



Methodology

*Rating Companies in the Forest
Products Industry*

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Insight beyond the rating.

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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.



Rating Companies in the Forest Products Industry

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Introduction to DBRS Methodologies

- In general terms, DBRS ratings are opinions that reflect the creditworthiness of an issuer, a security or an obligation. They are opinions based on an analysis of historic trends and forward-looking measurements that assess an issuer's ability and willingness to make timely payments on outstanding obligations (whether principal, interest, dividend or distributions) with respect to the terms of an obligation.
- DBRS rating methodologies include consideration of general business and financial risk factors applicable to most industries in the corporate sector as well as industry-specific issues and more subjective factors, nuances and intangible considerations. Our approach is not based solely on statistical analysis but includes a combination of both quantitative and qualitative considerations.
- The considerations outlined in DBRS methodologies are not intended to be exhaustive. In certain cases, a major strength can compensate for a weakness and, conversely, there are cases where one weakness is so critical that it overrides the fact that the company may be strong in most other areas.
- DBRS rating methodologies are underpinned by a stable rating philosophy, which means that in order to minimize the rating changes due primarily to economic changes, DBRS strives to factor the impact of a cyclical economic environment into its rating as applicable. Rating revisions do occur, however, when it is clear that a structural change, either positive or negative, has transpired or appears likely to transpire in the near future.
- As a framework, DBRS rating methodologies consist of several components that together form the basis of the ultimate ratings assigned to individual securities. Assessments typically include the industry's business risk profile, the company's general business risk profile, the company's financial risk profile and considerations related to the specific security.
- To some extent, the business risk and financial risk profiles are interrelated. The financial risk for a company must be considered along with the business risks that it faces. In most cases, an entity's business risk will carry more weight in the final issuer rating than will its financial risk.

Business and Financial Risk Overview

- On a high-level macro basis, DBRS has a consistent approach to determining the issuer rating of an entity that is common across many industries. (See the appendix for the definition of "issuer rating.") Our high-level approach can be broken into three stages, as shown on the opposite page.
- Where applicable, DBRS uses the concept of business risk ratings (BRRs) as a tool in assessing the business strength of both industries and individual companies within many methodologies across the corporate finance area. DBRS typically assesses five areas to establish the overall BRR for an industry:
 - Profitability and cash flow.
 - Competitive landscape.
 - Stability.
 - Regulation.
 - Other inherent industry considerations.
- Although there is an overlap in some instances (to some degree, in the long term, all five factors tend to relate to profitability and stability), DBRS has found that considering these five measures in a separate fashion is a useful way of approaching this analysis.
- Using the same factors across different industries provides a common base with which to compare the business risks of various industries, even when they are distinctly different. In all cases, DBRS uses historic performance and our experience to determine an opinion on the future, which is the primary focus. For additional discussion on industry BRRs, please refer to the Industry Business Risk Ratings and Industry Business Risk Rating Definitions sections in the appendix.



- It is important to note that the ratings for company-specific business and financial risks as provided under Stage 2 of this document should not be taken as final issuer ratings. For example, an individual company may fit into the “A” range with respect to the analysis of its business risk, but its financial metrics could be more in the BB category. It would be incorrect to believe that the final issuer rating in this case would be either “A” or BB. In determining the final issuer rating, both of these two major areas must be considered. For additional discussion on this topic, please refer to the Interrelationship between Business and Financial Risk section in the appendix.

Three Stages of DBRS Rating Analysis

Stage 1: Industry Business Risk Rating

Consider the overall business risk rating (BRR) for the industry.

Industry Business Risk Rating

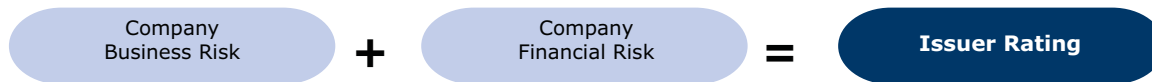


Stage 2: Issuer Rating

Consider the strength of the individual issuer:

- (a) First assessing how the company’s BRR compares with the industry BRR.
- (b) Then assessing the company’s financial risk.

Taken together, these factors will determine the company’s issuer rating.



The **long-term rating** puts more emphasis on business risk than the short-term rating does.



The **short-term rating** stresses financial risk as well as business risk, but places more emphasis on financial risk and liquidity than the long-term rating does.

Stage 3: Rating the Security

Consider covenant and ranking issues that exist for specific securities, using the issuer rating to determine specific security ratings.



Stage 1: Industry Business Risk Rating for the Forest Products Industry

DEFINITION OF THE INDUSTRY

- The industry includes companies that participate in the conversion of wood fibre into saleable products.
- Companies in the industry are involved in one or more of the following sectors: pulp, paper, newsprint, paper packaging and building products.
- A forest products company can be a fully integrated producer, participating in the full value chain from growing the trees to converting the wood fibre into final products (pulp, paper, newsprint, packaging boxes and building products). Or, it can be just a converter, making pulp, paper, packaging materials or building products, or a combination thereof.
- Pure timberland operators are covered in a separate section (see page 16) and are excluded from the analysis below.

BUSINESS RISK RATING

- The business risk rating (BRR) of the forest products industry is BBB (low)/BB. The rating reflects the fact that the industry is more volatile than the general economy due to the commodity nature of most forest products; the structural decline in demand for products like paper and newsprint as a result of the advent of the digital age; the highly energy-intensive nature of the industry and the industry's exposure to currency fluctuations for non-United States-based producers.
- The BRR of the four major sectors within the industry – that is, building products, packaging, pulp and paper and newsprint – varies due to each sector's unique risk profile. The BRR for building products is BBB (low)/BB (high) due to a higher profitability for this sector than for other forest products and lower substitution risk. The BRR for packaging is BB (high) because of the sector's modest profitability and average cyclicality (in line with the general economy). The BRR for pulp and paper and newsprint is BB. These sectors have lower profitability and more volatility than other forest product sectors. Pulp is a commodity and faces rising global competition. Newsprint and printing/writing paper face ongoing structural decline in demand due to the substitution effect of digital media.

The factors affecting the forest product industry's overall BRR are as follows:

- The industry has a level of cyclicality that is above that of most industries. Frequent oversupply and shortage conditions in the industry further accentuate volatility.
- Most forest products are commodities with limited pricing power and are subject to global supply and demand conditions. Profitability tends to be below the average of other industries.
- The industry faces high substitution risk. Newsprint and paper producers are facing structural decline due to competition from digital media. The decline in newspaper readership is threatening newsprint and the growth in digital advertising is taking market share from print advertising and reducing the use of specialty paper. Conservation is also having a pronounced impact on the use of packaging materials.
- Advances in forest management techniques have increased the supply of fibre through new plantations, especially in South America, adding to competitive pressure.
- The industry is capital intensive, with substantial capital needed to build pulp and paper mills.
- The industry is sensitive to energy costs, which are on a secular uptrend due to increasing consumption from emerging markets. In addition, the industry is transportation sensitive, limiting how far products can be economically transported. The industry has limited ability to pass on cost increases.
- The industry is labour intensive, with most companies possessing a unionized labour force. A unionized labour force tends to have more rigid work rules and a higher number of disruptions, adding to production costs.

INDUSTRY PROFITABILITY AND CASH FLOW

Profitability is generally below the average of other industries due to competitive pressure.

- Earnings are cyclical; frequent oversupply and shortage conditions add to volatility.
- Most forest products are commodities, lacking pricing power.
- A structural decline in demand for newsprint and specialty paper is pressuring industry production capacity. Ongoing decline in newspaper readership and a shift toward digital media are the main threats.
- The industry is capital intensive. The cost structure is relatively inflexible, and capacity utilization is key to profitability.
- Growing capacities in selected sectors (pulp and newsprint) in emerging markets further pressure profitability.
- Strong and militant unionized labour forces can add to cost pressures.
- The industry is sensitive to energy and raw materials costs, but has limited ability to pass through cost increases.

INDUSTRY COMPETITIVE LANDSCAPE

Competition in the forest products industry is generally more intense than in other industries.

- Forest products are mostly commodities, with little brand differentiation.
- Growing supply in emerging markets adds to competitive pressure.
- Coastal regions are vulnerable to lower-cost imports as transportation costs are less of an issue.
- Access to fibre supply and high capital intensity act as barriers to entry.
- Low profitability effectively acts as a mild deterrent to new entrants.
- Consolidation in North America and subsequent producer discipline has improved market conditions.

INDUSTRY STABILITY

The industry is subject to a level of cyclicity that is higher than in most industries.

- The industry is highly cyclical, and strongly correlated to the economic cycle.
- Downturns, when they occur, tend to be longer and deeper than in other industries.
- The forest products industry faces frequent oversupply/shortage conditions.
- Products mostly compete on prices, which are very sensitive to supply/demand conditions.

INDUSTRY REGULATION

Regulation risk in the industry is modestly higher than among other industries.

- Regulation is focused mostly on safety and environmental issues.
- Additional regulations regarding preservation of endangered species or protecting wildlife, unique to this industry, could cause temporary distortion to fibre supply.

OTHER INHERENT INDUSTRY CONSIDERATIONS

There are other industry considerations with varying effects on the business risk of the four major sectors.

- There is high substitution risk for printing paper and newsprint from digital media; however, this risk is less pronounced for other products
- The impact of manufacturing technology is not significant on the industry in general.
- Paper is transportation sensitive, limiting the distance products can travel.
- Most forest products (pulp, newsprint, paper, etc) are global commodities with high currency risk.

Stage 2: Issuer Rating

To move from the generic industry BRR toward the issuer rating for a specific company, two tasks must be performed. Specifically, we must determine the business risk and the financial risk for the individual company.

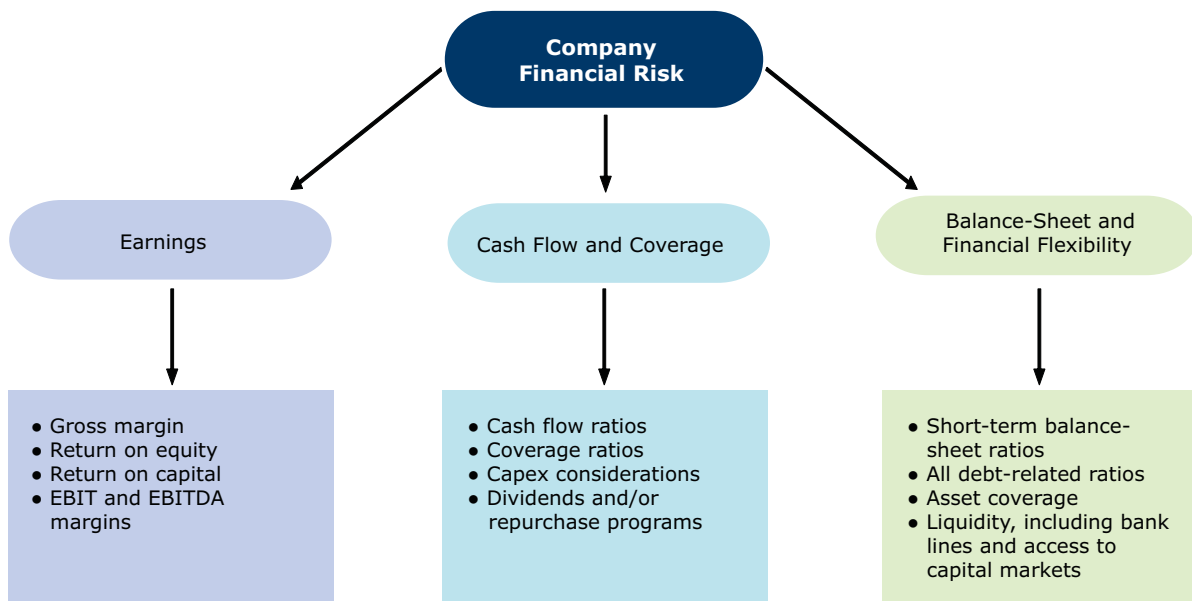
BUSINESS RISK PROFILE

- The business risk profile of the issuer may be better or worse than the industry average due to the presence of unique attributes or challenges that exist at the issuing entity. While not exhaustive, the list of critical factors outlined in the previous section could result in a specific issuer rating being different from the industry BRR.
- This methodology also provides some guidance on which factors are considered the most critical for the industry in question. Issuers may also have meaningful business lines in addition to the base business that extend beyond their most prominent industry, which could add significant attributes or challenges.

FINANCIAL RISK PROFILE

- The graphic below is a visual display of the key financial risk profile considerations that are discussed in the Company-Specific Financial Risk Factors section of this methodology, although even the detail provided there is not meant to be exhaustive.
- The discussion will note that DBRS often makes calculation adjustments in key ratios for risks related to a variety of areas. In some cases, a relationship with a parent or associated company will also be important.

Key Financial Risk Metrics





Company-Specific Business Risk Factors

- We now consider if an individual company in the forest products industry would be better, worse or the same as the industry BRR. Our focus here is on the critical business risk factors that relate to this industry in particular. The five critical factors used to determine the industry BRR are applied by DBRS to compare numerous industries and are thus more general in nature.
- By analyzing these key drivers (which will vary on an industry-by-industry basis), the essential strengths and challenges of each industry are captured in an accurate fashion, and transparency is provided. The analysis below is connected to the industry BRR in that the industry BRR establishes where an average company would be considered to score on the matrix. For example, an industry with a BRR of BBB would mean that the following matrix describes the scoring of an average company within the BBB column.

Company-Specific Business Risks – Critical Factors

Rating Business Strength	A Superior	BBB Adequate	BB Weak	B Poor
Fibre Supply and Costs	<ul style="list-style-type: none"> • More than self-sufficient in fibre supply. • No supply shortage risk. • Fibre source close to mills. • Low fibre cost. • Access to export market for surplus fibre. 	<ul style="list-style-type: none"> • Sufficient fibre supply under long-term contract. • No supply shortage risk. • Fibre source relatively close to mills. • Reasonable fibre cost. 	<ul style="list-style-type: none"> • Reasonable access to fibre supply. • A large portion of supply under contract. • Manageable supply shortage risk. • Reasonable fibre cost but still subject to volatile market prices. 	<ul style="list-style-type: none"> • Limited fibre supply under long-term contract. • Fibre supply mostly from open market purchase with high supply shortage risk. • Volatile and high fibre cost based on market prices.
Mill Integration and Efficiency	<ul style="list-style-type: none"> • Highly efficient mills with latest technology; well maintained. • A high degree of vertical integration. • Lowest-cost producer. • Long-term low-cost energy supply. • Low labour costs and no major labour disruptions. • Low transportation costs. 	<ul style="list-style-type: none"> • Efficient and well maintained mills. • Some vertical integration. • First- or second-quartile cost producer. • Long-term energy supply at slightly below market price. • Reasonable labour cost and minimal labour disruptions. • Reasonable transportation costs. 	<ul style="list-style-type: none"> • Acceptable operating efficiency. • Mills in reasonable condition. • Second- or third-quartile cost producer. • Sufficient energy supply at market price. • Reasonable labour cost and some labour disruptions. • Reasonable transportation costs. 	<ul style="list-style-type: none"> • Older, not efficient equipment. • High-cost producer. • Energy costs at volatile market prices. • High labour costs and frequent labour troubles. • High transportation costs.
Capital Intensity	<ul style="list-style-type: none"> • New equipment and only regular maintenance needed. • Modest capital demand in the near future. • Mill and equipment well ahead of environmental standards. 	<ul style="list-style-type: none"> • Mills and equipment in good condition. • Some investment may be needed in the near future. • Mills and equipment exceed current environmental standards. 	<ul style="list-style-type: none"> • Mills in reasonable condition but investment needed to improve efficiency. • Equipment meets current environmental standards but upgrades needed in the near future. 	<ul style="list-style-type: none"> • Mills need large capital investment to boost efficiency. • Equipment barely meets current environmental standards and needs costly upgrades.

Company-Specific Business Risks – Critical Factors

Rating	A Superior	BBB Adequate	BB Weak	B Poor
Business Strength				
Product Diversity	<ul style="list-style-type: none"> • Exposure to all forest product sectors. • Wide product offering in each sector. • Leading market position in most products. • Lower volatility than most forest product companies due to products with offsetting economic cycles. 	<ul style="list-style-type: none"> • Exposure to most forest product sectors. • Wide product offering in each sector. • Strong market position in most products. • Below-average volatility due to some products with offsetting economic cycles. 	<ul style="list-style-type: none"> • Exposure to most forest product sectors. • Limited product offering in each sector. • Strong market position in some products. • Average volatility compared with other forest product companies. 	<ul style="list-style-type: none"> • Narrow focus in terms of both sector and product offering. • More volatile than average forest products companies.
Saleable Assets	<ul style="list-style-type: none"> • Lots of large and readily saleable assets. 	<ul style="list-style-type: none"> • Some large and readily saleable assets. 	<ul style="list-style-type: none"> • Some readily saleable assets. 	<ul style="list-style-type: none"> • Limited readily saleable assets.

PRIMARY FACTORS

Fibre Supply and Costs

- Access to adequate fibre supply at a competitive cost is critical to the success of a forest product company.
- Self-sufficiency in fibre supply would shield producers from supply risk and improve cost-competitiveness.
- Long-term contracts on fibre supply would reduce supply risk but still expose the producers to fibre cost volatility.
- Producers with high dependency on open-market fibre purchases are vulnerable to supply and price risks.
- DBRS evaluates a company's access to recycled fibre. Producers can use recycled fibres such as old newspaper and old magazine paper instead of the virgin fibre obtained directly from trees.
- Having access to a fibre source close to the mill reduces transportation costs.

Mill Integration and Efficiency

- The cost-competitiveness of operations is a key factor in evaluating a company's efficiency.
- DBRS considers the age, size and condition of the company's equipment and the efficiency of its manufacturing process, as well as its ability to optimize capacity utilization.
- It must be determined whether the company has a supply of energy at a reasonable cost and diversity in its sources of energy.
- DBRS assesses a company's supply of labour, the level of unionization of its labour force and its history of labour relations.

Capital Intensity

- DBRS evaluates the level of capital required to replace existing equipment to improve operating efficiency.
- Capital is needed to maintain equipment in good operating condition.
- The amount of capital needed to upgrade equipment to meet regulatory standards is assessed, as well as the capital needed to fund expansion to achieve proper economies of scale.



Product Diversity

- Wider product offerings serving different end-markets helps reduce volatility.
- Greater breadth of product helps strengthen a forest products company's market position.
- Product offerings with offsetting business cycles helps to reduce earnings cyclicality.
- A richer product mix of higher-value products (away from commodity-grade) helps to increase margins and to lower volatility.

Saleable Assets

- Possessing large saleable assets increases a company's financial flexibility.
- Large saleable assets provide more protection to debt holders.
- Ownership of timberland and hydroelectric power generating facilities strengthens a company's cost position by providing low-cost fibre and electrical energy, respectively. Additionally, these assets can be easily monetized to provide liquidity.

ADDITIONAL FACTORS

Fragmentation

- The forest products industry is still fragmented, which intensifies competition despite recent consolidation.
- The lack of dominant companies leads to a lack of discipline among industry players regarding supply management; this can have detrimental effects on pricing.

Regulation

- Cross-border trade issues such as the lumber duty levied by the United States add more risks and costs to Canadian lumber producers.
- Production in areas with sensitive environmental issues could be subjected to regulations that directly affect fibre supply and, consequently, operating costs.
- Regulations related to labour practices in some regions add to production costs.

Currency Exchange Rates

- Most forest products companies export a high percentage of their products, and the relative strength between the local currency (production) and the U.S. dollar (sales) has a major impact on profitability.
- Currency fluctuation adds to earnings volatility if not adequately hedged.

Distribution Channels

- The extensive fine papers distribution network increases the marketability of fine paper products.
- Strategically located distribution centres enable a company to guarantee efficient delivery, providing a competitive advantage.

COMMON BUSINESS CONSIDERATIONS

- There are two major considerations that were not included with the prior analysis but can have a meaningful impact on an individual company in any industry: country risk and corporate governance (which includes management). These areas tend to be regarded more as potential negative issues that could result in a lower rating than otherwise would be the case, although DBRS would certainly consider exceptional strength in corporate governance as a rating attribute.
- In most cases, our focus on the two areas is to ensure that the company in question does not have any meaningful challenges that are not readily identifiable when reviewing the other business risk considerations and financial metrics outlined in this methodology.

Country Risk

- Governments often intervene in their economies and occasionally make substantial changes that can significantly affect a company's ability to meet its financial obligations; therefore, considerations include the company's main location or country of operation, the extent of government intervention and support and the degree of economic and political stability.
- As such, the sovereign rating itself may in some cases become a limiting factor in an entity's rating, particularly when the sovereign has a lower rating and the entity does not have meaningful diversification outside its domestic economy.

Corporate Governance

- Effective corporate governance requires a healthy tension between management, the board of directors and the public. There is no single approach that will be optimal for all companies.
- A good board will have a profound impact on a company, particularly when there are significant changes, challenges or major decisions facing the company. DBRS will typically assess factors such as the appropriateness of board composition and structure, opportunities for management self-interest, the extent of financial and non-financial disclosure and the strength or weakness of control functions. For more detail on this subject, please refer to the DBRS criteria *Evaluating Corporate Governance*.
- With respect to the pivotal area of management, an objective profile can be obtained by assessing the following: the appropriateness of core strategies; the rigour of key policies, processes and practices; management's reaction to problem situations; the integrity of company business and regulatory dealings; the entity's appetite for growth, either organically by adding new segments or through acquisition; its ability to smoothly integrate acquisitions without business disruption; and its track record in achieving financial results. Retention strategies and succession planning for senior roles can also be considerations.

Timberland Operators

DBRS also rates timberland operators.

DEFINITION OF THE INDUSTRY

- The industry includes companies that own and manage timberland.
- These companies grow and harvest trees for sale as logs.
- Timberland operators also sell surplus lands for real estate development.

BUSINESS RISK RATING

The BRR for timberland companies is BBB, which is higher than the BRR for any other forest product sector. The rationale for the higher BRR is due the following unique attributes:

- Timberlands are highly valuable assets and can be easily monetized, even during weak industry conditions.
- The value of the timberlands is usually well in excess of the amount of gross debt, providing debt holders with ample collateral support.
- Highly liquid timberland assets enhances a company's financial flexibility.
- Capital investments are very modest and the timing of the investment is flexible.
- Operating and maintenance costs can be kept at minimal levels during weak market conditions to minimize cash needs.
- Historically, timberland owners have exercised discipline and managed their holding judiciously to maximize their returns through a cycle.



Company-Specific Financial Risk Factors

KEY METRICS

- Recognizing that any analysis of financial metrics may be prone to misplaced precision, we have limited our key metrics to a small universe of critical ratios. For each of these ratios, DBRS provides a range within which the issuer's financial strength would be considered as supportive for the same level of business risk as the forest products industry. For example, a company where the outlook for both business risk and financial risk metrics falls within the BBB category would, all else being equal, be expected to have an issuer rating in the BBB range.
- To be clear, the ratings in the matrix below should not be understood as the final rating for an entity with matching metrics. This would only be the case to the extent that the business risk of the company and a wide range of other financial metrics were also supportive. The final rating is a blend of both the business risk and financial risk considerations in their entirety.

Forest Products Industry Financial Metrics*

Key Ratio	A	BBB	BB	B
Debt-to-capital	< 30%	30% to 45%	45% to 60%	> 60%
EBIT coverage	> 5.0x	3.0x to 5.0x	1.5x to 3.0x	< 1.5x
Cash flow-to-debt	> 30%	20% to 30%	10% to 20%	< 10%
EBITDA-to-interest	> 7.0x	4.0x to 7.0x	2.0x to 4.0x	< 2.0x
Debt-to-EBITDA	< 2.0x	2.0x to 3.5x	3.5x to 5.0x	> 5.0x
Return on equity	> 9%	7% to 9%	5% to 7%	< 5%

* Timberland operators could have financial metrics well below their rating range during a down cycle. The significant value of their timberland holdings that can be easily monetized acts as a source of liquidity and provides ample collateral support to debtholders. These help mitigate the risks of weaker financial metrics.

- While the data in the above table are recognized as key factors, they should not be expected to be fully adequate to provide a final financial risk rating for any company. The nature of credit analysis is such that it must incorporate a broad range of financial considerations, and this cannot be limited to a finite number of metrics, regardless of how critical these may be.
- 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 also not uncommon for a company's key ratios to move in and out of the ranges noted in the ratio matrix above, particularly for cyclical industries. In the application of this matrix, however, DBRS is typically focusing on multi-year ratio averages.
- Notwithstanding these potential limitations, the key ratios are very useful in providing a good starting point in assessing a company's financial risk.
- It is important to note that actual financial ratios for an entity can and will be influenced by both accounting and accounting choices. In Canada, this will include the shift to International Financial Reporting Standards (IFRS). DBRS acknowledges that IFRS and other accounting choices will have an impact on the financial metrics of the companies that it covers. The financial risk factors include ratios based on data from company financial statements that are based on Canadian Generally Accepted Accounting Principles (GAAP) and U.S. GAAP, for the most part. When company financial statements are based on GAAP in other countries, including IFRS, the ratios and ranges may need to be redefined.
- Recognizing that the metrics in the table above do not represent the entire universe of considerations that DBRS examines when evaluating the financial risk profile of a company, the following provides a general overview that encompasses a broader range of metrics and considerations that could be meaningful in some cases.



Overall Considerations in Evaluating a Company's Financial Risk Profile

In addition to the information already provided with respect to key financial metrics, the following financial considerations and ratios are typically part of the analysis for the forest products industry. As it is not possible to completely separate business and financial risks, note that many of the following ratios will relate to both areas.

EARNINGS

- DBRS earnings analysis focuses on core earnings or earnings before non-recurring items and in doing so considers issues such as the sources, mix and quality of revenue; the volatility or stability of revenue; the underlying cost base (e.g., the company is a low-cost producer); optimal product pricing; and potential growth opportunities. Accordingly, earnings as presented in the financial statements are often adjusted for non-recurring items or items not considered part of ongoing operations.
- DBRS generally reviews company budgets and forecasts for future periods. Segmented breakdowns by division are also typically part of DBRS analysis. Notwithstanding the focus on core earnings, note that actual net earnings is also a consideration in our analysis given the direct impact that this has on the capital structure.

Typical Earnings Ratios

- EBIT margin.
- EBIT interest coverage.
- EBITDA interest coverage.
- Net margin.
- Return on equity.
- Return on capital.

CASH FLOW AND COVERAGE

- DBRS cash flow analysis focuses on the core ability of the company to generate cash flow to service current debt obligations and other cash requirements as well as on the future direction of cash flow. From a credit analysis perspective, insufficient cash sources can create financial flexibility problems, even though net income metrics may be favourable.
- DBRS evaluates the sustainability and quality of a company's core cash flow by focusing on cash flow from operations and free cash flow before and after working capital changes. Using core or normalized earnings as a base, DBRS adjusts cash flow from operations for as many non-recurring items as relevant. As with earnings, the impact that non-core factors have on cash flow may also be an important reality.
- In terms of outlook, DBRS focuses on the projected direction of free cash flow, the liquidity and coverage ratios and the company's ability to internally versus externally fund debt reduction, future capital expenditures and dividend and/or stock repurchase programs, as applicable.

Typical Cash Flow Ratios

- Cash flow-to-debt.
- Adjusted cash flow-to-adjusted debt.
- Cash flow-to-net debt.
- Adjusted cash flow-to-adjusted net debt.
- Debt-to-EBITDA.



BALANCE-SHEET AND FINANCIAL FLEXIBILITY CONSIDERATIONS

- As part of determining the overall financial risk profile, DBRS evaluates various other factors to measure the strength and quality of the company's assets and its financial flexibility. From a balance-sheet perspective, DBRS focuses on the quality and composition of assets, including goodwill and other intangibles; off-balance-sheet risk; and capital considerations such as the quality of capital, appropriateness of leverage to asset quality and the ability to raise new capital.
- DBRS also reviews the company's strategies for growth, including capital expenditures and plans for maintenance or expansion, and the expected source of funding for these requirements, including bank lines and related covenants. Where the numbers are considered significant and the adjustments would meaningfully affect the credit analysis, DBRS adjusts certain ratios for items such as operating leases, derivatives, securitizations, hybrid issues, off-balance-sheet liabilities and various other accounting issues.

Typical Balance-Sheet Ratios

- Current ratio.
- Non-monetary working capital.
- Inventory turnover (days).
- Debt-to-EBITDA.
- Debt-to-capital.
- Adjusted debt-to-capital.
- Net debt-to-capital.

Stage 3: Rating the Security

With respect to Stage 3, the following comments describe how the issuer rating is used to determine ratings on individual securities:

- 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 DBRS rating policy entitled "[Underlying Principles](#)."
- In some cases, issued debt is secured by collateral. This is more typical in the non-investment-grade spectrum. For more detail on this subject, please refer to [DBRS Rating Methodology for Leveraged Finance](#).
- 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 Parent/Holding Companies and Their Subsidiaries](#).

Appendix

INDUSTRY BUSINESS RISK RATINGS

- DBRS uses the concept of business risk ratings (BRRs) as a tool in assessing the business strength of both industries and individual companies within many methodologies across the corporate finance area. (DBRS does not typically use this approach for most financial, government and public finance sectors, where the industry is more challenging to define and this approach is not as useful.)
- The BRR is assessed independently of financial risk, although in some cases there are subtle but important links. As an example, the very low business risk profile of many regulated utilities has historically allowed this sector to operate with debt levels that would not be acceptable for most other industry sectors. Given this reality, it is difficult to consider the utility industry's BRR without acknowledging to some degree that the industry operates with sizable debt levels. This type of relationship exists with many industries, although typically to a much lesser degree.
- When a BRR is applied to an industry, there is an acknowledgment that this is a general assessment and there may in fact be a wide disbursement in the business strength of individual entities within the industry. Nonetheless, this assessment is beneficial to enabling DBRS to clearly delineate our industry opinion and is a useful tool when comparing different industries. An industry BRR is defined as being representative of those entities that the market would consider as "established," meaning that the group of companies being considered would have at least reasonable critical mass and track records. As such, the BRR for an industry does not consider very small players, start-up operations or entities that have unusual strengths or weaknesses relative to the base industry.
- DBRS methodologies note whether they apply to global industries or more specific countries or regions. When analyzing individual credits, DBRS considers the degree to which regional considerations may differ from the geographic area applicable within the industry methodology. Many entities have business units that transcend industries and in these cases, more than one BRR would be considered, including the possible benefits or challenges that may exist when all businesses are analyzed as part of a combined group.
- The BRR is a tool that provides additional clarity regarding the business risk of the industry overall, but it should be viewed as just one aspect in the complex analysis of setting ratings and should by no means be seen as either a floor or ceiling for issuers within a given industry. Although DBRS does not anticipate volatility in an industry's BRR, changes are possible over time if there are meaningful structural developments in the industry. When such a change does occur, DBRS will make this clear and note any impact on related individual ratings within the industry as applicable.
- DBRS assesses five areas to establish the overall BRR for an industry. Although there is an overlap in some instances (to some degree, in the long term, all five factors tend to relate to profitability and stability), DBRS has found that considering these five measures in a separate fashion is a useful way of approaching its analysis. In all cases, DBRS uses historic performance and our experience to determine an opinion on the future, which is the primary focus.

Industry Profitability and Cash Flow

- When ratios such as return on equity, return on capital and a variety of cash flow metrics are considered, some industries are simply more profitable than others. While standard economics would suggest a reversion to the mean through new competitors, this often occurs at a very slow pace over a long time horizon and in some cases may not occur at all because of barriers to entry.
- The benefits from above-average profits and/or cash flow are substantial and include internal capital growth, easier access to external capital and an additional buffer to unexpected adversity from both liquidity and capital perspectives.
- Some industries and their participants have challenges or strengths in areas such as research and development (R&D), brand recognition, marketing, distribution, cost levels and a potentially wide variety of other tangibles and intangibles that affect their ability in the area of profitability.

Industry Competitive Landscape

- The competitive landscape provides information regarding future profitability for the industry and thus somewhat crosses over into the profitability and cash flow assessment, but competition is deemed worthy of separate consideration because of its critical nature.
- Participants in industries that lack discipline, produce commodity-like products or services, have low barriers to entry and exhibit ongoing pricing war strategies generally have difficulty attaining high profitability levels in the longer term. Certain industries benefit from a monopoly or oligopoly situation, which may relate to regulation.

Industry Stability

- This factor relates primarily to the degree of stability in cash flow and earnings, measuring the degree to which the industry and its participants are affected by economic or industry cycles. Stability is considered critical as industries with high peaks and troughs have to deal with higher risk at the bottom of a cycle. As such, to some degree, industries with lower but stable profitability are considered more highly than industries with higher average profitability that is more cyclical.
- Some of the key factors in considering stability include the nature of the cost structure (fixed or variable), diversification that provides counter-cyclical and the degree to which the industry interrelates with the overall economy. Depending on the industry, economic factors could include inflation or deflation, supply and demand, interest rates, currency swings and future demographics.

Industry Regulation

- Where applicable, regulation can provide support through stability and a barrier to entry, but it can also cause challenges and change the risk profile of an industry and its participants in a negative way, including the reality of additional costs and complications in enacting new strategies or other changes.
- As part of its analysis of regulation, DBRS also considers the likelihood of deregulation for a regulated industry, noting the many examples where this transition has proven to be a major challenge in the past.

Other Inherent Industry Considerations

- Each industry has its own set of unique potential risks that, even if managed well, cannot be totally eliminated. Specific risks, the ability to manage them and the range of potential outcomes vary industry by industry. Two of the most common risks are changing technology and operational risks.
- Some of the other more common risks are in the areas of legal, product tampering, weather, natural disasters, labour relations, currency, energy prices, emerging markets and pensions.



INDUSTRY BUSINESS RISK RATING DEFINITIONS

DBRS specifies the BRR for an industry in terms of our **Long-Term Obligations** rating scale. When discussing industry BRRs for an industry, DBRS typically provides either one specific rating or a limited range (such as BBB (high)/BBB). Using a range recognizes the fact that, by their nature, industry BRRs are less precise than a specific corporate or security rating as they represent an overall industry. In addition to relating to the industry level, these definitions also apply to the business risk of individual companies, which will fall more often in the very high and low categories (AA/AAA and B) than would be the case for an entire industry.

Industry Business Risk Ratings (BRRs)

Rating	Business Strength	Comment
AA/AAA	Exceptional	An industry BRR of AA/AAA is considered unusually strong, with no meaningful weakness in any individual area. It may include pure monopolies that are deemed essential (the primary case being regulated utilities, where the risk of deregulation is believed to be very low). Common attributes include product differentiation, high barriers to entry and meaningful cost advantages over other industries or entities. These and other strengths provide exceptional stability and high profitability. It would be quite rare for an industry to have a BRR in this category.
A	Superior	Industry BRRs at the "A" level are considered well above average in terms of stability and profitability and typically have some barriers to entry related to capital, technology or scale. Industries that have, by their nature, inherent challenges in terms of cyclicalities, a high degree of competition and technology risks would be unlikely to attain this rating category.
BBB	Adequate	Industry BRRs at the BBB level include many cyclical industries where other positive considerations are somewhat offset by challenges related to areas such as commodity products, labour issues, low barriers to entry, high fixed costs and exposure to energy costs. This rating category is considered average and many industries fall within it, with key considerations such as overall profitability and stability typically considered as neither above or below average.
BB	Weak	An industry at the BB level has some meaningful challenges. In addition to high cyclicalities, challenges could include the existence of high technology or other risks. Long-standing industries that may have lost their key strengths through factors such as new competition, obsolescence or the inability to meet changing purchaser demands may fit here. The culmination of such factors results in an industry that does not generally score well in terms of stability and profitability. For an entire industry, this is typically the lowest BRR level.
B	Poor	While not common, there are cases where an industry can have a BRR of B. Such industries would typically be characterized by below-average strength in all or virtually all major areas.



INTERRELATIONSHIP BETWEEN FINANCIAL AND BUSINESS RISK

Having in mind the prior discussion on the typical importance that DBRS places on certain financial metrics and business strengths for the forest products industry, we provide some guiding principles pertaining to the application of DBRS methodologies, the first one being that, in most cases, an entity's business risk will carry more weight in the final rating than its financial risk.

Based on this underlying concept, we provide the additional guidance for individual companies with varying business risks:

- **For an Entity with a Business Risk of AA (Exceptional):** A company with a business risk of AA will almost always be able to obtain an investment-grade issuer rating. When financial metrics are in the BBB range, an entity with a business risk of AA would typically be able to attain an "A"-range issuer rating.
- **For an Entity with a Business Risk of "A" (Superior):** Unless financial strength fails to exceed the B range, superior business strength will typically allow the final issuer rating to be investment grade. Very conservative financial risk may in some cases allow the final issuer rating to be within the AA range, but this should not be considered the norm.
- **For an Entity with a Business Risk of BBB (Adequate):** At this average level of business risk, the level of financial risk typically has the ability to result in a final issuer rating from as high as "A" to as low as B.
- **For an Entity with a Business Risk of BB (Weak):** At this weak level of business risk, conservative financial risk can, in some cases, take the final issuer rating into the BBB investment-grade range.
- **For an Entity with a Business Risk of B (Poor):** It is not typically possible for a company with a business risk of B to achieve a final investment-grade issuer rating.

DEFINITION OF ISSUER RATING

- DBRS Corporate rating analysis begins with an evaluation of the fundamental creditworthiness of the issuer, which is reflected in an "issuer rating". Issuer ratings address the overall credit strength of the issuer. Unlike ratings on individual securities or classes of securities, issuer ratings are based on the entity itself and do not include consideration for security or ranking. Ratings that apply to actual securities (secured or unsecured) may be higher, lower or equal to the issuer rating for a given entity.
- Given the lack of impact from security or ranking considerations, issuer ratings generally provide an opinion of default risk for all industry sectors. As such, issuer ratings in the banking sector relate to the final credit opinion on a bank that incorporates both the intrinsic rating and support considerations, if any.
- DBRS typically assigns issuer ratings on a long-term basis using its **Long Term Obligations** Rating Scale; however, on occasion, DBRS may assign a "short-term issuer rating" using its **Commercial Paper and Short Term Debt** Rating Scale to reflect the issuer's overall creditworthiness over a short-term time horizon.

SHORT-TERM AND LONG-TERM RATINGS

- For a discussion on the relationship between short- and long-term ratings and more detail on liquidity factors, please refer to the DBRS policy entitled "**Short-Term and Long-Term Rating Relationships**" and the criteria *DBRS Commercial Paper Liquidity Support Criteria for Corporate Non-Bank Issuers*.

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