

## Project Finance

Project finance is the financing of long-term infrastructure and industrial projects based upon a complex financial structure where project debt and equity are used to finance the project, and debt is repaid using the cashflow generated by operation of the project, rather than the general assets or creditworthiness of the project sponsors. Because of this structure, the debt is said to be "nonrecourse" to the project sponsors.

The financing is typically secured by all of the project assets, including the revenue-producing contracts. Project lenders are given a lien on all of these assets, and are able to assume control of a project if the project company has difficulties complying with the loan terms.

Generally, a special purpose entity is created for each project, thereby shielding other assets owned by a project sponsor from the detrimental effects of a project failure. As a special purpose entity, the project company has no assets other than the project. Capital contribution commitments by the owners of the project company are sometimes necessary to ensure that the project is financially sound.

Project finance is often more complicated, and more expensive, than alternative financing methods. It is most commonly used in the mining, transportation, telecommunication and public utility industries.

Risk identification and allocation is a key component of project finance. A project may be subject to a number of technical, environmental, economic and political risks, particularly in developing countries and emerging markets. Financial institutions and project sponsors may conclude that the risks inherent in project development and operation are unacceptable (unfinanceable). To cope with these risks, project sponsors in these industries (such as power plants or railway lines) are generally completed by a number of specialist companies operating in a

contractual network with each other that allocates risk in a way that allows financing to take place.[1] The various patterns of implementation are sometimes referred to as "project delivery methods."

The financing of these projects must also be distributed among multiple parties, so as to distribute the risk associated with the project while simultaneously ensuring profits for each party involved. Usually, a project financing scheme involves a number of equity investors, known as sponsors, as well as a syndicate of banks which provide loans to the operation. The loans are most commonly non-recourse loans, which are secured by the project itself and paid entirely from its cash flow. A riskier or more expensive project may require limited recourse financing secured by a surety from sponsors. A complex project finance scheme may incorporate corporate finance, securitization, options, insurance provisions or other further measures to mitigate risk.

Project finance shares many characteristics with maritime finance and aircraft finance; however, the latter two are more specialized fields.

A basic project finance scheme

Hypothetical project finance scheme Acme Coal Co. imports coal. Energen Inc. supply energy to consumers. The two companies agree to build a power plant to accomplish their respective goals. Typically, the first step would be to sign a memorandum of understanding to set out the intentions of the two parties. This would be followed by an agreement to form a joint venture.

Acme Coal and Energen form an SPC (Special Purpose Corporation) called Power Holdings Inc. and divide the shares between them according to their contributions. Acme Coal, being more established, contributes more capital and takes 70% of the shares. Energen is a smaller company and takes the remaining 30%. The new company has no assets.

Power Holdings then signs a construction contract with Acme Construction to build a power plant. Acme Construction is an affiliate of Acme Coal and the only company with the know-how to construct a power plant in accordance with Acme's delivery specification.

A power plant can cost hundreds of millions of dollars. To pay Acme Construction, Power Holdings receives financing from a development bank and a commercial bank. These banks provide a guarantee to Acme Construction's financier that the company can pay for the completion of construction. Payment for construction is generally paid as such: 10% up front, 10% midway through construction, 10% shortly before completion, and 70% upon transfer of title to Power Holdings, which becomes the owner of the power plant.

Acme Coal and Energen form Power Manage Inc., another SPC, to manage the facility. The ultimate purpose of the two SPCs (Power Holding and Power Manage) is primarily to protect Acme Coal and Energen. If a disaster happens at the plant, prospective plaintiffs cannot sue Acme Coal or Energen and target their assets because neither company owns or operates the plant.

A Sale and Purchase Agreement (SPA) between Power Manage and Acme Coal supplies raw materials to the power plant. Electricity is then delivered to Energen using a wholesale delivery contract. The cashflow of both Acme Coal and Energen from this transaction will be used to repay the financiers.

Complicating factors

The above is a simple explanation which does not cover the mining, shipping, and delivery contracts involved in importing the coal (which in itself could be more complex than the financing scheme), nor the contracts for delivering the power to consumers.

Minority owners of a project may wish to use "off-balance-sheet" financing, in which they disclose their participation in the project as an investment, and excludes the debt from financial statements by disclosing it as a footnote related to the investment. In the United States, this eligibility is determined by the Financial Accounting Standards Board.

Many projects in developing countries must also be covered with war risk insurance, which covers acts of hostile attack, derelict mines and torpedoes, and civil unrest which are not generally included in "standard" insurance policies. Today, some altered policies that include terrorism are called Terrorism Insurance or Political Risk Insurance.

In many cases, an outside insurer will issue a performance bond to guarantee timely completion of the project by the contractor.

Publicly-funded projects may also use additional financing methods such as tax increment financing or Private Finance Initiative (PFI). Such projects are often governed by a Capital Improvement Plan which adds certain auditing capabilities and restrictions to the process.

## History

Limited recourse lending was used to finance maritime voyages in the days of ancient Greece and Rome. Its use in infrastructure projects dates to the development of the Panama Canal, and was widespread in the US oil and

gas industry during the early 20th century. However, project finance for high-risk infrastructure schemes originated with the development of the North Sea oil fields in the 1970s and 1980s. For such investments, newly created Special Purpose Corporations (SPCs) were created for each project, with multiple owners and complex schemes distributing insurance, loans, management, and project operations. Such projects were previously accomplished through utility or government bond issuances, or other traditional corporate finance structures.

Project financing in the developing world peaked around the time of the Asian financial crisis, but the subsequent downturn in industrializing countries was offset by growth in the OECD countries, causing worldwide project financing to peak around 2000. The need for project financing remains high throughout the world as more countries require increasing supplies of public utilities and infrastructure. In recent years, project finance schemes have become increasingly common in the Middle East, some incorporating Islamic finance.

The new project finance structures emerged primarily in response to the opportunity presented by long term power purchase contracts available from utilities and government entities. These long term revenue streams were required by rules implementing PURPA, the Public Utilities Regulatory Policies Act of 1978. Originally envisioned as an energy initiative designed to encourage domestic renewable resources and conservation, the Act and the industry it created lead to further deregulation of electric generation and, significantly, international privatization following amendments to the Public Utilities Holding Company Act in 1994. The structure has evolved and forms the basis for energy and other projects throughout the world

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