Reserve-Based Lending & Insurance

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INTRODUCTION

The oil & gas industry operates in a very challenging world, which is pushing the boundaries of exploration in a volatile price environment. The life cycle of oil & gas projects evolves into different phases (i.e. exploration, development, production, plateau, decline, & decommissioning) with each phase demanding flexibility in terms of financing. For several decades, financial institutions have structured this financing based on future cash flows of the underlying assets. This type of financing requires a strong engineering assessment of the reserves and operational capacities of the oil & gas companies concerned. Banks in this sector are increasingly facing capital, counterparty and risk country constraints, so they need to find partners capable of de-risking a proportional share of their exposure, such as political and credit risk (re)insurers.

WHAT IS RESERVE-BASED LENDING?

Reserve-Based Lending (RBL) is a type of financing for independent exploration and production companies. RBL is a "borrowing-base" type of loan sized on the basis of the projected Net Present Value (NPV) of cash flows generated by the underlying oil & gas assets. The facility is repaid using the proceeds that derive from sales of oil & gas from these assets. RBL is on a constant evolution, being redetermined on a recurring basis. This means that the amount of the facility will increase or decrease during the loan-life to reflect changes in the assumptions (i.e. production, oil & gas prices, reserve assessment, taxes, etc.). RBL is used to finance acquisitions, develop projects, improved production rates, etc.

A DYNAMIC MARKET

Reserve-Based Lending is a long-established product, which first appeared in the U.S. before spreading to the North Sea and the rest of the world. The RBL market can be divided into two segments, the U.S. market, serviced by North American based banks, and the international market, centralized in London and Paris. One of the broader differences between the U.S. and international markets is that, in the U.S., it is possible to own the oil & gas reserves underground, which means that mortgages can be secured on the fields and the reserves. With other jurisdictions, oil & gas companies simply have a license to extract and sell the produced reserves. On the international market, security consists of the borrower's interests, such as shares in the operating or holding companies, plus insurances and hedging agreements.

The use of the RBL structure accelerated in the 1970's, which coincided with the beginning of development in the North Sea. The large size of the discoveries in the North Sea required significant capital expenditure to bring them into production, and independent oil & gas companies turned to financial institutions.

Around 40 banks are involved in the sector. French banks have been at the forefront of the RBL market, with a particular focus on Africa. Other European (UK, German, Dutch banks) and Japanese banks are very active on the international market. American banks are mainly focused on the U.S. market. More recently, there has been a sharp rise in the number of non-bank financial institutions financing and investing in the oil & gas industry. Private equity has



been active through mergers and acquisitions, especially with companies looking to acquire and increase production on mature fields.

A number of (re)insurers actively support financial institutions on their RBL portfolios. However, few of these (re)insurers have in-house expertise from the oil & gas industry itself. SCOR is unique in this respect, and consequently has a stronger understanding of the underlying risk factors associated with RBL's.







RESERVE RISKS

The primary assets of exploration & production companies are their reserves. One of the main risks within RBL is the ability to extract reserves in order to realize their projected value. It is important to understand the difference between "reserves" and "natural resources", also known as "accumulations". "Accumulations" are the oil & gas in place trapped in the reservoir. "Reserves" are the oil & gas that can be extracted, taking into account the geological & geoscientific characteristics of the reservoir, the operational capacity of the contractor, the duration of the contract given by the state, and the market price of the reserves (oil: bbl (barrel)/\$, gas: mmscfd (million standard cubic feet per day)/\$).



Reserve classification methodology can be probabilistic (P90/P50/P10) or deterministic (SEC - The US Securities and Exchange Commission / SPE - The Society of Petroleum Engineers). Listed companies generally use SEC's requirements. Oil & gas companies and banks make their own collateral calculations using specialist third-party companies in order to calculate the reserve base to leverage. This exercise is repeated at each redetermination date, often twice a year.



A risk factor or weighting is applied to each components of the proved reserves: typically, 100% of Proved Developed Producing (PDP), 75% of Proved Developed Non-Producing (PDNP) and 50% of Proved Undeveloped (PUD). A reasonable proportion of probable reserves can be counted within the banking case, considering undeveloped fields with high potential, or fields with satisfactory production history.

Deterministic method	Probabilistic method
Proved (P1)	- P90: 90% probability
• Proved Developed Producing (PDP):	
oil behind pipe	
 Proved Developed Non-Producing (PDNP): 	
oil shut behind pipe	
 Proved Undeveloped (PUD): 	
a bit more investment to develop it	
Probable (P2)	- P50: 50% probability
Possible (P3)	- P10: 10% probability



Statistical distribution of resources



CREDIT RISKS

LICENSES

The jurisdictional framework of the relationship between reserves owners (outside the U.S., the reserves usually belong to the state), and an oil & gas company is crucial in terms of understanding the cash flow involved. For example, royalties, tax, fiscal agreements, etc., all have a significant impact on the financial viability of the reserves being financed. Most host governments have learned that incentives for companies are essential to encourage private investments.

There are three main types of petroleum contracts between states (or national oil companies) and international oil companies (or joint ventures): **concession contracts**, **production sharing contract contracts**, and **risk-service contracts**. Whatever the type of fiscal regime and contractual framework (excluding the U.S. regime), the host country remains the owner of its underground natural resources.

The concession contract (also called the royalties tax system) is a delegation of mining rights in exchange for royalties and taxes. It gives a high level of control to the petroleum companies, and a correspondingly low level of control to the state. Exploration risks are borne by the investors. Taxes are fixed for the duration of the project concession or may be adjusted if certain milestones are reached.

The service contract is a delegation of operations in exchange for cash. The contractor develops reserves on behalf of the government. The service contract gives a high level of control to the state, and a low level of control to the petroleum companies. The state owns the facilities and the oil & gas production, delegating operation to the contractor for a limited period only. These contracts do not usually bear exploration and production risks. The contractor provides services, as well as bringing and transferring technical skills

The Production Sharing Contract (PSC) is the most popular type of contract. Independent companies receive a license to explore/develop a defined block and are responsible for all costs involved in exploring and developing any reserves they discover. The state retains ownership of the underlying reserves but will grant the oil company rights to keep revenues covering the costs of exploration and a share of the profits (cost/profit oil).







Example of the fiscal terms of a Production Sharing Contract



BORROWING BASE STRUCTURE & CASH FLOW MODELLING

The borrowing base for RBL is sized by measuring the risk of the reserves, and the capacity/ability to produce under market constraints. The banking case is a key tool in terms of defining the size of the debt. It is re-run and redefined twice a year in accordance with a number of factors. The assumptions made, such as forecasted oil & gas prices, production profiles, etc., are crucial in the veracity of the model. In essence these are a kind of business plan to value the projects or fields. The assumptions are discussed between various parties, such as banks, companies, third-party consultants and (re)insurers, to ensure comprehensive oversight and critical examination.

There are several factors behind the robustness of RBL financing that protect lenders and (re)insurers. First, a significant amount of reserves (probable and possible) are not included in the borrowing-based calculation, which means that future potential cash flows are not taken into consideration within the reserve base. Second, significant discounts are applied (i.e. commodity prices, reserves tail, etc.) to bring the borrowing base (i.e. the credit limit) to an amount that is well covered by projected future cash flows over the period.

Cash flow calculations are based on the production forecast, which reflects the reserves and indicates how long production will last and be able to sustain repayment of the facility. Technical and economic assumptions are made to associate those cash flows with the production, and a lenders deck is applied in the bank's internal forecast model.

Cash in hand today is worth more than the same amount of cash at a future date. Therefore, a discount rate that reflects the cost of capital is applied (historically, the benchmark was 10%, but this has



fallen in recent years, given the low interest rate environment). This discounting gives lenders the net present value of the cash flows and this is applied to the loan life and the project life, which are subsequently divided by different cover ratios, as outlined below (please note, these vary depending on the RBL involved):

- 1. Project/Field Life Cover Ratio: ~1.5x
- 2. Loan Life Cover Ratio: ~1.3x
- 3. Debt Service Cover Ratio: a liquidity test

Facilities are sized to ensure that cash flows generated from the fields are sufficient to amortize and pay off the debt by the "final maturity date". Facilities have a term of typically 5 to 7 years. A minimum reserve tail is required to ensure sufficient capacity to extend or re-finance. If the minimum reserve tail is breached, this triggers a mandatory repayment of the debt. Thus, it is designed to ensure repayment of debt comfortably within the well life of the assets. Most RBLs have a minimum reserve tail of 25%, which provides a significant buffer.



Redetermination:

The borrowing base amount is typically recalculated semi-annually, and the loan amount reduces over time. Companies add additional reserves depending on acquisition, through further developments on their existing assets, or external new license acquisition. Subsequently, the base amount borrowed can increase or decrease depending on the asset base being leveraged, however the fundamentals underpinning the financing remain the same.

OPERATIONAL RISKS

Oil & gas projects depend first and foremost on people. The risk of asset underperformance due to a lack of knowledge on the part of the contractor is mitigated by the consistency and previous experience of the management team. It is also important to understand who will operate the field and their track record as an operator.

Next, the distribution of assets must be analyzed. What are the geographical position of the fields, are they onshore or offshore assets, how many fields and wells are there? A well-diversified portfolio of producing fields is important and brings resilience to a project or company's cash flows enabling it to repay the RBL.

The production profile is a good indication of the operational constraints. After an oil plateau, the production of associated gas could be an issue for the export capacity due to increase of pressure at the well head. In addition, flaring is increasingly becoming an environmental & legal issue. Many countries ban flaring for environmental reasons. The production of water will also increase as production plateaus, resulting in a decrease in the production of oil. The increased drawdown (difference between bottom hole pressure and reservoir pressure) applied on wells will



product (i.e. OPEX)

increase the production of sand, which could damage the installation, creating capacity filling, pipe piercing, etc. All these factors will increase operational expenditures and the complexity of maintaining production.

Nevertheless, mature fields are not banned from the RBL structure. Companies have developed improved methodologies to create value from old fields, through second recovery techniques, electrical submersible pumps, rock stimulation, infill drilling, untapped reservoirs perforation, reperforations, etc.

The quality of the oil also plays a role, with heavy oil being more difficult to produce. The API gravity indicates the heaviness of a petroleum liquid and its impurities content (e.g. sulphur is very corrosive).

It is also crucial to understand what commercial offtake agreements are in place, for how long, and where the oil will be exported (exported via a pipeline, loaded offshore in a FPSO, etc.).



GUEST CORNER



Eric DESCOURTIEUX

Chief Financial Officer, Trident Energy

Eric Descourtieux is co-founder and CFO of Trident Energy - a leading company that unlocks the value of mid-life oil & gas assets and is backed by the Private Equity firm Warbug Pincus. He started his professional career in 1988 at Aerospatiale (now known as EADS), where he held various positions at the Paris Headquarters, in the Washington DC Purchasing Office and as Financial Controller of the Eurocopter Business Unit in Paris-La Courneuve. He then became a Financial Controller for the KFC division of the PepsiCo group in France, before joining the Oil and Gas company Perenco in 1997. Within Perenco, he held positions in Gabon, Guatemala, Venezuela and Colombia, first as Finance Manager and then as General Manager of these Business Units. In 2008, Eric was appointed Chief Financial Officer for the Perenco group in London and held this position until 2016. Eric is a graduate of ESCP Europe's Master in Management program. He has more than 30 years of international experience in both operational and financial positions in large companies.

It is part of the private equity business model to use bank debt to leverage the return on investment. For an investment whose return would be 15% per annum, if the investors can borrow money from banks at let's say 5% per annum, they can mechanically increase the return on their investment much above 15%.

On the other hand, the E&P oil sector is a capital-intensive industry and is used to borrow significant amounts from lenders to raise sufficient money to make an investment.

The financing requirement of the E&P sector is strongly correlated to the investment cycle:

The exploration phase is highly risky and not financed by the banks, so equity is the only way to fund exploration projects (seismic survey and drilling).

The development phase is post discovery and reserves have been booked, so bank financing is available alongside equity.

The production phase is in most cases cash flow positive, so the companies can not only borrow money from banks and refinance their loans but also repay them.

The decommissioning phase is sometimes forgotten in economic analyses as they are deferred payments, but the liability may impact any debt capacity, particularly during the production phase.





When bank debt is available, the debt to equity ratio varies typically from one to one (50% debt, 50% equity) in a conservative case to nine to one (90% debt, 10% equity) in a very aggressive case. The average is around two to one (66% debt, 33% equity).

The higher the debt to equity ratio, the higher the potential returns made by the investors on the equity but also the higher the risk they take: in case the asset does not deliver the expected return, the risk to default on the loan is higher.

Various types of debt are available to finance E&P assets. We can rank them in order of debt capacity correlation to asset performance:

1. The Reserve-Based Lending (RBL) is a loan secured by the cash flow resulting from the operation of the asset. It is tailormade for each asset and requires a strong technical analysis by the lenders.

The borrower agrees to disclose a lot of information on its operation on a regular basis to allow the lenders to size the debt and the risk. The RBL is very flexible as the borrower can draw on and repay the debt anytime, provided that the borrowing remains within defined parameters (essentially the debt capacity / borrowing base). As it is tailormade and tracks the asset performance over time, the risk/reward profile is optimized for the lenders as well as the cost for the borrower.

A less flexible RBL-type solution is the term loan, which is sized and monitored as an RBL but does not allow for unlimited numbers of draw-downs and repayments.

- 2. When a company has various RBLs covering several assets, it makes sense to combine them into a corporate RBL, with each asset contributing to the borrowing base. This portfolio approach reduces the risk for the lenders.
- 3. Pre-export finance is a loan secured on the future oil sales of the asset. The lenders carry out some due diligence, but it is not as detailed as for the RBL. It is a bit more expensive in terms of loan fees and margin but also for the associated offtake agreement.
- 4. Bonds (high yield, Norwegian, etc.) can be raised on the back of these assets, generally for a higher debt capacity than an RBL but at much higher cost and with less flexibility.

Most of the international investment banks provide for RBLs and have technical teams able to make a technical evaluation of the asset.

The trading companies and the trading divisions of oil supermajors are also able to provide RBL and pre-export finance. This helps them secure an exclusivity for the oil offtake.

Trident Energy specializes in mid-life exploitation of oil & gas assets. Its external growth is typically financed by a mix of equity, provided by the private equity firm Warburg Pincus and debt in the form of an RBL, provided by several international investment banks and by the trading division of a supermajor.



INSURANCE FOR RESERVE BASED LENDING

CREDIT INSURANCE

Credit insurance (or Non-Payment Insurance - NPI), typically covers the insured against nonpayment for any reason, usually arising from default, insolvency or bankruptcy. Lloyd's underwriters code non-payment insurance products as contract frustration, financial guarantee or trade credit as per Lloyd's bulletin Y5191. NPI is provided on the basis of a partnership between insurers and banks, with full disclosure by the bank of the risk to be insured, as required by insurance law, and supplemented by insurers' independent underwriting analysis.

Policies are triggered by an insured notifying insurers of a claim. The policies generally include a "waiting period" of 180 days. This is essentially a "standstill" agreement, for cure and claims assessment and validation, allowing time to remedy minor delays in repayment, currency shortages, etc. and allowing for the debt to be rescheduled if feasible. It is policy of indemnity, providing a specified amount of cover tailored to a specified individual risk (whilst largely uniform in principles and substance).

Section 13A of the UK Insurance Act 2015 imposes a statutory requirement to pay claims "within a reasonable time". The law permits insurers a reasonable period to investigate and assess claims, taking into account the size and complexity involved. Where the insurer breaches this duty the claimant is entitled to extensive remedy, including damages in addition to any sums due and related interest.

The product has evolved to align with operational requirements of banks and is recognized in many regulatory jurisdictions as an effective Credit Risk Mitigant (CRM), which has allowed banks in these jurisdictions to obtain regulatory capital relief on insured loans. Since the global financial crisis, banks have increasingly turned to NPI to support their lending activities, particularly as a risk distribution tool, which enables banks to increase or maintain their lending activity. In addition, certain banks' ability to obtain regulatory capital relief from NPI has allowed for certain loans to become more economically feasible.

Since the confirmation by both the BCBS - Basel Committee on Banking Supervision (FAQ6, QIS3) and the EBA – European Banking Authority (Single Rulebook 2014_768) that NPI can function as an effective CRM, the product has evolved to align with the operational requirements of CRM, whilst remaining a policy of indemnity offered (i) under tested insurance law and (ii) by highly regulated insurers with diverse portfolios, strong financial strength ratings, and based in legal jurisdictions where effective enforcement against the insurer is practicable. The EBA recently reaffirmed its assessment of NPI in its current CRM Framework dated March19, 2018.

In accordance with the new IFRS9 (International Financial Reporting Standards), a bank is required to calculate forward provisions, which must be made to protect its balance sheet from future volatility and exposure to assets. As insurance is an accrual-based CRM tool that is a direct match to the asset being covered, it assists banks with effective credit risk transfer, and reduces balance sheet volatility.



UNDERWRITING CONDITIONS

The shadow credit rating of an independent exploration and production company is driven by four main factors according to Moody's methodology:

- Reserves and production characteristics
 - Reserves of oil and natural gas are the more important assets of an independent exploration and production company. Moreover, they are an asset that can be valued and compared across companies in the industry.
 - Production leads to cash flows that are critical to repaying creditors. In addition, underwriters should examine the volatility in production volumes year-on-year.
- Operating and capital efficiency
 - Independent exploration and production companies sell a commodity whose price they largely cannot control. The margins generated by these companies are a function of their cost of production from each reservoir and the realized price of that production. In addition, independent oil and gas companies have Finding and Development (F&D) costs that are associated with the acquisition, exploration and development of a reservoir. In other words, F&D costs are the expense of bringing one barrel of new reserves into production. If a company has lower F&D costs, then they will perform better in a lower price environment.
- Leverage and cash flow coverage
 - Underwriters should understand the free cash flow generated by a company, given the capital-intensive nature of the industry
- Production mix overlay
 - Production mix is important for any independent exploration and production company. Realized prices and production costs will vary according to the commodity produced and the economics of each production region.





GUEST CORNER



Shane CLANCY

Investment Officer, International Finance Corporation

Shane Rory Clancy, an Irish and Canadian citizen, started his career in 2005 as an investment analyst in Calgary analyzing PSAs for international oil & gas projects, before joining the International Finance Corporation. After subsequent roles structuring energy transactions for SunPower in San Francisco and J.P. Morgan in London, he rejoined IFC in 2013 as an Investment Officer in infrastructure and natural resources. He is now based in Washington D.C. and works in equity, mezzanine and debt structuring across the energy value chain in emerging markets. Shane is a graduate of the Wharton School at the University of Pennsylvania, with an MBA from London Business School.

Reserves Based Loans ("RBLs") have historically been an essential source of affordable financing for E&P companies seeking to grow their production base and fund the large development CAPEX obligations normally required to do so. While giving firms credit for the expected future value of production, they have also typically provided borrowers with the flexibility to draw and repay throughout the life of the loan, adapting to field life cycle or asset portfolio liquidity needs without needing to procure additional sources of financing. For the lender, they often bring together some of the attractive features of project and corporate finance, pairing additional oversight of a company's producing and developing assets with typical corporate undertakings and covenants.

CYCLICALITY AND THE DOWNTURN

By definition, RBLs are inherently exposed to commodity risk. Banks have typically mitigated this risk with a variety of tools, including minimum hedging requirements, conservative commodity price deck assumptions, judicious assessment of and credit given for specific reserves classifications (distinguishing between PDPs, PDNPs, PUDs, and exercising caution with probable reserves) backed up by robust technical bank oversight, and prospective or look-forward liquidity tests or measures that can give early warning of potential funding and cash flow challenges.

Although conservatism is integral to how RBLs are structured, this can be stretched in an environment of sustained high commodity prices, robust E&P performance, strong liquidity and a competitive banking market, as was the case in 2013-2014. High enthusiasm and competition for E&P lending among banks led to a gradual erosion of standards, with greater latitude given on fundamental borrowing base assumptions and aggressive stances taken on inclusion of reserves, unrealistic discount rates and inadequate loan life or field life coverage ratios. Borrowing bases could also be creatively bolstered with longer capex add back assumptions, giving a borrower credit for funds it is expected to spend on developing borrowing base assets for a certain term into the future.



Undoubtedly, the drastic downturn in crude prices in 2014 put many RBL borrowers to the test and led to significant pressure on borrowing base availability and thus on broader corporate liquidity. Notwithstanding the erosion of some RBL lending criteria in the years prior, RBL facilities generally held up well and E&P borrowers were able to navigate the downturn. This demonstrated not so much the continued conservatism of commodity price assumptions in borrowing base models as the inherent, advantageous flexibility of borrowing base loans. As high yield debt markets reacted quickly to new market conditions and quickly evaporated as a reliable source of liquidity for junior E&P companies, RBL banks and borrowers were able to take advantage of extended borrowing base redetermination cycles to adjust assumptions and commitment levels, waive or relax covenants and provide leeway to support liquidity where needed. Thereby cushioning the impact of the oil price crash on vulnerable E&P companies, banks and borrowers were generally able to buy time and gradually work their way out of a challenging financial environment.

RECENT DEVELOPMENTS

The success RBLs have had in sustaining company liquidity through the downturn is evidenced by numerous recent successful refinancings for the junior E&P companies who rely so strongly on this source of capital. For example, Kosmos Energy refinanced its \$1.5B RBL in 2018, increasing borrowing capacity from \$1.3B to \$1.5B and extending maturity by four years. Tullow Oil refinanced \$2.5B in its corporate RBL just prior in late 2017, as did Ophir Energy, and Lundin Petroleum received increased commitments under its US\$5B RBL in 2016.

The downturn has led to the exit of some banks from the E&P RBL lending space, a trend which has likely been reinforced by the climate agenda many financial institutions are integrating into their broader strategies. At the same time, there emerged a new group of entrants to address the gap between banks and equity capital, and RBLs remain a remarkably important and flexible source of capital for E&P borrowers.

IMPROVED RISK MANAGEMENT AND STAKEHOLDER ALIGNMENT

Following the experiences of the 2014 downturn, banks have begun to adopt a broader focus on holistic company leverage and liquidity management, which starts with a more comprehensive approach to credit assessment and leads to the better employment of firm gearing tests and, ideally, prospective measures of corporate debt service capacity. The active dialogue between sponsors, companies and investors has led to a more in-depth understanding of what financial institutions are and are not capable of supporting, and this has led to a better alignment of interests among all stakeholders, as well as generally lower leverage and a more proactive stance on corporate risk management. All of this bodes well for the continued success of RBLs and their central place in the E&P financing space.



SECURITY

Assignment of rights / Share pledge

Security cannot be taken on the oil in the ground in most jurisdictions. The only real security is for lenders to take a pledge over the shares of the company with the rights to explore and produce the oil.

Security over project accounts / Control over cash flows

Security is taken over project accounts by the lenders, to ensure that proceeds from the sale of oil & gas produced by the borrowing base assets follows the correct repayment waterfall. An offshore collection account can be used generated to protect lenders from economic or political uncertainty in the host country and ensure the correct distribution of the operating cash.

Hedging

Hedging is a common solution to protect the Borrowing Base Amount. If a company is relatively small, a fall in the price of oil could considerably stress its cash flow. Therefore, many companies are under pressure, whether from lenders or shareholders, to hedge a proportion of their production. Hedging is a way of locking in value and reducing commodity price volatility. However, hedging can represent a risk that must be well understood. If the production of a field has to be reduced by any operational or technical issue, and if more production is hedged than produced, then the company must find oil from somewhere else on the market to meet the hedge contract. This might endanger the financial healthiness of the company, and it is rare to see hedging above 70% of a company's forecasted production for the next calendar year. Nevertheless, there is an upside benefit limitation when the company gets a fixed price for the oil produced under that hedge. If the oil price rises significantly above the price set under the hedge, then the company loses that upside value.

Most of the banks that are active in RBL will also have hedging capability.

<u>Swaps</u>

Swaps are free of charges. The idea is to swap the oil market price for a fixed future value, depending on how long the swap lasts. The swap provider makes money by taking a view on where oil prices will go and by matching oil buyers with oil sellers.

Puts

A Put protects the company below a zone price, but it requires an outlay. The company gets all the value above the put price, which is a floor on the oil price. When the oil price falls to the level of the put, then the company has the option to exercise the put and will continue to receive money at the put price.



DEFAULT

What options do companies have when they run into difficulties?

Companies have many possibilities:

- 1. Restructuring or extending maturity
- 2. Reducing the company's cost base
 - Cancelling or postponing project(s) which are not critical to repayment of outstanding debt
 - Renegotiating pricing in contracts related to on-going capital or operational expenditures
 - Focusing financial resources on assets with near term cash flow
 - Divesting assets
 - Monetization of all or part of the hedging program

Loss history

Many defaults are confidential, and usually not published, so it is difficult to have a precise loss history for this business. However, despite the heavy commodity crisis, several studies have emphasized the extremely low loss occurrence (Standard & Poor's and Moody's – North American RBF Loans – 16-18/01/2013).



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Brice Morlot, a French citizen, started his career in 2009 as a Production Engineer leading an offshore oil & gas field in Cameroon. He then moved to the Democratic Republic of Congo to manage the onshore fields of Muanda. After subsequent roles structuring field developments, and new business acquisition studies at the headquarter, Brice moved back to Central Africa to become Production Manager. He joined SCOR in 2017 as an Energy & Mining Underwriter to use his technical expertise in the insurance industry. Brice is a graduate of HEI, the Catholic University and IFP School, with three Master of Sciences in Civil Engineering, Petroleum Engineering and Economics.



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Kade Spears joined the Channel Syndicate in October 2013 to start the Political and Credit Risks team and has worked in this field since graduating with a Bachelor of Science in Business Administration from Washington & Lee University. Kade was previously the head of a team in the London market and has worked in Bermuda, Houston, London, and Singapore during his career. He was promoted to Head of Specialty in 2014 and completed recently a Master of Arts in International Relations from the Fletcher School of Law and Diplomacy at Tufts University.

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