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emember real estate finance before the recession of the early 1990s? In those days, a developer often financed a commercial real estate project on the strength of a long-term lease with a credit tenant. A local bank provided construction financing on a recourse basis. The permanent financing was provided on a nonrecourse basis by the construction lender in the form of a "mini-perm" loan or by an insurance company that would buy the construction loan on completion and lease-up. This way, developers could finance large buildings leased to a single creditworthy tenant. These real estate loans now seem extinct. But in a manner reminiscent of Jurassic Park, the genetic material of old-fashioned real estate finance lives on in the recognizable but mutated form of project finance.

What is Project Finance?

Project finance is a method of nonrecourse or limited recourse financing in which the project lenders look principally to the cash flow of a single project as security for their loan. Project finance transactions typically involve large, complex projects with many participants and a relatively long construction period and operating life. Unlike most nonrecourse financings, in a project financing, the loan amount usually exceeds the value of the project's hard assets. As a result, project cash flows are the key source of loan repayment. Because of the limited recourse nature of project finance loans, the size and

complexity of the projects involved and the lenders' reliance on cash flows over a long payment period, project financings require a complex scheme of risk allocation that is reflected in many long, complicated documents.

Many concepts underlying project finance are familiar to real estate lawyers who have handled traditional commercial real estate loans. In fact, the basic project finance structure looks much like a real estate loan in which the borrower finances the development of a building on the strength of a long-term net lease of the entire building to a single credit tenant. In a typical project financing, instead of a lease, there will be an "offtake" contract, such as a power sales agreement, under which the project owner sells all of the output of a facility on a long-term basis to a creditworthy local utility or industry. This offtake contract serves as the basis for the financing.

Nevertheless, there are significant differences between project finance and traditional real estate lending. In project finance, the same lender or group of lenders typically provides both the construction and long-term financing. In addition, the project loans are usually nonrecourse or of limited recourse both during construction and after the loan converts to term status. Project financing is almost always used for very large projects. Project financings are unusual for loans of less than \$25 million and are common for loans over \$1 billion. Companies use project financing for power plants, pipelines and other energy facilities, industrial and chemical

Project Finance Revives Extinct Deals

processing plants, mines, toll roads and other large facilities with reasonably complicated construction features, a long operating life and significant operating risks. These large, single purpose projects are in many ways the antithesis of an office building with fungible space leasable to a host of prospective tenants.

Recent Growth

Although project finance is not a new concept, in the last 15 years its use has grown tremendously both in the United States and around the world. In the United States, the passage of the Public Utility Regulatory Policies Act of 1978, Pub. L. No. 95-617, 92 Stat. 3117 (codified as amended in scattered titles of U.S.C.) (PURPA), spurred the growth of project finance as a means of funding the cogeneration industry. Under PURPA, if an independent power producer "cogenerates" both electric and thermal energy from the same fuel, then, subject to various conditions, the local electric utility must purchase electricity from the cogenerator at a price equal to the utility's "avoided cost" of generating a comparable amount of capacity and electric energy. 18 C.F.R. § 292.304. The independent power industry in the United States grew from this statutory foundationsomewhat slowly at first, but with great speed and vigor after 1985.

Initially, cogeneration plant developers tended to be either industrial companies that needed steam or electricity for their own use or relatively small, entrepreneurial developers. Thinly capitalized developers needed a suitable form of financing to build large, technologically complex generating plants. Project finance fit this need. The developer entered into a long-term (usually 20 years or more) power sales agreement with a utility. The contract obligated the utility to purchase a specific amount of power for a stated price. This power sales agreement supplied a long-term revenue stream that formed the basis for the project financing.

With this financing structure providing most of the necessary capital, independent power producers undertook a massive development program that transformed the face of the American electric industry. Project finance has grown even faster overseas, fueled principally by economic growth in East Asia and Latin America and the privatization of many former government monopolies. The result has been a powerful and sustained growth in worldwide project finance.

Project Structure

The key components of a typical project finance structure are: a special purpose borrower; long-term offtake contracts with one or more credit worthy purchasers; a series of contracts for project "inputs," such as fuel, chemicals and operation and maintenance services; for new projects, a fixed price, turnkey construction contract; and equity commitments and other forms of project support from creditworthy project sponsors. This description is not entirely accurate for merchant facilities-the newest form of energy project, which sells its output in the open market rather than under committed offtake contracts—but it is typical of most project financings that have occurred in the United States and abroad in the last 10 years.

In almost all project financings, including merchant facilities, the project borrower is a special purpose entity. It engages in, and its charter permits it to engage in, no business other than the development and ownership of the project. The form of the project company depends on tax considerations, loan covenants and, in international projects, local law requirements. Thus, the project company may be a general partnership, limited partnership, trust, limited liability company, corporation or other entity. In all cases, however, the entity has limited purposes and powers.

In addition, if a rating agency will rate the project debt, then the project entity must comply with rating

agency criteria, including the requirement that the special purpose entity be "bankruptcy remote." See Commentary, Special Purpose Entities & Project Finance Transactions, Global Project Finance (Standard & Poors), March 1996, at 5-6. Special purpose entities limit the extraneous claims that can be asserted against the borrower and the project assets. If the borrower were to engage in other businesses, claims from those activities could impair the finances of the borrower, give rise to liens or judgments against the project assets and create creditors that could file involuntary bankruptcy proceedings against the borrower.

Because the value of the hard assets is usually less than the project debt, debt repayment and anticipated equity returns depend on performance under project contracts. Properly structured project contracts are therefore essential for any project financing. A long-term contract with a creditworthy party that agrees to purchase project output is usually the linchpin of this contract structure. The output may be electricity, steam, chemical processing services, natural gas, water, wastewater processing or other products or services.

In general, the parties divide the payments under these offtake contracts into two parts, one fixed and one variable. The fixed portion usually covers all or a substantial part of fixed operating expenses and debt service. The fixed portion is often payable as long as the project is available to provide product or services, regardless of whether the offtake purchaser is actually using project output. The fixed portion may be in the form of a capacity payment, an availability payment or a take-or-pay or other similar contract that establishes a secure, stable and predictable cash flow for the project. The variable portion of the contract payment covers variable expenses, such as fuel expenses and variable operation and maintenance expenses. Return on equity may be included in the fixed payment portion, the variable portion or both.

Given the significance of the offtake contract, the contracts for project inputs must match the offtake contract so that expenses are linked to revenues. For example, if the offtake contract requires yearly price escalations based on increases in a specified fuel index, the fuel supply arrangements should provide for similar price escalations. If labor disputes are not force majeure events under the offtake contract, they should not be force majeure events under the project inputs contracts. If payments under the offtake contract are based on the "tested capacity" of the project, the construction contract must obligate the contractor to build the project so that it achieves the necessary capacity levels. Likewise, the operations and maintenance contract must obligate the operator to operate and maintain the project so that it continues to meet those requirements. This careful balancing of contractual obligations is a difficult but important foundation of a project financing. The success with which the project sponsors achieve this balance may dictate the availability of project financing or the amount of equity or other sponsor support the project will require.

Risk Identification and Allocation

Risk identification and allocation are at the heart of project finance. Project lenders lend large sums on a longterm basis to finance the construction and operation of a single project with limited recourse to creditworthy borrowers. Therefore, the lenders must analyze all commercial and legal risks of the initial construction and longterm viability of the project. Once identified, those risks must be allocated among the project parties. Of course, parties undertake an implied risk analysis and allocation in any development or loan transaction. What is distinctive about project financing is the explicit and elaborate way in which project lenders conduct this process.

To identify the risks of a particular project properly, the lender begins

with extensive due diligence. This due diligence inevitably involves technical consultants who analyze many key aspects of the project. For example, for a typical fossil fuel fired power plant, the lender hires an engineering firm to act as its consultant. The lender's engineer examines the project design, key subcontractors and suppliers, terms of the "EPC" contract described below, personnel of the EPC contractor, start-up procedures, required levels of spare parts, permitting plans, construction schedule, anticipated staffing levels for the project operator, outage rates, fuel consumption, backup or alternative fuels availability, completion test criteria and test protocol and many other technical and economic issues. In addition, the lender engages a fuel consultant either to conduct a fuel study or to review and approve a fuel study that the company has commissioned.

At the same time, lender's counsel undertakes considerable legal due diligence, including an analysis of all project entities, project documents, underlying project permits and approvals and the enforceability of key provisions in project documents. This due diligence includes extensive opinions from borrower's counsel and narrower opinions from counsel to most of the other project parties.

After identifying the project risks, the parties allocate those risks. To minimize project costs, both lenders and project sponsors try to allocate each risk to the party or parties that can bear the particular risk most efficiently.

Project lenders have developed customary ways to allocate project risks through project structure and project contract terms. For example, the parties usually allocate construction risk to a large, creditworthy construction company experienced in building similar projects. Under the construction contract (usually referred to as an engineering, procurement and construction or "EPC" contract), the contractor is responsible for all aspects of project engineering, design, procurement and construction. The contractor has additional responsibilities,

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such as preparing operating manuals, conducting performance tests and start-up procedures and training personnel to operate the project. Most importantly, the EPC contract is a fixed price, date certain contract with detailed performance criteria and liquidated damages for a failure to meet the schedule or performance levels.

In a similar fashion, the parties allocate or mitigate other risks they identify in due diligence. In domestic projects, these risks typically include regulatory risk, operating risk, fuel pricing and availability risk, force majeure risk, credit risk and technology risk. For example, the project lenders usually mitigate technology risk by requiring that the project use proven technology. Similarly, the parties may mitigate the fuel pricing risk with hedging or marketing arrangements. In addition, the parties may contractually allocate the fuel pricing risk to the project's offtake purchasers by passing through fuel price increases or to the project's fuel supplier with a contract having a fixed price, escalation caps or other price restrictions.

Loan Documents

Project finance loan documents contain provisions typical of other large secured construction and term loan transactions. For example, like other construction loans, the project finance loan documents include a long litany of conditions precedent to the initial advance of construction loan proceeds, an additional list of conditions precedent to each subsequent advance and a further set of conditions for the final advance and conversion of the loan to term loan status. The loan documents also contain borrower representations and warranties and affirmative and negative borrower covenants typical of many secured loans.

But project finance loans contain a number of provisions that either individually or in combination are atypical of other loans. In general, these provisions are designed to assure lenders that the project will be completed as planned and that the completed project will produce the expected cash flow over the long debt repayment period. Five characteristic loan provisions are described below.

 Conversion date. A loan agreement will contain a critically important set of conditions to converting the credit facility from a construction loan to a term loan. A default occurs if the project does not meet these conditions by a set date. The key question in defining the conversion date is whether the project is "complete." From the lender's perspective, the project is complete when it can generate the revenue stream necessary to pay expenses and debt service. To be sure that the project meets that completion standard, under the watchful eye of the lender's engineer, the project sponsors must demonstrate that the project satisfies the performance tests specified in the loan documents and the EPC contract, which in turn are keyed to the performance requirements under the power purchase agreement or other relevant offtake contracts.

 Debt service coverage. Debt coverage covenants, which track project cash flow, are a second characteristic feature of project finance loans. In contrast, debt-to-equity tests and other financial ratios are relatively uncommon. The parties assume that the real value of the project is in the revenue that the project and project contracts generate. The actual debt coverage requirement for a particular loan varies with the type of project. Loans for gas fired power projects, mining projects and toll roads may each have different coverage ratios, depending on the degree of anticipated fluctuation in project revenues and expenses and the likelihood of disruptions of project operations. In contrast, a hydroelectric power plant usually has a relatively low debt coverage test because water (and thus revenue) flows are relatively constant and project operations are relatively simple.

Payment waterfall. Project loans generally require that offtake purchasers make all payments directly

to a project control account that the lender or a security trustee maintains. The security documents will grant the lender a security interest in the funds in this account. In addition, the loan agreement will provide an elaborate scheme for distributing sums from this account. This scheme of distribution, often called the "payment waterfall," usually specifies a priority of payment from the project control account for each category of project expense in an order of distribution similar to the following: first, to pay costs of operating and maintaining the project; second, to pay interest, then principal, then fees and expenses payable under the project loan; third, to fund required reserves under the loan agreement; fourth, to pay interest and principal due on any subordinate debt the loan agreement permits; and fifth, to make distributions to equity. Within these broad categories, there may be subpriorities and projectspecific payments that have their own distribution priorities within the waterfall. In addition, because the project revenues are really the only effective source of loan repayment, loan documents typically impose further limitations on cash distributions if the project is not meeting debt coverage tests or if other events, such as defaults, have occurred.

 Reserves. Project lenders also require the project owner to establish certain reserves from initial equity and debt capital, project cash flow or both. When the loan converts to a term loan, the borrower establishes a debt service reserve account that is fully or partly funded with initial project capital. The project lenders also require additional deposits of project cash flow into the debt service reserve account until the reserve equals a specified level, such as six months' debt service. In addition, because project performance is so important, most project loans require major maintenance reserves. The size of these reserves varies based on the borrower's anticipated needs for major maintenance expenditures, as verified by the lender's engineer.

These expenditures occur in large amounts every few years and in relatively small amounts in the intervening years. In any case, the lender wants to be sure that the project owner has sufficient money available to pay those costs. Many other types of reserves are common in project financings, although debt service reserves and maintenance reserves are probably the most typical.

 Consents. Almost all project financings involve consents (sometimes styled "consent and agreement") between the lender and each counterparty to all important project contracts. Consents are a crucial element in the lender's security package because the project contracts are important to maintain project cash flow, achieve loan repayment and allocate project risks. The lender always takes a first priority security interest in all project contracts. A consent is really a means of further confirming the lender's security interest in a project contract.

The purpose of these consents is twofold. First, they assure the lender that, on a loan default, the project will still receive the anticipated benefits of the project contract. To that end, each consent will include estoppel language certifying the absence of defaults and that the borrower has fulfilled all conditions precedent to the contract. In addition, the consent will contain a direct agreement between the lender and the counterparty that amendments to the project contract will not be effective without the lender's consent. The consent will also require that the counterparty make all payments under the project contract directly to the project control account. This is a particularly important provision for lenders because it enables them to perfect their security interest in those payments and to assure the proper distribution of project revenues according to the payment waterfall. Finally, the consent may include project- or agreement-specific provisions that amend the underlying project contract, such as cure period extensions

and limitations on the exercise of certain remedies,

The consent is also an acknowledgment of the borrower's collateral assignment of the contract to the lender. The consent includes the counterparty's agreement that the lender can exercise all of the borrower's rights under the project agreement, that the counterparty will give the lender copies of all notices sent to the borrower (including default notices) and that the counterparty will accept performance by the lender to the same extent as performance by the borrower.

Because consents are universally required in project financings, project sponsors should anticipate that they will be required and provide for them in each project contract. Otherwise, a counterparty may try to renegotiate its contract when the sponsor requests a consent needed for closing.

Conclusion

Credit tenant real estate loans live on in the more highly evolved form of project finance. The limited recourse nature of project loans and the importance of project cash flow to debt repayment shape project finance. Much of the rest of a project financing has a certain predictable, if complicated, logic that flows from these key concepts. The advantages of project finance are in its rigor and flexibility, which allow developers to finance large, complicated, multiparty, multinational projects with high levels of debt from international money sources. The continued rapid growth of project finance suggests that lawyers will be hearing even more about this financing method in the future.

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