

Chapter 2

Understanding key project risks

Project finance is subject to several types of risks. It is useful therefore to look at these risks by category and identify their salient features and characteristics.

Entity risks

Each project finance participant has a different perspective on risk, often based on the role it is playing in the overall project financing structure. This perspective will obviously impact the participant's appetite for risk. The view of risk moreover is subjective and based not only on economic factors but on characteristics relating to the financial condition of the participant. A particular risk, event or condition that is unacceptable to one party may be considered manageable and routine by another. The identification of risks and knowledge of the participants is therefore essential if a project financing is to be assembled successfully. We will therefore consider the risk perspective of each participant in a project financing.

Sponsor

The project sponsor's objectives are based on the very reasons the project finance exists. Due to the complexity of project financings, the sponsor is interested in several objectives, such as limiting further development costs, minimizing transaction costs, recovering development stage expenses and earning construction, management, or similar fees to fund project company construction activities for the project. And in the long term,

the sponsor is motivated with the cash flow generation potential of the project. The sooner the project financing comes on stream, the sooner the sponsor benefits from the revenues generated. Thus, the sponsor would want to mitigate any risks which might delay or prevent the project from coming on stream.

Construction lender

The construction lender in a project financing is concerned with the design engineering and construction risks, since completing the construction is necessary in order to enable the borrower to draw down the permanent financing and use it to repay the initial construction loan. More specifically, the construction lender will be concerned with provisions relating to timely completion and performance at expected levels.

Credit enhancement devices to increase the likelihood of repayment of the construction loan may need to be in place. Examples are completion guarantees and performance and payment bonds.

Permanent lender

The permanent lender needs to:

- arrange sufficient debt to finance the total construction cost of the project;
- ensure the absence of any other lender in a more senior collateral or control position;
- conclude satisfactory intercreditor agreements if more than one lender is involved in the financing.

The permanent lender is generally concerned with the economic value of the project, and the legal adequacy of the contracts, and enforceability of the contracts in a loan workout scenario.

Overall, the lender attempts to structure a financing that ensures:

- All costs before construction completion are without recourse to lender for additional funds.

- The contractor satisfies performance guarantees, as evidenced by performance tests.
- There is recourse to other creditworthy project participants for delay and completion costs if the project is abandoned and if minimum performance levels are not achieved.
- There are predictable revenue streams that can be applied to service debt.
- The revenue streams are long term, from a creditworthy source and in an amount that covers operating costs and debt service (e.g. an off-take agreement).
- The project maximizes revenue while minimizing costs, complying with environmental laws (or lobbying to obtain exemptions) in order to maintain long term viability.

Contractor

The relationship between the sponsor and contractor is based on the fact that the turnkey nature of the construction project requires the contractor to deliver the project on spec and on time. This means that the contractor is concerned with the difficulty of predicting events that could adversely impact the parameters of the project and avoiding them. There are certain methods of incentivizing the contractor; for example, increasing the construction price or via a bonus payment in the case of early completion. The contractor is also concerned with the underlying financing documents, including whether the sponsor has arranged sufficient financing to pay the contractor for work performed.

Operator

The relationship between the project sponsor and operator is concerned with the need for price and performance predictability of the project. While the other project participants will want to ensure that the operating costs are fixed or predictable so that debt servicing ability can be analysed, the operator, in contrast, wants to limit price risk.

The operator can address this risk by agreeing to operate the project according to a budget approved by the project company. The operator moreover

agrees to operate the project within the parameters of the agreed-upon performance levels, and according to laws and industry practice.

Supplier

Suppliers are concerned with the challenges of providing requisite raw materials for the project and seek in return a fair and stable market price. Project participants on the other hand are concerned with quality and timely delivery of the raw materials with minimum price fluctuations.

Off-taker/purchaser

The off-taker is concerned with firm price and quality, and with minimum uncertainty. The project company, in contrast, wants to increase prices as the market will permit, and to be excused from performance failures (without penalties) for limited periods.

Host government

The project can offer the government short term and long term benefits from the project.

- Short term, the government can use the project for political benefits and for attracting other developers to a country.
- Long term, the successful project should improve economic prosperity and, perhaps, political stability, by providing the needed infrastructure, that is, if funds are not siphoned off by the ruling nomenklatura into offshore bank accounts.

It is therefore normal that the host country assume some of the project risks. This is particularly important for large high-profile projects. For example, implementation agreements, negotiated and executed with the host government, can provide a variety of government assurances with respect to the project risks. The host government might be involved in a project in one or several ways. These include as equity contributor, debt

provider, guarantee provider (particularly political risks), supplier of raw materials and other resources, output purchaser and provider of fiscal support (reduced import fees, tax holidays and other incentives).

The host government also has an ongoing role. It can ensure a smooth regulatory climate in future by ensuring permit compliance and through regulatory structures.

Other governments

A project might require the cooperation of third countries for project success. For example, the project may depend on a steady supply of fuel from a third country. Or the project production may need to be exported to a foreign country, thus necessitating the appropriate permits and contractual commitments. It is therefore essential that such interrelations be identified so that they can be managed within an appropriate legal and documentary framework.

Equity investor

Equity investors make a risk analysis similar to lenders. The structuring goals are quite different, however. Project lenders hold a first priority security interest on all project assets, want sufficient project revenues generated to service operating expenses, pay debt service and maintain other requisite reserve accounts, and pay dividends. Equity investors, on the other hand, may share some of these goals but will focus on receiving dividends regularly, keep reserve account balances to a minimum, and maintain a potential residual value in the project after the debt is paid off.

Multilateral and bilateral agencies

Multilateral and bilateral agencies have similar perspectives, but moreover must factor in political and government funding constraints. Each entity has separate charters and goals which define precisely the perspectives each has in a project.

Export credit agencies (ECAs) obviously have a political focus – to stimulate exports, whilst multilateral banks have a focus of providing long term loans on soft terms.

Transaction risks

The essence of any project financing is the identification of all key risks associated with the project and the apportionment of those risks among the various parties participating in the project. Without a detailed analysis of these project risks at the outset, the parties do not have a clear understanding of what obligations and liabilities they may be assuming in connection with the project and therefore they are not in a position to consider appropriate risk-mitigation exercises at the relevant time.

Should problems arise when the project is under way, it can result in considerable delays, large expenses and arguments as to who is responsible. As a general rule, a particular risk should be assumed by the party best able to manage and control that risk.

Due to the complexity, each project will have a different risk profile, that is, each project will have different kinds of risks and the magnitude of risks will differ from project to project. In general, however, there are some major areas of risks which should be addressed in every project so that they can be mitigated properly. We treat the main category of risks in this section below.

Preliminary risk assessment

Feasibility studies

The feasibility study is a useful mechanism for setting forth a description of the project, the goals of the project sponsor, sensitivities of the project to various construction, start-up and operating risks, an analysis of financing alternatives and credit enhancement. It will include estimated capital needs, debt service capabilities, revenue projections from output sales, operating costs and market projections. Typically, variables such as fuel cost fluctuation, interest rates, currency exchange rates and others are examined in alternative scenarios.

The study enables the sponsor and lenders to analyse the potential of the project before any party unnecessarily commits resources when the project is not economically feasible. The study must, of course, conclude that the project will have sufficient viability to pay debt service, operations and maintenance costs provide a return on equity, and, if necessary, provide for contingencies. The feasibility study is useful in that it can be analysed by various legal, financial and technical experts to establish whether the project is viable or not.

Due diligence

Due diligence in project financing is an important process for risk identification. It encompasses legal, technical, environmental and financial matters, and is designed to detect events that might result in total or partial project failure. Participants involved in this process, besides the project sponsors, are lawyers, construction companies, fuel consultants, market consultants, insurance consultants, financial advisers and environmental consultants. The level of due diligence undertaken involves considerations of time available, cost and the type of project.

Risk periods

There are three main risk periods in a project financing:

- engineering and construction;
- start-up;
- operational.

Figure 2.1 shows how the risks increase throughout this phase. The lenders become more exposed as funds are drawn down but until the start-up and operation phase there is no certainty that the project will succeed.

Engineering and construction phase risks

This first stage is when the risk is highest – funds begin to flow from the financiers to the project entity. No cash flow is being generated from the project, however, so no interest can be paid and in many financings

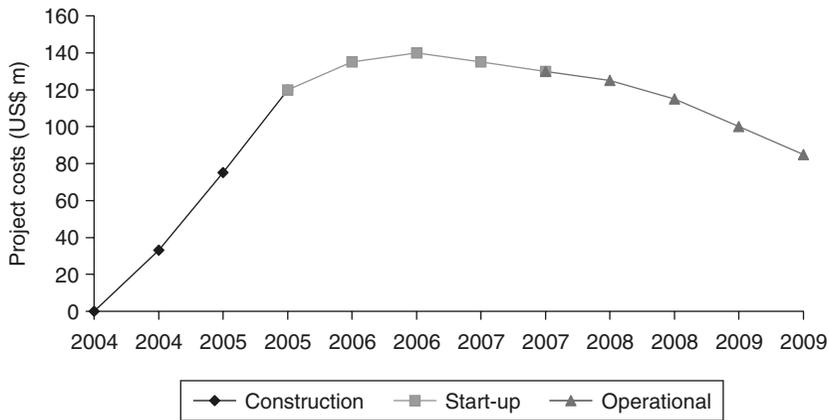


Figure 2.1 Risk phases and project costs

the borrower is allowed to ‘roll up’ interest or draw down further funds to make interest payments. The length of this phase can vary from several months (for example, the construction of a short toll road) to several years (for example, the construction of the Channel Tunnel). The lenders become more exposed as funds are drawn down but cash flows have yet to be generated.

Risks associated with the project during the construction phase include:

- **Sponsor risk** Sponsor risk is closely associated with completion risk. The bank’s view on completion risk will be strongly influenced by their view on sponsor risk, which may be broken down into two elements: Equity commitment and corporate strength and experience, also called ‘corporate substance’ Regarding equity commitment, lenders will normally require a contribution of anything from 15% to 50% of the project cost to ensure the sponsor’s continued commitment. In addition, lenders prefer to work with corporate sponsors that have substantial technical expertise and financial depth.
- **Pre-completion risk** The engineering and design review focuses on the suitability of the technology and design chosen for the project. These objectives recognize that construction risk levels vary among different technologies and the size of certain projects. Banks may well hesitate to finance projects using unproven technology.

- **Siting and permitting** Site and permitting risks are often linked to political risk, and can present a more difficult area of analysis. Regulations and legislation in some jurisdictions can leave continuous openings for project opponents to stop projects for reasons related, or unrelated, to siting concerns.
- **Completion risks** In essence, the risk is whether or not the project can be built on time, on budget and in accordance with the applicable specifications and design criteria.
- **Experience and resources of contractor** The contractor's experience, reputation and reliability should provide an indicator of the possibility of achieving timely completion of the project at the stated price. In projects, especially international projects, elements to analyse include human and technical resources necessary to satisfy contractual requirements, as well as ability to work with the local labour force.
- **Building materials** A project finance risk often overlooked. Of particular concern is the impact of import and export laws when the project is either located abroad or where imported materials are contemplated for construction.
- **Facility site** Pre-existing conditions on the project site can affect both construction and long term operations, especially if the site has hazardous waste problems.
- **Construction of related facilities** International projects, particularly in developing countries, often require simultaneous construction of facilities related to the project. These various facilities will all be inter-related and may need simultaneous construction to ensure project success. It is therefore important to analyse construction synchronization, since this may be the most important initial concern to the promoters of the underlying project.
- **Cost overruns** The risk that construction costs start to increase uncontrollably is perhaps the most important risk for the participants in a project financing. This may result in liquidity crises, as well as impact on long term cash flows.
- **Completion delays** Construction delays can have a similar impact to cost overruns, as it may affect the scheduled flow of project revenues necessary to cover debt service and operations and maintenance expenses, and result in higher than expected financing costs.

Start-up risks

During the start-up phase the banks need to be satisfied that the project will operate at the costs and according to the specifications agreed at the outset. The phase is especially significant if the loan becomes 'non-recourse' once the project has been completed (this is known as 'conversion').

The basis on which conversion takes place will require much thought and negotiation prior to the loan being signed. At this point, however, it is important to understand that the start-up phase may last for a period of many months. The technical assessment of a project therefore includes an evaluation of the facility's acceptance testing and start-up procedures, since they are an integral part of construction completion.

A potential conflict of interest and therefore risk arises from the need to start commercial operations versus the need to get the project to pass its long term reliability test. Financial pressures, which often occur near the end of the construction phase, to 'get the job done' may prompt the sponsor to accept a compromised performance test in an effort to generate cash flow as soon as possible. This is why lenders typically require that the engineer who engineer witnesses, verifies and signs off on all testing before releasing the contractor be fully independent (the engineer can, of course, be subjected to bribes or other pressures).

Operational risks

Once the project is complete the lenders in many project financings become dependent on stable cash flows to service the project loans. The lending risk is similar to the risks encountered in commercial loans in similar businesses. The future cash flows of the project company are subject to the usual operating costs, raw material costs, regulatory risks and markets for the products. The lenders can protect themselves by requiring the project company to maintain ratios and loan covenants: working capital, dividends and build-up of cash.

- **Operating/performance risk** Operational risk is the risk that normal ongoing operations will fail to generate the cash flow required to run

the project and service debt. This is why banks tend to be reassured if the project operations will be taken on by experienced third party operations and maintenance contractors, on a fixed cost basis. The main concern to lenders therefore is whether the project company has the experience and resources to manage the project, and if not, whether third parties, with sufficient creditworthiness to mitigate the risk of default, can.

- **Raw material/supply risk** This is another key risk category: input and supply risk relates to obtaining the requisite energy and raw materials for the project. The flow of these inputs must be assured, and within the parameters set by the project financial projections. This is why it is important to identify alternate sources should they be needed. Moreover, elements such as import or export fees, transportation charges, storage costs, can adversely impact the cost basis of these inputs. These factors should be factored into the financial projections in order to reassure the lenders that appropriate cash flow exists to meet operating costs and debt servicing commitments.
- **Off-take and sales risk** The off-take and sales risk is the risk that the project will fail to generate sufficient cash flow. This is why the sales, or off-take risk, is the key risk that banks will look at. Off-take agreements such as long term contracts to purchase electricity at fixed prices will substantially eliminate any sales volatility or instability, and will be considered as a positive element by the banks. Banks may therefore require the project sponsors to obtain off-take agreements, which leads to more basic questions such as: Is there a ready market for the project's products? How are the products going to be transported to market? Lenders will want to have the proper structures in place to insulate them from any potentially adverse effects arising from delays in the transportation process.
- **Counterparty risk** Counterparties include parties such as the contractor, bank providing bonds, purchasers or off-takers, insurance companies, etc. If any of these parties defaults in the performance of their respective obligations, then the project may run into difficulties. This raises three potential difficulties: The first is that a potential default risk exists, the second is that if such a risk arises, there is a potential documentation risk, which may be expensive and time-consuming to sort out, and the third is that since damages based claims are unliquidated

claims, basic common law damages rules may apply in common law based jurisdictions, which affect the value of such claims.

- **Technology/obsolescence risk** Banks tend to want to avoid new technology risk until it becomes proven technology. However, project sponsors cannot ignore new technology since often the success of such projects resides in cost efficiencies arising from new technology. Therefore, as a minimum, the contractor must have experience with the technology and provide adequate guarantees to support the underlying debt.

Financial risks

The project is now operating as a regular operating company and cash flow are being generated. As long as the project is performing according to plan, the risks to the lenders will reduce from their peak in the start-up phase. The borrower should not only be able to make interest payments but also repay the principal. As long as correct financial planning has been carried out, the company should be in a position to service debt. In a typical project finance transaction the banks will ensure that they have security over the sales proceeds.

Once the project is on stream, the project financial advisers should identify and mitigate for any risks that may occur outside of the project and scope of the project sponsor's control. Some of these risks are:

- **Foreign exchange (FX) risk** If all project inputs are denominated on one currency, there will be no FX risk. If this is not the case, the lender may need to assume some of the risk via multi-currency loans which give the borrower an option, based on a fixed FX rate, of repaying in different currencies. Lenders can sometimes hedge these risks using appropriate hedging instruments.
- **Interest rate risk** Project financings may rely on floating interest rate loans. Most project financings remove interest rate risk by financing with fixed interest rate debt. Some projects however have incorporated debt with interest rates tied to a floating reference rate. Where projects chose to use floating rate debt, the financial projections should

demonstrate that in a high interest rate scenario the project will still have enough available cash flow to service financing commitments.

- **Inflation risk** This risk exists when certain of the inputs can be subjected to price inflation (e.g. rising fuel costs). In such cases, the project sponsor must be able to pass on these price increases to customers. If the project output is a product whose price levels are fixed by the government (e.g. electricity cost), the ability to pass on the cost increase will be limited. Similar risks exist when the inputs are denominated in one currency and the project outputs in another. Thus it is important to identify any such risks and the ability to pass them on to the customers.
- **Liquidity risk** Projects should be able to demonstrate the ability to generate sufficient cash to fund major maintenance reserve funds. If not, a potential liquidity risk exists. Financial projections should therefore demonstrate that an adequate cash flow, enabling the company to generate enough cash to fund ongoing operations and fund reserves, exists. In some cases, project financings allocate a specific working capital facility for this purpose.
- **Product pricing** In the absence of off-take contracts, the lender needs to analyse the likely market price of the good or service being provided and evaluate the likelihood that the price levels achieved will suffice to cover operating costs and debt servicing requirements.

Country/political risks

Consider the following definition of country risk, provided by P. Nagy:

Country risk is the exposure to a loss in cross-border lending caused by events in a particular country which are, at least to some extent, under the control of the government but definitely not under the control of a private enterprise or individual.

When analysing this definition, one can find that country risk can arise through different paths. Indeed three types of events can cause country risk:

- Political events such as war, ideology, neighbouring countries, political unrest, revolution, etc. comprise political risk. Political risk is the risk

that a country is not willing or able, due to political reasons, to service/repay its foreign debt/obligations.

- Economic factors such as internal and external debt levels, GDP growth, inflation, import dependency etc. comprise economic risk. Economic risk is the risk that a country is not willing or able, due to economic reasons, to service/repay its foreign debt/obligations.
- Social factors such as religious, ethnic, or class conflict, trade unions, inequitable income distribution etc. comprise social risk. Social risk is the risk that a country is not able, or is unwilling, to repay its foreign debt/obligations due to social reasons.

Therefore, when we speak about country risk, we mean the exposure to a loss in cross-border lending (of different types) due to events more or less under the control of the government.

Typical examples of political risk are:

- expropriation or nationalization of project assets;
- failure of a government department to grant a necessary consent or permit;
- imposition of increased taxes and tariffs;
- withdrawal of valuable tax holidays and/or concessions;
- imposition of exchange controls, restricting the transfer of funds to outside the host country;
- changes in law adversely impacting project parties' obligations with respect to the project.

Political stability is an important ingredient for cross-border project financing success.

In project financing, the political risks are more acute because:

- The project may rely on governmental concessions, licences or permits.
- Tariffs, quotas or prohibitions might be imposed on exports of the project's production.
- The host government might introduce controls to restrict the rate of production or depletion of the project's reserves, either for national

reasons to do with the management of the host government's economy or for international reasons such as compliance with OPEC quotas.

- Additional taxes might be imposed on the project's production, such as the surcharge taxes imposed by the United Kingdom on revenues from North Sea oil production.

Legal risks

By legal risk is meant that the application of laws in the host country may not necessarily be consistent with that of the lender's home countries, and that judgements may yield results substantially different than those expected. It is therefore essential that project lenders review the legal risks at an early stage. Some banks may require the host country to pass specific legislation favourable to a project, which lends a new meaning to 'interference in domestic affairs'! Getting such legislation implemented no doubt requires numerous cash commissions to key government officials to accelerate lengthy procedures. A breakdown of legal risks includes:

- **Identifying and establishing applicable laws and jurisdiction** Project finance requires the establishment of a stable legal framework required for ongoing business operation. It is therefore important to identify the strengths and weaknesses of a given legal system and plan for the shortcomings appropriately.
- **Security** In a project finance – particularly where recourse is limited – the ability to take effective security can assume crucial importance. Laws on the taking and enforcement of security, particularly in the case of moveable assets, cash flows and contractual rights (such as receivables) might be less than satisfactory, and should be evaluated.
- **Permits and licensing** There is a risk when permits and licences must be obtained and renewed before the plant will operate. Effectively, this means that the lenders are assuming the risk that the requisite permits and licenses will be obtained in a reasonable time should the sponsors not provide any commitment to assume the costs arising from such delays.
- **Limited rights to appeal** The local lawyers and the judiciary might lack the requisite experience to judge project related disputes; resulting judgements may therefore be slower than expected and, yield unpredictable results.

- **Enforceability of contracts** Even if a project is supported by take-or-pay contracts with adequate escalation clauses, enforceability may very well be an open question, as well as the ability or motivation of the contracting party to honour its contractual commitments.
- **Structural risk** This is the risk that the interrelations of project elements may not function as initially envisaged. Complex projects can involve complex and interlocking documents which may be flawed. Allegiances moreover can shift during the life of a contract.

Environmental, regulatory and approval risks

Obtaining all the requisite approvals for a project is indispensable to its success. Indeed, all permissions should be obtained prior to setting in place the facility and forwarding funds. It is essential that these be included as conditions precedent in the facility documentation. Likewise for environmental and regulatory issues: these should be spelled out clearly in the loan agreement since there is a risk that other regulatory and environmental risks, may live to haunt the lenders if the project should fail and decontamination costs have to be borne by the lender who takes possession of the security in order to satisfy the outstanding loan.

- **Environmental risk** Environmental risk is increasingly becoming an issue of public concern, and is increasingly being subject to legislation controlling the adverse impact projects and the emissions, waste, hazardous substances and inefficient use of energy they may generate. Lenders need to insulate themselves from these risks. Some methods are to:
 - Understand the relevant legal framework in the host country and its impact on project feasibility.
 - Evaluate the risks relating to the project site, supplies, transportation from the site, and the products, emissions and waste that the project will generate.
 - Ensure that satisfaction of the relevant environmental and regulatory issues are a condition precedent to making finance available, including ensuring that the project will be able to meet future tightening of environmental controls.

- Documentation should contain representations, warranties and covenants on the borrower's part to ensure compliance with these issues.
- Monitor the project on an ongoing basis to ensure that the project operates within required environmental parameters.
- **Regulatory, licensing and permit risks** It is essential that all regulatory, licensing and permits issues are met at the outset of the project since if there are any difficulties and the lenders take possession of the security when a project fails to perform, this may cause difficulties. In the absence of appropriate governmental permits, this may result in fines. In the case of regulatory and licensing issues, the lenders may find themselves liable for the legal consequences of pollution caused by that project. The position is more ambiguous in other countries but bankers are concerned that the increasing profile of environmental issues might increase the risks of banks assuming these responsibilities in the event of pollution claims arising from their borrowers.
- **Public opposition** Public opposition to a project can become an unwelcome nuisance to bankers. Public opposition (via procedural challenges of permits and approvals) can result in costly delays to the project. The feasibility study should therefore consider public opposition as one factor in the chance for project success.

Refinancing risk

The repayment of construction financing by long term financing means that the former is depending on the latter for 'takeout'. This is known as refinancing risk, as it assumes repayment of the former by extension of the latter. The solution to this is to arrange the latter upon the signing of the former. This however is not always possible since there are often long lead times in a project. Construction lenders can try to protect themselves by providing incentives to sponsors to arrange the long term debt (e.g. gradually escalating interest rates, by triggering additional sponsor guarantees, or by requiring a takeout by the sponsor, since project financings tend to have the same group of lenders for both construction lending and long term lending). Repayment risk therefore needs to be evaluated on a case by case basis.

Force majeure

Force majeure means that entities are not responsible for performance shortfalls caused by unanticipated events outside their control. Project finance transactions are particularly vulnerable to force majeure risks due to the complexity of the transactions, the numerous participants in the project, the physical nature of construction activity, associated technical and performance risks, and impact of geographic distance and transport of raw materials.

Sponsors typically will not want to assume those risks and the financing parties should not accept these risks (in addition to the credit risks already assumed). It is therefore important to segregate risks which are those under the borrower's remit (technical, construction) against natural risks (floods and earthquakes, civil disturbances, strikes, or changes of law). While companies may be exempt from force majeure risks, it should be noted that they may still lead to a default depending on its severity.

The unpredictability of force majeure events makes effective mitigation difficult. Projects that show linearity in design or operations, such as toll roads, pipelines, or assembly line production, tend to be less at risk of operational force majeure accidents than operations which are complex (e.g. chemical plants, LNG facilities, refineries, and nuclear power plants). It is therefore essential that the project be assessed in light of such risks so that facility pricing and structure is commensurate with the risk profile of the project and downside cash flow analyses be undertaken to assess how much resistance the project structure has to such vicissitudes.

Lender liability risk

Lender liability risk may not be directly related to the project. Lenders however should be aware of this risk. One aspect of lender liability is the exercise of 'undue control' by a lender intervening in the customer's business by taking actions associated with ownership or management. Undue control can make the lender liable for the consequences if the borrower becomes insolvent. The need to draw a fine line between unacceptable

‘control’ and careful ‘credit monitoring’ is particularly acute in the context of project finance.

Excessive restrictions imposed on the borrower’s operations, the reporting and monitoring of progress, the control of disbursements and receivables, and the insistence on comprehensive security packages, increase the likelihood that the lender might be regarded as having an active role in the conduct of the business.

Conversely, banks in the United States have also been held responsible for the financial consequences of *failing* to make loans after entering into a commitment to lend.

There are a number of ways in which lenders can try to reduce the risk of lender liability:

- Include carefully drafted covenants in the documentation. These should be drafted carefully to ensure that the lender is not seen to be effectively exercising control.
- Have these restrictions expressed as events of default, rather than as proactive directions to follow specific policies.
- Avoid taking an equity interest in the borrower and/or in having a nominee director on its board.
- Take minutes during meetings with the project sponsors and borrower, to minimize the risk of allegations of misrepresentation or failure to negotiate in good faith.
- Make finance offers subject to final documentation and to be indicative, rather than exhaustive, of the terms and conditions of the offer.
- Make events of default specific and subject to objective tests rather than dependent on the discretion of the lender.
- Ensure that the financial covenants cannot be construed as the imposition of a ‘business plan’ on the borrower (e.g. use financial ratios, and not specific project related mileposts).
- Phrase management change covenants such that a ‘change of management constitutes an event of default’, rather than state that they are ‘prohibited from changing management’.

Particular care should be taken in loan defaults or reschedulings: if the lenders take advantage of the borrower's weakened condition and try to impose corrective measures, this may render the lenders liable for the borrower's obligations since they will be deemed to have taking a proactive role in the management of the borrower's ongoing operations.

Mitigating and managing project risks

Construction and completion risks

Completion risks can be allocated or mitigated in the following ways:

- **Turnkey contract** Turnkey arrangements are popular with lenders since they avoid gaps appearing in the contract structure and disputes between the subcontractors as to where particular risks lie. Lenders will prefer that the contractor assume responsibility for the design element of the works, thus simplifying negotiations with only one party for all aspects of the construction works during the construction period.
- **Fixed price lump sum contract** These reduce the likelihood of cost overruns being the responsibility of the project company. If there are to be any changes to the contract price, this will enable the lenders to protect their position, especially if there are any changes to project specifications by the project company.
- **Cost overrun** Cost overruns can be mitigated by contractual undertakings, e.g. the infusion of additional equity by the project sponsor, other equity participants, or standby equity participants. Similarly, standby funding agreements for additional financing, either from the construction lender or subordinated debt lent by project participants or third parties, can be used. This can be done by having the project sponsor create an escrow fund to provide liquidity in the case of cost overruns.
- **Completion guarantee** Pre-completion risks can be covered via the use of a completion guarantee. This is basically a guarantee from one or more of the project sponsors that the loan will be repaid if completion (as defined by certain performance tests) is not achieved by a certain date.
- **Completion test** Once the project has been completed, the sponsors will wish to be released from whatever undertakings they have made

to the lenders. The exact moment at which this happens is determined by the 'completion test'. The terms of the completion test usually involve considerable negotiation between lenders and sponsors. Completion can be defined by

- an architect's certificate of completion is issued (e.g. hotel);
 - physical completion (provided by independent consultants);
 - production test (production of a X over a particular period);
 - sales contract: confirmation the borrower can meet the obligations of any supplier contracts it has signed;
 - economics test: ability to profitably operate the facility as defined by cash flow coverage ratios incorporated in the loan agreement.
- **Liquidated damages in construction contracts** If construction of a project is at a stage where commercial operations cannot be undertaken or the project does not operate after completion at guaranteed levels, the project company will still need to service debt and other obligations. This can occur via 'liquidated damage payments' – these constitute an estimate by the contractor and project sponsor of the shortfall arising from late or deficient performance. The advantage of the liquidated damage clause is to avoid calculation of damages following a dispute. Enforceability of a liquidated damage clause, however, must be carefully considered, particularly in the international context.

Operational risks

- **Long term supply contracts** In many projects, long term requirements contracts are developed to provide the necessary raw material supply at a predictable price to reduce this risk. In such cases, the lender must ensure that the credit of the supplier be sufficient to ensure performance of the contract.
- **Take-or-pay contracts** Project financiers can minimize cash flow risk by entering into 'take-or-pay' contracts. This is a contract entered into between the project company and a third party whereby the third party agrees to purchase a specified amount of the project's production over a specified period whether or not it actually takes delivery of them. The advantage to the project entity of course is that it locks in a portion of the production over time at a fixed price – which may

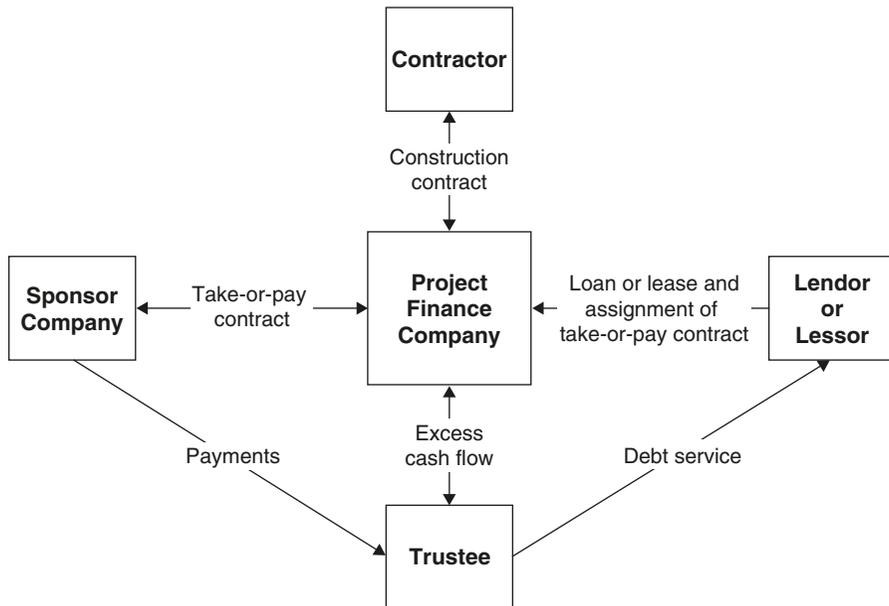


Figure 2.2 Project financing supported by a take-or-pay contract

Summary:

- A sponsor company enters into a take-or-pay contract with a project.
- A project company arranges a loan or lease with a lender or lessor and assigns the take-or-pay contract as security to the lender or lessor or to a security trustee acting for them.
- Proceeds of the loan or lease are used to finance the construction of the property.
- Take-or-pay contract payments are made to the trustee which, in turn, pays debt service to the lender(s) or lessor(s); any excess cash flow is paid to the project company.

be below prevailing market prices but which are stable and locked in over time, thereby facilitating financial planning. The incentive for the off-taker to enter such contracts is the desire to obtain certainty of supply in circumstances and at a price which otherwise might be unavailable to it. The bank's position is considerably strengthened by a take-or-pay contract, as it can ensure that the proceeds of such contracts be paid into the lending bank's account, an additional cash flow monitoring mechanism. Note that the off-take purchaser must be credit-worthy if such arrangements are to provide the requisite comfort to the bankers.

- **Take-and-pay contract** A take-and-pay contract is similar to the take-or-pay contract except that the buyer is only obligated to pay if the

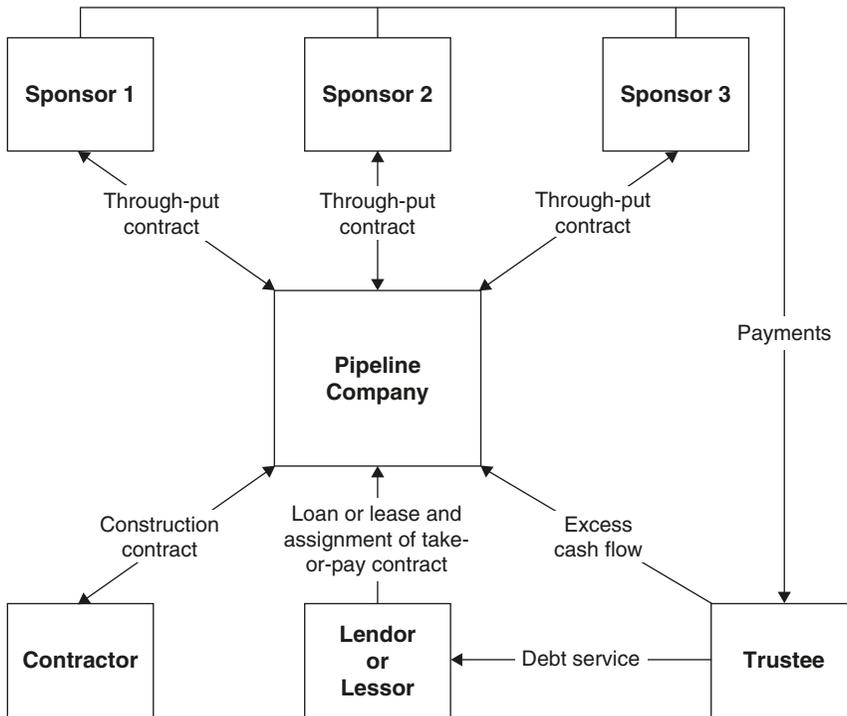


Figure 2.3 Project financing supported by a through-put contract

Summary:

- Three sponsor companies enter into a through-put contract with a pipeline company.
- The pipeline company enters into a loan or lease with a lender or lessor and assigns the through-put contract as security to the lender or lessor (or to a security trustee acting for them).
- Proceeds from the loan are used to build the pipeline.
- Payments under the through-put contract are paid to the trustee; the trustee uses those payments for debt service and pays the excess cash flow to the pipeline company.

product or service is actually delivered. Thus, a take-and-pay contract does not contain an unconditional obligation.

- **Throughput agreements** Throughput agreements usually apply to cases where there is an obligation to provide a service, such as the transmission of a product through a pipeline or number of cars on a railroad. The user will agree to supply minimum amounts of raw materials for processing and will pay tolling fees. These tolling fees should cover the debt-service obligations and other costs of the owner of the processing plant.

Financial risks

Financial risk can be reduced or mitigated through the use of derivative instruments. The risks that can be controlled are those associated with funding costs (interests), currency fluctuations when cash flows are not in the home currency and commodity price fluctuations. Examples of derivative instruments include: futures, forwards, options and swaps:

- **Futures contracts** In a project financing, interest rate futures can be used to protect against funding costs and currency future to protect against foreign exchange rate fluctuations.
- **Forward contracts** Forward contract on foreign exchange are used for hedging existing or anticipated currency exposures. Long term foreign exchange agreements can be used by project companies manage the currency risk arising from multi currency transactions.
- **Options** A call option gives the buyer a maximum price (the strike price) and a put option gives the buyer a minimum price (the strike price) at which the underlying product can be sold. Project companies can therefore use calls and puts to control input and output prices. The cost of this protection naturally is equal to the option price.
- **Swaps** Swaps can mitigate financial risks. There are currency swaps, interest rate swaps and commodity swaps. An interest rate swap can create a source of lower cost debt or higher yielding assets, and provide access to an otherwise unavailable source of funds. A commodity swap can be used to manage the price risk of the outputs or inputs for a project.

Political risks

It is impossible to mitigate all risks pertaining to a specific project. One way to avoid entering into potentially high risk lending situations, reducing political risk, is to lend through, or in conjunction with, multi-lateral agencies such as the World Bank, the EDRD and other regional development banks such as the ADB.

The rationale behind this is that when one or more of these agencies is involved in a project, the risk of an uncooperative or unhelpful attitude from the host country is reduced since the host government is unlikely

to want to offend any of these agencies for fear of cutting off a valuable source of credit in the future. The default track record of Mexico and Brazil in the 1980s supports this view – whether it remains applicable 20 years later in different cultural and geographical contexts however, remains open to conjecture.

Other ways of protecting against political risk include:

- **Private market insurance**, although this can be expensive and subject to exclusions rendering the policy's effectiveness next to useless. Moreover, the term that such insurance is available for will rarely be long enough.
- **Political insurance** from national export agencies (usually be given in connection with the export of goods and/or services by a supplier to the project). Lending in conjunction with national export credit agencies tends to probably enjoy a similar 'protected' status as loans in conjunction with development banks since there is a government element in addition to purely commercial element. Here, 'government involvement', not surprisingly, is seen as a reassuring accomplice rather than the realization of the 'government as the source of all evil and an infringement on capitalist freedom' arguments espoused by ideological zealots.
- **Obtaining assurances from the relevant government departments** in the host country, especially as regards the availability of consents and permits. This is only needed when the country is not having democracy imposed on it by hyperpowers waging extra-legal preemptive wars.
- **The central bank** may guarantee the availability of hard currency for export in connection with the project provided appropriate individuals are lobbied assiduously.
- **Thorough review of the legal and regulatory regime** in the country where the project is to be located is essential so as to ensure that all laws and regulations are complied with and all procedures are followed correctly, therefore reducing the scope for challenge at a future date. In countries with primitive legal systems and 'commission hungry' government officials, such ambiguities should be clearly identified in order to enable an accurate risk assessment and loan pricing mechanism to be set in place.

Table 2.1 Government agencies providing political risk insurance

Australia	Export Finance and Insurance Corporation	EFIC
Austria	Osterreichische Kontrollbank AG	OKB
Belgium	Office National du Ducroire	OND
Canada	Export Development Corporation	EDC
France	Compagnie Française d'Assurance pour le Commerce Extérieur Banque Française du Commerce Extérieur	COFACE BFCE
Germany	Treuarbeit Aktiengesellschaft	TREUARBEIT
India	Export Credit & Guarantee Corporation Limited	ECGC
Israel	The Israel Foreign Trade Risk Insurance Corporation Limited	IFTRIC
Japan	Export Insurance Division Ministry of International Trade and Industry	EID MITI
Korea	The Export–Import Bank of Korea	EIBK
Netherlands	Nederlandsche Credietverzekering Maatschappij NV	NCM
New Zealand	Export Guarantee Office	EXGO
Norway	Garanti-Instituttet for Eksportkreditt	GIEK
South Africa	Credit Guarantee Insurance Corporation of Africa Limited	CGIC
Sweden	Exportkreditnamnden	EKN
Switzerland	Geschäftsstelle für die Exportrisikogarantie	GERG
United Kingdom	Exports Credits Guarantee Department	ECGD
United States	Export–Import Bank	EXIM

The joint venture

Joint ventures are often used in project finance. A definition of a joint venture, aka ‘joint development company’, is when two or more parties join to develop a project or series of projects. Joint ventures might include entities with different but complementary skills, e.g. a construction company, a project developer and a consultancy with the requisite legal and political skills to ensure project success in the host country (see political risks previously). Joint ventures can provide credit enhancement to the overall project risk profile, thereby rendering the loan facility more attractive (from a risk as well as pricing viewpoint) to the financial markets.

Guarantees

Guarantees are a key element of project finance. This is because of the huge amounts in question and the relatively limited balance sheet sizes of the project sponsors whose capitalization ratios would be adversely impacted. Guarantees enable promoters to move the financial risk of a project 'off the balance sheet' to one or more third parties. They thus provide a basis for shifting certain project finance risks to interested parties who do not want to take a direct financial commitment or provide funds to the project.

Guarantees therefore enable the sponsors to shift the liability off its balance sheet and at the same time achieve its goal of getting the project built. The nature and extent of guarantees can vary considerably and often depend on the nature of the project in question. The value of the guarantee moreover is directly a function of the guarantor's creditworthiness as well as the wording of the guarantee (e.g. whether it is a strong guarantee or a watered down 'letter of comfort'). Unless the guarantee is absolute and unconditional, it may not provide the requisite credit enhancement to comfort a lender that creditworthy support is in place.

It should be noted that guarantees can give lenders a false sense of security, since it is impossible to forecast whether they will be enforceable in a court of law. A guarantor seeking to avoid payment has many defences and a lender must obtain the necessary legal advice to ensure that the terms and conditions of the guarantee are drafted in a manner to preserve its rights against the guarantor.

There are various categories of guarantees:

- **Limited guarantees** Traditional guarantees represent direct, unconditional commitments by a guarantor to perform all the obligations of a third party. Limited guarantees as the name implies have some sort of limitation on them. Limited guarantees can provide credit enhancement without considerable impact on the guarantor's credit standing and financial statements. Limited guarantees include:
 - **construction phase guarantees** (guarantees that are effective only during the construction phase of a project);

- **claw-back guarantee** (ensures that the borrower returns cash distributions to the project company to the extent required by the project for such things as debt service, capital improvements and similar needs);
- **cash deficiency guarantee** (requires that the guarantor contribute additional capital to the project company should cash deficiencies arise);
- **completion guarantee** (designed to cover cost overrun risks by committing additional capital to the project company to the extent necessary to complete project construction).
- **Unlimited guarantees** Unlimited guarantees are open-ended. While at first glance such guarantees seem the ultimate risk mitigation technique, in reality they can compromise the project since such a guarantee represents a tempting pool of cash for contractors, host governments, off-take purchasers and other project participants to tap. Such a guarantee could encourage contractors to generate cost overruns to the point that the project is no longer profitable. Such a guarantee – a credit enhancement device – would effectively have the perverse side effect of removing the ability to tightly control the project construction budget. It is important to consider therefore all possible ramifications of security and its side effects.
- **Indirect guarantees** Indirect guarantees typically exist to ensure a steady stream of project revenues. Take-or-pay contracts, throughput contracts or long term unconditional transportation contracts, which were discussed earlier, are therefore effectively indirect guarantees. Such guarantees are indirect in accounting terms but are of crucial importance in a project financing.
- **Implied guarantees** An implied guarantee is a way of assuring the lender that the ‘guarantor’ will provide ‘necessary support’ to the project. Implied guarantees are not legally binding and, as such, do not require financial statement reporting. Implied guarantees should not be confused with *comfort letters*. These are letters in which the ‘guarantor’ addresses a risk concern of the lender (e.g. an expression of an intent not to sell the project company or change its name). Since corporate objectives and boards change with the weather, such letters can rapidly run counter to strategies yet to be defined. Since comfort letters are not guarantees, it is therefore safe to say that they constitute nothing more than window dressing since they are not enforceable in a court of law.

- **Contingent guarantees** are guarantees contingent on an event, or events happening (e.g. the failure of other interested parties to the transaction to fulfil their commitments to pay after ‘reasonable efforts’ – which is not easy to define in court– by a lender to enforce performance or collection of same). Contingent guarantees may provide sufficient support to ‘credit enhance’ the facility commensurate with market demand.
- **Government assurances** Projects in the national interest may warrant the banks requiring the government to extend a guarantee. For example, the lender will seek assurances from the state body that they will not take actions that may adversely affect the project (e.g. tariffs, tax, duty and excise, etc.). Governmental support may be provided via comfort letters, support agreements or loan agreements. Such governmental commitments may require approval by local legislative bodies (e.g. in Russia loans with governmental guarantee on amounts above US\$100 million require ratification from the State Duma).
- **Sovereign guarantees** In a sovereign guarantee, the host government guarantees to the project company that if certain events do or do not occur, the government will compensate the project company. This is usually the case when the borrower is of a weak creditworthiness but the project is deemed to be in the national interest (typically infrastructural). The scope of a sovereign guarantee depends on the unique risks of a project.

Security

Creating appropriate security structures is so important that it can often necessitate changes in how a project is structured. Since typically the lenders will have no recourse to assets of the project company (other than the project assets) and will look primarily to the cash flow generated by the project to repay loans to the project company, it is therefore essential that lenders ensure that valid and effective security interests are taken over all the project assets. Moreover, it is essential that lenders fully understand the local legal system and how enforcement of security may not be as satisfactory as that in their own home systems. If problems do arise with the project and the lenders are forced to pursue their

security interests then, in the absence of any shareholder guarantees or other tangible support, the enforcing of their security over the project assets will be the only opportunity for the lenders to recover their loans.

Reasons for taking security

The main reason for taking security is to ensure that the lenders are able to sell the asset in question on any enforcement of their security. In most jurisdictions, realizing security on moveable assets will not pose insurmountable problems, although in some jurisdictions this can be an expensive and time-consuming exercise. With most projects, however, the ability to sell the project assets is not the prime motivation for taking security. The prime motivators are:

- **The security package is a defensive mechanism** designed both to prevent other (possibly unsecured) creditors taking security over the assets which they have financed and to prevent other creditors trying to attach those assets or take other enforcement action in respect of them. If the lenders cannot sell the project assets and repay themselves out of the proceeds, then they certainly do not want any other creditors interfering with those assets in any way. Usually, the project lenders will structure the facility to ensure that there are no significant creditors other than those within the project.
- **The security package is a control mechanism** to enable the lenders to control the destiny of the project should things start to go wrong. The lenders will hope that their security interests will provide sufficient leverage to wrest control from the project company, enabling them to control the project directly (e.g. complete the project (if necessary) and operate it in order to generate the cash flows needed to repay themselves). However, the ability of the lenders to be able to achieve this aim will depend to a large extent on the jurisdiction in which the principal project assets are located.

Security over specific tangible assets

In many projects there will be some specific tangible assets which can be separated from the project used by the banks for security. It is unlikely,

however, that the value of such assets in a liquidation fetch a value sufficient to cover the overall debts. Such assets would include the tangible assets used in the facilities, the land, buildings and other fixtures of the project company, licenses or other operating permits (provided they are transferable), technology and process licences, and any other assets such as the goods being produced by the project, and other rights under the underlying project.

Negative pledge

A negative pledge is a contractual commitment on the part of the borrower not to create encumbrances over its assets in favour of any third party. This however may not suffice to protect the lender's position because if the borrower were to create security in favour of a third party (in contravention of the negative pledge), it is quite likely that the security would in most jurisdictions be regarded as valid. Therefore, while the borrower might be liable for having breached its contractual obligations, this will provide little comfort to the lender if it is relying on the project assets as a source of repayment. It is possible that if the third party knew of the existence of the negative pledge, that the lender might be able to challenge the validity of any security created in breach of it, however, the onus of proof will lie with the lending bank, which may be unpleasantly surprised at the results yielded by the country's legal system.

Security trusts

Project financings often rely on security trustees to process project revenues. Security trusts represent a convenient way of taking and holding security in those jurisdictions where the concept of a trust is recognized. Security trusts offer two advantages:

- they facilitate the trading of loans by the lenders without any danger of releasing security; and
- they remove the insolvency risk of an agent or other third party holding the security.

Table 2.2 Taking security checklist

-
- 1 Which assets does the borrower own?
Which assets does it merely has a right to use (e.g. under a licence)?
 - 2 Can security can be created over user rights as well as ownership rights?
 - 3 Over what project assets can a fixed security be created?
 - 4 Are any floating charges are possible?
 - 5 Can security be created over assets not in existence at the time of creation of the charge?
 - 6 Can security over moveable assets be created without physical transfer of those assets to the mortgagee or pledgee?
 - 7 What degree of control must the chargee exercise over the assets to constitute a fixed, as opposed to floating, charge?
 - 8 Are there any restrictions on foreigners taking security, especially overland?
 - 9 Which creditors will, by law, be preferred over a secured creditor?
 - 10 Can third parties (including joint ventures under terms of pre-emption or similar rights in underlying documents) or a liquidator interfere with the granting of security or its enforcement?
 - 11 Can the lenders, when a default occurs, appoint a receiver over the assets?
 - 12 Can the banks be held responsible for the receiver's actions or can the receiver be appointed as agent for the borrower?
 - 13 Can the lenders, upon enforcement, control the sale of the assets or must there be a court sale or public auction?
 - 14 Is it necessary to obtain the third party's consent when enforcing security over claims against third parties (e.g. debts, receivables, shares, bonds, notes)?
 - 15 What formalities need to be complied with to perfect security-notarizations, registrations, filings and stamp duties?
 - 16 Can the security be held by an agent or trustee for a group of creditors whose members might change from time to time (e.g. through transfer of their participation in the facility to another bank)?
-

In those jurisdictions where trusts are not recognized, it may still be possible for one of the banks to act as security agent on behalf of the other lenders, although the insolvency of the security agent becomes a risk for the lenders.

Formalities

Whatever security is taken, it will need to satisfy the security formalities in the relevant jurisdiction. Security will typically be governed by English or New York law. However, security over the assets situated in the project company's jurisdiction, and often any concession agreement or licence, will generally be governed by local law. It is therefore essential that the lenders be aware of the formalities relating to the jurisdiction in question, and ensure that the security is perfected in accordance with local laws if it is to be enforceable. Such formalities may be relevant both at the time the security is taken and also at the time of enforcement.

Insurance issues

Role of project insurance

Insurance is an aspect of project finance which concerns the project sponsors and the lenders equally. Lenders view insurance as an integral and key element of their overall security package for a project, especially in the event of a major casualty or disaster. It is, therefore essential to ensure that an appropriate insurance structure be in place for a project financing.

The bank will require an insurance policy which ensures that the project is restored to operability should an accident or force majeure cause contractual failure. Lenders may also require insurance against business interruption. This will result in a cash transfer to the lenders, who can then decide whether to permit the insurance proceeds to be used to rebuild the damaged assets or whether to apply the insurance monies towards the debt.

Types of insurance

There are several types of insurance policies available to cover risks in project financings. Some of these are described below. Note that not all types are appropriate since legislation changes from country to country.

- **Contractor's all risks** Project finance contractors are typically required to obtain property damage insurance such as 'all risk' builder's risk

insurance to pay for direct loss or damage occurring to the work during construction.

- **Advanced loss of revenue** Advanced loss of revenue insurance protects against the potential loss of revenue arising from delays following an insured loss or damage during the construction period.
- **Marine cargo** Marine cargo insurance is available to provide protection against loss or damage caused to equipment and materials during transit from the shipper to the project site.
- **Marine advanced loss of revenue** Marine advanced loss of revenue provides insurance protection against the financial consequences for loss of revenue as a result of a delay following an insured loss or damage.
- **Operator's all risks** Operator's all risks provides protection against loss or damage, however caused, occurring after commercial operation (including coverage on equipment being overhauled or repaired off the site).
- **Operator's loss of revenue** Operator's loss of revenue coverage protects against lost revenue arising from physical loss or damage after completion of the project.
- **Third party liability** Third party liability coverage provides protection against damage and losses attributable to legal liability for bodily injury and property damage.
- **Exchange rate fluctuations** This is a particular concern where there is a decision not to rebuild a project after a casualty. If the exchange of insurance proceeds can be approved in advance, then this should be done. Alternatively, it may be prudent to require the local insurer to re-insure the risk off-shore, and then have the proceeds payable under the re-insurance contract assigned to the project company for payment should a loss occur.
- **Export financing requirements** Export credit agencies may require the project to obtain insurance from companies in the export bank's home country.
- **Warranty** Warranties extend protection to the project after the project is completed. Most are limited to obligations to repair or replace the defective construction or equipment. Warranties are sometimes considered 'quasi-insurance' because they may provide compensation for defects not covered by insurance.

Scope of cover

Cover will vary between the construction and operating phases of a project. Typically, insurance cover for each phase is set out below:

Construction phase:	Operating phase:
Physical damage to project facilities	Insurance against physical damage to project facilities
Physical damage to other assets	Insurance against physical damage to other assets
Transit insurance, e.g. parts in transit	Transit insurance covering the periods until point of sale
Employers, workmen's compensation and third party liability insurance	Employers' and workmen's compensation
Environmental liability insurance	Environmental liability insurance
Delay in start-up insurance	Business interruption or loss of profits insurance

Problem areas

It is impossible to predict all problem areas, but the following checklist identifies some of the principal concerns from a lender's perspective.

- The policy may be cancelled, either in accordance with its terms by agreement between the insured and the insurers, or by the brokers for non-payment of premiums.
- The policy may expire and not be renewed.
- The policy may be changed so as adversely to affect the cover provided – for example, the scope of the policy may be narrowed, policy limits may be reduced or deductibles may be increased (deductibles are, of course, a form of self-insurance).
- The loss may be caused by a peril which was not insured, and so (for example) a policy which covers political risks such as war, revolution and insurrection should be checked further to ensure that it also covers politically motivated violent acts such as terrorism or sabotage.

- The policy may be avoided by the insurers on the grounds of breach of warranty by the insured.
- The insured may not make any (or any timely) claim for indemnity under the policy.
- The insurers may be insolvent and unable to pay a claim.
- The claim may be paid by the insurers to the brokers but somehow lost in the broker's insolvency.
- The broker may assert a lien (i.e. a special proprietary claim) against any unpaid premiums which are due from the insured.
- A claim may be paid to the insured by the brokers but somehow lost in the borrower's insolvency.
- The occurrence of any or a combination of these events could result in the insurance moneys not being received by the lenders, as expected, with the result that the lenders could find themselves unsecured for all or part of the project loan.

Performance and payment bonds

- **Bid bonds** are used typically by a host government that desires to ensure that the project sponsor that wins a bid for an infrastructure facility actually proceeds with the project.
- **Performance bonds** are issued by a surety to a project company, and is usually assigned to the project lender as part of the project collateral.
- **Payment bonds** are callable if the contractor fails to pay some amount that is due under the terms of the construction contract.
- **Retention money bonds.** Contractors sometimes provide retention money bonds to the project company as security for project completion. The contractor can then receive and use the money that would otherwise be retained. If construction is not completed, the project company can apply the contingency amount covered by the bond for project completion.

Reinsurance

Sometimes use is made of reinsurers. This is usually because the principal insurer does not have the capacity to absorb the full risk insured against.