

Financing upstream developments

Nicholas Ross-McCall

CMS

Huw Thomas

Ashurst LLP

1. Introduction

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 E&P companies look to international commercial banks with specialist project finance or reserve-based lending (RBL) teams to supply most 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 that it is available to borrowers with little or no trading history.

The focus of this chapter is on international commercial bank financing – the prominent form (at least for borrowers that cannot raise bank debt off the strength of their balance sheets) being the RBL or borrowing base facility, the product used in most jurisdictions around the world (outside the United States and Canada, where a different 'North American' RBL model applies). The 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 from 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.

2. Background

2.1 Strong appetite for debt

For many years there has been a strong appetite among new entrant independent oil and gas companies for debt financing to fund the development and acquisition of upstream assets. More recently, there have been rapid developments in the types of transactions and geographical locations of assets financed, the choice of debt options and the terms on which the debt is made

available. At the same time, projects have become in some ways riskier from the point of view of lenders, which has probably led to an increase in pricing of senior debt and a lower limit on the amount of traditional senior debt that banks can provide. As a result, multi-source financing solutions are now a well-established feature of the capital structure of smaller exploration and production companies, where senior RBL debt can feature.

2.2 Development of market

The 'international' RBL (as opposed to the North American 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 either was financed 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 reserves figures, leaving substantial cushions of reserves; sponsors were generally large companies; and abandonment 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 can 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 following:

- The assets under development in the UK continental shelf are smaller now (originally perhaps 100 million barrels or greater, but now more like 10 million 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; and
- 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 Continued appeal of classic borrowing base facility

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, generally on a P50 basis for producing assets and on a P90 basis for development assets. Reserve-based lending is also attractive to borrowers, in that the facility is revolving (ie, repaid amounts can be re-borrowed) and often permits expenditure for general corporate purposes, so that the funds need not always be spent on the assets supporting the financing. The NPV of future cash flows projected to be generated by the assets being financed is of central importance in setting the amount of debt available.

In recent years, RBL facilities have been made available to small and mid-sized independents acquiring assets being divested by larger oil companies (often to private equity-backed vehicles) 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 that 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.

2.4 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 Southeast Asia, West and North Africa, the Middle East, Russia/Commonwealth of Independent States 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 asset-based control exercised by 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. Southeast 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 Amsterdam, 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 many independent oil and gas companies headquartered and/or listed in London now 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. Basic principles and key documentation features

3.1 Cash-flow financing

The riskier the project, the more suitable it is for equity financing as opposed to debt financing. Debt providers will lend only 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. Borrowers can use commodity hedging arrangements to underpin the cash flows on which a project depends to make the financing more attractive to lenders.

Debt financing is dependent on stable cash flows and traditionally is not appropriate for exploration and appraisal projects. In the frothy bank market before the global financial crisis, when debt providers were 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.

3.2 Calculation of NPV/projections

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. The NPV and key financial ratios are calculated 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 expenses (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 (at least in theory, but little used in practice). 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 semi-annual update from the borrower's in-house engineers.

3.3 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 (as stated above) 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 as follows:

- 'P90' means those quantities of petroleum that 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' means those quantities of petroleum that 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 must 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 into 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); 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).

3.4 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 factors to an RBL lender are the project life cover ratio (PLCR) and the loan life cover ratio (LLCR). 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 PLCR (also called the field life cover ratio) 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 taken into account only 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 lending only 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*

The 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 the 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 (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 DSCR is usually determined on a projected, rather than historic, basis – if at all. Even where not included in documentation, it is a feature that lenders are always keenly aware of and will look 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 earnings before interest, tax, depreciation and amortisation (EBITDA) 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.

3.5 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 remain 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 will be matched by revenue arising after the reserve tail date (although this may no longer hold true for UK deals).

3.6 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 seen only 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 had available free cash flow, as a nod to limited recourse project financing techniques; but borrowers must now 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 that a pay-down is larger than previously projected in the model.

(a) *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 from these accounts may be permitted only to meet expenditures set out in the latest cash-flow projection (or to a set percentage over and above such figures – say 10%). Subject to additional restrictions, surpluses after payment of finance costs and funding of any other relevant project accounts can usually be used for general corporate purposes and paid out as dividends.

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, in 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 moneys are held to ensure that an agreed equity to debt ratio is maintained.

This is an extract from the chapter 'Financing upstream developments' by Nicholas Ross-McCall and Huw Thomas in Oil and Gas: A Practical Handbook, Third Edition, published by Globe Law and Business.