4.101 Similarly, the use of destination clauses in typical off-take arrangements for oil and gas and related products has been heavily scrutinized by the European Commission. Under these arrangements, buyers will commit to taking a minimum volume of product which the supplier will sell at a competitive price, such price to be determined by a formula linked to the pricing of energy in the buyer's end-user market. The supplier will often want to include a clause which prohibits the buyer from on-selling their oil/gas to other markets without the prior approval of the supplier (or which requires the buyer to share any profit made in doing so). The European Commission has taken the view that such provisions may be unlawful on the basis that they restrict competition within the EU. As a consequence, these provisions have been removed in certain contracts or adapted in others. For instance, some suppliers have responded by delivering gas on an ex-ship basis—thus remaining the owner of their oil/gas cargo until it is unloaded in the intended market. However, the European Commission's approach to the lawfulness of these provisions has yet to be tested before the courts.

4.102 If agreements are deemed to restrict competition then they can still be permitted provided the restrictions are outweighed by the pro-competitive effects of the agreement, such as improving the production or distribution of goods or promoting technical or economic progress. In the past, operators were required to notify the European Commission if they believed they could benefit from this exemption. However, the burden of assessment now lies on the operators and will be highly dependent on the specific facts of each case.

4.103 Another issue may arise where a project benefits from unlawful subsidies or state aid. Article 87 (formerly 92) of the 1957 Treaty of Rome, for example, prohibits state aid (including subsidies, tax concessions, and grants) that distorts intra-European trade (subject to limited exceptions (which require approval by the European Commission)). The recipient of unlawful state aid will be required to repay it. Numerous international and regional treaties similarly prohibit subsidies that distort, subject to limited exceptions, international trade. Thus, an export-led project benefiting from grants or subsidized inputs or funds may also find its access to the international markets barred or subject to countervailing duties, which might prejudice the economic viability of the project.

Corrupt practices and money laundering

4.104 Although European and North American markets are not free from corruption, 'grease' payments and direct payments to governmental officials to secure business or other commercial advantage are common in many developing countries. Governments may seek to invalidate contracts on the basis that a predecessor government was induced into imprudent conduct. Whether or not a payment is proscribed by applicable law, lenders will often conduct due diligence to be certain that the underlying concession or other project documents were not procured through corruption or fraud and will require that representations and warranties in respect of specific corrupt practices be included in the project and financing documents. In addition, many official credit agencies will require confirmation of an absence of corrupt payments as a condition to participating in a project.

For a number of years, the US has been vigilant in addressing such forms of corruption. The US has, for example, adopted the Foreign Corrupt Practices Act (FCPA),[37] which renders it illegal for persons subject to the FCPA to engage in specified practices. The FCPA prohibits any payments or gifts, directly or indirectly, to any foreign public official or employee. FCPA enforcement guidance released by the US Department of Justice has clarified the 'long-arm' jurisdictional reach of the FCPA, noting that any act committed in the territory of the US in furtherance of a violation, such as physical participation in a meeting or use of the US publicly switched communications infrastructure, to plan or approve a prohibited 'grease' payment, is sufficient to establish jurisdiction over the parties involved, regardless of their nationality. FCPA violations may result in civil and/or criminal liability, including disgorgement of any revenues or profits associated with the underlying project and additional penalties. **4.105**

Significant steps have also been taken at a regional level to facilitate a coordinated response across countries. The Organization of American States sought to address the issue when member states adopted the Inter-American Convention against Corruption (IACAC)[38] in 1996. The IACAC recognizes the importance of corruption as an international issue and creates a legal mechanism to promote inter-country cooperation to combat it. The IACAC identifies specific acts of corruption and creates binding obligations under international law. The 1997 Convention on Combating Bribery of Foreign Public Officials (the OECD Convention) adopted by the OECD obligates the signatory parties (being the OECD members plus a number of additional countries) to adopt legislation criminalizing acts of bribery of government officials in international business transactions. In Europe, the Council of Europe's Criminal Law Convention on Corruption and Civil Law Convention on Corruption requires signatory countries to adopt legislative and other measures to criminalize passive and active bribery in both the public and private sectors. **4.106**

For many years the UK was the subject of criticism by the OECD for its failure to bring its anti-bribery laws in line with the OECD Convention. This was rectified with the introduction of the Bribery Act 2010, which was due to come into force in April 2011, however, this implementation date has subsequently been delayed. **4.107**

[37] The Foreign Corrupt Practices Act of 1977, as amended, 15 USC §§ 78dd.
[38] The Inter-American Convention against Corruption was adopted in March 1996 in Caracas, Venezuela, and came into force on 3 June 1997.

4.108 The Bribery Act 2010 represents a long-awaited overhaul of the UK's (previously antiquated and fragmentary) anti-corruption legal framework and is part of a renewed effort by the UK government to bolster the approach to anti-corruption. As part of this effort, in recent years the UK Serious Fraud Office has demonstrated a more robust approach to the investigation of corruption.

4.109 The Bribery Act 2010 sets out three main offences:

(1) a 'basic offence' of offering, promising or giving of a bribe and requesting, agreeing to receive or accepting a bribe either in the UK or abroad, in the public or private sectors;
(2) a 'bribery of foreign public officials' offence if the intention is to influence the official in the official's capacity as a foreign public official in order to obtain or retain business; and
(3) a 'corporate offence' in relation to relevant commercial organizations which fail to prevent a bribe being paid by those who perform services for or on behalf of the organization.

4.110 Critically for international organizations, the corporate offence has extra-territorial effect as the Bribery Act 2010 grants the UK jurisdiction to prosecute 'relevant commercial organizations' regardless of whether the 'acts or omissions which form part of the offence take place in the UK or elsewhere'. A 'relevant commercial organization' includes, in addition to companies incorporated in the UK, 'any other body corporate (wherever incorporated) which carries on a business, or part of a business, in any part of the United Kingdom . . .'. This offence is one of strict liability. The corporate offence is subject to a defence where an organization can prove that it had 'adequate procedures' in place to prevent its associates (including employees, agents and subsidiaries (whether domestic or foreign)) from paying bribes and that essentially the bribe was paid by a rogue element within the organization, acting independently rather than at the direction or with the (even tacit) approval of management.

4.111 Certain industries have adopted voluntary transparency-enhancing measures intended to reduce corruption and improve governance. For instance, the Extractive Industries Transparency Initiative (EITI)[39] identifies a number of 'validation' indicators, which serve as the basis for determining a country's compliance. Such criteria include, among others, the publication of material payments received by governments from oil and gas and mining projects, the application of accepted auditing standards to the payments and revenues generated by projects, and the involvement of civil society in the design and monitoring of projects. The phased approach

[39] <http://eiti.org/eiti>. The EITI is a coalition of governments, companies, civil society groups, investors, and international organizations.

adopted by the EITI allows countries to advance to a compliant status through the achievement of targeted milestones on a specified timeframe.

The home jurisdictions of most lenders have implemented anti-money laundering legislation[40] that requires such lenders to undertake detailed 'know-your-customer' (kyc) procedures with respect to each borrower and other material project participants These are designed to ensure that the lenders have undertaken sufficient due diligence to ensure that such persons are not funding the project through the proceeds of unlawfully gained money. **4.112**

Participant risk

As discussed in Chapter 2, a project finance transaction will involve many participants. Lenders and investors will have to assess the creditworthiness of each of these participants and whether specific structures are required to mitigate the relevant contracting parties' participant risk. **4.113**

These risks will extend from the structuring of the project's special purpose vehicle as described in Chapter 2, to consideration of the credit position of the sponsors providing completion guarantees. The contractual structures which may be used to mitigate sponsors' participant risk, including cross collateralization, performance guarantees, and other agreements to provide support for a project company are discussed in further detail in Chapter 11. **4.114**

[40] For example, s 326 of the US Patriot Act imposes stringent kyc obligations on US financial institutions and in the UK the Proceeds of Crime Act 2002 and the Money Laundering Regulations 2007 imposes kyc obligations on UK financial institutions.

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ALLOCATION OF RISKS IN PROJECT DOCUMENTATION

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General Overview

Many of the project risks discussed in the previous chapter are allocated to stakeholders in the project through the project documents. At the outset, the aim of risk allocation is to meet market standards of financeability, or 'bankability'. The agreements embodying the risk allocation should be assessed as a whole, with a view to: (a) providing that significant risks are allocated to those parties that are best able and most motivated to assume them; and (b) reducing the residual risks in the project to a level that the sponsors and lenders can prudently manage. **5.01**

It is important to structure the project contracts as a whole, with consistent allocation of risk throughout. If, for example, the power purchase agreement allocates unusual completion risks to the project company, those may need to be 'passed through' to the construction contractor. 'Pass through' means simply that the project company requires some other party, for example, the construction contractor, to assume a risk that would otherwise be a risk of the project company. Thus a concession agreement may require the project company to build the particular project facility by a given date certain, and impose upon the project company a liability to pay pre-determined levels of delay damages for each day of delay past that **5.02** date certain.[1] However, where the project company has contracted with an engineering, procurement, and construction (EPC) contractor for that contractor to build the project facility in question, the project company will 'pass through' the liability for delay damages to the EPC contractor, rendering the EPC contractor liable under the terms of the EPC contract to pay to the project company delay damages in an amount at least equal to the level of delay damages to which the project company would be liable under the concession agreement.

5.03 It is also important to address consistently the circumstances in which the parties can be relieved of their contractual obligations. In England and other common law countries, the parties to a contract may be relieved of their obligations to perform the contract where the contract is found to be frustrated. This is where an event occurs that is beyond the parties' original contemplation and outside their control, with the result that performance of the contract becomes impossible, illegal, or radically different from that undertaken when the contract was made. In many civil law countries, relief is afforded by statute if the ability of the affected party to perform the contract is prevented or impaired by virtue of specified events beyond its control, generally referred to as '*force majeure*'.[2] Each of these concepts has already been described in detail in Chapter 4.[3]

5.04 In most commercial contracts, these legal concepts are dealt with expressly through provisions in the contract that seek simply to relieve the affected party of its obligations in such circumstances or otherwise expressly to allocate the risk of such events. In allocating the risk of such events across contracts and parties, it is important to ensure that categories of *force majeure* events are treated consistently across all of the principal project contracts and that, as far as possible, adequate assurance is provided through insurance or other means to address these risks.

5.05 *Force majeure* provisions in project contracts can be the subject of intense negotiation, as these provisions will operate in a contract so as to relieve the affected party of its obligation to perform under that contract. A 'typical' *force majeure* provision would apply where there is an event or circumstance that affects a party's ability to perform its obligations under the particular contract (other than obligations to pay money) to the extent that the event or circumstance:

(1) is beyond the reasonable control of that party;
(2) is not the result of any act, omission, or delay of that party; and
(3) could not have been anticipated, avoided, or reduced by the exercise of reasonable precautions or measures.

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1 See para. 5.17.
2 For further discussion about '*force majeure*' in civil law jurisdictions, see para. 12.138.
3 See para. 4.82 et seq.

The provision will usually also contain a list of events that may constitute *force majeure*, which list is typically cast in a non-exhaustive manner and would include strikes or other labour disputes (usually, excluding those of the workforce of the party seeking to rely on the *force majeure* relief), fire, acts of God, drought, flood, earthquake, unusually severe weather conditions for the relevant locality, epidemic, war, riot, civil disturbance or commotion, sabotage, explosions, embargoes, governmental interference, and change in law.

In some project contracts,[4] the *force majeure* events may be subdivided into two categories, comprising 'natural' *force majeure* and 'political' *force majeure*. Usually, this subdivision will result in differing relief for the affected party under the contract should a particular event occur; for example, a natural *force majeure* event (act of God, fire, explosion, and similar events) would relieve the affected party of its obligation to perform, but have no other consequence, whereas a political *force majeure* event (governmental interference, change in law and, sometimes, war and similar events) might not only relieve the affected party of its obligation to perform, but also afford that party some further benefit such as an extension of the overall concession period or compensation for increased costs arising by reason of that event occurring. In contracts where this split approach is adopted, typically the natural *force majeure* events will be drafted so as to be a non-exclusive list, while the political *force majeure* events will be drafted as an exhaustive list. **5.06**

In either case, the sponsors and lenders will go to great efforts to try and achieve a full 'back to back' treatment of *force majeure* relief provisions across the suite of project contracts. This 'back to back' exercise may even go so far as to state that a party to which the project company has passed through various risks, such as an EPC contractor, may only claim *force majeure* relief under the relevant contract to which it is party if and to the extent that the project company can similarly claim *force majeure* relief under the primary project contract (for example, the concession agreement or the off-take contract). In other cases, the back to back exercise may be limited to seeking to ensure that the universe of circumstances in which *force majeure* relief may be claimed under, for example, the EPC contract is drafted in such a way that it is no wider than the corresponding circumstances under which the project company can claim relief under, for example, the concession agreement. In this latter case, however, care must be taken to ensure that all parties are clear as to the effect; *force majeure* relief afforded to an EPC contractor pursuant to the terms of an EPC contract will not, in and of itself, relieve the project company of its obligation under the concession agreement that it has passed through to the **5.07**

[4] For example, concession agreements with public authorities or power purchase agreements with state owned or controlled utilities.

EPC contractor, unless there is express provision to this effect in the concession agreement itself.

5.08 There are obvious trade-offs in negotiating project contracts. Commercial counterparties will often object to the comprehensive risk allocation called for by the sponsors. Such counterparties may respond by increasing the price of their participation in the project or even by declining to play a role. However, by persuading counterparties to assume such risk, sponsors better position the project company to raise financing on attractive terms.

5.09 In many cases, by the time lenders are involved in a project, the project company may have already allocated risks in the underlying project contracts. Accordingly, the lenders are requested to assess whether the project, as structured, meets their risk threshold and then to provide pricing for the relevant financing—a customary approach in project bond issuances. In other cases, the project may not be fully developed when it approaches the financial markets, and the lenders may be more deeply involved in the risk allocation process.

5.10 Where the lenders' technical feasibility study or other due diligence identifies risks that were not addressed in the project contracts, the process of risk allocation can be complicated. When such risks are central to the successful construction and operation of the project, their resolution may delay financial closing as amendments to the contractual structure are negotiated. Alternatively, lenders may not be prepared to limit their recourse to the project company until key milestones have been met. For example, in projects (such as petrochemicals, refineries, LNG plants) where the construction risks are not capable of being assumed under a full turnkey contract, the sponsors may remain liable for the debt until completion of construction and, in some cases, confirmation of key financial ratios.[5]

5.11 When the relevant risk may have a direct impact on the project's operating margins, but is not considered by the lenders to be a fundamental threat to the viability of the project, resolution of key project risk allocation issues can sometimes be postponed until after financial closing to the extent that the project company and the lenders agree a satisfactory solution and covenants are incorporated in the credit agreement to implement that solution within a specified time frame. For example, if additional off-take contracts are required to ensure the full marketing of the project's production, the lenders may insist that all or a percentage of a sponsor's development fee and equity distributions be placed in a reserve account until such contracts have been entered into. This is intended to provide the project company with sufficient incentive to resolve outstanding issues while giving protection to the lenders through an ability to draw on the reserve to repay the loans if the project company does not implement the agreed solution by a date certain.

[5] For further discussion of project completion support, see para. 11.31 et seq.

A significant number of commercial contracts may be required to facilitate a project. These can broadly be classified into: 5.12

(1) the principal project agreements, such as the concession agreement, the construction contract, the operation and maintenance contract, and the project off-take contract;
(2) the secondary project agreements, such as power and water connection agreements with the local utility, shared facilities agreements (perhaps with other projects or ventures affiliated with the sponsors), and subsidiary feedstock agreements with local suppliers; and
(3) project subcontracts (such as a long-term turbine maintenance contract, which a turbine supplier may enter into with the project's operation and maintenance contractor).

While the primary focus of sponsors and lenders will be on the principal and secondary project contracts, some of the subcontracts may also be key to the overall contractual risk allocation. Thus, for example, it may be important for the project company and/or the lenders to have direct rights with key subcontractors (such as a long-term maintenance subcontractor) in the event that the relevant principal project agreement is terminated following a material default by the relevant counterparty. 5.13

Risk Allocation in Project Agreements

Whilst the secondary project agreements and some of the subcontracts need to be structured carefully, the principal project agreements will naturally be key to the bankability of the project. The principal agreements in a project financing, and the risks that they seek to address, often include the following. 5.14

Shareholders' or joint venture agreements

Shareholders' or joint venture agreements govern the relationship among the project's equity investors. The handling of potential conflicts of interest, in particular where the equity holders include a private sector sponsors and a host government, are particularly important in project financings. These have already been discussed in Chapter 2, and we refer the reader also to the checklist set out in Appendix 3, which describes some of the more significant provisions and issues that should be considered in negotiating and drafting a shareholders' or joint venture agreement. Applicable law may require that some of these issues be resolved in the project company's constitutional documents rather than in a shareholders' or similar agreement. As the contents of the constitutional documents of the project company are dependent upon the jurisdiction of incorporation of the company, it is important to seek the advice of local counsel in this regard. 5.15

Construction contracts

General provisions

5.16 Many projects[6] are built on a turnkey basis, commonly by way of an EPC contract. As such, the sponsors will generally seek to shift as much completion-related risk as possible onto the turnkey, or EPC contractor.

5.17 The contractor is generally called upon to agree to damages provisions tied to delays and to facility performance, with performance guarantees relating to such factors as plant output and efficiency, as well as, in some instances, emissions levels. The use of specified, commonly referred to as 'liquidated', damages provides the project company with an enhanced degree of certainty as to the level of damages that the contractor will in fact pay to compensate for any delay or impaired performance. The English courts are predisposed to seek to uphold liquidated damages provisions in a contract, and have rarely struck down such provisions as constituting a penalty and therefore being unenforceable;[7] however, not all jurisdictions will take the same approach, and in certain jurisdictions liquidated damages may not be enforceable to the extent they are seen as punitive and not a reasonable projection of actual damages. The contractor will often seek pre-agreed termination payments in circumstances where the sponsors abandon the project, or the lenders cease funding, during construction (in many cases these payments may be insured through ECA coverage).

5.18 Perhaps the most critical element of a turnkey construction contract is the scope of work, which should be broad enough to ensure that the contractor will furnish a complete facility capable of meeting the project's projected operating standards and

[6] This is particularly the case in power and water projects and projects procured by public authorities (such as public private partnerships) but less common in oil and gas, LNG, process industry, and mining projects.

[7] The English courts will generally seek to uphold liquidated damages clauses, particularly where the contract in question was made between parties of comparable bargaining power—see, for example, Jackson J in *Alfred McAlpine Capital Projects Ltd v Tilebox Ltd* [2005] BLR 271 at 280: 'Because the rule about penalties is an anomaly within the law of contract, the courts are predisposed, where possible, to uphold contractual terms which fix the level of damages for breach. This predisposition is even stronger in the case of commercial contracts freely entered into between parties of comparable bargaining power.' The leading case in English law remains *Dunlop Pneumatic Tyre Co Ltd v New Garage & Motor Co Ltd* [1915] AC 79, in which Dunedin LJ set out (at 86–8) the criteria to apply in determining whether to strike down a contractual provision for being a penalty. Note also that, as a matter of English law, a liquidated damages provision will be upheld even where the true amount of damages is uncertain and difficult to assess—*Clydebank Engineering and Shipbuilding Co v Yzquierdo y Castaneda* [1905] AC 6 at 11, and a pre-estimate of damages does not have to be right and perhaps even not genuine in order to be reasonable—see Jackson J in *McAlpine* at 280. As Lord Woolf put it in the Privy Council case of *Philips Hong Kong Ltd v A-G of Hong Kong* (1993) 61 BLR 41 (at 59): 'The court has to be careful not to set too stringent a standard and bear in mind that what the parties have agreed should normally be upheld. Any other approach will lead to undesirable uncertainty, especially in commercial contracts.'

contractual obligations. Appendix 5 contains a checklist of the other key provisions in a turnkey construction contract.

Compensation

Most of the contractor's base compensation is routed through a milestone payment schedule, which usually includes the entire turnkey price. Payment of the final instalment, as well as bonus payments, usually related to early completion and to performance above the guaranteed levels, are often withheld until final completion. The contract price may also be offset by penalties for late or unsatisfactory performance.[8] **5.19**

The payment of performance-related damages may be secured by retaining a percentage of the contractor's monthly progress payment (usually in the range of 5 per cent to 10 per cent). On the date of final completion, the contractor receives the amount retained, sometimes with interest, minus any damages resulting from failure to meet performance guarantees. As an alternative to direct retention, contractors may in some instances post bonds or letters of credit in satisfaction of their retention obligations. **5.20**

Scheduling guarantees

The contractor's scheduling guarantees usually relate to the timely achievement of certain milestones in the construction schedule. Mechanical completion (or a similarly defined term) occurs when the project is completed in accordance with the design specifications, but has not yet undergone any performance tests. Substantial completion (or a similarly defined term) occurs on the date on which the project successfully passes performance tests related to, for example (in relation to a power plant), electricity output, steam output (for cogeneration plants), heat rate levels, and emissions levels. The performance tests are usually carried out simultaneously and are of sufficient duration to assure that the plant is able to meet the guaranteed performance levels with appropriate reliability. Following substantial completion, the project company will assume care, custody, and control of the plant. Final completion (or a similar term) marks the close of the follow-up phase, during which any remaining work is finalized by the contractor. **5.21**

Delay damages

Delay damages are typically tied to the target date of substantial completion. Projects will begin to sell their output and generate revenue following substantial completion. Therefore, delay damages are structured to replace revenue that is **5.22**

[8] These will usually be expressed as liquidated damages. Note that the use of the word 'penalty' in a contract in respect of such payments will not be conclusive as to whether the provision is in fact a penalty—see Dunedin LJ in *Public Works Comr v Hills* [1906] AC 368 at 375–6 and *Dunlop Pneumatic Tyre Co Ltd v New Garage and Motor Co Ltd* [1915] AC 79 at 86.

foregone during this time as a result of the missed target date for substantial completion and are usually sufficient to cover debt service and other costs, including fixed operation and maintenance expenses and delay damages which may be payable by the project company to a concession authority or product off-taker. The contractor generally will seek relief from damages obligations if the delay is caused by the project company or an event of *force majeure*. Accordingly, the sponsors and lenders will insist that the scope of *force majeure* is drafted as narrowly as possible.

Performance damages

5.23 Performance damages are tied to the contractor's performance guarantees. To the extent that guarantee levels are not demonstrated by the performance tests which are carried out as a condition to substantial completion, and still are not achieved by the contractor during subsequent retesting before final completion, performance-related damages may be paid to compensate the project company for the difference between the project's actual performance levels and the guaranteed performance levels. Such damages are often designed to 'buy-down' the amount of the debt to a level at which the project can meet its debt service obligations in light of the reduced revenues resulting from the impaired levels of performance.

Warranties

5.24 The construction contract typically contains a warranty by the contractor to repair or replace defective equipment or re-perform services (including design) for a period of one year or more following final completion. It is best if this warranty period is 'evergreen' (i.e. if there is a defect within the warranty period, a further warranty is given by the contractor from the date of rectification, although it is common for such evergreen provisions to include an eventual back-stop date). Additional warranties or guarantees of operating standards (for example, availability and heat rate) may be required for some period where the applicable technology is unproven. In some civil law jurisdictions, there may be further liabilities under statutory law on the contractor for certain hidden defects in the completed works.

Liability caps

5.25 The contractor will often seek to limit its liability for damages under the construction contract (whether with respect to liquidated damages, warranty obligations, or otherwise) to a specified level, generally expressed as a percentage of the contract price. Depending on the nature of the project or market practice, the limit on liability may range from 20 per cent to 100 per cent of the contract price, with higher limits on liability customary in power projects and lower limits often agreed in process and natural resources projects (in which sponsor completion support is more prevalent). Typically, there are exceptions considered to be 'fundamental' to the stated limit for certain instances of liability, such as a failure to deliver good title to equipment or for gross negligence or wilful misconduct.

Credit support

If the contractor itself is not viewed by the sponsors and/or the lenders as sufficiently creditworthy fully to perform its obligations, a parent company guarantee may be required. In addition, performance, retention, and warranty bonding is customary in construction contracts and provides significant performance incentivization on contractors. **5.26**

Multiple procurement contracts

In some industries, the use of multiple technologies may be required to facilitate a project and, as such, the cost of a turnkey 'wrap' may be economically prohibitive because no single contractor or consortium is prepared to take responsibility for the design, construction, testing and commissioning of the entire project facility. In such circumstances, the project company may wish to enter into multiple procurement contracts with individual suppliers, in some cases contracting with an engineering firm for the management of the overall construction process. This is often referred to as an engineering, procurement, and construction management (EPCM) structure. It differs from a turnkey or EPC arrangement by virtue of the fact that the EPCM contractor provides a professional service but does not itself take direct and sole responsibility for the overall execution of the construction process. Although it may be paid bonuses or be subject to penalties determined by reference to the schedule or performance of the plant, these are generally modest in relation to the overall capital cost of the project. **5.27**

Whilst entry into an EPCM structure might avoid prohibitive construction costs, such an arrangement is not without its risks. As the EPCM contractor will not take sole responsibility for overseeing the works, it will not be liable to the project company for the overall cost or performance of the project. Consequently, there is risk associated with the interface between the roles of the various contracting parties under which impaired performance by one contractor (whose individual liability may be quite limited) may adversely affect the performance of the plant as a whole. **5.28**

In light of the risks posed by a multi-contract, EPCM structure, the lenders may require a completion guarantee or undertaking from a creditworthy sponsor[9] or the provision of other completion risk mitigants, such as significant oversight by the lenders' technical adviser and the commitment of substantial debt and equity contingencies. **5.29**

'Split' contracts

In certain projects, a 'split' arrangement may be entered into. This is typically employed for tax reasons; for example, a particular jurisdiction may impose **5.30**

[9] See para. 11.31 et seq.

withholding tax on payments for services rendered by a foreign company. In such a case, it may be beneficial to the overall economics of the project for the construction contract to be split into component parts.

5.31 A split EPC structure will usually comprise three separate contracts:

(1) an onshore contract, pursuant to which a locally incorporated company controlled by a parent construction contractor provides certain services that are required as part of the EPC package, such as the procurement of equipment and materials from within the country in which the project is located, design services, supervision and management required for the construction itself, site clearance, and, usually, the actual construction of the facility;
(2) an offshore contract, pursuant to which the parent construction contractor provides the remainder of the services, such as offshore procurement and technical expertise that resides in the parent company, including developing environmental management plans and general and detailed engineering and design work; and
(3) a coordination agreement, to which both the onshore contractor and the offshore contractor are party, under which the two contractor companies assume full responsibility for the entire EPC package.

5.32 A split EPC arrangement can be distinguished from the EPCM arrangement described above, since under a customary EPCM arrangement no one contractor or consortium takes overall responsibility for the delivery of the project on time and to specification. Under a split EPC arrangement, the split is essentially merely a device employed for (usually) tax reasons, and the intention of the parties remains that the 'contractor' as a whole, in other words the onshore contractor and the offshore contractor, will together be liable on the same basis is if there had been no split of the actual contractual arrangements.

Operation and maintenance agreements

5.33 Key provisions of a typical operation and maintenance agreement (O&M agreement) are set out in Appendix 8. As noted in Appendix 8, there are a wide range of arrangements used to structure O&M agreements.

5.34 In a fixed-price structure, the operator assumes risks related to operating costs and makes a profit only to the extent that actual costs fall below the contract price. There are likely to be adjustments for a broad range of factors, including changes in the cost of spare parts or consumables. This type of arrangement nonetheless affords a project company substantial certainty as to its costs, but the operator may charge a significant premium to assume the risk which is entailed.

5.35 Alternatively, a cost pass-through structure may be adopted, in which the operator receives a fixed fee and performance bonuses, while passing operating costs directly back to the project company. In this structure, it is critical that the operator be provided with sufficient incentive, usually in the nature of:

(1) a performance bonus, to maximize plant performances or production (in a power project, for example, these would typically comprise such categories as electricity output, heat rate, and plant emissions levels); and
(2) adequate adverse consequences, in the form of liquidated damages, if the appropriate performance levels are not achieved.

Furthermore, provisions regarding scheduled major overhaul and maintenance programmes and formal review by the project company of the annual operation and maintenance budget to ensure that costs and expenses are kept within projected levels, may also be included in the O&M agreement.

There should also be sufficient remedies (i.e. indemnities) for all acts or omissions of the operator that result in loss to property or third-party liability. Operators generally seek to cap their total contract liability, arguing that, given their limited potential return under an O&M agreement, exposure to potential liability should not be unlimited. In that situation, the project company's general insurance programme should address potential loss or liability in excess of the operator's limitations on liability. **5.36**

It is not uncommon in project financings for the operating company to be a special purpose vehicle formed specifically to perform the O&M agreement. In such instances, a parent company guarantee is usually put in place to guarantee at a minimum the operator's payment obligations under the O&M agreement. **5.37**

Site purchase or lease agreements

In many respects, project financings are simply complex property transactions. The project company and its lenders must consider all of the customary real property issues, such as certainty of title to land and assurance that the lender's mortgage will be first in priority, as well as issues of environmental liability. An assessment will need to be made as to whether the host jurisdiction has implemented a property or mortgage registration system that facilitates certainty of title, or whether some form of alternative arrangement is implemented. **5.38**

Particularly where the project site is in an industrial zone, the project company should obtain environmental indemnification from the site seller or lessor so that it is responsible for the clean-up of any contamination on the site that can be traced to the period before construction of the facility. Even if there is no current legislation addressing clean-up, it is best to anticipate the adoption of laws during the life of the project that address the discharge of hazardous substances. **5.39**

Power and cogeneration plants are often sited on land owned by and adjacent to the plant site of the purchasing utility or the industrial steam user. The lease is usually **5.40** negotiated as a package with the power purchase agreement or the steam sales agreement and may involve only nominal compensation. To avoid affording the lessor/off-taker too much leverage, the lease should be structured to prohibit termination even if the related power purchase agreement or steam sales agreement is terminated by reason of the impaired performance of the project.

Off-take agreements

5.41 In any projects, the principal means to manage revenue risk is through off-take agreements. The nature of these agreements, and the scope of undertakings that they customarily envisage, depends principally on the market into which the project's output is to be sold. If the project is to sell, for example, electric power in a country where there is a single or dominant purchasing utility, the terms of that contract are likely to be critical as, absent a creditworthy commitment from that utility to purchase the plant's output, there may simply not be a market for the project to sell its product into. Where, at the other extreme, the project produces a high quality commodity that is commonly traded on an exchange (such as London Metal Exchange (LME)-grade metals), the issue of market access is limited to a question of whether the project can manage the logistics of getting its output to the market. This range of circumstances leads to a wide variance in the type of contract appropriate for each project.

5.42 Among the categories of off-take agreement commonly encountered are:

(1) take or pay contracts;
(2) tolling contracts;
(3) marketing contracts; and
(4) power purchase agreements.

Take or pay contracts

5.43 This type of agreement sets out the terms on which a purchaser agrees to take for a specified period a minimum level of output, often at a price based on a pre-agreed formula. If the purchaser does not take delivery of the product, it may nonetheless be liable to pay for it, provided that the actual product was available for delivery. These contracts are commonly used in oil and gas, metals, and other commodity markets, as well as being the basis for power purchase agreements (PPAs) in developing markets.[10] At the extreme, they require the purchaser to pay for the product even if it is not tendered for delivery, but the more customary variant is a 'take if delivered' commitment, which places the risk of production and delivery on the seller.

5.44 Minimum volume commitments can impose significant burdens on the buyer, particularly when coupled with a fixed or floor price. If the buyer commits to paying

[10] See para. 5.48 et seq.

more than the then current market price, it may be put under financial stress that leads it to look for ways of avoiding the stipulations of the contract. The disputes that arise in such circumstances often end up in court or before an arbitral panel. The buyer may rely on the express terms of the contract, such as price 're-openers' or *force majeure* clauses, or domestic legal doctrines that may afford relief as a matter of law where performance is frustrated or rendered impossible.

While, as a matter of English law, a well-drafted take or pay provision will be upheld, **5.45**
a poorly drafted provision may constitute a penalty and thus be unenforceable.[11] Similar concerns may arise under the laws of other jurisdictions, and the off-take contract may be governed by, for example, the laws of the jurisdiction in which either the project company or the off-taker is incorporated. Care should therefore be taken to confirm if any penalty type concerns, or other reason for which a take or pay provision may be struck down, arise under the governing law of the relevant contract, or (if different) the laws of the jurisdiction of incorporation of the parties to the contract in question. Thus, the express terms affording relief to the purchaser, the enforceability of the agreement, and the credit-worthiness of the purchaser will all be of relevance to the lenders.

Tolling contracts

This type of agreement is similar to a take or pay commitment in that it places the **5.46**
risk of fluctuating demand for the project's output largely on the purchaser. It goes beyond that by also placing the risk of availability and, in many cases, price of fuel or other feedstock on the purchaser. In effect, the project company is simply paid a

[11] In *M&J Polymers Ltd v Imerys Ltd* [2008] EWHC 344 (Comm), a buyer that was subject to a 'take or pay' obligation in a supply contract argued that, where it had failed to order the product in the quantities required by the contract, it should be liable in damages for breach of that contractual obligation and not liable under the 'take or pay' clause in the contract (which stated that the payment obligation applied for the minimum quantities of products required to be ordered even if those quantities were not ordered), on the basis that the take or pay clause amounted to a penalty and was thus unenforceable. Although Burton J found in favour of the supplier on the point, he nonetheless suggested in his judgment that, in certain circumstances, a take or pay clause could constitute a penalty. In *M&J Polymers*, the purchase contract provided that it was a contractual obligation of the buyer to order the minimum stated quantities of product, and the take or pay provision was drafted such that it applied if the buyer had not ordered those required quantities. Burton J found that the claim for payment of money arising under the take or pay provision arose from a breach of the contractual obligation to place the minimum order, thus allowing an argument for penalty to be entertained; conversely, where a claim for payment of money arises other than by reason of breach of contract, a penalty argument will not apply—see Roskill LJ in *Export Credits Guarantee Department v Universal Oil Products Co* [1983] 1 WLR 399. If a claim that a take or pay provision could constitute a penalty was arguable on the basis that the liability under the provision arises as a result of a breach of contract, the usual considerations regarding the determination of whether the provision did in fact constitute a penalty would apply—see footnote 7 above. A well-drafted take or pay provision should therefore be cast as an election of the buyer, such that the buyer may elect to take the stated quantity of product at the required time or, if it does not so elect, it will pay for that stated quantity of product.

fee for processing feedstock into a marketable product. Similar arrangements, referred to a 'throughput agreements', are often used in the financing of pipeline, power transmission and similar projects. In most cases, tolling contracts and throughput agreements will ensure the project company a minimum level of revenue by specifying a minimum level of use or by paying it a capacity charge for merely being available for use by the toller or transporter.

Marketing contracts

5.47 In projects where there is a sufficiently deep and transparent market for the output of the project, and where the lenders are prepared to accept the risk of price volatility, the lenders may be prepared to place reliance on a commitment by the purchaser simply to market the project's output at the then current market price or at the best price available to the purchaser (which may be different). In these cases, the commitment is generally one of 'best endeavours' or a similar standard, and not of absolute assurance, of performance. Although a marketing agreement may be entered into by the project company with a sponsor or an affiliate of a sponsor, there is customarily scope to replace the marketer if it is unable to perform. As part of their due diligence, the lenders will generally want to assess the availability of replacement marketing arrangements. In most cases, the availability of alternative marketing arrangements means that the credit standing of the marketer is less critical than it is in relation to other forms of off-take commitment.

Power purchase agreements

5.48 A PPA is often the foundation of a power project's 'bankability'. It is generally analogous to both a take or pay or tolling contract. It is typically entered into by the project company, as the seller, and a utility company, as the buyer, which will often be owned or guaranteed by the host government. The rate, or 'tariff', paid for energy under the agreement must be sufficient to cover both fixed costs, including debt service, and variable costs, including fuel costs and operation and maintenance expenses. In most cases, the responsibility to procure fuel is placed on the project company, but in countries where there is a single, government-owned supplier, a tolling structure under which the purchasing utility takes responsibility for fuel supply is common. With the revenue stream so established, the remaining primary objective of the lenders is to ensure that the PPA remains in force during the entire term of the project loans and that the risk of *force majeure* and other adverse events is appropriately allocated. Appendix 7 sets out a checklist of provisions that are often addressed in a PPA.

5.49 Lenders generally focus particular attention on the termination provisions of the PPA and require that both the project company and the lenders themselves, as assignees of that company, be afforded a reasonable opportunity to cure defaults under the agreement before the off-taker is permitted to exercise termination rights.

The lenders may seek a payment obligation by the purchasing utility were the PPA to be terminated, and the amount of that payment may vary depending on the circumstances under which the termination occurs.

The credit standing of the purchasing utility generally, and in relation to the termination liability specifically, will be of significant importance to both the sponsors and the lenders. **5.50**

Power generation may afford an opportunity concurrently to produce efficiently other outputs, such as desalinated water or steam. As a consequence, a PPA may also envisage the sale of those other outputs, often to the same purchaser, but in some case to different entities through separate agreements. In such cases, coordination over such matters as despatch of the plant to address variable demand for these separate outputs is required. **5.51**

In some cases, the project may rely on long-term sales arrangements with a variety of industrial end-users. For example, in less developed countries a power generator may find it preferable to secure firm contracts from industrial power consumers whose capacity to pay fixed charges may be better than a national utility that is required to serve a broad range of often non-paying consumers. In other cases, electricity purchasers have sought to enhance their credit by offering to dedicate the payments by their best customers, secured through escrow arrangements, to satisfy or support their obligations under the power purchase agreement. **5.52**

In countries with an open electricity market, energy may be sold to a power pool through which the generator has access to regional distribution companies or directly to consumers. Although in this type of structure the generator can gain assured access to the market, it has no certainty as to the price it will receive for selling its electricity. This uncertainty can be overcome by a project company and a consumer entering into what is essentially a hedging arrangement or 'contract for differences'. The typical contract for differences compensates both sides against a strike price. When the price paid by the pool goes above the strike price, the generator pays the consumer; when the pool price goes below the strike price, the consumer pays the project entity. This two-way contract operates in a similar fashion to an interest rate swap agreement. It otherwise may have the practical effect of a more standard PPA. **5.53**

Fuel and other feedstock supply and transportation agreements

The sensitivity to fuel supply arrangements will vary depending on the fuel used by a project. A checklist of customary provisions in feedstock supply contracts is set out in Appendix 6. A principal objective in any fuel supply agreement is to ensure that the price provisions, including any escalation indices or other price adjustment **5.54** mechanisms, match the terms of the project's off-take agreement or other revenue projections.

5.55 For coal-fired power generation facilities, there should be certainty as to the availability of sufficient reserves of adequate quality coal, a long-term supply contract, and viable transportation arrangements from the coal mine to the project site. Complexity may be reduced where the coal supplier is obliged to deliver coal directly to the project site and secure its own transportation arrangements. Consideration should also be given to ash and other waste disposal, including the availability and cost of land fill or disposal sites.

5.56 For power projects fuelled by natural gas, the sponsors and the lenders will require assurance that the project has access to sufficient natural gas reserves to fuel its operations for the term of the loans. Such assurance may take the form of dedication of specified reserves or a corporate 'warranty' of supply. Natural gas transportation arrangements must also be subject to close scrutiny; sponsors and lenders will want to be assured of firm pipeline capacity from the wellhead to the plant site. Projects fuelled by LNG pose additional concerns related to the reliability of liquefaction, shipping, and regasification arrangements.

5.57 Other projects, such as petrochemical plants, smelters, refineries, or LNG liquefaction plants, that rely on the supply of feedstock from third parties, may have very similar concerns. These projects will also need assurance of access to adequate resource reserves, certainty of transportation arrangements, and, in many cases, stability in relation to the cost of the resource.

5.58 In the event long-term fuel supply arrangements are not available, the project company may have to adopt complex and innovative fuel supply and storage strategies. Often, because the fuel supplier and the fuel transporter are separate entities, care is required to ensure that all fuel risks are properly addressed in the various fuel-related agreements.

Development agreements/concession agreements

5.59 Sponsors must focus attention on the particular risks posed by governmental involvement in projects. Governments, in turn, must be sensitive to the need for a consistent commitment, across all levels of government, to private infrastructure development. For example, if a government's ministry of finance or national development agency endorses the concept of private infrastructure projects, but the relevant utility regulator refuses to approve tariff rates that allow full recovery of costs, then the project will not prove 'bankable' despite the commitment of key elements of the national government. Where host country governments enter into a comprehensive development agreement with the project company before the procurement of financing, sponsors and lenders are afforded a degree of certainty with respect to issues of concern and can rely on an efficient, 'one stop' agreement addressing government-related issues.

There are a wide range of agreements used to document the relationship between the sponsors and the host government. These range from concession agreements (which are regularly used in the natural resource extraction and processing sectors), to production sharing agreements (widely used in the oil and gas sectors), to licensing regimes, which may afford the benefit of detailed investment promotion legislation to authorized licence holders. The terms used may depend on the domestic legal tradition or the market in which the project is to operate. In some cases, the agreements may allow the project company to hold legal title to land and natural resources, in other cases it may only authorize the project company to operate in the relevant sector, with the project company obtaining legal title only to processed resources or assets. **5.60**

Although most arrangements with host governments set out the terms of the royalties or other economic benefits to be paid to the host government, the extent to which they address specific sponsors protections will vary significantly depending on the extent of the sponsor and the lenders concerns as to the reliability of the host state's investment regime. The nature of the governmental commitment may vary from providing legally binding undertakings, a breach of which may entitle the sponsors and/or the lenders to specific damages, to mere 'comfort letters', which may afford little, if any, certainty of remedy. **5.61**

In projects where the project company is providing a service to a government entity (for example, producing electricity), the contract governing that provision may address many of the relevant issues, rendering the need for other direct agreements with government less critical. In export-based projects (for example, in the mining or oil and gas sectors), where the project company does not otherwise have a direct contractual relationship with the government, the concession agreement may need to address a broader range of issues. These agreements are often implemented into national law through some form of enabling legislation, allowing greater certainty that the relevant undertakings will take precedence over competing, and often inconsistent, laws and regulations. **5.62**

Development agreements and concession agreements with the host government generally address issues such as: **5.63**

(1) The rights granted to the project company to exploit natural resources or otherwise to carry out its business.
(2) Confirmation of the sponsor's right to repatriate capital and profits.
(3) The means by which the project will be assured access to foreign exchange.
(4) Whether the project will be afforded grants, subsidies, or concessions on taxation.
(5) Whether the central government will provide credit enhancement for the obligations of national utilities or other public-sector entities.

(6) Relief from import restrictions: since private infrastructure developers often need to import components of the plant and other equipment during the construction phase and import spare parts on an ongoing basis, the host government may assure that such items are not subject to import restrictions and even waive, as an added incentive, any import tariffs that may otherwise be incurred.

(7) Compliance with the host country's labour laws: the sponsors may require that qualified expatriate personnel necessary to construct and operate a project be granted work permits for the entire period during which their skills are required; if a host country government is eager that its own citizens have access to skilled positions within the project, agreements may be negotiated to balance the project's requirement for experienced, skilled personnel with the need to create opportunities for host country nationals on a gradual but accelerating basis.

(8) License or permitting issues that may be outstanding, including any obligation to obtain central bank approval for financing relating to the required investments.

(9) A recognition of the role of lenders, often including express notice, cure, and 'step-in' rights.

(10) Any assurances that the host government might seek that the project company will provide adequate service during the term of the agreement; observe relevant safety and environmental standards; sell its output at reasonable prices; and, particularly in a BOT structure, carry out prudent maintenance and repairs, so that at the end of the term, the government or state-owned entity will acquire a fully operational project (there may be specific penalties or termination rights arising by reason of breach of these undertakings).

5.64 Appendix 4 sets out a checklist of key provisions, including those listed above, which should be taken into consideration when drafting or reviewing a concession agreement.

5.65 Each of the checklists of key provisions set forth in Appendices 3–8 is intended as guidance only, and should not be taken as being comprehensive lists of all provisions that would or should appear in a particular contract. In addition, in many project financings, the commercial contracts will likely be governed by a variety of governing laws; for example, a concession agreement will usually be governed by the laws of the host jurisdiction, supply contracts may be governed by the laws of the jurisdiction in which the relevant supplier is located, off-take agreements may be governed by the laws of the jurisdiction in which the relevant off-taker is located, and the construction contract may be governed by English law or the laws of the host jurisdiction (or a combination of the two, in the case of a split EPC structure). The above discussion is thus intended as guidance only, rather than a comprehensive legal review of the effects of any particular provision that may be found in a commercial project contract. We hope, however, that the discussion above, and the appended checklists, will assist in guiding the practitioner or other interested party in their consideration of the contractual means by which a number of the risks described in Chapter 4 are typically addressed in the commercial documentation that underpins any project financing.

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INSURANCE

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Introduction

The importance of project insurances

The approach taken by financiers to insurance in project financed transactions is onerous, requiring a comparably more robust insurance programme than would be adopted in a project that is financed on balance sheet alone. This is a reflection of the fact that until the project company has established a reliable revenue stream, it will have a low level of capitalization and be highly leveraged. This means that any reduction in its cashflow or call on its capital as a result of material loss or damage to the project's assets, or an interruption or delay in achieving its revenue generating capability, will have a detrimental impact on its ability to maintain adequate debt service cover ratios. **6.01**

While insurance does not remove risk, it does offer some financial security to the project company by providing financial assistance should it suffer the effects of such **6.02** risk becoming manifest. The primary function of insurance is to act as a risk transfer mechanism. In return for a known cost (the premium) the uncertainty associated with both the frequency and severity of loss is transferred to the insurer. The project company's premium is its contribution to the 'pool' or fund of all premiums received by the insurer from all the insured parties it acts for and out of which all losses are paid. In other words, the project company, and all other contributors to the pool, make up-front payments of their known share of losses for the period of the contract of insurance. Ideally, the contributions to the pool should be fair and equitable, taking into account the likely frequency and severity of claims that may be made on the pool by the insured parties.

6.03 In theory, the cost and availability of finance should reflect the risk profile of a project. Therefore, in order to attract funds, the cost of such finance will be determined by how much risk the project company retains and to what extent these residual risks are mitigated. Although the interests of lenders and sponsors should converge, if the project suffers from significant financial stress, the lenders need the insurance to continue to operate in the event they exercise step in rights and replace key project parties including, potentially, the project company itself. In such a situation, the lenders may directly assume the full array of liabilities that until that point had been carried by the project company and will need to have all residual risks and liabilities mitigated to the optimal extent which is commercially feasible. Where such mitigation is provided by transferring risk to the commercial insurance market, the integrity of the insurance programme protecting the project must be guaranteed to the fullest extent possible in order to ensure that it will respond as designed when it needs to be relied on. And this itself is one of the key areas of risk to which any project is exposed: the risk of relying on the insurance programme to operate as required. It should be borne in mind that insurance is by definition not a guarantee and as such its operation is subject to express and implied terms and conditions that must be understood by lenders and project company alike.

A 'bankable' insurance programme

6.04 The objective of the lenders is to ensure that the project company puts in place a 'bankable' insurance programme. Central to doing this are risk management and control strategies, which generally fall into two categories: physical and financial control of risk. Physical control of risk may be achieved through the elimination or minimization of the uncertainty associated with loss both before and after such loss has occurred. Financial control may be achieved through retention (for instance, by way of a captive insurance company[1] which the insured party creates in the event

[1] Many of the leading oil and gas companies have incorporated captive insurers to assist in the risk management of their portfolio of exploration projects and downstream ventures. In some project financings these captives have been used to place insurances and lenders generally apply the same credit assessment principles to such captives as they would to any other insurer or reinsurer.

risk cannot be controlled or covered via the commercial insurance market, thus effectively insuring itself or collectively with other affiliated entities); by transferring such risk to other parties, usually by way of contract; or for residual risks, by way of insurance. Against certain risks that cannot be eliminated or reduced by technical means to manageable dimensions or transferred commercially under contract, transferring the risk to the commercial insurance market may represent the sole available solution. This is particularly the case for catastrophic consequences of natural *force majeure* events such as earthquake, tsunami, or volcanic eruption.

Design

A bankable insurance programme should be designed to provide the types of cover **6.05** that lenders expect and that the project company requires. The first and most important cover is for the costs of reinstating loss or damage to the project's assets, which is typically covered by either construction 'all risks' (CEAR) insurance or 'property damage' (PD) insurance. Further cover will be required to protect against any delay or interruption to the project's revenue stream that might arise from loss or damage to the project's assets and, in certain circumstances, damage to assets not even owned by the project but on which the project is dependent. This cover can be achieved by way of 'delay in start up' (DSU) and 'advance loss of profit' (ALOP)[2] insurance or 'business interruption' insurance. Lenders will also insist on 'third party liability insurance' against the cost of funding obligations owed to third parties stemming from an accident or occurrence that results in a third party's bodily injury or loss of property for which the project company would be held legally liable. All of these insurances are so crucial to the bankability of the project that the lenders will take security over them in the event they exercise 'step in rights'. The lenders will also expect the insurance programme to cover insurance contracts required by a 'prudent developer' or operator as well as those such as 'personal accident insurance', 'employers' liability insurance', and 'directors' and officers' liability insurance' that are required by law in the jurisdiction in which the project is operating.[3]

Project company control

The fundamental starting point of a bankable insurance programme is that, in **6.06** almost all circumstances, it should be under the exclusive control of the project company rather than any individual sponsors, contractor, operator, or an authority.

[2] Also referred to as 'advanced loss of revenue' insurance.
[3] See para. 6.27 et seq.

To allow control to another party presents significant issues for the lenders, since it prevents them from regulating the insurance programme via the finance documents. For example, if revenue protection insurance was procured by an entity other than the project company it would be difficult for the lenders to rely on this insurance.[4]

Breadth and scope

6.07 The insurance programme should respond efficiently by covering against the largest possible quantum of loss that could be suffered by the project due to any particular risk becoming manifest as well as against as comprehensive an array of risks as is available on commercially reasonable terms. Although that is a subjective criterion, in practice the programme should protect at least against the traditionally insurable perils the project is exposed to, particularly if such risks have not been mitigated by technical or contractual means. Such risks would embrace both *force majeure* events such as earthquake, storm, flood, or terrorism as well as non-*force majeure* events like machinery breakdown, damage caused by any defects in design, plan, specification, materials or workmanship, burst pipes, or accidental damage.[5]

Integrity

6.08 The usefulness of the insurance package naturally depends on the integrity of the insurance placement. The lenders will want to have assurances as to the financial security of the insurance and reinsurance underwriters. This is often difficult as the insurance programme must be procured and maintained in accordance with applicable legislation, which in some emerging markets entails using local insurance carriers that have inadequate financial standing. In such cases, the lenders will seek comfort that the use of facultative reinsurance with acceptably rated counterparties and incorporating mechanisms, such as assignments of reinsurance, will protect their ability to access reinsurance proceeds directly.[6] However, this practice of requiring insurance placements with local insurers creates insolvency risks (and in some jurisdictions, corruption risks) that cannot be completely avoided.

Restrictions

6.09 The lenders will seek to include a number of clauses in the insurance contracts intended to ensure the integrity of the insurance contracts is maintained. These clauses will restrict the impact of certain undesirable terms and conditions that are

[4] See para. 6.32 et seq.
[5] See para. 6.37 et seq.
[6] See para. 6.45 et seq.

expressly or implicitly contained in all the project company's insurance contracts to provide the optimum comfort to the lenders that the integrity of the insurance will be maintained so that it will respond when called upon.[7]

Insurance Programme Design[8]

Whilst there are a myriad of labels categorizing the risks which are typically insured against, insurance contracts in project financed transactions may be split into three distinct categories: 6.10

(1) those that protect against the direct costs, and to some extent, indirect costs to reinstate, repair, or replace assets that have been lost or damaged;
(2) those that protect against a loss of revenue or a loss of anticipated revenue that would have been earned but for the loss or damage that delayed or interrupted the generation of revenue; and
(3) those that protect against a claim by a third party for indemnity as a result of an occurrence or accident for which the project company is held to be legally liable, whether under applicable law or in negligence.

A further distinction should be drawn between those parts of an insurance programme that constitute material insurances over which the lenders will need to take security, and those that the lenders require to be in place, but over which they do not intend to take security. The material insurances contain covers that the lenders would expect to see effected on a project financing regardless of sector or location and are also required to benefit from clauses commonly known as 'the lenders' clauses'. 6.11

Material insurances—material damage insurance

Construction erection all risk, builders' risks, and construction all risks insurances

Construction erection all risk (CEAR) insurance provides cover against material loss or damage to any permanent or temporary works, the completed project, and any materials incorporated, or due for incorporation, in the project. In addition to the project company, insured parties will include the project operator and the secured lenders as well as contractors, subcontractors, professional consultants, and architects to any of the insured parties, although they will only be covered in relation to their activities on the project site. 6.12

[7] See para. 6.56 et seq.
[8] See figure 6.1 for a chart detailing the insurance participants in a typical project financed transaction.

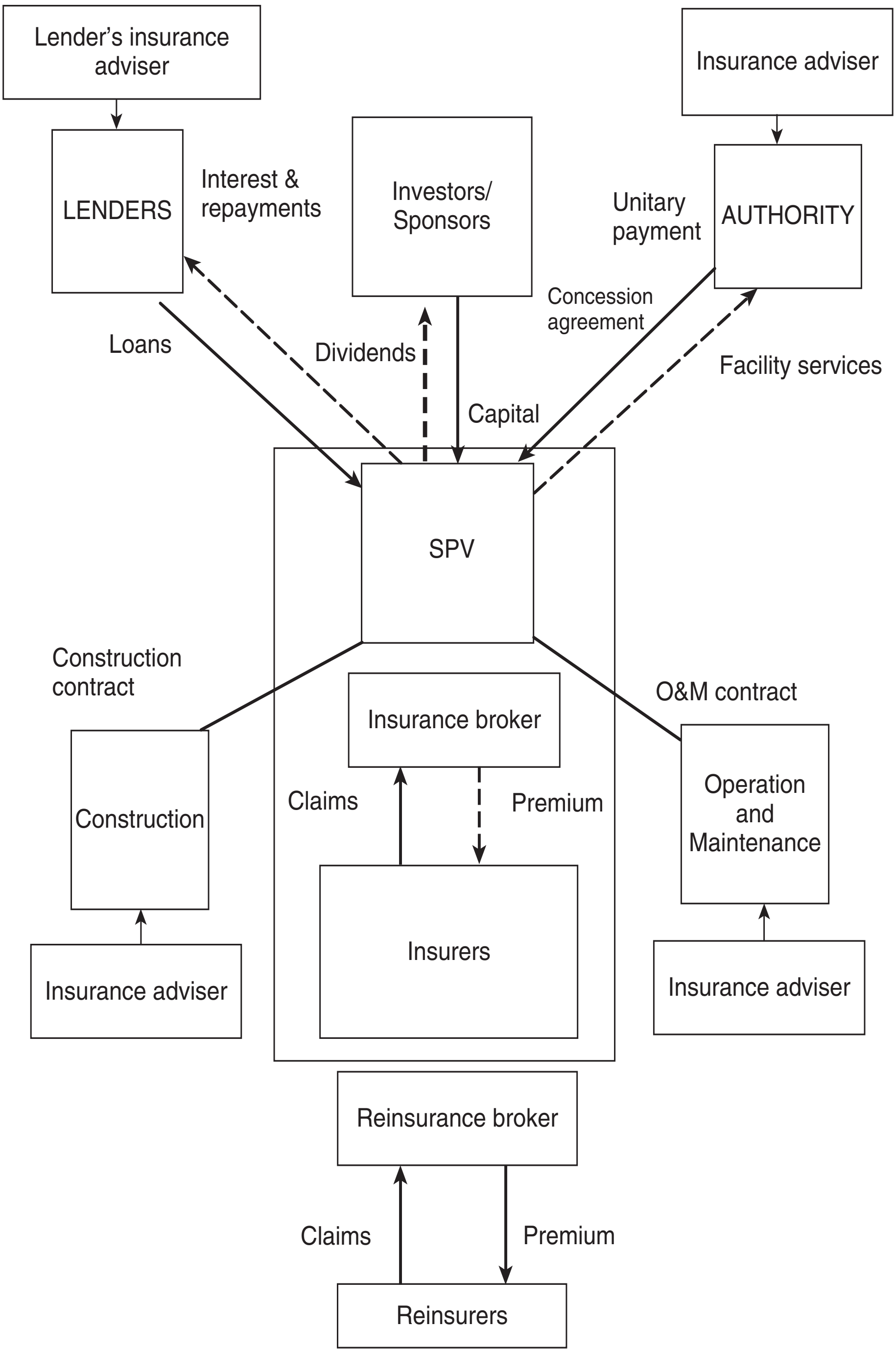

Figure 6.1 Insurance participants in a project financing

During the period of cover, which lasts until the project's commencement of operations, a broad range of assets are covered even if they are not situated at the site of the project. The policy will respond to loss or damage suffered to the insured property anywhere in a specified territory that typically includes the entire jurisdiction in which the project operates. With respect to offsite storage and temporary removal, this coverage is extended to anywhere worldwide. The range of works and related materials covered by CEAR is similarly broad, including free issue materials, spare parts, fuels and oils, and other consumables. Any material or property for incorporation into the project should be covered against loss or damage. Free issue materials will, by definition, include any property or equipment that is to be incorporated into the permanent works and plant, the property of the insured or for which the insured is responsible whilst at the project site and, in the case of locally supplied materials, whilst in transit other than by air or sea. Limitations to CEAR cover may include contractors' and subcontractors' temporary buildings, as well as their construction related plant, tools, and equipment. **6.13**

Although construction insurance will have the widest amount of defects cover reasonably available on stand-alone projects with respect to loss or damage to the project assets, there will be limits to the cover. It will not cover the costs to repair or replace (or respond to a delay in start-up) arising from any insured property being in a defective condition. However, if insured property is damaged *as a result* of defective property, then this insurance may respond. **6.14**

The policy will also provide a number of extensions that include automatic increases in the sum insured, provisions to allow for the expediting of expenses and accounting for extra expenses, as well as fire fighting, inland transit, offsite storage, and temporary removal expenses. Unexpected expenses related to the loss of plans and drawings, professional fees, public authorities, removal of debris, and reproduction of computer records may also be contained in the policy as extensions. In the event construction materials and plant are transported by sea (for instance, for the construction of an oil rig or an offshore wind park), a 'sue and labour' extension would be included that requires the insurer to compensate an insured party for expenses related to extraordinary efforts made to preserve any insured cargo or property. **6.15**

Marine transit, aviation transit, transit 'all risks', and 'goods in transit' insurances

Insurances covering the transit of goods required for the construction of the project is crucial to a project financing. Such a policy typically includes coverage of all materials, equipment, and supplies (excluding the contractors' plant and equipment) against all risks of physical loss or damage while in transit by sea, air, land, or inland waterway. The geographical scope of coverage is worldwide and the insurance is in effect from the time the insured items leave the suppliers' premises for shipment or transit to the moment they are unloaded at the laydown area at the project site. **6.16**

6.17 Usual underwriting clauses provide cover that is broad and comprehensive, including war, charges of general average sacrifice,[9] as well as any contribution and salvage expenses for relevant materials, equipment, spares, and supplies that are lost or damaged in transit. Lenders customarily insist that coverage is the widest available meaning institute cargo clauses (A),[10] as well as institute war clauses and institute strike clauses.[11] A '50/50 clause' will also be added to increase the efficiency of the insurance programme by ensuring that when a loss occurs that is covered by both marine cargo all risks and CEAR insurances, 50 per cent will be covered by each policy.[12]

Property damage 'all risks', material damage/industrial all risks insurances

6.18 Property damage insurance provides cover against 'all risks' of loss or damage to the property insured during a specified period. The sum insured will often be set at the full reinstatement value of the project although lenders will allow a first loss limit on larger projects, as long as it is set at a level adequate to cover the absolute worst case event of loss or damage or, if lower, the limit of availability at commercially reasonable terms. A 'first loss basis' of insurance will thus be acceptable provided that it represents sufficient protection to ensure the project will be indemnified for the full reinstatement costs of the perceived worst possible event of loss or damage.

6.19 There tends to be confusion as to the meaning and purpose of 'first loss' insurance. It typically means that the insurers are liable for the 'first part' of the amount of loss or damage claimed in the period of insurance, up to the 'first loss limit' for each occurrence. When it is considered unlikely that the entire value of the property of a project will be impacted by a single event, the lenders may become comfortable with the PD all risk policy covering only a given amount of the total value of the project. Therefore, as long as the protection will cater to the worst case loss event with a reasonable margin of safety (using the benefit of a post-September 11 hindsight) it is difficult to sustain an argument for a greater amount of cover. However, it is a common fallacy that a first loss limitation will reduce the cost of any premium

[9] Parties to a common maritime adventure must cover any expenses or damages incurred during the course of that adventure in proportion to the amount of their interests exposed to the danger.

[10] This is the widest cover available under such standard clauses developed by the Institute of London Underwriters and Lloyd's. These clauses generally regulate marine cargo ((B) and (C) cover are respectively more restrictive).

[11] Institute war and strike clauses were similarly developed by Lloyd's and the Institute of London Underwriters and cover perils such as capture, seizure, arrest or restraint by a belligerent power, and, in the case of the institute strike clauses, loss caused by strikes, locked out workers, and labour disturbances.

[12] A 50/50 clause divides cover between marine cargo all risks and construction/erection all risks insurance. When a loss occurs and it is unclear under which insurance the loss was suffered, 50 per cent will be covered by each insurance policy. For example, if a container is opened on site and its contents are found to have been damaged, it would be difficult to determine whether the damage occurred on the vessel or whilst being handled at the site and thus the 50/50 clause would apply.

payable. It will only do so if the first loss limitation also reduces the insurers' liability, meaning that the limit to the coverage purchased is set below the worst case loss, in which case it is likely that the relevant insurances are in fact inadequately covering the project.

Sabotage and terrorism and site-wide terrorism insurance

Prior to September 2001, unless the territory involved had a meaningful history of terrorism (for instance, Spain, Bahrain, or the UK) insurers tended to provide protection against terrorism and sabotage as part of the standard fire cover under a property damage or construction 'all risks' insurance. Following the September 11 attacks, separate and specifically underwritten insurance has been required. **6.20**

Sabotage and terrorism insurance provides indemnity against the costs to repair or replace insured property damaged by an act of terrorism. Such an act is defined along the lines of: **6.21**

> . . . an act, including, the use of force or violence, of any person or group(s) of persons, whether acting alone or on behalf of or in connection with any organization(s), committed for political, religious, or ideological purposes including the intention to influence any government and/or to put the public, in fear for such purposes.

This dovetails with the exclusion in the construction all risks and property damage insurance policy wordings. The insurance indemnity is usually provided to cover 'any one occurrence and in the annual aggregate' and may be extended to cover business interruption following loss or damage caused by an act of terrorism. If commercially available, lenders may insist on site wide terrorism insurance (SWTI) as a means of providing coverage across a number of separate projects at the same site rather than requiring that each project be insured separately. Sabotage and terrorism insurance (including SWTI) may be based on the Insurance Market Association's standard T3 policy.

Material insurances—consequential loss insurance

Construction delay in start up, marine delay in start up, advance loss of profits, and advance loss of revenue insurance

This insurance provides protection against a loss or reduction in revenue as well as any increased costs of activities designed to avoid such a loss. As their names suggest, such insurance covers loss sustained following delay to the scheduled achievement of revenue from the project as a direct result of physical loss of or damage to the contract works during construction, testing, or commissioning. For example, in power projects, the policy might cover loss of capacity payments which would otherwise be payable to the project company under the power purchase agreement arising from a delay caused by damage during construction or compensate the project company for increased costs associated with actions taken to avoid loss of capacity payments. The scope of coverage will typically only apply during the **6.22** period of insurance cover provided by CEAR or marine cargo insurance and may be extended to include suppliers. The duration of marine delay in start up cover will be slightly different and begin on the date the first shipment of equipment and material for the construction of the project leaves port and continue until the final consignment is delivered.

Business interruption, loss of revenue/machinery, and consequential loss insurance

6.23 Once the project is operational, insurance will be required to provide protection against a loss of revenue, and increased costs of working capital sustained to avoid loss of revenue, where such loss is caused by interference of or interruption to commercial operation and where such interference or interruption is caused by physical loss or damage indemnifiable under the property damage insurance. The sum insured will be set at the longest period the project is estimated to require to reinstate its revenue stream (the 'maximum indemnity period') and will be subject to a time deductible or waiting period.

Material insurances—liability insurance

Comprehensive general liability (construction and operation) and third party liability insurance

6.24 Third party liability insurance (TPL) provides cover against all sums that the insured parties may become legally liable to pay in respect of liabilities to third parties. This will include liability for bodily injury to a third party, which is broadly construed to include death, disease, injury or illness, mental injury, mental anguish, shock, false arrest, false detention, false imprisonment, invasion of right of privacy, false eviction, malicious prosecution, wrongful dismissal, and defamation of character. Material damage to property owned by a third party is defined in a similarly broad manner to include loss of, physical injury to, damage to, or destruction of tangible property. Other covers include compensation for interference, trespass, and nuisance that occurs during the period of insurance. Cover will also respond to indemnify legal costs and expenses as well as costs to minimize bodily injury or damage to third party property. To ensure that each insured party is protected against liabilities owed by other insured parties, the policy will contain a 'cross liabilities' clause.

6.25 Insurers usually insist that cover be provided subject to a limitation of liability that will apply per occurrence, as long as the occurrence arises from an act or omission that took place during the periods of insurance. Sometimes, particularly in North America, cover is provided to apply as long as *the claim* is made within the period of insurance coverage. Cover will be further limited to liability that arises out of activities of the insured parties that are connected to the construction or ownership, operation, maintenance, and occupancy of the project arising in a given territory (and worldwide in relation to non-manual business trips). There will also be limitations to comprehensive liability or third party liability coverage; for instance, there will be no protection against liabilities arising from pre-existing contamination or a gradual release of contaminants, although this may be obtained by way of a separate 'environmental impairment liability' insurance.

The insurance may respond to liabilities brought in any jurisdiction in the world although certain limitations would apply with respect to claims brought through the courts of a North American jurisdiction.[13] Cover will also typically respond to defend the insured parties against liabilities under relevant consumer protection legislation and health and safety at work legislation. **6.26**

Mandatory but non-material insurances

Finally, there is a further category of insurance that is not usually viewed as 'material insurance' and is solely required by the lenders in order to satisfy statutory legal requirements or as part of the project company's obligation to act as a prudent developer or operator. In most jurisdictions this includes automobile liability insurance and workmen's compensation insurance. **6.27**

Automobile liability

Automobile liability insurance provides cover against liability for claims of bodily injury (including personal injury and death) and property damage resulting from the operation or use of an owned, leased, non-owned, or hired motor vehicle. Typically, cover will only apply if the vehicle was used in relation to the building, operation, and maintenance of the project. The premiums and scope of coverage associated with automobile insurance can vary significantly depending on the jurisdiction in which the project is located. For instance, jurisdictions with no-fault automobile insurance regimes will limit the amount recoverable by both parties following an accident, which results in lower premiums. Other considerations, such as the nature of claims in tort in the US, will also be a factor in determining cost. **6.28**

Workmen's compensation and employers' liability

Workmen's compensation and employers' liability insurances generally cover the insured for the cost of injury or illness suffered by an employee. They differ in that most jurisdictions have workmen's compensation regimes that require employers to take out minimum levels of insurance so as to ensure that employees who are injured or become ill while employed by the insured receive certain benefits. Employers' liability is available to provide coverage in excess of the requirements of the workers' compensation regime including, for instance, coverage of the employer for injury caused by its negligent acts. **6.29**

The exact scope of workmen's compensation insurance is, like automobile liability insurance, dependent upon the jurisdiction in which the project is located. As such, the lenders will require that the project company procure that such insurance is in **6.30**

[13] This is to account for the higher damages awards in most North American jurisdictions.

compliance with the laws of the jurisdiction in which the project will be operating and will cover all relevant employees. This will usually extend to employees of the project as well as those of any construction and operations and maintenance contractors.

Directors' and officers' liability

6.31 Under English law, companies (but not directors or officers themselves) are able to purchase insurance that covers their officers and directors in respect of their acts (including negligent acts) which may arise in the course of performing their duties to the company.[14] A failure to procure directors' and officers' liability insurance is considered evidence of poor corporate governance and lenders would, for instance, typically expect a European project company to carry such cover.

Project Company Control

6.32 Best practice in project finance transactions (in the absence of a strong completion guarantee from creditworthy sponsors) is to require that all the insurance necessary for the lenders' protection (the 'material insurance') be procured and controlled by the project company. It is central to the lenders' interests and their ability to place reliance on the material insurances that they are, if not effected, at least controlled by the project company rather than the main contractor or their suppliers and that such insurance is to be as completely ring-fenced as far as possible from any insurance placed by the sponsors or related entities. There are numerous benefits to the insurances being centrally organized and controlled by the entity over which the lenders have the most control. This consolidation ensures that the insurance programme will provide comprehensive coverage while limiting disputes between the various insurers as well as between the insured parties. It will also lower costs for the project company and facilitate the taking of security over the material insurances by the lenders.

6.33 The ability of the project to effect a comprehensive risk management strategy will be aided by the consolidation and control of insurance by the project company. The project company is responsible for the entire cover and thus has a powerful incentive to ensure that its scope of coverage is adequate and costs are reasonable. In addition to allowing for the effective management of risks in their entirety, this approach will provide for consistent coverage of the various risks being managed by ensuring that there is a lower likelihood of 'gaps' which are more likely to occur if a project's insurance programme is put in place in a piecemeal fashion. In addition to reducing risk, this also reduces the likelihood of project participants having to enter into costly one-off 'top up' and 'in fill' insurance policies.

[14] N. Legh-Jones (ed.), *MacGillivray on Insurance Law* (Sweet and Maxwell, London 2003) 28–95 ('MacGillivray').

This approach will also help ensure potential areas of conflict can be addressed in advance, reducing the risk of disputes. For instance, project company control ensures commonality of interest between material damage and business interruption insurers. Similarly, insurance costs are more definite and transparent which will have the effect of limiting disputes between the insured parties and the insurers. In the event disputes do arise, consolidating the insurances in the project company will facilitate better resolution of conflicting claims arising out of the insurance programme by allowing a more streamlined risk management approach. For instance, contentious disputes arising in respect of claims made by different suppliers and contractors who damage each other's works will be less likely. **6.34**

The project insurance approach also reduces cost and promotes a longer and more mutually beneficial relationship between the project company and the insurers. Funding of premiums is simplified as a schedule of premium payments throughout the project period may be arranged to ensure optimum cashflow. Insurers will also provide more advantageous terms to the project as a whole through more specific consideration of the project's risk exposures. The insurance programme administration costs will also be lower as the project company will no longer need to vet the policies of individual suppliers and contractors. **6.35**

The most important incentive from the point of view of the lenders is that this approach facilitates the creation of security over the insurance programme. The proceeds of claims will be paid directly to the project company's accounts, as required under the finance documents, which reduces delays in payment and administration. For the project company, this approach allows control over the levels of cover, within the terms of the insurances prescribed in the finance documents, and permits the project company to select insurers provided they meet adequate credit rating requirements. **6.36**

The Breadth and Scope of the Insurance Programme

Insurance is required to respond against losses arising from risks that may be split into four main categories: natural *force majeure* events, political *force majeure* events (including sabotage and terrorism), non-*force majeure* events (including testing and commissioning risks), and risks that concern liabilities to third parties, including environmental risks. The scope of cover for each of these risks will ideally be for 'full value', although this will depend on the location of the project in question. **6.37**

Full value coverage

Lenders in project finance transactions customarily seek an insurance package which covers the full reinstatement value of the project assets. This coverage includes **6.38** physical damage and DSU protection triggered by all the classic natural *force majeure* events such as flood, windstorm, lightning, and seismic risks (including volcanic eruption). It should be in place, or procured to be in place, at the commencement of construction and be maintained until completion or, in the case of marine transit and marine delay in start up cover, from the first consignment of critical path plant and equipment ex-works until the date the project is completed. The physical location of the project will determine the availability and cost of insurance against the major catastrophe perils such as flood, windstorm, and earthquake. For example, major infrastructure projects in a seismically active territory such as the Sakhalin Islands, Colombia, or Turkey may struggle to obtain full reinstatement value cover against earthquake, whereas projects of similar scale located in relatively asiesmic territories such as Saudi Arabia, the UK, or French Guyana should be able to obtain cover to full value without significant difficulty or incurring excessive cost.

Natural force majeure

6.39 Depending on the location of the project, the risk of it being adversely affected by natural *force majeure* events may be greater during the process of manufacturing key items at the manufacturer's premises and whilst in transit to the site rather than at the actual site of the project. Thus, a natural *force majeure* event that has limited potential for causing damage at the project site may nevertheless pose a significant threat to the construction schedule. Any such delay, at best, is insurable only to a limited extent.

Political force majeure

6.40 *Force majeure* events arising from 'political' or 'non-natural' occurrences such as strikes, riots, civil commotion, political violence and terrorism, or any general amendment of the law affecting all private corporations, may be significant risks depending on the location and nature of the project. As is the case with natural *force majeure*, it is possible that a political *force majeure* event, which is only a remote risk while the project is being structured, may pose a more significant threat to the construction schedule depending on the location of suppliers' premises and the routes of supply. For instance, the project may be exposed to strikes, industrial disputes, actions of environmental or political protest groups, and riot, civil commotion, and terrorist acts that affect the project infrastructure directly and indirectly. Whilst terrorism is insurable in most territories of the world, with capacity constraints only in areas subject to high terrorism risk (at the time of writing, this included countries such as Iraq, Somalia, Afghanistan, and Pakistan), it is universally the case in all project financed transactions that there are a number of 'fundamental' political *force majeure* events that are considered uninsurable by the private commercial insurance market. These commercially uninsurable *force majeure* risks (if they occur within the territory of the project itself) include violent conflicts such as outbreak of war (whether declared or undeclared) or any other armed conflict within or affecting the territory of the project. Risk associated with revolutions or insurrections are similarly uninsurable within the territory of the project as are nuclear explosions and radioactive or chemical contamination. National strikes or national lockouts are also uninsurable in the event that they affect the entire territory of the project. With respect to political risks such as war, contract frustration, expropriation, and nationalization, the insurance market will not be prepared to write these risks for a project company if the perceived risk is located within the project company's territory.

Insurability of force majeure risks

The table below summarizes typical heads of *force majeure* risks and the degree to which insurance solutions can be found to mitigate against such risks in the context of a project financing. **6.41**

Force Majeure Event	Available Insurance Solutions
Lightning, fire, earthquake, flood, cyclone, tornado, tsunami, typhoon, or other natural disaster or act of God.	During construction, the project is protected against the costs of repair or reinstatement of damaged property under the marine transit and CEAR insurance. Revenue protection insurance will be available for a delay in achieving completion is provided by marine delay in start up and construction delay in start up insurance. Delay due to unusually severe weather without loss or damage would not be conventionally insurable. Once operational, the project will be covered by PD insurance. Interruptions to operation will be insured by business interruption insurance. Most events that result in loss or damage will be insured against, including, landslip, subsidence, heave and collapse, etc., causing damage to the project insured under the CEAR and any resulting delay under the DSU insurance. Contamination or damage to the project from an accident off the site are insured subject to not being caused by gradual pollution. Loss or damage caused by falling debris is fully covered. If *force majeure* is considered to embrace perils of the sea, (accidents of navigation or breakdown or injury to vessels, accidents to harbours, docks, canals or other assistance to or adjuncts to shipping or navigation) then marine transit delay in start up insurance will respond.
Epidemic or plague.	Not usually insured against.
Accident, explosion or chemical contamination.	Explosion (unless due to nuclear reaction) will be fully insured against (including pressure explosions).

(continued)

Force Majeure Event	Available Insurance Solutions
	There is generally no insurance available for loss or damage arising from nuclear explosion or radioactive contamination unless from isotopes used on site for medical, surveying or similar purposes. Similarly, chemical, biological and radioactive contamination is generally uninsurable.
Strikes, works to rule or go-slows (other than solely by employees of the affected party or its affiliates).	Most events that result in loss or damage will be insured against by the project company.
Acts of war (whether declared or not), invasion, armed conflict, act of foreign enemy or blockade in each case occurring within the territory, acts of rebellion, riot, civil commotion, strikes of a political nature.	Covered by marine transit and marine consequential loss and CEAR and DSU (probably subject to inner limits). Cover for loss or damage from strikes, riot and civil commotion may be limited on a first loss basis under the CEAR insurance.
Act or campaign of terrorism, or sabotage of a political nature, in each case, occurring within the territory.	Terrorism cover for material damage and business interruption is available.
Boycott, sanction, embargo penalty, or other restriction imposed directly on the territory by the government of the main equipment country(ies) of origin during the period up to and including the latest of: (1) the project commercial operation date; or (2) the expiration of the relevant warranty period stipulated in the EPC contracts.	Protection may be provided by multilaterals and export Credit Agencies. Stand-alone political risks insurance is typically available from the commercial insurance markets to offshore contractors, offshore sponsors and lenders who may insure the value of the outstanding principal and interest due against a payment default by the project company that would be triggered by confiscation, expropriation, or nationalization. This would typically cover 'creeping' expropriation. Insurance could also be obtained against inconvertibility of the currency of the host country due to restrictions on exporting capital.
Any action or failure to act by a competent authority, including any action or failure that results in any approval ceasing to remain in full force and effect despite the project company having taken all steps to re-apply for the same; or not being issued or renewed in a timely manner upon due application having been made.	If it leads to expropriation, requisition, confiscation, nationalization, or export or import restrictions by any governmental authority then a stand-alone political risks insurance is available from the commercial insurance markets to offshore EPC contractors, offshore sponsors and lenders. To the extent not covered by multilateral agencies and ECAs, the lenders may insure the value of the outstanding principal and interest due against a payment default by the project company that would be triggered by confiscation, expropriation or nationalization. This would also cover 'creeping' expropriation. Insurance could also be obtained against inconvertibility of currency due to restrictions on exporting capital.
Change of law	No insurance protection available.

(continued)

Force Majeure Event	Available Insurance Solutions
Discovery of archaeological remains or hydrocarbons, underground man-made objects or constructions, any pre-existing toxic or hazardous material or contamination on or within the site of the project.	No insurance protection available unless such events result in loss or damage to the project's assets.

Standard exclusions from insurable risks

A project insurance programme will not cover loss or damage due to 'fundamental' risks that are so extreme and severe that the commercial insurance market would be unable to survive if they were covered. Such fundamental risk events include war, civil war, and any rebellion or insurrection. However, certain exceptions apply and coverage is available for loss caused by munitions of war[15] as well as loss or damage arising from a strike, riot, and civil commotion. Other exclusions include losses caused by radioactive contamination and nuclear risks (but not consequent fire damage), as well as asbestos and electronic date recognition losses. 6.42

There are also limitations on coverage relating to losses that arise from 'inevitable causes' such as losses related to routine maintenance and making good defects to project equipment. Other inevitable causes include gradual wear and tear, deterioration, the normal settling and shrinkage of walls and floors, rust, erosion, and corrosion. Subsequent damage caused to insured property free of such defects would be covered as would defects that are not 'inevitable', such as mechanical and electrical breakdown. Cover is not extended to damage caused to the project resulting from experiments or overloading or similar tests requiring the imposition of abnormal conditions unless they are carried out with the approval of the manufacturer or by normal rules of operational practice. There will also be exclusions where the insurer believes coverage should be the responsibility of manufacturers or suppliers, for example, with respect to certain defects or series losses. 6.43

Certain risks are expected to be covered by way of specialized insurance policies. In a project financing, these risks will include loss to watercraft, aircraft, and motor vehicles or transmission and distribution lines, towers, poles, pylons, and cables in excess of 1,000 feet from the project site. Other risks that will be specifically underwritten will include terrorism, latent defects, consequential loss, and loss of cash, bank notes, and monetary instruments. 6.44

[15] This includes residual munitions left unexploded after an armed conflict has ended.

Legal and Commercial Influences on Procurement

6.45 An insurance programme needs to be procured and maintained in accordance with applicable legislation, which in many territories entails using local insurance carriers that have inadequate financial standing to satisfy the lenders. This necessitates the use of facultative reinsurance with acceptably rated counterparties and using mechanisms, such as assignments of reinsurance, to allow the lenders adequate comfort with respect to their ability to access reinsurance proceeds directly.

6.46 Placement is also determined by commercial considerations. Ideally, the insurance provisions in the project documents should satisfactorily regulate the relationships of the key project parties with regard to the insurance programme by setting out the duties and obligations of the various parties as well as the rights and duties of the parties when the insurance programme is to respond to indemnification for loss, damage, or liability. Relevant provisions would include those that address disclosure obligations of counterparties (at the inception of the insurance and also on an ongoing basis) as well as counterparty compliance with policy terms, risk improvements, warranties and requirements, allocation of liability for deductible funding, and claims notification and handling.

Creditworthiness of the risk carriers

6.47 The lenders will almost always insist that the project company only place insurance with an insurer that possesses a given minimum required credit rating. However, this may not be possible in jurisdictions in which local law requires the regional placement of insurance and in which such insurers are not rated, or have particularly low ratings. To control the primary insurer in such cases, the lenders will often have rights to approve any proposed insurance placement both with respect to the identity of the insurer and the amount of exposure the project has to that insurer. The lenders often also require that a certain percentage of the insurances be reinsured and that the reinsurers meet the minimum required ratings test.

6.48 Where the insurance programme is governed by English law, the financing documents will typically include a provision requiring an endorsement on the terms of insurance through which the reinsurers consent to an assignment of reinsurance.

Reinsurance

Credit issues

6.49 As mentioned previously, because governments in certain markets seek to promote their domestic insurance industry, it is not uncommon for them to require that a certain amount of the project's risk is insured locally. In such circumstances, lenders will seek to control the amount of risk that remains with local insurers via a clause that requires a given percentage of risk be reinsured with international insurers having an acceptable credit rating. The actual percentage varies depending on the market, but often will be as high as 90 per cent or 95 per cent, meaning that very little of the insured risk will remain exclusively in the domestic insurance market in which the project is located.

Security—cut through clauses versus reinsurance assignments

The purpose of both cut through clauses and assignments of reinsurance is to protect the insured party against the risk of the insolvency of the primary insurer. It is important to note, however, that they do not necessarily achieve the same result in all jurisdictions. In particular, as noted below, although cut through clauses continue to be used in relation to insurance programmes governed by New York law, they are not now used where the insurances are placed in London. **6.50**

Claims under a reinsurance policy are claims that the primary insurer has against the reinsurer as a result of the occurrence of an insured event under the primary policy of insurance which is reinsured under the reinsurance policy. Moneys payable under the reinsurance policy will therefore ordinarily be payable to the primary insurer either to enable him to pay the corresponding claim that has been made by the insured under the primary policy or to reimburse him for having paid that claim. The problem that this presents for both the insured (i.e. the project company) and the lenders is that in an insolvency of the primary insurer the reinsurance proceeds that were intended to be available (albeit indirectly) to meet the claim under the primary policy may well be become trapped in the insolvency. This would leave the project company (and the lenders as assignees) with a claim against the primary insured under the primary policy and (at worst) nothing more, and (at best) nothing more than an argument that they have a specific entitlement to the proceeds of the reinsurances. **6.51**

A cut through clause included in the reinsurance policy is (in theory, if not always in practice) designed to avoid this potential problem because it requires that, in the event of the insolvency of the primary insurer, payment of all proceeds payable under the reinsurance policy direct to the insured to the extent that the proceeds are attributable to a claim by the insured as opposed to the primary insurer, as would normally occur. In effect, this means the insured under the primary policy becomes an insured under the reinsurance policy in the event of the insolvency of the primary insurer. However, it should be noted that the *quid pro quo* for a reinsurer agreeing to include a cut through clause in the reinsurance policy is often the imposition of a requirement that the insured assume at least some liability for the payment of premiums under the policy. **6.52**

As the name suggests, an assignment of reinsurances involves the assignment by the primary insurer of its rights under the reinsurance policy as security for the primary insurer's liabilities under the primary policy. The assignment is either in favour of **6.53** the insured (i.e. the project company) or the lenders' security agent. Where the assignment is in favour of the project company, it will then be further assigned to the security agent pursuant to the terms of the general assignment of insurances that the project company will grant as part of the overall security package in favour of the lenders. Either way, with this approach, if the primary insurer becomes insolvent, the project company or the lenders will he able to assert a proprietary claim over the reinsurance proceeds and therefore defeat an argument from the officials overseeing the insolvency that the proceeds should be distributed amongst all the primary insurer's unsecured creditors.

New York and London market practice

6.54 While cut through clauses are used in New York-governed insurance programmes, they are no longer used in their English law-governed counterparts; and indeed their use is on the wane in many other jurisdictions. The underlying concern in relation to the cut through clause, as a matter of English law, is that in its operation it offends one of the basic principles of insolvency law, which is that the unsecured creditors of an insolvent company should be treated equally (unless their claims are preferred by law). This is the so-called *pari passu* or anti-deprivation principle and provisions in contracts which offend it are void as a matter of public policy.[16] Since the function of the cut through clause is to ensure the reinsurer's obligations are owed to the insured in the event the primary insurer becomes insolvent, it is likely that the provision would be held to fail as an attempt to avoid the anti-deprivation principle. The problem is avoided if the primary insurer assigns the reinsurance policy because there is no reason why the primary insurer cannot agree to create security over his assets (the reinsurance policy) to secure his obligations under the primary policy.

6.55 It is also perhaps worth noting that until the enactment of the Contracts (Rights of Third Parties) Act of 1999, another potential barrier to the efficacy of cut through clauses (depending on the specific provisions of the reinsurance policy and in particular the cut through clause) was the fact that there might be no privity of contract between the reinsurer and the ultimate insured. The common law doctrine of privity stipulates that a person who is not party to a contract may not make a claim for its enforcement. The Contracts (Rights of Third Parties) Act of 1999 introduced a new regime overriding the privity doctrine and allows third parties that are expressed to have rights under a contract (but who are not parties to it) to enforce those rights. While this removed a significant hurdle facing insured parties wishing to make use of cut through clauses, it does not address the risks associated with the primary insurer's insolvency, so the normal practice in financings where English law is the applicable governing law, is to use assignments.

[16] *British Eagle International Airlines v Compagnie Nationale Air France* [1975] 2 All ER 390.

Insurance Risk itself and Lenders' Clauses

It has become customary practice in project financings to incorporate a number of provisions intended to restrict the impact of a number of explicit and implicit terms and conditions contained in a project company's insurance contracts. After first considering the general legal principles applying to the insurances in a project finance context, the conditions and the clauses that are customarily endorsed on project insurance policies to mitigate the risks they present will be considered. **6.56**

General insurance law principles

Utmost good faith and the duty of disclosure

Under English law, contracts of insurance differ from ordinary contracts in that they are based on the legal principle of *uberrimae fidei* or 'utmost good faith', which creates a duty both not to make untrue statements with respect to any material fact and to disclose all material facts. According to s 17 of the Marine Insurance Act 1906, a failure to act in good faith means that 'the contract may be avoided by the other party'. This obligation primarily exists in relation to the party seeking insurance coverage since (in theory) it should have the greatest access to the information needed to assess the risk being insured against. However, the obligation technically must be observed by both parties and, according to the Marine Insurance Act, not only at the time of formation of the contract of insurance but also on a continuing basis, although the scope of the duty differs slightly in post-contractual situations.[17] **6.57**

To understand the principle of utmost good faith and its related duty of disclosure, it is necessary to consider the concept of materiality. Under s 18(2) of the Marine Insurance Act, information is considered material if a prudent insurer would take it into account when assessing the risk. The Court of Appeal in *St Paul Fire* further delineated the scope of what is material information by affirming that information may be material even if it has not had a decisive effect on the decision taken by the insurer ultimately to accept a risk.[18] **6.58**

The duty to disclose material information has existed under English law since *Carter v Bohem* was decided in 1766 as a positive duty to divulge all material facts relating to the risk against which insurance is being sought, regardless of whether such information is requested by the insurer.[19] The scope of the duty is now wider than actual knowledge. Under s 18(1) of the Marine Insurance Act, the insured is deemed **6.59**

[17] MacGillivray , 17-6, citing *London Assurance v Mansel* (1879) 11 Ch. D. 363, 367.

[18] *St Paul Fire and Marine Insurance Co (UK) Ltd v McConnell Dowell Constructors Ltd* [1996] 1 All ER 96, citing *Pan Atlantic Insurance Co Ltd v Pine Top Insurance Co Ltd* [1995] 1 AC 501. Also see H. Beal (ed.), *Chitty on Contracts* (Thompson Reuters, London 2008) 41–031 ('Chitty').

[19] *Carter v Bohem* (1766) 3 Burr 1905, 1 Wm Bl 593.

to know every circumstance which, in the ordinary course of business, it ought to know.[20] This includes the knowledge of agents working on behalf of the insured, even if the insured does not actually possess or share in this knowledge.[21] Unless specifically requested to do so by the prospective insurer, the obligation to disclose material facts does not, for instance, include an obligation to disclose circumstances that decrease risk or circumstances that are known, or should be known, to the insurer.[22] Although this obligation is principally borne by the insured and owed to the insurer, certain information is material to the insured. This includes conflicts of interest of the insurer with respect to the insured and any information in the possession of the insurer that might assist the potential insured assess the probability of an insured peril occurring.

6.60 Unlike the duty to disclose, which starts when the proposer begins to negotiate its insurance and ends when the contract is formed, the duty of utmost good faith continues to apply throughout the life of the contract of insurance.[23] A separate contract is created every time the contract of insurance is renewed and the duty of good faith applies to each such contract. If the policy is renewable, then the duty of disclosure is revived at renewal. Insurers may on occasion seek to add a clause to the policy that similarly extends the duty of disclosure throughout the policy period.

6.61 It should be noted that general insurance law principles in the US are often different from those under English law. Under US law, for example, as a general principle, the duty of utmost good faith applies to reinsurance contracts, but does not apply to insurance policies (or even to commercial insurance policies). Although there are disclosure duties on every insured in the US, and material misrepresentations can form the basis for rescinding insurance policies, this will occur not by way of application of the principle of utmost good faith, but rather under the policy wording itself. Under US insurance law (which varies from state to state) there is a duty of good faith and fair dealing in insurance contracts, but breaches of that duty are most typically found against the insurer, not the insured. In some jurisdictions in the US, tort damages are actually available to policyholders for breach of this duty,

[20] MacGillivray 17-13; Marine Insurance Act 1906, s 18(1).

[21] There are exceptions to this rule, for instance, if agents have withheld information by way of fraud etc. See MacGillivray, 17-13 and 17-14.

[22] According to s 18(1) of the Act:

(a) Any circumstance which diminishes the risk;
(b) Any circumstance which is known or presumed to be known to the insurer. (The insurer is presumed to know matters of common notoriety or knowledge, and matters which an insurer in the ordinary course of his business, as such, ought to know);
(c) Any circumstance as to which information is waived by the insurer;
(d) Any circumstance which it is superfluous to disclose by reason of any express or implied warranty.

[23] Chitty 41-030, citing *Manifest Shipping & Co Ltd v Uni-Polaris Shipping Co Ltd (The Star Sear)* [2001] UKHL 1, [2001] 2 WLR 170. The nature of the duty changes in post-contractual situations.

but they are not available to the insurer for breaches by the insured, in contrast to the principle of *uberrimae fidei* which is a mutual concept.

Joint insurance, composite insurance and severability of interest

An insurance contract covering more than a single party will be considered to be a 'joint' insurance' or 'composite' insurance. Courts make this determination as a matter of construction when considering allegations, or the consequences, of a breach of duty or misconduct by one or more of the co-insureds. In a project finance context in which lenders are seeking to protect their investment in the project by way of the project insurance programme, it is in their interest to ensure that the insurance will not be prejudiced by one of the co-insureds. **6.62**

Joint insurance will exist if: (1) there is more than one insured party under a single contract of insurance; and (2) such parties have the same insurable interest. It is not enough, for instance, that multiple parties are insured under the same policy. It is necessary that all parties actually have the same underlying interest and will thus suffer the same loss in the event that the insured peril occurs.[24] This has a number of important consequences for all parties. For instance, because loss suffered by the parties under the policy is shared, any insurance proceeds received as a result of that loss will similarly be shared. However, any act by either of the joint insureds that would serve to vitiate a contract of insurance (for instance, the non-disclosure of a material fact) could allow the insurer to avoid the entire contract, meaning that the joint insured who did not commit the vitiating act will nevertheless lose its rights under the contract of insurance.[25] **6.63**

Having more than one insured on the same policy does not mean that it is a policy of joint insurance. The moment that the interests of the multiple insured parties differ, even if the underlying property being insured is the same, the policy will be one of composite insurance. This position attaches when a loss affects each of the insured in a different way. A composite policy is typically seen as a series of separate contracts of insurance meaning that, unlike joint insurance, any vitiating act on the part of one of the co-insured will not allow the insurer to avoid the entire insurance policy. Provided that the nature of the parties' insurable interests differ, and even if one or more of the parties might be entitled to recover the full amount of the loss sustained, the party will be characterized as composite.[26] This distinction is particularly relevant in the context of the vitiation and invalidation of insurances.[27] **6.64**

[24] MacGillivray, 1-194.
[25] See para. 6.79 et seq.
[26] Chitty, 41-011 citing *State of Netherlands v Youell* [1997] 2 Lloyd's Rep 440.
[27] See para. 6.79 et seq.

Insurable interest

6.65 Under English law, to be able to procure insurance, the policyholder must have an insurable interest, or a 'legal or equitable' relationship with the subject matter of the insurance.[28] The subject matter of the insurance policy must also be identified. Insurance does not protect an object per se, but rather insures a person against the pecuniary loss that arises from damage to or destruction of the object or interest in the object. Thus, in the case of business interruption insurance, it is effectively the loss of revenue from the destruction of the object that is being covered.

6.66 The legal relationship between the insured and the subject matter of the insurance is usually found to exist because of ownership or a financial interest, but courts in England have been reluctant to articulate a single set of criteria applicable to all circumstances.[29] An insurable interest can also be created or amended by business practice (being a bailee, executor, trustee, agent), under contract (by borrowing money, renting premises, issuing an insurance policy), and by statute—creating or limiting liability to specific persons. The existence of an insurable interest also depends upon the type of insurance in question. An insurable interest under a contract of life insurance must exist when the policy is taken out whereas an insurable interest under maritime law must exist when the claim is made.[30] For all other insurances, an insurable interest must exist both when the policy starts and when the claim is made.

6.67 Finding its roots in English common law and statute, the law of New York will find a valid contract of insurance exists only if the insured party has an insurable interest in the subject matter of the insurance.[31] The law of New York differs in that the notion of an insurable interest is more expansive than that currently in existence in England and Wales. As is the case under English law, the existence of legal and equitable interests in property are accepted as evidence of an insurable interest in that property. However, both courts and the state legislature have adopted the position that a person who has an 'economic interest' in a property also has an insurable interest.[32]

[28] Section 5(1) of the Marine Insurance Act 1906.

[29] Chitty, 41-006.

[30] MacGillivray, 1-70, citing the Life Insurance Act 1774 and *Dalby v India and London Life Assurance Co.* (1854) 15 CB 365.

[31] Donald S. DiBenedetto, *1-3 New Appleman New York Insurance Law* § 3.01 ('DiBenedetto').

[32] DiBenedetto, § 3.01 citing s 3401 of the Insurance Law and *Meyers v Norwich Union Fire Insurance Society* 47 Misc 2d 353, 262 NYS2d 579 (Sup Ct Ulster Co 1965). The statute states that: 'No contract or policy of insurance on property made or issued in this state, or made or issued upon any property in this state, shall be enforceable except for the benefit of some person having an insurable interest in the property insured. In this article "insurable interest" shall include *any lawful and substantial economic interest* in the safety or preservation of property from loss, destruction, or pecuniary damage.'

Valuation of the subject matter of the insurance

Because the premium payable by the insured is calculated based on the potential quantum of any claim (along with the perceived risk of such a claim being made), undervaluing the subject matter of the insurance could undermine the financial position of the insurer. In such cases, the insurer will look to see whether the insured breached its duty to disclose. However, in the event that (in the case of a non-marine insurance policy) there was no breach of the insured's duty of utmost good faith, the insured will be allowed to recover up to the maximum sum agreed.[33] For this reason, it is common in practice for the insurers to consider the insurance 'subject to average'. This is accomplished by including an 'average' clause which reduces the amount payable in the event the subject of the insurance is undervalued. The claim settlement will be reduced according to the average clause in proportion to the amount of underinsurance by applying the following formula: the product of the sum insured divided by the value at risk, multiplied by the amount of loss, equals the settlement. **6.68**

The amount provided as an indemnity can be amended by additional clauses added to the policy. For example, when there will be no deduction for wear and tear throughout the life of the insurance, the policy is referred to as 'reinstatement' when applying to commercial insurances. 'Agreed values' or 'valued policies' mean that the amount to be paid in the event of a total loss has been agreed at the inception of the policy. This will be paid in full despite variations in the actual value of the insured item at the time of the loss. **6.69**

There are additional legal principles which ensure that the insured cannot recover more than the indemnity. In the event that more than one policy is insuring against a loss, the remedy of contribution may apply. Similarly, if a third party is responsible for all or part of a loss, the insurer may be subrogated to the rights of the insured against that third party. **6.70**

Contribution

When more than one policy covers the same item, the legal principle of indemnity will apply to prevent the insured receiving indemnity from both policies and therefore recovering for more than the loss suffered. Contribution is an equitable remedy so that a proportion of a paid claim can be recouped from other insurers who have also received premium for the same risk.[34] In a project finance context, lenders require that the project company's insurance be treated as the primary protection without contribution from any other insurance. The requirement for this clause stems from the fact that the lenders will have, through the due diligence process, agreed the insurance policies including not just the scope of cover but also the terms **6.71**

[33] MacGillivray, 22-33.
[34] MacGillivray, 23-32.