Energy and Resources Financing

A Practical Handbook

Consulting Editors **Huw Thomas** and **Antony Skinner**

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Energy and Resources Financing: A Practical Handbook
is published by
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Horsell
Woking
Surrey GU21 4DD
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Print and bound by Gomer Press

Energy and Resources Financing: A Practical Handbook
ISBN 9781909416765

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Introduction

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This book addresses the need for a practical guide to energy and natural resources financing in a time of rapid change in the energy and natural resources industries and the world of finance.

International resources companies are enduring a prolonged period of low commodity prices. In mature and frontier oil and gas basins, costs of extraction are increasing because of the technical challenges of exploiting the less accessible reserves – the days of 'easy oil' are at an end. At the same time, international oil companies (IOCs) have limited access to the still vast conventional reserves that are either held by national oil companies or are located in countries which IOCs cannot access due to civil breakdown, war or sanctions. The response of IOCs has been to examine closely their capital expenditure budgets across the energy chain.

Controversially, climate change campaigners claim that the majority of the reserves that the IOCs own may be stranded and to extract them would cause the global 'carbon budget' to be exceeded, thus tipping the planet into dangerous climate change.

Meanwhile the costs of renewable sources of energy supply such as wind and solar have fallen substantially, to the point where governments can justify withdrawing subsidies, albeit often out of fiscal necessity.

All this is in a world still feeling the after-effects of the global financial crisis. As a result of increased regulatory pressures, commercial banks are less able to make available the long-term loans that were previously the norm in project financings.

So what are the consequences for energy and natural resources financings? Some of the key developments are outlined below:

- A fall in the volume of financings for oil and gas assets across the energy chain. The oil price collapse has badly affected upstream financing and although, at the time of writing, lenders have generally been supportive of borrowers under existing facilities, there has been only limited new upstream financing activity. The cuts that IOCs have made to their capital expenditure budgets for midstream and downstream projects have also resulted in a decrease in project financings for pipelines, refineries and petrochemical plants. Companies looking for cheaper and more flexible solutions to monetise gas reserves are turning to floating LNG liquefaction solutions, and it is likely to be only a matter of time before we see the first successful financing of a floating LNG project;
- A fall-off in traditional forms of mining financing, including project

financing and high-yield bond issuance, forcing mining companies to embrace a range of alternative funding methods;

- A sharp upturn in the volume of financings for renewable energy projects, on both a single-asset and a portfolio basis;
- The prospects for nuclear energy improving in some countries, with the United Kingdom in particular seeing nuclear as a key means of achieving carbon reduction targets. Limited-recourse financing for nuclear projects, however, still looks a long way off;
- A move to mini-perm structures, where the loan life is limited to, say, five to seven years, well short of the project life, with a need for refinancing at the end of the initial term;
- For larger-scale financings, export credit agencies playing a critical role in plugging the gap left by commercial banks unable to lend on the longer maturities;
- The appearance of new sources of liquidity, such as pension funds and other institutional investors that are keen to lock in long-term stable returns. Some of these investors are still investing through traditional loan structures; others are investing through private placements or a combination of both; and
- A rise in the state capitalist model for the financing of infrastructure such as oil and gas pipelines, with Chinese state-owned entities in particular playing an active role.

No doubt many of the changes we are seeing are cyclical and, in due course, oil and gas financings will come back strongly, as may long-term bank lending. Whatever the challenges, this book provides a practical guide to achieving successful energy and natural resources financings across the spectrum.

Reserve-based lending

Nick Ross-McCall
Huw Thomas
Ashurst LLP

1. Overview

Oil and gas exploration and production (E&P) companies typically have many different equity and debt funding options at their disposal in order to finance their operations. With the exception of the majors and national oil companies, most players look to international commercial banks with specialist project finance or reserve-based lending (RBL) teams to supply the majority or a significant part of the debt funding for their projects. The defining feature of RBL is that the size of the facility is determined by reference to the current value of the borrower's oil and gas reserves rather than the strength of its balance sheet. Its look-forward nature means it is available to borrowers with little or no trading history.

The focus of this chapter will be on what is commonly called 'European RBL' or 'International RBL', the product used in most jurisdictions around the world, outside the United States and Canada where a different US RBL model applies. We shall see that the International RBL product is extremely flexible, being capable of adjustment to fit any point on a spectrum of borrower needs. These might range from a project finance style approach to a single-asset development, or to a corporate facility style approach to a portfolio of producing assets. This versatility is testament to RBL's continued prevalence over the last 30 years, with relatively low default rates considering the nature of the business and financial standing of its borrowers.

This chapter will give an overview of an RBL financing transaction from start to finish before examining the key principles underlying RBL and the key documentation features. It will then look at the scope of due diligence undertaken by lenders and common issues that arise, and progress to describing adjustments which can be made to the basic RBL product to meet special situations including mergers and acquisitions opportunities and decommissioning obligations. Next, the chapter will look briefly at other debt financing options available to E&P companies and how these might interface with an RBL facility, and describe the key differences between the International RBL and US RBL models. Finally, we will examine how to manage RBL facilities during a downturn in the oil and gas market.

2. History and development of RBL

2.1 US RBL model

RBL as a debt product has a fairly long and distinguished history. The US market predates the European/international market and is largely focused around Houston-

and Dallas-based lenders. It has developed largely in isolation, focusing on large numbers of modest onshore producing projects in the United States and Canada.

This chapter does not explore the US RBL model in detail but in section 8 below it does flag some of the key differences with the International RBL model.

2.2 Origins of International RBL model in the United Kingdom

The International RBL product originated in the United Kingdom with a focus on large offshore development projects. During the early years of the UK continental shelf industry in the 1970s and 1980s, the development of assets was financed either on the balance sheet by the majors or, where debt-financed by smaller players, involved financing a single asset on a project-finance basis. Projects were not, with the benefit of hindsight, particularly risky financing propositions because:

- fields were larger;
- loans were based on conservative reserve figures, leaving substantial cushions of reserves;
- sponsors were generally large companies; and
- decommissioning was a distant prospect.

As the North Sea basin matured, that type of financing largely became inappropriate for the generally smaller fields which were then being developed. At least as early as the 1990s (with a few deals even earlier) financing a portfolio of assets by way of a borrowing base facility became attractive to lenders as it de-risks the asset base; a deterioration in reserves at one field may be offset by upside from another and reserves on both producing and development assets could be used to finance development and even further exploration.

A number of factors drove a move in the United Kingdom from single-asset project financings to a portfolio or borrowing base structure, including:

- the assets under development in the UK continental shelf are smaller now (originally perhaps 100 million barrels or greater, but now more like 10 to 30 million barrels);
- technology risk has increased, with a greater reliance on enhanced recovery techniques to extract petroleum and yet also often reliance on ageing infrastructure for transportation;
- the field life of the assets being financed has become shorter (down to perhaps five years now as against 20 years at the high point of UK continental shelf discoveries), with decommissioning now a key issue;
- the single-asset approach is often not cost-effective for raising a relatively small amount of debt given the expense of putting together a quite complex and extensive finance document package.

Single-asset project financings still occur in the United Kingdom but multi-asset RBL facilities are now prevalent.

The portfolio approach of the borrowing base facility mitigates the risk of problems with one asset affecting the ability of the borrower to service the loan and permits a large enough loan to be raised with simple enough documentation, so as to make the

exercise economically viable. In essence, an RBL facility seeks to match the loan size to the net present value (NPV) of future income from the portfolio of assets. That NPV calculation (and therefore the permitted size of the loan) is typically reassessed every six months during the tenor of the loan. If, for example, a new projection is produced on the basis of a lower oil price or the reserves are revised downwards, the borrowing base shrinks, and the borrower will be required to prepay the loans to the extent that the outstandings exceed the revised borrowing base amount.

2.3 Development of the International RBL market

In recent years, RBL facilities have been made available to small and mid-sized independents acquiring assets being divested by larger oil companies or developing new discoveries. As there is no strong parent company behind such a borrower, these have been secured primarily by way of a floating charge. Assuming the NPV is adequate to support the financing, the rest of the representation and covenant package is usually relatively light compared with what would be found in a full-blown project financing. Some commentators therefore regard RBL as thinly disguised corporate loans to sub-investment grade companies, and the defensive security as a means to justify the extra risk before credit committees. While there may be a nugget of truth in this for a small number of borrowers, the protection that the lenders receive through careful modelling and controls over the borrowing base cash flows usually provides legitimate differentiation for RBL as against plain vanilla corporate facilities.

RBL remains popular with borrowers today, primarily because of the flexibility and relatively favourable pricing that it provides. It enables borrowers to raise financing based on the value of their petroleum reserves. In the United Kingdom this is generally on a P50 basis for producing assets and on a P90 basis for development assets. RBLs are also attractive to borrowers in that the facility is revolving (ie, repaid amounts can be re-borrowed) and will often permit expenditure for general corporate purposes, so that the funds do not always have to be spent on the assets supporting the financing.

2.4 The European model goes international

In the last decade or so International RBL has spread rapidly from the North Sea to most major basins outside of North America, in particular across South East Asia, West and North Africa, the Middle East, Russia/Commonwealth of Independent States (CIS) and the rest of Europe. This has largely tracked the growth in international activities of independent companies.

Certain countries in the Middle East and North Africa, such as Oman, Egypt, Tunisia and Morocco offer strong potential for borrowing base-style lending. Despite the tight grip of the national oil companies, in particular in many parts of the Middle East, as fields mature there may be openings for independent companies to be allowed in to operate assets that the big players may consider not worthwhile, as happened originally in the UK continental shelf and in the Gulf of Mexico, and more recently in Indonesia. Such companies are likely to use debt financing to fund their activities.

West Africa has been fertile ground for RBL including large-scale developments in Nigeria and Ghana. South East Asia has seen progressively more activity. In any of these other territories where political risks are deemed to be higher than the norm, the lending criteria and terms for such deals may be commensurately more conservative, but this does not prevent deals from being successfully closed on the right terms.

London and Paris are now established as the premier international centres for upstream oil and gas financing (with other important bases including Geneva and Singapore). This is largely due to the historic development of the market by bankers based in London and Paris. Hand in hand with that is the fact that there are now many independent oil and gas companies headquartered in London which have activities around the world. In addition, a large number of consulting and advisory businesses have grown up in the same locations to support the deals. The lender community is wider than this and includes on occasion hedge funds and private equity funds, the World Bank (through the International Finance Corporation (IFC)), traders and even oil and gas majors.

South America and East Africa appear to be the next regions ready for the RBL technique. RBL is a flexible product and can be quite readily adapted for different jurisdictions, including:

- licence or production-sharing contract regimes;
- common law or civil law jurisdictions; and
- less developed or mature oil and gas territories.

The RBL structure even allows for producing assets in a mature territory to be placed in a borrowing base portfolio with more risky development assets from a newer territory.

3. Transaction overview

3.1 Initial steps

While the process for refinancing of existing RBL debt will be simpler, the first RBL facility for any E&P company will typically be a lengthy process requiring senior management's full involvement. However, the result – the introduction of relatively cheap senior debt into the capital structure leading to increased equity returns – is usually considered worth the effort.

Lenders undertake significant due diligence and so borrowers should gather as much information as possible to facilitate initial discussions, including reserves reports, field development plans, capital expenditure budgets, development contracting strategies, production histories and Know Your Client (KYC) information.

Lenders' origination teams, including in-house engineers, will conduct initial due diligence and develop or review a detailed cash-flow model. If this is considered bankable, a term sheet will be negotiated. This is usually produced by the lender, but can be a borrower-led exercise, particularly if the borrower wants to maintain competitive tension among multiple potential lenders.

3.2 Mandate letter

The next step is typically the signing of a mandate letter attaching the term sheet setting out the agreed terms prior to the execution of full documentation. Under the mandate letter, the lenders agree in varying degrees of certainty and conditionally, either to:

- take and hold a proportion of the total debt, in the case of a club deal; or
- underwrite all of the debt, in the case of a syndicated deal.

In a club deal, all the participant banks are known in advance of signing and agree the proportions of the debt they will hold. In an underwritten deal, one or more banks may agree to take on all the debt with the intention of selling it down (syndicating it) to other lenders in due course. The underwriters will benefit from a market flex clause in the mandate letter allowing them to make changes to key financial terms within agreed parameters, should syndication prove more difficult than expected.

In the RBL market, before the onset of the credit crunch, although a market flex provision would typically have been included in mandate letters, it was often restricted to only a right to change pricing, and then perhaps subject to a cap. Since then, in the relatively exceptional event of an underwriting, it has become more usual for the underwriters to insist on full market flex provisions to apply. In the context of the currently more prevalent club deal structure, market flex will usually not be relevant.

3.3 Full documentation

Once the mandate letter is signed, legal counsel are typically instructed for the lenders and borrower (if they have not been already), due diligence is completed by lenders and their advisers, and lenders obtain their final internal credit approvals. Credit officers will check that the proposed transaction meets financial return hurdles, that structure and security requirements are included in the documentation, and that downside sensitivity testing is carried out on the financial model.

The definitive finance documentation package will include, principally:

- the facility agreement;
- security documents;
- a security trust deed; and
- (if required) an intercreditor agreement and an accounts agreement.

In RBL deals where the only secured creditors are the RBL lenders and the hedge providers, the security trust and the intercreditor provisions can be incorporated in the facility agreement.

The key finance document is the facility agreement which will include the borrowing base mechanics described above and the following:

- *Representations and warranties:* These serve slightly different purposes to commercial contracts, such as sale and purchase agreements. Lenders are not particularly interested in suing for damages for breach of a representation, but rather want to force disclosure both before signing and on an ongoing

basis, and to be able to call a default on breach of a representation. Many of the representations are deemed to be repeated on certain days throughout the life of the facility.

- *Covenants:* In classical project finance documentation these are extensive and are designed to give the banks control in relation to the basic management of the special purpose vehicle borrower and development of the project. There will also be extensive information covenants included on financial accounts and construction/production/reserves reports. In terms of weight and tightness of the covenant package, RBLs range from much less restrictive corporate finance style restrictions, to a package closer to a project financing for a hybrid borrowing base/project finance deal. This flexibility is one of the key strengths of RBLs as a robust financial product. Key covenants include restrictions on the borrower granting security over its assets to other creditors (a negative pledge), and restrictions on incurring other financial indebtedness, expenditure outside of an agreed model, disposals and acquisitions. Exceptions to these are always keenly negotiated. Financial covenants may also feature, particularly in corporate-style RBLs for larger borrowers.
- *Events of default:* These will include failure to pay, insolvency events, breach of representations or covenants or other terms of any finance document, and other more bespoke events relating to the borrower or its projects/assets. The occurrence of any of these allows lenders to accelerate the entire debt and enforce security. Banks also view them as a means of forcing the borrower to the negotiating table at a hopefully pre-emptive stage of the project if things go wrong, in addition to an opportunity to call for an immediate return of their money. Some bankers take the view that it is no bad thing if at any point in time lenders can point to a technical default under a facility agreement, but of course borrowers' counsel will make every effort to ensure that only genuine issues trigger an event of default.

Since the publication by the Loan Market Association (LMA) in the United Kingdom of a template English law syndicated loan agreement for investment grade and leveraged borrowers, the time taken agreeing mechanical and standard provisions of credit agreements has been greatly reduced. LMA-based documentation is always used in the European, and very often in the international, upstream oil and gas RBL market as a basis for negotiations.

3.4 Financial close

Lenders will insist on a range of conditions precedent (CPs) being set out in the facility agreement, which must all be satisfied or waived before first drawdown is permitted. The occurrence of CP satisfaction and first drawdown is typically referred to as financial close, but the phrase is sometimes used only to describe signing of the facility agreement. In RBL, these usually occur close together or even on the same day. Upfront fees are typically due to lenders on or within a short period of signing, rather than on satisfaction of CPs and so borrowers will want a high degree of certainty prior to signing that CPs can all be satisfied in due course.

3.5 Post-financial close

Lenders will monitor RBL borrowers closely on an ongoing basis up to final maturity or earlier prepayment of the loans. In development financings this can include monthly progress reports. In portfolio financings (with a balance between development and producing assets) monitoring focuses on updates to the financial model which are usually carried out every six months.

4. Basic principles of reserve-based lending and key documentation features

4.1 Cash-flow financing

The riskier a project, the more suitable it is for equity financing as opposed to debt financing. Debt providers will only lend on projects with a sufficiently low risk profile and clear cash flows to justify their expected low fixed returns. On the other hand, borrowers have a higher and uncapped potential return on their investments and a greater appetite for risk.

Debt financing is dependent on stable cash flows and traditionally is not appropriate for exploration and appraisal projects. During the frothy bank market before the global financial crisis, with debt providers being keen to establish relationships with new market entrants at an early stage in their business cycle, occasionally pre-development assets were capable of being debt financed. Since 2008, however, bank appetite for providing pre-development financing has diminished. The exception has been where high quality pre-development assets are financed as part of a portfolio of development and producing assets.

4.2 Projections and NPV calculations

RBL transactions essentially involve financiers lending against the NPV of future cash flows projected to be generated from independently audited oil and gas reserves of included fields. Calculation of the NPV and key financial ratios is achieved using an audited computer model to produce a projection through to the end of the life of the loan and beyond. The inputs for the model include relevant economic and technical assumptions. Usually, lenders provide economic assumptions such as forward curve petroleum prices and tax rates and the borrower provides technical assumptions such as

- capital expenditure (capex);
- operating expenditure (opex);
- decommissioning costs; and
- reserves figures.

Disputes over assumptions are often settled by using the technical bank's or majority lenders' (two-thirds by value of commitments) reasonable views, or, in the case of technical assumptions, by referring the matter to an expert for a quick determination.

The NPV is calculated by taking the projections of gross proceeds for each future period (usually six months) and then deducting projected expenses including capex,

opex and taxes for such period and discounting the net amounts at a fixed rate of discount. The discount rate is usually comparable to or slightly higher than the interest rate payable on the loan, subject to a floor.

This initial projection is then redetermined periodically throughout the life of the facility, usually every six months, to provide the level of comfort required by lenders that the then current borrowings under the facility are covered by expected cash flows from the included fields. The reserves figures used in the computer model are usually taken from an annual independent reserves report and a semiannual update from the borrower's in-house engineers.

4.3 Debt sizing – borrowing base amount

The borrowing base amount is the term used to describe the maximum amount permitted to be drawn under the facility at any particular time. This must in any case be lower than the total commitments of the lenders at that time. The borrowing base amount is based on the NPV of certain cash flows, taking account of P50 or P90 reserves, divided by a denominator which differs depending on the cover ratio being used to limit the debt size.

P90 (or P1) and P50 (or P2) are shorthand for proved reserves and proved and probable reserves respectively under deterministic or probabilistic calculations (which usually give similar results). Typical definitions are:

- P90: those quantities of petroleum which have a 90% or greater probability of being recovered from the included fields (determined in accordance with the guidelines of the Society of Petroleum Engineers); and
- P50: those quantities of petroleum which have a 50% or greater probability of being recovered from the included fields (determined in accordance with the guidelines of the Society of Petroleum Engineers).

RBL banks are usually comfortable lending against P50 reserves for producing assets and P90 reserves for development assets. Development assets will have to pass the completion test defined by the banks, usually including production at commercial rates for at least six months, before qualifying as producing assets.

Of course, there is no certainty that the projected cash flows will be achieved. Economically recoverable reserves may be less, or expenditure may be higher than expected, for example if the geology of a field is more complex than anticipated, increasing the costs of development.

The borrowing base amount can be increased through commodity hedging, if the borrower enters hedging contracts ensuring a price per barrel higher than the price deck used by lenders in the projections to calculate gross revenues. The borrowing base amount can also be increased by bringing in more assets. This is usually permitted subject to two-thirds bank approval (by commitments), and likewise disposals or de-designation of borrowing base assets is usually allowed with two-thirds bank approval and subject to paying outstanding loans down to the reduced borrowing base amount.

The borrowing base amount is sometimes also increased by allowing capex add-back to be taken into account in NPV calculations where the projected capex spend

on borrowing base assets in the next, say, 12 months is added back to the numerator in the NPV calculation. The usual rationale for allowing the add-back is that lenders are leveraging cash flows from assets rather than project NPVs and, therefore, upfront costs/capex should not reduce borrowing capacity if funded otherwise than from the cash flows (ie, including under the RBL facility itself).

4.4 Cover ratios and financial covenants

RBL lenders use cover ratios to size debt and to forecast the financial viability of a project. They are re-tested on a running basis in projections. The most important to an RBL lender are the PLCR and the LLCR (see below). Other uses of these ratios include:

- as a condition precedent to first drawdown;
- as a trigger to vary the interest rate;
- as a distribution block;
- as a tool to determine whether insurance proceeds must be applied in pre-payment of the facility as opposed to repair or reinstatement of an asset;
- as a drawstop preventing further utilisation of the facility; and ultimately
- as a trigger for an event of default.

(a) PLCR

The project life cover ratio or PLCR (also called the Field Life Cover Ratio or FLCR) is a key ratio, as banks focus very much on the life of the assets over and above that of the debt given that RBLs are typically five to seven years in tenor and usually refinanced well in advance of maturity. It is the ratio of the NPV at a relevant calculation date (usually every six months) of future projected net revenue during the life of a project to the principal debt outstanding (or projected to be outstanding) on that calculation date. Projections are run on a conservative post-tax basis with tax deductions only taken into account if capex-related allowances actually defer when tax is due on profits.

For debt sizing, the project NPV is typically divided by 1.5 so that lenders are only lending against two-thirds of the NPV.

The PLCR assists lenders in ascertaining the cushion available if the loan is not paid by the final maturity date and therefore the refinancing risk.

(b) LLCR

A loan life cover ratio or LLCR is the ratio of the NPV at a relevant calculation date (usually every six months) of future projected net revenue during the life of the debt facility to the amount of principal debt outstanding (or projected to be outstanding) on that calculation date. It is usually, but not always, included in an RBL as a determinant of the borrowing base amount where the loan life NPV is typically divided by 1.3. If included, the borrowing base amount will always be the lesser of the PLCR amount and LLCR amount.

There may be no loan life cover ratio in an RBL facility with a wide portfolio of borrowing base assets, on the basis that loans are not being matched against the NPV of a single asset. With the portfolio approach, there is a spread of assets which may

change over time so the non-inclusion of an LLCR is agreed by lenders to meet borrowers' requirements for increased leverage, justified by this de-risking of the loan.

(c) DSCR

A debt service cover ratio or DSCR is occasionally used by RBL lenders to gain comfort that the borrower will have funds available to make its debt payments on a current basis. It is the ratio of net revenue before payment of financing costs during a certain period (usually six months) to the financing costs due to be paid during that period. In RBL transactions, the debt service cover ratio is usually determined on a projected, rather than historic, basis, if at all. Even where not included in documentation, it will always be a feature that lenders are keenly aware of and will be looking at in the model.

(d) Other financial ratios

Some RBL facilities for larger players incorporate ratio features from corporate style loans, with looser controls over the borrower group in exchange for corporate lending ratios, such as a total borrowings (gross or net) to EBITDA (earnings before interest, tax, depreciation and amortisation) ratio. Some deals go further and effectively become corporate facilities, leaving behind the RBL debt-sizing mechanics while maintaining a covenant package with the feel of an RBL facility. An advantage for borrowers is greater certainty over borrowing capacity which is determined annually based on past results and not susceptible to a quick drop after a price fall. Sometimes larger players can have both an RBL facility and a smaller corporate facility.

4.5 Reserve tail date

For additional protection, banks prescribe the date on which a certain amount (typically 20% to 25%) of the original reserves of the included fields remains as a longstop date for repayment of the loans, which may bring forward the final maturity date from the otherwise typical five- to seven-year term. This is known as the reserve tail date and protects the banks from relying on more speculative future recovery from the end of the life of the fields, allowing them to take a more robust approach towards abandonment costs. The traditional view is that decommissioning costs would be matched by revenue arising after the reserve tail date (though this may no longer hold true for some UK deals).

4.6 Control of borrowing base asset cash flows – project accounts

Control over cash flows in RBL transactions is achieved using secured bank accounts (usually known as proceeds or revenue accounts) through which all receipts relating to the relevant assets will pass. Under an agreed cash waterfall, withdrawals may only be permitted from these accounts to meet expenditures set out in the latest cash-flow projection (or to a set percentage over and above such figures, say 10%) and, subject to additional restrictions, surpluses after payment of finance costs and funding of any other relevant project accounts can usually be paid out as dividends and used for general corporate purposes.

Additional accounts might include:

- onshore and offshore accounts in jurisdictions where lenders are uncomfortable with all of the cash flows sitting onshore;
- cash lock-up accounts to which all free cash must be transferred in the event of certain cover ratios being breached;
- a debt service reserve account to which funds representing a certain period of debt service (typically three to six months) must be kept at all times;
- a completion reserve account to include a minimum balance to cover cost-overruns on development projects; and
- an equity reserve account in which equity monies are held to ensure an agreed equity to debt ratio is maintained.

4.7 Paying down to the borrowing base amount

As the borrowing base amount is recalculated periodically during the life of the loan, the facility will be a revolving facility (as opposed to a term loan which is typically only seen on single-asset project financing), but usually with the lenders' commitment reduced on six-monthly reduction dates. On a reduction date, the loan will need to be paid down to the lower of:

- the reduced commitment amount; and
- the borrowing base amount (be that PLCR-based, or the lower of PLCR- and LLCR-based).

In the past this has occasionally been only to the extent that the borrower has available free cash flow, as a nod to limited recourse project financing techniques, but borrowers now have to settle immediately, albeit perhaps within an extended grace period in the case of an unexpected drop in petroleum prices (and therefore the borrowing base amount) to the extent a pay-down is larger than previously projected in the model.

4.8 Hedging

RBLs always include a hedging policy. There may be requirements for hedging petroleum prices in respect of a certain proportion of projected production. In times of strong petroleum prices, borrowers have been largely successful in resisting specific requirements with the result that there is only a high level agreed hedging policy in the documentation, the only hard limits being on the maximum proportion of reserves which can be hedged so as to prevent over-hedging, with no minimum requirements. The hedging policy is usually permissive regarding interest rate and foreign exchange hedging and, unlike classic project financing, rarely mandates any such swaps.

4.9 Borrower group structures

A key issue when contemplating an RBL transaction is the position within the group structure of the company or companies owning the assets which are to be financed, and which companies within the group are to be borrowers and guarantors under the facility. This is easy enough in the case of a single-asset financing which may be undertaken by a special purpose company, as is typical in a classic project financing.

For a portfolio RBL, the assets are likely to be held by a number of field companies, at least some of which will also own non-borrowing base assets, for example exploration and appraisal assets.

In a whole group financing, every company in the group is a party to the loan documentation, providing cross-guarantees and security. This structure tends to be appropriate for relatively small cap companies with a significant proportion of development assets, where the lenders might expect the whole group to stand behind the financing. Or it may be appropriate for larger companies with a wide portfolio of assets which want to achieve beneficial borrowing terms more akin to a corporate facility.

The limited borrowing base group approach is used where there is a desire for only a certain sub-group in the corporate structure to be party to the loan documentation, and in this respect the loan takes on a quasi-project finance flavour, with typically no or only limited recourse to the parent or other parts of the group.

4.10 Non-recourse subsidiaries

The concept of non-recourse subsidiaries is used where there are companies located in the group structure such that they would otherwise fall to be obligors under the terms of the finance documents, but which the borrower wants to exclude from the reach of the facility. This is usually so that the relevant subsidiary can carry out – and finance – other projects independently. Restrictions are imposed under the finance documents which insulate the obligors under the finance documents from the creditors of the non-recourse subsidiaries and limit the dealings of the obligors with the non-recourse subsidiaries. These restrictions mitigate the risk of money leaking from the borrower group other than as a distribution permitted by the finance documents. It is rarely the case that it will be feasible to carry out a wholly non-recourse project financing in such a subsidiary, so consent of the RBL lenders is still likely to be required in practice for such a financing.

4.11 Security

(a) Typical RBL security package

In RBL deals, there is often a relatively light security package, including only perhaps share pledges, a charge over accounts (which will be located in a jurisdiction where appropriate security rights exist), assignment of insurances and hedging agreements and, probably, in jurisdictions which recognise the concept, a floating charge over the assets of the borrower. Since the global financial crisis, banks have generally become more conservative in approach and may be more inclined to require whatever security can be practically granted under local law such as assignments or pledges of key project documents and local insurances. We examine asset security in (b) below and insurance in section 5 below.

(b) Asset-level security and lenders' concerns

The lenders' main objectives when considering a security package are to:

- trump unsecured creditors;

- protect assets from actions by unsecured creditors;
- confer control of the company on a default; and
- enable sale of a company as a growing concern.

Often security is only taken defensively as, in practice, enforcement may be unrealistic, particularly over oil and gas fields where governmental consents to any sales or transfers will invariably be required (outside of the United States). Indeed, in many jurisdictions it is difficult, in practice, to take security over the licence, production sharing contract or concession due to the requirement for government and other counterparty consents.

In a classic project financing, lenders try to go further and ensure that effective security can be taken over all project contracts and that key project contracts remain in place in one form or another if and when lenders enforce their security. They achieve the latter by entering into direct agreements with key project counterparties to control termination of the underlying project documents. RBL lenders may be prepared to close a financing on the basis of no security being taken over the licence, production sharing contract or concession and other project agreements, or an undertaking from the borrower to use reasonable endeavours to obtain any necessary counterparty consent for the granting of security. RBL lenders do not typically require direct agreements or amendments to project documents. For assets on the UK continental shelf, lenders are comfortable with the history of the government's and other industry players' involvement. A more conservative approach may be necessary in other jurisdictions with less experience of international debt financings.

For English companies, cross-guarantees and security granted are likely to be of little use for lenders in appointing a receiver (the most bank-friendly type of insolvency practitioner) since sweeping changes in 2003. Banks have been willing to live with this, perhaps emphasising the point that their principal protection is through the operation of the borrowing base itself. However, this relatively relaxed attitude to security has been tested since the global financial crisis, with instances of RBL borrowers over-extending themselves by incurring excessive expenditure outside the context of the borrowing base assets. RBL lenders have greater incentive nowadays to take whatever security it is practicable to take.

(c) Security over licences in the United Kingdom

Petroleum assets on the UK continental shelf are managed by way of a licence-based regime with joint operating agreements (JOAs) entered into by the parties to a licence. The terms of the licences prevent the granting of security except with the consent of the Secretary of State, who in the past gave individual formal written consents to the creation of security over licence interests. However, in recent years this cumbersome process has been replaced by a general standing open permission, which is a consent by the Secretary of State to the creation of security over licences by way of fixed or floating charge, with certain notification conditions. The consent is stated to cover crystallisation of a floating charge into a fixed charge. A 2012 amendment clarified that any security whereby the licensee's interest in the licence is assigned on entering into the security is excluded from the permission, which

applies to Scots law assignments in security. Under the RBL structure, usually only a floating charge will be taken over the licence interest and the borrower's interest under the JOA, which is permitted. Secretary of State consent would still be required on enforcement of the licence in relation to transferring it to another party.

Whether the co-licensee's consent would also be required would depend on the provisions of the JOA's assignment clause. Co-licensees may also have pre-emption rights under the JOAs which apply in such circumstances.

UK continental shelf licence security is only defensive in that it can prevent others dealing with assets, but not give effective control to lenders over the assets on enforcement. Nevertheless, it is superior to virtually any other jurisdiction (outside the United States) in that taking security is easy and in the context of enforcement there is a long history of asset trading in the United Kingdom with many potential buyers for distressed assets, and banks have a high degree of confidence that the Secretary of State will approve proposed transfers.

(d) Security in other jurisdictions

A floating charge is a common law concept available to lenders only in countries which have inherited an English law based legal regime. Given that many of the jurisdictions playing host to RBL financings nowadays are civil law based, it is often not possible to create floating security over the assets. Lenders would ideally like to see equivalent security, involving taking security in some form over the licence interests, contracts and other assets. In many jurisdictions this is difficult or even practically impossible and a cost–benefit analysis will be required to decide if it is worthwhile or practicable to take such asset security.

For example, in Norway the market view is generally that asset-level security is not worth taking because of the difficulty of obtaining consents and adjusting the finance documentation so that enforcement can only be taken on a Norwegian asset-related default. In the Netherlands there is a debate over whether even defensive security can be taken without breaking the relevant licence terms. In North African jurisdictions including, for example, Tunisia and Egypt, as well as in West African jurisdictions such as Gabon, it is possible in theory at least – subject to governmental and other counterparty consent – to take security over the production-sharing contracts or licences and other local law project agreements. However, the process for taking perfected security can be extremely cumbersome. North America has a different legislative set-up and, for onshore assets at least, asset level security can generally be easily granted.

4.12 Groupwide liquidity testing

Because of some bad experiences in the wake of the global financial crisis, RBL lenders now require group-wide liquidity testing. This focuses on any expenditure incurred across the borrower's wider corporate group, in the hope of controlling that risk. This typically requires a group-wide cash flow forecast to be produced every six months demonstrating that liabilities can be met when due over the next 12 months. This gives lenders advance warning of overreach on a group-wide basis, which is not always picked up in the model which focuses on the borrowing base assets.

4.13 Defensive features leading to a low rate of lender losses on RBL transactions

Debt sizing on RBL transactions is of critical importance to lenders, and many conservative features in combination make it unlikely that lenders will be left out of pocket in the event of a default. We have touched on some of these already but by way of summary:

- banks use forward curves of petroleum prices (the price deck) in the model which are more conservative than mid-market views, typically by at least 10–20%;
- banks use a reserve tail feature and so effectively refuse to lend against the final 20–25% of a field's or portfolio's reserves as at the date of the loan;
- banks use PLCR/LLCR mechanics as described to only lend against two-thirds of reserves or less;
- banks only lend against P90 reserves, or perhaps P50 reserves for producing assets, and may have discretion to risk (ie, decrease) reserves further than those contained in a third party reserve report; and
- banks discount cash flows by a rate that is typically at least as high as the weighted average cost of debt in the NPV calculations. Bankers may also build significant cost contingencies into the cash flows on development projects.

5. Bankability and due diligence

5.1 Bankability issues

It is often said that bankability is an art, not a science. As the requirements of borrowers have changed, so the market's view of what is a bankable structure has shifted to accommodate, so far as possible, those requirements. Examples include capex add-bank as mentioned above, a balloon repayment at maturity (so long as the cover ratios imply that a refinancing at maturity will be feasible) and adding limited borrowing capacity in respect of pre-development sanctioned reserves/resources, which has made a comeback into a small number of larger RBL and quasi-RBL facilities in recent years. The art is for an arranging bank to put together a deal which gives the borrower what it needs, but where any variation from the norm can be justified to ensure that the financing is still readily saleable in the bank market.

The lenders will need to be able to rely on a legal due diligence report prepared in respect of the assets being financed. This may involve commissioning a new due diligence report or updating an existing due diligence report (with a letter of reliance) which may have been prepared in connection with a listing of the company or the acquisition of those assets. In the latter case, a typical caveat in the reliance letter is that the report has been prepared for purposes of such a listing or acquisition, rather than the debt financing, but banks are usually attuned to this issue. Similarly, lenders will also typically commission technical and insurance reports and, as mentioned previously, will have reliance on an independent reserves report. We will look at a small number of key due diligence matters in more detail.

5.2 Licences/production sharing contracts/concessions

Lenders will focus on establishing title to the assets, and will seek comfort that the

terms of any licences, production-sharing contracts or concession agreements (RBL techniques can be applied to assets governed by any of these) are sufficiently robust, free of restrictions on granting security over the assets and free from hair trigger defaults leading to counterparty termination rights. The due diligence report may also typically report on term, consideration, relinquishment, work obligations and profit sharing under production-sharing contracts. Debate can be had on the scope of previous transfers of interests over which due diligence should be undertaken, which can have a significant effect on the amount of work involved.

5.3 Joint operating agreements

The focus for lenders on JOAs is often the assignment clauses, particularly if the security package includes assignments of project agreements as opposed to just a floating charge. Usually assignment by way of security is permitted provided such security is expressly subordinated to the rights of the counterparties to the JOA (which is the case anyway). The due diligence report may also typically report on operatorship, insurance, work programmes, voting, default, and termination and decommissioning security.

5.4 Offtake/sales/marketing and transportation contracts

Lenders will focus on how secure the cash flows are for petroleum sales, and again on restrictions on creating security, and on the creditworthiness of the offtakers. Lenders will generally only count the reserves of a gas asset for debt sizing purposes to the extent they are satisfied with the offtake arrangements. Lenders will also be concerned, particularly for gas assets, that the hydrocarbons can be transferred from the site of production to either the nearest hub, processing plant, refinery or power station.

5.5 Public international law issues/treaties

Where an oil or gas field straddles a maritime boundary between two sovereign states (eg, the United Kingdom and Norway in the North Sea) then recourse may need to be had to relevant treaties governing the border. In some cases the countries may have agreed a general process on how to unitise the field. In other cases (perhaps in the Middle East or Africa), the borrower may be proceeding to exploit the field from one side of the boundary without a unitisation, but in compliance with the relevant treaty by for example only drilling further than the minimum specified distance from the border. In the latter case, lenders will need to make an assessment of the risk of a dispute arising which may interfere with the development of, and production from, the field.

5.6 Environmental and social issues

Environmental concerns and requirements vary from project to project but are always a critical issue for lenders, in part because of the reputational risk of being seen to fund an environmental disaster. Compliance with the Equator Principles is frequently a condition precedent and/or covenant requirement in RBL facilities. They seek to regulate the approach of financial institutions to environmental and social issues and are a voluntary code of conduct. Most commercial banks active in

the RBL market have agreed to abide by them and this means that borrowers effectively have to comply with them too. The Equator Principles recognise that lenders are able to influence the environmental and social aspects of a project. They are substantially based on World Bank/IFC policies and apply in the case of project finance loans to projects with a total capital cost of more than $10 million or, in the case of project-related corporate loans (which is the category into which RBLs are more likely to fall), to facilities with a loan amount of at least $100 million.

The Equator Principles divide projects into three categories based on their likely environmental impact, and typically an environmental and social impact assessment (ESIA) is required. The ESIA examines potential negative and positive environmental and social impacts and recommends measures to prevent, minimise or compensate for them and to improve environmental and social performance. Affected groups, including indigenous people and local NGOs, must be consulted as part of the process and the final report must be published. In addition, an environmental and social management system (ESMS) and an environmental and social management plan (ESMP) may be required, which must draw on the conclusions of the ESIA and address mitigation, action plans, monitoring, management of risk and time schedules.

Lenders may impose documentary requirements such as proof of compliance with the ESMP and may require an independent environmental expert to be appointed to report on compliance.

5.7 Insolvency and administration

Insolvency risk and lenders' rights on insolvency, and in particular relating to the enforcement of security, are critical considerations for lenders and will vary depending on the jurisdiction(s) of incorporation of the borrower group, and potentially the jurisdiction(s) where the assets are located.

It is difficult to make any general statements but lenders tend to view common law jurisdictions more favourably than civil law jurisdictions. Reasons include greater certainty that contractual rights will be enforced as stated in documentation, and the existence of floating charge asset level security.

The security regime in the United Kingdom currently balances the law in favour of the appointment of an administrator and away from a receiver. In English law, an administrator acts for all of a company's creditors and tries to continue to run a company as a going concern, whereas a receiver acts in the interests of the security holders who appoint it.

Administration is seen by lenders as an inferior remedy, because when an administration order is made, enforcement of security and the institution or continuation of any legal process against the company without the permission of the court or the consent of an administrator is not allowed. Lenders are now entitled to appoint a receiver in only certain specified situations, none of which is likely to be applicable in the context of an RBL facility, except perhaps in the context of a single-asset project financing style transaction. This is due in part to the fact that North Sea projects have not typically included step-in rights for lenders. However, generally a floating charge will at least give lenders the right to choose the identity of an administrator.

5.8 Technical due diligence

Reservoir risk is typically one of the most significant for lenders and will need to be understood in detail, particularly on development heavy portfolios. The scope of technical due diligence required on an RBL deal will depend in part on whether arranging banks already have in-house engineers. Lenders may in any case need additional expertise, for example if there is a novel technical aspect to the development plan or if a particular recovery technique has not been attempted in the basin in which the asset is located. Also relevant will be the number and diversity of assets comprising the borrowing base and proportion of assets in production as opposed to a development.

5.9 Insurance due diligence

(a) Types required

Lenders typically commission a report by an insurance adviser covering insurances in place and whether they are considered sufficient given industry norms. Insurance typically required by lenders on upstream oil and gas financings during the operating phase follows a fairly standard energy package which may incorporate:

- property all risks;
- cost of control of wells;
- comprehensive general liability;
- marine hull;
- protection and indemnity;
- directors' and officers' liability; and
- all other insurances required by local legislation or the project agreements.

Development projects will, in addition, call for contractor's all risk insurance.

Lenders may also request delay in start-up and business interruption insurance, terrorism/sabotage insurance and (depending on the jurisdiction) political risk insurance to cover expropriation, non-convertibility of local currencies into hard currencies and breach of contract by a governmental authority or public body. These are expensive, and often successfully resisted by borrowers. MIGA, the insurance arm of the World Bank, is on occasion approached to insure against certain types of political risk.

The operator of a field would often take out the energy package insurance on behalf of the joint venturers, and the lenders will usually be satisfied with this arrangement.

(b) Recognising the lenders' interests

In the case of insurances taken out by the borrower, the lenders will require the security trustee on behalf of the lenders to be named as loss payee and possibly co-insured on property damage type insurances and additional insured on liability type insurances. In the case of insurances taken out by the operator on behalf of the joint venturers, the lenders should accept that this approach may not be practicable. As mentioned in section 4 above, lenders will also often take security over insurances, perfection of which usually requires notices to be served on each underlying insurer.

(c) ***Brokers' letters***

A typical condition precedent to an RBL facility is provision of a letter from the insurance brokers of the borrower confirming, at the minimum:

- the level of cover;
- that the insurances required by the facility agreement are in place and effective;
- that all premiums have been paid; and
- that the notations recognising the interests of the security trustee as required by the facility agreement have been endorsed on the policies.

Brokers should be able to provide such a letter, though it often requires negotiation as to the exact wording used.

(d) ***Reinsurance and cut-through***

Where local law requires that all or part of the insurances are taken up by local insurance companies, invariably lenders require that such risks be reinsured in a major foreign insurance market because the local providers may not be sufficiently creditworthy. A contract whereby the lenders can cut through the local insurance policy to the reinsurer is typically given, at least where governed by New York law, as this may be ineffective on the insolvency of the local insurer under English law. So it is often a requirement for the borrower or the banks to have an assignment by the local insurer of the reinsurance policy, or even a direct agreement with the local insurer and foreign reinsurer, whereby the foreign reinsurer would pay the borrower/banks direct. Cut-through arrangements in certain jurisdictions (eg, Thailand) leave a risk that if the local insurer becomes insolvent the reinsurer may also be faced with a claim from a liquidator and have to pay twice, so can be problematic to agree. RBL lenders will look at all the circumstances and may take a more relaxed view than project finance lenders, depending on factors such as the spread of jurisdictions of assets in the borrower base.

6. Optional extras to the basic RBL product

An RBL facility can be adjusted in a myriad of ways to meet borrower needs. We explore a handful in more detail.

6.1 Letter of credit facility for decommissioning security liabilities

RBLs often incorporate a letter of credit (LC) facility, the purpose of which is usually to enable a borrower to meet its decommissioning obligations. In some cases, an RBL facility can be predominantly or even exclusively for the purpose of posting LCs for decommissioning security. This has become a particularly acute issue in the UK continental shelf in recent years due to maturating assets and related infrastructure and a draconian legal regime which results in vendors, co-venturers and government all potentially requiring security to be given by new parties to a licence in respect of projected decommissioning costs. Lenders, larger co-venturers and, in particular, the government all take a cautious approach on the level of security to be provided. Purchasers and smaller co-venturers take the opposite view, as the costs of providing

security result in a substantial liability on their balance sheets, limiting their ability to invest in new assets.

Fortunately, the introduction of a standard form decommissioning security agreement has largely mitigated the risk of having to post double or triple security, although top-ups are still not unheard of. Security in the North Sea is typically by letter of credit or, where the credit standing of the parent is sufficiently robust, parent company guarantee.

Another recent positive change is that the government has introduced the option for North Sea interest holders to enter into private law contracts with government, known as 'decommissioning relief deeds'. These guarantee that the current rate of decommissioning tax relief will be available in future. The introduction of decommissioning relief deeds is leading to a cut of 50% (or more for petroleum revenue tax (PRT) fields) in the amount of decommissioning security being required. Security was previously posted on a pre-tax basis as the view was that government could not be trusted not to reduce tax relief in future. This is a world first and it will be interesting to see if any other countries follow suit.

It will be interesting to see if debt facilities can be made available to companies backed up by the government's obligations to refund decommissioning costs, with principles similar to exploration financing facilities used by Norwegian companies effectively secured against a government commitment to refund 78% of exploration capex.

In an RBL LC facility, if decommissioning costs are included in the cash flows used to calculate the NPVs then the LC can usually be issued without counting towards the borrowing base amount, but still of course subject to the aggregate commitments of the lenders. Conversely, if the decommissioning costs are not included in the NPVs then the LC will count towards the borrowing base amount. The former can be advantageous to borrowers because the discount rate applied to the cash flows usually results in higher effective borrowing capacity.

Due to the usual operator's annual re-determination process as to decommissioning costs for a particular field, lenders may be requested to post an LC greater than that for which they have internal approval if the size of the abandonment liability under the decommissioning security agreement goes up. Conversely, if the re-determined decommissioning cost goes down, the borrower may be over-collateralising. A partial solution, offered by lenders who appreciate that an LC may be unlikely to be called on years before decommissioning work commences, is to document a base case cash collateralisation build-up requirement based on agreed ratios.

Getting the balance right between the lenders', borrowers' and government's interests is crucial as acquisition deals are being done, or potentially done, on more marginal fields where costs are finely balanced.

6.2 Senior stretch

Occasionally (and less frequently after the global financial crisis), senior debt in an RBL will be divided into base senior and senior stretch (or conforming and non-conforming) tranches, the stretch tranche being lent against a higher percentage of

the NPV of future net revenues, with the excess being in effect the size of the stretch tranche. A higher margin and looser debt sizing ratios will apply to the stretch tranche. Usually only lenders with in-house technical skills tend to be able to lend over and above the base senior debt as they have the know-how to assess which assets can support the extra debt.

6.3 Private acquisition finance

The use of the RBL facility as a pure acquisition financing tool is now well established and, with many acquisition transactions being managed as auctions, and particularly with the addition of junior tranches, is well suited to maximising the debt available to the borrower. In this case the RBL can be sized based on the prospective assets and this structure has been seen, for example, in recent Nigerian deals.

A conventional RBL facility can also be used for acquisitions where it is based on a portfolio consisting predominantly of producing assets providing ample free cash flow over and above projected debt service.

In the scenario of the transformational acquisition undertaken by a small independent oil and gas company, the principal value will be found in the target assets. To avoid pre-emption and other contract and licence transfer issues and also maybe for tax reasons (eg, inheriting tax losses in the target), the acquisition will typically involve a share purchase of one or more asset-holding target companies. The lenders will want the target companies to give upstream security over their assets and a cross-guarantee covering any borrowings under the facility which, in certain jurisdictions, is restricted by laws relating to corporate benefit, financial assistance and reduction of net assets. In the United Kingdom, the giving of financial assistance by a private target company to an acquirer for the purposes of assisting the acquisition of the target's shares is no longer prohibited, which avoids the need for a costly whitewash procedure. Corporate benefit issues would still be relevant, but it should be fairly straightforward to demonstrate adequate corporate benefit for a subsidiary in securing the obligations of its parent, given support provided by the parent and the wider group to that subsidiary. In a large number of other jurisdictions, financial assistance, and the demonstration of corporate benefit, are more difficult issues. For example, in Norway upstream guarantees must be limited to the value of the loan outstanding received by the Norwegian subsidiary. Other European civil law jurisdictions and Nigeria pose similar issues, making asset level security difficult to take.

6.4 Public company bid financing

RBLs can on rare occasions also be used to fund bids for public companies and some particular considerations and risks apply in addition to those in the preceding paragraph.

(a) Conditionality

In recent years there has been a lot of consolidation among the numerous smaller independents including, in particular, those listed on junior stock exchanges such as the London Stock Exchange's Alternative Investment Market (AIM) and the TSX Venture Exchange in Toronto. A key factor in UK public company bids is the lack of

conditionality that the lenders can place on the availability of funds, once the offer has been announced. Although the offer will invariably be made subject to numerous conditions, including no material adverse change in the target's business, in practice the UK Takeover Panel will not allow bidders to rely on them. Similarly, the bid financing facility agreement will contain some events of default, but in practice – other than in the case of insolvency of the acquirer's acquisition vehicle (which is unlikely, given that it will be a newco) and illegality – the banks would be required to fund through a default. This may be unfamiliar territory for oil and gas teams at banks which are not existing players in the public company acquisition financing market.

(b) Limited due diligence

An associated issue on a public company acquisition is the relative lack of ability, particularly on a hostile bid, to undertake due diligence over and above publicly available information. This may be adequate to allow the acquirers and their bankers to make a proper assessment of what debt structure the business will support, but it may be more challenging to use only such publicly available information to build the sophisticated computer model used by oil and gas banks on RBLs. Having said that, if the target assets in question are in mature basins, they may have been financed several times over in the past, so banks which are active in the market will have a good understanding of them. In practice, hostile bids are almost unheard of in the E&P sector, with acquirers generally carrying out a full due diligence process, partly due to the requirements of their funders.

6.5 Refinancings and amendments to key terms

RBL facilities are typically five to seven years with no prepayment fees. It may come as a surprise, therefore, to learn that they are usually refinanced far in advance of maturity. Lenders positively encourage this as they can recycle their capital and gain upfront fees more often (and more regularly than the bulk of the wider project finance market where tenors are often 15–25 years or longer).

Reasons for undertaking a refinancing include:

- a desire to lock in debt with as long a tenor as possible while markets are open;
- to achieve a better margin if assets have completed so that the asset portfolio is more weighted towards production; and
- to relax distribution restrictions allowing dividends to be paid to shareholders.

Special factors to consider on a refinancing include, in particular:

- if the syndicate of lenders is materially changing;
- the timing mechanics for repayment of the existing indebtedness;
- the release of existing security;
- the closure of existing bank accounts with the opening of new bank accounts; and
- the termination or novation of existing secured hedging.

There is a technical chicken-and-egg problem in that existing security cannot be released until the existing debt is repaid, but this can only be done from the proceeds of the new debt, which cannot technically be drawn while existing debt and security are in place. The usual solution is for the new lender to permit a utilisation request to be submitted on being satisfied that the existing indebtedness will be repaid and existing security released upon the first utilisation under the new facility being made.

If material changes are being made to an RBL facility by amendment, rather than a full refinancing, consideration should be given as to whether fresh security or guarantees are required. As material variations of the principal contracts can discharge guarantees unless consent is given to the variation by the guarantor, material variations are generally done with contemporaneous consent from all of the guarantors.

7. Other debt products and interface with RBL facilities

As mentioned earlier, borrowers have various debt finance options available to them. We examine some others here, including as to how they might interface with an RBL facility. Multi-source financings are becoming more common, even outside the United States and so, increasingly, subordination and intercreditor issues need to be understood by RBL banks.

7.1 Pre-development bridge financing

The debt options for a company whose portfolio consists only of assets which have been successfully appraised, but as yet do not have final development plan (FDP) approval are limited, particularly following the global financial crisis. The company may have already exhausted the equity markets. For example, London's AIM market, popular with start-up oil and gas companies, has not been consistently open to such companies in recent years. Borrowers can also turn to the now very select group of lenders willing to make available short-term bridge financing, the bridge to be taken out by way of an RBL at such time as the borrower has sufficient borrowing base capacity under standard NPV calculations when the assets have achieved FDP. This is seen on acquisitions, and in recent years on assets in Israel and West Africa.

Lenders providing such bridges need to be satisfied that everything is in place to ensure that the borrower will be able to bring its pre-development assets to FDP approval, and then onwards into production, at sufficient levels and within the right time frame to enable a refinancing within a satisfactorily short period, typically 12 to 18 months. Examples include in the case of oil to be produced from an inland location, lenders being assured that it will be feasible to transport that oil to market, or in the case of a gas field, if regulatory approval is required for the gas to be sold into a domestic market, lenders being assured that there is no reason why such approval will not be forthcoming. A bridge financing should be relatively quick and easy to complete, but a thorough due diligence exercise will need to be undertaken to satisfy the lenders on the refinancing risk. Terms, such as margin step-ups and cash sweeps, will encourage refinancing prior to the full term.

7.2 UDAB/PSF facilities and value given to pre-development reserves in RBLs

A further development on the bridge facility which appeared shortly before the onset

of the global financial crisis but which has largely disappeared from the market in recent years was the undeveloped asset backed facility/pre-sanction facility (UDAB/PSF), providing bridge financing for pre-development assets, sometimes on a conveyor belt principle (for which see 7.3 below). A structure is established whereby assets are approved as UDAB assets when the lenders are satisfied (as described at 7.1 above) that they qualify for bridge financing. As and when the UDAB assets reach FDP approval, they are moved out of the UDAB facility, with an appropriate portion of the UDAB facility being repaid. The available amount under the UDAB facility is calculated in a highly conservative manner, with the lenders having a wide discretion as to determination of the reserves and NPVs attributable to those assets. Only a few US dollars per barrel value will be permitted and usually only strategically important assets seen as very likely to be sanctioned for development will qualify.

In recent years, this few US dollars per barrel for pre-development resources has returned in a small number of RBLs and quasi-RBLs for larger independents looking to push the amount of senior debt capacity.

There is no particular logic, at least under standard RBL metrics, for the value attributed to such resources, however lenders take the view that the relevant assets would realise at least that dollar amount if sold into the market.

7.3 RBL facility combined with UDAB/PSF

To mitigate the refinancing risk inherent in a UDAB facility, some borrowers put in place an RBL facility at the same time as the UDAB facility, the RBL facility standing ready to receive new assets (subject to the assets meeting specified acceptance conditions and majority bank approval) as they come off the UDAB facility conveyor belt. Alternatively, the UDAB facility may be put in place before the RBL facility, so saving the borrower commitment fees, but increasing the refinancing risk.

7.4 Other junior bank debt

Borrowers may supplement their senior debt with junior or mezzanine bank debt, typically on similar terms albeit with subordination to the senior debt on enforcement of security and perhaps also on repayment, and with debt sized using looser cover ratio tests and at a higher margin. Junior debt is often by way of term loan, rather than the classic RBL revolving loan. Sometimes hedge funds and private equity players provide junior debt, perhaps where the fund is also a shareholder in the borrower.

7.5 Second lien facilities

In the United States and Canada, second lien lending is a well-established market which has in recent years spread to the United Kingdom and the rest of Europe. However, this market has been largely closed, at least to upstream resources companies outside the United States, since the onset of the financial crisis. Second lien loans are seen as a response to a pricing gap in the capital structure that previously existed between senior debt and mezzanine/junior financing. Second lien debt is lien subordinated only, as opposed to debt subordinated mezzanine debt. This means a second lien lender is only required to turn over to the senior lenders