

# *Project Finance Teaching Note*

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written by

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## *I. Definition of project finance*

The term “project finance” is used loosely by academics, bankers and journalists to describe a range of financing arrangements. Often bandied about in trade journals and industry conferences as a new financing technique, project finance is actually a centuries-old financing method that predates corporate finance. However with the explosive growth in privately financed infrastructure projects in the developing world, the technique is enjoying renewed attention. The purposes of this note are to contrast project finance with traditional corporate financing techniques; to highlight the advantages and disadvantages of project finance and ; to propose that a single structure underlies every project finance transaction; to explain the myriad of risks involved in these transactions; and, to raise questions for future research.

Project financing techniques date back to at least 1299 A.D. when the English Crown financed the exploration and the development of the Devon silver mines by repaying the Florentine merchant bank, Frescobaldi, with output from the mines.<sup>1</sup> The Italian bankers held a one-year lease and mining concession, i.e., they were entitled to as much silver as they could mine during the year. In this example, the chief characteristic of the project financing is the use of the project’s output or assets to secure financing.

Another form of project finance was used to fund sailing ship voyages until the 17th century. Investors would provide financing for trading expeditions on a voyage-by-voyage basis. Upon return, the cargo and ships would be liquidated and the proceeds of the voyage split amongst investors.<sup>2</sup> An individual investor then could decide whether or not to invest in the sailing ship’s next voyage, or to put the capital to other uses. In this early example the essential aspect of project financing is the finite life of the enterprise. In corporate finance terms, we can also think of this mandatory liquidation as a fixed dividend policy. The idea of project finance predated the idea of permanent capital entrusted to a group of professional managers who would decide rather autonomously between paying dividends and reinvestment.

Project financing has evolved through the centuries into primarily a vehicle for assembling a consortium of investors, lenders and other participants to undertake infrastructure projects that would be too large for individual investors to underwrite. The more recent prominent examples of project finance structures facilitating projects are the construction of the Trans-Alaskan pipeline and exploration and exploitation of the North Sea oil fields. In the late 1990s, the technique has become rather prevalent and is frequently used to finance independent power plants and other infrastructure projects around the world as governments face budgetary constraints.

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<sup>1</sup> John W. Kensinger and John D. Martin. “Project Finance: Raising Money the Old-Fashioned Way,” in Donald H. Chew, Jr., ed. 1993. *The New Corporate Finance: Where Theory Meets Practice*. New York: McGraw-Hill, p. 326.

<sup>2</sup> Kensinger and Martin, p. 326.

There is no singular definition of project finance. In a article in the *Harvard Business Review*, Wynant defined project finance as “a financing of a major independent capital investment that the sponsoring company has segregated from its assets and general purpose obligations.”<sup>3</sup> A major player in sponsoring infrastructure projects and providing financing in developing countries, the World Bank defines project finance as the “use of nonrecourse or limited-recourse financing.” Further defining these two terms, “the financing of a project is said to be *nonrecourse* when lenders are repaid only from the cash flow generated by the project or, in the event of complete failure, from the value of the project’s assets. Lenders may also have *limited recourse* to the assets of a parent company sponsoring a project.”<sup>4</sup> These two definitions along with the historical examples above begin to establish the characteristics of project finance. In building a more robust picture of project finance, it is helpful to articulate the full list of characteristics and to contrast project finance with corporate finance.

How can a project financing be identified? What details should we expect to find about the transaction? Not every project financing transaction will have every characteristic, but the following provides a preliminary list of common features of project finance transactions.

**Capital-intensive.** Project financings tend to be large-scale projects that require a great deal of debt and equity capital, from hundreds of millions to billions of dollars. Infrastructure projects tend to fill this category. A World Bank study in late 1993 found that the average size of project financed infrastructure projects in developing countries was \$440 million. However, projects that were in the planning stages at that time had an average size \$710 million.<sup>5</sup>

**Highly leveraged.** These transactions tend to be highly leveraged with debt accounting for usually 65% to 80% of capital in relatively normal cases.

**Long term.** The tenor for project financings can easily reach 15 to 20 years.

**Independent entity with a finite life.** Similar to the ancient voyage-to-voyage financings, contemporary project financings frequently rely on a newly established legal entity, known as the project company, which has the sole purpose of executing the project and which has a finite life “so it cannot outlive its original purpose.”<sup>6</sup> In many cases the clearly defined conclusion of the project is the transfer of the project assets.

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<sup>3</sup> Larry Wynant. “Essential elements of project financing,” *Harvard Business Review*. May-June 1980, p. 166.

<sup>4</sup> World Bank. 1994. *World Development Report 1994*. New York: Oxford University Press, p. 94.

<sup>5</sup> World Bank, p. 95.

<sup>6</sup> Kensinger and Martin, p. 324.

For example, in a build-operate-transfer (BOT) project, the project company ceases to exist after the project assets are transferred to the local company.

**Non-recourse or limited recourse financing.** The project company is the borrower. Since these newly formed entities do not have their own credit or operating histories, it is necessary for lenders to focus on the specific project's cash flows. That is, "the financing is not primarily dependent on the credit support of the sponsors or the value of the physical assets involved."<sup>7</sup> Thus, it takes an entirely different credit evaluation or investment decision process to determine the potential risks and rewards of a project financing as opposed to a corporate financing. In the former, lenders "place a substantial degree of reliance on the performance of the project itself. As a result, they will concern themselves closely with the feasibility of the project and its sensitivity to the impact of potentially adverse factors."<sup>8</sup> Lenders must work with engineers to determine the technical and economic feasibility of the project. From the project sponsor's perspective, the advantage of project finance is that it represents a source of off-balance sheet financing.

**Controlled dividend policy.** To support a borrower without a credit history in a highly-leveraged project with significant debt service obligations, lenders demand receiving cash flows from the project as they are generated. This aspect of project finance recalls the Devon silver mine example, where the merchant bank had complete access to the mine's output for one year. In more modern major corporate finance parlance, the project has a strictly controlled dividend policy, though there are exceptions because the dividends are subordinated to the loan payments. The project's income goes to servicing the debt, covering operating expenses and generating a return on the investors' equity. This arrangement is usually contractually binding. Thus, the reinvestment decision is removed from management's hands.<sup>9</sup>

**Many participants.** These transactions frequently demand the participation of numerous international participants. It is not rare to find over ten parties playing major roles in implementing the project. The different roles played by participants is described in the section below.

**Allocated risk.** Because many risks are present in such transactions, often the crucial element required to make the project go forward is the proper allocation of risk. This allocation is achieved and codified in the contractual arrangements between the project company and the other participants. The goal of this process is to match risks and corresponding returns to the parties most capable of successfully managing them. For example, fixed-price, turnkey contracts for construction which typically include severe penalties for delays put the construction risk on the contractor instead on the project

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<sup>7</sup> Clifford Chance. 1991. *Project Finance*. London: IFR Publishing, p. 3.

<sup>8</sup> Clifford Chance, p. 3.

<sup>9</sup> Kensinger and Martin, p. 324.

company or lenders. The risks inherent to a typical project financing and their mitigants are discussed in more detail below.

**Costly.** Raising capital through project finance is generally more costly than through typical corporate finance avenues. The greater need for information, monitoring and contractual agreements increases the transaction costs. Furthermore, the highly-specific nature of the financial structures also entails higher costs and can reduce the liquidity of the project's debt. Margins for project financings also often include premiums for country and political risks since so many of the projects are in relatively high risk countries. Or the cost of political risk insurance is factored into overall costs.

Another means of understanding project finance is to relate it to corporate finance. Kensinger and Martin draw this comparison,

Generally when a corporation chooses to undertake an investment project, cash flows from existing activities fund the newcomer; and management has the option to roll over the project's capital into still newer ventures within the company later on -- without submitting them to the discipline of the capital market.

With project financing, by contrast, the assets and cash flows associated with each project are accounted for separately. Funding for the new project is negotiated from outside sources, and creditors have recourse only to the assets and cash flows of a specific project. As the project runs its course, furthermore, the capital is returned to the investors, and they decide how to reinvest it.<sup>10</sup>

Most actual projects probably fall somewhere between the two theoretical definitions. When evaluating a project, however, it is useful to think of it falling somewhere along a *Corporate Finance-Project Finance Continuum*.<sup>11</sup> The following chart summarizes the key differences between the two types of financing.

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<sup>10</sup> Kensinger and Martin, 324.

<sup>11</sup> The idea of a continuum comes from Jechoutek and Lamech, p. 36.

*Corporate Finance-Project Finance Continuum*

<b>Dimension</b>	<b>Corporate finance</b>	<b>Project finance</b>
<b>Financing vehicle</b>	Multi-purpose organization	Single-purpose entity
<b>Type of capital</b>	Permanent - an indefinite time horizon for equity	Finite - time horizon matches life of project
<b>Dividend policy and reinvestment decisions</b>	Corporate management makes decisions autonomous from investors and creditors	Fixed dividend policy - immediate payout; no reinvestment allowed
<b>Capital investment decisions</b>	Opaque to creditors	Highly transparent to creditors
<b>Financial structures</b>	Easily duplicated; common forms	Highly-tailored structures which cannot generally be re-used
<b>Transaction costs for financing</b>	Low costs due to competition from providers, routinized mechanisms and short turnaround time	Relatively higher costs due to documentation and longer gestation period
<b>Size of financings</b>	Flexible	Might require critical mass to cover high transaction costs
<b>Basis for credit evaluation</b>	Overall financial health of corporate entity; focus on balance sheet and cashflow	Technical and economic feasibility; focus on project's assets, cash flow and contractual arrangements
<b>Cost of capital</b>	Relatively lower	Relatively higher
<b>Investor/lender base</b>	Typically broader participation; deep secondary markets	Typically smaller group; limited secondary markets

## ***II. Project finance: when and why?***

Given the previous discussion the advantages of project finance as a financing mechanism are apparent. It can raise larger amounts of long-term, foreign equity and debt capital for a project. It protects the project sponsor's balance sheet. Through properly allocating risk, "it allows a sponsor to undertake a project with more risk than the sponsor is willing to underwrite independently."<sup>12</sup> It applies strong discipline to the contracting process and operations through proper risk allocation and private sector participation. The process also applies tough scrutiny on capital investment decisions.<sup>13</sup> By involving numerous international players including the multilateral institutions, it can provide a kind of *de facto* political insurance. Kensinger and Martin further argue that the finite life and fixed dividend policy aspects of project finance "mean that investors rather than managers get to make the decisions about reinvesting the cash flows from the project."<sup>14</sup>

On the other hand, the financing technique also presents certain disadvantages. It is a complex financing mechanism that can require significant lead times. High transaction costs are involved in developing these one-of-a-kind, special-purpose vehicles. The projects have high cash flow requirements and elevated coverage ratios. The contractual arrangements often prescribe intrusive supervision of the management and operations that would be resented in a corporate finance environment.

## ***III. Structures of project finance transactions***

Despite the complexity inherent in the nature of the financing, some contend that every project financing can be fitted into the same basic structure and essentially has the same components. One proponent of such thinking is Thomas H. Pyle, Managing Director of the Princeton Pacific Group and project finance lecturer with the Euromoney Institute of Finance.

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<sup>12</sup> J. Paul Forrester. "The Role of Commercial Banks in Project Finance," *Journal of Project Finance*. Summer 1995, p. 54.

<sup>13</sup> "In a project financing, furthermore, the investment is subjected to outside scrutiny before being undertaken. The investors, that is, have a direct say in the capital investment decision, thus enhancing the efficiency of resource allocation." See Kensinger and Martin, p. 333.

<sup>14</sup> Kensinger and Martin, p. 332.