Methodology

Rating Companies in the Automotive Manufacturing Industry

NOVEMBER 2014
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# Rating Companies in the Automotive Manufacturing 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 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.)

* 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 Manufacturing Industry

- An automotive manufacturer is involved in the design, development, manufacture, sale and service of passenger cars and light- and heavy-duty trucks, buses and other heavy-duty motor vehicles for highway use. DBRS published two other related methodologies: Rating Companies in the Automotive Supplier Industry and Rating Captive Finance Companies.
- Per the three-tier IRR system described on the previous page, the automotive IRR is BBB.
- The automotive industry is characterized by: (1) increasing long-term global demand, particularly in developing markets where automotive penetration remains low; (2) highly cyclical revenues and earnings that are closely tied to general economic conditions; (3) high fixed costs and operating leverage, with earnings particularly sensitive to production volumes; (4) significant overcapacity in larger developed markets, especially Europe, where barriers to exit are high and plant closures are difficult because of union issues; (5) high product development costs that make it difficult for small- to medium-sized firms competing against the dozen or so dominant global firms; and (6) regulation that is focused on product safety and emissions issues.
- Global leaders can usually generate higher margins, typically resulting from relatively low-cost positions that generally are a function of their large scale. Moreover, leading original equipment manufacturers (OEMs) also usually benefit from highly diversified sales across both product line and geography, which adds a degree of stability to earnings. Additionally, certain niche (typically premium) auto manufacturers can also exhibit consistently higher margins relative to the industry average.
- Significant barriers to entry persist in the industry, linked with, among other items, high capital investment and extensive distribution network requirements; however, the industry remains burdened by overcapacity, particularly in developed markets, despite some recent and ongoing reductions in aggregate production capacity. As a result, pricing power is typically modest, although leading global players and certain OEMs with strong brand recognition can have an advantage over their competitors.
- The cyclicality of the industry is significant, with profitability and performance dependent on economic cycles and consumer confidence. In order to partly offset this cyclicality, many OEMs place a particular emphasis on preserving solid liquidity positions, which better enables them to withstand pronounced downturns.
- Given the high capital costs, production efficiency is critical and includes management of costs, capacity utilization, integration and co-operation of global design and manufacturing functions, the flexibility of production facilities (multiple models and the use of common platforms or modules) and the use of joint ventures (JVs) to supplement production capacity.
- New product introductions are frequently linked with technical advances, which are usually gradual but nonetheless persistent. This is particularly so with respect to vehicle safety and emissions/fuel efficiency, spurring the development of alternative powertrains.
- Labour and supplier relations can at times be adversarial.
- Commodity costs can be subject to significant fluctuations, potentially materially affecting the OEM’s profitability.
- Additionally, currency fluctuations, which can highly influence earnings depending on a given OEM’s production base and vehicle export patterns, can significantly impact earnings.
- Product recalls and lawsuits can have long-lasting and harmful effects on a company’s brands and can limit upside profitability-to-cash flow generation, but are generally not a major issue.
- However, emissions standards are becoming increasingly stringent (particularly in major developed markets); associated product development costs are in turn growing significantly, with such costs becoming more difficult to pass on to consumers.
- Many manufacturers also own captive financial services operations that provide vehicle-related financing to dealers and consumers as well as leasing and insurance.
Automotive Manufacturing 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 Manufacturing - 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>Market Position/Share</td>
<td>Leading market share globally.</td>
<td>Very strong market share in designated territories.</td>
<td>Solid market share in designated territories.</td>
<td>Modest market share globally and in core native markets.</td>
<td>Insignificant market player, with limited brand recognition or no notable presence in any one product line.</td>
</tr>
<tr>
<td></td>
<td>Number one or two market position in core native market.</td>
<td>Number one or two market position in core native market.</td>
<td>Number one or two market position in core native market.</td>
<td>Niche brands, albeit with solid market position in their product segments.</td>
<td>May be evidence of significant market-share loss.</td>
</tr>
<tr>
<td>Geographic Diversification</td>
<td>Strong presence in most major markets.</td>
<td>Strong presence in selected major markets.</td>
<td>Meaningful presence in certain key markets.</td>
<td>Weak global presence, albeit solid in local/regional markets.</td>
<td>Modest presence in local/regional markets.</td>
</tr>
<tr>
<td></td>
<td>Very high correlation between production capabilities and market demands.</td>
<td>High correlation between production capabilities and market demands.</td>
<td>Modest correlation between production capabilities and market demands.</td>
<td>Weak correlation between production capabilities and market demands.</td>
<td>Very weak correlation between production capabilities and market demands.</td>
</tr>
<tr>
<td>Product Diversification</td>
<td>Very good diversification of products, with strong representation across all vehicle segments.</td>
<td>Well diversified by product, with solid representation across all vehicle segments.</td>
<td>Wide product offering, although vehicle sales tend to be highly concentrated in one or two vehicle segments.</td>
<td>Moderate product offering, although vehicle sales tend to be highly concentrated in one or two vehicle segments.</td>
<td>Narrow product offering, with vehicle sales being highly concentrated in one vehicle segment.</td>
</tr>
<tr>
<td>Production Efficiency</td>
<td>Most efficient producer, with high operating leverage and continuous innovation.</td>
<td>First quartile producer, with good operating leverage.</td>
<td>Cost position average.</td>
<td>Cost position generally below average (third quartile).</td>
<td>Cost position significantly below average.</td>
</tr>
<tr>
<td></td>
<td>Consistently high capacity utilization (relative to industry average)</td>
<td>Capacity utilization usually strong, with high manufacturing flexibility.</td>
<td>Capacity utilization in line with industry cycles.</td>
<td>Below average capacity utilization and manufacturing flexibility.</td>
<td>Chronic overcapacity; sub-optimal capacity utilization and weak manufacturing flexibility.</td>
</tr>
<tr>
<td>Product Quality/ Warranty Cost</td>
<td>Models consistently rank very highly in quality surveys.</td>
<td>Models consistently rank highly in quality surveys.</td>
<td>Models generally rank well in quality surveys, although there may be some occasional fluctuations.</td>
<td>Quality survey results may vary across product line or time periods.</td>
<td>Models typically do not rank well in quality surveys.</td>
</tr>
<tr>
<td></td>
<td>Very low warranty costs, with minimal year-over-year volatility.</td>
<td>Low warranty costs, with minimal year-over-year volatility.</td>
<td>Warranty costs also subject to some volatility.</td>
<td>Warranty costs subject to volatility.</td>
<td>Warranty costs subject to volatility and can at times be elevated.</td>
</tr>
</tbody>
</table>
Rating Companies in the Automotive Manufacturing Industry
November 2014

**Automotive Manufacturing - Primary BRR Factors**

<table>
<thead>
<tr>
<th>Rating</th>
<th>AA</th>
<th>A</th>
<th>BBB</th>
<th>BB</th>
<th>B</th>
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<tbody>
<tr>
<td>Supply Chain Management</td>
<td>• Highly collaborative relationship with core suppliers, which typically are key project partners.</td>
<td>• Collaborative relationship with core suppliers, which are active project partners.</td>
<td>• Stable relationship with core suppliers.</td>
<td>• Relationship with core suppliers can at times be adversarial.</td>
<td>• Relationship with core suppliers typically adversarial.</td>
</tr>
<tr>
<td></td>
<td>• Input costs well controlled, with high ability to pass on cost increases to consumers.</td>
<td>• Input costs controlled, with considerable ability to pass on cost increases to consumers.</td>
<td>• Input costs tend to be stable, although ability to pass on cost increases to consumers can be limited.</td>
<td>• Input costs subject to some volatility, with limited ability to pass on cost increases to consumers.</td>
<td>• Input costs subject to some volatility, with little ability to pass on cost increases to consumers.</td>
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</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.

**Barriers to Entry**

• The development costs associated with light-vehicle production have risen sharply as much more discerning and sophisticated consumers generally demand an extremely refined product. Additionally, elevated levels of regulation, primarily regarding matters such as safety and emissions standards, impose very high development costs.

• When one also considers costs associated with the high capital intensity of production and the extensive distribution and servicing networks required to remain competitive in these markets, the effective barriers to entry become quite high. In emerging automotive markets such as Eastern Europe, China and India, barriers to entry for prospective automotive producers are relatively low, reflecting the open competitive landscape of these markets combined with sparse regulation.

• Furthermore, it is typically the very inexpensive mini-cars that are gaining prominence in emerging markets, with such vehicles being much less costly to design and produce.

**Maturity of Markets**

• Traditional domestic markets, including North America, Europe and Japan, are very mature, with demand growth generally in line with gross domestic product growth and excess capacity. As a result, new emerging markets have become increasingly important to generate measurable earnings growth.

• Increased international sales also provide increased stability via earnings diversification, although expansion risks exist. Emerging markets such as Eastern Europe, China and India have very low vehicle penetration levels and are exhibiting strong economic growth.

**Finance Subsidiaries**

• The role of the finance subsidiary as a marketing tool and the diversities of businesses (captive versus multi-businesses), geography and services mix are all evaluated by DBRS. Subsidiaries that have expanded their financing activities well beyond their parent’s products may have an effect on the rating of the manufacturing parent. In addition, the finance subsidiary’s penetration of the parent OEM’s sales, financial profile (e.g., financial structure), sources of funding, matching of assets and liabilities and portfolio credit profile are also reviewed.
• In evaluating the financial profile of the automotive operations, the finance subsidiary is treated as an equity investment to remove the influence of high leverage associated with the finance operations.

**Research and Development**
• Technological capabilities and strengths are assessed, including in-house technological expertise; technology sharing through the use of JVs to develop products and to share development costs; purchase of technology; product development track record; and the ability to meet safety and fuel consumption standards.

**Labour**
• The characteristics of a company’s labour force and the track record of the OEM with respect to labour relations (e.g., strike history, staffing levels) are also taken into consideration. Highly unionized workforces are less flexible, which, in particular, reduces the ability to adjust quickly to changing market conditions and increases the risk of 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 increase the potential for large operating cash outflows. The ability to control these costs has become critical for U.S. firms relative to most Asian-based competitors, which do not face the same burden, notably for companies with high leverage and modest cash flow.
• The migration of production facilities to regions with significantly lower employment costs and outsourcing have continued over the past several years as a means to control costs.

**Dealer Network**
• The assessment of an automotive OEM’s dealer network includes its size and strength in each market; the quality and location of the dealers and the services offered to customers; the support provided by auto manufacturers regarding training, finance, etc.; and the degree of ownership by auto manufacturers.
• Strong dealer networks can lead to increased barriers to entry for competitors. Conversely, inflated dealer networks can compromise distribution efficiency while increasing costs and undermining profitability.
Automotive Manufacturing 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.

<table>
<thead>
<tr>
<th>Primary Metric</th>
<th>AA</th>
<th>A</th>
<th>BBB</th>
<th>BB</th>
<th>B</th>
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</thead>
<tbody>
<tr>
<td>Cash flow-to-debt</td>
<td>&gt; 60%</td>
<td>30% to 60%</td>
<td>20% to 30%</td>
<td>10% to 20%</td>
<td>&lt; 10%</td>
</tr>
<tr>
<td>Debt-to-EBITDA</td>
<td>&lt; 1.0x</td>
<td>1.0x to 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; 10.0x</td>
<td>7.0x to 10.0x</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; 20%</td>
<td>20% to 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.
- Given the risk of operational disruptions (labour disputes resulting in a strike, for example), DBRS expects automotive manufacturers to have significantly higher liquidity at a given rating in comparison with other industrial companies. Moreover, the industrial operations of OEMs with an investment grade rating would typically have a net cash position, (i.e. cash & marketable securities balance exceed gross indebtedness).
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 notch 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.
• 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.