MOODY'S
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RATING METHODOLOGY
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Rating Methodology

Investment Holding Companies and Conglomerates

This rating methodology replaces the *Investment Holding Companies and Conglomerates* methodology published in July 2018. We have reordered and have made editorial updates to various sections of the methodology. These updates do not change our methodological approach.

Scope

We recognize that there are multiple ways to define what constitutes an investment holding company (IHC) or conglomerate, and that these broad terms can be used in different markets to refer to very different corporate entities. However, we distinguish the two types of entities according to certain characteristics displayed by each, which are summarized in Exhibit 1.

An IHC is either a public or a private group holding entity that acts as a financial investor, holding a portfolio mainly consisting of majority or minority equity stakes in private or publicly traded companies. In addition to companies that take minority holdings in a large number of typically publicly traded companies and whose profile is predominantly driven by equity risk, there are IHCs that take predominantly majority stakes in a small number of companies. Ancillary investments in other non-equity securities or alternative assets also may exist. Financing at the holdco level is generally clearly separated from subsidiary levels, with a lack of holdco recourse financing and guarantees for operating companies and no cross-default clauses between debt at operating companies and debt at the holdco. Conglomerates include several main operating subsidiaries (some may be less than wholly owned) in completely unrelated industries without the existence of a distinctive leading business segment. In addition, a conglomerate acts as one single entity, and there is no significant barrier to reallocation of capital within the group, including issuance of debt at the conglomerate's holding entity to support financing needs at subsidiaries. Many corporates have multiple operations in completely unrelated industries. However, in the vast majority of cases, we identify a leading business segment and apply the relevant sector methodology to assess the credit risk of the issuer. We have historically viewed few corporates as conglomerates.

The following table summarizes key features that differentiate IHCs from conglomerates. Some companies may have characteristics of both a conglomerate and an IHC. Private equity firms and asset managers, which have substantial differences from IHCs and conglomerates (these include differences in compensation, investment style and exit horizon) are rated using separate methodologies.[1]

Exhibit 1

Typical distinctions between investment holding companies and conglomerates

	Conglomerate	Investment Holding
Description	Typically several (sometimes more) core operations in completely unrelated businesses. Core businesses are typically majority-owned, although other investments can be minority interests, held directly by holdco. Holdco may or may not have own operations and cash flows but takes management lead - conglomerate acts as one group.	Holdco is typically a financial investor with a limited number of large holdings. Assets are mainly equity stakes. Asset base can be diverse with a large proportion of minority interests, or it may comprise a smaller number of holdings with significant or majority or full ownership stakes. Sometimes significant influence on management. Typically, a large portion of assets can be traded on short notice.
Operational Integration	Integration typically only among subsidiaries in related businesses. Usually strong planning and strategic integration.	No integration. Holdco typically active only through board membership at subsidiary level.
Management and Strategy	Focused on business portfolio composition. Limited churn of investments and change in business mix. Executive management appointed by holdco.	Investments are typically exited within a certain time horizon although some holding companies may have a long-term investment horizon. Portfolio turnover is limited; investments generally held for at least 5 to 7 years. More frequent change of business mix possible to capture opportunities in growing market segments. Holdco might follow investment-management-style strategy (more minority holdings, less active involvement) or operating-management-style strategy (more majority holdings, more active involvement).
Financing Oversight and Integration	Holdco may opt to centralize funding. Debt may have cross-defaults to operating company (opco). Main opco covenants - if any - typically include specific carve-out for dividends to holdco. Structure potentially allows shifting support within the group, orchestrated by holdco.	Subsidiary financing clearly separate from holdco. Generally no cross-default among holdco and opcos. Typically no recourse financing of opco to holdco. Guarantees to opcos are exceptional and temporary.
Board Representation	Holdco board representation at opco levels. Holdco has distinct management team.	Typically separate board and management structures for each opco and holdco. But holdco board representation at opcos is possible depending on significance of influence.
Control	Holdco typically controls core strategic assets and is able to exercise significant influence due to limited shareholder diversification (if minority exists).	Holdco may have influence or even have control over strategic decisions where stakes are significant. Major strategic decisions may be reviewed with shareholder.
Our Approach	Focus of analysis is on conglomerate's individual business segments and group financial statements.	Analysis includes evaluation of holdco non-consolidated accounts, predictability of cash flow available to holdco from dividends, holdco liquidity, investment volatility, and portfolio asset value.
	For IHCs where dividends from certain concentrated investments generate a significant proportion of holdco cash flow, analysis may also consider the credit profile of these companies on a standalone basis. This highlights some areas of overlap with the analytical approach taken for conglomerates as the credit linkage between the holdco and its major investments could be stronger than what is typical for an IHC.	

Source: Moody's Investors Service

Considerations for analyzing investment holding companies

The portfolio of an investment holding company typically covers several industry sectors and is typically relatively stable over a five- to seven-year investment horizon, but changes in business mix might occur to some extent to capture opportunities in growing markets or to reflect a re-balancing of portfolio risk. There is also typically a degree of delinkage between the credit risk of the holding company and that of the companies the holding company has invested in, with generally limited-to-moderate credit risk contagion among these entities.

Our analysis takes into account some features that differentiate IHCs from other corporate issuers. In our analysis of the credit risk of an IHC, we consider the IHC's non-consolidated financial statements and respective asset values and cash flow streams rather than focusing on consolidated group accounts and on a bottom-up credit analysis that would be more typical for other corporate issuers.

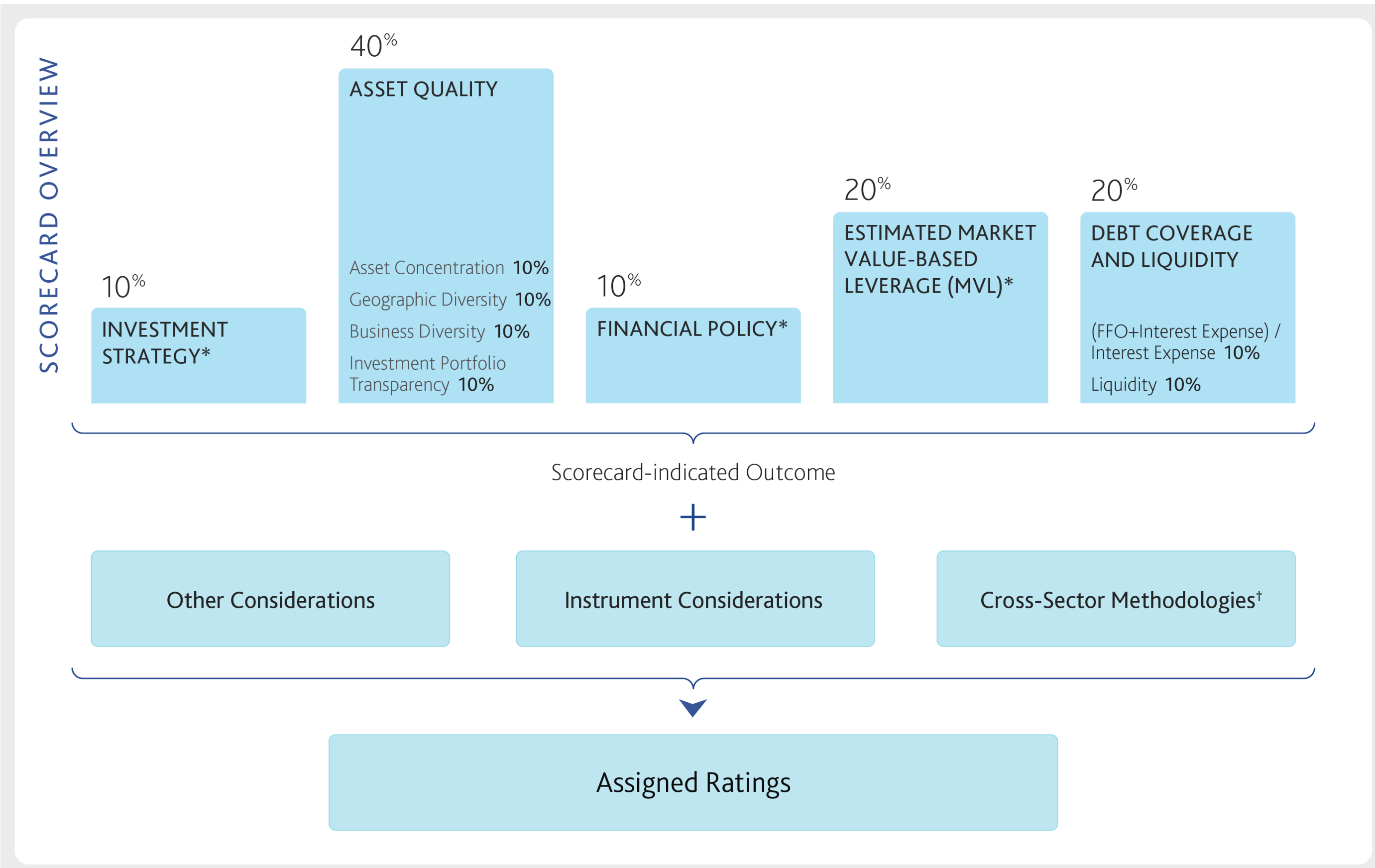
Rating approach for investment holding companies

In this rating methodology, we explain our general approach to assessing credit risk of investment holding companies 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 IHCs, which includes the use of a scorecard.[2] 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 2

Illustration of the investment holding 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

Investment holding 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 3

Investment holding companies scorecard

	Weight	Aaa	Aa	A	Baa	Ba	B	Caa
Factor: Investment Strategy (10%)								
Investment Strategy	10%	Not Applicable [1]	Highly conservative investment strategy and excellent track record in execution. Highly liquid investments with low volatility of holdings. Typically large blue chips, highly rated issuers in stable industries. Strong commitment and focus on credit profile of the underlying investments. Very low risk of significant quality transition of the portfolio. Clearly-defined investment guidelines that provide long-term visibility of business profile.	Conservative investment strategy with strong track record in execution. Fairly liquid investments with low volatility of holdings. Typically IG companies, stable industries / diversified economic drivers. Commitment and focus on credit profile of the underlying investments. Low risk of unexpected and material investment portfolio weakness. Transparent investment guidelines.	Prudently managed investment strategy and/or good but mixed success in execution of its strategy. Reasonably liquid investments with moderate volatility of holdings. Typically core companies have an IG profile. Balanced focus on credit profile of the underlying investments. Manageable risk of business profile transitioning to a weaker state. Investment guidelines limit the company's credit profile from weakening materially.	Moderately aggressive investment strategy and/or limited or untested track record. Aimed towards a mixture of mature and growth investments with liquidity playing a primary role in investment decisions. Management willing to have material exposure in risky operating profiles and environments or leveraged companies. Visible willingness for aggressive or opportunistic investments and uncertainty around investment strategy and guidelines.	Aggressive investment strategy and/or largely unsuccessful track record. Aimed towards a mixture of mature and growth investments with liquidity playing a secondary role in investment decisions. Management willing to have substantial exposure in risky operating profiles and environments. Visible willingness to invest in special situation opportunities such as start-ups, turnarounds, and leverage buyouts and no clear investment guidelines.	Very aggressive investment strategy and/or poor execution of strategy. Aimed towards a mixture of mature and growth investments with liquidity playing a negligible role in investment decisions. Management willing to have substantial exposure in risky operating profiles and environments. Visible willingness to invest in highly risky, speculative investments with substantial event risk and limited track record.
Factor: Asset Quality (40%)								
Asset Concentration	10%	Minimal concentration; < 10%	Very low concentration; 10% - 20%	Low concentration; 20% - 35%	Moderate concentration; 35% - 50%	High concentration; 50% - 60%	Very high concentration; ≥ 60%	Highly concentrated; Typically top two investments ≥ 60%
Geographic Diversity	10%	Globally diversified; Core assets are fully globally diversified.	Very strong; Core assets fully cover major economic regions.	Strong; Core assets cover several major regions with diversification within regions.	Moderate; Core assets cover major countries in a couple of local regions or a few large countries.	Weak; Core assets cover various large countries in a local region.	Very Weak; Core assets cover only 2-3 mid-size countries in a local region or one large country.	Minimal; Core assets cover only one mid-size country or a few small countries.
Business Diversity	10%	≥ 13 sectors	10 - 12 sectors	8 - 9 sectors	6 - 7 sectors	4 - 5 sectors	2 - 3 sectors	1 sector

	Weight	Aaa	Aa	A	Baa	Ba	B	Caa
Factor: Asset Quality (40%)								
Investment Portfolio Transparency	10%	Full Transparency; All (or nearly all) investments are listed and public disclosures are of very high quality with regular reporting (typically not less than on a quarterly basis). Public listings provide a timely and accurate valuation estimate of portfolio.	Excellent Transparency; Vast majority of investments are listed and public disclosures are of high quality with regular reporting (typically not less than on a quarterly basis). Public listings provide a very good valuation estimate of core investments.	Good Transparency; Investments comprising of at least half of the portfolio's value are listed and public disclosures are of good quality with reporting typically not less than on a semi-annual basis. Available information is sufficient to value non-listed assets.	Moderate Transparency; Core investments are generally listed but significant part of unlisted investments in markets where there is moderate quality of public information available to estimate value of investments.	Limited Transparency; Core investments are a mix of listed and unlisted assets in markets where there is limited public information available to estimate value of unlisted investments.	Weak Transparency; Significant investments are unlisted and/or are in markets where there is limited public information available to estimate value of investments.	Poor Transparency; Most investments are unlisted, have poor quality of information available for estimating portfolio valuation. Valuation may rely on book value which may be exposed to severe write-downs.
Factor: Financial Policy (10%)								
Financial Policy	10%	Expected to have extremely conservative financial policies; very stable metrics; public commitment to very strong credit profile over the long term.	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.	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.	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.	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.	Expected to have financial policies that favor shareholders over creditors; high financial risk resulting from shareholder distributions, acquisitions or other significant capital structure changes.	Expected to have financial policies that create elevated risk of debt restructuring in varied economic environments.
Factor: Estimated Market Value-Based Leverage (MVL) (20%)								
Estimated Market Value Based Leverage (MVL)	20%	Minimal; Typically less than 10%	Very Low; Typically between 10% - 15%	Low; Typically between 15% - 25%	Moderate; Typically between 25% - 35%	High; Typically between 35% - 45%	Very High; Typically between 45% - 60%	Highly Leveraged; Typically greater than or equal to 60%
Factor: Debt Coverage and Liquidity (20%)								
(FFO + Interest Expense) / Interest Expense	10%	≥ 7x	5.5x - 7x	4x - 5.5x	3x - 4x	2x - 3x	1x - 2x	< 1x
Liquidity	10%	≥ 10 years	7 - 10 years	5 - 7 years	3 - 5 years	2 - 3 years	1 - 2 years	< 1 year

[1] Given the business nature of a holding company with investments primarily in a portfolio of equities, we do not foresee a scenario where a company's investment strategy has Aaa characteristics.
Source: Moody's Investors Service

Discussion of investment holding company 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: Investment Strategy (10% weight)

Why it matters

Transparent and more conservative investment strategies can provide a longer-term view of an IHC's business profile, which is particularly important given the tendency for IHCs to acquire and divest investment portfolio assets. Greater visibility over the evolution of a company's investment portfolio is supported by clearly defined investment strategies in terms of the types of assets the company seeks to invest in, the intended tenor of its investments, the targeted asset allocation and the risk-return profile of its investment portfolio. Strategies that are more focused on longer-term ownership positions in cash-generative companies may support more stability in values of investments compared to more speculative and opportunistic strategies. Exposure to mature companies with stable revenue streams is likely to carry less risk than investments in greenfield projects where execution risks are higher. Also important is the asset class in which investments are made; alternative investments, such as private equity, are typically riskier than traditional listed and mature investments, but also have a stronger return profile.

Management track record in executing investment strategies is also an important consideration for the strength of an IHC's's future business profile. Track record becomes even more important where an IHC's strategy is focused on generating returns through value creation (e.g., engaging in opportunistic investments such as turnaround situations with an expectation of selling the investments in a short horizon).

Economic conditions and geopolitical risk in countries to which the underlying investments are exposed are also meaningful indicators of the risk appetite of the IHC.

How we assess it for the scorecard

We qualitatively assess the company's investment strategy to understand the extent to which the company's risk profile could change over time. This includes an assessment of the IHC's investment policies and guidelines, as well as management track record. The existence of publicly communicated goals as well as a commitment to adhere to them are also considered, as is a proven track record where present.

In many cases, an IHC's current investment portfolio would reflect the success (or lack thereof) of its investment strategy. As an example, we would consider the performance of an IHC's portfolio relative to peers and respective indexes over the long term and the ability to develop and integrate assets with more stable growth in market values and dividend income. We also consider an IHC's risk appetite. A demonstrated ability by management to balance its exposure in riskier investments by conservatively managing other parts of its investment portfolio would be viewed positively, particularly if investment policies on areas such as investment concentration are clearly specified.

Strategies that require an IHC to invest in liquid investments, such as those that can be easily sold close to fair value, can also be viewed more positively. This is because on occasions where an IHC needs to raise cash urgently, liquid assets can be sold in a timely manner while incurring only a minimal discount relative to fair value. We also recognize that large majority stakes in listed assets may be difficult to sell in a relatively short time frame, and management may also be unwilling to lose its controlling interest in its investment. However, we would generally view high exposure to illiquid or volatile equity investments, particularly in emerging markets, to be a riskier investment strategy due to the additional risk they create for the holding company. As an example, a sharp drop in equity prices may erode existing asset coverage quickly, and the illiquidity in the market could further constrain the IHC's ability to dispose its investment in a timely manner.

Factor: Asset Quality (40% weight)

Why it matters

The asset quality of an investment portfolio is one of the drivers of an IHC's credit risk.

The main business focus of an IHC is investing in assets via equity participation. A less risky portfolio is one that has low asset concentration. The mix of assets and their respective values can change rapidly in an investment portfolio for many reasons. Asset concentration can trend upward even in long-term and stable portfolios, for example, when a holdco chooses to participate in equity rights issues in order to avoid dilution of its control over investees.

Typically, the more diverse the investments are in terms of business and geographic mix, the less correlated they are to each other, and the less likely it is that the IHC's ability to pay its debt, either through upstreamed dividends or through the sale of investments, would diminish. However, greater diversification has not always translated into greater market value and dividend stability; different sectors can be economically linked, and there can be advantages to concentrations in less cyclical sectors.

Having an in-depth understanding of the portfolio's individual investments is an important aspect of our analysis. As a result, the transparency and consistency of management in communicating information is a key element. Listed investments in markets where regulatory disclosure requirements are strong can help to provide more reliable information.

How we assess it for the scorecard

Scoring for this factor is based on four sub-factors: Asset Concentration; Geographic Diversity; Business Diversity; and Investment Portfolio Transparency.

ASSET CONCENTRATION:

In assessing this sub-factor, we use the market value of the three largest investments (excluding cash balances) as a percentage of total portfolio market value (including cash balances).

This sub-factor is used to assess the concentration risk of investments. We recognize that certain IHCs may hold meaningful cash balances and other highly liquid assets in order to deploy them in the future or to manage portfolio-wide risk. We therefore include highly liquid assets such as cash, cash equivalents, short-term deposits and money-market funds in the total value of the portfolio, but in order to assess the concentration of risky assets, we exclude these highly liquid assets when selecting the three largest investments.

The fair value of the investment portfolio involves analyst judgment and is calculated or estimated using a combination of market value for listed assets and our estimate of the value of unlisted assets. In specific cases where core investments are unlisted and the carrying value does not represent economic reality, a valuation technique may be used or a haircut may be applied. For example, a standard multiple approach (e.g., EBITDA or an enterprise value-based multiple) to assess the fair value of the most significant holdings may be used where a benchmark for appropriate multiples is available through comparable listed companies or comparable recent M&A transactions within the same business segment. Cash-flow-based models may also be used if appropriate and sufficient data exist. This approach would not be appropriate in markets where there is no benchmarking data and limited transparency is a constraint to accurately valuing a company.

In the event that there is no third-party information or other reliable indicator of market values to corroborate asset values, we would use the book value in the audited accounts and typically apply a haircut (or in some cases where we have reason to believe assets are undervalued, we could use a value above the book value). The haircut reflects the uncertainty surrounding the asset value and the challenges in monitoring the valuation on a frequent basis, and it may be applied more generally in order to reflect forward-looking expectations, such as when assets are impaired and book value is materially higher than the estimated fair value. We note that using the book value in some cases may understate the value of unlisted investments where holding periods are extremely long (holding companies with long-term investment strategies may have holding periods in excess of 20 to 30 years) and where the historical cost does not reflect the fair value of the investment. Reliance on book value where the investment portfolio is concentrated in a few unlisted investments is generally not appropriate and a more in-depth analysis of the operating company is necessary.

GEOGRAPHIC DIVERSITY:

We estimate geographic diversity based on the number of core assets residing or operating in different countries or regions, with core assets defined as assets with ownership typically at least 20% or with a market value typically at least 10% of the total investment portfolio value. We also consider geographic diversity at the investment level, which can contribute to greater stability of investment earnings and more stable market values and dividend income.

In assessing geographic diversity, we consider potential regional economic correlations — for example, a diversification within the US might be economically more beneficial than a diversification in two Benelux countries, such as Belgium and the Netherlands. A well-diversified company in the US might receive a higher score for this sub-factor than an issuer invested in only two adjacent European countries.

BUSINESS DIVERSITY:

We use the number of business sectors included in the investment portfolio.

In assessing this sub-factor, we consider various sectors identified for other methodologies and may also consider segment reporting disclosed in a company's audited financials. While scoring is based on the number of business sectors, we also consider the weight of investments in each sector and the extent to which exposure in the main sector(s) is balanced by exposure to unrelated sectors. We also consider business sectors at the investment level as this can contribute to more stable earnings, more stable market values and recurring income (e.g., dividends).

INVESTMENT PORTFOLIO TRANSPARENCY:

We qualitatively assess the extent of the public transparency available on the underlying assets in the investment portfolio. Companies listed in highly regulated, mature markets typically are required to have good disclosures, which in turn provide timely and quality information. Stock market listings are also useful in valuing the investments, fundamental in our ability to calculate or estimate market value-based leverage accurately on an ongoing basis. On the other hand, it is challenging to analyze the investment portfolio where there is limited availability of information about specific investments and where data cannot be independently verified.

We may also consider the benefits of privately owned assets in our analysis when considering the quality of an IHC's portfolio. For example, some IHCs have allocated an increasing share of their portfolio to unlisted assets to achieve higher returns.

Factor: Financial Policy (10% weight)

Why it matters

Management and board tolerance for financial risk is a rating determinant, because it directly affects debt levels, credit quality, and the risk of adverse changes in financing and capital structure. An investment holding company's exposure to equity risks can result in greater volatility in leverage metrics relative to other corporates. The active portfolio management of investment holding companies also make it more challenging to estimate future leverage.

Our assessment of financial policies includes the perceived and demonstrated 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 ability for the company to achieve its targets.

Financial risk tolerance serves as a guidepost to 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, 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.

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. Attention is paid to management's investment 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, monetary policies, stress/high volatility in capital markets, legal actions, competitive challenges, and regulatory pressures. In particular, we positively view commitments to market value-based leverage targets as this allows us to assess leverage over a longer time period, especially given the tendency for IHCs to acquire and divest assets and their exposure to equity market risk. This means that market value-based leverage is more volatile and more difficult to forecast.

Management's appetite for portfolio and strategic change is assessed, with a focus on the type of transactions (i.e., new asset classes or adding sector exposure) and funding decisions. Frequency and materiality of acquisitions and previous financing choices are evaluated. A history of debt-financed or credit-transforming acquisitions will typically result in a lower score for this factor.

We also consider an investment holding 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.

Factor: Estimated Market Value-Based Leverage (20% weight)

Why it matters

Estimated market value-based leverage (MVL) is important because the majority of an IHC's assets are typically equity investments, though an IHC may also make investments in alternative assets, such as real estate, private equity, infrastructure or, more rarely, financial instruments, such as derivatives or money market funds. In the event that the IHC decides to lever its equity returns by funding part of its investments through the issuance of debt, the credit risk of this debt is significantly affected by asset coverage and the available investment income to service the debt.

How we assess it for the scorecard

NET DEBT / ESTIMATED MARKET VALUE OF PORTFOLIO ASSETS:

We use the ratio of net debt to estimated market value of portfolio assets. For clarity, we use net estimated market value (i.e., net of highly liquid assets).

We use the market value of a holdco's investment portfolio to assess the strength of a company's asset coverage. In our estimate of the market value of portfolio assets, we may use available stock prices, or we may use our estimated enterprise value assessments, which may be based on standard multiple valuation techniques. We may apply a haircut or a discount to unlisted or illiquid assets. In arriving at estimated market value, we may also consider the financial statements of material subsidiaries.

In order to reflect the asset coverage available relative to debt, we calculate or estimate the portfolio value on a market price/fair value basis where such information is independently verifiable and available on a frequent basis, as is common for actively traded shares. In other instances, as is common for unlisted investments, the book value of investments is used, typically with a haircut (or in some cases where we consider the assets undervalued, we may use a value above the book value). We may also assess the potential impact of hedging contracts against movements in the fair values of investments. The portfolio value used for this calculation excludes cash balances, which are already incorporated into the net debt numerator. In addition, a debt adjustment is made when the holdco has guaranteed debt or other material obligations, including debt at the level of its investments.

In cases where an IHC's acquisition is funded through non-recourse debt raised by a special purpose vehicle (SPV), we generally "roll-up" the SPV debt and include it as part of the IHC's debt for the MVL calculation. Even in cases where an IHC does not have a contractual obligation to pay the non-recourse debt, we consider that the holding company generally remains committed to the investment and that the SPV is expected to be supported by the IHC should the dividend payments of the acquired company be insufficient to service interest and principal payments. A debt default by the SPV could have greater consequences for the IHC as opposed to the acquired company, with a possible loss of ownership interest in the investment as well as reputational damage to the IHC in the broader market.

Factor: Debt Coverage and Liquidity (20% weight)

Why it matters

Operational cash flow available to pay interest expenses provides an important indication of an IHC's financial flexibility and long-term viability. IHCs that do not have a portfolio of sufficiently mature investments that pay an adequate level of dividends to cover their interest and debt payments are more reliant on cash and credit facilities.

The timing of debt repayments can play a particularly significant role in the credit profile of an IHC because the concentration of maturities can present liquidity challenges and heighten refinancing risk. All things being equal, the longer the debt maturity profile, the greater the firm's financial flexibility, because it will have more time and options to repay or refinance debt. This flexibility is also enhanced by the amount of cash balances a company maintains relative to upcoming debt maturities.

How we assess it for the scorecard

Scoring for this factor is based on two sub-factors: (FFO + Interest Expense)/Interest Expense and Liquidity.

(FFO + INTEREST EXPENSE) / INTEREST EXPENSE:

In assessing this sub-factor, we use the ratio of FFO plus interest expense to interest expense.

We use this ratio to assess the ability of an IHC to meet its interest obligations using funds from operations. An IHC's recurring cash income is for the most part from dividends and cash interest but can also include other sources such as interest payments from related party loans to operating companies, or management fees received from operating companies for services provided by the parent.
In calculating or estimating this sub-factor, we exclude one-off or unusual cash flows, such as gains from asset sales or one-time restructuring costs, which we assess qualitatively instead.

Recurring expenses are primarily related to interest expenses, operational costs (such as employee salaries and office rent) as well as tax expenses. Dividends paid by the company to its shareholders are not part of the calculation because we do not consider them part of FFO, and they can be discretionary in nature.

LIQUIDITY:

In assessing this sub-factor, we use the number of years that cash balances and committed credit facilities cover upcoming debt maturities.A company's cash balances and committed credit lines are assessed against its debt maturity profile to derive the number of years of available liquidity. The benefit of credit facilities is limited to the maturity date of the facility. For example, an undrawn 5-year credit facility can be used to pay a debt obligation due in year 3, but this facility will become due in year 5.

One approach to calculating or estimating this metric is to assume that available committed credit facilities are drawn down immediately, and this requires that the debt maturity profile be adjusted by the drawn down amount due at the facility maturity date. As can be seen from Example 1, in the absence of a material cash balance, the 3-year credit line is sufficient to cover year 1 debt obligations but becomes due in year 3. On the other hand, in Example 2, the cash balance is sufficient to cover year 1 debt obligations, but remaining liquidity is inadequate to cover year 4 debt obligations.

Exhibit 4
Example 1

Cash balance	25
Available 3-year committed facility	50
Total available liquidity	75

	Amount Due	Adj. Amount Due	Liquidity Remaining
Year 1	50	50	25
Year 2	0	0	25
Year 3	0	0 + 50	inadequate
Year 4	50	50	
Year 5	50	50	

Years of liquidity	**2 years**

Source: Moody's Investors Service

Exhibit 5
Example 2

Cash balance	50
Available 5-year committed facility	25
Total available liquidity	75

	Amount Due	Adj. Amount Due	Liquidity Remaining
Year 1	50	50	25
Year 2	0	0	25
Year 3	0	0	25
Year 4	50	50	inadequate
Year 5	50	50 + 25	

Years of liquidity	**3 years**

Source: Moody's Investors Service

Other considerations for analyzing investment holding companies[3]

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.

Environmental, Social and Governance Considerations

Environmental, social and governance (ESG) considerations may affect the ratings of investment holding companies. For information about our approach to assessing ESG issues, please see our methodology that describes our general principles for assessing these risks.[4]

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, auditor's comments in financial reports and unusual restatements of financial statements or delays in regulatory filings may indicate weaknesses in internal controls.

Liquidity

Liquidity is an important rating consideration for all investment holding companies and can be an overriding consideration in times of stress, although it may not have a substantial impact in discriminating between two issuers with a similar credit profile. We form an opinion on likely near-term liquidity requirements from the perspective of both sources and uses of cash and assess both internal and external liquidity, including the quality of committed bank credit facilities and degree of reliance on short-term debt financing and uncommitted credit lines. For more details on our approach, please see our liquidity cross-sector methodology.[5] While liquidity is specifically considered in the scorecard, when it is very weak, the impact it has on ratings may be much greater than the standard scorecard weight would imply.

Group Complexity

Typically, the more complex the group is, the less clear-cut it becomes to separate the holding company from the rest of the group or its owners. It is therefore more likely that the IHC will be potentially affected by aspects that have a negative impact on one part of the group. At the extreme, this may prompt us to view the company as a conglomerate rather than an investment holding company and hence to modify our analytical approach as the risk of credit contagion between the holding company and its individual investments becomes significant. Increasing group complexity can also imply more sophisticated management capacity in the form of accessing additional means of liquidity, savings from tax optimization, and improved treasury management, but at the same time this also increases the risk of credit contagion between the holding company and the various investments in the portfolio.

We identify four indicators below that characterize group complexity:

» Share cross-holdings among participations

» Intercompany transactions among participations and/or holding and participations

» Related-party transactions of shareholders of the holding company

» Multiple debt-funding entities, i.e., participations within the holding's portfolio provide funding among themselves

Degree of Influence over Dividends of Investees

The more an investment holding company can influence operating companies, the greater its flexibility in making additional liquidity available for its own needs through a change in dividend policy or intercompany loans at the respective operating companies. Companies that tend to maintain high ownership in their investees also tend to have high asset concentration, reflecting their investment strategy of having a less diversified portfolio in order to maintain control over key investments. An assessment of the balance between these two factors can become an important consideration, as a high degree of influence could lead to credit linkages between the investment holding company and its key investments.

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 asset sales, spin-offs, capital restructuring programs, litigation, pandemics, significant cyber-crime events, shareholder distributions, and sudden market events causing volatility, for example as a result of geopolitical events or changes in monetary policies. Key-person risk can, in some instances, also affect ratings if there is no clear succession planning.

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 company in times of stress or financial need (e.g., a major capital investment), 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.[6] 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, large corporate issuers are likely to receive government or banking support in the event of financial difficulties because of the strategic importance of the company. In Japan, our corporate ratings consider the unique system of support that operates 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 the presence of strong group and banking system relationships that may provide support when companies encounter significant financial stress.

Investment holding companies: 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,[7] 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 metrics,[8] 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.

Quantitative credit metrics may incorporate standard[9] or non-standard adjustments to income statement, cash flow statement and balance sheet amounts for items such as underfunded pension obligations and operating leases.

The main data source for a number of quantitative rating factors is the holdco-level (i.e., non-consolidated) financial statements. Considering the specific investment style of an investment holding company (i.e., typically equity participations in operating companies with potentially significant portions invested as minority stakes, and no or only limited financial support by the holding company to subsidiary debt), the holding company's group consolidated financial statements are often not the best source of financial information in order to assess the credit risks at the holdco level. However, holdco level accounts may not always be available or have the same level of detail as audited consolidated accounts, complicating the analysis and requiring certain assumptions to be made.

Asset concentration, leverage, debt coverage and liquidity can typically be better measured or estimated based on information arising directly from holdco level accounts rather than consolidated group accounts. For example, using the carrying value of operating companies from the holdco's consolidated group accounts would not accurately assess the asset value because of the effect of group consolidation.

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 or Caa, 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 6

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

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 7
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

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.[10]

General approach for analyzing conglomerates

While recognizing that many companies describe themselves as conglomerates, this methodology characterizes conglomerates narrowly such that only a very small number of companies would be rated as conglomerates using this methodology. Several principal features distinguish such entities from other industrial companies:

» A conglomerate invests in several completely unrelated industries with generally majority-owned or wholly owned operating subsidiaries but lacks a distinctive leading business segment. While a very large number of companies have multiple operating subsidiaries and investments in completely unrelated industries, we have observed that the vast majority have a leading business segment. In rating such companies, we use the relevant industry sector methodology for the leading business segment while considering differences in risk (which can include diversification benefits) and financial performance related to the other business segments.

» A conglomerate acts as one single entity and there is no significant barrier to reallocation of capital within the group, including issuance of debt at the conglomerate's holding entity to support financing needs at subsidiaries.

Credit risk assessment of a conglomerate incorporates a balanced view about the credit risk in each business segment and its overall contribution to the credit quality of the group. Our assessment typically incorporates a weighted sum-of-the-parts analysis, as opposed to an assessment of weak-link risk or best credit risk within a group of companies. Consideration is also given to any potential overall reduction in the conglomerate's credit risk due to industry and country diversification of assets and cash flows.

Because of a lack of significant barriers to a reallocation of capital within the group, we generally assess the overall group's credit profile on a consolidated basis, including issues relating to group management strategy and track record, corporate governance and financial policy. In addition, a re-allocation of capital within the group may potentially lead to credit risk contagion from weak to strong entities within the conglomerate. As a consequence, we assess the impact of the likelihood as well as the magnitude and direction of any supporting capital flows on the respective credit risk of the involved entities.

If a conglomerate has a modest level of debt, it may be possible to view its credit quality as being supported only by the stronger business segment(s); but that view would depend on there being little or no scope for the weaker business segment(s) to be a drag on overall credit quality. In most cases, group debt relies to some extent at least on the credit quality of each major segment, which makes a sum-of-the-parts approach more appropriate.

A conglomerate typically has a high degree of oversight over the group's business strategy and a coherent financial policy. It is generally expected that the entity will provide various forms of financial support, if necessary to its major/flagship subsidiaries and it is not uncommon that it also provides guarantees and collateral for financing arrangements of its subsidiaries, if such entities have financing arrangements of their own. In addition, it may provide significant administrative or support services to subsidiaries, such as legal advice, centralized cash management or other administrative services. A conglomerate acts as one group and may show a high degree of operational and managerial integration. In addition, the investment strategy of a conglomerate typically includes some form of permanence in the business mix on a longer time horizon with no specific exit strategy, although it may at times arbitrage assets in an opportunistic manner.

We assess the individual business and credit risk profile of each major industry segment of a conglomerate by applying the scorecard from the respective industry sector methodology, and by incorporating the relevant "Other considerations" described in those sector methodologies. In most cases, it is most meaningful to do this only for the two or three largest industry segments. Based on the outcomes, an overall risk-weighted scorecard-indicated outcome can be estimated for the conglomerate. In line with the relevant industry sector rating methodologies, the scorecard-indicated outcome is not expected to match the actual rating and there are additional considerations that are not included in the scorecard. These can include the benefits of diversification in some cases. We recognize that conglomerates may choose to also take into consideration tax and currency issues when allocating debt within the group. Consideration of consolidated statements and the theoretical debt capacity by rating category of each business will to a large extent mitigate this potential distortion in debt allocation.

This approach may include an allocation of the conglomerate's holdco debt to its subsidiary businesses in order to estimate individual ratios which allow for a weighted average calculation for the total group. The weighting is usually centered around cash flow metrics (such as each major segment's contribution to EBITDA) since this can represent an approximation for the debt capacity of the various subsidiaries. However, in some cases, other metrics for weighting may be more relevant. For example, a rating committee may find it analytically useful to consider assets for capital-intensive companies, or operating profits if these measures are more relevant for a particular company.

Other considerations for conglomerates

As described above, we incorporate the considerations discussed in the "Other considerations" sections of the relevant sector methodologies. In addition, the following considerations apply for conglomerates.

Portfolio Stability

The stability of a conglomerate's portfolio during a certain time period can be assessed by analyzing the stability of investments in assets and their asset mix (e.g., by sector, country or revenue versus cash flow focus), the number of acquisitions, spin-offs and "greenfield" developments. Strong discipline with clear guidance on a balanced investment strategy and limited event risk would typically be viewed as positive for the overall credit risk of the conglomerate. Predictability of behavior is also typically a positive credit consideration. This does not imply that the conglomerate needs to maintain a constant business mix, but rather that we value a clearly articulated strategy on how the conglomerate intends to manage its business mix.

Associate and Subsidiary Control

It is not uncommon for a conglomerate to have less than 100% ownership in the shares of a subsidiary. Even though the conglomerate might still exert significant control, minority shareholders typically have rights to participate in distributable income. Those cash flows to minorities are not available for debt repayment at the conglomerate's holding level. Indeed, there can be limitations with regard to the ability to upstream dividends or pool cash at the conglomerate holding level if minority shareholders are present. As a consequence, the actual economic cash flow position of a majority-owned subsidiary, which would be fully consolidated according to accounting practices, might be better reflected by a pro rata consolidation, which could also be appropriate for participations that are accounted for in the conglomerate's group financial statements under the equity method.

Parent – Subsidiaries Relationship and Support within the Group

There might be circumstances under which the parent holding company provides specific financial support to a business that is part of the overall conglomerate. This may be accomplished, for example, through inter-company loans, equity top-ups, asset transfers, granting of financial guarantees or debt forgiveness. The overall strength of support depends on the type of measure and our assessment of the willingness and ability of the parent to grant this support.

Since a conglomerate is normally assumed to be acting as one single entity, extending support to one business typically could come at the expense of another business within the whole group. The premise is that a conglomerate is typically only as good as the sum of its parts with a likely fluidity in the capital structure (subject to diversification described below) that results in an "averaging out" of the credit strength within the entities of the group. Moreover, it may not be uncommon for support to be provided from other entities within the family.

A conglomerate's track record in shifting financial support from one business to another presents an indication whether a specific business is more affected than others by financial support or whether all businesses would be affected equally and, if the latter, whether they would be affected at the same time or sequentially. Important for such an analysis are also potential restrictions such as debt covenants at subsidiaries that may prevent transactions with affiliates and other external parties and therefore would limit the potential support a subsidiary is able to provide. For conglomerates, the ability to use funds across the whole group to pursue business opportunities is a credit strength.

Positive Diversification Effects

Business diversification within a conglomerate can bring potential benefits for creditors. At the same time, diversification exists only to the extent that interdependence is low across the various businesses. We therefore take a pragmatic and cautious approach to diversification.

Ownership Structure

The type of ownership might be an important consideration for the credit assessment of a conglomerate. For example, a conglomerate with stable ownership and a clear succession plan can be seen as a credit positive. Conversely, unclear ownership influences or weak governance structures may be a credit weakness.

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.[11]

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.[12]

Key rating assumptions

For information about key rating assumptions that apply to methodologies generally, please see *Rating Symbols and Definitions*.[13]

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" sections, 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.[14] 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 publication" section.

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

3 The "Other considerations" for conglomerates are discussed in the "General approach for analyzing conglomerates" section below.

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

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

6 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.

7 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.

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

9 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.

10 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.

11 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.

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

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

14 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 issuer/deal page on https://ratings.moodys.com for the most updated credit rating action information and rating history.

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