

Methodology

Rating Companies in the Airline 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.



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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.

Stage 1: Industry Business Risk Rating for the Airline Industry

DEFINITION OF THE INDUSTRY

- The airline industry encompasses global companies principally engaged in the transportation of passengers by plane. These companies may also engage in the transportation of cargo, but this is usually on a much smaller scale.
- The methodology is broadly applied to both scheduled and chartered airlines and covers all segments such as legacy, budget, feeder and regional airlines.
- While primarily focused on global companies, this methodology is also applicable to smaller operators, which may be able to offset some scale and diversification challenges through meaningful presence in important niche markets.

BUSINESS RISK RATING

The business risk rating of the airline industry is BB (low) and recognizes the fact that the industry is one of the most difficult industries in our economy in which to operate.

- Profitability of the industry is often weak because it is (a) labour intensive, (b) capital intensive, (c) energy intensive, (d) sensitive to the state of the economy and (e) highly seasonal, with stronger results in the third quarter and weaker results in the first and fourth quarters.
- Barriers to entry into the industry are often low, helped by the ability to lease aircraft and outsource most other support services.
- Stability of income is low because of the fixed nature of costs and fluctuating passenger loads.
- Regulation is high, and rather than reducing competition, regulation (especially related to security matters) increases costs and reduces flexibility of operations.
- Safety and reputation are key issues, and any airline that has an accident is hurt severely in lawsuit settlement costs, reputation loss and future insurance rates.
- Therefore, the business risk rating of the airline industry is relatively low. Having said this, DBRS recognizes that there are companies that are able to deal with these challenges and obtain investment-grade ratings.

INDUSTRY PROFITABILITY AND CASH FLOW

- Profitability of the industry is generally weak, although, with high levels of depreciation and amortization, cash flow levels tend to be stronger and help stabilize the balance sheet.
- While financial ratios are covered separately in this methodology, the industry in general tends to have high levels of adjusted debt because of the use of operating leases. This adds an element of costs that are largely fixed and, over the longer term, are sensitive to interest rate movement at the time of renewal.
- The airline industry is highly labour intensive, from pilots and flight attendants to personnel responsible for baggage handling, ticketing and loading. These labour costs are mostly fixed and restrict flexibility in adjusting the expense structure when needed. Moreover, most of the labour force is unionized, which further limits operational flexibility.
- Aircraft use high levels of fuels and are energy intensive, with operating profits materially influenced by fuel cost volatility.
- Interest rate levels have significant influence on borrowing costs and leasing costs, which indirectly affect profitability.
- Load factors are key, so the state of the economy is important to the airline industry. With a high proportion of fixed costs, a slowdown in the volume of passengers quickly translates into lower profitability and makes earnings volatile.
- Operations are highly seasonal, with stronger results in the third quarter of the year, while the first and fourth quarters are usually weaker. Therefore, earnings through the year are highly volatile.

INDUSTRY COMPETITIVE LANDSCAPE

- Barriers to entry into the industry are low because of the ability of the industry to lease aircraft at relatively low rates, particularly older or surplus aircraft.
- Interest rates today are relatively low and this reduces the interest cost of leases.
- In recent years, a number of new airlines have engaged in niche segments, such as special charters, vacation destinations, etc. These new entrants have a non-union labour force (which increases flexibility and lowers labour costs) and focus on selective routes that are high-volume destinations and give these airlines critical mass to serve those destinations. These new entrants, with less in legacy costs and more route flexibility, often have a competitive advantage over the larger legacy airlines.
- The formation of an alliance among airlines (e.g. the Star Alliance) provides member airlines a competitive advantage of scale and flexibility by pooling resources from all members. The alliance allows members to code share and leverage each other's services, leading to increased coverage, better connections and higher capacity utilization.

INDUSTRY STABILITY

- Airlines are extremely sensitive to volume of traffic (load factor) and profitability quickly falls off as load factor declines.
- Costs are largely fixed in the short term. (Fuel usage and costs are affected by load and flying conditions, but the incremental impact is modest.) The industry is highly seasonal, with revenue usually peaking in the third quarter but weak in the first and fourth quarters.
- The advent of travel websites and other travel distribution channels has led to a substantial increase in discounted and promotional fares.
- The volume of business class is highly sensitive to economic conditions. The variability of the more profitable business class passenger would have an exaggerated impact on profitability.

INDUSTRY REGULATION

- The industry is heavily regulated in areas such as safety issues, maintenance policies, hours of operation per month for personnel and route selection.
- Bilateral agreements with other countries restrict the number of flights between these countries.
- Generally, cabotage can restrict foreign airlines from picking up passengers in a country and flying them to another location in that or any other country.

OTHER INHERENT INDUSTRY CONSIDERATIONS

- Safety and reputation issues are key for any airline, which must maintain a favourable track record.
- Airlines are vulnerable to security risks related to terrorism, war, political unrest, epidemics, etc.
- Airline operations are susceptible to disruptions from weather and natural disasters.

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.

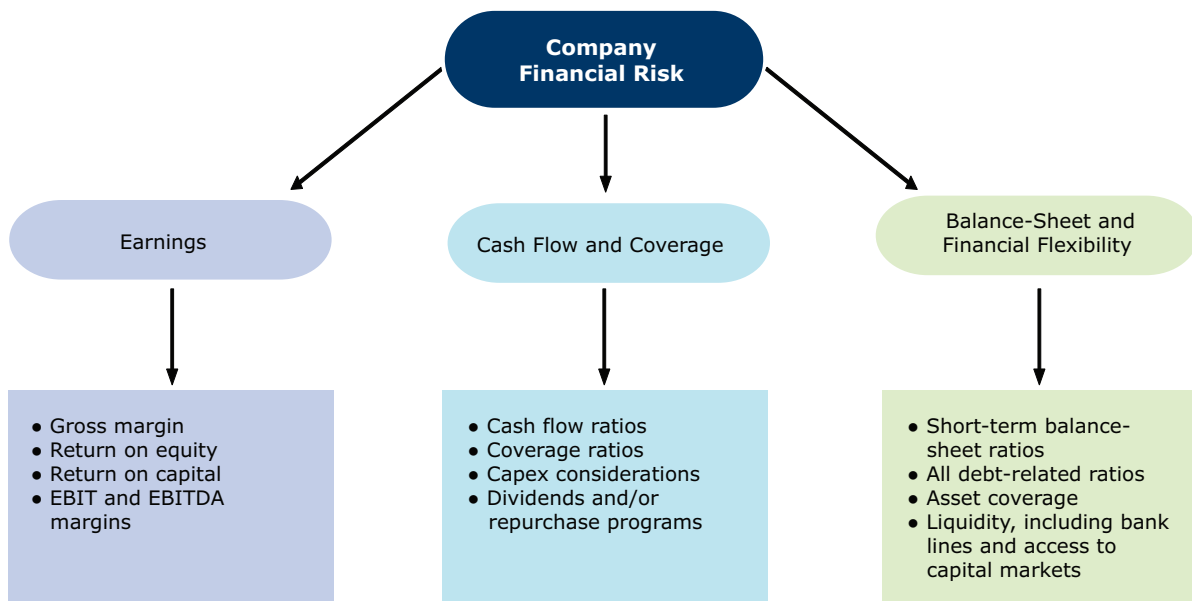
BUSINESS RISK PROFILE

- 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 airline 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	BBB	BB	B or below
Business Strength	Adequate	Weak	Poor
Diversification and Market Share	<ul style="list-style-type: none"> • Highly diversified across several continents and regions. Well-balanced mixed of domestic and intercontinental flights. • Among market share leaders in a significant number of key markets. • A key member of a strong international airline alliance, with lots of code-sharing opportunities. Meaningful revenue from non-passenger services. 	<ul style="list-style-type: none"> • Well diversified, with no continent producing the majority of revenue. • Well-balanced mix of domestic and intercontinental flights. • Among market share leaders in some key markets. • A member of a strong international airline alliance. with code-sharing opportunities. • Some revenue from non-passenger services. 	<ul style="list-style-type: none"> • Majority of revenue from one type of traffic and vulnerable to competition. • Not typically among the leaders in terms of market share or only among market share leaders on a very narrow niche basis. • A member of an international airline alliance, with code-sharing opportunities.
Operating Cost Structure (Including Labour and Seasonality)	<ul style="list-style-type: none"> • Low-cost operating structure, with strong ability to control variable non-fuel costs. • Ability to levy fuel surcharge without adverse effect on demand. • Labour relations are good and strikes are rare. • If they exist, unions are generally cooperative. • Modest legacy cost burden. • Track record of consistent high-load factor. • Ability to use fleet for sun destinations in winter often adds another method of using planes when there are excesses in other regions. • Strong financial resources to implement financial hedges to mitigate currency and fuel cost risks. 	<ul style="list-style-type: none"> • Operating cost structure is better than average, with some flexibility to control variable non-fuel costs. • Some flexibility in levying fuel surcharges without material impact on demand. • Acceptable load factors. • Labour relations are reasonable. • Strikes are minor, although some labour disruptions may occur. • Moderately high legacy cost burden. • Some flexibility in redirecting fleet in winter to sun destinations. • Ability to implement financial hedges to mitigate currency and fuel-cost risks. 	<ul style="list-style-type: none"> • Average to high cost structure. • Limited flexibility to control variable non-fuel costs. • Below-average load factor and moderate to high variability in load factor. • Material legacy cost burden. • Labour relations are poor. • Work disruptions are common. • Seniority issues among unionized workforce an obstacle in contract negotiations. • Limited ability to levy fuel surcharge. • Low flexibility in cutting planes or costs. • Limited ability to implement financial hedges to mitigate currency and fuel-cost risks.

Company-Specific Business Risks – Critical Factors

Rating	BBB	BB	B or below
Business Strength	Adequate	Weak	Poor
Fleet	<ul style="list-style-type: none"> Company has owned and leased aircraft, including leases on a long-term basis, with some flexibility. Company operates modern, efficient fleet. Fleet age well below industry average. Fleet mix compatible with route network. 	<ul style="list-style-type: none"> Company has a high proportion of leased planes, with leases that tend to be middle term and have moderate flexibility. Company has a mixed fleet of old and new planes. Fleet age near industry average. Fleet mix reasonable for route network. 	<ul style="list-style-type: none"> High proportion of leased planes, with long-term leases and limited flexibility in lease terms. Company has a lot of older and fuel-inefficient planes. Plane size is not appropriately matched to routes. Fleet age above industry average.
Route Network	<ul style="list-style-type: none"> Highly profitable routes, with high proportion of business travel. Traffic routes have high growth potential. Access to all key cities of markets served. High flight frequency at favourable time slots. Large number of landing slots at key airports to accommodate growth. 	<ul style="list-style-type: none"> Profitable routes, with reasonable share of business travel. Traffic routes have good growth potential. Access to some key cities of markets served. Frequent flights at favourable time slots. Adequate landing slots at key airports to accommodate near-term growth. 	<ul style="list-style-type: none"> Network primarily covering regional traffic and/or serving as feeder to other airlines. Focus on vacation destinations and chartered flights at lower margins. Sufficient landing slots at key airports to handle existing traffic volume but limited growth capacity.
Customer Service/ Reputation	<ul style="list-style-type: none"> Very strong brand recognition. Strong reputation for quality service. Strong customer loyalty. A highly popular loyalty program. 	<ul style="list-style-type: none"> Strong brand recognition. Good reputation for quality service. A highly popular loyalty program. 	<ul style="list-style-type: none"> Acceptable reputation for service. Some form of loyalty program. Inconsistent service quality and frequent flight disruptions.

PRIMARY FACTORS

Diversification and Market Share

- Diverse geographical coverage can add protection from adverse regional economic conditions.
- Strong market position usually bestows the carrier with economies of scale and pricing leadership.
- Serving attractive markets, such as ones with a high proportion of business travel and good growth potential, provides good opportunities for revenue growth.
- Being a member of a strong global airline alliance adds to competitive advantage by offering improved services to customers, such as increased flight choices and efficient connections and transfers.
- Meaningful revenue from other sources, such as transporting cargo, selling vacation packages or providing chartered services, reduces dependence on volatile passenger travel and revenue volatility,

Operating Cost Structure (Including Labour and Seasonality)

In an industry that has challenges with intensity across a full gamut of labour, capital, energy, economic and seasonal considerations, companies that lead in cost control will have a significant advantage. Flexibility to adjust to changing market conditions is also important. In assessing cost control and flexibility, DBRS reviews the following areas:

- Track record on labour relations, the frequency of job actions and the duration of disruptions. A unionized labour force with highly restrictive work rules and hiring practices can be a major issue.
- Legacy cost burdens, such as high-cost pension and benefits plans.



- Capacity utilization and load factors s. Cost efficiency is difficult without strength in these key cost drivers.
- Pricing power and ability to levy fuel surcharges enable a carrier to pass on high costs to maintain profit.

Fleet

Key attributes assessed to determine the strength of an operators fleet include the following:

- Suitability of planes to service the route network in terms of range and cost of operations.
- Average Age of Fleet: Younger planes tend to be more fuel efficient and require lower maintenance.
- Fleet Mix: Deploying planes from a large number of different manufacturers and a diverse mix of models increases training costs, investment in parts and overall operating and maintenance costs.
- Fleet Ownership (Owned or Leased): Some portion of leases in the fleet mix is acceptable and expected, but leases can be problematic when they are short term or inflexible.

Route Network

A strong route network will provide the operator with a solid underlying base of profitability and future growth potential. In assessing this factor, DBRS views the following as key attributes:

- Access to and adequate coverage of all key cities and regions.
- Routes that have high growth potential and above-average yield (e.g., with a higher proportion of business travel).
- Frequent flights in favourable time slots.
- Adequate landing slots in key airports to service existing traffic and for growth.

Customer Service/Reputation

Strength in customer service and reputation can be advantageous in attracting customers and charging higher prices. In this respect, the following factors are assessed:

- Brand recognition.
- Reputation on quality of service.
- Customer loyalty.
- Availability of frequent-flyer or loyalty programs.

ADDITIONAL FACTORS

Fuel Hedging

- Given the energy intensiveness of the industry, hedging for fuel pricing is positive in that it reduces earnings volatility.
- Financial capacity to support financial derivatives gives a carrier flexibility to mitigate currency and fuel-cost risks.
- For meaningful credit, companies would be expected to hedge major portions within a year and some beyond.

Regulation

- While regulation is heavy for all participants, some companies have better processes and strength in dealing with safety issues, maintenance policies and hours of operation.

Currency Sensitivity

- Some companies are sensitive to currency and choices with respect to hedging can have an impact on stability.



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.

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 airline 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.

Airline Industry Financial Metrics

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

- 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 financial ratios for an entity can and will be influenced by both accounting and accounting choices. In Canada, this includes the current transition to International Financial Reporting Standards (IFRS). DBRS notes that the differences between accounting choices will have an impact on the financial metrics of the companies that it covers. Historically in Canada, the financial risk factors included ratios based on Canadian Generally Accepted Accounting Principles (GAAP) and U.S. GAAP, for the most part. In those cases when a company's financial statements are based on other accounting standards, 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 airline 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

- EBITDA interest coverage.
- EBIT interest coverage.
- EBITDA margin.
- EBIT margin.
- 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 (DBRS-adjusted ratios for operating leases, which are capitalized and included as debt).
- Cash flow-to-net debt.
- Adjusted cash flow-to-adjusted net debt (DBRS-adjusted ratios for operating leases, which are capitalized and included as debt).



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.
- Debt-to-EBITDA.
- Net debt-to-EBITDA.
- Adjusted debt-to-EBITDA (DBRS-adjusted ratios for operating leases, which are capitalized and included as debt).
- Debt-to-capital.
- Net debt-to-capital.
- Adjusted debt-to-capital (DBRS-adjusted ratios for operating leases, which are capitalized and included as debt).

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 airline 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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