MOODY'S
INVESTORS SERVICE

RATING METHODOLOGY
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Rating Methodology

Passenger Railways and Bus Companies

This rating methodology replaces the *Passenger Railways and Bus Companies Methodology* published in January 2021. We have reordered and have made editorial updates to various sections of the methodology, and we have changed the presentation of the scorecard. These updates do not change our methodological approach.

Scope

This methodology applies to companies globally that are primarily* engaged in providing inter-city passenger railroad services, privately managed bus transportation services for passengers and closely associated activities, such as the development and leasing of retail space at stations, which we typically include as passenger-related revenue. Companies rated under this methodology may also have some freight and logistics operations. Investor-owned as well as government-owned companies are rated under this methodology.

Companies that are primarily engaged in providing freight transportation services to businesses through trucking or railroad operations are rated under our methodology for surface transportation and logistics.[1] Government-owned mass transit enterprise issuers that provide local passenger transport services primarily within a metropolitan area are rated under our methodology for mass transit enterprises.[2]

*The determination of a company's primary business is generally based on the preponderance of the company's business risks, which are usually proportionate to the company's revenues, earnings and cash flows.

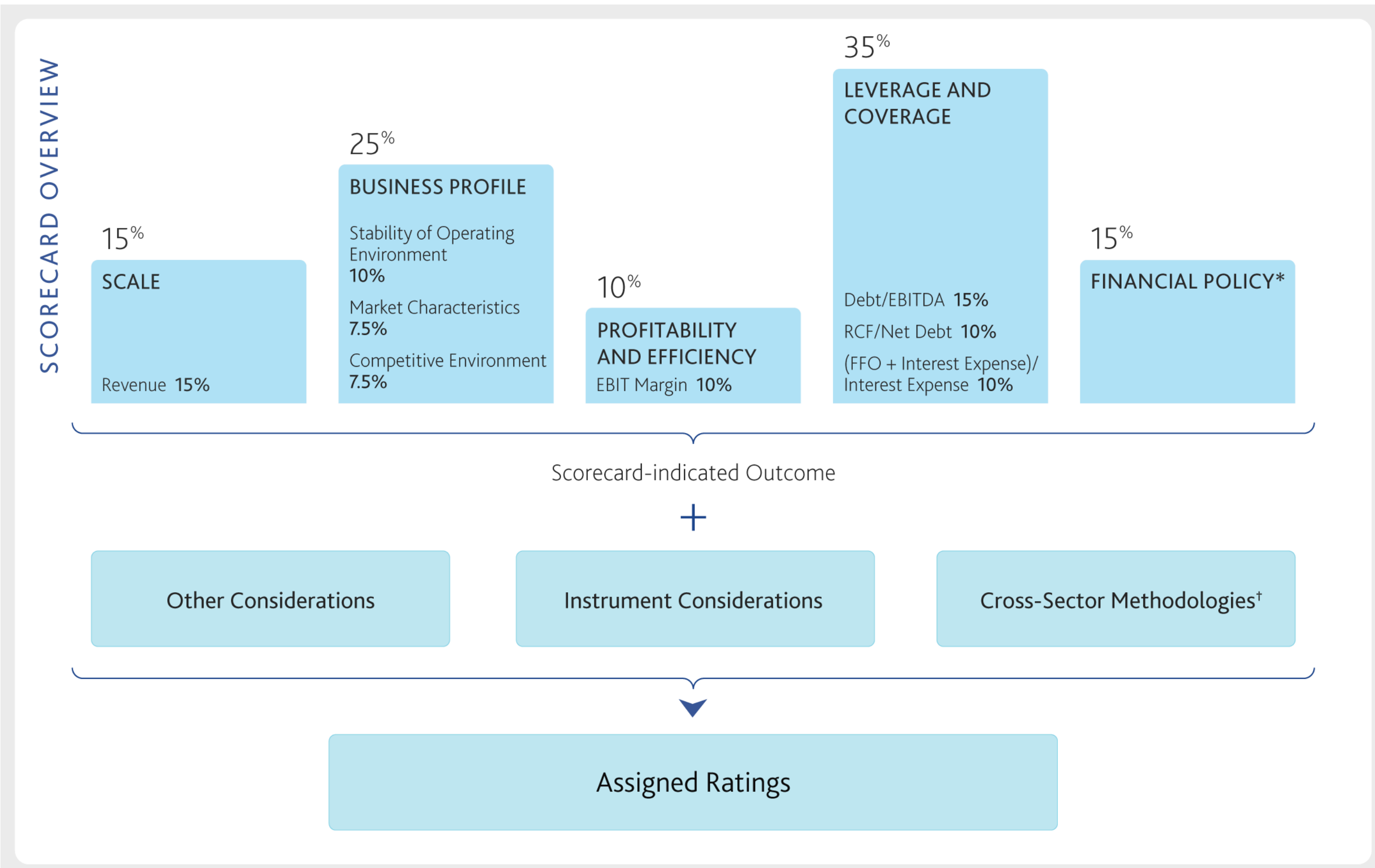
Rating approach

In this rating methodology, we explain our general approach to assessing credit risk of issuers in the passenger railways and bus companies industry globally, including the qualitative and quantitative factors that are likely to affect rating outcomes in this sector. We seek to incorporate all material credit considerations in ratings and to take the most forward-looking perspective that visibility into these risks and mitigants permits.

The following schematic illustrates our general framework for the analysis of passenger railways and bus companies, which includes the use of a scorecard.[3] The scorecard-indicated outcome is not expected to match the actual rating for each company. For more information, see the "Other considerations" and "Limitations" sections.

Exhibit 1

Illustration of the passenger railways and bus companies methodology framework



* This factor has no sub-factors.

† Some of the methodological considerations described in one or more cross-sector rating methodologies may be relevant to ratings in this sector. A link to a list of our sector and cross-sector methodologies can be found in the "Moody's related publications" section.

Source: Moody's Investors Service

Passenger railways and bus companies scorecard

For general information about how we use the scorecard and for a discussion of scorecard mechanics, please see the "Using the scorecard to arrive at a scorecard-indicated outcome" section. The scorecard does not include or address every factor that a rating committee may consider in assigning ratings in this sector. Please see the "Other considerations" and "Limitations" sections.

Exhibit 2

Passenger railways and bus companies scorecard

	SCALE (15%)	BUSINESS PROFILE (25%)			PROFITABILITY AND EFFICIENCY (10%)	LEVERAGE AND COVERAGE (35%)			FINANCIAL POLICY (15%)
	Revenue (USD Billion)[1] (15%)	Stability of the Operating Environment (10%)	Market Characteristics (7.5%)	Competitive Environment (7.5%)	EBIT Margin[2] (EBIT / Revenue) (10%)	Debt / EBITDA[3] (15%)	RCF / Net Debt[4] (10%)	(FFO + Interest Expense) / Interest Expense[5] (10%)	Financial Policy (15%)
Aaa	≥ $40	Regulatory and legal framework is extremely supportive, extremely transparent and predictable and allows for nearly full cost reimbursement. and Extremely strong political support, including through subsidies or longer term through transportation policies, is expected to continue, and subsidies are from entities with very strong financial positions.	Operates in countries or regions with extremely strong and highly diversified economies; very strong growth trend in passenger traffic. and Social or environmental events would result in essentially no disruption of operations.	Sole operator in primary market, with very low competition from alternative modes of transportation.	≥ 20%	≤ 1.5x	≥ 50%	≥ 10x	Expected to have extremely conservative financial policies (including risk and liquidity management); very stable metrics; essentially no event risk that would cause a rating transition; and public commitment to a very strong credit profile over the long term.
Aa	$20 - $40	Regulatory and legal framework is highly supportive, highly transparent and predictable, and allows for substantial cost reimbursement. and Very strong political support, including through subsidies or longer term through transportation policies, is expected to continue, and subsidies are from entities with very strong financial positions.	Operates in countries or regions with very strong and well-diversified economies; strong growth trend in passenger traffic. and Social or environmental events would result in a minor, manageable disruption of operations.	Leading operator in primary market, with low competition from same mode of transportation and alternative modes.	15% - 20%	1.5x - 2.5x	35% - 50%	7x - 10x	Expected to have very conservative financial policies (including risk and liquidity management); stable metrics; minimal event risk that would cause a rating transition; and public commitment to a strong credit profile over the long term.
A	$10 - $20	Regulatory and legal framework is supportive, transparent and predictable and allows for some cost-reimbursement; strong political support, including through subsidies or longer term through transportation policies, is expected to continue, and subsidies are from entities with strong financial positions.	Operates in countries or regions with strong and diversified economies; modest growth trend in passenger traffic; social or environmental events would result in a moderate but manageable disruption of operations.	Leading operator in primary market, with increasing competition from same mode of transportation or moderate competition from alternative modes.	10% - 15%	2.5x - 3.5x	25% - 35%	4.5x - 7x	Expected to have predictable financial policies (including risk and liquidity management) that preserve creditor interests; although modest event risk exists, the effect on leverage is likely to be small and temporary; strong commitment to a solid credit profile.

	SCALE (15%)	BUSINESS PROFILE (25%)			PROFITABILITY AND EFFICIENCY (10%)	LEVERAGE AND COVERAGE (35%)			FINANCIAL POLICY (15%)
	Revenue (USD Billion)[1] (15%)	Stability of the Operating Environment (10%)	Market Characteristics (7.5%)	Competitive Environment (7.5%)	EBIT Margin[2] (EBIT / Revenue) (10%)	Debt / EBITDA[3] (15%)	RCF / Net Debt[4] (10%)	(FFO + Interest Expense) / Interest Expense[5] (10%)	Financial Policy (15%)
Baa	$5 - $10	Regulatory and legal framework is supportive, transparent and predictable; moderate political support, including through subsidies or longer term through transportation policies, is expected to continue, and subsidies are from entities with solid financial positions.	Operates in countries or regions with moderately strong and diversified economies; stable passenger traffic; social or environmental events would result in a somewhat challenging disruption of operations.	Strong operator in primary market, with increasing competition from same mode of transportation or alternative modes.	7% - 10%	3.5x - 4.5x	15% - 25%	3x - 4.5x	Expected to have financial policies (including risk and liquidity management) that balance the interests of creditors and shareholders; some risk that debt-funded acquisitions or shareholder distributions could lead to a weaker credit profile.
Ba	$3 - $5	Regulatory and legal framework is somewhat supportive and transparent, but with limited history of implementation, or with some potential for adverse change; moderate political support, including through subsidies or longer term through transportation policies, is expected to continue.	Operates in a country or region with a moderately strong economy, but subject to some industry concentration; stable passenger traffic or trend of moderate declines; social or environmental events would result in a challenging disruption of operations.	Materially increasing competition in primary market from same mode of transportation or alternative modes.	4.5% - 7%	4.5x - 6x	7% - 15%	2x - 3x	Expected to have financial policies (including risk and liquidity management) that tend to favor shareholders over creditors; above-average financial risk resulting from shareholder distributions, acquisitions, or other significant capital structure changes.
B	$1 - $3	Regulatory and legal framework is somewhat transparent, but with high likelihood of adverse change; limited political support, including through subsidies or longer term through transportation policies, is expected to continue.	Operates in a country or region with a somewhat weak economy, subject to heavy industry concentration; trend of declines in passenger traffic; social or environmental events would result in a highly challenging disruption of operations.	Strong competition in primary market from same mode of transportation or alternative modes.	2.5% - 4.5%	6x - 7.5x	0% - 7%	1.25x - 2x	Expected to have financial policies (including risk and liquidity management) that favor shareholders over creditors; high financial risk resulting from shareholder distributions, acquisitions, or other significant capital structure changes.
Caa	$0.5 - $1	Regulatory and legal framework is opaque, with a track record of adverse change. or Extremely limited or unreliable political support for subsidies.	Operates in a country or region with a weak or deteriorating economy; trend of strong declines in passenger traffic. or Social or environmental events would result in a highly challenging disruption of operations.	Very strong and increasing competition in primary market from same mode of transportation or alternative modes.	1% - 2.5%	7.5x - 9x	(5)% - 0%	0.5x - 1.25x	Expected to have financial policies (including risk and liquidity management) that create elevated risk of debt restructuring in varied economic environments.

	SCALE (15%)	BUSINESS PROFILE (25%)			PROFITABILITY AND EFFICIENCY (10%)	LEVERAGE AND COVERAGE (35%)			FINANCIAL POLICY (15%)
	Revenue (USD Billion)[1] (15%)	**Stability of the Operating Environment (10%)**	**Market Characteristics (7.5%)**	**Competitive Environment (7.5%)**	**EBIT Margin[2] (EBIT / Revenue) (10%)**	**Debt / EBITDA[3] (15%)**	**RCF / Net Debt[4] (10%)**	**(FFO + Interest Expense) / Interest Expense[5] (10%)**	**Financial Policy (15%)**
Ca	< $0.5	Regulatory and legal framework is opaque, with a track record of adverse change. or Essentially no political support.	Operates in a country or region with an extremely weak or deteriorating economy; rapidly deteriorating passenger traffic. or Social or environmental events would result in a complete disruption of operations.	Small startup operator in intensely competitive primary market.	< 1%	> 9x	< (5)%	< 0.5x	Expected to have financial policies (including risk and liquidity management) that create elevated risk of debt restructuring even in healthy economic environments.

[1] For the linear scoring scale, the Aaa endpoint value is $75 billion. A value of $75 billion or better equates to a numeric score of 0.5. The Ca endpoint value is $0. A value of $0 equates to a numeric score of 20.5.
[2] For the linear scoring scale, the Aaa endpoint value is 40%. A value of 40% or better equates to a numeric score of 0.5. The Ca endpoint value is 0%. A value of 0% or worse equates to a numeric score of 20.5.
[3] For the linear scoring scale, the Aaa endpoint value is 0x. A value of 0x equates to a numeric score of 0.5. The Ca endpoint value is 12x. A value of 12x or worse equates to a numeric score of 20.5, as does a negative debt/EBITDA value.
[4] For the linear scoring scale, when net debt is positive, the Aaa endpoint value is 75%. A value of 75% or better equates to a numeric score of 0.5. The Ca endpoint value is (10)%. A value of (10)% or worse equates to a numeric score of 20.5. When net debt is negative and RCF is positive, the numeric score is 0.5. When net debt is negative and RCF is negative or zero, the numeric score is 16.5.
[5] For the linear scoring scale, the Aaa endpoint value is 15x. A value of 15x or better equates to a numeric score of 0.5. The Ca endpoint value is 0x. A value of 0x or worse equates to a numeric score of 20.5.
Source: Moody's Investors Service

Sector overview

Most passenger railways and some bus companies receive some public funding because the transportation they provide is generally considered to be an essential public service that often provides a vital link between some of the most important economic zones within a country. Public support is typically in the form of operating and capital expenditure subsidies,or grants and may also include access to low-interest loans or the ability to purchase fuel at a discount to market value. Where direct public funding is not provided, companies may still receive some form of government support, for example through policies that favor the use of public transportation.

Low profit margins are a characteristic of many passenger railway and bus companies, because the companies may be subject to price regulations. Passenger railway and bus companies may be able to improve profitability and efficiency through cost reductions in procurement and operations. Labor costs, on the other hand, tend to be relatively inflexible especially for passenger railways or in jurisdictions with strong labor laws, and these costs typically constitute a significant portion of a company's budget.

Some passenger railway or bus companies have diversified operations through logistics, freight or other businesses. Additionally, some passenger railway and bus companies may own or operate multiple modes of transport.

Discussion of the scorecard factors

In this section, we explain our general approach for scoring each scorecard factor or sub-factor, and we describe why they are meaningful as credit indicators.

Factor: Scale (15% weight)

Why it matters

Scale is an important indicator of the overall depth of a company's business and its success in attracting customers, as well as its resilience to shocks, such as sudden shifts in demand or rapid cost increases. The scale of a passenger railway or bus company is also a key indicator of its economic and political importance.

A large revenue base is important because it can lead to economies of scale that result in greater operating and cost efficiencies. Larger companies tend to generate higher cash flow for capital reinvestment and debt reduction. These companies have a greater capacity to invest in more efficient technology, production and sourcing, which are key for maintaining market share in the broad transportation market. Greater market share is also key for continued political support.

How we assess it for the scorecard

REVENUE:

Scale is measured (or estimated in the case of forward-looking expectations) using total reported revenue in billions of US dollars.

Factor: Business Profile (25% weight)

Why it matters

The business profile of a passenger railway company or a bus company is important because it greatly influences its ability to generate sustainable earnings and maintain stable operating cash flow. Core aspects of a passenger railway company's or bus company's business model are the stability of its operating environment, market characteristics and competitive environment.

This factor comprises three qualitative sub-factors:

Stability of the Operating Environment

The regulatory, legal and political environment in which a passenger railway company or bus company operates is important because it is the basis from which a company can maintain or grow its market share, expand its passenger base, generate revenue and sustain profitability. A company's performance is influenced by government policy and regulations that apply to such aspects as the level of competition permitted in the market, the amount of fees charged to access the railway network, limitations on ticket pricing, investments in new railway lines or bus routes, and security standards.

Government transportation policies indicate the extent of political support that passenger railway companies and bus companies receive. Even where the legal and regulatory framework is unchanged, different governments or administrations may provide varying levels of contractual, policy and subsidy support.

Government contracts for passenger railway or bus services also provide an important source of stability and predictability to a portion of a company's business, which would otherwise be more fully exposed to market risk. Many companies, particularly in the passenger railway sector, also receive public subsidies for operations, including funds for salaries and pensions, debt service and capital spending. Support may include access to low-interest loans or measures to help manage fuel costs, such as the ability to purchase fuel at a discount to market value or to pass through increases to consumers by increasing ticket prices.

The financial position of the entity providing support is also important, because a financially strong and creditworthy supporter is typically more able to meet its commitments to support passenger railway or bus transport services over an extended period.

Market Characteristics

The characteristics of the markets in which a passenger railway or bus company operates are important because they reflect the strength of the service area from which it draws passengers and the service area's resilience in the face of economic or other challenges. An economically strong and diversified service area is typically able to support the stability or growth of passenger traffic, in large part because the area is more resilient in an economic downturn.

The economic, social and environmental dynamics of the market or markets in which a company operates greatly influence its performance, stability and the potential for passenger traffic growth. For example, a passenger railway company that does not experience an unusually large number of weather-related delays or labor-related service interruptions may be more likely to maintain on-time arrivals and departures and benefit from the associated customer satisfaction. A high level of customer satisfaction can contribute to passenger stability and growth.

Many passenger railway companies' primary market has tended to be domestic, although some may have a regional or international presence. Privately managed bus operators have tended to have more geographically diverse operations and more variability in the strength of the markets in which they operate.

Passenger railway and bus companies that operate in countries or regions with strong and diversified economies, have a generally strong growth trend in passenger traffic and experience little or no disruption of operations from social or environmental events, typically have greater resilience to occasional downturns than companies that operate in weak economies, have declining traffic and face disruption from social or environmental events.

Competitive Environment

A passenger railway company's or bus company's market position and its competitive environment are meaningful indicators of its resilience in the event of increasing competition. Many passenger railway companies are long established and hold a very high share of their domestic market's passenger railway business. In some jurisdictions, the nearly monopolistic position of these companies is protected by regulation and very high barriers to entry. However, railways and buses may compete with each other and with passenger car travel, and evolving regulatory and legal frameworks that allow for more transportation options can generally increase competition or create advantages or disadvantages for some modes of transport. Additional competing modes of transport, such as low-cost airlines, can reduce a company's market share.

A company that is the sole or leading operator in its main market, and which has low competition from alternative modes of transportation, is generally in a better position to sustain its profitability and typically has more resources to invest in assets, provide high-quality customer service and maintain or strengthen its competitive position.

How we assess it for the scorecard

Scoring for this factor is based on three sub-factors: Stability of the Operating Environment; Market Characteristics; and Competitive Environment.

STABILITY OF THE OPERATING ENVIRONMENT:

Scoring for this sub-factor is based on our qualitative, forward-looking assessment of the transparency and predictability of the regulatory and legal framework in which a company operates. We consider how supportive the framework is for the company's activities and the extent to which it allows and provides for the reimbursement of costs. Additionally, we assess the level of near-term political support for subsidies or grants and for longer-term, favorable transportation policies.

In our assessment of the regulatory, legal and political environment, we consider the legal status granted to companies that provide passenger rail or bus transport service, the history and stability of policies related to the level of cost reimbursement, and policies related to the level and duration of subsidies. We also consider a country's or region's broader transportation policy, currently and going forward, as well as the financial strength of the entity or government providing ongoing support.

MARKET CHARACTERISTICS:

Scoring for this sub-factor is based on the economic strength of the geographic area served and diversification of the market or markets (e.g., business, leisure, regional, long-distance) in which a passenger railway or bus company operates. We may also consider a company's non-passenger activities, such as freight, logistics and real estate and the related risks and benefits.

We also assess the growth trend in passenger traffic. The level of growth that we consider to be strong varies across jurisdictions. In our assessment of passenger traffic growth, we consider whether the company operates in a mature market, where large increases in passenger traffic are unlikely, or if the company provides services in a developing economy that may experience higher passenger traffic growth from year to year.

In assessing the market characteristics of a passenger railway or bus company, we also consider the extent to which social or environmental events can disrupt operations. For a company operating in a country where labor strikes in the sector are common or protracted, we typically assess the potential interruption to operations resulting from the strike. Companies that are able to manage the disruption with limited effect on revenue or profitability, because they maintain sufficient reserves to support operations or because of government support during the disruption are typically in a stronger position than companies where such events would result in a challenging disruption of operations.

COMPETITIVE ENVIRONMENT:

Scoring for this sub-factor is based on our assessment of a company's competitive position within its primary market or markets and the level of competition it faces from other companies that provide the same mode of transport or other modes of transport. For a passenger railway company, its primary market typically lies within a country. However, in some cases, the service market could be a region within a country. Passenger railway and bus companies may operate in competition with each other or with other modes of transportation, including regional light rail, passenger cars and low-cost airlines.

Companies that are the sole or leading operators in their primary market or markets and face a low level of competition from same or alternative modes of transport typically receive higher scores for this sub-factor than companies that have a weaker market position or face increasing competition from various modes of transportation. We typically assess the current competitive environment and the possible effect that competition is likely to have on a company's revenue and profitability over the medium to long term.

Passenger railway companies that are vertically integrated and own all of the infrastructure of a railway network tend to have a fairly solid position because they typically operate the networks as monopolies, with stable and predictable operating revenue generated by all types of train traffic instead of solely from passenger traffic.

Generally, we do not expect a given company's business profile to exactly match each of the attributes listed for a given scoring category. We typically assign the sub-factor score based on the alpha category for which the company has the greatest number of characteristics. However, there may be cases in which one characteristic is sufficiently important to a particular company's credit profile that it has a large influence on the sub-factor score.

Factor: Profitability and Efficiency (10% weight)

Why it matters

Profits matter because they are needed to generate sustainable cash flow and maintain a competitive position, which includes making investments in assets, upgrading technology and improving service offerings. Profitability may also provide insights into a company's ability to manage its key costs, including fuel, labor and the cost of equipment and infrastructure.

The cost efficiency of a passenger railway or a bus company is an important indicator of the long-term viability of its business model.

Companies that demonstrate a solid track record of maintaining low operating costs and using assets efficiently without eroding growth prospects and product quality are generally in a better position than companies that have a poor track record of managing costs.

How we assess it for the scorecard

EBIT MARGIN:

We use the ratio of earnings before interest and taxes to revenue (EBIT Margin).

Factor: Leverage and Coverage (35% weight)

Why it matters

Leverage and cash flow coverage measures provide important indications of a company's financial flexibility and long-term viability, as well as its ability to sustain its competitive position, invest in growth and meet debt service obligations.

This factor comprises three quantitative sub-factors:

Debt / EBITDA

The ratio of total debt to earnings before interest, taxes, depreciation and amortization (Debt/EBITDA) is an indicator of debt serviceability and financial leverage. The ratio is commonly used in this sector as a proxy for comparative financial strength.

RCF / Net Debt

The ratio of retained cash flow to net debt (RCF/Net Debt) is an indicator of a company's cash generation (before working capital movements and capital expenditures, and after dividend payments) relative to its net debt (total debt minus cash and cash equivalents).

FFO Plus Interest Expense / Interest Expense

The ratio of funds from operations plus interest expense to interest expense (FFO + Interest Expense/Interest Expense) is an indicator of a company's ability to meet its interest obligations.

How we assess it for the scorecard

Scoring for this factor is based on three sub-factors: Debt/EBITDA; RCF/Net Debt; and (FFO + Interest Expense)/Interest Expense.

DEBT / EBITDA:

The numerator is total debt, and the denominator is EBITDA.

RCF / NET DEBT:

The numerator is retained cash flow, and the denominator is net debt (total debt minus cash and cash equivalents).

(FFO + INTEREST EXPENSE) / INTEREST EXPENSE:

The numerator is FFO plus interest expense, and the denominator is interest expense.

Factor: Financial Policy (15% weight)

Why it matters

Financial policy encompasses management and board tolerance for financial risk and commitment to a strong credit profile. It is an important rating determinant, because it directly affects debt levels, credit quality, the future direction for the company and the risk of adverse changes in financing and capital structure.

Financial risk tolerance serves as a guidepost to investment and capital allocation. An expectation that management will be committed to sustaining an improved credit profile is often necessary to support an upgrade. For example, we may not upgrade the ratings of a company that has built flexibility within its rating category if we believe the company will use that flexibility to fund a strategic acquisition, cash distribution to shareholders, spin-off or other leveraging transaction. Conversely, a company's credit rating may be better able to withstand a moderate leveraging event if management places a high priority on returning credit metrics to pre-transaction levels and has consistently demonstrated the commitment to do so through prior actions. Liquidity management[4] is an important aspect of overall risk management and can provide insight into risk tolerance.

Some passenger railway and bus companies have used acquisitions to spur revenue growth, expand business lines, consolidate market positions, advance cost synergies or seek access to new technology.

How we assess it for the scorecard

We assess the issuer's desired capital structure or targeted credit profile, its history of prior actions, including its track record of risk and liquidity management, and its adherence to its commitments. Attention is paid to management's operating performance and use of cash flow through different phases of economic and industry cycles. Also of interest is the way in which management responds to key events, such as changes in the credit markets and liquidity environment, legal actions, competitive challenges or regulatory pressures. Considerations include a company's public commitments in these areas, its track record for adhering to commitments and our views on the ability of the company to achieve its targets.

When considering event risks in the context of scoring financial policy, we assess the likelihood and potential negative impact of mergers and acquisitions (M&A) or other types of balance-sheet-transforming events. Management's appetite for M&A activity is assessed, with a focus on the type of transactions (i.e., core competency or new business) and funding decisions. Frequency and materiality of acquisitions and previous financing choices are evaluated. A history of debt-financed or credit-transforming acquisitions will generally result in a lower score for this factor. We may also consider negative repercussions caused by shareholders' willingness to sell the company.

We also consider a company's and its owners' past record of balancing shareholder returns and debtholders' interests. A track record of favoring shareholder returns at the expense of debtholders is likely to be viewed negatively in scoring this factor.

Other considerations

Ratings may reflect consideration of additional factors that are not in the scorecard, usually because the factor's credit importance varies widely among the issuers in the sector or because the factor may be important only under certain circumstances or for a subset of issuers. Such factors include financial controls and the quality of financial reporting; corporate legal structure; the quality and experience of management; assessments of corporate governance as well as environmental and social considerations; exposure to uncertain licensing regimes; and possible government interference in some countries. Regulatory, litigation, liquidity, technology and reputational risk as well as changes to consumer and business spending patterns, competitor strategies and macroeconomic trends also affect ratings.

Following are some examples of additional considerations that may be reflected in our ratings and that may cause ratings to be different from scorecard-indicated outcomes.

Regulatory Considerations

Companies in the passenger railway and bus transportation sector are subject to varying degrees of regulatory oversight. Effects of these regulations may entail limitations on operations, higher costs, and higher potential for technology disruptions and demand substitution. In addition, increased competition may result where companies are more easily permitted to enter the market. However, some regulatory changes may be positive for the sector, such as regulations intended to increase the use of more environmentally friendly travel such as public transportation. Regional differences in regulation, implementation or enforcement may advantage or disadvantage particular issuers.

Our view of future regulations plays an important role in our expectations of future financial metrics as well as our confidence level in the ability of an issuer to generate sufficient cash flow relative to its debt burden over the medium and longer term. Regulatory considerations also play a role in our assessment of the Stability of the Operating Environment and Competitive Environment sub-factors. In some circumstances, regulatory considerations may also be a rating factor outside the scorecard, for instance when regulatory change is swift.

Environmental, Social and Governance Considerations
Environmental, social and governance (ESG) considerations may affect the ratings of issuers in the passenger railway and bus transportation sector. For information about our approach to assessing ESG issues, please see our methodology that describes our general principles for assessing these risks.[5]

Some ESG considerations are incorporated in the scorecard, for example, in our assessment of the Market Characteristics sub-factor or in our forward view of metrics. In some cases, ESG considerations are incorporated qualitatively in our analysis.

Increased environmental awareness may strengthen efforts to reduce carbon dioxide emissions through greater adoption of train travel and other forms of public transportation, compared with airplane or automobile travel. Such a development may increase ridership for passenger railway companies or bus companies and improve their cash flow and profitability.

However, the companies are likely to bear the cost of upgrading rolling stock, railway lines or bus fleets to more stringent environmental standards over time and of using cleaner energy sources, which may be more expensive.

Companies may be subject to losses from extreme weather-related events that are associated with long-term climate change. For example, railroad tracks can be degraded by flooding as well as high temperatures. Weather-related service interruptions or delays can also lead to a decrease in timely service and eventually to a loss of revenue if customers perceive a company to be unreliable.

Social risks to companies in this sector are related primarily to human capital, in particular labor relations Labor strikes can lead to a disruption of service and temporary revenue shortfalls. Additionally, especially in jurisdictions with a highly unionized labor force, labor costs tend to rise more quickly and can lead to high fixed operating costs for companies. Rigid work rules can result in less flexibility to control labor and non-labor costs.

A company's corporate governance risks may arise from its financial strategy and risk management; management credibility and track record; its organizational structure; the quality of its compliance and reporting; and its board structure, policies and procedures.

Financial Controls
We rely on the accuracy of audited financial statements to assign and monitor ratings in this sector. The quality of financial statements may be influenced by internal controls, including the proper tone at the top, centralized operations, and consistency in accounting policies and procedures. Auditors' reports on the effectiveness of internal controls, auditors' comments in financial reports and unusual restatements of financial statements or delays in regulatory filings may indicate weaknesses in internal controls.

Management Strategy
The quality of management is an important factor supporting a company's credit strength. Assessing the execution of business plans over time can be helpful in assessing management's business strategies, policies and philosophies and in evaluating management performance relative to performance of competitors and our projections. Management's track record of adhering to stated plans, commitments and guidelines provides insight into management's likely future performance, including in stressed situations.

Liquidity
Liquidity is an important rating consideration for all passenger railway and bus companies rated under this methodology, although it may not have a substantial impact in discriminating between two issuers with a similar credit profile. Liquidity can be particularly important for companies in highly seasonal operating environments where working capital needs must be considered, and ratings can be heavily affected by extremely weak liquidity. We form an opinion on likely near-term liquidity requirements from the perspective of both sources and uses of cash. For more details on our approach, please see our liquidity cross-sector methodology.[6]

Construction Risk
Construction risk is an important consideration for passenger railway companies, and the incremental risks related to material construction or physical expansion of railway network infrastructure may negatively affect the credit profile of an issuer.

The construction phase for new railway lines or a new type of train project, such as a high-speed train, can strain leverage levels, if not adequately subsidized, as the company incurs construction-related debt well before any corresponding increase in revenue or cash flow to pay debt service.

In our assessment of construction risk and the likelihood of an on-time and in-budget completion, we typically consider the complexity of the project and the terms and conditions of the related contractual agreements. Where construction entails an expansion of an existing railway network, we consider the effect the project may have on the company's current operations, including the punctuality of service and related customer satisfaction.

Fleet Condition

The character and condition of the company's rolling stock or bus fleet can be important considerations in our assessment of a company's credit profile. We typically consider the average age of a fleet and a company's investment strategy. Investment in energy-efficient fleets and rail infrastructure may initially weigh on a company's cash flow and leverage. We typically assess the benefits of the investment and the expected timeline for credit metrics to improve.

Event Risk

We also recognize the possibility that an unexpected event could cause a sudden and sharp decline in an issuer's fundamental creditworthiness, which may cause actual ratings to be lower than the scorecard-indicated outcome. Event risks — which are varied and can range from leveraged recapitalizations to sudden regulatory changes or liabilities from an accident — can overwhelm even a stable, well-capitalized firm. Some other types of event risks include M&A, asset sales, spin-offs, litigation, pandemics, significant cyber-crime events and shareholder distributions.

Differences in Reporting of Ongoing Support

Differences in the type of ongoing support that a company receives, and the manner in which it is reported in financial statements, may limit comparability among peers.

Some issuers receive government subsidies in the form of grants. Grants are typically reflected in the income statement and cash flow statement according to whether they are for operating or capital expenditures.

Where support is accounted for in the form of equity injections or other contributions, the funds typically go directly to equity in the balance sheet and are reported as financing activities in the cash flow statement. We may make an adjustment to include these funds in the operating cash flow for better comparability with peers. In some cases, equity injections or other contributions may not flow through the income statement, which results in weaker profitability margins compared to those issuers for which grants reduce income statement costs.

We typically follow a company's presentation of its subsidies for calculating or estimating our scorecard metrics and incorporate our view of the quality and stability of the support into our analysis.

Excess Cash Balances

Some companies in this sector may maintain cash balances (meaning liquid short-term investments as well as cash) that are far in excess of their operating needs. This excess cash can be an important credit consideration; however, the underlying policy and motivations of the issuer in holding high cash balances are often as or more important in our analysis than the level of cash held. We have observed significant variation in company behavior based on differences in financial philosophy, investment opportunities, availability of committed revolving credit facilities and shareholder pressures.

Most issuers need to retain some level of cash in their business for operational purposes. The level of cash required to run a business can vary based on the region(s) of operation and the specific sub-sectors in which the issuer operates. Some issuers have very predictable cash needs and others have much broader intra-period swings. Some companies may hold large levels of cash at times because they operate without committed, long-term bank borrowing facilities. Some companies may hold cash on the balance sheet to meet long-term contractual liabilities, whereas other companies with the same types of liabilities have deposited cash into trust accounts that are off balance sheet. The level of cash that issuers are willing to hold can also vary over time based on the cost of borrowing and macroeconomic conditions. The same issuer may place a high value on cash holdings in a major recession or financial crisis but seek to pare cash when inflation is high. As a result, cash on the balance sheet is most often considered qualitatively, by assessing the issuer's track record and financial and liquidity policies rather than by measuring how a point-in-time cash balance would affect a specific metric.

Across all corporate sectors, an important shareholder-focused motivation for cash holdings, sometimes over very long periods, is cash for acquisitions. In these cases, we do not typically consider that netting cash against the issuer's current level of debt is analytically meaningful; however, the cash may be a material mitigant in our scenario analyses of potential acquisitions, share buybacks or special dividends. Tax minimization strategies have at times been another primary motivation for holding large cash balances. Given shareholder pressures to return excess cash holdings, when these motivations for holding excess cash are eliminated, we generally expect that a large portion of excess cash will be used for dividends and share repurchases.

By contrast, some companies maintain large cash holdings for long periods of time in excess of their operating and liquidity needs solely due to conservative financial policies, which provides a stronger indication of an enduring approach that will benefit creditors. For instance, some companies have a policy to routinely pre-fund upcoming required debt payments well in advance of the stated maturity. Such companies may also have clearly stated financial targets based on net debt metrics and a track record of maintaining their financial profile within those targets.

While the scorecard in this methodology uses certain leverage and coverage ratios with total (or gross) debt we do consider excess cash holdings in our rating analysis, including in our assessment of the financial and liquidity policy. For issuers where we have clarity into the extent to which cash will remain on the balance sheet or be used for creditor-friendly purposes, excess cash may be considered in a more quantitative manner. While we consider excess cash in our credit assessment for ratings, we do not typically adjust the balance sheet debt for any specific amount because this implies greater precision than we think is appropriate for the uncertain future uses of cash. However, when cash holdings are unusually large relative to debt, we may refer to debt net of cash, or net of a portion of cash, in our credit analysis and press releases in order to provide additional insight into our qualitative assessment of the credit benefit. Alternatively, creditor-friendly use of cash may be factored into our forward view of metrics, for instance when the cash is expected to be used for debt-repayment. We may also cite rating threshold levels for certain issuers based on net debt ratios, particularly when these issuers have publicly stated financial targets based on net debt metrics. In cases where we believe that cash on the balance sheet does not confer meaningful credit support, we are more likely to cite gross debt ratios in our credit analysis, press releases and rating threshold levels.

Even when the eventual use for excess cash is likely to be for purposes that do not benefit debtholders, large holdings provide some beneficial cushion against credit deterioration, and cash balances are often considered in our analysis of near-term liquidity sources and uses. Such downside protection is usually more important for low rated companies than for highly rated companies due to differences in credit stability and the typically shorter distance from potential default for issuers at the lower end of the ratings spectrum.

Additional Metrics

The metrics included in the scorecard are those that are generally most important in assigning ratings to passenger railway and bus companies; however, we may use additional metrics to inform our analysis of specific companies. These additional metrics may be important to our forward view of metrics that are in the scorecard or other rating factors.

For example, free cash flow is not always an important differentiator of credit profiles. Strong companies with excellent investment opportunities may demonstrate multiyear periods of negative free cash flow while retaining solid access to capital and credit, because these investments will yield stable cash flows in future years. Weaker companies with limited access to credit may have positive free cash flow for a period of time because they have curtailed the investments necessary to maintain their assets and future cash-generating prospects. However, in some cases, free cash flow can be an important driver of the future liquidity profile of an issuer, which, as noted above, can have a meaningful impact on ratings.

Parental Support

Ownership can provide ratings lift for a particular company if it is owned by a highly rated owner(s) and is viewed to be of strategic importance to those owners. In our analysis of parental support, we consider whether the parent has the financial capacity and strategic incentives to provide support to the issuer in times of stress or financial need (e.g., a major capital investment or advantaged operating agreement), or has already done so in the past. Conversely, if the parent puts a high dividend burden on the issuer, which in turn reduces its flexibility, the ratings would reflect this risk.

Government-related issuers may receive ratings uplift due to expected government support. In our assessment, we distinguish extraordinary support from the ongoing or ordinary support that a government provides to a company. We consider ongoing support in a company's stand-alone credit strength, and specifically in our assessment of the Stability of the Operating Environment sub-factor and in our forward view of metrics. However, for certain issuers, government ownership can have a negative impact on the underlying Baseline Credit Assessment.[7] For example, price controls, onerous taxation and high distributions can have a negative effect on an issuer's underlying credit profile.

Other Institutional Support

In some countries, passenger railway and privately managed bus companies are likely to receive government or banking support in the event of financial difficulties because of their overall importance to the functioning of the economy.

In Japan, our corporate ratings consider the support that has operated there for large and systemically important organizations. Over the years, this has resulted in lower levels of default than might otherwise have occurred. Our approach considers whether the presence of group and banking relationships may provide support when systemically important companies encounter significant financial stress.

Seasonality

Some companies may experience seasonality in their operations. Seasonality may cause swings in cash balances and working capital positions. Higher volatility creates less room for errors in meeting customer demand or operational execution.

Non-wholly Owned Subsidiaries

Some companies may choose to dilute their equity stake in certain material subsidiaries, for example through an initial public offering, which may in some cases negatively impact future financial flexibility. While improving cash holdings on a one-off basis, selling minority interests in subsidiaries may have a negative impact on cash flows available to the parent company that may not be fully reflected in consolidated financial statements.[8] The parent's share of dividend flows from a non-wholly owned subsidiary is reduced, and minority stakes can increase structural subordination, since dividend flows to minority interest holders are made before the cash flows are available to service debt at the parent company. While less frequent, sale of a minority stake may be accompanied by policies protective of the subsidiary that further limit the parent's financial flexibility, for instance restrictions on cash pooling with other members of the corporate family, limitations on dividends and distributions, or arms-length business requirements. Minority stakeholders may have seats on the board of the subsidiary. In many cases, we consider the impact of non-wholly owned subsidiaries qualitatively. However, in some cases we may find that an additional view of financial results, such as analyzing cash flows on a proportional consolidation basis, may be very useful to augment our analysis based on consolidated financial statements. When equity dilution or structural subordination arising from non-wholly owned subsidiaries is material and negative, the credit impact is captured in ratings but may not be fully reflected in scorecard-indicated outcomes.

For companies that hold material minority interest stakes, consolidated funds from operations typically includes the dividends received from the minority subsidiary, while none of its debt is consolidated. When such dividends are material to the company's cash flows, these cash flows may be subject to interruption if they are required for the minority subsidiary's debt service, capital expenditures or other cash needs. When minority interest dividends are material, we may also find that proportional consolidation or another additional view of financial results is useful to augment our analysis of consolidated financials. We would generally also consider structural subordination in these cases.[9] When these credit considerations are material, their impact is captured in ratings but may not be fully reflected in scorecard-indicated outcomes.

Hedging Strategies

For many companies in this sector, hedging policies are primarily used to manage currency risks, and to a lesser extent may be used to manage commodity prices. Some companies use hedging to convert an issuance in foreign currency debt to domestic currency in order to reduce foreign exchange risk. Additionally, companies use hedging to convert the interest on a debt issuance from a floating rate to a fixed rate.

Commodity hedging to protect against oil price fluctuations may be used by companies that have diesel trains or buses. However, hedging generally does not provide a competitive cost advantage when fuel prices stagnate, decline or remain within a fairly tight range.

In assessing the impact that hedging can have on an issuer's financial prospects, we typically consider the type of hedging instruments used, the underlying commodity or currency, and the risk of margin calls, among other considerations.

Using the scorecard to arrive at a scorecard-indicated outcome

1. Measurement or estimation of factors in the scorecard

In the "Discussion of the scorecard factors" section, we explain our analytical approach for scoring each scorecard factor or sub-factor,[10] and we describe why they are meaningful as credit indicators.

The information used in assessing the sub-factors is generally found in or calculated from information in the company's financial statements or regulatory filings, derived from other observations or estimated by Moody's analysts. We may also incorporate non-public information.

Our ratings are forward-looking and reflect our expectations for future financial and operating performance. However, historical results are helpful in understanding patterns and trends of a company's performance as well as for peer comparisons. Financial ratios,[11] unless otherwise indicated, are typically calculated based on an annual or 12-month period. However, the factors in the scorecard can be assessed using various time periods. For example, rating committees may find it analytically useful to examine both historical and expected future performance for periods of several years or more.

All of the quantitative credit metrics incorporate our standard adjustments[12] to income statement, cash flow statement and balance sheet amounts for items such as underfunded pension obligations and operating leases. We may also make other analytical adjustments that are specific to a particular company.

2. Mapping scorecard factors to a numeric score

After estimating or calculating each factor or sub-factor, each outcome is mapped to a broad Moody's rating category (Aaa, Aa, A, Baa, Ba, B, Caa or Ca, also called alpha categories) and to a numeric score.

Qualitative factors are scored based on the description by broad rating category in the scorecard. The numeric value of each alpha score is based on the scale below.

Exhibit 3

Aaa	Aa	A	Baa	Ba	B	Caa	Ca
1	3	6	9	12	15	18	20

Source: Moody's Investors Service

Quantitative factors are scored on a linear continuum. For each metric, the scorecard shows the range by alpha category. We use the scale below and linear interpolation to convert the metric, based on its placement within the scorecard range, to a numeric score, which may be a fraction. As a purely theoretical example, if there were a ratio of revenue to interest for which the Baa range was 50x to 100x, then the numeric score for an issuer with revenue/interest of 99x, relatively strong within this range, would score closer to 7.5, and an issuer with revenue/interest of 51x, relatively weak within this range, would score closer to 10.5. In the text or table footnotes, we define the endpoints of the line (i.e., the value of the metric that constitutes the lowest possible numeric score, and the value that constitutes the highest possible numeric score).

Exhibit 4

Aaa	Aa	A	Baa	Ba	B	Caa	Ca
0.5-1.5	1.5-4.5	4.5-7.5	7.5-10.5	10.5-13.5	13.5-16.5	16.5-19.5	19.5-20.5

Source: Moody's Investors Service

3. Determining the overall scorecard-indicated outcome

The numeric score for each sub-factor (or each factor, when the factor has no sub-factors) is multiplied by the weight for that sub-factor (or factor), with the results then summed to produce an aggregate numeric score. The aggregate numeric score is then mapped back to a scorecard-indicated outcome based on the ranges in the table below.

Exhibit 5
Scorecard-indicated outcome

Scorecard-indicated outcome	Aggregate numeric score
Aaa	x ≤ 1.5
Aa1	1.5 < x ≤ 2.5
Aa2	2.5 < x ≤ 3.5
Aa3	3.5 < x ≤ 4.5
A1	4.5 < x ≤ 5.5
A2	5.5 < x ≤ 6.5
A3	6.5 < x ≤ 7.5
Baa1	7.5 < x ≤ 8.5
Baa2	8.5 < x ≤ 9.5
Baa3	9.5 < x ≤ 10.5
Ba1	10.5 < x ≤ 11.5
Ba2	11.5 < x ≤ 12.5
Ba3	12.5 < x ≤ 13.5
B1	13.5 < x ≤ 14.5
B2	14.5 < x ≤ 15.5
B3	15.5 < x ≤ 16.5
Caa1	16.5 < x ≤ 17.5
Caa2	17.5 < x ≤ 18.5
Caa3	18.5 < x ≤ 19.5
Ca	19.5 < x ≤ 20.5
C	x > 20.5

Source: Moody's Investors Service

For example, an issuer with an aggregate numeric score of 11.7 would have a Ba2 scorecard-indicated outcome.

In general, the scorecard-indicated outcome is oriented to the corporate family rating (CFR) for speculative-grade issuers and to the senior unsecured rating for investment-grade issuers. For issuers that benefit from rating uplift from parental support, government ownership or other institutional support, we consider the underlying credit strength or Baseline Credit Assessment for comparison to the scorecard-indicated outcome. For an explanation of the Baseline Credit Assessment, please refer to *Rating Symbols and Definitions* and to our cross-sector methodology for government-related issuers.[13]

Assigning issuer-level and instrument-level ratings

After considering the scorecard-indicated outcome, other considerations and relevant cross-sector methodologies, we typically assign a CFR to speculative-grade issuers or a senior unsecured rating for investment-grade issuers. For issuers that benefit from rating uplift from government ownership, we may assign a Baseline Credit Assessment.[14]

Individual debt instrument ratings may be notched up or down from the CFR or the senior unsecured rating to reflect our assessment of differences in expected loss related to an instrument's seniority level and collateral. The documents that provide broad guidance for such notching decisions are the rating methodology on loss given default for speculative-grade non-financial companies, the methodology for notching corporate instrument ratings based on differences in security and priority of claim, and the methodology for assigning short-term ratings.[15]

Key rating assumptions

For information about key rating assumptions that apply to methodologies generally, please see *Rating Symbols and Definitions*.[16]

Limitations

In the preceding sections, we have discussed the scorecard factors and many of the other considerations that may be important in assigning ratings. In this section, we discuss limitations that pertain to the scorecard and to the overall rating methodology.

Limitations of the scorecard

There are various reasons why scorecard-indicated outcomes may not map closely to actual ratings.

The scorecard in this rating methodology is a relatively simple reference tool that can be used in most cases to approximate credit profiles of companies in this sector and to explain, in summary form, many of the factors that are generally most important in assigning ratings to these companies. Credit loss and recovery considerations, which are typically more important as an issuer gets closer to default, may not be fully captured in the scorecard. The scorecard is also limited by its upper and lower bounds, causing scorecard-indicated outcomes to be less likely to align with ratings for issuers at the upper and lower ends of the rating scale.

The weights for each factor and sub-factor in the scorecard represent an approximation of their importance for rating decisions across the sector, but the actual importance of a particular factor may vary substantially based on an individual company's circumstances.

Factors that are outside the scorecard, including those discussed above in the "Other considerations" section, may be important for ratings, and their relative importance may also vary from company to company. In addition, certain broad methodological considerations described in one or more cross-sector rating methodologies may be relevant to ratings in this sector.[17] Examples of such considerations include the following: how sovereign credit quality affects non-sovereign issuers, the assessment of credit support from other entities, the relative ranking of different classes of debt and hybrid securities, and the assignment of short-term ratings.

We may use the scorecard over various historical or forward-looking time periods. Furthermore, in our ratings we often incorporate directional views of risks and mitigants in a qualitative way.

General limitations of the methodology

This methodology document does not include an exhaustive description of all factors that we may consider in assigning ratings in this sector. Companies in the sector may face new risks or new combinations of risks, and they may develop new strategies to mitigate risk. We seek to incorporate all material credit considerations in ratings and to take the most forward-looking perspective that visibility into these risks and mitigants permits.

Ratings reflect our expectations for an issuer's future performance; however, as the forward horizon lengthens, uncertainty increases and the utility of precise estimates, as scorecard inputs or in other considerations, typically diminishes. Our forward-looking opinions are based on assumptions that may prove, in hindsight, to have been incorrect. Reasons for this could include unanticipated changes in any of the following: the macroeconomic environment, general financial market conditions, industry competition, disruptive technology, or regulatory and legal actions. In any case, predicting the future is subject to substantial uncertainty.

Moody's related publications

Credit ratings are primarily determined through the application of sector credit rating methodologies. Certain broad methodological considerations (described in one or more cross-sector rating methodologies) may also be relevant to the determination of credit ratings of issuers and instruments. A list of sector and cross-sector credit rating methodologies can be found here.

For data summarizing the historical robustness and predictive power of credit ratings, please click here.

For further information, please refer to *Rating Symbols and Definitions*, which is available here.

Moody's Basic Definitions for Credit Statistics (User's Guide) can be found here.

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Endnotes

1 A link to a list of our sector and cross-sector methodologies can be found in the "Moody's related publications" section.

2 A link to a list of our sector and cross-sector methodologies can be found in the "Moody's related publications" section.

3 In our methodologies and research, the terms "scorecard" and "grid" are used interchangeably.

4 Liquidity management is distinct from the level of liquidity, which is discussed in the "Other considerations" section.

5 A link to a list of our cross-sector methodologies can be found in the "Moody's related publications" section.

6 A link to a list of our cross-sector methodologies can be found in the "Moody's related publications" section.

7 For an explanation of the Baseline Credit Assessment, please refer to *Rating Symbols and Definitions* and to our cross-sector methodology that describes our general approach for assessing government-related issuers. A link to a list of our sector and cross-sector methodologies and a link to *Rating Symbols and Definitions* can be found in the "Moody's related publications" section.

8 For example, in the case of an equity stake reduction in a subsidiary down to 75%, in the parent's financial statements, all revenue and EBITDA of the subsidiary would typically still be consolidated at the group level.

9 Proportional consolidation brings a portion of the minority subsidiary's debt onto the balance sheet, but this debt is structurally senior to debt at the parent company, because it is closer to the assets and cash flows of the minority subsidiary.

10 When a factor comprises sub-factors, we score at the sub-factor level. Some factors do not have sub-factors, in which case we score at the factor level.

11 For definitions of our most common ratio terms, please see *Moody's Basic Definitions for Credit Statistics (User's Guide)*. A link can be found in the "Moody's related publications" section.

12 For an explanation of our standard adjustments, please see the cross-sector methodology that describes our financial statement adjustments in the analysis of non-financial corporations.

13 A link to a list of our sector and cross-sector methodologies and a link to *Rating Symbols and Definitions* can be found in the "Moody's related publications" section.

14 For an explanation of the Baseline Credit Assessment, please refer to *Rating Symbols and Definitions* and to our cross-sector methodology for government-related issuers. A link to a list of our sector and cross-sector methodologies and a link to *Rating Symbols and Definitions* can be found in the "Moody's related publications" section.

15 A link to a list of our sector and cross-sector rating methodologies can be found in the "Moody's related publications" section.

16 A link to *Rating Symbols and Definitions* can be found in the "Moody's related publications" section.

17 A link to a list of our sector and cross-sector methodologies can be found in the "Moody's related publications" section.

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moodys.com for the most updated credit rating action information and rating history.

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