Methodology

Rating Companies in the Printing Industry
DBRS is a full-service credit rating agency established in 1976. Privately owned and operated without affiliation to any financial institution, DBRS is respected for its independent, third-party evaluations of corporate and government issues, spanning North America, Europe and Asia. DBRS’s extensive coverage of securitizations and structured finance transactions solidifies our standing as a leading provider of comprehensive, in-depth credit analysis.

All DBRS ratings and research are available in hard-copy format and electronically on Bloomberg and at DBRS.com, our lead delivery tool for organized, Web-based, up-to-the-minute information. We remain committed to continuously refining our expertise in the analysis of credit quality and are dedicated to maintaining objective and credible opinions within the global financial marketplace.
TABLE OF CONTENTS

Scope and Limitations 4
Introduction to DBRS Methodologies 4
Overview of the DBRS Rating Process 5
Printing Industry 6
Printing Business Risk Assessment 7
  Primary BRA Factors 7
  Additional BRA Factors 8
Printing Financial Risk Assessment 8
  Primary FRA Metrics 8
  Additional FRA Metrics 9
Blending the BRA and FRA into an Issuer Rating 9
Rating the Specific Instrument and Other Criteria 9
Scope and Limitations

This methodology represents the current DBRS approach for ratings in the printing industry. It describes the DBRS approach to credit analysis, which includes consideration of historical and expected business and financial risk factors, as well as industry-specific issues, regional nuances and other subjective factors and in tangible considerations. Our approach incorporates a combination of both quantitative and qualitative factors. The methods described herein may not be applicable in all cases; 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. Further, this methodology is meant to provide guidance regarding the DBRS methods used in the sector and should not be interpreted with formulaic inflexibility, but understood in the context of the dynamic environment in which it is intended to be applied.

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 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 assessment (IRA), (2) an issuer rating and (3) considerations for specific securities. The figure below outlines this process.
- An IRA 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 IRA 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 IRA, 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 IRA helps DBRS set the BRA grid (see below) in that it positions, in an approximate way, an average firm in the industry onto the BRA grid.
- 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 assessment (BRA), determined by assessing each of the primary and (where relevant) additional BRA factors in the BRA grid for a specific issuer; and (2) the financial risk assessment (FRA), determined by assessing each of the primary and (where relevant) additional FRA metrics. The two components, BRA and FRA, are combined to determine the issuer rating; in most cases, the BRA will have greater weight than the FRA in determining the issuer rating. Throughout the BRA and FRA 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.
Printing Industry

- The printing industry includes commercial printers that produce, among other printed products, print advertising (retail flyers and inserts, catalogues, direct marketing, signage, etc.), newspapers, magazines, directories, books, business forms and labels. To the extent an issuer also engages in publishing (i.e., content creation), DBRS will also use the methodology entitled Rating Companies in the Publishing Industry.
- Per the three-tier industry risk assessment system described on the previous page, the printing IRA is BB.
- The printing industry is characterized by: (1) high competition resulting from an excess in capacity due to a structural shift of what used to be printed materials toward digital mediums; (2) cyclical revenues that fluctuate primarily with advertising spending, which in turn is correlated with general economic cycles; (3) a trend to lower unit costs resulting from consolidation and efficiencies arising from digital production technology; (4) high fixed costs, particularly where unionized labor is involved; and (5) modest regulation.
- Technology has caused a shift to shorter contracts and more customized/shorter-term production runs.
- Printing industry revenues are being negatively affected by the structural shift from print to digital.
- While longer-term contracts offer a stable revenue source to the printer, large customers can have a bargaining advantage and fixed price longer-term contracts pose risks as printers need to absorb changes in input costs. While most long-term contacts contain provisions for variations in the costs of some inputs, such as paper, others may not. Paper is generally the most volatile input in the printing process; however, other variable costs, such as ink and energy, can also be unpredictable. The inability of a printer to pass on variable costs could affect profitability and cause erratic variations in cash flow.
- High transportation costs, and short delivery lead times, has resulted in relatively higher competition in more densely populated geographies.
- As traditional printing products increasingly migrate to digital/online media, printing service diversification and the ability to provide additional services becomes more important.
- Capital expenditures are moderately high in this industry, with regular equipment upgrades required over the medium term. Newer digital/online services require less equipment but higher levels of investment in software and intangible investments.
- The printing industry is also labour intensive, with traditionally strong unions having an influence on wages and benefits.
## Printing Business Risk Assessment

### PRIMARY BRA FACTORS

- The BRA grid below shows the primary factors used by DBRS in determining the BRA. 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.

<table>
<thead>
<tr>
<th>Printing - Primary BRA Factors</th>
<th>BBB</th>
<th>BB</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Market Position and Printing Network</strong></td>
<td>• Strong position in a meaningful number of printing products.</td>
<td>• Steady position in a number of printing products.</td>
<td>• Steady position in some printing products.</td>
</tr>
<tr>
<td></td>
<td>• National/international printing network with facilities well-located to serve multiple major centres.</td>
<td>• National/international printing network reasonably located to serve a few major centres.</td>
<td>• Regional printing network that requires transport to serve a few major centres.</td>
</tr>
<tr>
<td><strong>Product Diversification and Long-Term Contracts</strong></td>
<td>• Strong product diversification.</td>
<td>• Reasonable product diversification.</td>
<td>• Modest product diversification.</td>
</tr>
<tr>
<td></td>
<td>• Majority of products accompany long-term contracts which provide stable revenues.</td>
<td>• A moderate degree of long-term contracts which provide reasonable revenue certainty.</td>
<td>• A modest degree of long-term contracts which provide some revenue certainty.</td>
</tr>
<tr>
<td></td>
<td>• Excellent track record in bidding on long-term, fixed-price contracts.</td>
<td>• Proven track record in bidding on long-term, fixed-price contracts.</td>
<td>• Some success in bidding on long-term contracts.</td>
</tr>
<tr>
<td><strong>Customer Diversification</strong></td>
<td>• Strong customer diversification across printing products and services.</td>
<td>• Reasonable degree of customer diversification across printing products and services.</td>
<td>• Some concentration of customers across printing products and services.</td>
</tr>
<tr>
<td></td>
<td>• Strong customer diversity across many geographic areas.</td>
<td>• Reasonable customer diversity across some geographic areas.</td>
<td>• Some customer concentration across some geographic areas.</td>
</tr>
<tr>
<td><strong>Operating Efficiency</strong></td>
<td>• Very strong in demonstrating consistent operating efficiency.</td>
<td>• Strong in demonstrating steady operating efficiency.</td>
<td>• Adequate in demonstrating operating efficiency but somewhat inconsistent.</td>
</tr>
<tr>
<td></td>
<td>• Economies of scale operations providing for a significant per-unit cost advantage.</td>
<td>• Economies of scale operations providing for a moderate per-unit cost advantage.</td>
<td>• Satisfactory scale providing for per-unit costs in line with industry averages.</td>
</tr>
<tr>
<td></td>
<td>• State-of-the-art technology and facilities, enabling product and cost leadership.</td>
<td>• Good use of technology and modern facilities to produce high-quality products and contain costs.</td>
<td>• Low-to-average use of technology with mature facilities to produce reasonable quality products and contain costs.</td>
</tr>
</tbody>
</table>

The following BRA 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 BRA FACTORS
• The additional BRA 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.

Geographic Mix
• The degree to which a printer provides services in various geographies is assessed. End customers within different regions and demographics are interested in different types of advertisements, offered through various mediums. Their tastes, platform preferences, spending levels and other demographic factors are taken into account. Geographic diversification is generally a positive credit factor.

Printing Financial Risk Assessment

PRIMARY FRA METRICS
• The FRA grid below shows the primary FRA metrics used by DBRS to determine the FRA. While these primary FRA 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 FRA grid below.
• Liquidity can be an important credit risk factor, especially for lower-rated non-investment grade issuers. While ratios such as the current or quick ratio can give an indication of certain short-term assets in comparison with short-term liabilities, DBRS will typically review all material sources of liquidity (including cash on hand, cash flow from operations, availability of bank and capital market funding, etc.), in comparison with all material short- and medium-term uses of liquidity (such as operations, capital expenditures, mandatory debt repayments, share buybacks and dividends, etc.).
• 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 equityholders 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 FRA Metric</th>
<th>BBB</th>
<th>BB</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debt-to-EBITDA</td>
<td>&lt;3.5x</td>
<td>3.5x to 5.0x</td>
<td>&gt; 5.0x</td>
</tr>
<tr>
<td>Cash flow-to-debt</td>
<td>&gt;20%</td>
<td>10% to 20%</td>
<td>&lt; 10%</td>
</tr>
<tr>
<td>EBITDA-to-interest</td>
<td>&gt;4.0x</td>
<td>2.0x to 4.0x</td>
<td>&lt; 2.0x</td>
</tr>
<tr>
<td>EBIT-to-interest</td>
<td>&gt;3.0x</td>
<td>1.5x to 3.0x</td>
<td>&lt; 1.5x</td>
</tr>
<tr>
<td>Debt-to-capital</td>
<td>&lt;45%</td>
<td>45% to 60%</td>
<td>&gt; 60%</td>
</tr>
</tbody>
</table>
ADDITIONAL FRA METRICS

• While the primary FRA metrics above will be the most important metrics that DBRS will use in determining the FRA 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 BRA and FRA into an Issuer Rating

• The final issuer rating is a blend of the BRA and FRA. In most cases, the BRA will have greater weight than the FRA in determining the issuer rating.
• At the low end of the rating scale, however, particularly in the B range and below, the FRA and liquidity factors play a much larger role and the BRA 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 notchting 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.
• 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 Criteria for Corporate 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 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.