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TABLE OF CONTENTS

Introduction to DBRS Methodologies .................................................. 4
Overview of the DBRS Rating Process .............................................. 5
Automotive Supplier Industry ............................................................. 6
Automotive Supplier Business Risk Rating ...................................... 7
  Primary BRR Factors ........................................................................ 7
  Additional BRR Factors ................................................................. 8
Automotive Supplier Financial Risk Rating ..................................... 9
  Primary FRR Metrics ........................................................................ 9
  Additional FRR Metrics ................................................................. 9
Blending the BRR and FRR into an Issuer Rating ......................... 10
Rating the Specific Instrument and Other Criteria ....................... 10
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 IRR helps DBRS set the business risk rating (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 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

- Industry Risk Rating

  - BUSINESS RISK RATING
    - Primary BRR Factors
    - Additional BRR Factors
  - FINANCIAL RISK RATING
    - Primary FRR Metrics
    - Additional FRR Metrics

  Issuer Rating

  Application of Other Criteria*

  Instrument Rating

* 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.
Automotive Supplier Industry

• Automotive suppliers provide parts to original equipment manufacturers (OEMs) ranging from small sub-components to large-scale module assemblies. The predominant focus of this methodology is Tier 1 firms (i.e., those that supply the manufacturers directly). The methodology will also be applied to Tier 2 suppliers (i.e., firms that provide parts to the supply base and are thus indirect suppliers to OEMs); however, the cost position of Tier 2 suppliers (a Primary BRR Factor below) will have greater importance than would be the case with Tier 1 companies. The automotive manufacturers are covered in the DBRS methodology entitled Rating Companies in the Automotive Manufacturing Industry.
• Per the three-tier IRR system described on the previous page, the automotive supplier IRR is BB.
• The automotive supplier industry is characterized by: (1) significant dependence on the success of the OEM business, which is itself subject to cyclical economic pressures and consumer preference; (2) strong competition resulting from persistent overcapacity in the industry, mitigated to some extent for the largest firms whose technological superiority creates a barrier to entry for small firms that lack the resources for product development; (3) profitability, which varies widely by firm and product type, with the highest profitability generated by large firms that sell complex components; (4) regulation, which is mostly focused on product safety and emissions but is limited in comparison with that faced by the OEMs; and (5) labour cost issues, particularly when unions are present.
• Tier 1 automotive suppliers sell large-scale module assemblies (such as cockpits, chassis, etc.), are integral to the OEM supply chain and have a global reach and significant resources and responsibility for delivery, product development, engineering or design. Tier 2 suppliers typically supply Tier 1 suppliers with less complex parts and sub-components. Tier 1 suppliers generally have higher profit margins and much greater bargaining power against OEMs than Tier 2 suppliers.
• The industry benefits both from higher demand for autos as well as demand for new models.
• The complexity of a product supplied generally reduces the risk of substitution by another competitor. As well, in certain cases, a supplier can form a technological partnership with an OEM and solidify its position as a sole or preferred supplier. Higher pricing power and increased margins are, therefore, effectively defended by high technological levels. Similarly, suppliers that possess a specialized niche technology derive similar benefits.
• However, the products of many companies face significant substitution risk, which can be exacerbated by overcapacity in the industry. In addition, the industry faces constant pricing pressure from OEMs seeking to reduce their costs. In light of this, the relative cost position of automotive suppliers is critical. Suppliers can reduce costs by relocating to low-cost countries, many of which have sufficiently educated and motivated workforces.
• Diversification across global markets can mitigate the risk of lower volumes in a particular region. The impact of foreign exchange volatility can also often be reduced through diversification, depending on the location of production facilities. Increased political risks, however, may be assumed when manufacturing is relocated to developing countries.
• Regulation is less significant than it is to the automotive OEMs where emissions standards are becoming increasingly stringent (particularly in major developed markets) resulting in significant increases to product development costs.
Automotive Supplier 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.

**Automotive Suppliers - Primary BRR Factors**

<table>
<thead>
<tr>
<th>Rating</th>
<th>A</th>
<th>BBB</th>
<th>BB</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology/Product Complexity</td>
<td>• High technology level and product complexity.</td>
<td>• Solid technology level and product complexity.</td>
<td>• Modest technology level and product complexity.</td>
<td>• Low technology level and product complexity.</td>
</tr>
<tr>
<td>Diversification By Product</td>
<td>• Significant exposure across all vehicle segments.</td>
<td>• Products diversified across most vehicle segments.</td>
<td>• Products somewhat over-weighted in a particular vehicle segment.</td>
<td>• Products considerably over-weighted in a particular vehicle segment.</td>
</tr>
<tr>
<td>Diversification By Geography</td>
<td>• Highly diversified globally, with a strong presence in most major markets.</td>
<td>• Global presence, albeit with a diminished presence, in some major markets.</td>
<td>• Moderate global presence, albeit strong in certain major markets.</td>
<td>• Weak global presence.</td>
</tr>
<tr>
<td>Diversification By Customer</td>
<td>• Highly diversified customer base.</td>
<td>• Diversified customer base, albeit with a moderate dependence (in terms of revenue or profits) on a major customer.</td>
<td>• Poorly diversified customer base, with a significant dependence (in terms of revenue or profits) on a major customer.</td>
<td>• Relatively small customer base.</td>
</tr>
<tr>
<td>Cost Position/Manufacturing Footprint</td>
<td>• First quartile producer, with good operating leverage.</td>
<td>• Cost position in second quartile.</td>
<td>• Cost position at or slightly below average (second to third quartile).</td>
<td>• Low margins mainly due to high and/or volatile input costs.</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.

**Labour**
- A company’s labour force and its track record with respect to labour relations (e.g., strike history, staffing levels) can help to differentiate credit risk between firms. Highly unionized workforces are less flexible, are less able to adjust quickly to changing market conditions and cause work stoppages in the event of a strike.
- In addition, legacy costs for pension and health-care benefits (notably for companies with large underfunded pensions) add to expenses and future demands on cash flow. The ability to control these costs has become critical for U.S. firms, particularly those with high leverage and modest cash flow.

**Supply Chain Management**
- The relationship between Tier 1 companies and their suppliers (e.g., collaborative or adversarial) is also a rating consideration. The more reliance placed on parts companies to design and produce complex modules and assemblies for OEMs, the more vital these outsourced components become to Tier 1 suppliers. Sub-optimal supplier relations can affect the quality of components, which can ultimately influence product cost and, in turn, profitability.
- Other areas assessed include the relative dependence on suppliers (e.g., single-source suppliers), the participation of local suppliers in each market, the procurement function and contract bidding process and the financial health of suppliers. A Tier 1 company could face production disruptions in the event of a failure of a sub-supplier.

**Raw Materials Cost Management**
- Supply chain management with respect to raw materials is yet another important consideration. Automotive production is highly energy and raw-material intensive, and parts suppliers are exposed to often volatile commodity costs. A company’s ability to manage such costs (notably steel, aluminum, resin and precious metals) can have a significant impact on cash flow.
- The ability to pass on rising costs to OEM customers and the term of contracts (i.e., short- or long-term versus spot exposure) are all considered as part of a company’s ability to moderate input cost volatility. Maintaining relationships with multiple suppliers typically improves bargaining power and reduces the risks associated with potential supply disruptions.
Automotive Supplier 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 primarily based 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.

### Automotive Suppliers - Primary FRR Metrics

<table>
<thead>
<tr>
<th>Primary Metric</th>
<th>A</th>
<th>BBB</th>
<th>BB</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash flow-to-debt</td>
<td>&gt; 30%</td>
<td>20% to 30%</td>
<td>10% to 20%</td>
<td>&lt; 10%</td>
</tr>
<tr>
<td>Debt-to-EBITDA</td>
<td>&lt; 2.0x</td>
<td>2.0x to 3.5x</td>
<td>3.5x to 5.0x</td>
<td>&gt; 5.0x</td>
</tr>
<tr>
<td>EBITDA-to-interest</td>
<td>&gt; 7.0x</td>
<td>4.0x to 7.0x</td>
<td>2.0x to 4.0x</td>
<td>&lt; 2.0x</td>
</tr>
<tr>
<td>Debt-to-capital</td>
<td>&lt; 30%</td>
<td>30% to 45%</td>
<td>45% to 60%</td>
<td>&gt; 60%</td>
</tr>
</tbody>
</table>

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.
Blending the BRR and FRR into an Issuer Rating

• 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 in the DBRS Criteria: 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 DBRS Criteria: Commercial Paper Liquidity Support Criteria for Corporate Non-Bank Issuers.
• 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.