Methodology

Rating Companies in the Oil and Gas Industry

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Rating Companies in the Oil and Gas Industry

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Introduction to DBRS Methodologies

- DBRS publishes rating methodologies to give issuers and investors insight into the rationale behind DBRS’s rating opinions.
- In general terms, DBRS ratings are opinions that reflect the creditworthiness of an issuer, a security or an obligation. DBRS ratings assess an issuer’s ability to make timely payments on outstanding obligations (whether principal, interest, preferred share dividends or distributions) with respect to the terms of an obligation. In some cases (e.g., non-investment grade corporate issuers), DBRS ratings may also address recovery prospects for a specific instrument given the assumption of an issuer default.
- DBRS rating methodologies include consideration of historical and expected business and financial risk factors as well as industry-specific issues, regional nuances and other subjective factors and intangible considerations. Our approach incorporates a combination of both quantitative and qualitative factors.
- The considerations outlined in DBRS methodologies are not exhaustive and the relative importance of any specific consideration can vary by issuer. In certain cases, a major strength can compensate for a weakness and, conversely, a single weakness can override major strengths of the issuer in other areas. DBRS may use, and appropriately weight, several methodologies when rating issuers that are involved in multiple business lines.
- DBRS operates with a stable rating philosophy; in other words, DBRS strives to factor the impact of a cyclical economic environment into its ratings wherever possible, which minimizes rating changes due to economic cycles. Rating revisions do occur, however, when more structural changes, either positive or negative, have occurred, or appear likely to occur in the near future.
- DBRS also publishes criteria which are an important part of the rating process. Criteria typically cover areas that apply to more than one industry. Both methodologies and criteria are publicly available on the DBRS website and many criteria are listed below under “Rating the Specific Instrument and Other Criteria.”
Overview of the DBRS Rating Process

- There are generally three components to the DBRS corporate rating process: (1) an industry risk rating (IRR), (2) an issuer rating and (3) considerations for specific securities. The figure below outlines this process.
- An IRR is a relative ranking of most industries that have a DBRS methodology, typically using just three ranges of the DBRS long-term debt rating scale (i.e., “A,” BBB and BB), without making use of the “high” or “low” descriptors. The IRR is a general indication of credit risk in an industry and considers, among other things, an industry’s (1) profitability and cash flow; (2) competitive landscape; (3) stability; (4) regulation; and (5) other factors. An “industry,” for the purposes of the IRR, is defined as those firms that are generally the larger, more established firms within the countries where the majority of DBRS’s rated issuers are based; this remains true for DBRS methodologies that are more global in nature. The industry risk rating helps DBRS set the BRR grid (see below) in that it positions, in an approximate way, an average firm in the industry onto the BRR grid. For firms in industries with low IRRs, the IRR can, in effect, act as a constraint or “cap” on the issuer’s rating.
- The issuer rating is DBRS’s assessment of the probability of default of a specific issuer. It is a function of (1) the business risk rating (BRR), determined by assessing each of the primary and (where relevant) additional BRR factors in the BRR grid for a specific issuer; and (2) the financial risk rating (FRR), determined by assessing each of the primary and (where relevant) additional FRR metrics. The two components, BRR and FRR, are combined to determine the issuer rating; in most cases, the BRR will have greater weight than the FRR in determining the issuer rating. Throughout the BRR and FRR determination process, DBRS performs a consistency check of the issuer on these factors against the issuer’s peers in the same industry.
- The issuer rating is then used as a basis for specific instrument ratings. DBRS assigns, for example, a recovery rating and notches up or down from the issuer rating to determine a specific instrument rating for instruments of non-investment grade corporate issuers. (See “Rating the Specific Instrument and Other Criteria” below.)

DBRS Rating Analysis Process

* Depending on the instrument, “other criteria” may include the recovery methodology for non-investment grade issuers or the preferred share and hybrid criteria, for example. Please refer to the section below entitled “Rating the Specific Instrument and Other Criteria” for a list of these criteria, as well as other criteria that may be applicable at any stage of the rating process.
Oil and Gas Industry

- DBRS defines the oil and gas industry as those companies primarily engaged in oil and gas exploration and production (generally referred to as upstream activities) and refining and marketing activities (generally referred to as downstream activities). (Note that oilfield drilling and related services are covered in a separate methodology called Rating Companies in the Oilfield Services Industry.)
- Per the three-tier IRR system described on the previous page, the oil and gas IRR is BBB.
- The oil and gas industry is characterized by (1) significant oil and gas price volatility, which can be partially offset by (a) product diversification between crude oil, natural gas, and natural gas liquids, (b) vertical integration of upstream and downstream operations that provides an economic hedge, and (c) geographical diversification; (2) political, regulatory and environmental risk; (3) technology risk with respect to changes in both oil and gas technologies, as well as the more indirect effect of changes in technology of energy users (who may, for example, benefit from advances in solar power technology, thereby reducing demand for natural gas as a raw material for power generation); and (4) the importance of market access, as infrastructure constraints may lead to significant regional pricing differences.
- Oil and gas companies vary widely in size and credit quality, ranging from junior oil and gas exploration companies to extremely large, profitable and highly rated integrated producers.
- Pricing volatility stems from a variety of factors, including supply and demand fundamentals, geopolitical factors and the influence of cartels such as the Organization of the Petroleum Exporting Countries (OPEC). Companies with integrated upstream and downstream operations have lower exposure to commodity pricing volatility than independent upstream or downstream operators, since higher margins in upstream activities can offset tighter margins in downstream activities and vice versa. Integrated companies typically also have a greater ability to fund capital spending from internally generated cash, relative to exploration and production companies.
- High fixed costs arise from the need for recurring investment to sustain production. Reserves are becoming increasingly more expensive to replace, and a large, high-quality reserve base is an excellent mitigant to future pricing volatility. The industry also faces significant variable costs, particularly given the shortage of skilled labour. Both fixed and variable costs have generally risen faster than inflation in the recent past and this trend is expected to continue.
- Companies that explore offshore regions have greater exploration risk than onshore exploration companies, and more capital must be spent per well. In contrast, oil sands operators incur minimal or no exploration expense, although upfront capital requirements are usually substantial.
- The refinery and retail sectors of the industry can be subject to weak operating profit margins that are squeezed between volatile revenues and high fixed costs.
- Political risks include civil unrest, change in law, nationalization, expropriation, taxes and production-sharing contracts. Some of these factors play into global supply and demand balances, while others may affect reserves for a specific issuer only.
- Regulation is typically centred on safety standards, permitting, royalty rates and abandonment/reclamation standards.
- Environmental factors include climate change and greenhouse gas emissions legislation, concern over the future of hydraulic fracturing, oil spillage, water usage and environmental footprint.
- Technology has improved both discovery and recovery rates of oil and gas reserves. Recently, horizontal and multi-stage fracturing hydraulic technologies have enhanced the ability to extract oil and gas, resulting in a significant increase in reserves and production.
- Product transportation can be constrained by the lack of the appropriate infrastructure. Production tends to be located far from the end users and must be shipped via pipeline, tanker, rail or truck.
Oil and Gas Business Risk Rating

**PRIMARY BRR FACTORS**

- The BRR grid below shows the primary factors used by DBRS in determining the BRR. While these primary factors are shown in general order of importance, depending on a specific issuer’s business activities, this ranking can vary by issuer.

### Oil and Gas — Primary BRR Factors

<table>
<thead>
<tr>
<th>Rating</th>
<th>AA</th>
<th>A</th>
<th>BBB</th>
<th>BB</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Size and Business Mix</strong></td>
<td>• Exceptional size (i.e., well in excess of 1.5 million barrels of oil equivalent production per day).</td>
<td>• Superior size, well integrated.</td>
<td>• Adequate size (i.e., in the area of 100,000 barrels of oil equivalent production per day).</td>
<td>• Small size.</td>
<td>• Very small size (i.e., less than 25,000 barrels of oil equivalent production per day).</td>
</tr>
<tr>
<td></td>
<td>• Fully integrated.</td>
<td>• Balanced product mix (liquids vs. dry gas).</td>
<td>• Some integration.</td>
<td>• Limited geographical diversification.</td>
<td>• No integration.</td>
</tr>
<tr>
<td></td>
<td>• Well-balanced product mix between liquids and dry gas.</td>
<td>• Strong geographical diversification.</td>
<td>• Good geographical diversification.</td>
<td></td>
<td>• Very limited geographical diversification.</td>
</tr>
<tr>
<td></td>
<td>• Significant presence in many key global basins.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Reserves of Core Operations</strong></td>
<td>• Exceptional reserve quality.</td>
<td>• Superior reserve quality.</td>
<td>• Adequate reserve quality.</td>
<td>• Weak reserve quality.</td>
<td>• Poor reserve quality.</td>
</tr>
<tr>
<td></td>
<td>• Industry-leading reserve life (i.e., proven reserves divided by recent annual production volume).</td>
<td>• Long reserve life (generally more than ten years).</td>
<td>• Average reserve life (about ten years).</td>
<td>• Below-average reserve life.</td>
<td>• Short reserve life (generally less than five years).</td>
</tr>
<tr>
<td></td>
<td>• Superior ability to grow reserves and production.</td>
<td>• Superior ability to grow reserves and production.</td>
<td>• Adequate ability to grow reserves and production.</td>
<td>• Weak ability to grow reserves and production.</td>
<td>• Poor ability to grow reserve and production.</td>
</tr>
<tr>
<td><strong>Cost Competitiveness</strong></td>
<td>• Very low cost base.</td>
<td>• Low cost base.</td>
<td>• Average cost base.</td>
<td>• High cost base.</td>
<td>• Very high cost base.</td>
</tr>
<tr>
<td></td>
<td>• Industry-leading operating efficiency.</td>
<td>• High operating efficiency.</td>
<td>• Average operating efficiency.</td>
<td>• Below-average operating efficiency.</td>
<td>• Low operating efficiency.</td>
</tr>
<tr>
<td></td>
<td>• Exceptional infrastructure.</td>
<td>• Superior infrastructure.</td>
<td>• Adequate infrastructure.</td>
<td>• Weak infrastructure.</td>
<td>• Poor infrastructure.</td>
</tr>
<tr>
<td><strong>Sensitivity to Price/Market Volatility</strong></td>
<td>• Exceptional ability to withstand market volatility.</td>
<td>• Superior ability to withstand market volatility.</td>
<td>• Adequate ability to withstand market volatility.</td>
<td>• Weak ability to withstand market volatility.</td>
<td>• Poor ability to withstand market volatility.</td>
</tr>
<tr>
<td><strong>Capital Flexibility</strong></td>
<td>• Exceptional capital flexibility.</td>
<td>• Superior capital flexibility.</td>
<td>• Adequate capital flexibility.</td>
<td>• Weak capital flexibility.</td>
<td>• Poor capital flexibility.</td>
</tr>
</tbody>
</table>

The following BRR risk factors are relevant to issuers in all industries (although the relevance of sovereign risk can vary considerably):

- **Sovereign Risk**

  The issuer rating may, in some cases, be constrained by the credit risk of the sovereign; in other words, the rating of the country in which the issuer operates generally sets a maximum rating for the issuer. If the issuer operates in multiple countries and a material amount of its business is conducted in a lower-rated country, DBRS may reflect this risk by downwardly adjusting its issuer rating.

- **Corporate Governance**

  Please refer to DBRS Criteria: Evaluating Corporate Governance for further information on how DBRS evaluates corporate governance and management.
ADDITIONAL BRR FACTORS

• The additional BRR factors discussed below may be very important for certain issuers, depending upon their activities, but they do not necessarily apply to all issuers in the industry.

Political Risks

• Companies in the oil and gas industry are often confronted with significant political risks, including unilateral changes in royalties, production-sharing contracts and more local issues, particularly in politically sensitive countries.
• While international firms in any industry can be subject to political risks, oil and gas reserves located in politically unstable countries are particularly vulnerable to risk. Diversification between countries is important to ensure the security of reserves. DBRS reviews political risk indicators, such as the percentage of production from Organisation for Economic Co-operation and Development (OECD) countries, credit ratings of host countries and the concentration of production and reserves by country, where appropriate.

Regulatory/Environmental Risks

• All production activities are subject to regulatory oversight, particularly with respect to safety and environmental issues. Certain activities, such as offshore drilling or tar sand production, for example, are subject to additional regulations as well as public attention.
• While environmental costs remain a relatively small portion of total operating costs, these are likely to increase over time and could result in a lengthier permit process, which will likely have a negative impact on profitability.

Exploration

• Exploration, while essential to finding new reserves, is an expensive and risky undertaking. To the extent a firm is overweighted in exploration activities relative to its size or capital resources, DBRS may view this as a negative factor on the rating.
Oil and Gas Financial Risk Rating

PRIMARY FRR METRICS

• The FRR grid below shows the primary FRR metrics used by DBRS to determine the FRR. While these primary FRR metrics are shown in general order of importance, depending upon an issuer’s activities, the ranking can vary by issuer.
• DBRS ratings are based heavily on future performance expectations, so while past metrics are important, any final rating will incorporate DBRS’s opinion on future metrics, a subjective but critical consideration.
• It is not unusual for a company’s metrics to move in and out of the ranges noted in the grid below, particularly for cyclical industries. In the application of this matrix, DBRS looks beyond the point-in-time ratio.
• Financial metrics depend on accounting data whose governing principles vary by jurisdiction and, in some cases, industry. DBRS may adjust financial statements to permit comparisons with issuers using different accounting principles.
• Please refer to DBRS Criteria: Financial Ratios and Accounting Treatments – Non Financial Companies for definitions of, and common adjustments to, these ratios in the FRR grid below.
• Liquidity can be a material risk factor, especially for lower-rated non-investment-grade issuers. DBRS will consider available sources of liquidity, including cash on hand, cash flow, access to bank lines, etc., as well as uses of liquidity such as operations, capital expenditures, share buybacks and dividends for every issuer.
• DBRS considers an issuer’s financial policy, including factors such as its targeted financial leverage, its dividend policy and the likelihood of share buybacks or other management actions that may favour equity holders over bondholders.
• While market pricing information (such as market capitalization or credit spreads) may on occasion be of interest to DBRS, particularly where it suggests that an issuer may have difficulty in raising capital, this information does not usually play a material role in DBRS’s more fundamental approach to assessing credit risk.

Oil and Gas — Primary FRR Metrics

Primary Metric | AA | A | BBB | BB | B
---|---|---|---|---|---
Debt-to-cash flow | < 1.0x | 1.0x to 1.5x | 1.50x to 2.0x | 2.0x to 3.0x | > 3.0x
Debt-to-capital | < 25% | 25% to 35% | 35% to 45% | 45% to 55% | > 55%
EBIT interest coverage | > 20.0x | 10x to 20x | 5x to 10x | 3.0x to 5.0x | < 3.0x

ADDITIONAL FRR METRICS

• While the primary FRR metrics above will be the most important metrics that DBRS will use in determining the FRR of an issuer, other metrics may be used, depending upon an issuer’s activities, capital structure, pension liabilities and off-balance sheet obligations.
• Profitability, particularly in the medium term, can be an important differentiator of credit risk. DBRS may assess profitability through a variety of metrics, including return on capital.
• While free cash flow (i.e., net of changes in working capital, dividends and capital expenditures, etc.) can be volatile and, on occasion, negative, DBRS may use this and/or other cash flow metrics to assess a company’s ability to generate cash to repay debt.
• Operating metrics, such as netback analysis (a measure of operating profitability on a per barrel basis) or reserve recycle ratio (a measure of operating profitability per dollar invested in reserve development), can be useful metrics for credit differentiation.
For issuers that have downstream operations, DBRS may evaluate these activities with operating statistics such as refined throughput or refined capacity utilization (an efficiency measure that indicates the percentage of a company’s licensed capacity that is used) as well as through sector profitability measured by benchmark refining margins.

Because of the high cyclicality of the industry, financial ratios vary widely through the cycle. As a result, financial metrics (in comparison with BRR factors) will be of even lower relative importance than they are for most industries, particularly for investment-grade credits.

- The final issuer rating is a blend of the BRR and FRR. In most cases, the BRR will have greater weight than the FRR in determining the issuer rating.
- At the low end of the rating scale, however, particularly in the B range and below, the FRR and liquidity factors play a much larger role and the BRR would, therefore, typically receive a lower weighting than it would at higher rating levels.

Rating the Specific Instrument and Other Criteria

- For non-investment-grade corporate issuers, DBRS assigns a recovery rating and reflects the seniority and the expected recovery of a specific instrument, under an assumed event of default scenario, by notching up or down from the issuer rating in accordance with the principles outlined in the criteria DBRS Recovery Ratings for Non-Investment Grade Corporate Issuers.
- Preferred share and hybrid considerations are discussed under Preferred Share and Hybrid Criteria for Corporate Issuers (Excluding Financial Institutions).
- The issuer rating (which is an indicator of the probability of default of an issuer’s debt) is the basis for rating specific instruments of an issuer, where applicable. DBRS uses a hierarchy in rating long-term debt that affects issuers that have classes of debt that do not rank equally. In most cases, lower-ranking classes would receive a lower DBRS rating. For more detail on this subject, please refer to the general rating information contained in the DBRS rating policy Underlying Principles.
- For a discussion on the relationship between short- and long-term ratings and more detail on liquidity factors, please refer to the DBRS policy Short-Term and Long-Term Rating Relationships and the criteria Commercial Paper Liquidity Support for Non-Bank Issuers.
- The existence of holding companies can have a meaningful impact on individual security ratings. For more detail on this subject, please refer to the criteria Rating Holding Companies and Their Subsidiaries.
- Guarantees and other types of support are discussed in DBRS Criteria: Guarantees and Other Forms of Explicit Support.
- For further information on how DBRS evaluates corporate governance, please refer to DBRS Criteria: Evaluating Corporate Governance.
- Please refer to DBRS Criteria: Financial Ratios and Accounting Treatments – Non Financial Companies for definitions of, and common adjustments to, these ratios.