

Chapter 1

An overview of project finance

Although the term ‘project financing’ has been used to describe all types and kinds of financing of projects, both with and without recourse, the term has evolved in recent years to have a more precise definition:

A financing of a particular economic unit in which a lender is satisfied to look initially to the cash flows and earnings of that economic unit as the source of funds from which a loan will be repaid and to the assets of the economic unit as collateral for the loan.

A key word in the definition is *initially*. While a lender may be willing to look initially to the cash flows of a project as the source of funds for repayment of the loan, the lender must also feel comfortable that the loan will in fact be paid on a worst case basis. This may involve undertakings or direct or indirect guarantees by third parties who are motivated in some way to provide such guarantees.

Project financing has great appeal when it does not have a substantial impact on the balance sheet or the creditworthiness of the sponsoring entity. Boards of directors are receptive to proceeding with projects which can be very highly leveraged or financed entirely or substantially on their own merits. Industries engaged in the production, processing, transportation or use of energy have been particularly attracted to project financing techniques because of the needs of such companies for new capital sources. Enterprises located in countries privatising state-owned companies have made extensive use of project financing.

The moving party in a project is its promoter or sponsor. A project may have one or several sponsors. The motivation of construction companies acting as sponsors is to profit in some way from the construction or operation of the project. The motivation of operating companies for sponsoring a project may be simply to make a profit from selling the product produced by the project. In many instances the motivation for the project is to provide processing or distribution of a basic product of the sponsor or to ensure a source of supply vital to the sponsor’s business.

The ultimate goal in project financing is to arrange a borrowing for a project which will benefit the sponsor and at the same time be completely non-recourse to the sponsor, in no way affecting its credit standing or balance sheet.

Indeed, project financing is sometimes called off-balance sheet financing. One way this can be accomplished is by using the credit of a third party to support the transaction. Such a third party then becomes a sponsor.

However, projects are rarely financed independently on their own merits without credit support from sponsors who are interested as third parties who will benefit in some way from the project.

There is considerable room for disagreement between lenders and borrowers as to what constitutes a feasible project financing. Borrowers prefer their projects to be financed independently off-balance sheet. Lenders, on the other hand, are not in the venture capital business. They are not equity risk takers. Lenders want to feel secure that they are going to be

repaid either by the project, the sponsor or an interested third party. Therein lies the challenge of most project financings.

The key to a successful project financing is structuring the financing of a project with as little recourse as possible to the sponsor while at the same time providing sufficient credit support through guarantees or undertakings of a sponsor or third party, so that lenders will be satisfied with the credit risk.

There is a popular misconception that project financing means off-balance sheet financing to the point that the project is completely self-supporting without guarantees or undertakings by financially responsible parties. This leads to misunderstandings by prospective borrowers who are under the impression that certain kinds of projects may be financed as stand alone self-supporting project financings and, therefore, proceed on the assumption that similar projects in which they are interested can be financed without recourse to the sponsor, be off-balance sheet to the sponsor and be without any additional credit support from a financially responsible third party.

It would be a happy circumstance if it were possible simply to arrange a 100 per cent loan for a project (non-recourse to sponsors) which looked as though it would surely be successful on the basis of optimistic financial projections. Unfortunately, this is not the case.¹

There is no magic about project financing. Such a financing can be accomplished by financial engineering which combines the undertakings and various kinds of guarantees by parties interested in a project being built in such a way that none of the parties alone has to assume the full credit responsibility for the project, yet when all the undertakings are combined and reviewed together, the equivalent of a satisfactory credit risk for lenders has resulted.²

This book discusses the methods, structures, and instruments which can be used to accomplish such a satisfactory credit risk and hence a successful project financing.

1. Checklist for a successful project financing

An independent economic unit which qualifies as a

viable credit for project financing must usually meet the criteria, and have the characteristics, contained in the checklist shown in Exhibit 1.1. However, not all of the items listed are applicable to all project financings. Also, the criteria will be satisfied if the project has a guarantor willing to assume the financial exposure and the costs associated with some of the noted risks. On the other hand, if a project financing fails to satisfy any of the applicable criteria, both lenders and sponsors should be apprehensive and should address the problem to resolve the risk exposure before proceeding. (Each item contained in the checklist is discussed in more detail in Chapter 2.)

2. Causes for project failures

The best way to appreciate the concerns of lenders to a project is to review and consider some of the common causes for project failures, which include the following:

- a. Delay in completion, with consequential increase in the interest expense on construction financing and delay in the contemplated revenue flow;
- b. Capital cost overrun;
- c. Technical failure;
- d. Financial failure of the contractor;
- e. Government interference;
- f. Uninsured casualty losses;
- g. Increased price or shortages of raw materials;
- h. Technical obsolescence of the plant;
- i. Loss of competitive position in the market-place;
- j. Expropriation;
- k. Poor management;
- l. Overly optimistic appraisals of the value of pledged security, such as oil and gas reserves; and
- m. Financial insolvency of the host government.

For a project financing to be successfully achieved, these risks must be properly considered, monitored and avoided throughout the life of the project.

The Eurotunnel project and its financing presents an interesting case study that illustrates the failure to address risks involved in project financing. A case study on the Eurotunnel project appears at the end of this chapter.

Exhibit 1.1: Checklist for a successful project financing

	Yes	No	Not applicable
1. A credit risk rather than an equity risk is involved.			
2. A satisfactory feasibility study and financial plan have been prepared.			
3. The cost of product or raw material to be used by the project is assured.			
4. A supply of energy at reasonable cost has been assured.			
5. A market exists for the product, commodity, or service to be produced.			
6. Transportation is available at a reasonable cost to move the product to the market.			
7. Adequate communications are available.			
8. Building materials are available at the costs contemplated.			
9. The contractor is experienced and reliable.			
10. The operator is experienced and reliable.			
11. Management personnel are experienced and reliable.			
12. New technology is not involved.			
13. The contractual agreement among joint venture partners, if any, is satisfactory.			
14. A stable and friendly political environment exists; licences and permits are available; contracts can be enforced; legal remedies exist.			
15. There is no risk of expropriation.			
16. Country risk is satisfactory.			
17. Sovereign risk is satisfactory.			
18. Currency and foreign exchange risks have been addressed.			
19. The key promoters have made an adequate equity contribution.			
20. The project has value as collateral.			
21. Satisfactory appraisals of resources and assets have been obtained.			
22. Adequate insurance coverage is contemplated.			
23. Force majeure risk has been addressed.			
24. Cost over-run risk has been addressed.			
25. Delay risk has been considered.			
26. The project will have an adequate ROE, ROI and ROA for the investor.			
27. Inflation rate projections are realistic.			
28. Interest rate projections are realistic.			
29. Environmental risks are manageable.			
30. Compliance with US Foreign Corrupt Practice Act of 1977 (FCPA).			
31. Protection from criminal activities such as kidnapping and extortion.			
32. A commercial legal system protecting property and contractual rights.			

3. Credit impact objective

While the sponsor or the beneficiary of a project financing ideally would prefer that the project financing be a non-recourse borrowing which does not in any way affect its credit standing or balance sheet, many project financings are aimed at achieving some other particular credit impact objective, such as any one or several of the following:

- a. To avoid being shown on the face of the balance sheet;
- b. To avoid being shown as debt on the face of the balance sheet so as not to impact financial ratios;
- c. To avoid being shown in a particular footnote to the balance sheet;
- d. To avoid being within the scope of restrictive covenants in an indenture or loan agreement which precludes direct debt financing or leases for the project;
- e. To avoid an open-end first mortgage;
- f. To avoid being considered as a cash obligation which would dilute interest coverage ratios, and affect the sponsor's credit standing with the rating services;
- g. To limit direct liability to a certain period of time such as during construction and/or the start-up period, so as to avoid a liability for the remaining life of the project;
- h. To keep the project off-balance sheet during construction and/or until the project generates revenues; and
- i. To avoid a liability for IMF purposes.

Any one or a combination of these objectives may be sufficient reason for a borrower to seek the structure of a project financing.

Liability for project debt for a limited time period may be acceptable in situations in which liability for such debt is unacceptable for the life of the project. Where a sponsor cannot initially arrange long-term non-recourse debt for its project which will not impact its balance sheet, the project may still be feasible if the sponsor is willing to assume the credit risk during the construction and start-up phase, and provided lenders are willing to shift the credit risk to the project after the project facility is completed and operating. Under such an arrangement, most of the objectives of an off-balance sheet project financing and limited credit impact can be achieved after the initial risk period of construction and start-up. In some instances, the lenders may be satisfied to rely on revenue produced by uncon-

ditional take-or-pay contracts from users of the product or services to be provided by the project to repay debt. In other instances, the condition of the market for the product or service may be such that sufficient revenues are assured after completion of construction and start-up so as to convince lenders to rely on such revenues for repayment of their debts.

4. Accounting considerations

Project financing is sometimes called off-balance sheet financing. However, while the project debt may not be on the sponsor's balance sheet, the project debt will appear on the face of the project balance sheet. In any event:

The purpose of a project financing is to segregate the credit risk of the project in order that the credit risk of lending to either the sponsor or the project can be clearly and fairly appraised on their respective merits. The purpose is not to hide or conceal a liability of the sponsor from creditors, rating services or stockholders.

Significant undertakings of sponsors and investors in projects subject to the US Financial Accounting Standards Board must usually be shown in footnotes to their financial statements if not in the statements themselves. Since project financings are concerned with balance sheet accounting treatment, familiarity with accounting terms used to describe or rationalise balance sheet reporting is important. Terms such as contingent liability, indirect liability, deferred liability, deferred expense, fixed charges, equity accounting and materiality are used to rationalise the appropriate positioning of entries in a sponsor's financial statements and footnotes. Accounting rules for reporting these types of liabilities are under continual review, as the accounting profession grapples with the problem of proper and fair disclosure and presentation of objective information to stockholders, lenders, rating agencies, guarantors, government agencies and other concerned parties.

5. Financial consolidation of subsidiaries

Rules for financial consolidation are basic to structuring a project financing. Briefly stated, for financial

accounting purposes a more than 50 per cent-controlled subsidiary is consolidated on a line-by-line basis, with debt of the subsidiary shown as debt of the parent. In absence of control, the equity method of accounting is used for subsidiaries owned 50 per cent or less, which means the investment is shown as a one line entry. Debt of less than 50 per cent-owned subsidiaries usually does not show as debt on the parent's balance sheet. The same rules are applicable to partnerships. The accounting rules for financial consolidation present some interesting opportunities for off-balance sheet financing through the use of jointly owned corporations or partnerships in which the sponsor owns 50 per cent or less.

6. Meeting internal return objectives

Most companies set target rates of return for new capital investments. If a proposed capital expenditure will not generate a return greater than a company's target rate, it is not regarded as a satisfactory use of capital resources. This is particularly true when a company can make alternative capital expenditures which will produce a return on capital in excess of the target rate.

Project financing can sometimes be used to improve the return on the capital invested in a project by leveraging the investment to a greater extent than would be possible in a straight commercial financing of the project. This can be accomplished by locating other parties interested in getting the project built, and shifting some of the debt coverage to such parties through direct or indirect guarantees. An example would be an oil company with a promising coal property which it did not wish to develop because of better alternative uses of its capital. By bringing in a company which required the coal, such as a public utility, an indirect guarantee might be available in the form of a long-term take-or-pay contract which would support long-term debt to finance the construction of the coal mine. This, in turn, would permit the oil company's investment to be highly leveraged and consequently to produce a much higher rate of return.

7. Other benefits

There are often other side benefits resulting from segregating a financing as a project financing, which may

have a bearing on the motives of the company seeking such a structure:

- a. Credit sources may be available to the project which would not be available to the sponsor;
- b. Guarantees may be available to the project which would not be available to the sponsor;
- c. A project financing may enjoy better credit terms and interest costs in situations in which a sponsor's credit is weak;
- d. Higher leverage of debt to equity may be achieved;
- e. Legal requirements applicable to certain investing institutions may be met by the project but not by the sponsor;
- f. Regulatory problems affecting the sponsor may be avoided;
- g. For regulatory purposes, costs may be clearly segregated as a result of a project financing;
- h. The project may enable a public utility sponsor to achieve certain objectives regarding its rate base;
- i. Investment protection in foreign projects may be improved by joining as joint venturers with international parties, thus lessening the sovereign risk;
- j. A more favourable labour contract or climate may be possible by separating the operation from other activities of the sponsor; and/or
- k. Construction financing costs may not be reflected in the sponsor's financial statements until such time as the project begins producing revenue.

In some instances, any one of the reasons stated above may be the primary motivation for structuring a new operation as a project financing.

8. Tax considerations

Tax benefits from any applicable tax credits, depreciation deductions, interest deductions, depletion deductions, research and development tax deductions, dividends-received credits, foreign tax credits, capital gains, and non-capital start-up expenses are very significant considerations in the investment, debt service and cash flow of most project financings. Care must be used in structuring a project financing to make sure that these tax benefits are used. Where a project financing is housed in a new entity which does not have taxes to shelter, it is important to structure the project financing so that any tax benefits can be

transferred to parties in a position currently to use such tax benefits.

For US federal income tax purposes, 80 per cent control is required for tax consolidation, except in the case of certain foreign subsidiaries, in which 50 per cent control may require consolidation. Similar structures to those used in the United States are frequently applicable in other countries.

9. Disincentives to project financing

Project financings are complex. The documentation tends to be complicated, and the cost of borrowing funds may be higher than conventional financing. If the undertakings of a number of parties are necessary to structure the project financing, or if a joint venture is involved, the negotiation of the original financing agreements and operating agreements will require patience, forbearing, and understanding. Decision-making in partnerships and joint ventures is never easy, since the friendliest of partners may have diverse interests, problems and objectives. However, the rewards and advantages of a project financing will often justify the special problems which may arise in structuring and operating the project.

10. Principles apply regardless of project size

Discussions of project financing sometimes tend to focus on large complex projects. This might lead one to the conclusion that the project financing principles discussed in this book have little application to smaller, more ordinary financings. This is not the case. The same principles used to finance a major pipeline, copper mine, or Channel tunnel can be used to finance a cannery, a hotel, a ship or a processing plant.

11. Exception for internet start-ups

Internet start-up companies that are financed with risk capital in the form of equity present an exception to the traditional rules for project financing that should be noted. The rapid development of the internet and electronic data transfer have given rise to e-commerce business opportunities that can result in a few cases of very large growth potential and future profits. The risk for investors is also very high.

B2B (business to business) and B2C (business to consumer) commercial activities have the potential to replace traditional distribution and sales channels. Venture capitalists (VCs) and venture capital funds sometimes provide equity related securities to these proposed projects that are often based merely upon the reputation of the promoters and conjecture and optimistic financial projections. Another type of venture capitalist called an ‘incubator’ may provide small amounts of initial seed equity capital and advice to what they perceive as promising start-ups in their early stages. The time horizon of promoters of this type of company is often limited to the time it takes to go to the public markets or to find a buyer.

Since capital provided to this type of start-up company is equity type capital, rather than debt, the financing is not really project financing.

12. Building blocks of project financing

Before reviewing various specific project financings, it is necessary to discuss the building blocks of project financing. Briefly stated, these building blocks include debt in the form of notes, debentures, bonds, subordinated notes, term debt secured by a particular asset, non-recourse debt, limited-recourse debt, warrants, options, tax-exempt industrial revenue bonds, capital leases, operating leases, service leases, bank loans, short-term notes and commercial paper. This debt, in turn, may be restructured or combined with interest rate swaps and options and currency swaps and options. The debt is supported by the financial viability of the project, direct guarantees, contingent guarantees, indirect guarantees and implied guarantees. Projects are structured using subsidiaries, unrestricted subsidiaries, special purpose corporations, nominee corporations, jointly owned corporations, general partnerships, limited partnerships, joint ventures and trusts. These borrowings, guarantees and entities can be combined in a variety of ways to produce a viable project financing.

The method used must ensure that the state and federal income tax benefits from depreciation, and tax credits, interest expense and depletion will be used by the appropriate parties or by a third party lender who will share those benefits with the project.

The objective is to package and combine the undertakings of various parties interested in getting a pro-

ject built in such a way that no one party has to assume the credit responsibility for the project, while at the same time providing a combination of guarantees and undertakings which, when viewed together, will constitute a bankable credit. If a single strong credit (such as a government agency) will provide a guarantee, the task of structuring the transaction as a project financing for the remaining sponsors is much easier.

The combinations of entities, guarantees, instruments and borrowings are limited only by the ingenuity of the architect of a project financing and the acceptability of the structure to investors and lenders. Various project financings which have been accom-

plished or are under active consideration are reviewed later in this book.

A company considering a project financing should review financial structuring methods used in other industries as well as its own industry. Some industries, such as the petroleum industry, have been successfully using various methods of project financing for many years. Structures used in one industry may be used, or may generate ideas, for new structures applicable to other industries. And structures used for a project in one country may also be used effectively in another country despite differences in laws and tax consequences.

Case study: Eurotunnel – A disaster for lenders

The 31-mile link under the English Channel between the UK and France is one of the most expensive projects in the world. It was the third attempt at a 'Chunnel' and came after the second had been cancelled by an incoming British government afraid of a huge increase in the capital budget for the project – a similar long-tunnel project in Japan had just been completed with a cost overrun of 100 per cent.* Financed by a consortium of 225 banks it is a project in which the construction phase, overall cost and start-up revenues were all underestimated. The proposed project financing failed the checklist (see Exhibit 1.1) on a dozen grounds, any one of which should have caused rejection. In May 1987, construction was expected to be completed by May 1993. In 1990, construction was estimated to be completed by May 1994. Actual completion occurred in December 1994. In the 1987 budget, total cost to build and open the tunnel was estimated to be £4.9 billion. In 1990 the estimate was raised to £7.5 billion. Actual cost was £9.7 billion.

Crucial to Eurotunnel is the fact that the project company was created by construction contractors to issue a construction contract to those contractors. Further, the project financing became almost a matter of national pride (and pressure) even though the construction budget was not finalised and the rail equipment not finally specified at the time the project was syndicated.

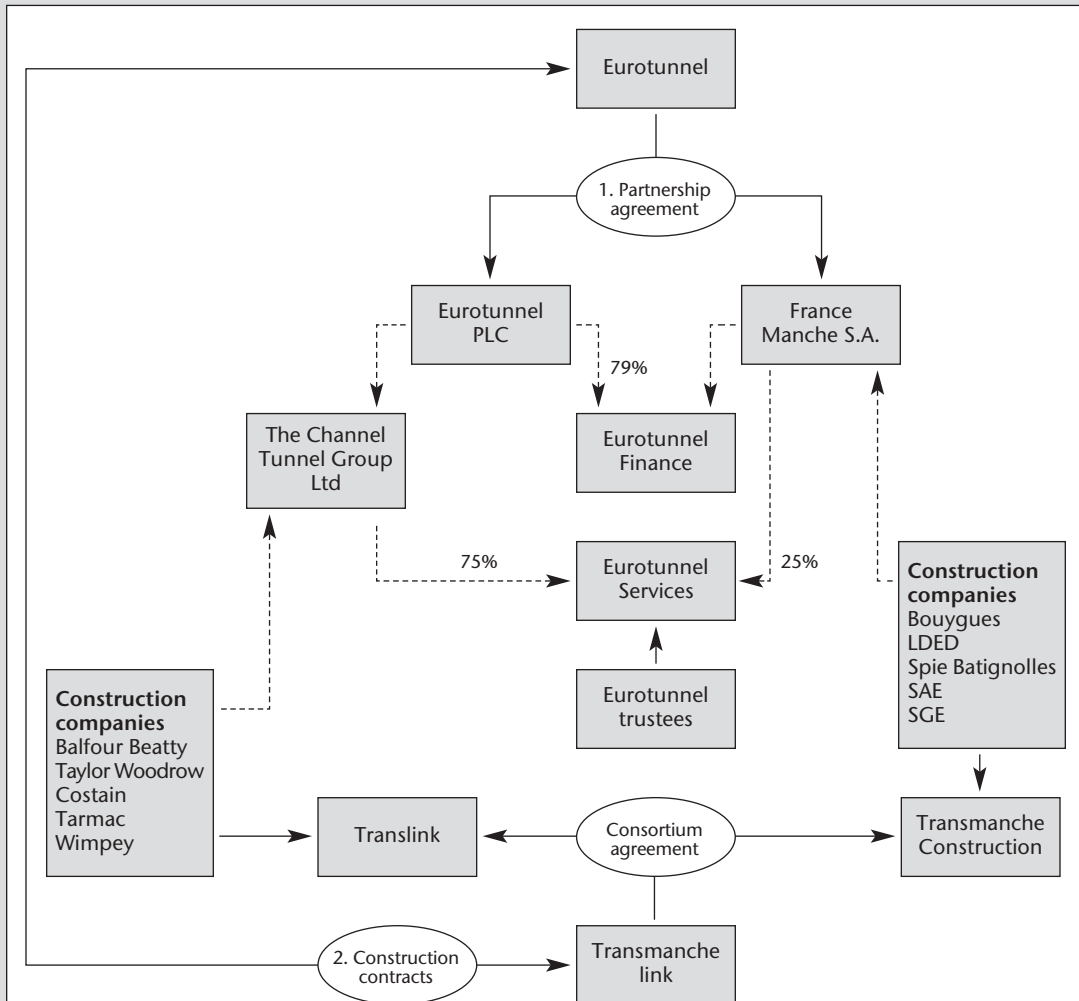
Bankers' egos and old school ties apparently got in the way of responsibilities to bank stockholders. Head bankers apparently approved the credit with its obvious many shortcomings rather than experienced project finance loan officers.

The equipment specification aspect was revisited during the construction period, with a cost increase to the project of £1 billion for fire safety on the rail shuttle cars. Yet, on 18 November 1996, the 21.42 train from Coquelles in France caught fire and the overall fire systems failed (compounded by human error), shutting down the system for six months.

The traffic, already building slowly, was naturally put off by this disaster. In addition, successive British governments failed to upgrade the rail connection from London to Folkestone at the entry to the English side of the tunnel, whereas the French have established their TGV express trains from the Coquelles portal to Paris. The ferry companies thus compete with Eurotunnel on many fronts, including price and convenience. Until the fast connection is in place from London, the project will continue to have difficulty servicing its massive debt which has been heavily restructured, including the conversion of almost half the US\$12.5 billion debt into equity.

The very serious risk aspects of completion, traffic, infrastructure, force majeure, and operating aspects were either ignored or seriously misjudged in the various scenarios and refinancings in evidence in this mega transaction, with its concomitant mega write-down.

Case study: Eurotunnel *continued*



Summary

1. Partnership of The Channel Tunnel Group Ltd. and France Manche S.A. formed to proceed with the tunnel on behalf of five UK and five French contractors.
2. Construction contracts established for the Target Works, Lump-Sum Works, and Procurement (Equipment).

* See Tinsley, C.R., *Advanced Project Financing*, 1st Ed., Euromoney Books, 2000.

Notes and references

1. Lenders remember the old adage: at the start of the project financing, the promoter has the experience and the lender has the money; whereas at the end of the project financing, the lender has the experience and the promoter has the money.
2. The authors have tried to arrange this modest treatise in a logical sequence. However, the impatient reader may wish to turn immediately to Chapter 27, Guarantees, which are the lubricant to the success of many project financings.