

# MOODY'S

## INVESTORS SERVICE

### RATING METHODOLOGY

10 September 2021

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## Rating Methodology Consumer Durables

This rating methodology replaces the *Consumer Durables Industry* methodology published in April 2017. We have reordered and have made editorial updates to various sections of the methodology, and we have changed the presentation of the scorecard. We have removed outdated information. These updates do not change our methodological approach.

### Scope

This methodology applies to companies globally that are primarily\* engaged in the design, manufacture and distribution of products that are not consumed or disposed of quickly and that can be used for several years. This methodology applies to many sub-sectors such as furniture, mattresses, appliances, musical instruments, floor covering and recreational goods. It includes companies that sell directly to consumers (such as appliance, musical instrument and recreational companies) and companies that sell to other corporations (such as certain floor covering and office furniture companies).

\*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.

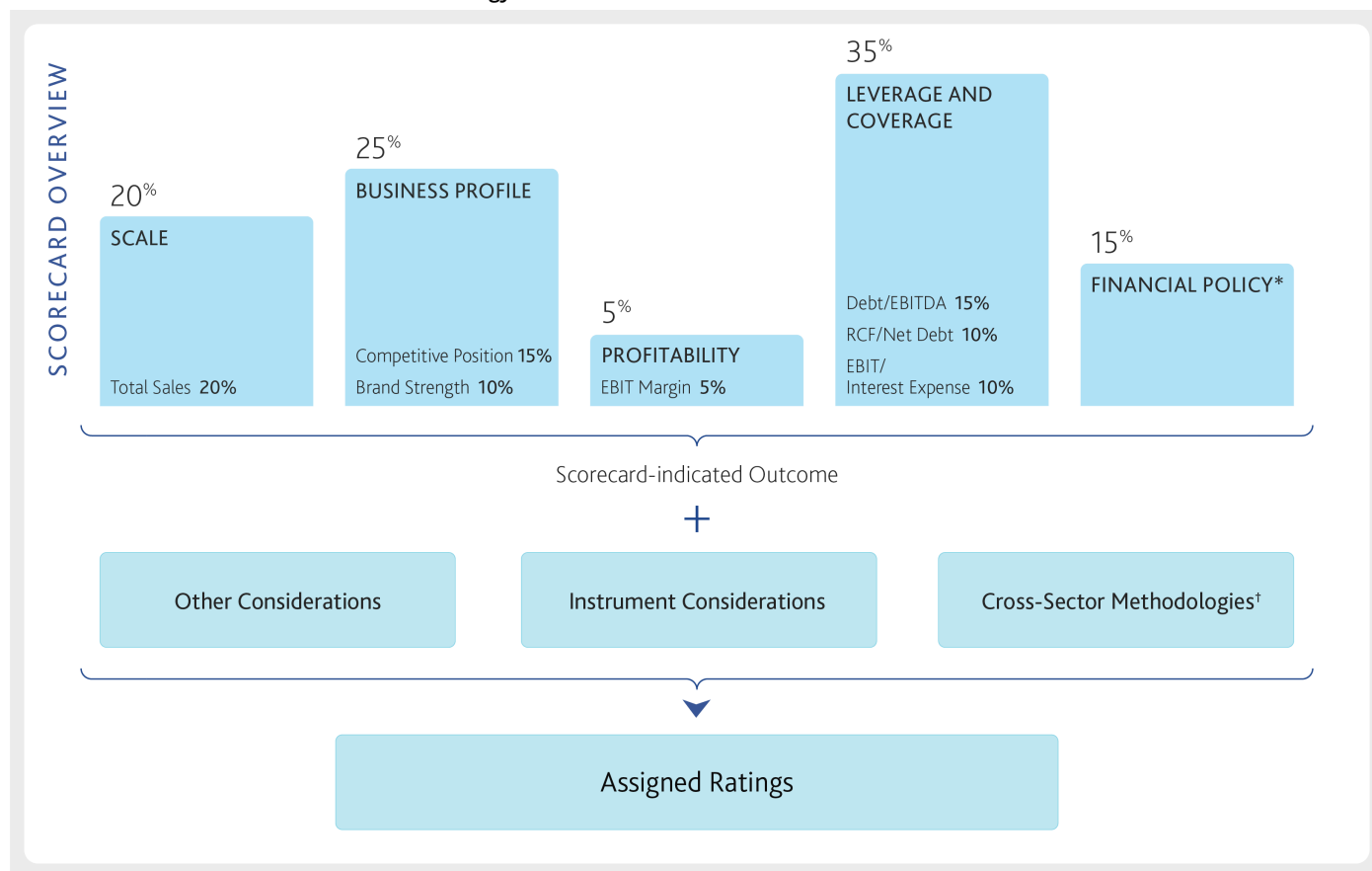
## Rating approach

In this rating methodology, we explain our general approach to assessing credit risk of issuers in the consumer durables 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 consumer durables companies, which includes the use of a scorecard.<sup>1</sup> 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 consumer durables 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

## Consumer durables 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

### Consumer durables scorecard

SCALE (20%)		BUSINESS PROFILE (25%)		PROFITABILITY (5%)	LEVERAGE and COVERAGE (35%)			FINANCIAL POLICY (15%)
Total Sales (USD Billion) (20%)		Competitive Position (15%)	Brand Strength (10%)	EBIT Margin (5%)	Debt / EBITDA <sup>(1)</sup> (15%)	RCF / Net Debt <sup>(2)</sup> (10%)	EBIT / Interest Expense (10%)	Financial Policy (15%)
<b>Aaa</b>	≥ \$60	Expected to have highly stable cash flow across industry and economic cycles; supported with dominant market positions and by highly diverse product lines with significant barriers to entry, no concentration of cash flow sources and leading/low cost operations.	Multiple globally recognized leading and enduring brands that are synonymous with the category. Customer loyalty is unwavering.	≥ 27%	< 0.5x	≥ 70%	≥ 18x	Expected to have extremely conservative financial policies; very stable metrics; public commitment to very strong credit profile over the long term.
<b>Aa</b>	\$20 - \$60	Expected to have very stable cash flow across industry and economic cycles; supported with leading market positions and by diverse product lines with very high barriers to entry, low concentration of cash flow sources, and low cost operations.	Globally recognized leading and enduring brands that are synonymous with the category. Customer loyalty is very high.	22% - 27%	0.5x - 1x	50% - 70%	12x - 18x	Expected to have very stable and conservative financial policies; stable metrics; minimal event risk that would cause a rating transition; public commitment to strong credit profile over the long term.
<b>A</b>	\$10 - \$20	Expected to have stable cash flow across industry and economic cycles; supported with large market positions and by multiple product lines with high barriers to entry, moderate-to-low concentration of cash flow sources, and predominantly low cost operations.	Globally recognized brands with long-term track record. High degree of brand loyalty, customer prefers and seeks brand.	17% - 22%	1x - 2x	33% - 50%	7x - 12x	Expected to have predictable financial policies 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.
<b>Baa</b>	\$4 - \$10	Expected to have moderate volatility of cash flow generation across industry and economic cycles; supported with significant market positions and by one or two product lines with moderate barriers to entry, moderate concentration of cash flow sources, and predominantly low cost operations.	Well recognized brands with medium to long-term track record. Customer has loyalty, but not exclusively, to brand.	13% - 17%	2x - 3x	21% - 33%	4x - 7x	Expected to have financial policies that balance the interest of creditors and shareholders; some risk that debt funded acquisitions or shareholder distributions could lead to a weaker credit profile.

SCALE (20%)		BUSINESS PROFILE (25%)		PROFITABILITY (5%)	LEVERAGE and COVERAGE (35%)			FINANCIAL POLICY (15%)
Total Sales (USD Billion) (20%)		Competitive Position (15%)	Brand Strength (10%)	EBIT Margin (5%)	Debt / EBITDA <sup>[1]</sup> (15%)	RCF / Net Debt <sup>[2]</sup> (10%)	EBIT / Interest Expense (10%)	Financial Policy (15%)
<b>Ba</b>	\$1.5 - \$4	Expected to have cyclical cash flow across industry and economic cycles; supported with mid-sized market positions with moderate barriers to entry, moderately-high concentration of cash flow sources, and average cost operations.	Brand has medium level of awareness and moderate differentiation to peers; price may be a factor. Brand may have history of inconsistent revenue trends.	10% - 13%	3x - 4x	15% - 21%	2.5x - 4x	Expected to have financial policies that tend to favor shareholders over creditors; above average financial risk resulting from shareholder distributions, acquisitions or other significant capital structure changes.
<b>B</b>	\$0.5 - \$1.5	Expected to have highly cyclical cash flow across industry and economic cycles; modest market positions with minimal barriers to entry, high concentration of cash flow sources, and average-to-high cost operations with limited geographic diversity advantages.	Brand has low level of awareness and low differentiation to peers; price is a factor. Brand may have history of inconsistent revenue trends.	7% - 10%	4x - 6x	7% - 15%	1x - 2.5x	Expected to have financial policies that favor shareholders over creditors; high financial risk resulting from shareholder distributions, acquisitions or other significant capital structure changes.
<b>Caa</b>	\$0.25 - \$0.5	Expected to have highly volatile cash flow across industry and economic cycles; weak market positions with limited barriers to entry, and high cost operations with limited geographic diversity advantages.	Brand has minimal to no level of awareness and minor, if any, differentiation to peers; price is a key differentiating factor. Brand has history of significant volatility in revenue trends.	4% - 7%	6x - 8x	0% - 7%	0.5x - 1x	Expected to have financial policies that create elevated risk of debt restructuring in varied economic environments.
<b>Ca</b>	< \$0.25	Expected to have extremely volatile cash flow; no barriers to entry; an insignificant market position; uncertain demand trends; high cost operations with no geographic diversity advantages.	No brand awareness. Price alone determines consumer purchasing trends.	< 4%	≥ 8x	< 0%	< 0.5x	Expected to have financial policies that create elevated risk of debt restructuring even in healthy economic environments.

[1] When debt is zero, the score is Aaa. When debt is positive and EBITDA is negative, the score is Ca.

[2] When net debt is negative and RCF is positive, the score is Aaa. When net debt is negative and RCF is negative, the score is Ca.

Source: Moody's Investors Service

## 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 (20% weight)

#### Why it matters

Scale is an important indicator of the overall depth of a company's business and its success in attracting a variety of customers. Larger companies may be able to achieve greater economies of scale and be better positioned to leverage fixed costs and the advertising spend to promote consumer awareness of brands and products. Size may also be an indicator for a consumer durable company's resilience to changes in product demand and its clout with suppliers and customers. Broad scale will likely reduce a company's exposure to business disruption caused by a problem with a single plant.

#### How we assess it for the scorecard

##### TOTAL SALES:

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

### Factor: Business Profile (25% weight)

#### Why it matters

The business profile of a consumer durables company is important because it greatly influences its ability to generate sustainable earnings and operating cash flows. Core aspects of a consumer durables company's business profile are its competitive position and brand strength.

#### *Competitive Position*

A company's competitive position includes its stability of cash flows, overall market position, product and geographic diversity, barriers to entry, and cost structure characteristics. A company's relative strength in these areas is indicative of its ability to maintain a strong competitive position over time. For example, a large market share suggests a more sustainable competitive position with greater ability to weather volatile market conditions. In some instances, companies with large market shares adjust their production volumes to help balance supply and demand conditions as a means to stabilize product pricing.

Diversification by product line and geography are also important considerations. A breadth of products in a variety of categories often mitigates the impact of obsolescence of a single product caused by changes in consumer habits. Product diversity can also offset the weakening of an individual brand since distinct product lines tend to be sold under separate brands. Geographic diversification is an important consideration because it helps mitigate: (i) the impact of a recession or adverse economic shocks affecting specific geographies; (ii) the impact of local changes in consumer habits; (iii) changes in customer relationships, which are mostly regional, and (iv) the impact of regional regulatory, product liability or safety issues.

#### *Brand Strength*

A company's brand strength is another important indicator of cash flow stability. Stronger brands typically generate more loyal and consistent consumer demand, which maximizes recurring sales and reduces volatility. In addition, brand strength can expand opportunities for marketing into new categories or product areas. This helps shield companies against changing consumer preferences and the cyclical/seasonality that is typical in the consumer durables sector. Companies that pursue multi-brand strategies may forgo some of the benefits of scale of owning larger brands, but a portfolio that reaches a range of consumers and retailers mitigates the risk that a particular brand may experience weak performance for a protracted period.

#### How we assess it for the scorecard

Scoring for this factor is based on two sub-factors: Competitive Position; and Brand Strength.

### COMPETITIVE POSITION:

#### *Stability of Cash Flows*

We consider the stability of expected cash flow across industry and economic cycles. A company whose profile indicates higher levels of volatility in cash flow typically receives a lower score for this sub-factor than companies with more stable cash flow profiles.

*Market Position*

We consider the strength of a company's market position. For example, we may consider whether a company's market position is protected by patent or unique licensing restrictions, or other technological advantages, that can help underpin strong, stable cash flows and performance.

*Product and Geographic Diversity*

We consider the diversity of a company's product lines. In cases where a company has only one brand, diversity by geography and by product may be even more important. Companies with a leading worldwide presence, without major dependence on any one region, typically receive higher scores for the sub-factor. Geographic expansion in emerging markets can be an important element in an effective diversification strategy because these markets often offer more growth potential than developed economies. We may also consider whether favorable characteristics of the markets in which the company competes may offset limited geographic diversification.

*Barriers to Entry*

We consider barriers to entry, such as a unique business model or assets and whether they provide greater revenue stability and sustainability.

*Cost Structure*

We consider whether a company has high- or low-cost operations. Companies with a flexible and low cost structure tend to have less volatility in earnings and cash flows, and higher margins, than companies with a higher fixed cost structure, and typically receive higher scores for this sub-factor.

**BRAND STRENGTH:**

In assessing brand strength, we typically consider the global awareness of the brand with consumers, the brand's track record, revenue generated, market position, the degree of customer loyalty and whether the brand is considered price sensitive or differentiated.

**Factor: Profitability (5% weight)****Why it matters**

Profits matter because they are needed to generate sustainable cash flow and maintain a competitive position. Profitability on a long-term multi-year basis helps companies attract capital and make ongoing investments in research and development to maintain a technological edge.

**How we assess it for the scorecard****EBIT MARGIN:**

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

Differences in currency and business mix complicate comparability between companies. For example, margins for appliance makers are usually lower than margins for sporting goods companies. In instances where companies segment information for different business lines, we may also compare margins across comparable segments.

**Factor: Leverage and Coverage (35% weight)****Why it matters**

Financial leverage and coverage measures provide important indications of a company's financial flexibility and long-term viability.

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 for 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).

*EBIT / Interest Expense*

The ratio of earnings before interest and taxes to interest expense (EBIT/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 EBIT/Interest Expense.

**DEBT / EBITDA:**

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

**RCF / NET DEBT:**

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

**EBIT / INTEREST EXPENSE:**

The numerator is EBIT, and the denominator is interest expense.

**Factor: Financial Policy (15% weight)****Why it matters**

Management and board tolerance for financial risk is a key rating determinant because it directly affects leverage levels, credit quality, and the risk of adverse changes in financing and capital structure.

Our assessment of financial policies includes the perceived tolerance of a company's governing board and management for financial risk and the future direction for the company's capital structure. Considerations include a company's public commitments in this area, its track record for adhering to commitments, and our views on the company's ability to achieve its targets.

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 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, 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.

Historically, some consumer durable companies have used acquisitions to spur revenue growth, expand product offerings, consolidate market positions, advance cost synergies or seek to access new technology. The impact of an acquisition on a rating depends on the company's existing capital structure and the degree to which it is changed by the acquisition.

**How we assess it for the scorecard**

We assess the issuer's desired capital structure or targeted credit profile, history of prior actions and adherence to its commitments. We pay attention to management's operating performance and use of cash flow through different phases of economic cycles. Also of interest is the way in which management responds to key events, such as changes in credit markets and the liquidity environment, legal actions, competitive challenges, and regulatory pressures.

We assess management's appetite for M&A activity, 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 generally results in a lower score for this factor. We also consider a company and its owners' past record of balancing shareholder returns and debtholders' interests.

## 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.

### 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.

### Environmental, Social and Governance Considerations

Environmental, social and governance (ESG) considerations may affect the ratings of issuers in the consumer durables industry. For information about our approach to assessing ESG issues, please see our methodology that describes our general principles for assessing these risks.<sup>2</sup>

Among the areas of focus in corporate governance, for example, are audit committee financial expertise, the incentives created by executive compensation packages, related party transactions, interactions with outside auditors, and ownership structure.

### 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.

### Liquidity

Liquidity is a critical rating factor for all consumer durables companies, although it may not have a substantial impact in discriminating between two issuers with a similar credit profile. Liquidity can be particularly important for non-investment grade companies where issuers typically have less operating and financial flexibility, 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.<sup>3</sup>

### 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, leveraged buy-outs, asset sales, spin-offs, capital restructuring programs, litigation, pandemics, significant cyber-crime events and shareholder distributions.

### Seasonality

Seasonality is an important driver of customer demand and can cause swings in cash balances and working capital positions for issuers. Higher volatility creates less room for errors in meeting customer demand and in product or operational execution.

### Parental Support

Ownership can provide ratings lift for a particular company in the consumer durables sector 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. However, for certain issuers, government ownership can have a negative impact on the underlying Baseline Credit Assessment.<sup>4</sup> For example, price controls, onerous taxation and high distributions can have a negative effect on an issuer's underlying credit profile.

## 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,<sup>5</sup> 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,<sup>6</sup> 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<sup>7</sup> 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

### 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 4

**Scorecard-indicated outcome**

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

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 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.<sup>8</sup>

### 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.<sup>9</sup>

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.<sup>10</sup>

### Key rating assumptions

For information about key rating assumptions that apply to methodologies generally, please see *Rating Symbols and Definitions*.<sup>11</sup>

### 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.<sup>12</sup> 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](#) In our methodologies and research, the terms "scorecard" and "grid" are used interchangeably.
- [2](#) A link to a list of our sector and cross-sector methodologies can be found in the "Moody's related publications" section.
- [3](#) A link to a list of our cross-sector methodologies can be found in the "Moody's related publications" section.
- [4](#) 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.
- [5](#) 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.
- [6](#) 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.
- [7](#) 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.
- [8](#) 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.
- [9](#) 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.
- [10](#) A link to a list of our sector and cross-sector rating methodologies can be found in the "Moody's related publications" section.
- [11](#) A link to *Rating Symbols and Definitions* can be found in the "Moody's related publications" section.
- [12](#) A link to a list of our sector and cross-sector methodologies can be found in the "Moody's related publications" section.

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