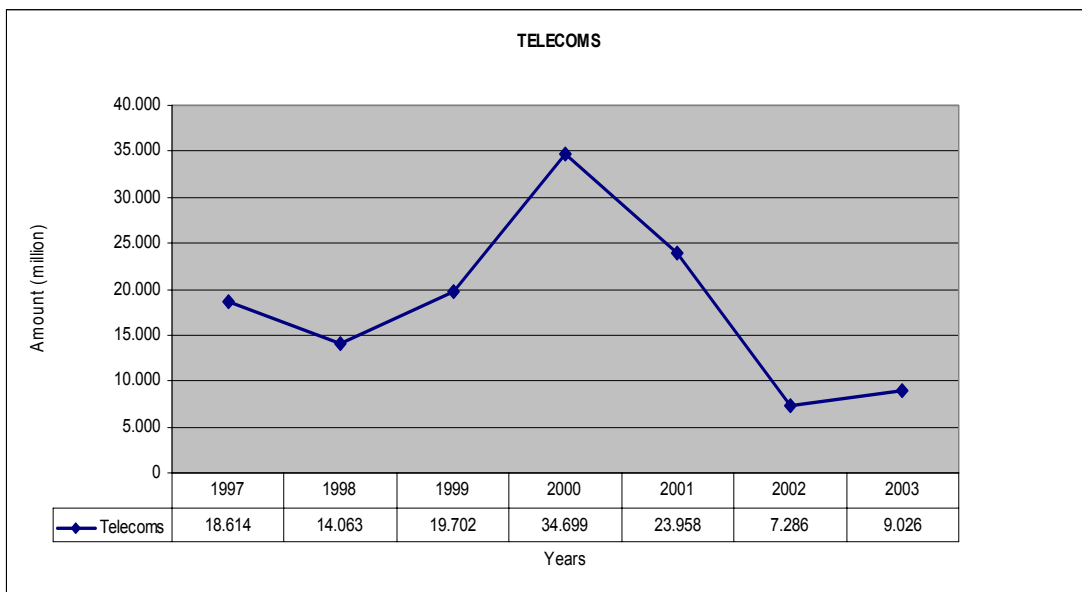


Figure 0-4 Telecoms Sector Tendency

Infrastructure sector is without a doubt the only sector which maintains a stable rise the 1997-2003 periods. The sector even has not been influenced in the fall in year 2002. The importance of transportation has been increased for the countries mostly in all over the world, and hence this is reflected in the global loans given in Figure 2-5.

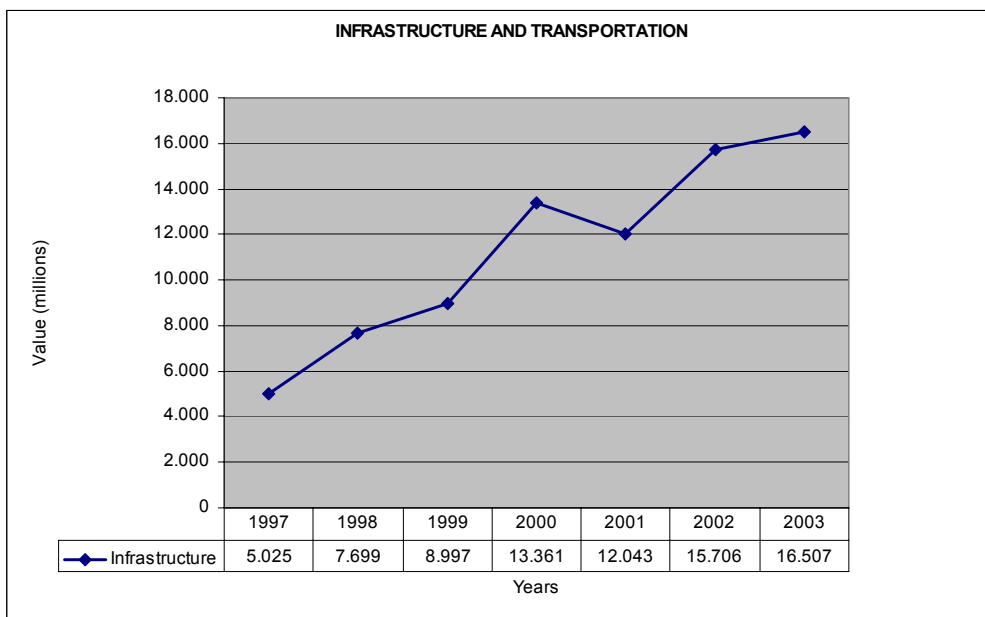


Figure 0-5 Infrastructure Tendency

Like infrastructure, as given in Figure 7, Oil and Gas sector has also a stable graphic in the amount of loans but in the opposite way. The sector formed a big portion of loan in 1997 and starts to decrease in 1998 with a big acceleration and continues to 1999. The good financial environment effects are recognized in this sector also in 2000 and have almost a hundred percent rise in 2000. However the decrease continues to year 2003 within Oil and Gas sector.

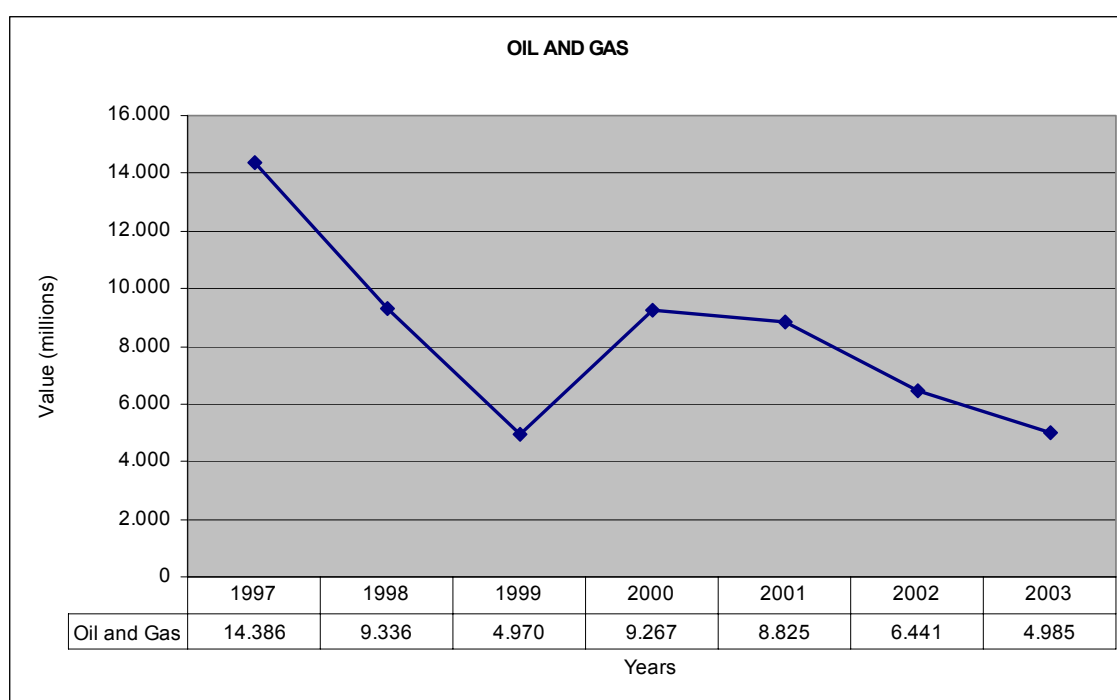


Figure 0-6 Oil and Gas Tendency

The other sectors, Mining, Petrochemicals, Industry and Leisure and Property form the nearly 12 percent of total PF loans.

Table 2-4 shows the distribution of bank lending by both region and sector during the years 1997-2003. The most active sectors in regions are shaded in the given figure. Power and Telecoms sectors in Americas constitute nearly the seventy percent of the loans in this region with 145.5 billion dollars. However in EMEA, Telecoms sector is in

the first rank and has other two active sectors Infrastructure and Power. It is obvious that during these years Infrastructure and Telecoms investments are done especially in EMEA which does include GSM operators, motorway and subway projects in Europe especially. Asia Pacific region has power and infrastructure sectors active in these years. The shaded regions and sector pairs accounted for 70% of all bank lending over the seven years. The top sector alone is without a doubt power in Americas which forms the more than 20 percent of all the bank loans.

Table 0-4 Project Finance Loans by Sector and Region (USD Million), 1997-2003

	<u>Americas</u>		<u>Europe Middle</u>		<u>Asia Pacific</u>		<u>1997-2003 Total</u>	
	<u>\$ (m)</u>	<u>%</u>	<u>East and Africa</u>		<u>\$ (m)</u>	<u>%</u>	<u>\$ (m)</u>	<u>%</u>
			<u>\$ (m)</u>	<u>%</u>				
Telecoms	33.962	16,33	79.943	32,92	13.442	13,90	127.348	23,26
Power	111.513	53,61	56.988	23,47	31.627	32,70	200.128	36,55
Oil and Gas	25.272	12,15	20.714	8,53	12.223	12,64	58.210	10,63
Mining	7.867	3,78	1.751	0,72	4.404	4,55	14.022	2,56
Infrastructure	10.375	4,99	53.230	21,92	15.732	16,27	79.338	14,49
Petrochemicals	8.048	3,87	15.366	6,33	7.825	8,09	31.239	5,71
Industrial	6.057	2,91	5.747	2,37	5.389	5,57	17.192	3,14
Leisure	4.649	2,24	9.117	3,75	5.703	5,90	19.470	3,56
Other	250	0,12	0	0,00	365	0,38	615	0,11
Total	207.994		242.857		96.711		547.562	

According to the Thomson financial securities database and Esty's estimates (Esty, 2000), the number and size of the projects in the regions by sector shows the scope of these projects.

Nearly the 50% of the projects' value is between \$100-\$500 million dollars which accounted for the quarter value of the bank lending. The of Oil & Gas, Petrochemicals, Telecoms and Transportation and power sectors have 74%, 67%, nearly 60% and 45% of their total volume respectively, in deals greater than \$1 billion dollars.

3

PROJECT DEVELOPMENT AND MANAGEMENT

The Project which will be financed by PF technique can either be initiated by the private sector, where the sponsor develops a project to earn profit, or by public an authority who promote a public project and delegates the financing and operation of the vehicle to private sector sponsors. The active sectors given in Table 2-4 above, shows that active sectors are power, telecoms, infrastructure which are often initiated by the local government which the project is required for the development of the country. Rarely, leisure and property projects are promoted by private sponsors like Euro Disneyland in Paris which developed and realized by Warner Bros.

The main difference between the private investment and public procurement is that the public procurement projects do have a bidding phase for the award of the project. However, in both situation, a Project Company is established and the sponsors undertake the development, project drawings, and construction and operation phases of the project. The life of a project can be divided in to 4 phases which are the tender, development, construction and operation. Development phase includes the feasibility studies, financial arrangements and ends up with signing of contract between the parties and completion of design. The construction phase is the period when the building of the project commences and ends up with the start of project operation. In the operation phase the project operates commercially and produces cash-flow to pay the lenders' debt interests and repayment of the loan as well as the sponsors' equity return.

Projects involving provision of products or services to the public sector under a Project Agreement are initially developed by a national or local government or other public sector agency, which then calls for competitive bids to finance and construct the project and provide the product or service. A public procurement (competitive bidding) process is a legal requirement in many countries where public funding is being provided to the

public (e.g. European Union), and it is generally required by multilateral development banks, such as the World Bank. (Yescombe, 2002)

The tender period generally consists of Pre-qualification period, bidding which finalizes with the award of the project and signing of project agreement.

The tender may be open or selective tendering where the project is advertised in official publications. The bidders are required to demonstrate the proposed technology, technical capacity, experience and performance in a similar project and financial capacity of the company (Yescombe, 2002). The pre qualified bidders are short listed and invited to submit a detailed bid including their price quotations which is called also invitation to bidders. The tender file is submitted to bidder which consists of technical specification, project data, instruction to bidders and a draft project agreement.

The bidders in the tender period, decides and works with legal advisers for the documentation and structuring of financial plan which is important for the award of the bid. The provision of the loan with the most convenient conditions enables the bidder to submit more competitive prices. It lasts generally several months till the award of the project to the successful bidder. The successful bidder, which is often more than one company which forms a joint venture company, establishes a new project company (also called as Special Purpose Vehicle-Project Company) for the development, construction and operation of the project.

The Project Company lies in the center of all contractual and financial relationships in PF which cannot carry out any other business which is not part of the project. If there is more than one sponsor, once the Project Company has been set up and responsible for the managing implementation of the project, a Shareholder Agreement is signed between these parties which sets out the percentage share ownership, board representation and voting, distribution of profits etc. (Yescombe, 2002)

After the establishment of the Project Company, the sponsors starts to deal with the project development concerning the feasibility of the project, legal and financial structuring and engineering and design issues.

The legal and financial advisors play an important role in the structuring of contracts and financing of the project. They deal with the contractual relationships between the parties, the cost and repayment of the loan, cash-flow analysis etc.

3.1 Project Contracts

One of the main characteristics of PF is the high risks involved in the project as the debt is always higher than equity. For the provision of the loan for financing of the project in terms of loan and guarantees, the sponsors should provide securities to the lenders. The amounts of these securities depend on the risks of the project. To provide a security arrangement for the convincement of lenders many contracts are signed between various parties. At this point, other parties are requisite for the project for the bearing of risks and securities, where on the other hand lenders and investors for the financing. Hence, the PF comprises plenty of contracts in its body. These contracts set out the obligations of each party and they form the main part of a transaction from the very beginning of the PF.

For example; in scope of the Baku-Tbilisi-Ceyhan (BTC) project, which is a \$2.9 billion investment, the financing package includes 208 finance documents, with over 17,000 signatures from 78 different parties, and it represents a major milestone in the implementation of the financing arrangements for the pipeline which will cost \$2.95 billion to construct (\$3.6 billion total project cost including line fill and loan interest during construction). (BP website-2004) This is exactly because the project is big in scope so that only the sponsors can not provide these securities alone to the lenders as they can not bear all risks also.

The project contracts are designed to fortify the credit strength of a project. The purposes of contract can be divided into two parts which ensure:

- the project completion and fully repayment of project debt, and
- Timely payment of debts following project completion (Finnerty, 2000).

The contracts, generally included in project financing are:

- i. Project Agreement in the form of either a Purchase and Sales Contract (also called as *Off take Contract*) or a Concession Agreement,
- ii. Construction Contract,
- iii. Operation and Maintenance Contract,
- iv. Supply Contract,
- v. Insurance,
- vi. Government Support Agreement,
- vii. Direct Agreements with Lenders.

3.1.1 Project Agreement

Project Agreement is the most main contract of the project between the sponsors and the other party who will use or buy the product or service of the project when it starts operation. It can be in the form of a Purchase and Sales Contract (also called as *off take Contract*) under which the Project Company produces a product and sells it to an Offtaker, or in the form of Concession Agreement under which the Project Company provides a service to a public authority or directly to the general public. The only types of projects that do not operate under a Project Agreement are those that sell a product or service to private-sector buyers in a commodity based or opens competitive market such as telecommunication projects (Yescombe, 2002).

If it is a Purchase and Sales Contract, the purchaser (Offtaker) guarantees to purchase the product of the project on an agreed amount for an agreed period of time after the project is put into operation. This contract is required by the lenders to show the revenue of the project. It is often used in power projects and called Power Purchase Agreement

(PPA) where the electricity is purchased by the electricity authority of the country on an agreed tariff for a period of time. Hence, it guarantees the cash which will be generated by the constructed facility.

If the project is constructed to provide a service rather than a product to the public-sector entity or directly to the Project Agreement is in the form of Concession toll road, bridge, or other transportation project where the public pays tolls, water and sewerage, airports, or public sector building such as schools, hospitals, prisons etc. In these types of Concession Agreement the measurement of the revenue is more difficult and includes more risks.

3.1.2 Construction Contract

The construction contract used in project financings is often in the form of EPC contract (Engineering, Procurement and Construction), where the Contractor is obliged for the design and engineering of the project as well as the construction. It is a turn-key contract which required the contractor to complete in the required time with a fixed price. Hence, the risks are higher for the contractor; therefore the contractor has to envisage the contract price by adding more contingency amount. The standard forms of EPC contracts, such as those produced by International Federation of Consulting Engineers (FIDIC) are generally not appropriate for project finance, first because they tend to be too “contractor friendly”, and second because there are some differences of structure compared to project finance requirements (UNCITRAL, 1988). The articles of an EPC contract can be (the main articles of BTC project Turnkey Agreement):

- Definitions
- Agreement, Term and Duration
- Turnkey Contractor’s Work and Other Rights and Obligations
- Subcontracts and Procurement
- Price and Payment
- Completion and Acceptance of the Facilities and the Work

- Performance Guaranties and Remedies
- Financing Procedures and Obligations
- Warranties and Guaranties of Turnkey Contractor
- Force Majeure
- Scope Changes
- Indemnity (Claims)
- Insurance
- Termination
- Assignments
- Design Documents
- Confidential Information
- Inspection
- Dispute Resolution and Jurisdiction
- Cost Records
- Taxes and Payments
- Representations and Warranties
- Miscellaneous

3.1.3 Operation and Maintenance Contract

An Operation and Maintenance Contract (O&M) helps to ensure that project operation and maintenance contract costs stay within budget and that the project operates as projected. Because the Project Company has no track record of operating at the beginning of a project, lenders often prefer established companies, with the necessary experience of similar projects as well as more financial substance, to take this responsibility. Even if the project is going to be operated by one of its Sponsors, a separate agreement for this purpose is necessary, to define the scope of the Sponsors' involvement.

O&M may be dealt with less than one contract with a single contractor, if this is appropriate to the type of project. Alternatively, the O&M responsibilities may split. Another approach is for the EPC Contractor or equipment supplier to provide long-term major maintenance, while minor maintenance and general operations are undertaken by O&M Contractor. The O&M Contractor's fees may be one fixed or a "cost plus" basis plus a profit margin. (Yescombe, 2002)

3.1.4 Supply Contract

Fuel or raw materials are the main operating cost for a project selling an output product. Security of the input supplies, on an appropriate pricing basis, is therefore an important building block for this type of project finance, usually achieved through a long-term Input Supply Contract.

If a Project Company has an Off take Contract, an Input Supply Contract is usually signed which, as far as possible, matches the general terms of the Off-take Contract such as the length of contract. In the absence of an Off-take Contract, the Supply Contract should normally run for at least the term of the debt (Yescombe, 2002)

3.1.5 Insurance

In project financing, the insurance is arranged in two phases:

- the insurance covering the whole of the construction period of the project,
- Annual renewal of insurances when the project is in operation.

In addition, normal insurances required by law, such as employer's liability, vehicle insurance, third part insurance etc. have to be taken out by the Project Company or the EPC Contractor.

3.1.6 Government and Support Agreement

Where there is no clear legal framework for the project, for example when the country is using private sector finance for the first time, or where there are local risks in the

country especially in developing countries, a Support Agreement is signed with the Host Government which undertakes some risks by giving guarantees for the repayment of the debt.

3.1.7 Direct Agreements with Lenders

The EPC Contractor, O&M Contractor, Purchaser or Contracting Authority, Supplier, Host Government or any other party involved in the project are often obliged to sign direct agreement with the lenders in scope of security arrangements. These direct agreements cut the Project Company out of the picture in the event of default, and create a direct relationship between the lenders and project participants, hence the lenders ensures the repayment of the debt although the Project Company fails.

4

ARRANGEMENT OF THE LOAN

Project finance are often raised by private-sector lenders which are commercial banks, bond investors, public-sector sources as export credit agencies (ECAs) and development banks (DB). In the arrangement of financial documentation and financial model, a commercial bank is chosen as the arranger of the loan even if the project is not awarded to the Contractor or Sponsor. This arranger is often called as Lead Manager and is a commercial bank, and acts as the arranger of the loan and financial adviser to the contractor (or bidder). The main mission of this lead manager is to build up the financial model and convince the other financial institutions including ECAs and MLAs to subsidize loans in terms of direct loans or guarantees.

The normal approach to arranging a project finance loan is to appoint one or more banks as Lead Manager(s) who will underwrite the debt and place it on the market to obtain the whole amount. To ensure maximum competition between banks on financing terms, the whole of the project package should be finalized and a number of banks are invited to bid in a competition to underwrite and provide the loan as Lead Managers. For this bidding stage the sponsors have to employ a Financial Adviser to put this package together. In major projects, generally a Financial Adviser is appointed from the very beginning and later a Lead Manager is awarded where the two work together in the project financing. This is called as mandate which is the formal appointment to advice on or arranges a project financing.

The alternative approach is to agree with one or more banks at an early stage of the project development process that they will act both as Financial Adviser and Lead Manager. The obvious problem in this approach is that the banks are not in a competitive position and therefore the Sponsors will probably not get the most advantageous terms for financing. However, this may be a reasonable price to pay for

the greater efficiency of the process and greater certainty of obtaining finance that this method affords (Yescombe, 2002)

In case that sponsors have to bid in a public-procurement process for a Project Agreement, Financial Advisers and Lead Managers are involved in the bidding phase. When bid is submitted, bidders may have to prove that financing can be arranged. This may be provided by letters of intent from banks expressing their willingness to finance the project however they are not committed after the bid is awarded. On the other hand banks may be required to submit a full financing package, obtain credit approvals, and agree on documentation with the bidders to demonstrate that the financing can be provided and thus the project can begin without a delay. But in this case, the bidder has to pay the costs of the advisers and lead managers even they are not awarded for the bid. Once, the Lead Manager and/or Financial Adviser both appointed, a term sheet is drawn up which sets out in summary form the basis on which the finance will be provided. After the credit approval is obtained from other banks and financial institutions, the Lead Managers “underwrite” the debt, usually by signing the designed term sheet.

Throughout due-diligence process the Financial Advisers and/or Lead Managers pay an active role in the negotiation of Project Contracts, such as the Project Agreement, EPC Contract, Supply Contract, etc., to ensure that financing implications of these contracts are taken into account.

Once the financing documentation has been signed, one of the Lead Managers acts as a channel between the Project Company and the banks. The Agent Bank:

- collects funds from the syndicate¹ when drawings are made and passes these on to the Project Company,

¹ The process by which the Lead Managers reduce their underwriting by placing part of the loan with other banks.(thesis writer note)

- holds the project security on behalf of the lenders, calculates interest payments and principal payments,
- receives payments from Project Company and passes through on to the individual syndicate banks,
- gathers information about the progress of the project in liaison with the lenders' advisers, and distributes this to syndicate at regular intervals,
- monitors the Project Company's compliance with the requirements of the financing documentation and provides information on this to the syndicate banks,
- arranges meetings and site visits as necessary for the Project Company and the Sponsors to make formal presentations to the syndicate banks on the project's progress,
- organizes discussions with and voting by the syndicate if the Project Company needs to obtain an amendment or waiver of some term of financing,
- Takes enforcement action against the Project Company or the security after a default.

4.1 Commercial Banks

Commercial banks are institutions that primarily accept deposits and extend credit to serve consumer and corporate needs for capital. In contrast to most other financiers, commercial banks extend credit rather than taking an investment position in a corporate enterprise. Commercial banks receive deposits in two main ways: (a) consumer or commercial deposits, and (b) central bank and other bank deposits. Commercial banks generate revenue from the interest charged to consumers at rates above those received, and through a variety of customer service fees. (WRI, "Leverage", 1998)

4.1.1 Size and Leaders

Commercial banks, which exist in nearly every country, represent the largest individual pool of available private sector capital in the world, the majority of the world's debt financing, and the largest global funding of project finance activities. Globally, the leader of commercial banks in PF is Citigroup with a total value of nearly a 50 billion US \$. As given in Table 4-1, the other leading commercial banks are from Germany, Switzerland, the Netherlands, the United Kingdom, China, and the United States. They include the Deutsche Bank (Germany); Chase Manhattan (U.S.); Barclays Bank (U.K.); Deutsche Bank (Germany); ABN Amro Holdings (the Netherlands); Bank Nationale de Paris, or BNP (France); Societe Generale (France); and Citigroup (U.S.) (Thomson Financials Annual Reports, 1994-2003)

In past years, banks tended to make loans and extend other forms of credit, and then waited for the borrower to repay the money. In the modern banking era, many credit extensions (although usually not project finance transactions) are sold to servicing agents or bundled together with other similar debt instruments (securitization) and sold in the secondary market to other financial intermediaries, thus spreading the financial risk. This practice is most frequently done with high volume, low value, standardized loans such as mortgages and credit cards.

Table 0-1 Commercial Banks Ranking (1994-2003)

Rank	Commercial Banks	Total Value (US\$ m)
1	Citigroup	49.552
2	SG	28.856
3	Bank of America Securities	22.459
4	BNP paribas	21.407
5	Chase	21.054
6	Deutsche Bank	19.270
7	ABN AMRO	18.583
8	Barclays Capital	18.077
9	JP Morgan	17.513
10	Credit Agricole-Credit Lyonnais	16.052

4.1.2 Relevance to Developing and Transition Economies

Commercial banks in industrialized countries are providing loans to the developing world to support the construction of roads, power generation projects such as dams and coal-fired power plants, and other projects with significant environmental and social impacts. The structure of a limited recourse finance project in a developing or transition country may include a public sector guarantee from a bilateral or multilateral financing source, such as the U.S. Overseas Private Investment Corporation (OPIC) or the World Bank Group's Multilateral Investment Guarantee Agency (MIGA). In 1995, the World Bank Group supported about US\$25 billion of private sector finance, amounting to approximately 10 percent of all investment by private enterprise to developing and transition economies (The World Bank. *1995 Annual Report*). Worldwide, new commercial bank loans to developing countries totaled US\$34 billion in 1996 (Worldwatch Institute, 1997). Japanese banks, with US\$495.3 billion in outstanding loans, account for the largest aggregate lending to developing and transition economies. European banks rank second with US\$167.5 billion. U.S. banks, however, are experiencing the greatest rate of increase in this sector, growing 10.4 percent during the first half of 1996 to US\$114.9 billion. Lending to the developing world by U.S. banks is concentrated among a few institutions such as Bank of America, Citigroup, and Chase (Kraus, 2000).

4.1.3 Commercial Banks' Role in Project Finance

Project finance refers to any large long-term loan specifically tied to a particular capital-intensive project, with future project cash flows serving as the primary source of repayment for the loan and the physical assets of the project serving as the primary collateral for the loan. One of the objectives of the corporate borrower in the structuring of project finance is to limit or eliminate the recourse nature of a project—the direct liability of the corporate project sponsor in the event that the borrower defaults. So-called “non-recourse” financing limits the potential liabilities of a project finance deal to

the project itself and provides no obligation for the sponsoring corporation to repay the debt if the project fails. “Limited recourse” is usually a more accurate description than non-recourse, because most project financings have some degree of recourse to the sponsoring or equity entities. Recourse liability in project finance deals can be allocated to third parties (public or private) through various credit enhancement guarantees. Project finance funding is traditionally designed for 10 to 15 years, but it can have a term of 30 years or longer, with the amount rarely less than US\$10 million. If the risk is to be spread, the commercial bank will typically form a loan syndication, that is, a group of several commercial banks working together on a deal prior to loan approval. The syndication can occur at any point up until the transaction is closed with the borrowing corporate client. Chase, the largest underwriter of project finance in the world, underwrote 92 projects in 1996 totaling US\$8.75 billion (“Private Sector Fills the Gap.” Financial Times, 1997).

Figure 4-1 illustrates a commercial bank’s role in a project finance transaction. Project finance is depicted for the following reasons:

- (a) it is the primary focus of lending into developing and transition economies, and
- (b) it is long term in nature and thus more likely to be influenced by environmental concerns. (WRI, “Leverage”, 1998)

Each project finance transaction begins with the need for funds by the corporate client, the borrower. The demand for credit extension usually begins with the client contacting one of its commercial banks to discuss various financing options available for the particular need. This may be a new banking relationship, but normally it is an expansion of an existing one. The typical transaction involves the building of a structure (e.g., dam, manufacturing plant, resort) with the revenues generated from the sale of products or services produced paying off the loan and the interest due. The corporate client, represented by the Chief Financial Officer (CFO) or his or her designee, approaches the

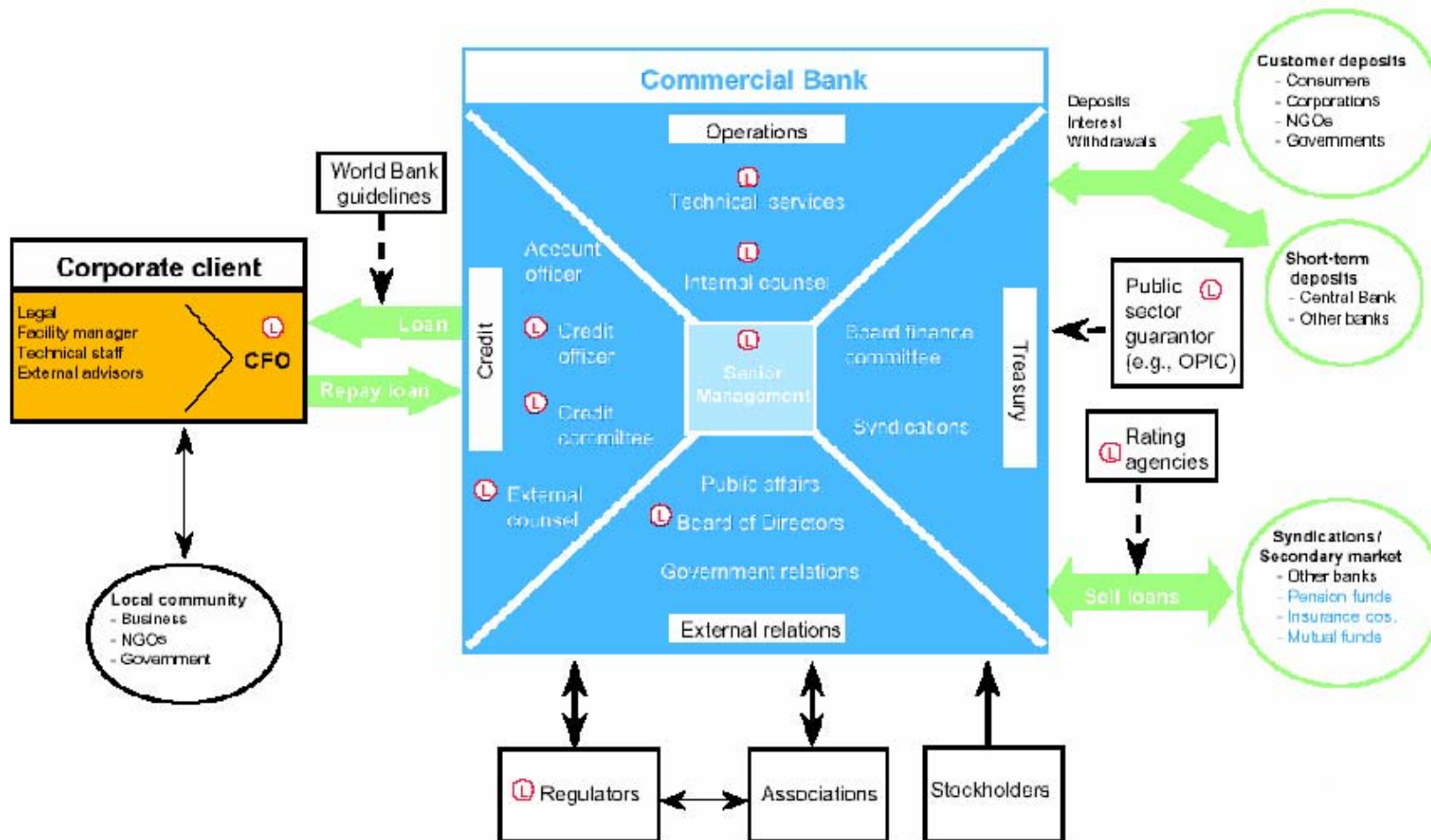


Figure 0-1 Commercial Banks' Role in Project Finance

commercial bank via an account officer, usually in geographic proximity to the potential borrower. The account officer functions as the corporate client's representative in dealing with the bank's internal review and approval of the transaction. The local community (NGOs, government, and business) where the corporation is operating may be in contact with the corporate client through the facility manager, external advisors, or legal and technical staff.

The account officer's team works with the corporate client in clearly defining the financial needs of the project and the most effective way to structure the transaction. The proposed deal is then reviewed and discussed internally within the bank, driven by the account and credit officers. The goal is to receive approval for the requested amount, from the credit officer and credit committee who serve, in effect, as the final authority on each extension of credit. The credit committee is responsible for the overall credit quality of a bank's portfolio, deciding how much risk a bank will support against expected rates of return. The credit committee, with guidance from senior management, helps set the overall credit criteria and process to achieve the targeted risk levels, and thus influences the policy and portfolio of an entire institution as well as influencing each transaction. Senior management and the Board of Directors serve to establish the bank's broader credit guidelines and policies and oversee the long-term health of the institution. Banking associations provide information and education to their members.

If the credit officer and credit committee agree to proceed, the account officer then coordinates with external counsel (for all documentation, regulatory, statutory, and other legal requirements) and technical services (for all physical requirements such as environmental and structural) to confirm that no significant problems exist with the project. It is at this point that environmental and social factors may be considered in a legal or scientific context. The bank likely will perform environmental due diligence for site contamination, regulatory compliance, legal titles to property and physical structures, as well as engineering and legal issues. If the bank does not have its own environmental guidelines, it may refer to World Bank guidelines. If the project finance deal is in a

developing or transition country, the loan may be packaged with a public guarantee by a public sector guarantor to ensure against commercial risk (e.g., insufficient cash flow) or noncommercial risk (e.g., political instability).

4.2 Export Credit Agencies (ECAs)

ECAs subsidize almost 8 percent of annual world trade. Government-supported loans, guarantees and insurance schemes back up more than \$400 billion worth of annual exports. And more than \$50 billion a year is devoted to big infrastructure projects in developing countries. This exceeds the combined financial assistance of all multilateral and bilateral aid agencies. (Export Credit Agencies Fund Immoral And Environmentally Damaging Project by Bruce Rich)

Export credit agencies (“ECAs”) are either public-sector institutions in their respective countries or private-sector companies that act as a channel for government support from the country, established to support the exports of that country by offering a mix of export support services and products, including buyer and supplier export credits and short to medium term commercial and political export credit insurance. Over time, ECAs have developed a broader array of services as they strive to better complement the services and products of the private sector and as they compete against each other. In recent years, ECAs have begun to offer long-term commercial risk insurance coverage in project finance transactions.

ECAs traditionally promote exports by providing either buyer or supplier credits in support of export/import transactions. In addition, ECAs provide short to long-term political risk insurance, short to medium term commercial risk insurance, and comprehensive coverage relating to both commercial and political risks, among other products. ECAs have continually expanded their scope of services and products in an effort to provide better services to their countries’ exporters and to compete with other

ECAs. ECAs have begun to offer commercial risk insurance in more complicated and longer-term transactions, which include aircraft/structured finance and project finance.

4.2.1 ECAs' Programs

ECAs are the official independent agencies of the government that supports national producers and exporters to enter in worldwide export markets in the competitive global marketplace by providing a number of financing programs.

The Ex-Im Bank of US describes its mission as 'to enable US companies to turn export opportunities into real sales that help to maintain and create US jobs and contribute to a stronger national economy.' This is the common mission for all the ECAs of all countries.

In general, the ECAs offers financing by Direct Loan, Insurance and Loan Guarantee programs for the export of all kinds of goods and services, except military-related. Besides some agencies concessionalizes loans to foreign countries through Tied Aid Fund.

The biggest portion of commitments of the transactions is for Guarantee Programs compared to Direct Loans. William H. Lash (1995) states 'By issuing loan guarantees, the Exim Bank can support more exports than it could by simply making direct loans.' According to Mr. William H. Lash (1995), if the Eximbank were to use only direct loans, its financing would be limited to the amount of its appropriation.

Under the guarantee programs the exporter or the buyer borrows from a lender (commercial bank) and ECA guarantees the repayment of the loan to the lender. This guarantee enables the commercial bank to lend in lower interests.

The Bank plays an important role by assuming economical and commercial risks of foreign countries that private sector is unable or unwilling to accept. The agency charges Commitment and Exposure Fees in its all loan programs which depends on the risk

rating of the country. The ratings are based on country's creditability and economical situation indicated by relevant factors. The third parties' such as Standard & Poor's, Moody's ratings are used while determining the risk category of the country.

Besides ECAs have adopted green agenda from the lending practices of World Bank in 1994, which requires the applicants to demonstrate the environmental impacts of the any projects or products receiving ECA support.

In direct loans, The detailed terms on which ECAs provide support for export credits (whether direct loans, guarantees or credit insurances) are governed by an international agreement under the Organization for Economic Cooperation and Development (OECD). This OECD consensus is accepted by major ECAs of most of the countries and ensures the operation of an orderly export credit market and seeks to prevent countries from competing to offer the most favorable financing terms of exports. By this consensus, the general rules in all the ECA programs are standardized.

The applicant to Direct Loans can only be the borrower who may be the foreign buyer or the exporter while the applicant for a Guarantee can be the lender or the borrower. For final commitment application, ECA requires detailed information of the participants comprising the applicant, buyer, exporter, end-user, lender (financing institution) and Guarantor Company. The applicant is asked to describe the purpose of the loan, if the application is for an identified project, then project information including the project name, capacity, estimated project cost, and start and completion dates must be provided. Here the agency would also want the applicant to show the contract between the supplier and the buyer in the attachment and Content Report to see the eligible goods or services subject to the amount of coverage requested.

ECAs take place in Project Finance transactions often with their Guarantee programs or sometimes Direct Loans. Beside, some ECAs do have specialized Project Finance programs such as US Exim, Hermes and Coface.

4.2.2 ECA Structures of Countries

Official ECAs began with ECGD, established in the United Kingdom in 1919, and U.S. Ex-Im, dating back to 1933. Since then, most of the countries established their own ECAs to support their export and import with different organization names. The ranking of these institutions are set out in Table 4-2 showing the total transaction value where the Hermes of Germany leads.

The 51 official ECAs are given in Table 4-3. The ECAs of developed countries are the major ones and take part in transactions very often. Eximbank of US, Hermes of Germany, Coface of France, SACE of Italy, OND of Belgium and JBIC/NEXI of Japan are the major ECA structures in this manner.

Table 0-2 Export Credit Agencies Ranking (1991, 1995-1998)

Rank	Export Credit Agencies	Acronym	Country	Total Value (US\$ m)
1	The Export-Import Bank of the United States	USEXIM	United States	9.403
2	The Export-Import Bank of Japan	JEXIM	Japan	13.612
3	Compagnie Francaise d'Assurance pour le Commerce Exterieur	COFACE	France	6.889
4	Export Credits Guarantee Department	ECGD	United Kingdom	3.140
5	Export Development Corporation	EDC	Canada	4.307
6	Hermes Kreditvorsicherungs	Hermes	Germany	24.538
7	Kreditanstalt fur Wiederaufbau	KfW	Germany	5.203
8	Sezaine Speciale per l'Assicurazione del Credito all'Esportazione	SACE	Italy	2.819

Table 0-3 The Official ECAs of Countries

1	Asuransi Ekspor Indonesia (ASEI, Indonesia)	27	Export Credit Insurance Organization (ECIO, Greece)
2	Banco de Inversión y Comercio Exterior (BICE, Argentina)	28	Export Kredit Fonden (EFS, Denmark)
3	Banco Nacional de Comercio Exterior SNC (Bancomext, Mexico)	29	Export Risk Guarantee Agency (ERG, Switzerland)
4	BNDES-Exim (Ex-Finamex, Brazil)	30	Exportkreditnamnden (EKN, Sweden)
5	Compagnie Francaise d. Assurance pour le Commerce Exterieur (COFACE, France)	31	Finnvera plc (Finnvera, Finland)
6	Companhia de Seguro de Créditos S.A. (COSEC, Portugal)	32	Guarantee Institute for Export Credits (GIEK, Norway)
7	Compañía Española de Seguros de Crédito a la Exportación, S.A. (CESCE, Spain)	33	Hermes Kreditversicherungs-AG (Hermes, Germany)
8	Corporación Financiera Nacional Fondo de Promoción de Exportaciones (CFN/Fopex, Ecuador)	34	Hong Kong Export Credit Insurance Corporation (HKEC, Hong Kong)
9	Credit Guarantee Insurance Corporation of Africa Limited (CGIC, South Africa)	35	Hungarian Export Credit Insurance Ltd. (MEHIB, Hungary)
10	Credit Insurance Zimbabwe (Credsure, Zimbabwe)	36	Israel Foreign Trade Risks Insurance Corporation (Iftric, Israel)
11	Croatian Bank for Reconstruction and Development (HBOR, Croatia)	37	Istituto per i Servizi Assicurativi e il Credito all'Esportazione (SACE, Italy)
12	ECICS Credit Insurance Ltd. (ECICS, Singapore)	38	Japan Bank for International Cooperation (formerly JExim)
13	Exgo (a division of State Insurance, New Zealand)	39	Korea Export Insurance Corporation (KEIC, South Korea)
14	Export Credit Bank of Turkey (Turk Eximbank, Turkey)	40	KfW IPEX Bank (part of the KfW BankenGruppe, Germany)
15	Export Credit Guarantee Agency (ECGA, Oman)	41	Malaysia Export Credit Insurance Berhad (MECIB, Malaysia)
16	Export Credit Insurance Corporation (Kuke, Poland)	42	Nederlandsche Credietverzekering Maatschappij NV (ATRADIUS, formerly NCM, Netherlands)
17	Export Credits Guarantee Department (ECGD, UK)	43	Norwegian Guarantee Institute for Export Credits (Giek, Norway)
18	Export Development Canada (EDC, Canada)	44	Office National du Ducroire (OND, Belgium)
19	Export Finance and Insurance Corporation (EFIC, Australia)	45	Oesterreichische Kontrollbank Aktiengesellschaft (OeKB, Austria)
20	Export Guarantee and Insurance Corporation (Egap, Czech Republic)	46	Overseas Private Investment Corporation (OPIC, United States)
21	Export-Import Bank of India (I-Eximbank, India)	47	Segurexpo de Columbia (Segurexpo, Columbia)
22	Export-Import Bank of Korea (Keximbank, South Korea)	48	Slovene Export Corporation (SEC, Slovenia)
23	Export-Import Bank of the Russian Federation (Eximbank, Russia)	49	Sri Lanka Export Credit Insurance Corporation (SLECIC, Sri Lanka)
24	Export-Import Bank of Thailand (Thai Exim, Thailand)	50	Svensk Esportkredit (SEK, Sweden)
25	Export-Import Bank of Trinidad & Tobago (Eximbank, Trinidad & Tobago)	51	Uzbekinvest National Export-Import Insurance Company (Unic, Uzbekistan)
26	Export-Import Bank of the United States (EXIM, US)		

The major ECA structures state their aims in their own words as follows (ECGD International Comparison Survey - October 2003)

4.2.2.1 COFACE, FRANCE

“The Coface Group mission [i.e. including business for its own account] is to help businesses to limit their political and commercial risks by providing business information and credit insurance. Its products and services cover not only the risks associated with trading activities and the related financial transactions, but also those attached to overseas investments.”

4.2.2.2 ECGD, UK

“To benefit the UK economy by helping exporters of UK goods and services win business and UK firms to invest overseas, by providing guarantees, insurance and reinsurance against loss, taking into account the Government’s international policies.”

4.2.2.3 EXIM BANK, USA

“The Export-Import Bank supports the export of U.S. goods and services by assuming credit and country risks the private sector is unable or unwilling to accept and provides financing (when the private sector is unable or unwilling) that is competitive with and neutralizes the export financing of our foreign government ECA counterparts so that purchase decisions can be made on the basis of market forces such as price, quality, and service.”

4.2.2.4 EULER HERMES, Germany

“By issuing Federal Guarantees (HERMES Cover), the Federal Government strengthens the global competitive position of German companies and, in particular, of small and medium enterprises (SMEs). This is a major contribution to the preservation of jobs at home.”

4.2.2.5 NEXI, Japan

“NEXI was established in order to provide administrative services efficient enough to address the globalization of financing and the diversifying needs of Japanese companies”.

4.2.2.6 SACE, Italy

“To grant insurance and reinsurance cover against payment default connected to political, force majeure, economic, commercial and exchange risks, ran by Italian exporters having trade relations with foreign buyers and to support the internationalization of the Italian Economy.”

4.2.2.7 CESCE, Spain

“CESCE is a Spanish export credit insurance agency which is governed by a Law which regulates its activities and is considered as a part of the Spanish scheme to promote exports financing ruled by the Ministry of Economy and in particular by the Trade State Department”.

4.2.2.8 EDC, Canada

“EDC’s public policy mandate is to support and develop, directly or indirectly, Canada’s export trade and Canadian capacity to engage in that trade and to respond to international business opportunities.”

4.2.2.9 EKN, Sweden

“To promote Swedish exports by issuing guarantees. EKN shall offer the Swedish export companies support which corresponds to the support available for their competitors in other countries. EKN’s activities shall be financially self-supportive”.

4.2.2.10 ATRADIUS, Netherlands

“To create the conditions for Dutch exporters to enable them to compete on equal terms with their foreign competitors, by providing credit insurance and guarantees complementary to the market.”

4.2.3 Project Finance Programs of ECAs

The ECAs offering project financing programs are Export Finance and Insurance Corporation (EFIC, Australia), Export Development Canada (EDC, Canada), Export Kredit Fonden (EFS, Denmark), Finnvera plc (Finnvera, Finland), Coface (France), Hermes Kreditversicherungs-AG (Hermes, Germany), SACE (Italy), Japan Bank for International Cooperation (formerly JExIm), Nederlandsche Credietverzekering Maatschappij NV (ATRADIUS, formerly NCM, Netherlands), Export Credits Guarantee Department (ECGD, UK), Exportkreditnämnden (EKN, Sweden) and Export Import Bank of United States (US Exim).

This program enables the sponsors to provide the source for developing a project. The financing of a construction projects have an important portion in this program. The development projects have very high costs. The sponsors may not be able to afford the costs which occur before and during the construction period. The contractors may be asked to provide a financing solution offering appropriate conditions during the tender stage. The loans requested by a contractor (for the promoter) or a sponsor where it may be a foreign government, corporation or financial institution for a specific project is under the responsibility of Project Finance Division in the ECA.

The program has common guidelines as in all other programs described above. In addition more detailed information about the project parties are required with supporting documentation. The key issue is to satisfy the bank on the eligibility of the costs incurred in the project and the assurance of repayment to be successful in the application.

The application starts with Preliminary Application of the applicant. In a few weeks, the applicant is notified if it is suitable or not. The successful application is then proceeded to evaluation by an assigned consultant of the Bank. The application is reviewed by the consultant who will be paid by the applicant before this process. In a few months, if the evaluation is satisfactory a Preliminary Project Letter (PPL) is issued by ECA to notice the applicant to move on final commitment with the consultants.

During the application process, the applicant is required to submit supporting documents. A Lender's Independent Engineer is assigned to the project to pursue the proceedings. Information on scope of the project, participants, host country and technical capabilities is demanded. The supporting documents will be feasibility report of the project including the location, estimated costs, the ownerships, financing of the project, financial statements (ie. Balance sheets, profit-loss etc), market studies (strategy, proposed customers etc.), insurance coverage to be purchased during the project, historical financial information, experiences and statements of the sponsors and contractors, environmental assessment of the project, work schedule, project implementation schedule with target dates and arrangement of supply of raw materials are required. In addition, the agency will want to know the political and financial situation of the host country (sponsor or not) and want current and historical commitment. For the coverage, the eligible foreign costs and country's national content in the project needs to be shown in a Project Cost Breakdown. The foreign goods/services are eligible in case they are shipped from the ECA's country to a foreign country. The financing on the transaction will be either 85% of the total price of the contract or the total value of the its national content.

The pre-development costs are not eligible unless it is a construction project. The pre-construction expenses i.e. plants, equipment, insurances are eligible. The Operations and Maintenance costs are not covered.

The contingency amount not exceeding 10% of the contract price is eligible for support hence; the items must be described related to contingency. The disbursements for the

progress payments from ECA are made if the actual cost of performed work is equal to the amount of requested payment. In most cases the approval (confirmation) of the Lender's Independent Engineer may be required. The program does have restrictions however does not have a limitation. All credits approved by ECA must meet the standard of reasonable assurance of repayment.

4.3 Bilateral and Multilateral Lending Agencies

Multilateral Lending Agencies (MLAs) and Bilateral Lending Agencies (BLAs) are also known as Multilateral Development Banks (MDBs) and Bilateral Development Banks (BDBs). The difference in their structure is that BLAs are institutions established by one country to promote trade with other countries like an export-import agency, on the other hand MLAs are institutions organized by a group of countries to promote development. The list of MLAs and BLAs are given in Tables 4-4 and 4-5. In some way the BLAs subsidize loans if promotes the export of its country; however MLAs concessionalizes loans to foreign countries if it supports the development of the country. The BLAs' procedures and eligibility criteria are similar, however the MLAs' differ.

Table 0-4 List of MLAs

Multilateral Lending Agencies (MLAs)	
1	African Development Bank (ADB)
2	Asian Development Bank (ADB)
3	European Bank for Reconstruction and Development (EBRD)
4	European Investment Bank (EIB)
5	Inter-American Development Bank (IADB)
6	Inter-American Investment Corporation (IIC)
7	International Finance Corporation (IFC)
8	International Monetary Fund (IMF)
9	Islamic Development Bank (IDB)
10	Multilateral Investment Guarantee Agency (MIGA)
11	Nordic Investment Bank (NIB)
12	United Nations Development Program (UNDP)
13	World Bank Group (IBRD)

Table 0-5 List of BLAs

Bilateral Lending Agencies (BLAs)
Agence Francaise de Development (AFD, France)
Commonwealth Development Corporation (CDC, UK)
Finnish Fund for Industrial Cooperation (FINNFUND, Finland)
Industrial Development Corporation (IDC, South Africa)
Industrialization Fund for Developing Countries (IFU, Denmark)
Japan Bank for International Cooperation (OEFC, Japan)
Kreditanstalt fur Wiederaufbau (KfW, Germany)
Overseas Private Investment Corporation (OPIC, US)
Swedfund International AB (Swedfund, Sweden)

4.3.1 MLAs Role in Project Finance Transactions

MLAs play an important role not just as lenders to projects, but also in mobilizing private sector funding to projects in developing countries. Private-sector lenders are more comfortable about lending to developing countries under the sponsorship of or in parallel with a MLA because of the MLA's general involvement in the economy of the host country. This gives the protection of MLA "umbrella", which can also benefit investors (Yescombe, 2002).

An important factor in encouraging private-sector lenders to participate in MLA-arranged Facility is the "preferred creditor" status that arises for the practice of providing a preference to MLAs when resources for repaying external creditors are limited, and not involving MLA loans in the country debt rescheduling. This status was established to reduce the risk to IFIs (and their shareholders) due to their special role within the international finance community. It is important to note that this preferred creditor status exists by custom and not by law, but it has been honored in practice where countries have run into debt problems.

The MLAs have also developed a variety of guarantee instruments for political risk that have encouraged private-sector lenders' involvement in developing countries' projects in recent years.

MLAs pay more attention than private-sector lenders to examining whether the project to be financed is appropriate in the wider economic context of the Host Country. Besides, if a project gets into trouble, a MLA may have a more long-term agenda in dealing with the problem that may not be relevant for a lender or investor who is simply trying to get the loan repaid or recover the equity. The ranking of BLAs and MLAs are given in Table 4-6 and 4-7 respectively.

Table 0-6 Bilateral Development Agencies (1991, 1995-1998)

Rank	Bilateral Development Agencies	Acronym	Country	Total Value (US\$ m)
1	Overseas Investment Corporation	OPIC	United States	5.860
2	Commonwealth Development Corporation	CDC	United Kingdom	1.853
3	Deutsche Entwicklung Gesellschaft	DEG	Germany	1.767
4	Agence Francaise de Development	AFD	France	1.593
5	The Netherlands Development Finance Company	FMO	Netherlands	1.549

Table 0-7 Multilateral Development Agencies (1991, 1995-1998)

Rank	Multilateral Development Agencies	Acronym	Country	Total Value (US\$ m)
1	International Finance Corporation	IFC	International , based in Washington,DC	11.309
2	European Bank for Reconstruction and Development	EBRD	Regional, based in London	7.949
3	European Investment Bank	EIB	Regional, based in Luxembourg	4.326
4	Inter-American Development Bank	IDB	Regional, based in Washington,DC	1.240
5	Asian Development Bank	ADB	Regional, based in Manila	928

4.3.1.1 The World Bank (IBRD)

The International Bank for Reconstruction and Development (IBRD), normally known as the World Bank, was founded in 1944, and is an international organization owned by most world governments. Its affiliates IFC, IDA and MIGA have been added to the World Bank Group since its original foundation. Its lending mandate is to provide credit to governments and therefore its immediate relevance to project finance, which is always a private-sector activity might appear limited; however, the increased importance of private-sector funding for infrastructure in developing countries has inevitably led to some change of emphasis in the World Bank's approach (Philippe Benoit, 1996). IBRD offers programs in terms of Direct Loans and Guarantees. It is not linked to the exports of the goods from any country.

4.3.1.2 International Finance Corporation (IFC)

IFC, established in 1956, is the private sector financing affiliate of the World Bank, and is therefore the only member of the World Bank Group that does not need direct host government involvement in projects as a basis for its financing. (International Finance Corporation: Project Finance in Developing Countries (IFC, Washington, 1999). It takes part in project finance transactions by lending, guarantees or equity investment. It can invest or lend up to 100 million US \$ per project, with a limit of 25 % of project cost and does not require host government guarantees. It can also take minority equity investments (normally 5-15% and a maximum 35 %) in project companies, but does not take an active role in company management and is considered a passive investor.

4.3.1.3 Multilateral Investment Guarantee Agency (MIGA)

MIGA is another World Bank affiliate, established in 1988 to encourage private-sector investment in developing countries by providing cover to lenders and investors against political risks. It is intended as the primary World Bank political risk guarantor (and

was modeled on OPIC). As with the World Bank, MIGA does only provide coverage under an agreement with the Host Government.

4.3.1.4 Asian Development Bank (ADB)

ADB was established in 1966 as regional MLA. It began private-sector operations in 1983 and can lend directly to private sector projects, invest equity, or provide loan guarantees. Its loan guarantee program is similar to that of the World Bank, where two types of guarantee are provided for private-sector projects; political risk guarantee and partial credit guarantees. A Host Government counter guarantee may be required.

4.3.1.5 African Development Bank (AfDB)

AfDB was established in 1953. It does not offer a political risk guarantee programs. Loans can be made to project companies, but only for a maximum amount of \$15 million.

4.3.1.6 Inter-American Development Bank (IADB)

IADB was established in 1959, which is regional MLA covering Latin America and Caribbean. It provides direct loans to private-sector borrowers in USD up to \$ 75 million or 25 % of total project cost with maturities up to 20 years. It also takes part in PF transaction with guarantees.

4.3.1.7 European Bank for Reconstruction and Development (EBRD)

EBRD also known as European bank was formed in 1991 and operates in 26 countries in Central and Eastern Europe. It promotes private-sector activity, the strengthening of financial institutions and legal systems, and the development of the infrastructure needed to support the private sector. It provides equity and debt as well as guarantees which are similar to IFC. For private-sector projects, the EBRD provide in the form of equity or debt, up to 35 % of a project company.

4.3.1.8 Islamic Development Bank (IDB)

IDB was established in 1974 to provide financing on Islamic basis (i.e., without a charging interest), but sharing in the profitability of the other ways, namely:

- Islamic lease (*ijara*)-basically similar to leasing elsewhere in the world (i.e. allowing use of equipment for a period of time against fixed rental payments)
- Installment sale (*murabaha*)-with a “mark-up” on the price that provide the profit margin
- *Istisna'a*- basically similar to *murabaha*, but based on the sale of an item yet to be manufactured.

The financing models can be provided as part of a project finance package, in parallel with banks lending on a conventional basis. IDB financing is provided for up to 12 years, at fixed or floating rates of markup, and for a maximum amount of 20 million Islamic dinars. (App. \$ 25 million)

5

PROJECT FINANCING in TURKEY

Turkey has used three types of resource for decades in the financing of public infrastructure investments,

1. Primarily individual public institution finances the project from their own budget which is reserved for the work item (e.g. such as construction of a facility, supply of goods etc.) and borrows loan from the lenders,
2. Obtains long-term loans from other countries' governments, or
3. Borrows from Multilateral Lending Agencies (MLAs, e.g. World Bank).

The MLAs examines the project prepared by the public institution according to their field of interests. If the project meets the agency's eligibility criteria, the agency concessionalizes funds to the institution under the repayment guarantee of Treasury. However, apart from these stated above, for the last 20 years, the borrowing practices of Turkey have begun to change. These changes resulted because of Turkey's own economic and politico-economic situation and second; the global changes in the financing techniques.

For the last 20 years, Turkey has been dealing with high inflation problems. Therefore, the biggest portion of public revenues has been used to repay the debt. In the year 1960, one-third of budget expenditure had been spending on investments, where this ratio was decreased to 3-4% in 2000. On the other hand, liberal market economy has become popular, therefore privatization is started to be encouraged in global market place. This trend has affected also the financing sector, and by the pressure of financial institutions, borrow-lend relationship between countries' government has been ceased. Especially because of the high increase in oil prices, the private sector finance institutions have owned big amount of funds. Therefore, in order to obtain the loans for the project financing, the sponsors begin to seek private-sector debts instead of government loans.

As a result of this, the private rating agencies are formed to evaluate the risk of the countries' risks and creditability and publish of the rating of all countries to the public which is taken into consideration by the lenders and investors before they make their financing decisions. These two reasons lead Turkey to create new financing technique which is called Project Financing under BOO and BOT schemes.

5.1 BOT and BOO Schemes

The project financing has been started to be used in under Build-Own-Transfer (BOT) scheme followed by Build-Own-Operate (BOO) in 1984 and firstly used in Birecik Dam project. In the tender of BOT projects, Government asks the bidder to provide financing of the project under convenient terms; hence the responsibility of government is delegated to the private sector. (İmre, 2001)

Broadly speaking, BOT scheme can be defined as, the construction and financing of a public infrastructure investment by a private-sector entity which operates the facility for a number of years and sells to the public on agreed tariffs, and finally transfers the facility to the public in the end of operation years. The main characteristic of BOT-BOO schemes are:

1. It is only used between public and private entities in Turkey, however it is carried out between private entities without the public participation,
2. The main purpose is to provide finance to the infrastructure investments required by the public authorities and therefore the realization of investment by private-sector,
3. It also aims to transfer advanced technology by the private sector to the country in the operation and management of the facility,
4. It can also be used in the renovation of any public institution,
5. Treasury does not guarantee the repayment of the loan and interests,
6. The debt is not shown as the government debt and therefore the creditability and debt capacity of the country is not influenced,

7. It is put into practice in terms of several agreements and contracts between the project participants and lender such as Concession Agreement, Supply and Purchase Contracts,
8. It encourages the privatization in the country which attracts the foreign investment into the country.

5.2 Project-financed investments in Turkey

According to Project Financial International statistics, the total commercial lending of Turkey totaled US \$ 4, 67 bn, beginning from 1998-2003. It is first experienced in the construction of dams and hydroelectric project in Anatolia Project (known as GAP after its Turkish name, Guneydogu Anadolu Projesi), a network of 22 dams and 19 power plants: it would be built by a consortium of European and US companies for the Turkish government's State Hydraulics Works Department (DSI). The Birecik HEP project is the first project financed under this technique. Another project in agenda is the Ilisu dam which has been heavily criticized after it is announced to public that it is financed by the ECAs and several commercial banks. The project has centered largely on the failure of the project to meet international standards for infrastructure projects involving forcible resettlement and shared rivers. As planned, the dam would flood an area submerging or partially submerging some 183 villages and hamlets and the ancient town of Hasankeyf, a site of international archaeological significance. Before the issue of support, the ECAs demanded Turkey to meet environmental standards; hence the project has been suspended.

The projects in which project financing are used is given in Table 5.1. In overall, the mostly financed projects are power plants. Since then, new technologies have been transferred to the Turkish power market including coal fired, thermal and natural gas combined cycle power plants. Lately, telecoms and oil-gas projects have been realized parallel to the demand increase in these sectors in the world.

Finally, Table 5-1 gives the current projects which has not been financed yet but has been mandated to the advisers which amount nearly US \$ 6 bn.

Table 0-1 Project Financed Projects in Turkey

	Project Name	Project Company	Sector	Project Type	Project Sponsors	Project Cost (US \$ million)	Financing Status	Contract Signing Date	Operational Date
1	Birecik Dam Power Plant	Birecik Enerji A.Ş.	Hydro-Electric	BOT	TEAŞ, GAMA, P.HOLTZMAN, STRABEG OST ,ACEC,VERBUND PLAN, CEGELEC, SULZER E.W., NEYRPIC, CEGELEC ACEC,TGT.	1,200	Financed	18.11.1995	Ekim 2000 - Kasım 2001
2	Çamlıca Power Plant	Ayen Enerji A.Ş.	Hydro-Electric	BOT		165	Financed	07.08.1996	13.12.1998
3	Trakya Power Plant	Trakya El. Üretim A.Ş	Combined Cycle Gas Turbine	BOT	GAMA, ENRON, WING INTERNATIONAL , MIDLAND GENERATION	600	Financed	06.09.1996	13.12.1998
4	Marmara Power Plant	Uni-Mar Enerji Yatırım A.Ş.	Combined Cycle Gas Turbine	BOT	UNIT Int., UNIT Investment, MARUBENI, ENTES, NATIONAL POWER, MARUBENI Euro Power	630	Financed	15.11.1996	13.12.1998
5	Gönen Power Plant	Gönen HES Elektrik Üretim A.Ş.	Hydro-Electric	BOT		11	Financed	14.03.1997	07.03.1998
6	Esenyurt Power Plant	Doğa El. Üretim ve San. Ve Tic. Ltd. A.Ş.	Combined Cycle Gas Turbine	BOT	EDISON, MISSION ENERGY, ÇAPAN ŞİRKETLER GRUBU	168	Financed	02.04.1997	22.05.1999
7	Tohma-Medik Power Plant	Altek Enerji Santralleri Tesis, İşletme ve Ticaret A.Ş.	Hydro-Electric	BOT	ALARKO	10,2	Financed	11.08.1997	23.12.1998
8	Suçatı Power Plant	Ere El. Üretim ve Dağıtım San. ve Tic. A.Ş.	Hydro-Electric	BOT	ERE	10,2	Financed	06.11.1997	18.01.2000

Co.	Project Name	Project Company	Sector	Project Type	Project Sponsors	Project Cost (US \$ million)	Financing Status	Contract Signing Date	Operational Date
9	Gebze-Dilovası Power Plant	Ova Enerji A.Ş.	Combined Cycle Gas Turbine	BOT	-	235	Financed	04.09.1997	03.08.1996
10	Fethiye Power Plant	Fethiye El. Üretim A.Ş.	Hydro-Electric	BOT	-	21,1	Financed	12.01.1998	20.12.1999
11	İzmit Water Treatment	İzmit Su A.Ş.	Water Treatment	BOT	İZMİT Büyükşehir Bld, GAMA, GÜRİŞ, THAMES WATER, MITSUI Corp., SUMITOMO Corp.	865	Financed	19.12.1995	18.01.1999
12	İzmir Power Plant	İZMİR Elektrik Üretim A.Ş.	Combined Cycle Gas Turbine	BOO	ENKA / INTERGEN		Financed	08.10.1998	Jan 2003
13	Gebze Power Plant	GEBZE Elektrik Üretim A.Ş.	Combined Cycle Gas Turbine	BOO	ENKA / INTERGEN	2,200	Financed	08.10.1998	Jan 2003
14	Adapazarı Power Plant	ADAPAZARI Elektrik Üretim A.Ş.	Combined Cycle Gas Turbine	BOO	ENKA / INTERGEN		Financed	08.10.1998	Jan 2003
15	Ankara Power Plant	BAYMİNA Elektrik Üretim A.Ş.	Combined Cycle Gas Turbine	BOO	BAYINDIR / MİMAG	400	Financed	06.11.1998	Jan 2003
16	İskenderun Power Plant	İSKENDERUN Elektrik Üretim A.Ş.	Coal-Fired	BOO	SIEMENS / STEAG	1,207	Financed	08.01.1999	Jan 2003
17	Telecom Italia Mobile (TIM)	TIM GSM Network	Telecom.	BOO	Telecom Italia Mobile SpA	1,000	Mandated	04.01.2004	-

Co.	Project Name	Project Company	Sector	Project Type	Project Sponsors	Project Cost (US \$ million)	Financing Status	Contract Signing Date	Operational Date
18	Turkcell GSM Licence	Turkcell İletişim Hizmetleri	Telecom	BOO	Telecom Finland, Çukurova Group, LM Ericsson Telefon AB	875	Financed	05/10/1998	05/10/1998
19	Shah Deniz Offshore Project	Shah Deniz Natural Gas Project	Gas	BOO	British Petroleum Ventures, Den Norske Stats Oljeselskap, TotalFinaElf, OEIC of Iran, SOCAR, Türkiye Petrol Rafinerileri AS, Asip SpA	3,288	In Process	15/03/2001	-
20	Blue Stream-Black Sea Gas Pipeline	Blue Stream Pipeline Co.	Gas	BOO	Gazprom, ENI	3,254	Financed	December 1999	-
21	Opet Petrolculuk Expansion Project	Opet Petrolculuk Expansion	Oil	BOO	Opet Petrolculuk AS	160	In Process	April 2004	
22	Tupraş Privatization Project	Tupraş Privatization Project	Oil	Privatization	Republic of Turkey	1,300	Mandated	-	-
23	Baku-Tblisi-Ceyhan Oil Pipeline	Main Export Pipeline Co.	Oil	BOO	BP PLC, Unocal Corp, SOCAR, Agip SpA, TPAO, Itochu Corp, ICA/Statoil AS, Devon Energy Corp, Delta Hess Alliance, Conoco Ltd., TotalFinaElf Pipelines Ltd., Impex	3,955	Financed	August 2004	-

6

CASE STUDIES

Three case studies are examined in this section which shows different aspects of project financing. (Table 6-1)

The first case study, Adapazarı, Gebze and İzmir power plants show the structuring of a project, financing and operation period of a three power plants which is a successful example and awarded as the best-financed project by Project Finance International in year 2000.

Secondly, Birecik Dam is analyzed to show how the first project in Turkey been financed including the financial structure and the involved parties. Hence the project is accepted as one of the most high leverage project with more than 80 percent debt.

Finally, Eurotunnel project is examined to show the risks of project financing, and how a successful transaction can turn out to be a big failure because of unconsidered risks.

Table 0-1 Overview of Case Study Projects

	ADAPAZARI-GEBZE-İZMİR POWER PLANTS	BİRECİK POWER PLANT	EUROTUNNEL
Project Name	Adapazari-Gebze and İzmir Power Project	Birecik HEP Project	Eurotunnel
Project Type	Build-Own-Operate	Build-Own-Transfer (15 yrs)	Build-Own-Transfer (55 yrs)
Project Cost (US \$ m)	2.100	1.566	6.900 (comp. 14.700)
Project Sector	Power	Power	Transportation
Sponsors	InterGen %60 Enka %40	TEAS 30.0% Gama 18.0% Philipp Holzmann 16.9% GEC Alstom 4 10.5% Strabag Österreich 8.4% Cegelec 6.2% Verbundplan 4.3% Sulzer Hydro 3.7% TGT 2.0%	Channel Tunnel Group - France Manche SA (CTG-FM)
Equity (US \$ m)	500	283,5	1.500
Debt	1.500	1.282,5	7.500
Debt/Equity Ratio	75/25	82/18	83.5/16.5
Construction Contract	Bechtel-Enka JV	Philipp Holzmann Strabag Sulzer Hydro and Gama Endustri	Trans Manche Link (TML)
Supplier	BOTAS	-	-
Offtaker	TEAS	TEAS	-

6.1 Adapazari-Gebze-İzmir Power Plants

The project is one of the most important power project is analyzed in this case study which consists of three separate power plants, Gebze, Adapazari and İzmir power plants awarded as a package to the InterGen-ENKA JV, including the design, construction and operation under the Build-Own-Operate scheme. The project is a good example of project financing techniques as it includes the main characteristics of project financings in terms of contracts, participants, environmental issues and technology. The power plants Gebze and Adapazari when coupled with the İzmir plant in Aliaga also represent the largest private sector power investment in Turkey and provide more than 14% of Turkey's total electric power capacity.

In January 1997, the Turkish Electricity Generation and Production Company (former name TEAS, current TETAS) solicited BOO schemes for five power plant projects in competitive tender. The competitive tender included coal fired Iskenderun and natural gas combined Ankara, İzmir, Gebze and Adapazarı Power with an approximate value of 4 billion USD. The 34 bidders were asked to submit their feasibility studies with their prices. The awarded company will be judged on cheapest tariffs for the operation of plants for 20 years. There are many global contractors in the bidders list including reputable Turkish contractors such as Tekfen/Cogen, Nurol/Balfour Beatty, Mobil, Enka/InterGen Siemens/Steag, etc. The bidders had two months to submit their price proposals with their financing proposal for the project. The cost of the construction, financing and other costs made up the price proposals, hence the most convenient financing conditions was very important in giving competitive quotations.

By the end of February 1997, InterGen, the joint venture of Bechtel and Shell, and Enka, partnership won the right to develop, build, own and operate three natural gas combined cycle power plants, with a total value of more than 2 billion USD. The project called for constructing two adjacent plants at Adapazarı—a 1,540-megawatt facility to serve the Gebze region and a 770-megawatt plant for the Adapazarı region—along with a 1,540-megawatt plant near the Aegean port of İzmir.

The cheapest tariff given by the JV is 4.84 USD for the first five years decreasing annually to 3.71 USD by the end of 20 years. According to the analysis of Thomson Financials, the revenue generated by the partnership will be around 11 billion USD by the end of 20 years. The contract is awarded in the mid of October 1997; however the project has been suspended until June 2000, because of the Marmara earthquake in 1999. The earthquake caused a heavy damage in Adapazarı where one of the proposed sites for the power plants would be located given in Figure 6-1. During this period, the design of the project has been completed by the Project Company. (Thomson Financials date 06NOV96, 12MAR97, 17JUN98, 21OCT98, 15DEC99, 08MAR00, 04OCT00, 13DEC00, 02OCT02)



Figure 0-1 Adapazari-Gebze and İzmir Power Plants in Turkey

6.1.1 Project Description

The project scope is development and construction of the power plants; the 1540 MW Gebze, 770 MW Adapazari and 1520 MW İzmir plants. Their commercial Operation started in 9 October 2002, 25 October 2002 and 28 March 2003, respectively, under the Energy Sales Agreement by the Build Own Operate concept. Basically, the aim of the power plants is to support an objective strategy for the sustainable development of the Turkish Energy Market and to improve the quality of the electricity generation. The risks involved in the project are not very significant as the technology has been proved previously on other projects and the parties are reputable contractors.

The Bechtel-Enka solution to the project in the feasibility studies was to treat the three plants as one huge project, and use the same basic engineering design for all of them. The power blocks at all three plants are configured identically (Gebze and İzmir have two blocks each, Adapazari has one). Each block comprises two combustion turbine generators, two heat recovery steam generators, and one steam turbine generator.

According to Bechtel, combined cycle technology was an ideal choice for the big project which enabled the lenders to believe in the technology and avoided technology risks. In wide demand throughout the world, combined cycle plants boast short construction times; low investment costs, high operating efficiencies, and low exhaust emissions. A combined cycle plant can reach fuel-to-electricity conversion efficiencies at 60 percent operating capacity, with minimal environmental impact, since it's driven by clean-burning natural gas. This environment friendly technology persuaded the ECAs to subsidize loans.

Another important issue that leads the project to success is the harmony between the partners. Bechtel which is an affiliate of InterGen and Enka has together undertaken several projects for nearly 20 years as JV.

	GEBZE	ADAPAZARI	İZMİR	TOTAL
Installed Capacity MW (base-load)	1,540	770	1,520	3,830
Annual Generation (billion kWh-net)	13.3	6.6	13.1	33.0

6.1.2 Project Participants

After the award of the tender to InterGen-Enka JV, the other participants joined the project due to the arrangement of contractual relationships. The structure of the project financing of the project carries almost all the characteristics of a typical power plant project.

Aside from the site-specific parameters, the three projects shared near identical commercial frameworks. Despite, they were financed under separate financing documentation. In the financing and forming of these contractual relationships, legal and financial advisers had played a significant role. ABN AMRO Bank NV took place as the financial advisor to project where and Taylor Dejongh has been the financial adviser to the banks. On the legal advising part, Shearman and Sterling has been legal

advisor to the Project, Herguner, Bilgen and Özeke to Turkish Government and Morrison&Foerster, Chadbourne&Park and Latham&Watkins to the banks.

The first step was to establish a project company, one for each project, named Adapazarı Elektrik Üretim A.Ş., Gebze Elektrik Üretim A.Ş. and İzmir Elektrik Üretim A.Ş. by BEJV. (Figure 6-2) InterGen and Enka had signed a shareholder agreement by contributing equity (app. 500 mil \$) for the project in the share of 60 % and 40 % respectively. InterGen has also a partnership between Bechtel and Shell with the share of 32 % and 68 %. In some way, the project can be accepted as three partnership organization where the expertise of Shell, Enka and Bechtel has an importance for the project.

The operation and contracting of the project was also under the BEJV's responsibility. A new company has been formed for the operation and maintenance of the project named Santral ve Bakım İşletmeleri A.Ş. with the equity transfer from Enka and Bechtel. An operation and maintenance contract has been signed with the project company. For the construction side, Bechtel and Enka affiliates has formed a partnership as Bechtel and Enka joint venture with 50 % shares and signed a turnkey engineering, procurement and construction (EPC) contract with the project company. A purchase contract has been signed with state owned Turkish Electricity and Transmission Corporation (TEAS) and Project Company which is also called Power Purchase Agreement (PPA). The PPA runs for 16 years post-completion. The PPA obligates TEAS to pay for the electricity on an agreed tariff whether it takes the delivery or not.

The price of electricity is the tariffs on the InterGen and Enka's bid which is 4.84 US \$ and starts to decrease after the first five years to 3.71 US \$ at the end of 20 years.

The average price is 4.2 US \$/kWh for 16 years. The tariff is higher in the first years to repay the debt to the lenders. The payments of electricity are backstopped by the Treasury of Turkey which is guaranteed by the Guarantee Agreement signed between

the Project Company and the Treasury. Another contract with a state-owned entity is the supply contract signed between Project Company and Turkish State Pipeline Authority (BOTAS) where BOTAS guarantees to supply natural gas to the project on a fixed price of 2.9 US\$/cbm. The gas supply of BOTAS to the project is also guaranteed by Guarantee Agreement with Treasury. Hence, the risks of non-payment or supply are allocated to the government with these three agreements. Finally for the operation of project Parts and Services contract has been signed between General Electrics (GE) where GE guarantees to sell the parts and services required for the project on agreed rates.

By arranging of these contracts described above, the risks are allocated to participants who enabled the project to borrow loans and guarantees from the financial institutions. In the project export credit agencies (ECAs), commercial banks and a bi-lateral development bank (BLAs) took place. The ECAs provided loan in terms of commercial and political guarantees for the products or services included from their countries. Exim US has provided for US origin, Hermes for German origin, and OND for Belgium origin. The biggest portion is guaranteed by Exim US as Bechtel, InterGen and General Electrics are the important participants of the project. By provision of these guarantees, commercial banks subsidize loans to the project with lower interests for the guaranteed parts of the loans which equal 94 % of total. OPIC has participated via direct loan to the project to cover costs that were not eligible for eligible for ECA funding equal to 6% of the total debt. The details of the financing are explained below in project financing part.

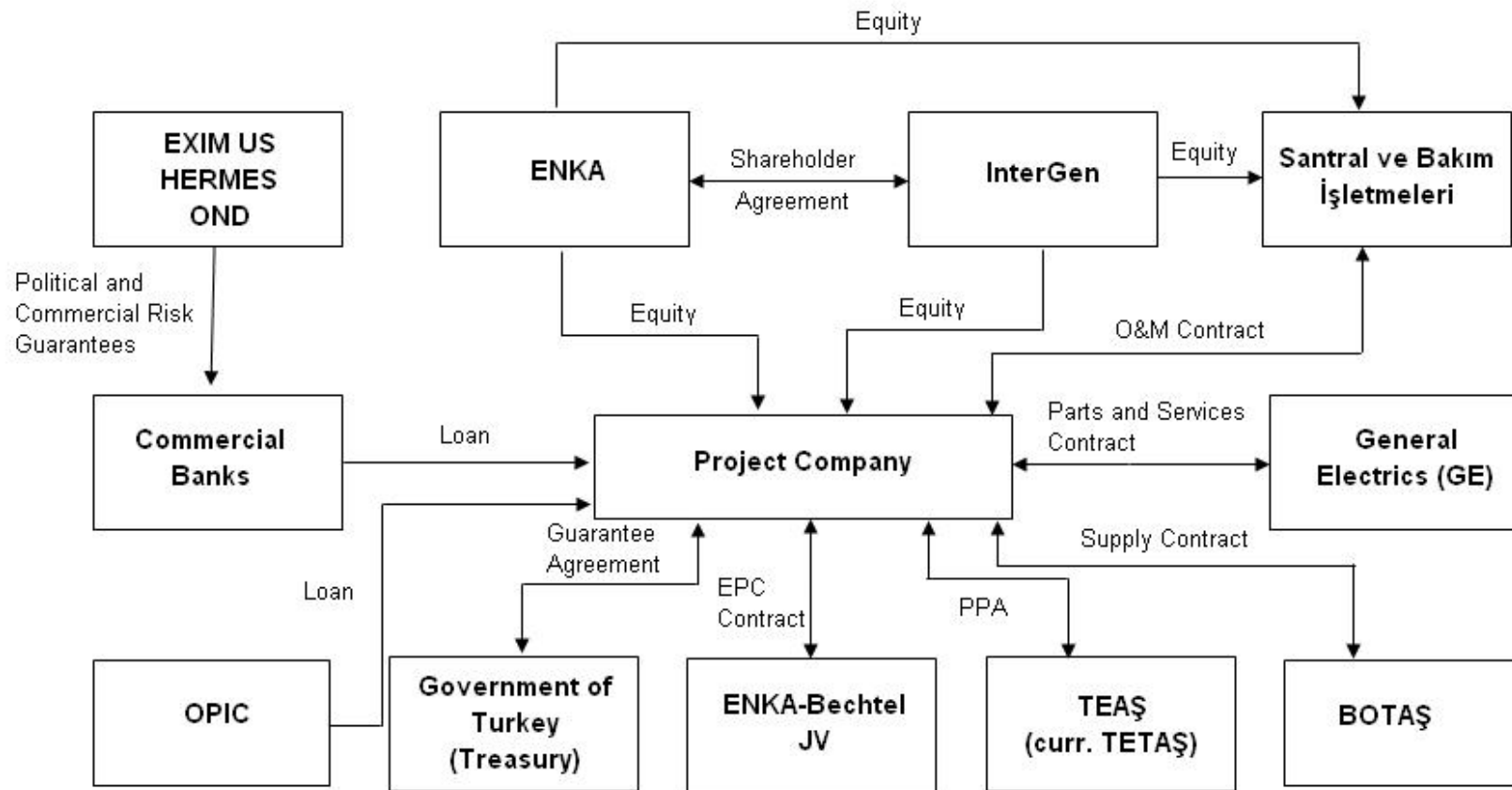


Figure 0-2 Participants and Contractual Relationships

6.1.3 Project Financing

The total cost of the three combined cycle gas turbine (CCGT) plants was around USD 2 bn. On September 2000, the financing for the project was closed. The three projects were financed via loans arranged by ABN AMRO, BNP Paribas, Societe General and WestLB. The loans in total amounted to 1,641 bn US\$ and covered by Exim of the US, Hermes and OND. The Intergen and Enka JV contributed equity in the amount of nearly 550 m US\$. The equity to debt ratio has been 25/75. In total 18 commercial banks joined the arrangers of the loan as counter-guarantee.

The deal was arranged by ABN AMRO, BNP Paribas, SG and WestLB. The three loans, bundled into one, back the 770MW Adapazari scheme, the 1554MW Gebze scheme and the 1523MW İzmir scheme. Debt equity split was 75/25 and the deal benefits from export credit agency (ECA) cover both pre and post completion. The loan is really three deals backing three gas fired plants. It is split between a US\$860m US Exim tranche, a US\$185m Hermes tranche, a US\$125m OND tranche, US\$300m directly from Opic, The US Exim tranche provides political and commercial cover during construction and operation. The ECA loans runs for 2.5 years construction and 12 years operation. OPIC Amount was US\$300m, funded via the US capital markets in terms of bonds. Exim has backed the GE 9FA turbine supply, while Hermes backed the ABB steam turbines OND the CMI boilers. The other commercial banks also participated in the loan with the loan arrangers as Dresdner Kleinwort Benson (US\$80.264m), ANZ, Bankgesellschaft Berlin, Hypo und Vereinsbank, Bayerische Landesbank, Credit Agricole Indosuez, Dexia, Fortis, ING Barings, KBC, Mizuho, Rabobank, Bank of Tokyo Mitsubishi and Royal Bank of Scotland (US\$76.442m), BCI, IKB Deutsche Industriebank and Natexis Norddeutsche Landesbank (US\$57.331m). (PFI Issues dated 06NOV96, 12MAR97, 17JUN98, 21OCT98, 15DEC99, 08MAR00, 04OCT00, 13DEC00, 02OCT02)

6.1.4 Remarks

Power generation capacity is one of the most important indicators showing a country's development level. The three projects, when it came into service have increased Turkey's power output by 14% or 3854MW. The total production is around 32 bn kWh which meets almost a quarter of Turkey's annual energy demand (Figure 6-3).

The project has no high risk in terms of technology. The technology has been experienced in other projects before. The main risk was the financial risks of Turkey government that is covered by the Treasury guarantees.



IZMIR POWER PLANT



ADAPAZARI-GEBZE POWER PLANTS

Figure 0-3 Adapazari-Gebze and İzmir Power Plants in Turkey

During the project, according to Mr. Yavuz Aktürk, Investor Relations Manager, no big problems are raised. The biggest challenge for the project is a force majeure risk, the Marmara Earthquake which struck in August 17, 1999. The commencement of the works has been suspended temporarily; however, this period is used for the design and development phase of project. During this period, the media go towards to government

declining the investment as it is accepted unnecessary to build high-capacity generators in the country. These problems are solved and construction started in 2000.

In general, the participants had benefit from the project. The tariff of 4.2 US\$ for 16-year period, is the cheapest electricity sold to the public authorities by the public producer. This was due to both the use of proven and advanced technology and low financing costs. The investors of Project Company beared the financing and construction and operation risks of public. The financing has been provided in lower interests because of the reputable players in the project as Bechtel, Enka and General Electrics. The project also had to obey the rules of environment policies of the international of financial institutions that leads environmentally clean electrical power. Besides, according to OPIC, the project has purchased more than \$100 million in US goods and services, and generates nearly \$1 billion in purchases and creates or support over 2,500 jobs in the U.S.

Finally, the environmentally sound project can be shown as an example of successful project financed investment. The high leverage of debt has been provided by the generation of cash-flow from the project which is achieved by public using a private producer. The tender done by the public authority achieved competitive price quotations. The private partnership between reputable parties have also provided high amount of debt with lower interests. The use of debt has saved Turkish Government from using the resources of the country. The expertise of the participants on similar projects and technology resulted as a completion of five months ahead of the schedule which is not often situation in construction projects. As a result, it can be said that by using an approximate amount of 1,500 bn US\$ debt, the total financing costs happened as around 500m US\$. With the equity amount of 500 m US\$, the project cost amounted nearly a 2,500bn US\$ which is not difficult to amortize in several years from the cash-flow of the project.

6.2 Birecik Dam (GAP)

6.2.1 Project Description

The Birecik dam is a part of the south eastern Anatolia project (GAP), a US\$2 billion public project to harness the power and potential of the upper reaches of the Tigris and Euphrates rivers and to irrigate the fertile plains that lie between them. When completed in 2010, GAP project with 22 dams and 19 hydroelectric power plants will produce approximately 22% of Turkey's projected electricity requirements, equivalent to the entire national energy consumption in 1988. (The Ilisu Dam, the World Commission on Dams and Export Credit Reform, 2000)

The main objectives of the scheme are thus to supply irrigation water and to provide hydropower in the arid plains via a complex system of dams, pumps and other infrastructure. By these means, the project intends to provide economical and social development in one of the least developed regions of Turkey.

The GAP area covers 9 provinces, corresponding to approximately 10% of Turkey's total surface area as well as of total population. In terms of surface water supply, the Euphrates and Tigris Rivers represent over 28% of the surface, while the total irrigated area accounts for over 20% of the country. The affected region has rich cultural, historical and environmental assets. It also has geopolitical importance while its geographical position affects neighboring countries (Syria and Iraq).

The Birecik Dam and Hydraulic Power Plant (HPP) is the first large-scale facility in Turkey materialized on Build-Operate- Transfer (BOT) model. The dam and HPP will be transferred to the Ministry of Energy and Natural resources after being operated by the company for 15 years. A consortium composed of Turkish and foreign firms constructed this dam on the lower Euphrates basin. It is the fourth dam on the Euphrates after Keban, Karakaya and Atatürk Dams. The construction of the Birecik dam began in 1996 and was finished earlier than planned. The impoundment started in November

1999. The dam has an installed capacity of 672 MW and it will generate 2.5 billion kWh energy a year. The total cost for construction was 2.3 billion DM (1.2 billion US\$).

Location: Euphrates River, South Eastern Anatolia, Turkey

Issue(s): 6,500 people displaced, impacts on downstream rivers and wetlands

Construction period: 1996-2000

Production capacity: 672 MW

Project operator: *Birecik Baraj Ve Hidroelektrik Santrali Tesis Ve Isletme* or Birecik Company (Turkey). This is a joint-venture between:

TEAS Turkey 30.0%

Gama Turkey 18.0%

Philipp Holzmann Germany 16.9%

GEC Alstom France 10.5%

Strabag Österreich Austria 8.4%

Cegelec Belgium/France 6.2%

Verbundplan Austria 4.3%

Sulzer Hydro Germany 3.7%

TGT (joint-venture Gama & TEAS) Turkey 2.0%

TEAS is the Turkish state-owned electricity company. The other partners are construction companies and equipment suppliers.

Building consortium: Philipp Holzmann (Germany), Strabag (Austria), Sulzer Hydro (Switzerland) and Gama Endustri (Turkey).

Power generation equipment suppliers: Cegelec (France), GEC Alstom (United Kingdom) and ACEC Energy (United Kingdom).

Other companies involved Coyne et Bellier (France) and Lahmeyer (Germany).

Remarks: The Birecik Dam is part of the South-Eastern Anatolia Project (GAP), a US\$ 32 billion infrastructure development program that envisages the construction of 22 dams and 19 power plants on the Tigris and Euphrates rivers and their tributaries. It is planned that at full development over 1.7 million hectares of land will be irrigated and 27 billion kWh of electricity will be generated annually with an installed capacity over 7,500 MW. (Gelder, Valk, Dros and Worm, 2002)

6.2.2 Project financing Birecik Dam (large dams)

Project value: US\$ 1,566 million

Financing overview: The Birecik dam is the first power plant in Turkey built on a *build-operate-transfer (BOT)* basis. This means that the Birecik Company (NTPC) will build the dam and will operate it during a concession period of 15 years (from 2001 to 2016).

After this period, the dam will be transferred at no cost to the government of Turkey. The advantage of this structure for the government of Turkey is that it will not be exposed to financial risks such as construction cost overruns.

After years of discussion, the financing agreements were signed in November 1995. The financing structure was as follows:

Equity:

Shareholders Birecik Company US\$ 226.7 m 14.5%

Start-up revenues US\$ 56.8 m 3.6%

Debt:

Commercial bank loans guaranteed by ECAs US\$ 956.7 mn 61.1%

Not guaranteed commercial bank loans US\$ 325.8 mn 20.8%

Total: US\$ 1,566.0 mn

What is remarkable in this financing structure is the large role played by commercial banks, which have provided 82% of total financing. But it should be noted that 75% of their loans are guaranteed by foreign ECA's, which therefore also play a prominent role. Multilateral and bilateral development banks and agencies are totally absent, however, making this a rather unique case.

Equity financing plays a smaller role than usual (18%). Also remarkable is the large percentage of the equity supplied by construction companies and equipment suppliers. The electricity off-taker, TEAS, is the largest shareholder, but only holds 30%.

Equity financing: Around 18% of the total project costs (US\$ 283.5 million) is financed by equity. The shareholders of the Birecik Company contribute US\$ 226.7 million. These shareholders are:

- TEAS Turkey 30.0%
- Gama Turkey 18.0%
- Philipp Holzmann Germany 16.9%
- GEC Alstom France 10.5%
- Strabag Österreich Austria 8.4%
- Cegelec Belgium/France 6.2%
- Verbundplan Austria 4.3%
- Sulzer Hydro Germany 3.7%
- TGT (joint-venture Gama & TEAS) Turkey 2.0%

Debt financing: Around 82% of the project (US\$ 1,282.5 million) is financed by two international bank loans extended in November 1995. The first loan (US\$ 956.7 million) is guaranteed by ECAs and has tenure of 15.5 years. The second loan (US\$ 325.8

million) is not guaranteed and has 8-year tenure. Both loans are extended by the same banking syndicate. The arranging banks were:

- Bayerische Landesbank - Germany
- Chase Manhattan (now part of J.P. Morgan Chase & Co. Co.) -United States
- Generale Bank (now part of Fortis Bank) – The Netherlands/Belgium
- GiroCredit Bank (now part of Erste Bank Bank) - Austria
- Kreditanstalt für Wiederaufbau - Germany
- Société Générale – France

Other banks participating in the loan syndicate were:

- ABN AMRO Bank - The Netherlands
- Bank Austria (now part of HypoVereinsbank HypoVereinsbank) - Germany
- Bank für Arbeit und Wirtschaft - Austria
- Bank für Oberösterreich und Salzburg (now: Oberbank Oberbank) - Austria
- Bankhaus Carl Spängler & Co. - Austria
- Banque Bruxelles Lambert (now part of ING Bank Bank) – The Netherlands
- Banque Française du Commerce Extérieur (now part of Natexis Banques Populaires Populaires) France
- Banque Indosuez (now part of Crédit Agricole Agricole) France
- Banque Nationale de Paris (now part of BNP Paribas Paribas) -France
- Banque Paribas (now part of BNP Paribas Paribas) - France
- Banque Worms (now part of Deutsche Bank Bank) - Germany
- Barclays Bank - United Kingdom
- Bayerische Hypotheken und Wechsel Bank (Now part of HypoVereinsbank)- Germany
- Berliner Bank (now part of Bankgesellschaft Berlin Berlin) - Germany
- Berliner Handels und Frankfurter Bank (now part of ING Bank Bank) - The Netherlands
- Commerzbank - Germany

- Crédit Commercial de France (now part of HSBC Bank Bank) - United Kingdom
- Crédit Local de France (now part of Dexia Dexia) - Belgium/France
- Creditanstalt-Bankverein (now part of HypoVereinsbank HypoVereinsbank) - Germany
- Deutsche Girozentrale-Deutsche Kommunalbank (now part of DekaBank DekaBank) - Germany
- DG Bank (now part of DZ Bank Bank) - Germany
- Erste Bank der Österreichischen Sparkassen (now: Erste Bank Bank) - Austria
- Dresdner Bank (now part of Allianz) - Germany
- Gulf International Bank - Bahrain
- Kärntner Sparkasse - Austria
- Korea First Bank (now part of Newbridge Capital Capital) – United States
- Krediet aan de Nijverheid (now part of Fortis Bank Bank) – The Netherlands/Belgium
- Landesbank Berlin (now part of Bankgesellschaft Berlin Berlin) - Germany
- Landesbank Hessen-Thüringen Girozentrale (now: Helaba Helaba) - Germany
- Landesbank Rheinland-Pfalz - Germany
- Mitsubishi Trust & Banking (now part of Mitsubishi Tokyo Financial) - Japan
- Norddeutsche Landesbank - Germany
- Rabobank - The Netherlands
- Raiffeisen Zentralbank Österreich - Austria
- Royal Bank of Scotland - United Kingdom
- SaarLandesbank (now part of Bayerische Landesbank Landesbank) - Germany
- Salzburger Landes-Hypothekenbank (now: Hypobank Salzburg Salzburg) - Austria
- Salzburger Sparkasse Bank - Austria
- Sanwa Bank (now part of UFJ Bank Bank) - Japan
- Türkiye Vakıflar Bankası (now: VakıfBank VakıfBank) - Turkey
- Westdeutsche Landesbank (WestLb) - Germany

Credit guarantees: The following ECAs in November 1995 guaranteed an international syndicated bank loan of US\$ 956.7 million, equivalent to 61.1% of total project costs:

- Ducroire-Delcredere - Belgium US\$ 206.1 million
- Coface - France US\$ 167.5 million
- Hermes Kreditversicherungs - Germany US\$ 403.2 million
- Österreichische Kontrollbank - Austria US\$ 179.9 million

6.3 Eurotunnel

6.3.1 Project Description

The Eurotunnel project aimed to link the UK and French rail networks together by the construction of a twin tunnel system crossing the channel and financed purely by private capital. The project proposal, which included the financing, the construction and the operation of a fixed link across the channel, was put forward by the Channel Tunnel Group - France Manche SA (CTG-FM) consortium, formed by banks and construction companies from the UK and France, and accepted in 1986 by the French and the British Governments. The sponsors would be allowed to build and operate the system over a period of fifty-five years after which the entire project would become the property of the governments. The project was protected from all government interference with tariffs and from competing construction until the end of 2020. Michael Grant (1997) describes the Eurotunnel Project as: “the largest privately financed infrastructure in history.” The project has been accepted as a stunning success in term of financing value however it turned out to be a failure in its current position (Carmen Li and Wearing, 2000).

Project Company is Eurotunnel PLC, a publicly quoted company with institutional and private shareholders in the UK and France. The company was formed as a single purpose vehicle company to hold the concession, enter into the necessary commercial contracts and obtain the necessary investment funding and commercial debt facilities and carry out the development of the scheme. Implementation arrangements included a treaty between the UK and France covering agreement over the fixed link between the

two countries, and the UK enabling legislation and a concession which specifically excluded state funding and assistance for the project.

Initial sponsors of the project had been a consortium of construction companies in which the UK groups George Wimpey, Costain, Taylor Woodrow and Balfour Beatty were key project promoters. They subsequently formed a consortium with 5 UK and 5 French companies for named Trans Manche Link (TML) as the construction contractor for the project although they remained sponsor shareholders in the project company, Eurotunnel PLC (Figure 6-4).

- **Initial project cost** was approximately £4,600m.*
- **Scope of the project** comprised the design, procurement and construction of the tunnels, construction of the terminals, design and installation of the track and signalling, the design and installation of the mechanical & electrical equipment and services, the procurement of engines and rolling stock for the shuttle operations, project finance and the commercial operation of both the tunnel/fixed link infrastructure and the shuttle services. Project revenues come from the two shuttle operations run by Eurotunnel and from fees paid to Eurotunnel for the use of the tunnel by Eurostar for its passenger train operations and by the UK/Mainland Europe freight operator.

* 1 £=1.5 US \$

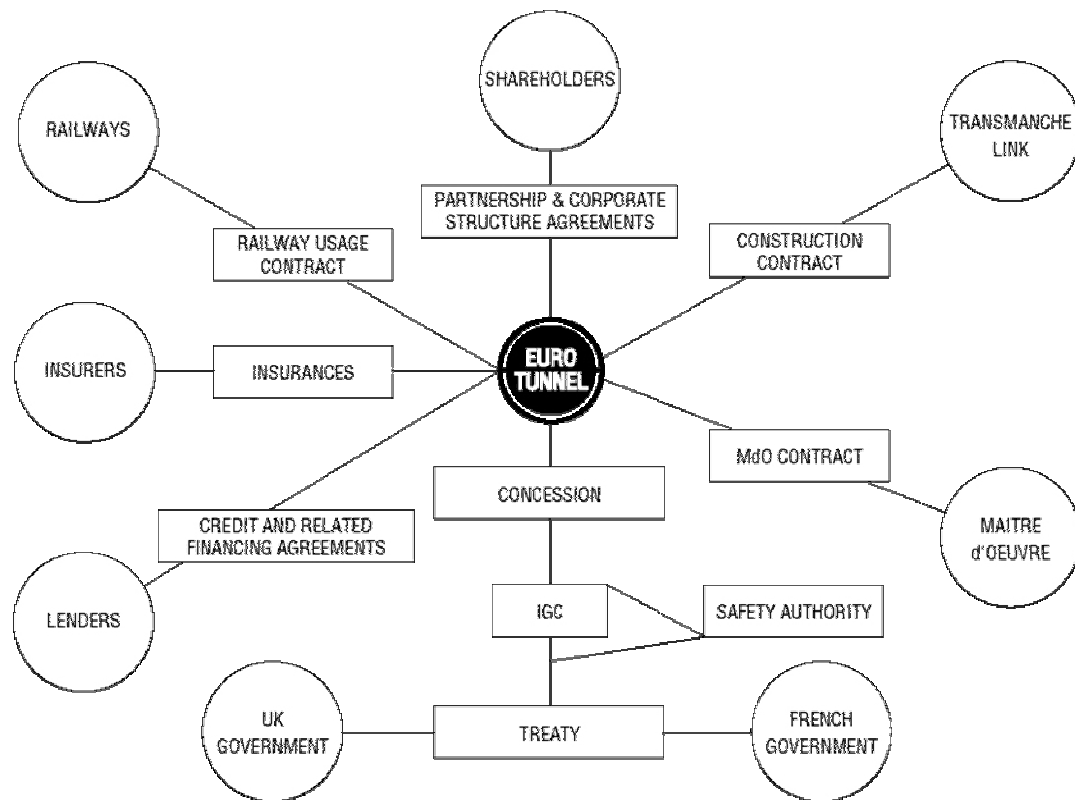


Figure 0-4 Eurotunnel Project Contractual Structure

6.3.2 Project Financing

Project funding was through a combination of equity and debt. The investment funds were from a share issue (sponsor shares and a public offer) subscribed by sponsors, individual public shareholders and institutions, and the commercial debt which was provided as project finance facilities by a syndicate of banks arranged and lead managed by a group of British and French banks which are Midland and Natwest from UK and Credit Lyonnais, Bank Nationale de Paris and Bank Indosues from France. Those arranging banks subsequently formed a special team to carry out their agent bank role and duties (Kaiser, 1996).

The risks of the project began at the construction level because of uncertainty concerning the geological state of the strata to be tunneled. Discrepancies between anticipated and actual geological states would have consequences on the duration of the tunneling as well as important cost increases. The commercial risks were (and remain) related to the road based traffic. The main factors impacting the demand-side risk were considered to be the introduction of an express railway service from Paris, and the price competition engaged in by alternative services.

The costs to build and run the system were estimated to be approximately £4.6 billion. A total of £6 billion would be raised, 20% of which was intended to meet unanticipated costs. Of the £6 billion, equity financed £1.0 billion and loans provided the remaining £5.0 billion. To obtain such a huge quantity of money, the consortium decided to raise money in stages. The equity was raised via three separate issues known as Equity I, II and III. Equity I referred to the initial £50 million investment made by the founding shareholders (the construction consortium). Equity II was a private placement raising £200 million in the UK, France, USA, Japan and Germany. The largest shareholders were banks, insurance and oil companies. Equity III was an initial public offering in France, the UK and elsewhere of 54% of Eurotunnel equity. Forty-six percent of the outstanding shares were offered in France and the UK, and the remaining 8% in various countries. In the UK about half were placed to institutional investors before the bidding. The initial private offering raised £750 million.

Letters of intent to underwrite loans were obtained from banks for about £4.4 billion immediately after the selection of the Eurotunnel consortium. Additional banks were contacted soon after to increase the loans to £5.0 billion. Approval of the syndicated loans hinged on the following conditions: Equity III would have to be floated and total equity would be £1.0 billion, capital expenditures of £700 million minimum would have been made and construction schedule and costs would be respected. The loan contracts also contained a series of protective measures. In particular, all assets would be

transferred to the banks in the event of default and Eurotunnel could not undertake other business without bank permission and could not borrow money elsewhere.

6.3.3 Remarks

The project experienced a number of serious technical difficulties during the construction phase which increased the project capital costs and delayed completion and commissioning substantially and hence the commencement of commercial operations.

Following each of those technical difficulties, major financial difficulties were experienced. Both the project company and lenders realized the available project funding would be insufficient to complete the project with the result that on each of four occasions additional funding had to be raised.

In the end the project cost rose to over £9,800m, an increase of around £5,200m or over 113% on the original cost (Kaiser, 1996). Later there were further financial difficulties following commissioning which required increases and amendments to the commercial loan facilities, involving equity rising exercises and finally a financial restructuring. The financial restructuring was necessary because it became clear to all parties that the huge amount of project debt and the consequent debt service burden had become so large that the net cash flow from the reasonably successful operations was simply insufficient. The restructuring involved a debt forgiveness package which in essence reduced the debt to a level where the net project revenues could service the remaining debt and give the equity holders a prospect of a return, although in the longer term. The repayment of the loan interests are suspended for 18 months (Smith, 2003).

The reasons of the financing failures are:

-Tunnel boring difficulties

Although trial bores and surveys along the line of the tunnels had been carried out during the project planning and preparation phase showed the chalk substrata on the French side through which the tunnels would need to be bored was fissured and would

therefore require the special tunnel boring machines to be waterproofed, the expectation was the chalk on the English side were not so fissured. In the event tunnel boring progress on the English side was much slower than planned and more water was encountered than had been expected.

-Contractual arrangements

As the contractors were not prepared to take ground conditions' risk, the tunnel construction contract had been agreed on a cost reimbursement basis and not as a fixed price, dates certain turnkey contract. As progress was significantly slower and costs were rising substantially, disputes arose over the claims submitted by the contractors for reimbursement of their increased costs which resulted in an increasingly acrimonious relationship between the project company and the contracting consortium. Eventually the resulting cost for this section of the project was seriously over budget (the base case cost) and the period to complete the work was a great deal longer leading to an overall delay to the project completion, commissioning and handover.

Ground conditions are a very serious risk for projects where a major part of the project works is under ground, but for a project with long tunnels as an essential component of the works and necessarily a major cost, the consequences of difficulties with cost and progress are a very serious concern indeed. In the first year of tunnel construction there were great concerns that the initial poor progress and much higher costs might continue for most of the tunnel construction. This led to considerable uncertainty and was the beginning of a process which reduced the credibility of the project company and its management. Concern and doubts over the quality and thoroughness of the project company's initial planning and risk analysis were natural consequences and of any projection of the likely success of proposed technical remedies. The cost reimbursement contract allocated the cost overrun and delay risks to the project company and hence to the banks as they found in very real terms.

7

CONCLUSION

Project financing offers a number of advantages over directly financing a project on a conventional basis under the right circumstances. The benefits that are available can be realized only after careful analysis. As it is a technique which allows high leverage, the risks and transaction costs are higher. It is therefore important to choose the appropriate project to benefit. The organization of the project, its legal structure, and its financing plan must reflect the nature of the project, identifiable project risks, the project's expected profitability, the creditworthiness of the various participants, the financial positions of the project's sponsors, the needs of the host government, and any other factor which may affect the willingness of prospective lenders or equity investors to provide funds for the project should also be carefully assessed.

Project financing can minimize the credit impact on the project sponsors. The contractual arrangements that support the project borrowings can be designed to minimize the direct financial commitments of the project's sponsors. It also allocates returns and risks more efficiently than conventional financing. Project financing arrangements can be designed to allocate the project-related risks among the parties to the project who are in the best position to bear them. Thus, engineering firms can bear the construction risks, raw material suppliers can bear the supply risk; the purchasers of the output can bear the product price risk, etc.

As a result of the credit support provided by other parties, project financing facilitates greater leverage than the project sponsors could manage if the project was financed internally. The higher leverage involves greater financial risk but it leads to greater returns if the project is successful.

Given complex decisions that have to be made in planning the financing of a major project, it is essential that the project sponsors develop a thorough understanding of the

proposed project-its risks, estimated investment requirements, and the projected returns. Most importantly, the project sponsors need to determine at the outset whether project financing is the most cost-effective method of financing a project.

In conclusion, in short term investors will focus on safer locations, more traditional assets, and more structured deals. However, in the longer term, project finance will continue to expand into new regionals and nontraditional assets because of the enormous need for global investment. Sponsors will continue to structure, and investors will continue to finance, large projects such as financed \$ 4 billion BTC Oil Pipeline and \$12 billion Shaklin II Project which is mandated already. Given the trends in the global market and the ever-growing demand for private capital to finance new infrastructure and services, project finance will continue to play an important role in both developed and developing markets like Turkey.

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Glossary of Terms*

A

Acceptance: The positive response to an offer seeking participation in a credit facility.

Administrative Agent: The arranger of a syndicated loan.

Advance: A partial upfront drawdown of a loan.

Affiliate: A foreign operation—either a branch or foreign–incorporated subsidiary. A corporation that directly (or indirectly) controls or is controlled by another corporation.

Agency Agreement: A legal agreement between a borrower, a group of lenders, and one or more agent banks governing the rights and responsibilities of the agent(s) in the transaction. The agency agreement is an integral part of a syndicated loan.

Agent: The bank responsible for administering a project financing.

A-Loan: A loan from a multilateral agency such as the International Finance Corporation (IFC) where it is the lender of record and where it books the loan for its own account.

Arrangement Fee: A fee paid to a mandated bank or group of banks (lead arrangers) for arranging a transaction. It includes fees to be paid to participating banks.

Arranger: A bank or other financial institution responsible for originating and syndicating a loan transaction. The arranger always has a senior role, is often the agent, and usually participates in the transaction at the most senior level (it holds the largest share of the loan).

Asset: The physical project and its associated contracts, rights, and interests of every kind, in the present or future, which can be valued or used to repay debt.

Assignment: A transfer of legal title to an asset for security purposes.

Audit: An independent examination of the financial statements, project studies, or projections.

* Adapted from Harvard Business School’s “Project Finance” Portal

B

Balance Sheet: The accounts which show assets, liabilities, net worth/shareholders' equity.

Berne Union: The Berne Union was established in 1934 to determine sound principles for export credit and foreign investment insurance. As of 2002, the Berne Union has 51 members from 42 countries.

Bid Bond: A small percentage (1% to 3%) of the tender contract price is established as a bid performance bond.

Bid Price: The price that a dealer is willing to pay to purchase a foreign exchange, security, or commodity.

Bidding Group: The banks that bid on a facility.

Bilateral Agency (BLA): An institution established by one country to promote trade with other countries, such as an export-import agency or an export credit agency (ECA).

B-Loan: A loan syndicated by a multilateral lender, such as the IFC, that acts as the lender of record on behalf of the funding participants (commercial banks and other institutional investors).

Bond: The paper evidence of a legal promise by the issuer to pay the investor on the declared terms.

Bond Rating: An appraisal by a bond rating service of the soundness of a bond as an investment.

Build-Own-Operate-Transfer (BOOT): The situation when a private owner builds, owns, and operates an infrastructure facility and then transfers it to another entity after a specified period.

Build-Own-Transfer (BOT): The situation when a private owner builds, owns, and then transfers an infrastructure facility to another party, often at no cost, after a specified period.

Build–Transfer–Operate (BTO): The situation when a private owner builds an infrastructure facility, transfers it to another entity, and then operates it on a contractual basis for a specified period.

C

Capacity: The amount of energy, measured in kilowatts, that a plant or system is capable of producing.

Capital: The amount of money invested in a venture.

Capital Account: That portion of the balance of payments that measures international lending and investment.

Capital Budget: The cost of planned investment projects.

Capital Markets: A broad term to include tradable debt, securities, and equity as distinct from private markets or banks.

Cash Flow: The cash generated by a project.

Cash Flow Cascade: The order of priorities under the financing documentation for the application of the project's cash flow. See also cash waterfall.

Charge: A fixed charge refers to a defined set of assets and is usually recorded in an official registry. A floating charge refers to other assets, which change from time to time (e.g., cash accounts, inventory, or receivables) but which become fixed charges after a default.

Co–Financing: The situation where different lenders agree to fund under the same documentation and security packages yet may have different interest rates, repayment profiles, and terms. The lenders typically hold different debt tranches.

Cogeneration: The production of energy from the waste heat of industrial processes.

Collateral: Assets pledged as security under a loan to assure repayment of debt obligations.

Commercial Risks: The various risks that can affect a project during operations, such as changes in input and output prices, fluctuations in demand, or failures in mechanical processes.

Commitment Letter: A formal letter offering an underwriting on a given set of terms and conditions, including interest basis/margin and fees.

Commitment Fee: A per annum fee applied to undisbursed balances that lenders are committed to lend; the fee is charged until the end of the availability period.

Competitive Tender: An open bidding situation where many banks may be encouraged to submit offers.

Completion: The date on which the project's cash flows become the primary method of repayment. It occurs after a completion test typically involving both financial and physical performance criteria. Prior to completion, the primary source of repayment is usually from the sponsors or from the contractor.

Completion Guarantee: A guarantee that ensures a project will achieve physical and/or financial completion. A turnkey contractor guarantees physical completion (achievement of certain operating performance). The guarantees are normally secured by performance bonds and/or penalties in the form of liquidated damages. Alternatively, project sponsors sometimes provide lenders with completion guarantees by agreeing to pay the scheduled debt service in the event the project company does not or cannot pay.

Completion Risks: Construction, development, or cost overrun risk.

Compound Interest: Interest resulting from the periodic addition of simple interest to principal; the sum then serves as the principal for the computation of interest owed during the following period.

Concession: The duration for which the private sector will operate the service/asset for. At end of the concession the asset is handed back to the government authority in a pre-agreed condition.

Concession Agreement: An agreement made between a host government and a project company or sponsor to permit the construction, development, and operation of a particular project.

Conditions Precedent (CPs): A set of preconditions that must be satisfied before the borrower can request drawdown or other credit facilities be made available under a lending agreement.

Consortium: All of the participants or developers associated with a specific project. In the early stage of a project, it may be a loose association not a legal or contractual entity or joint venture.

Contingency: An additional amount or percentage to any cash flow item (such as capital expenditures) that is needed to provide a cushion.

Contingent: For liabilities that do not yet appear on the balance sheet such as guarantees, supports, and lawsuits. For support or recourse, the trigger may occur anytime.

Country Risk: Narrowly defined, it refers to cross-currency and foreign exchange availability risks. More broadly defined, it can also include the political risks of doing business in a given country.

Covenant: An agreement by a borrower to undertake (a positive covenant) or not to undertake (a negative covenant) a specific action. Breaching a covenant is considered an event of default.

Cover: The amount above 1.0x of a debt service coverage ratio.

Covered: When a loan or a tranche of a loan is protected by political risk insurance (PRI).

Creditworthy: The risk of default on a debt obligation by that entity is considered low.

D

Debt: The obligation to repay an agreed amount of money.

Debt Capacity: The total amount of debt a company can prudently support given its earnings expectations, equity base, and asset liquidation value.

Default: When a covenant has been broken or an adverse event has occurred. A monetary default occurs when a repayment is not made on time. A technical default

occurs when a project parameter is outside defined or agreed-upon limits, or a legal matter is not yet resolved.

Deficiency: The amount by which the project cash flow is not adequate to service the debt.

Depreciation: Amortization for accounting (book), tax calculations, or income calculations. A regular reduction in asset value over time.

Derivative: A financial instrument based on an underlying contract or funding such as a swap, option, or hedging instrument.

Devaluation: Either a formal reduction in the spot price of a currency or a gradual reduction due to market forces.

Developing Countries: Developing countries are defined by the World Bank in terms of 2000 gross national income per capita as follows: (a) low-income, US\$755 or less; (b) lower-middle income, from US\$756 to US\$2,995; and (c) upper-middle income, from US\$2,996 to US\$9,265.

Development Bank: A lending agency that provides funds to encourage the creation or expansion of productive facilities in developing countries.

Disbursement: An accounting and financial term used to describe the actual payout or drawdowns of cash under a loan agreement.

Dividend: The amount paid out per share, usually once, twice, or four times a year, by a company from its profits as decided by the board of directors.

Due Diligence: Bank lenders to a project will undertake a thorough assessment of the transaction which covers financial, legal, technical, and insurance aspects of the project in order to ensure that there are no undisclosed or potential problems.

E

Earnings: Net income or profit.

Enclave Guarantee: IBRD partial risk guarantee structured for export oriented foreign exchange generating commercial projects in IDA countries.

Enclave Project: A project whose products are exported, for which payment is received outside the host country.

Engineering Risk: The negative impact on project cash flows resulting from deficiencies in design or engineering.

Environmental Risk: Economic or administrative consequences of slow or catastrophic environmental pollution.

Equity: In a project financing, the cash or assets contributed by the sponsors. In accounting, the difference between total assets and total liabilities.

Equity Cash Flow (ECF): Cash flow available to equity holders. It is equal to net income plus depreciation less capital expenditures less increases in net working capital (NWC) less principal repayment plus new debt proceeds.

Equity Risk Premium: The average annual return of the market over and above the return on riskless debt.

Event of Default: Any event that entitles the lender to cancel a debt facility, declare all amounts owed by the debtor to become immediately due and payable, and/or enforce security.

Execute: Formally sign documentation or implement a required action.

Export Credit Agency (ECA): Organizations that assist in supporting exports from their country through the use of direct loan and guarantee mechanisms provided to importers.

Export Credits: Credit facilities or guarantee programs made available by a country for the benefit of exporters of goods or services in an effort to promote exports.

Expropriation: A forced transfer of ownership or value from a private owner to a government entity.

F

Fee: A fixed amount or a percentage of an underwriting or principal charged as part of a financing.

Financial Close: The date on which all project contracts and financing documentation are signed and conditions precedent to initial drawing of the debt have been satisfied or waived.

Financial Viability: The ability of a project to provide acceptable returns to equity holders and to service its debt on time and in full.

Fixed Rate: An interest rate that is fixed for a defined period.

Force Majeure: An excuse for contractual nonperformance due to events beyond the control of either party. These events are either “acts of God” (floods, fires, or other natural disasters) or political risks (war, strikes, riots, expropriation, breach of contract, etc.). Contractual performance is forgiven or extended by the period of *force majeure* (French: “superior force”).

Foreign Exchange Risk: The effect on project cash flow or debt service coverage from the movement in the foreign exchange rate for revenue, costs, or debt service.

Full Recourse: No matter what risk event occurs, the borrower agrees to repay the debt. By definition, this is not a project financing unless the borrower's sole asset is the project.

G

Gas Turbine: Electricity generation by way of a turbine from burning natural gas or liquid fuels.

Governing Law: The legal system to which the terms and conditions of a transaction or contract are subject. The law set forth by the contract or applied by a court.

Grace Period: The period within which a default is resolved without incurring penalty interest or other charges. A period during which interest or principal is not yet payable; it usually occurs after startup, commissioning, and completion in a project financing.

Guarantee: An agreement to repay a loan or ensure performance. It may be limited in time and amount.

Guarantor: A party who agrees to guarantee repayment or performance.

H

Hedging: A strategy that eliminates a risk through the spot sale of the risk or through a transaction in an instrument that represents an obligation to sell the risk in the future. The goal is to ensure that any profit or loss on the current sale or purchase will be offset by the loss or profit on the future purchase or sale.

Hermes: The German export credit agency.

Host Country: The country in which a project is located.

I

Income: Operating cash flows less overheads and depreciation, either before tax or after tax earnings.

Inconvertibility: An investor's inability to exchange a local currency (i.e., profits, royalties, fees, and capital invested) into a foreign currency. **Indemnity:** A legal obligation to cover a liability.

Indemnity: A legal obligation to cover a liability.

Industrialized Countries: The World Bank defines an industrialized country as one having 2000 gross national income per capita of US\$9,266 or more.

Infrastructure Project: A project in one of the following industrial sectors: power (electricity and gas), telecom, transportation, or water/sewage.

Infrastructure Risk: The impact on project cash flows from infrastructure (i.e., transport, telecommunications, etc.) problems. Sometimes called transportation risk.

Institutions: Insurance companies, pension funds, trusts, foundations, mutual funds, funds managers, and bank investment departments.

Interest Rate: The percentage payable to the lender calculated at an annual rate on the principal amount outstanding on a loan.

Islamic Loan: Interest cannot be charged. Rather the loan is structured using discounts, a sale/lease, profit participation, or repurchase agreement.

J

Joint and Several Liability: Each party is liable for the full amount of the liability, but performance by one discharges the obligations for all the parties.

Joint Venture: A business venture owned by two or more other business ventures.

L

Lead Arranger: The senior tier of arrangers in a syndicated loan facility.

Lead Bank: A senior bank involved in the negotiations for a project financing. Subordinate to a lead arranger or manager.

Lead Manager: Senior tier of lenders in a loan syndication.

League Tables: A ranking of lenders and advisors according to the underwriting, final take, or number of project finance loans or advisory mandates completed during a given period.

Lease: The owner of an asset (the “lessor”) agrees to receive lease payments from the user (the “lessee”). The lessor receives the benefit of depreciation as a tax deduction and has the asset as security.

Legal Risk: The risk that a party to a contract will not be able to enforce security arrangements, enforce foreign judgments, have a choice of law, or refer disputes to arbitration.

Lenders’ Engineer: An engineering firm that advises lenders on technical matters (see independent engineer).

Letter of Credit (L/C): A financial instrument issued by a financial institution for the benefit of a customer under which the financial institution agrees to pay money to the beneficiary thereof upon demand or upon the occurrence of specified events.

Letter of Intent (LOI): A letter from one company to another acknowledging a willingness and ability to do business.

Leverage: The level of debt expressed as a percentage of equity or as a ratio to equity. The U.S./Canadian word for gearing.

Liability: The obligation to repay a defined amount or to perform a service.

who are not liable for the debts of the partnership beyond the funds so contributed.

Limited Recourse: Under certain conditions (related to legal, financial, or operating conditions), lenders have access to the sponsors' credit or other legal security to fulfill a project's debt obligations. There is usually recourse in the event of fraud, misrepresentation, or nondisclosure. For this reason, and because lenders often have some kind of recourse prior to completion, nonrecourse is often described as "limited-recourse" financing.

London Inter-Bank Offered Rate (Libor): The rate at which banks sell deposits in the market.

Long-Term: 3 years or more. In accounting, anything more than 1 year.

M

Mandate: The formal appointment to advise on or arrange a project financing.

Mandated Bank: The bank given the authority to proceed into the marketplace on behalf of the borrower, on the basis of the terms and condition set out in the mandate letter. The mandated bank is often referred to as the arranger in the Euromarkets and the administrative agent in the United States.

Margin: The amount expressed as a percent per annum above the interest rate basis or cost of funds. For hedging and futures contracts, the cash collateral deposited with a trader or exchange as insurance against default.

Maturity: The final date a project finance loan is repayable.

Medium Term: Two to six years.

Mortgage: A pledge or assignment of security of particular property for payment of debt; the same as an indenture of trust or security agreement.

Multilateral Agency (MLA): An institution organized by a group of countries to promote development (e.g., the World Bank, the IFC, and the Inter-American Development Bank).

N

Nonrecourse: The lenders rely on the project's cash flows and security over the project vehicle's assets as the only means to repay debt service.

O

OECD Consensus: Guidelines created by the Organization for Economic Cooperation and Development (OECD) that are intended to prevent distortions in price competition among manufacturers of different countries. The OECD Consensus is derived from an OECD agreement, “Arrangement on Guidelines for Officially Supported Credits” (1978), which limits export credit to 85% of the contract value and holds interest rates to a minimum of the OECD interest rate matrix, which is revised semiannually.

Off-Balance-Sheet Liability: A corporate obligation that does not appear as a liability on the company's balance sheet or is not required to appear by the applicable accounting standards.

Offtake Agreement: An agreement to purchase all or a substantial part of the product produced by a project, which typically provides the revenue stream for a project financing.

Offtaker (Offtake Purchaser): The purchaser of a project's output.

Operating Risk: Cost, technology, and management components which affect operating expenses, output, or throughput.

Operations and Maintenance (O&M) Agreement: A contract obligating a party to operate and maintain a project.

Organization of Petroleum Exporting Countries (OPEC): An alliance of most major crude oil producing countries to control oil production to influence the price of crude oil in world markets.

Overrun: The amount of capital expenditure or funding above the original estimate to complete the project.

P

Participant: A party to a funding agreement. It usually refers to the banks at the lower levels of a syndicate.

Participant Risk: The credit of the participants and the risk of non-performance under the project contract or financing agreements.

Participation: The amount of loan/bond issue taken directly or from another direct lender/underwriter.

Partnership: The partners agree to a proportional share of profits and losses and thus have the same tax treatment.

Performance Bonds: Guarantees purchased by the project developer issued by commercial banks or insurance companies to guarantee full and successful implementation of a contract according to prespecified performance guidelines.

Political Risk: Eight risks associated with cross-border investment and financing: currency inconvertibility, expropriation, war and insurrection, terrorism, environmental activities, landowner actions, nongovernmental activists, and legal and bureaucratic approvals. The first three are insurable. It overlaps with the political component of *force majeure* risk.

Power Purchase Agreement (PPA): A contract for a large customer to buy electricity from a power plant. This is usually the most important contract underlying the construction and operation of a power plant.

Premium: The cost of an insurance policy or the price of an option. An extra margin payable with prepayment of principal.

Principal: The quantity of the outstanding project financing due to be paid.

Project: The asset constructed or acquired with a project financing, which is expected to produce cashflow at a debt service ratio sufficient to repay the project financing.

Project Company: A special-purpose entity created to develop, own, and operate a project.

Project Completion: Occurs when a defined set of technical and financial tests have been met as stipulated in the financing documents.

Project Contracts: The suite of agreements underlying a project.

Project Finance: Involves a corporate sponsor investing in and owning a single-purpose industrial asset (usually with a limited life) through a legally independent entity financed with nonrecourse debt.

Project Finance Initiative (PFI): Created in 1992 to encourage the private sector to invest in the public sector.

Project Funds Agreement: Agreement, usually by sponsors, to provide additional funds as needed until project completion or other agreed date.

Public Private Partnerships (PPP): Projects, typically infrastructure developments, which involve both the public and private sectors.

R

Rating: An evaluation of creditworthiness provided by a rating agency such as Standard & Poor's Corporation or Moody's.

Rating Agency: A company providing an independent view on the creditworthiness of the project company or some other security.

Recourse: In the event a project cannot service the financing or achieve completion, the financiers have recourse to either cash from the sponsor or other non-project security.

Risk: The event which can change the expected cash flow forecast for the project financing.

S

Security: A legal right of access to value through mortgages, contracts, cash accounts, guarantees, insurances, pledges, or cashflow, including licenses, concessions, and other assets. A negotiable certificate evidencing a debt or equity obligation/shareholding.

Senior: The highest ranking for repayment, security, or action.

Sensitivity Analysis: Analysis of how changing an input variable in a financial model affects the value, performance, or solvency of a given project.

Severel Liability: A legal term that conveys the meaning that nonperformance by one entity of its obligations will not affect or alter the obligations of the other parties.

Shareholders Agreement: The generic term for any contract between two or more shareholders governing their conduct in relation to the corporation, or partnership, in which they own shares.

Shareholders Equity: Net worth. Book value of total assets less total liabilities.

Sovereign Guarantee: A government guarantee of its obligations under project documents.

Sovereign Risk: The risk that the host country government will default in its contractual undertaking with the project or another project participant, such as under guarantees, indemnity agreements, or input and offtake contracts.

Special Purpose Vehicle (Project Company): See Special Purpose Entity.

Sponsor: A party wishing to develop and finance (with equity) a project. Shareholders of project companies are known as sponsors.

Steam Turbine: Electricity generated from steam pressure.

Structure: How a project financing is drawn down, repaid, and collateralized.

Subordinated: The subordinated party accepts a lower priority of repayment and/or security than the senior party.

Subsidiary: A foreign operation incorporated in the host country and owned 50% or more by a parent company.

Supply Risk: The raw materials or input to a project change from those assumed or projected. For a resources production project, this is called reserves risk.

Syndicated Loan: A commercial banking transaction in which two or more banks participate in making a loan to a borrower, typically a large multinational firm or government.

Syndication: The selling of a project finance to a group of prospective participants (a.k.a., the syndicate).

T

Tariff: A duty or tax on imports that can be levied based on a percentage of cost or specific amount per unit.

Tenor: The number of years a loan is outstanding (i.e., the final maturity or term).

Term: The loan life or tenor; the period to a loan's final maturity.

Term Loan: A loan with an original or final maturity of more than one year, repayable according to a specified schedule.

Tolling Agreement: An agreement under which a project company imposes tolling charges on each project user as compensation for processing raw material.

Tranche: A separate portion of a project financing, perhaps with different lenders, margins, and terms.

Transfer Risk: Currency cannot be sent out of the country, usually due to Central bank restrictions or a national debt rescheduling.

Turnkey Contract: A construction contract that provides for the complete engineering, procurement, construction, and start-up of a facility by a certain date, for a fixed price and at guaranteed performance levels.

U

Undersubscription: The situation when the underwriting commitments from a syndication are less than the amount sought by the borrower.

Underwrite: An arrangement under which a financial house agrees to buy a certain agreed amount of securities of a new issue on a given date and at a given price, thereby assuring the issuer the full proceeds of the financing.

Underwriting: The commitment to fund is not contingent upon successful syndication.

Unsecured: The financier has no security other than a legal commitment by the borrower to repay the loan.

W

Warranty: A guarantee that a given fact will exist at some future date, as promised.

Y

Yield: The financial return usually expressed as a percentage per annum.

Yield to Maturity: The rate of interest (discount) that equates future cash flows of a bond (both principal and interest) with the present market price. Yield to Maturity is the time-adjusted rate of return earned by a bond investor.