Financing options in the oil and gas industry

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Practice notes | **Maintained** | United Kingdom

A note on the structures and financing options and risks typically associated with the oil and gas industry.

Scope of this note

This note considers the structures, financing options and risks typically associated with the oil and gas industry. It is written from the perspective of a lawyer seeking to structure a project that is capable of being financed and also addresses the aspects of funding various components of the industry from exploration and extraction to refining, processing, storage and transportation.

In addition, this note considers the typical features of oil and gas financing including the fact that such projects:

- Can be on a very large scale.
- Often take many years from inception to the point at which the end product is sold to consumers.
- Almost invariably involve government bodies.
- Are subject to certain specific risks over and above those more generally found in a project financing context.

The note is intended to provide an overview for those advising on the financing of projects in the oil or gas industries, or to those who are seeking to understand the typical structures and risks involved in oil and gas projects.

For more general information on the nature of gas and/or oil projects, see Practice notes:

- *Downstream gas industry: overview*.
- *Downstream gas sector: terminology*.
- *Financing liquefied natural gas projects*.
- *Anatomy of a gas-fired power project*.
- *International joint ventures: oil & gas*.

Industry overview

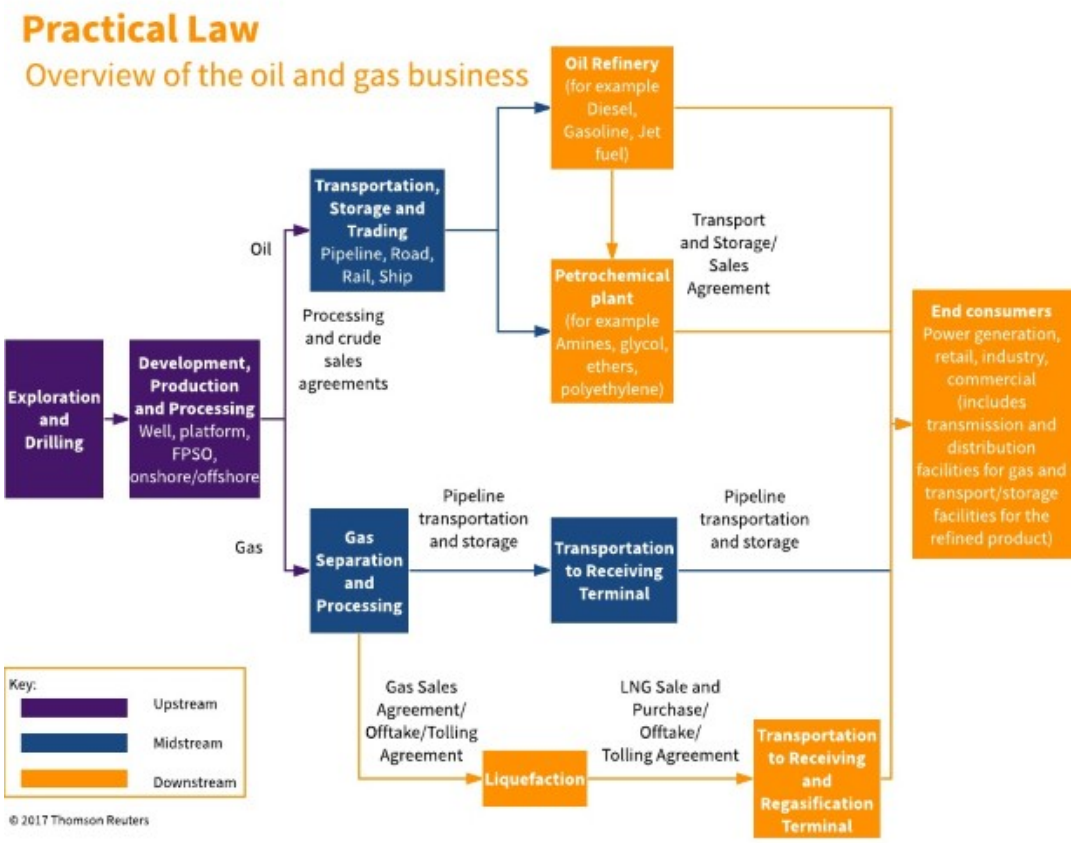
The oil and gas industry underpins many national economies through:

- Its supply of energy to industry and the domestic end consumer.
- The export and import of raw materials, and derivative manufactured and refined products.
- Job creation.
- Revenue generation.
- Furthering of inter-governmental connections and trade links.
- The generation of royalties and tax income.

The industry is typically divided into three major operational components:

- Upstream (or exploration and production (E&P)).
- Midstream.
- Downstream.

An overview of the various components of the industry is set out below:



Providing access and exploration rights to, and consequently monetising, a country's hydrocarbons alongside the development of transportation and processing facilities for such products can be of considerable benefit to a national economy. Private sector technical expertise and equity investment potential is leveraged alongside the participation of state-owned national oil and gas companies (NOCs) to maximise the benefit obtained by the relevant state (as well as the equity investors) and to enable the NOCs to grow their technical expertise.

Equity participants in the oil and gas industry include:

- International oil companies (IOCs) and other corporate entities, who have historically dominated this sector and who are distinguished by market capitalisation into:
  - super majors (for example, ExxonMobil, BP, Shell and Total);
  - majors (for example, ENI and Repsol); and

    - mid-cap/independents (for example, Ophir, Tullow, Noble Energy and Premier Oil).

- NOCs (for example, Saudi Aramco, Qatar Petroleum, ADNOC, Petrobras, Gazprom, CNOOC, PETRONAS and KNOC).
- Global traders (for example, Glencore, Vitol and Trafigura).
- Private equity and hedge funds (for example, Blackstone, Carlyle and Och-Ziff).
- State-owned investment funds (for example, China Investment Corp and IPIC).
- Pension funds and insurance companies (for example, OMERS and Ontario Teachers).
- Services companies (for example, Nabors, Schlumberger, Halliburton and Seadrill).
- Shipping companies for liquefied natural gas (LNG) and other hydrocarbons (for example, Golar, GasLog and Mitsui).
- Industrial manufacturing companies and refiners (for example, The Dow Chemical Company, Reliance Industries and Essar).

In view of the capital intensive nature of oil and gas projects and the varying degrees of risk to which stakeholders are exposed (in part, depending on the stage of a project's development and operations), equity investors typically require different sources of financing over the life of a project. Key financing options employed include:

- **Equity sources.** IPOs, cash calls (under a joint operating agreement (JOA) (see *Key commercial contracts in an upstream project*)), shareholder loans and share subscriptions.
- **Third party financing products.** Corporate loans, acquisition financing, reserve based lending (RBL), equity bridge loans (EBLs), project finance, capital markets, hybrid financings and hedging.
- **Other sources.** Operational current or future cashflow and the raising of funds through asset disposals.

One feature common to many of the above in an oil and gas context is the detailed technical, legal, market, financial and regulatory due diligence carried out on what can often be complex and bespoke projects. A petrochemicals complex comprising multiple interconnected units, such as the Sadara petrochemical plant in Saudi Arabia, for example, requires a comprehensive understanding of, among others, the interface risk in construction and operation, the licensing and technology arrangements and the relevant product markets and sales arrangements. In addition, rigorous environmental and social standards are expected by debt and equity financiers alike to avoid the occurrence of catastrophes of significant commercial or reputational consequence (or both).

As is the case for other large-scale projects, factors framing the risk assessment for an oil and gas project and, in turn, the availability of financing, include:

- The type of project and the nature of transaction.
- The project's location and consequential political, legal, regulatory, economic, social and environmental considerations.
- The identity, creditworthiness, existing liabilities and contractual rights and obligations of key project stakeholders and participants, including the sponsors, offtakers, feedstock suppliers, regulators, contractors, utility suppliers and operator (as applicable).
- The availability and coverage of insurances.

- Individual institutional requirements (for example, capital reserve allocations) and risk appetites (for example, country risk, environmental and social responsibility, source of funds and sanctions regimes).

Over time, the industry has established means of addressing these risks to facilitate the structuring of "bankable" projects through the adoption of recognised frameworks with modifications required to ensure financiers are able to obtain internal credit approvals to proceed. For further details on risk factors, see *Practice note, Identifying and managing project finance risks: overview (UK)*.

Upstream

What is an upstream oil and gas project?

The upstream sector is also known as the E&P division of the business. Activities consist of:

- The exploration of reserves.
- The drilling and evaluation of the commercial viability of wells.
- The recovery and production (including initial processing) from fields.

Product is recovered for onward transportation and processing utilising midstream and downstream infrastructure through which crude oil, natural gas and other related natural resource by-products such as condensates, ethane, propane, butane and sulphur are ultimately sold.

Hydrocarbon deposits are typically confined at high pressure within rock formations. Drilling into these rocks alleviates the pressure and enables extraction of the relevant natural resources. Reserves may be located deep underground on land (known as onshore) or under the seabed on the continental shelf (known as offshore). The country within whose borders fields are located usually retains sovereignty over them. See *Key commercial contracts in an upstream project*.

In an offshore context, upstream activities can be performed by way of drilling rigs from an offshore platform installation or a vessel. Floating production storage and offloading units (FPSOs) are often used to exploit hydrocarbons offshore. These are floating vessels which receive the relevant hydrocarbon(s) either from nearby platforms or from direct production for processing, storage and onward transportation (by vessel or pipeline). Vessels can be preferred by financiers and equity investors to pipelines depending on the ultimate location of the offtaker and localised geographical constraints.

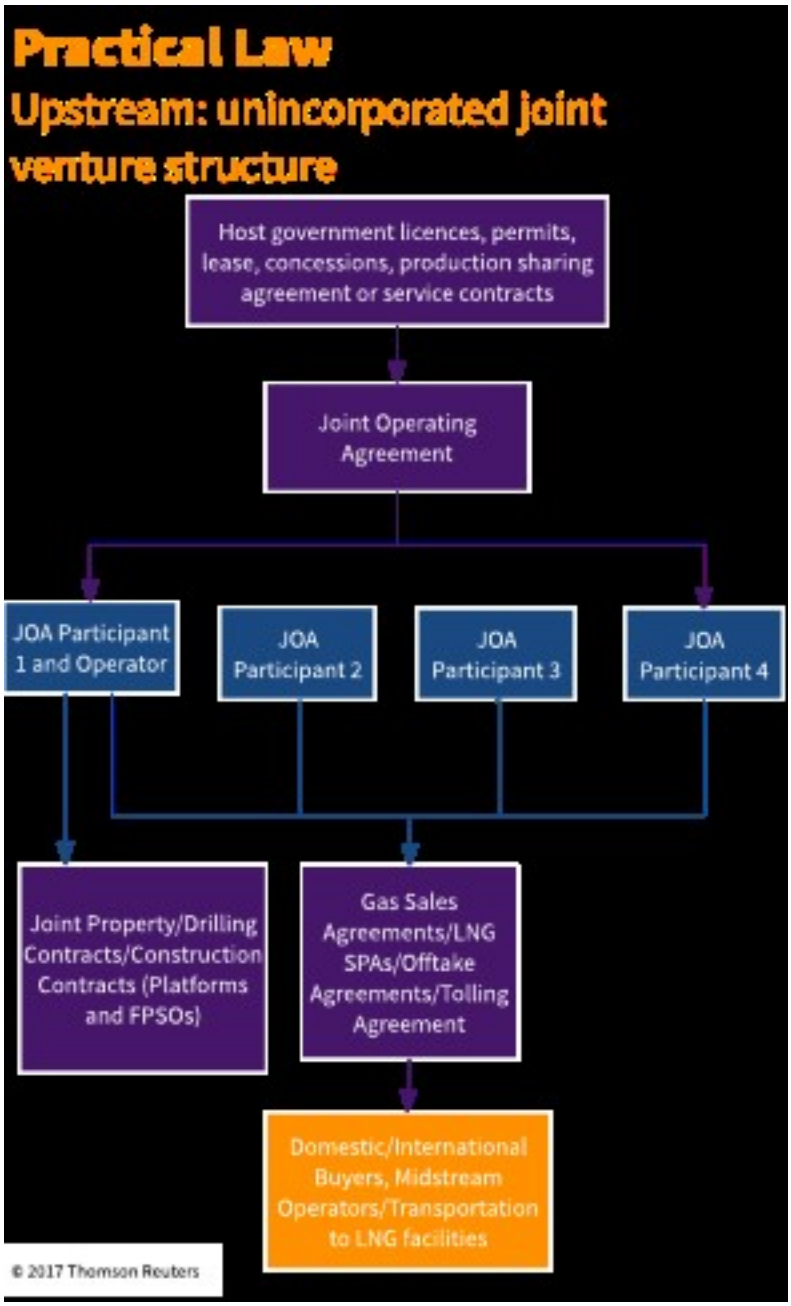
Additionally, and more recently used to recover hydrocarbons including shale gas from onshore sources, "fracking" refers to a process of drilling (often horizontally) into the earth before releasing a high-pressure water mixture to release natural gas trapped within. For a guide to Practical Law's key materials on the extraction of shale gas using hydraulic fracturing, see *Shale gas toolkit*.

Typical equity structure

It is unusual for a single sponsor to finance, develop and operate an upstream field, except if the field is small-scale or the sponsor has sufficient balance sheet financing capability. The latter may be the case in the pre-production phase of a field's exploration as this can be difficult to finance through third party means. Investment in upstream projects is arguably more risky and less predictable than downstream oil and gas ventures, as the amount of cash required to monetise an upstream resource and the timing of such investment contributions will not always be apparent at the outset.

An unincorporated joint venture (UJV) is the more commonly used structure to access sources of upfront equity finance and spread the cost (and risk) amongst participants.

Set out below is an upstream UJV structure showing the equity parties to a JOA and examples of the key government and commercial contracts that are customarily put in place. For more on these agreements, see *Key commercial contracts in an upstream project*.



Each participant holds an undivided interest in the relevant government-granted licence or contractual arrangement, as well as a direct interest in the assets and production from the project (depending on the nature of the government-granted rights) in proportion to its specified working interest. Participants may also be entitled to lift and sell hydrocarbons recovered from the reserve in proportion to this interest. Failure to do so will typically grant the others a right to lift their share.

An operator is identified in the JOA and government-facing documents to lead the construction and operation of the field. The operator plays an important role in proposing development activities, budgets and collection of funding from the non-operators.

The above is not a typical project finance limited recourse structure and the value of the relevant field interests will appear on the consolidated accounts of each sponsor. Incorporated joint ventures (IJVs) (see *Typical equity*

structure) are less commonly used in an upstream context, and this, in turn, influences the nature of the financing open to the participants.

Relationship with the state

Countries may wish to retain an equity or production stake (or both) in any national oil and gas development projects while simultaneously seeking to attract private sector investment and expertise, as a matter of security of supply, to maximise local economic benefits and to preserve their rights in national natural resources (including through Service Contracts and Production Sharing Contracts, see *Key commercial contracts in an upstream project*).

Upstream participants will be granted the right to explore, develop and finally extract hydrocarbons from the reserves located within the specified bounds. This is effected by the entry into, or issuance of, a concession agreement, production sharing contract, service contract, lease or licence (or a combination of these), each consistent with the applicable national legislation. Whether or not the participants will be granted ultimate title to their share of the offtake and right of sale following extraction will depend on the nature of the contract that is awarded.

Key commercial contracts in an upstream project

Concession agreement

This is the contract under which sponsors are granted rights to develop a specified area for a specified period of time and are granted title to any hydrocarbons extracted from the area, in exchange for the payment to the government of royalties and taxes. The relevant host government may stipulate a percentage of offtake to be applied for domestic use.

Production sharing contract

Production sharing contracts (PSCs) are entered into frequently in the Asian market. Similar to a concession agreement, they entitle the sponsor to develop the relevant field for a fixed term but, importantly, title to the extracted product remains with the relevant host government.

Terms used in this context include "cost recovery oil", which is the product sold to cover the reimbursable development costs of the sponsor and "profit oil", being all remaining oil to be sold.

A host government may require certain bonuses to be paid by the sponsors on reaching specified milestones.

Service contract

Under a service contract, a sponsor will develop an area on behalf of a host government in exchange for a fixed fee which is sized to cover development and operating costs and a pre-agreed profit for the sponsors.

Licences

As is customary in the UK, licences are granted by some host governments under national legislation for a party or several parties to develop a specified area. Approved activities are typically the subject of legislative limitations including with regards to budget setting.

Joint operating agreement

Upstream projects are often structured between a series of SPVs of each sponsor as UJVs, which arrangements will be governed by a JOA with each participant having an undivided interest in the relevant contractual arrangement or licence with the government and assets in proportion to their interest in the UJV. Parties often commence their negotiations using industrywide standard forms of these documents such as the Association of International Petroleum Negotiators (AIPN) form, adapting as required for the specific nature of the relevant project. Other standard forms are used, for example, in the US where UJVs may involve lesser-experienced participants or smaller scale onshore operations, such as that of the American Association of Professional Landmen.

In particular, lenders will consider:

- Operator identity and creditworthiness, the scope of the operator's role (from a development planning, budgeting, construction and operating perspective), liabilities and the ability for the operator to be removed and/or replaced.
- Decision-making processes on developments and expenditure (for example, through an operating committee).
- Equity funding (known as cash calls that are made by the operator) including the means of, and timing for, cash calls and the consequences of a non-operator neglecting to respond to its proportionate share of a cash call. Failure to fund is typically addressed by a suspension of JOA rights and, ultimately, if it is not remedied after the expiry of any cure periods, it will lead to termination of the defaulting participant (and a corresponding funding obligation for the non-defaulting participants). Shareholders' agreements in an IJV context will contain equivalent provisions.
- Lifting rights in relation to proportionate shares of the production from the field and the consequences of failure to lift.
- Assignment rights, which can often be underpinned by the requirements of the host government with regard to absolute transfers or assignments (for example, requiring the parties to obtain prior consent or meet other specific criteria (or both)).

Sales contracts

In order to monetise the upstream processes, sales contracts will also be entered into, whether permitting sales individually (by each equity participant in proportion to its interest) or permitting sales by one entity on behalf of all of the participants. Depending on the integrated nature of the project or otherwise, sales can be on a tolling, take-or-pay or marketed basis.

Drilling contracts

If upstream participants do not have the machinery to extract hydrocarbons onshore or offshore, they may also enter into drilling contracts negotiated bilaterally with service providers (for example, Nabors Industries, Seadrill Limited) for a fixed, but renewable, term under which specific rigs, individuals and licensed information can be provided alongside the rig at specified day rates. This industry may experience downward pressure in times of turbulence in the oil and gas markets.

Specific risks in financing an upstream project

In addition to those common large scale project risks described in *Industry overview* and those set out in *Practice note, Identifying and managing project finance risks: overview (UK)*, third party investors will focus on certain key risks when evaluating an upstream project.

Reservoir risk

A reserves consultant will prepare a reserves report:

- As a financing condition precedent to establish the nature of the recoverable hydrocarbons and the existence of proven, probable and possible reserves.
- To verify the production profile projections and reasonableness of the proposed production costs.

The ultimate aim of this being to ascertain the project's revenue generation capability and, therefore, ability to service debt and/or produce a sustainable and attractive equity return (as applicable). The relevant commodity prices at such time will have an impact on this.

Field life is also key, having an impact on both financial ratios and debt tenor. The parties will establish the reserves tail, which is the estimated point in time at which only 25 to 30% of the proven reserves remain (the Reserves Tail Date).

Operational risk

Proven technology is crucial in well performance as, together with the operator's identity and track record, it can have a substantial impact on hydrocarbon recovery rates. Technological advancements also contribute to longer field production lives and increased recovery percentages from the fields. Perceived benefits from a risk analysis perspective derive from the alignment of interest created where an equity participant is also the operator.

Another consideration in oil and gas operations relates to the adherence to international and national environmental, health and safety regulations and the associated costs for non-compliance and for instigation of environmental remediation.

Price risk

Particularly in times of oil price fluctuations, pricing risk in the context of the overall viability of a project merits careful consideration.

Hydrocarbons are typically priced on the basis of the quality of the product against the relevant benchmark. As has been seen in the recent past with Brent crude descending from a high of $147.02 per barrel in July 2008 to a 12 year low of $29.24 per barrel in January 2016, market prices fluctuate and can be highly volatile, creating difficulties in assessing the ability to forecast and service debt (or provide a sustainable return on an equity investment). Commodity hedging agreements can be entered into to limit this exposure (see *Hedging*).

JOA risks

It is not uncommon for each JOA participant to grant its JOA counterparties a security interest over its own interest in the JOA and UJV, in which case the priority of ranking will need to take this into account in any third party financing.

Lenders will also focus on the creditworthiness of JOA participants and the consequences of failure to fund cash calls, provisions for sole risk expansion projects and transfer restrictions relating to the ability to assign rights to a security trustee in an enforcement scenario.

In many instances, including in the UK, government consent is required at the point of enforcement due to national legislation or the applicable concession agreement (or equivalent).

Sources of financing in the upstream sector

The earliest exploration stages of an upstream project in which the parties have no guarantee of commercially viable production options from that field can be a challenging time for an equity investor to raise finance. There is usually a time lag between commencing the initial drilling activities and the recouping of costs from production, which may only come some years from when the exploration activities have identified commercially viable reserves and obtained appropriate approvals.

Equity funding

IOCs will look to their own balance sheets to source funds or alternatively seek corporate loans or high-yield debt. Their proven track record means that they are more likely to be able to raise unsecured corporate debt.

A smaller to mid-cap player will not, however, have this option and will typically either seek third party secured financing, to bring in additional partners to acquire a stake in the field, or inject further equity.

Reserve-based lending

A common source of financing employed in the upstream sector is reserve-based lending (RBL), which enables the raising of debt across a number of assets at various development stages and retention of a degree of operational flexibility. Structures have developed differently between the longer standing North American markets and those financed internationally. This product is often used in a refinancing context.

The key features of RBL in an international project context are:

- Commercial banks make funds available to cover capital expenditure, operating expenditure and the development costs of a number of specified assets (in doing so they spread the risk) and for general corporate or working capital purposes. In addition, drawings may cover the refinancing of existing equity/debt (including bridge financing) or the finance of an acquisition.
- Available loan commitments usually fluctuate on a six monthly basis by reference to the "borrowing base amount", calculated using the most recently delivered banking case that covers each of the included oil and gas fields and identifies:
    - the net present value (NPV) of future cashflows from each field, taking into account their current status (producing, non-producing or undeveloped);
    - availability of sponsor collateral; and
    - concentration limits on the borrower.
- As commodity prices fluctuate, so too does the available loan commitment. If key ratios are breached, the borrower must prepay a corresponding proportion of its loan.
- RBL lenders consider only proven, and proven and probable reserves (not possible and contingent reserves) and the extent to which projected production figures enable debt service. ("Proven reserves" means those with a 90% (known as a P90) chance of recovery and "proven and probable reserves" constitute those with a 50% (known as a P50) chance of recovery.)
- Banks typically require:
    - loan tenors to match production profiles as lenders seek full repayment by the earlier of Reserves Tail Date and a short-to-medium term maturity of five to seven years;
    - maintenance of coverage ratios: loan life cover, project life cover and debt service coverage ratios (see *Example RBL coverage ratios*);
    - fixed amortisation schedule and prepayment of cash (a cash sweep) to the extent that the outstandings of a loan facility exceed the borrowing base amount;
    - secured project accounts (including those of the sponsor party to the JOA) through which revenues are to pass in accordance with a payment waterfall;
    - restrictions on further indebtedness;
    - security including over borrower shares, collection and collateral accounts, borrower and group assets (including licences, JOAs, production sharing contracts, project documents), accounts, insurances, hedge agreements, cross-guarantees by the companies owning the relevant assets; and
    - an ability to add, or dispose of, the field assets on which the borrowing base is founded, subject to various conditions being met, including in relation to the provision of security and ability to service debt.
- Sponsor support may be required in the event that the offtake arrangements do not match the field's production capacity and, in a gas field context, long term gas sale and purchase agreements are usually required.

- RBL pricing can be favourable if used in the later, less risky stages of an upstream project.

For information on borrowing base facilities, see *Practice note, Borrowing base facilities*.

Example RBL coverage ratios

The following are example formulations of coverage ratios found in reserve based lending (as well as, in the case of DSCR and LLCR, certain other types of financing).

- **Loan life cover ratio** (LLCR), which can also be employed in a midstream and downstream context.

  The ratio of:

  - the NPV of projected net cashflow for each period during the period commencing on the relevant test date until the final maturity date of the loan(s); to
  - the aggregate amount of facility outstandings, taking into account all account payments made on that date.

- **Project life cover ratio** (PLCR).

  The ratio of:

  - the NPV of projected net cashflow for each period during the period commencing on the relevant test date and ending on the date on which field costs are greater than revenues; to
  - the aggregate amount of facility outstandings, taking into account all account payments made on that date.

- **Debt service cover ratio** (DSCR), also a common feature on midstream and downstream projects.

  The ratio of:

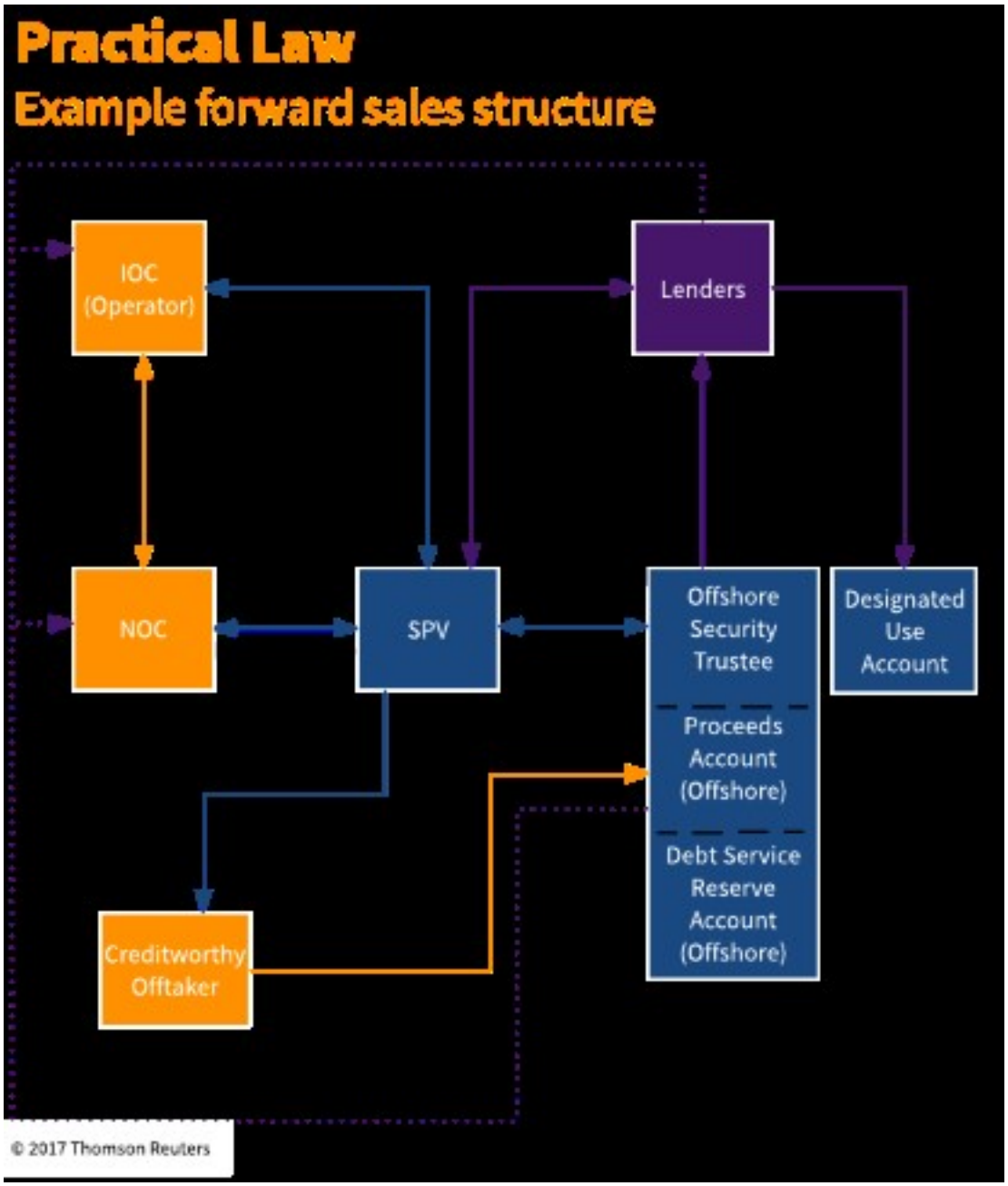
  - Cash Available for Debt Service (CFADS) in respect of a particular period; to
  - Debt Service falling due in such period.

  Although the breakdown of what constitutes CFADS is specific to each project, in simple terms, CFADs is those revenues and funds received by the project company or, as the case may be, project in the particular period net of any permitted ongoing expenditures and taxes. The Debt Service component of this ratio will take into account all interest, fees, costs and commissions in addition to the amounts of principal to be repaid.

Forward sales/Inventory monetisations

A "forward sale" constitutes the sale of a commodity to be delivered at a specified time in the future at an agreed on price at the inception of a contract. In this financing scenario, both delivery and transfer of ownership are deferred but there may be a cash advance upfront as part of the consideration. The buyer has no proprietary entitlement to the commodity because an ownership interest does not arise until volumes are appropriated.

For local law purposes, the forward sales structure has to stand up to a "true sale" scrutiny to avoid being recharacterised as a loan supported by a security interest, which may, if and to the extent an NOC is involved in the financing, breach the relevant host government's negative pledge obligations. The challenge is, therefore, to ensure an outright transfer of title to the buyer, which will be determined by the laws of the jurisdiction in which the commodity is located at the time of transfer.



The key features of a forward sales structure are:

- A special purpose vehicle (SPV) is incorporated by upstream joint venture parties who each enter into a forward sale agreement to deliver fixed commodity volumes on specified dates if commercially reasonable to do so.
- The forward sale agreement stipulates the commodity type, quality and quantity, time and place for delivery (and passing of title), the parties' rights and obligations, and the consequences of non-performance. The SPV and the lenders take the reserve risk (subject to satisfactory reserve reports being in place at closing) based on prudent operation of the relevant field.
- The SPV enters into offtake agreements with creditworthy, experienced offtakers nominated by the sponsors that, subject to any local requirements, mirror the forward sales agreements.

- The SPV enters into financing arrangements with the following features:
    - loan proceeds are required to be paid into an unsecured account controlled by the SPV and sponsor entities, which is held separately from the other project accounts and is subject to restrictions on application;
    - utilisations are in such amounts and at such times as correspond to the sponsors' request for the SPV to take delivery at a specified time in the future of commodities at a specified price, the timing of which request will ultimately correspond to the construction schedule. Utilisations are also applied by the SPV towards prepayment for future commodities to be delivered and a premium when commodities are delivered that equals the net proceeds received by the SPV from resale of the commodity.
- Sales proceeds from the offtaker are placed in a secured offshore account and applied towards debt service (in addition to which a secured reserve account is also held).
- The lenders in this type of financing benefit from a borrower security package that includes share security over the SPV itself as well as security over substantially all present and future assets (including commodities once appropriated under the forward sales agreement, accounts and balances and contractual rights under documents to which the SPV is a party).
- Financiers will only have limited recourse to the upstream participants, as would be the case in a project financing structure but direct agreements will typically be entered into with the joint venture partners (as sponsors and sellers) to cover key credit considerations and the operator in respect of operating covenants. Failure to meet the relevant obligations will result in an event of default under the financing.

Volumetric production payments

Historically used in the North American markets as a form of financing, a volumetric production payments (VPP) structure is useful for producers of lower credit strength, especially where commodity prices are high.

Key features of this structure are:

- The buyer (the VPP buyer) makes an upfront cash payment to a producing entity (the VPP seller) in exchange for a non-operating interest, for which in the future the VPP buyer will receive a specified portion of offtake according to a specified timeline.
- The VPP buyer receives payments from the VPP seller over a period of five to ten years in the form of cash or units of hydrocarbons up to an agreed amount calculated by reference to the proven reserves.
- Any shortfall in the agreed amount provided to the VPP buyer, except where this is due to production shortfalls, are met and compensated by additional deliveries in the future.
- Once the agreed quantity of hydrocarbons has been transferred, the non-operating interest is conveyed back to the VPP seller.

Other sources of financing

- **Corporate debt.** Corporate financing becomes relevant in an upstream context when:

- an entity is large enough and has sufficient production track record to be in a position to borrow through a corporate credit facility adopting traditional historic EBITDA ratio testing; or
- a sponsor is seeking to fund its own cash calls.

The benefit of proceeds going directly to the sponsors is that there is flexibility with regard to the operation of the project. For more general information on corporate loans, see *Practice note, Corporate loan facilities*.

- **Project finance.** An upstream facility is capable of, but does not always lend itself to, being project financed, not least because of the less frequent use of limited recourse structures. That said, hybrid RBL/project finance structures have been used in Mediterranean, African and offshore projects such as the Offshore Cape Three Points Integrated Oil and Gas project in Ghana, where the covenant packages, rights and restrictions (including in respect of the accounts structure) resemble those of a project financing but the security packages (which include the assets, interests and accounts of the sponsors to the project) look more like those encountered in an RBL facility. For more information on project finance, see *Multi-sourced project finance* and *Practice note, Project finance: UK law overview*.
- **Bridge facilities.** Short term bridge facilities are not unusual in the upstream financing context where a sponsor is seeking to bridge a funding gap until it is able to raise a higher amount of debt on more favourable terms once its assets are better developed and offer a greater degree of certainty. Bridge financings of an "equity bridge" nature were put in place by multiple investors in the early stages of the Tamar gas field development in Israel and were subsequently refinanced.
- **Project bonds.** Although traditionally more difficult to access for the smaller to mid-cap players in Europe, increasing activity is expected in this area, in light of issuances by Tullow Oil, Delek/Avner and Afren plc. For further information on project bonds, see *Project bonds* and *Practice note, Project bonds*.

Midstream, downstream and integrated projects

Similar considerations are taken into account when approaching the equity structure and financing of projects in the midstream, downstream and integrated oil and gas markets. Their salient features are set out below followed by the equity structures most commonly employed and applicable forms of financing.

Typical equity structures

A variety of structures can be employed for midstream and downstream ventures depending on the type of project, whether integrated with another sector, or depending on the legal framework of the relevant jurisdiction. For example, in a midstream pipeline context, an IJV might be used where one SPV develops, constructs, owns and operates the assets, or alternatively separate SPVs may be established for each jurisdiction crossed, necessitating careful cross-guarantee structuring within a financing.

IJVs lend themselves well to a limited or non-recourse project financing where the project no longer features on the balance sheet of the sponsors, save to the extent of any parent company guarantees or debt service undertakings required to be provided by way of completion support for the project. The capital costs involved in these projects make them highly unlikely to be owned by a single stakeholder although certain types of asset, which generate a regulated return such as, for example, gas transmission and distribution systems may well be owned and operated by one or two entities. This has been seen most recently in the context of the bid processes for various European assets

in this sector, for which acquisition financing has been used to finance the relevant purchases. See, for example, the sales by:

- EISER Infrastructure Partners of Italian gas pipeline group Societa Gasdotti Italia in 2016 to a subsidiary of the Macquarie Group.
- Macquarie of the German gas network, Thyssengas to DIF and EDF.

In a more typical midstream context, and in contrast to the UJV structure described above, the SPV project company holds the necessary rights and licences and enters into most of the contractual framework required to develop, finance and construct the project itself.

What is a midstream oil and gas project?

The midstream sector of the oil and gas industry comprises the transportation and processing of extracted hydrocarbon products from the upstream directly to the onshore market or to port facilities for storage or onward passage to the relevant domestic or international downstream market (or both). This sector comprises the construction, operation and maintenance of pipeline projects and vessels, and the building of storage and processing facilities (or any combination of these).

One type of midstream project used by upstream participants or their offshore customers (or both) is the floating storage regasification unit (FSRU), which enables effective transportation and eventual transfer of LNG from source to end customer. These operate to reheat chilled fuel on arrival at destination, with the regasification process carried out either through an independent FSRU or aboard the vessel actually transporting the LNG from source. The former is often found within the bounds of destination port facilities to minimise transfer time and costs, and the units can subsequently be used as storage vessels pending lifting for end use onward transportation. Potential financiers of such projects will take into account, among other risks, the risk of volume loss through external FSRU regasification and onward transportation. For more information on LNG projects, see *Practice note, Financing liquefied natural gas projects*.

A midstream pipeline project, such as the pipeline to transport gas from the Shah Deniz field into Europe, will require the entry into of host government agreements (HGAs) with the governments of those countries in which the hydrocarbon reserves originate and across whose jurisdictions, for example, a pipeline will be constructed. The HGA provides a right to build and operate the pipeline for a specified period of time, right of free passage and various change in law and expropriation protections. In addition, as pipelines commonly traverse more than one set of national borders, these midstream projects will also necessitate the entry into of an intergovernmental agreement (IGA) and the granting of a wide-ranging selection of permits specific to the project.

Specific risks in financing a midstream project

Particular risks specific to a midstream project, include the following.

Construction risk

In a midstream context, construction risks may include:

- Interface risk with completion of the upstream and downstream delivery points.
- Purpose built vessels not being built to the required specification.
- Challenges posed and delays caused by the extreme climates and inhospitable conditions that may be encountered in the environments where many of these projects can be located (for example, the Arctic), which may affect a project's ability to generate revenues.

Capacity risk

Financiers (and their technical and marketing advisers) need to consider pipe sizing, the extent of capacity use, the potential for future expansion and the ability to generate revenue from tolling or equity shipment tariffs.

Storage and transportation risk

Loss, delay or damage in storage or transportation is of considerable concern as it will directly affect the ongoing revenue generating capability of the assets. This can include the lifting of the product or vessels not running to schedule.

Political risk

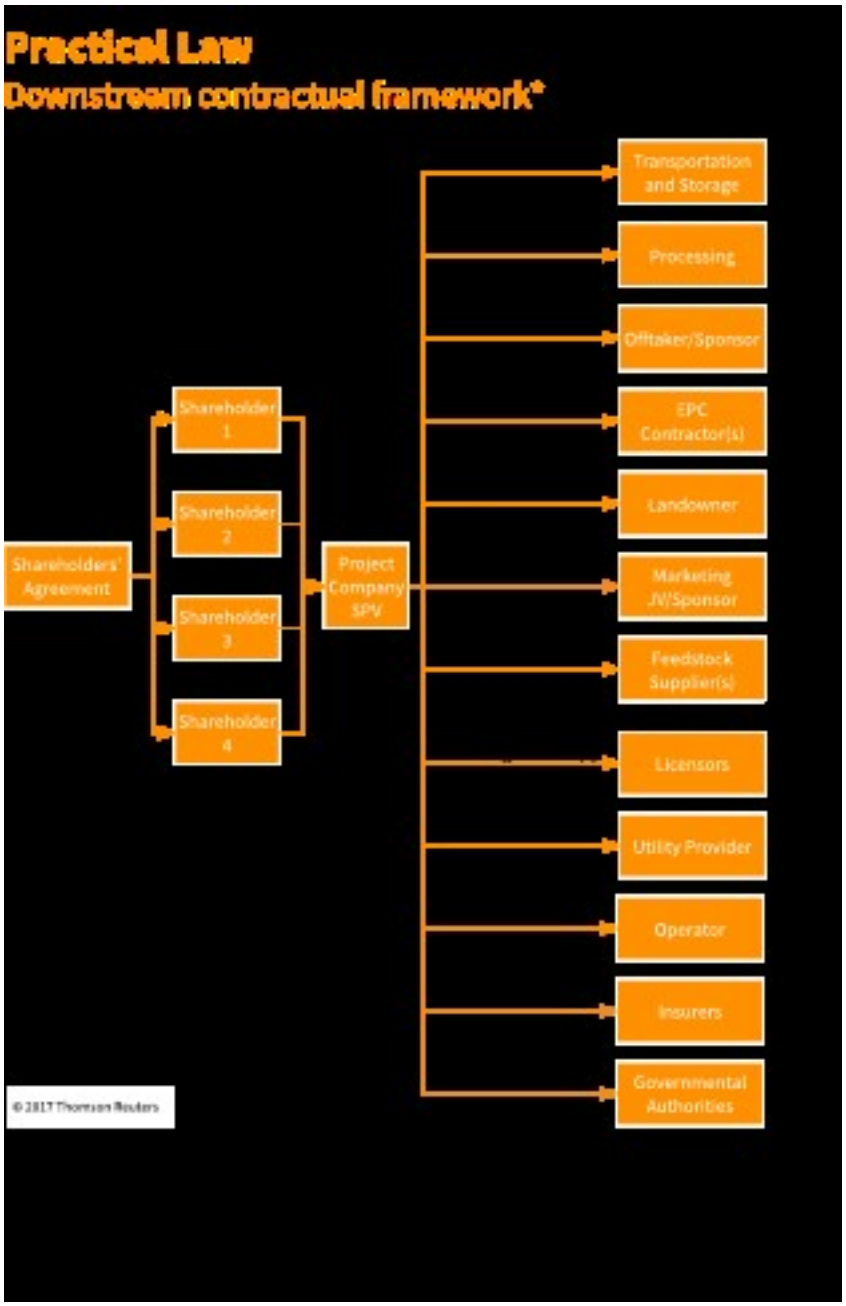
Lenders will focus closely on the expropriation and change in law protections and tax incentives afforded by the HGAs and IGAs, maritime laws (to the extent the pipeline is subsea), as well as the necessary permits and whether any community support projects are required to be carried out. For example, the Nabucco-West pipeline was severed in the Turkish section by three explosions in 2012 and the Baku-Tbilisi-Erzurum pipeline was disrupted by an explosion.

Environmental risk

Pipelines can be routed through challenging geographies with greater land or marine areas affected in an emergency scenario than, for example, a more self-contained power plant. Liabilities can be considerable for environmental damage not to mention the costs involved in a remediation context and the reputational consequences for those parties involved. Lenders will also need to carefully diligence the relevant decommissioning and abandonment regime.

What is a downstream oil and gas project?

A downstream operation refers to those projects that process extracted resources to make them into a usable end product or a source of energy supply, including by way of power plants, refineries, LNG liquefaction and regasification facilities and petrochemical plants. The diagram below illustrates the typical contracts that form part of a downstream framework.



Offtake arrangements in a downstream context can be by way of long-term sole offtake where, for example, equity stakeholders, a government entity or industry purchases all of the refined oil products or LNG, as the case may be. Alternatively, and depending on the type of product, sales may be structured by way of short-term or spot sales contracts or through a separate marketing IJV selling to end users. Again, in all cases, the lender focus will be on the ability of the project to meet its debt service requirements.

For more on downstream projects, specifically in the context of gas projects, see Practice notes:

- *Downstream gas industry: overview*.
- *Downstream gas sector: terminology*.

- *Anatomy of a gas-fired power project*.

Specific risks in financing a downstream project

Key risks faced by any downstream project include the following.

Feedstock supply risk

Ultimate revenue streams for the project life and relevant financing tenor depend on the security of supply of the raw oil and natural gas products (feedstock) to the project. For integrated projects (see *Integrated projects*), this risk can be partially mitigated by aligning, as far as possible, the interests of the upstream participants with the eventual output product.

Construction and completion risk

Downstream (and integrated) projects often include a complex set of interdependent components each with its own specialist technology, presenting interface risk between the contractors during construction (as well as on an ongoing basis during operations).

Pricing risk

Pricing of the offtake and how this will be built into the lenders' models is usually the subject of some discussion. S&P Global Platts is one of the typical benchmark providers for the commodities and energy markets. For other products, such as LNG, this will vary according to geography. Petrochemical pricing, however, can be much more varied.

Offtake risk

Financiers of LNG projects typically focus on ensuring that long term LNG SPAs (commonly on a take-or-pay basis) are in place for a minimum annual contracted quantity to ensure that the relevant project is more likely to meet its debt service obligations. This is important given the less liquid nature of the market for LNG than crude oil.

Integrated projects

Certain upstream participants often seek to maximise the value chain benefits by taking stakes in the E&P elements of a field with a view to the profits that may be made by securing long-term reliable supply to other complementary parts of their sales business, whether in domestic markets or internationally.

This approach is common in an LNG project context, where equity investors develop and operate an upstream gas field, construct the pipeline to transport the hydrocarbon for processing at their downstream liquefaction facility to purify and refrigerate the gas into a liquid state. Such a project may then involve:

- The acquisition and leasing of a fleet of LNG tankers.
- Further pipelines and the construction of a regasification plant to convert the LNG back to gas (regasification) for distribution to final end users.

It can also be the case where upstream partners are not granted title to all extracted hydrocarbons under their government-granted rights but can profitably transport their portion of production to a market downstream for onward sales. Building transportation infrastructure through the midstream into a different jurisdiction or downstream market can often generate more enhanced returns for each individual sponsor than may have been the case by upstream participation alone.

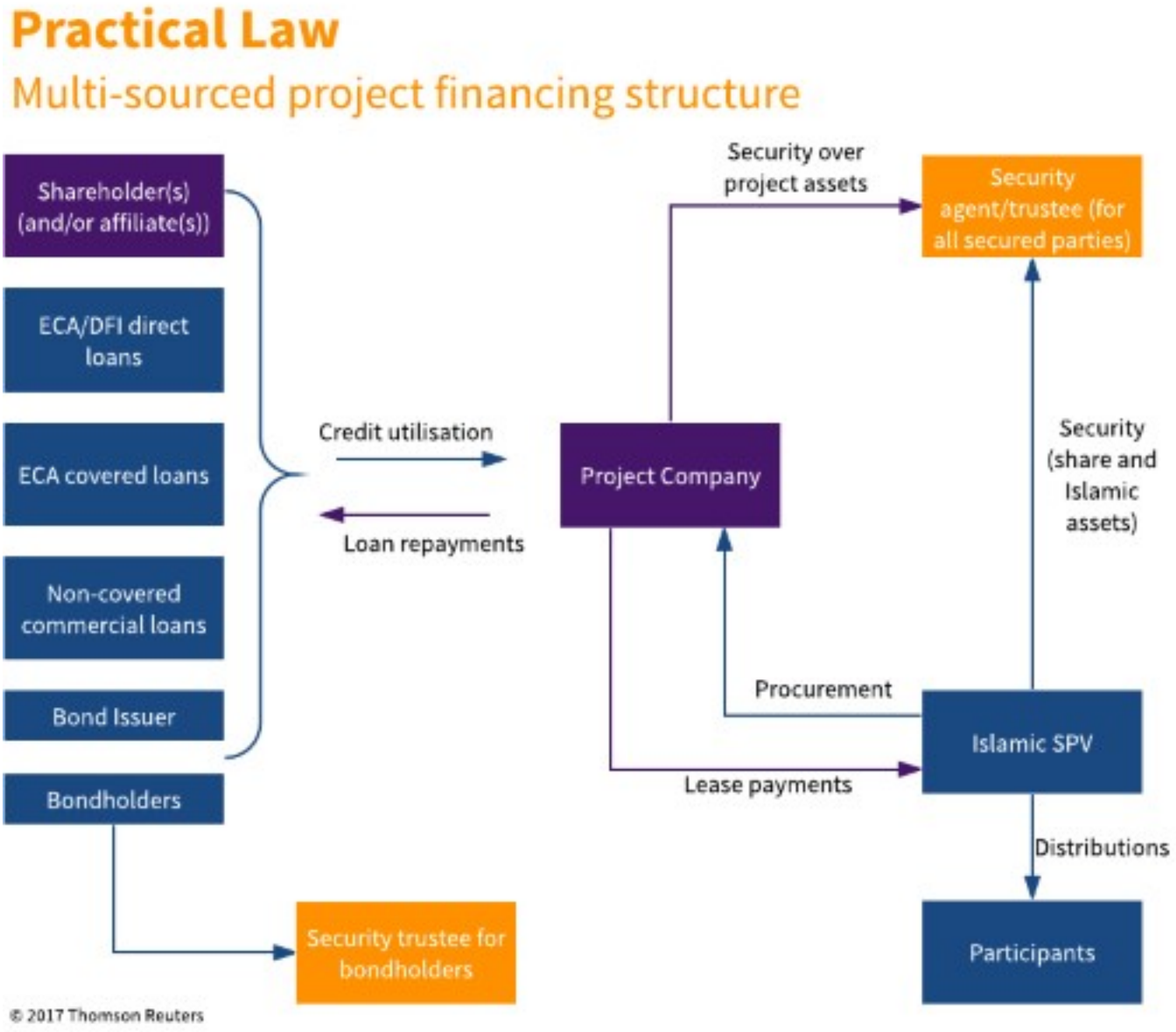
In an integrated project, IJVs are often used for the midstream and downstream project elements and financing can be sourced on either a project finance IJV or silo'd basis (either across the sponsors or between different sectors of the project) depending on the financing needs of the parties. Integrated projects require significant amounts of debt to be raised and a project finance framework is commonly used to facilitate long-term and large-scale financing during construction, potentially refinancing at completion through a capital markets solution.

Sources of financing in midstream, downstream and integrated projects

There are a number of potential sources of financing for midstream, downstream and integrated projects in the oil and gas sectors.

Multi-sourced project finance

Midstream, downstream and integrated LNG projects can be complex with huge capital costs involved. These kinds of projects typically follow the multi-sourced project financing route during the construction phase. An overview of the lenders who may be involved in such a financing is set out below.



Third party financiers in this sector include a combination of international and local commercial banks, export credit agencies (ECAs), Islamic banks, pension funds, insurance companies, development finance institutions (DFIs) and multilaterals such as those from the World Bank Group and the European Investment Bank. To a certain degree, the strength of the sponsor and the extent of existing commercial relationships with such a sponsor may dictate the ability of a project to raise funds and influence the relevant financing terms, although a detailed risk analysis will also be key (see *Industry overview*, *Specific risks in financing a downstream project* and *Practice note, Identifying and managing project finance risks: overview (UK)*).

When considering which institutions may be open for business to a particular oil and gas project, sponsors and their financial advisers will consider, among others:

- Whether there are any DFIs with a mandate to support projects in that particular jurisdiction.

- Which ECAs might be able to finance the procurement sources for the project.
- Whether the jurisdiction is open to accessing Islamic financing.
- What kind of products such institutions might be offering: debt and equity, direct loans or guarantees, as the case may be.

From a transaction cost perspective, the financing and pricing terms (which will include transaction fees, interest calculation (including margin) but also will be reflective of tenor) may be more competitive than those of commercial banks and typically these sources will be able to finance larger loans than their commercial counterparts. In addition, ECAs and DFIs are able to lend to countries that may present more political and commercial risk and their involvement can also mitigate political risk exposure from a commercial bank perspective and provide for more stringent environmental, social and safety standards to be adopted.

Local bank involvement can also be helpful to mitigate certain risks including through providing local regulatory and political knowledge, as well as local currency financing, which is useful in mitigating some of the currency risk that may arise if the offtake is to be paid for in a currency other than that of the main loan agreements.

Multi-sourced project financing may enable an SPV and its sponsors to:

- Access a higher debt quantum to meet significant capital costs, although this will require equity "skin in the game".
- Leverage equity investment to raise capital on a non-recourse or limited-recourse basis, though note that in an oil and gas context:
    - due to the complexities and risks of cost overruns, debt to equity ratios are higher than in other sectors (70:30 being not uncommon) and significant contingencies can be built into the projected project costs in the banks' financial model;
    - completion risk can be perceived as high, necessitating the provision of debt service undertakings or parent company guarantees (or both) from the sponsors, though this in turn lowers the margins financiers can earn on the outstanding debt; and
    - where equity is funded directly by the sponsors, lenders may require letters of credit, assignments of subscription agreements or cash collateral in respect of equity funding obligations.
- Access large commitments from ECAs for funding which the SPV can apply towards payment for specifically stated, eligible construction goods and services. This can also provide additional political risk cover to commercial banks and enable them to participate in jurisdictions that might not otherwise be possible due to internal risk analysis policies and restrictions.
- Access a combination of fixed and floating rate facilities, the combination of which may, in turn, provide a natural interest rate hedge for the financing and lessen the need for formal interest rate hedging arrangements to be entered into.
- Facilitate the efficient drawing of debt with utilisations during the availability period that match the phased spending on construction and are consistent with the milestones that may be set out in the applicable construction contracts.
- Develop more stringent environmental and social requirements through the involvement of DFIs going beyond the Equator Principles of the commercial lending institutions (for an introduction to these issues, see *Practice note, Project finance: UK law overview: Social, ethical and environmental issues*).

- Access longer term debt including from capital markets.

Despite this, the project financing route imposes significant restrictions on the project construction and operations, including in relation to the granting of security and comprehensive representations, warranties, covenants and events of default. Additionally, there will be substantive and regular ongoing reporting obligations so that the lenders are kept apprised of the project's status, including in respect of delays and cost overruns, which, as mentioned above, can be significant. Many of these restrictions and obligations will be bespoke to the relevant project and will result from the extensive due diligence exercise that is carried out and the lenders' analysis of the various risks inherent in the project.

Financings of oil and gas projects (including hybrid transactions in the upstream, midstream pipeline, and petrochemical and refining sectors) will typically include a detailed and robust completion testing regime. This is of particular importance where the project comprises multiple interdependent components, either as part of a downstream financing or where constructed and operated on an integrated basis. The covenant testing will comprise mechanical, volume and reliability testing as well as other elements (such as the funding of a debt service reserve account, operational insurances being in place, no events of default being outstanding and all environmental requirements are being complied with). The significance of these tests being met is that it usually results in a lifting of recourse to, and restrictions on the sponsors (for example, completion support and transfer prohibitions) and the sponsors are able to start receiving distributions from the project. On passing the completion tests, the lenders often then only have recourse to the borrower and its assets for the repayment of the debt where previously they may have had an ability to call under a parent company guarantee in the event of, for example cost overruns. In those projects where early operating revenues are forthcoming prior to the completion test being fulfilled, which is common in an oil and gas or petrochemical plant context, sponsors often seek to negotiate value extraction ahead of completion.

The significant price volatility of oil and gas products has a number of consequences in a project financing context, including in relation to higher debt service coverage ratios and obligations to ensure that any excess cashflow is applied in prepayment of outstanding debt.

Shareholder funding

The use of shareholder capital as a source of funding is common across the various components of the oil and gas sector where, for example, equity investors might be required to ensure the maintenance of gearing ratios under the terms of a project financing or where they independently fund a project ahead of any third party financing being put in place. Shareholders may consider extending shareholder loans or subscribing for shares depending on various tax, corporate and local legal considerations. A shareholder loan can be extended on a commercial, arm's length basis, and may be secured, but will have to be subordinated to that of any external financiers under the terms of the relevant intercreditor agreement.

In a project finance context, the required quantum of shareholder loans (or share subscriptions, as the case may be) will take into account the maintenance of minimum gearing ratios and, thus, the drawdown schedule under the loan agreements. Until the project finance facilities are repaid in full, repayment of principal or interest on shareholder loans will only be possible to the extent that distributions are permitted under the terms of the financing documents and in accordance with the payment waterfall set out in them. The sponsors will typically not be able to accelerate the repayment of their shareholder loans or to trigger a cross-default as the lenders will expect to be repaid in all cases ahead of equity stakeholders. A construction phase project financing will usually prohibit a sponsor from any value extraction before the completion testing requirements have been met (or potentially earlier, if there is to be significant early revenue generation ahead of the full completion test requirements being fulfilled).

In recent years, DFIs, infrastructure and pension funds and private equity investors have all invested in projects across the oil and gas sector including, for example, in the Tamar gas field, the Egyptian Refining Company and Golar LNG by way of subscribing for shares in the project structure. Rights attaching to such shareholder investment will be set out in the relevant governance documents but will be subordinated, and subject, to those of the third party financiers of any outstanding senior debt to the project.

Equity bridge financing

Stakeholders can maximise their capital returns by meeting their equity funding obligations in a project financing through the use of equity bridge loans (EBLs). EBLs typically mature at, or sometimes, shortly after the end of construction, and their availability depends partly on whether the project finance lenders or local law require any "hard" equity contributions from the sponsors.

Key features of EBLs include:

- Drawdown is usually in full upfront, but if the parties agree to EBL drawings pro rata with senior project finance utilisations, the senior project lenders will seek sponsor support to ensure there is no funding shortfall in the event that the EBL lenders do not fund.
- The sponsors are required to provide a guarantee of the project company's repayment obligations, since the senior project finance lenders retain priority of repayment from the project cashflows (save to the extent that distributions are permitted and for a capped amount of interest payments). The presence of a guarantee enables favourable interest rates.
- If a default occurs and is continuing under the EBL, given the subordinated position of the EBL lenders, there will not usually be a cross-default trigger under the senior project financing.

Additional sources of financing

Initial public offerings

While there have been discussions in the market in recent years relating to certain NOCs (including Saudi Aramco) seeking an initial public offering (IPO) of their ultimate holding companies, certain large scale downstream projects can be required as a consequence of local law or government policy to make public share offerings, such as was the case with the Sadara petrochemicals project in Saudi Arabia.

For more on IPOs, see *Practice note, Initial public offerings (IPOs): overview*.

Private equity

Private equity investment can arise either by way of acquisition (perhaps using leveraged financing) during the operational life of an asset or through investment from the outset. However, the relatively short term exit strategies of private equity houses are not always commensurate with the more distant development and construction horizons

of the upstream sector. Consequently, private equity investment may be more suitable in a downstream context or for an asset which is already in operations.

The challenges for private equity players ultimately seeking to project finance their assets include:

- Restrictions placed on the sale of their shares.
- The inability to extract value from the business due to distribution lock-ups until certain specified points at the end of the project's construction.

Corporate loan facilities

In a midstream or downstream context, these would typically be available once the project was itself fully operational and had the proven operational and financial track-record required for the commercial banks and/or certain institutional investors such as insurers or infrastructure funds.

Mezzanine debt

Mezzanine debt may be used as part of a project financing (or in an upstream RBL context) to optimise the financing plan or fill a funding gap. This can be a secured loan but repayment will, in all cases, be subordinated to the senior lenders' rights of repayment (and ahead of the equity distributions).

Repayment of principal and interest depends on there being sufficient cashflow through the payment waterfall. Interest usually accrues at a higher rate to compensate the mezzanine lender for its subordination to the senior debt and may accrue on a capitalised basis ("rolled up") or additionally the structure may provide a right for a mezzanine lender to convert the debt to equity at the end of the term.

In some cases subordinated debt may be provided by another stakeholder in the project.

Acquisition debt

This category of finance is often relevant in a midstream or downstream context where, for example, an investor is seeking to purchase an existing gas distribution or transmission asset. Leveraged financing sourced through a combination of commercial banks and institutional investors may be used for this purpose.

Islamic finance

This is primarily a type of asset-based financing that is concerned with the conduct of commercial and financial activities in accordance with Islamic law (Sharia). The structures are analogous to typical financing structures and techniques and are increasingly popular due to the longer tenors and more attractive pricing that has become available from Islamic financing institutions. Of particular interest is the *sukuk* instrument, which is a Sharia-compliant bond where any profit or benefit derived from the *sukuk* must be linked to the performance of a real asset and associated risks of ownership of the asset.

A *sukuk* was issued by the project company as part of the multi-sourced financing structure for the $18 billion Sadara petrochemicals plant in Saudi Arabia.

Project bonds

In this instance, the issuer is the project company or a specially incorporated entity of the sponsors with bondholder institutional investors. Projects have long accessed the bond market, particularly following the completion of the construction phase where fewer waivers are likely to be sought from the bondholders.

The advantage of bonds, as compared to other sources of debt, is that long term debt can be sourced in large amounts with greater operational flexibility than project finance provided by commercial banks or agency lenders. Decision-making can be unwieldy and the investors may be less sophisticated and able to process some of the technical or legal requests arising in a waiver context. Bonds are also time-consuming, with significant disclosure requirements. Where an investor is interested in long-term stable cashflows (such as an insurance company or a pension fund), a bond can provide an attractive investment opportunity, particularly once a project is operational. Additionally, once projects have matured, corporate bonds might be issued.

Other financing considerations for the oil and gas sectors

Aside from the question of sourcing of funds for an oil and gas project, the following are some of the additional considerations that the parties may have regard to during the life of a project and its financing.

Expansion financings

It is not uncommon in an oil and gas financing context for the sponsors to seek a change in project scope, whether by way of neighbouring field development for which the sponsor already has permits and licences, or whether by constructing a new complementary unit within an existing complex. Production from complex petrochemical plants or refineries can be enhanced through a process known as "debottlenecking", through which existing operating components of the project are modified to enable them to run more efficiently. The loan agreements will often permit a pre-agreed quantum of project revenues to be applied from the project company's accounts waterfall for debottlenecking but only after first meeting any principal and financing cost payment and prepayment obligations and ahead of the making of any distributions.

Such expansion projects can also be achieved through the application of the project's revenue streams, but the finance documents may specifically provide for expansions. Existing third party financiers will be concerned to ensure that there is no material impact on the existing operations to the detriment of the cashflow applied to meet the project's debt service obligations. In a downstream project financing context, the sponsors may agree upfront with their financiers that the documents provide for such potential expansion, subject to various conditions being fulfilled including that:

- It will not occur until completion of construction.
- There is an identified acceptable offtake arrangement for products from the expansion facilities.

The lenders may allow the project to incur further secured debt from the existing banking group or, alternatively, the sponsor parties may consider refinancing in full if more favourable or cheaper terms are available in the market.

Hedging

Typically minimum and maximum hedging requirements are specified in the terms of the finance documents. The commodity hedging element of this is particularly important in an oil and gas context to the extent that the offtake (and therefore the borrower and its ability to service debt) is exposed to changing commodities prices (that is, external market forces over which the borrower has little or no control) without any floor.

The inclusion of commodity hedging within a financing structure will be in addition to:

- Any interest rate hedging that may be required to mitigate the extent of floating rate facilities.
- Any currency hedging in respect of the offtake arrangements, which may be payable in an alternative currency to that of the loan repayments.

It is critical also in an RBL context that the calculation of the borrowing base amount should be negotiated to take into account any hedging payments or receipts, and that the lenders are protected from the borrower overhedging (that is, hedging an amount greater than the total risk exposure).

Refinancing

As noted in a number of sections above, it is not uncommon for the financing of an oil and gas project to contemplate or even incentivise refinancings at a later juncture through step-up adjustments to margin over time (a margin "ratchet") and often using alternative financing structures. Project bonds have been used to refinance loan facilities in the midstream and upstream sectors, including, for example, in relation to the Dolphin Energy pipeline between the United Arab Emirates and Qatar and also by the Delek and Avner sponsors on the Tamar gas field in Israel.

Once construction is complete, the sponsors may consider refinancing on more advantageous terms due to the lower risk associated with operational projects and investors no longer having to assume construction risk, but market terms may, at that point, not be sufficiently favourable or the conditions as liquid to provide an attractive financing alternative.

One option for the generation of cash when a project is operational is to transfer all or part of a sponsor's shareholding or working interest in the project, subject to the existing transfer restrictions in the constitutive documents and any third party financing documents already in place. Pension funds and insurers, for example, have long-term investment horizons but seek to minimise volatility of returns, which means that operational assets will tend to be more attractive to them.

Current market trends

The volatility in commodity prices has had an impact on the oil and gas sector in the following ways:

- Fewer large-scale new projects have been coming to market because projects have become commercially less viable with sponsors being less inclined to lock-in long-term offtake arrangements when pricing uncertainty exists. Unpredictability of recovery is also a key consideration of upfront investment costs or ability to service debt over the medium to long term. This is particularly the case in the upstream oil and gas and LNG markets. However, there are signs that the investment cycle is returning.
- Writing-down of asset values due to declining production revenues (for example, BHP Billiton's write down of assets by 30% in early 2016 and Petrobras' write down of assets causing a loss of $10.2 billion in the first quarter of 2015).
- Downward pressure on pricing (in combination with additional political risks in certain jurisdictions), combined with increased leverage of offtakers and customers to service providers at contract renewals and unsuccessful mergers are leading to financial restructurings. This is particularly apparent in the US RBL market where a significant number of oil and gas businesses are distressed, being restructured or subject to Chapter 11 bankruptcy proceedings (such as that involving Linn Energy Inc).
- Contractors and service providers as a consequence have diminishing backlogs of work ahead of them, decreasing margins and therefore there is downward pricing pressure in the contracting market with the result that both rigs and construction equipment are not being fully utilised.
- Public flotations of some of the NOCs and investment funds such as the heavily publicised proposed IPO of Saudi Aramco are indicators of moves away from previously adopted investment strategy to diversify risk and exposure to market pricing.
- M&A activity is on the increase both through strategic mergers such as that of the Abu Dhabi IPIC and Abu Dhabi Investment Authority, and divestments including, in Europe, the sale of midstream oil and gas / infrastructure assets with numerous bid processes coming to market.
- Consolidations and joint venture activity is prevalent across the market. Most notably, Shell acquired BG in February 2016 for $50 billion with a corresponding reduction in Shell's outstanding debt facilities. Smaller scale businesses are also seeking strategic joint venture opportunities as a means of leveraging positions in key markets which would not otherwise be commercially viable.
- Increasing focus on decommissioning costs with borrowers being required to set aside separate allocations including providing collateral in respect thereof. The UK regulator, the Oil and Gas Authority, published a strategy in this regard in June 2016 (see *Legal update, Oil and Gas Authority publishes UK's oil and gas decommissioning strategy*).

However, hybrid financings continue to occur in the market including in relation to upstream fields in Ghana (such as the financing by Vitol of its interest in the OCTP oil and gas project) and in Israel, and ultimately, the scale and complexity of large oil and gas projects makes them ideally suited to benefit from hybrid structured financing techniques. NOCs are rapidly emerging as controllers of a large share of the world's upstream production units and are seeking to finance projects on the basis of their own credit ratings albeit that they are less able to access the cheaper corporate debt available to the IOCs. Based on proved oil and gas reserves, 17 of the top 20 oil and gas companies in the world are NOCs with IOCs controlling less than 10% of the world's proven oil and gas resources base. NOCs are looking at increasingly flexible means of structuring the monetisation of their upstream resources while also instigating downstream activities.

Commercial banks are facing new financing constraints including in respect of Basel III, which result in shorter tenors and higher pricing to reflect higher capital and regulatory costs. Structured financings are increasingly "club deals" rather than underwritten/syndicated as the commercial bank market becomes tighter and less liquid. Across the banking sector, there is lower appetite for longer maturities. Hence borrowers have to maximise the use of alternative funding sources including through securitisations, US private placements, sovereign wealth fund

investments, ECAs, DFIs, multilateral agencies, bonds and the high yield market (see also *Practice note, Types of lending: alternative finance: Energy and mining projects*).

The authors are grateful to Natalie Raine, Milbank, Tweed, Hadley & McCloy LLP, for assistance in the preparation of this Practice note.

END OF DOCUMENT

Resource History

Resource created (January 2018).
We will track here amendments to this resource that reflect changes in law and practice.

Related Content

Topics
Project Finance

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