MOODY'S INVESTORS SERVICE

RATING METHODOLOGY

Trade Credit Insurers Methodology

This rating methodology replaces the *Trade Credit Insurers Methodology* published in November 2019. In this update, we have added "Consideration of Accounting Changes: IFRS-17 and US GAAP LDTI" in the "Scorecard Framework" sub-section of "Our General Framework for Rating Trade Credit Insurers," which describes that we may adjust factor scores as a result of these accounting changes.

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Introduction

In this rating methodology, we explain our general approach to assessing credit risk for issuers in the trade credit insurance industry globally, including the qualitative and quantitative factors that are likely to affect rating outcomes in this sector.

We discuss the scorecard used for this sector. The scorecard[1] is a relatively simple reference tool that can be used in most cases to approximate credit profiles in this sector and to explain, in summary form, many of the factors that are generally most important in assigning ratings to companies in this sector. The scorecard factors may be evaluated using historical or forward-looking data or both.

We also discuss other rating considerations, which are factors that may be important for ratings but are not included in the scorecard, usually because they can be meaningful for differentiating credit profiles, but only in some cases. In addition, some of the methodological considerations described in one or more cross-sector rating methodologies may be relevant to ratings in this sector.[2] Furthermore, since ratings are forward-looking, we often incorporate directional views of risks and mitigants in a qualitative way.

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

2 A link to an index of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

As a result, the scorecard-indicated outcome is not expected to match the actual rating for each company.

Our presentation of this rating methodology proceeds with (i) the scope of this methodology; (ii) our general framework for rating trade credit insurers; (iii) a discussion of the scorecard factors; (iv) other scorecard considerations; (v) assessing support; (vi) other rating considerations; (vii) assigning entity-level and instrument ratings; (viii) methodology assumptions; and (ix) limitations.

In the appendices, we describe (i) how we use the scorecard; (ii) definitions of credit and surety insurance; and (iii) how we incorporate stress testing in our analysis.

Scope of This Methodology

Long-term Insurance Financial Strength Ratings (IFSRs[3]) for trade credit and surety insurers are assigned at the legal entity level to insurance operating companies.

In addition to long-term IFSRs, we may assign short-term IFSRs[4] to provide institutional investors and financial intermediaries with opinions about an insurance company's ability to pay punctually its short-term senior policyholder claims and obligations. We use the same prime rating symbols for these ratings that we use for other short-term instruments and obligations.[5]

Other ratings that may be assigned within the group (e.g., senior unsecured debt issued by the insurer or its parent company) are typically determined in relationship to the IFSRs of the group's main subsidiaries.[6]

Our General Framework for Rating Trade Credit Insurers

Our general approach to assessing the credit risk of the various obligations of trade credit insurers is based on an assessment of the financial strength of the main operating units within that organization. This methodology is, therefore, intended primarily to explain our approach to assigning IFSRs to operating insurers. Specifically, the methodology describes our general approach to assigning a financial strength rating of a standalone entity before consideration of support. We also describe how we incorporate affiliate[7] support to move from the standalone credit profile to the assignment of the IFSR.[8]

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

In rating trade credit insurers on a standalone basis, we focus on qualitative and quantitative characteristics in relation to the company's business and financial profile, as well as on the operating environment in which it conducts its business. Regulatory, accounting and product characteristics can vary widely from country to country, and our rating approach considers these differences.

3 IFSRs are opinions of the ability of insurance companies to pay punctually senior policyholder obligations and claims and also reflect the expected financial loss suffered in the event of default. Please refer to *Rating Symbols and Definitions* for more details; a link can be found in the "Moody's Related Publications" section.
4 Please refer to our methodology that discusses global short-term ratings. A link to an index of our sector and cross-sector rating methodologies can be found in the "Moody's Related Publications" section.
5 Please refer to *Rating Symbols and Definitions* for more details; a link can be found in the "Moody's Related Publications" section.
6 Please see our cross-sector methodology that discusses how we assign instrument ratings for insurers. A link to an index of our sector and cross-sector credit rating methodologies can be found in the "Moody's Related Publications" section.
7 "Affiliate" includes parents, cooperative groups and significant investors.
8 The standalone credit profile is an opinion of an insurer's standalone intrinsic strength, absent any extraordinary support from an affiliate or government. An analytic unit generally comprises all the operating companies with common analytic and credit characteristics operating in a single country or geographic region. An analytic unit could include a group of companies operating outside of a single geographic region if significant inter-company support arrangements exist, or if there is a high degree of integration in the management, systems, distribution and operations of the group of companies.

EXHIBIT 1

Business Profile	Financial Profile	Operating Environment
Factor 1: Market Position and Brand	Factor 3: Asset Quality	Economic Strength Factor
Factor 2: Product Focus and Diversification	Factor 4: Capital Adequacy	Institutions and Governance Strength Factor
	Factor 5: Profitability	Susceptibility to Event Risk Factor
	Factor 6: Reserve Adequacy	
	Factor 7: Financial Flexibility	

Source: Moody's Investors Service

In the following sections, we describe the key factors underlying an insurer's business and financial profile, as well as factors that affect its operating environment. We explain our general approach for scoring each scorecard factor and show the weights used in the scorecard. We also provide a rationale for why these scorecard components are meaningful for an insurer's standalone credit profile, what the relevant financial metrics are in analysing these factors, including regional/supplemental metrics, and how we interpret those metrics. Overall country risk and characteristics of the local insurance operating environment also play an important role in our rating analysis as do other factors, such as management governance, and accounting policy and disclosures.

Given the inherent cyclicality of the trade credit insurance industry, a company's financial profile may be somewhat stronger than the scorecard-indicated outcome during cyclical peaks and somewhat weaker during cyclical troughs.

We employ the same analytic approach to evaluating trade credit insurance companies worldwide, incorporating the business, financial profile, and operating environment dimensions discussed in this methodology. However, each of the various regions has its own market nuances that reflect the local political, social and economic climates. These include the regulatory environment, governance and capital structures, taxation, accounting rules and public reporting requirements, and laws and the litigation environment. If these regional factors, are not already captured in the Operating Environment component, we may incorporate them qualitatively into our analysis.

Trade credit insurance companies often consist of subsidiaries operating in more than one geographic region. Where this is the case, we typically consider the largest and most significant units of the group (in terms of revenues and earnings, capital, assets or other key metrics), and, where relevant, apply the quantitative metrics in the methodology to this group of key subsidiaries to arrive at weighted average ratios. In some instances, this group of key subsidiaries may be less than 100% of the analytic unit. Also, in some instances, more than one group of subsidiaries, called analytic units, exist within a trade credit insurance group. Each analytic unit is typically analysed separately.

Scorecard Framework

This methodology includes a scorecard, which is used in our analysis and reflects our opinion and judgment on each of the broad factors within the rating methodology. Information we use in the scorecard may include proprietary, non-public data. Business Profile factors represent 30% of the overall fixed scorecard weights, and the Financial Profile factors represent 70%; however, weights shown for each factor in the scorecard represent an approximation of their importance for rating decisions, and actual importance may vary substantially. The Operating Environment component, described in more detail later in this report, has a variable weight depending on the assigned score.

The scorecard calculates an unadjusted score for each factor, and analysts typically populate the scorecard with an adjusted score, which can range from Aaa to C. The score is derived from the raw metrics (see Appendix 1) and the adjusted score is based on analytical judgment. The scorecard also factors in the operating environment. We also consider a pre-defined severe stress case scenario.

Consideration of Accounting Changes: IFRS 17 and US GAAP LDTI

Insurers reporting under IFRS or US GAAP may be subject to IFRS 17 or long duration targeted improvements (LDTI) under US Generally Accepted Accounting Principles (US GAAP),* respectively, depending on the jurisdiction in which an insurance company reports.

The application of IFRS 17 or LDTI may significantly affect the overall presentation of financial statements as well as certain reported amounts, some of which are inputs to scorecard metrics. These inputs include shareholders' equity, insurance liabilities, revenue and net income.

Scorecard metrics whose inputs are affected by the application of IFRS 17 or LDTI may result in values and unadjusted scores that are significantly different from what would have otherwise resulted. The application of the new accounting standards are not expected to directly affect the underlying economic risk or expected cash flows of in-force business. In addition, for most regulatory jurisdictions, the standards do not directly affect regulatory financial reporting and regulatory capital.

Thus, qualitative adjustments to factor scores of affected metrics will, for a period of time, be particularly important for certain insurance companies, due to limited comparability with prior accounting periods** or with insurers that follow different accounting standards. These adjustments fall within the scope of our overall approach to analyzing trade credit insurers where we may adjust factor scores to reflect our analytical perspective of credit risk.

As described in the "Discussion of the Scorecard Factors" section, we may consider supplemental metrics in our analysis, including metrics calculated or estimated from financial statements. For instance, we may place greater emphasis on leverage excluding accumulated other comprehensive income (AOCI) in assessing financial flexibility and on capital metrics calculated under regulatory models in assessing capital adequacy.

* Accounting Standards Update (ASU) 2018-12 is commonly referred to as Long Duration Targeted Improvements, or LDTI, and is effective January 1, 2023, for large US Securities and Exchange Commission (SEC) insurance filers. The LDTI update includes accounting changes for long-duration insurance contracts under US Generally Accepted Accounting Principles (US GAAP), particularly for certain life insurance products. IFRS-17 Insurance Contracts is commonly referred to as IFRS 17 and is effective as early as January 1, 2023, for entities reporting under the International Financial Reporting Standards (IFRS) framework; effective dates depend on the jurisdictions in which a firm reports. The IFRS 17 standard establishes the principles for the recognition, measurement, presentation and disclosure of insurance contracts.

** Specifically, accounting periods for which metric calculations are based on financial reporting prior to the adoption of IFRS 17 and LDTI.

To arrive at the standalone credit profile for the analytic unit, we may assess the company's management, governance, risk management, accounting policy and disclosures, sovereign and regulatory environment as well as any special rating situations. To move from the standalone credit profile to the rating, we consider any explicit or implicit support from affiliates, as well as other rating considerations. Scorecard factors and weights can be found below.

EXHIBIT 2

Trade Credit Insurers Methodology Scorecard Factors and Weights[9]

	Aaa	Aa	A	Baa	Ba	B	<B	Score	Adjusted Score
Business Profile									
Market Position and Brand (10%)									
Relative Market Share Ratio									
Distribution and Access to New Markets									
Product Risk and Diversification (20%)									
Business Diversification									
Flexibility of Underwriting									
Risk Diversification									
Financial Profile									
Asset Quality (15%)									
High Risk Assets % Shareholders' Equity									
Reinsurance Recoverables % Shareholders' Equity									
Goodwill and Intangibles % Shareholders' Equity									
Capital Adequacy (20%)									
Net Total Exposure to Shareholders' Equity (x)									
Net Underwriting Leverage									
Profitability (20%)									
Combined ratio (5 yr average)									
Sharpe Ratio of ROC (5 yr average)									
Reserve Adequacy (5%)									
Worst Reserve Development for the last 10 years % Beg. Reserves									
Financial Flexibility (10%)									
Financial Leverage									
Earnings Coverage (5 yr. avg)									
Operating Environment									
Preliminary Standalone Outcome									

Source: Moody's Investors Service

Notching Factors and Support Considerations:

» Management, Governance and Risk Management

» Accounting Policy and Disclosures

» Sovereign and Regulatory Environment

» Standalone Credit Profile

» Nature and Terms of Explicit Support

» Nature and Terms of Implicit Support

» Scorecard-Indicated Outcome

[9] See Appendix 1 for sub-factor weight detail.

Standard Adjustments in the Analysis of Financial Statements

The financial statements we use in our analysis generally have a consistent basis of accounting depending upon the region (e.g., Generally Accepted Accounting Principles (GAAP) or International Financial Reporting Standards (IFRS)). Different accounting conventions can affect – sometimes materially – comparisons among companies operating in different jurisdictions. Accordingly, we make standard and non-standard adjustments, as described below. The qualitative analysis that we employ may also consider accounting system differences, including when we do not have sufficient information to make specific adjustments. To the extent that other accounting conventions are used by a company, we may also use that data for a more direct comparison to global peers.

All of the quantitative credit metrics incorporate our standard adjustments 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.

For an explanation of our standard adjustments, please see the cross-sector methodology that describes our financial statement adjustments in the analysis of financial institutions. A link to an index of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

In addition to the standard adjustments, we may also make non-standard adjustments to financial statements for other matters to better reflect underlying economics and improve comparability among peers. For example, we may adjust financial statements in order to reflect estimates or assumptions that we believe better reflect an issuer's sustainable forward-looking credit profile. We may also make non-standard adjustments where local GAAP or the interpretation of IFRS in a particular country or region differs from the norm in an area that would affect our analysis.[10] Our adjustments may incorporate non-public information.

Incorporating Scenario Analysis and Stress Testing for Credit Insurers

Developing a forward-looking assessment of an insurer's financial performance under an expected case and stress case is usually important to our assessment of financial strength. Our expectations of an insurer's results over the medium term reflect our opinion of current and projected market conditions. The nature of an insurer's operating and business profile, as well as its product offerings, mean that we may have differing levels of confidence in a particular expected case or stress case scenario.

In addition, our credit analysis includes an assessment of the downside risks faced by insurers and their creditors. Because challenging economic and financial events, as well as natural and man-made catastrophes, do occur – with potentially adverse effects on the financial and business profiles of insurers – we typically include an analysis of stress scenarios as part of our analysis.

Stress analysis can take different forms. To assess the impact of stress on an insurer, we may employ a number of different approaches as each situation dictates, including assessing the insurer's own capital models and performing pre-defined and ad hoc scenario analysis. Please refer to Appendix 3 for a discussion of the pre-defined stress scenarios we use in our stress test. Our ratings reflect an expected scenario, but also take into consideration the impact of the pre-defined stress scenarios on a company's credit profile. We generally expect an insurer to be able to withstand moderate stress while maintaining a credit profile consistent with its

[10] See our cross-sector methodology on financial statement adjustments in the analysis of financial institutions for a discussion of our adjustments. A link to an index of our sector and cross-sector rating methodologies can be found in the "Moody's Related Publications" section.

assigned rating and that the application of the pre-defined stress scenarios (the stress test) would result in a credit profile deterioration of no more than a few notches below the assigned rating.

Discussion of the Scorecard Factors – Business Profile

Factor 1: Market Position and Brand

Why It Matters

Market position, brand and franchise strength are key rating factors that represent a company's ability to develop and sustain competitive advantages in its chosen markets. A credit insurer with a strong market position, brand and competitive advantage is better able to withstand prolonged difficult market conditions (by imposing price increases without significantly damaging commercial relationships, for example) and to capitalise on new, potentially profitable opportunities that may develop in the future. We believe such companies are more likely to meet their obligations through varied economic periods. Conversely, a weak business franchise can indicate financial stress for a company if it generates low or erratic core profitability and may lead management to enter unfamiliar businesses, take on new and unfamiliar risks or leverage the company to a greater extent.

Market position incorporates the firm's sustainable advantages in its key lines of business and considers market share, worldwide and locally; barriers to entry; scale advantages; control over pricing; and control of distribution. Additionally, a firm's brand encompasses a company's image and reputation in the market, brand recognition and perception by distributors and end-consumers, and customer loyalty. We also assess credit insurers' market position in the overall market of credit risk management and financing, as credit insurance products may compete directly with financing solutions that can be offered by banks. In particular, the development of alternative risk transfer mechanisms and particularly self-insurance may threaten credit insurers' growth prospects.

Relevant Metrics

Relative market share ratio (GPW/industry's GPW)

Distribution and access to new markets

Interpreting the Metrics

A credit insurer's market share is highly indicative of its franchise and market reputation. The market share of a company is generally assessed at the level of the market where it primarily operates. We assess the market share for large trade credit insurers on a global basis. given the industry's typically significant geographic diversification, albeit some have a regional focus. Global diversification allows these groups to have greater flexibility to exit certain markets and underwrite in different regions should a particular operating environment become difficult.

Credit insurance is a highly concentrated industry. This concentration reflects the high barriers to entry of the credit insurance industry and the significant economies of scale.

Notwithstanding the industry's highly concentrated market, we may also incorporate in our assessment the generally highly competitive environment and the relatively low level of credit insurance penetration. Both of these aspects can be attributed to the discretionary nature of credit insurance, making self-insurance one of the industry's main competitive threats, together with the relatively high risk of substitute products provided by other financial institutions such as banks.

In assessing market shares, we typically consider sustainability. Hence, local players that may have a dominant position in their market typically operate in less advanced economies where their position can be threatened by the entrance of large international players and where the economic environment can be more vulnerable, while large groups typically operate in many different countries, including the most advanced economies, and therefore benefit from higher barriers to entry and well-established competition in most of these countries.

Our analysis of credit insurers' franchises also may comprise a review of the distribution policy. We may consider the diversity in a company's distribution channels which can mitigate its dependence on specific channels, and its vulnerability to sales disruption, though we recognize that not all distribution channels are equal. Although credit insurance is sold primarily through company sales forces or through brokers, some players use reinsurance companies or enter into partnerships with local players to access new markets, which enables them to expand their franchises. Agents and banking networks are also used by some credit insurance companies. The assessment of a company's distribution effectiveness may consider the various distribution channels and assess the suitability of each to the products being sold in specific customer segments. We may also consider the costs involved in developing and maintaining a specific distribution channel, as well as the retention and productivity of distributors, and - by extension - its ultimate customers (particularly in times of stress) in our assessment of the channel.

Further to the factors described above, we may also include any competitive advantage in a specific country as well as possible weaknesses in the links between the policyholders and/or the distributors and the insurers in our assessment of a credit insurer's franchise. Our assessment may also reflect recent trends that might not be yet be reflected in the current ratios or the projected position of the company, according to management's recent initiatives.

EXHIBIT 3

Summary of Relevant Financial Metrics – Market Position and Brand

	Aaa	Aa	A	Baa	Ba	B	< B
Relative Market Share Ratio	≥ 40%	40% > x > 30%	30% ≥ x > 20%	20% ≥ x > 10%	10% ≥ x > 5 %	5% ≥ x > 2%	≤ 2%
Distribution and Access to New Markets	5 or more distinct distribution channels with no concentration in any one channel for sourcing of business	Balanced use of brokers, salaried sales force, partnerships and reinsurance	Brokers, salaried sales force and a third channel such as partnerships or reinsurance to access emerging markets	Brokers and salaried sales force	One channel only (Brokers or salaried sales force)	n/a	a/a

Source: Moody's Investors Service

Factor 2: Product Risk and Diversification

Why It Matters

Credit insurance is by nature a risky business where sharp increases in claims are likely to occur at times of sudden contraction in economic activity. In addition, credit insurers are specialist companies that may not benefit from the cross-subsidization that multi-line non-life insurers may enjoy. Lack of product diversification is often a credit negative. Therefore, we assess the extent to which credit insurers can diversify their sources of earnings through the launch of less cyclical new products and services. Diversification of the risks portfolio by client, industry sector, type of product and territory also mitigates the potential impact of any claim and is beneficial from a credit perspective.

Furthermore, while credit insurance is a cyclical industry, we consider the composition of the portfolio, the underwriting philosophy, the company's risk monitoring and loss-mitigation measures. Weak underwriting can lead to trouble and failure in relatively short periods of time, and written guidelines are often relaxed to some extent at times of relative economic stabilization and intense competition.

Relevant Metrics

Business diversification (weight of ancillary services in total revenues)

Flexibility of underwriting

Risk diversification (by buyer, by sector and by country)

Interpreting the Metrics

We believe that groups with larger proportions of ancillary services generally exhibit lower volatility of profitability at the downturn of the business cycle. The weight of ancillary services in total revenues is a good measurement of the business diversification of a credit insurer. The profitability of credit insurers is particularly sensitive to changes in the economic environment with loss ratios generally surging at times of sudden contraction in economic activity. We consider ancillary services (e.g. debt collection, credit information, management of export guarantees provided by governments and some factoring business) to be a credit positive because they tend to bring more stability in both revenues and generally in bottom line profits, particularly at the downturn of the cycle. We also assess the contribution of these activities to profits, which provides additional information on how efficient these services are in protecting the group's ultimate profitability in a recessionary environment or an economic slowdown.

Given consideration of a specific analytic unit, we also may consider whether the unit has operations outside of credit-insurance-related activities, thereby enhancing diversification. As such, we also may consider the quality of diversification; the company's ability to manage diverse businesses unrelated to the core; the synergies or lack thereof among diversified businesses; and the extent to which diversified businesses detract from a focus on the core or add value to the enterprise as a whole.

In the assessment of the flexibility of underwriting, we seek to understand how the company goes about its core underwriting activity and particularly how quickly a company can change the terms and conditions of its policies to adapt to a sharp deterioration in the economic environment with a consequent increase in credit risk. In order to assess the group's flexibility of underwriting, we typically assess a number of factors including the duration of the policies and the limits granted by the insurer (typically the duration of exposures are around six months in trade credit insurance, but can be much longer in surety insurance), the cancellation clauses, the monitoring by the credit insurer of the seller's adherence to terms and conditions and how limits are monitored. We also may look for evidence of careful risk selection, efficient risk assessment and internal risk scoring and proactive risk management.

Good underwriting flexibility enables the credit insurer to react quickly to changing conditions, which is supportive of higher scores for this factor, while lower flexibility (e.g. an inability to increase tariffs due to long-term policies or impossibility to rapidly cancel credit limits or to reduce its exposure) is associated with lower scores for this factor. We believe efficient risk selection for credit insurers with significant exposure to countries with weak operating environments and high levels of downside risks can be difficult and often leads to substantial volatility.

In analysing the risk diversification by buyer, sector or country, we may assess the extent to which a single claim, the deterioration of the fundamentals of a sector, or the situation of a specific country can affect a company's net income and capitalization. We typically assess the granularity of the exposure to single buyers by measuring or estimating the weight of the largest exposures relative to the total exposure of the company. We also may assess the weight of these largest exposures relative to the shareholders' equity figure of the company. A company exposing a significant percentage of its financial resources to a single name (or highly correlated group of names) typically has a lower score for this factor. In addition, global trade credit insurers tend to have excess-of-loss reinsurance programmes to protect from large insolvency scenarios, which we also incorporate in our assessment of exposure to single names.

Credit insurers are generally well-diversified by country. Our assessment of geographic diversification incorporates an assessment of how exposed each main country's economies are to countries with weaker operating environments and substantial downside risks, with such exposures generally viewed as a credit negative.

EXHIBIT 4

Summary of Relevant Financial Metrics – Product Risk and Diversification

	Aaa	Aa	A	Baa	Ba	B and Lower
Business Diversification	Some diversification with revenues from ancillary services larger than 40%	Some diversification with revenues from ancillary services larger than 30%	Some diversification with revenues from ancillary services larger than 20%	Some diversification with revenues from ancillary services larger than 10%	Only one line of business (credit insurance / financial guarantee)	n/a
Flexibility of Underwriting	Very low duration of exposures, no multi-year policy, contracts are cancellable very easily, all limits need pre-approval	Low duration of exposures, few multi-year policy, contracts are cancellable relatively easily, nearly all limits need pre-approval	Average duration of exposures, some multi-year policies, a majority of contracts cannot be cancelled easily, some limits granted without pre-approval	Duration of exposures close to one year, some multi-year policies, contracts cannot be cancelled easily, a lot of limits granted without pre-approval	Duration of exposures higher than one year, multi-year policies are in majority, contracts cannot be cancelled easily, limits granted without pre-approval	Duration of exposures > 2 years, multi-year policies are in majority, contracts cannot be cancelled easily, limits granted without pre-approval
Risk Diversification	Outstanding diversification of exposure by buyer, sector and country	Excellent diversification of exposure by buyer, sector and country	Very good diversification of exposure by buyer, sector and country	Good diversification of exposure by buyer, sector and country	Adequate diversification of exposure by buyer, sector and country	Questionable diversification of exposure by buyer, sector and country

Source: Moody's Investors Service

Discussion of the Scorecard Factors – Financial Profile

Factor 3: Asset Quality

Why It Matters- High Risk Assets:

Credit insurance companies' core assets are typically concentrated in high-quality liquid assets. In some cases, however, companies allocate a portion of their investment portfolios to higher-risk assets. Assessing the history and trends in risky asset exposures is important, because changes in the market environment, especially during periods of stress, can depress asset values, earnings, and ultimately, the company's capital base.

Relevant Metric - High Risk Assets:

High risk assets as % of shareholders' equity

Interpreting the Metric – High Risk Assets:

High-risk assets broadly comprise all investments other than investment-grade bonds and mortgage loans and include below-investment-grade and unrated bonds/loans, common and preferred stock equities, alternative investments, such as private equity and hedge fund holdings, real estate assets, and other investments that are not classified on the balance sheet.

Companies with higher scores for this sub-factor generally have lower exposure to high-risk assets. However, companies that have strong and stable operational performance are typically able to tolerate a higher proportion of these assets in their investment portfolios. Solid capital positions and a stable earnings profile, as well as strong track records and proven expertise in managing more risky asset classes, are credit strengths.

Beyond this single high-risk asset metric, we may also consider investment portfolio composition including the proportion of high risk assets in relation to total invested assets, and investment concentration risk (particularly if there is any correlation with the underwriting portfolio). Excessive concentrations in a single name or sector raise questions about market and credit risk, liquidity, and the sustainability of historical investment returns. We also may consider the average quality of the fixed income portfolio, the liquidity and volatility of the investment portfolio and the strategy employed by the company, as well as assets that are higher-risk or less liquid due to features specific to a particular market (e.g., commercial mortgage loans in the US).

As part of our analysis, we typically consider an insurer's investment risk. Our investment risk stress tests, which vary by asset type, are typically conducted on holdings in equities, alternative investments, real estate, mortgage loans, sovereign/sub-sovereign bonds, corporate bonds and structured securities.

Why It Matters - Reinsurance Recoverables:

A significant asset of uncertain value on the balance sheet of credit insurers is recoverables/receivables from reinsurers. Although the extent to which credit insurers use reinsurance and are dependent on it varies significantly by company, most of them manage their risk exposure through the extensive use of proportional and non-proportional reinsurance. The analysis of the amount of a company's reinsurance recoverables, its concentrated reliance on a few reinsurers, and the credit quality of the individual reinsurers is important because write-offs of the recoverables as uncollectible could impact the insurer's income and capital, and because the loss of reinsurance capacity could require the insurer to modify its market/product focus.

Relevant Metric - Reinsurance Recoverables:

Reinsurance recoverables as % of shareholders' equity

Interpreting the Metric - Reinsurance Recoverables:

Companies with higher scores for this sub-factor tend to have lower amounts due from reinsurers, relative to their equity base. In addition to evaluating a company's reinsurance exposure ratio, we also assess a company's reinsurance program including coverage placed, terms and conditions, and the credit quality and collateral of its reinsurance counterparties. Typically, our analysis focuses on the most significant reinsurance collectibles, and we qualitatively assess the level of potential future collectibles based on the insurer's reliance on (and potential utilization of) reinsurance protection, and the creditworthiness of its reinsurers. We typically evaluate the creditworthiness of reinsurers by: 1) considering their IFSRs or credit profile; 2) evaluating the ceding company's reinsurance surveillance practices, 3) considering prior payment experience, and 4) evaluating offsets, letters of credit, trust funds, and other features that improve the ceding insurer's position.

Why It Matters - Goodwill and Intangibles:

Goodwill and other intangible assets also form a significant portion of the assets of some credit insurers. Goodwill and intangible assets are typically derived from acquisitions and new business production. The economic value of these assets is often uncertain and may not be realizable to the extent expected at the time of their recording.

Write-downs of intangible assets are often an indication that the potential profits of a book of business or a subsidiary are lower than what had originally been contemplated by management. Furthermore, although charges related to intangible assets are non-cash, they reduce earnings and capital, potentially hurting investor confidence and reducing financial flexibility.

Relevant Metric - Goodwill and Intangibles:

(Goodwill + Deferred Acquisition Costs + Value Of Business Acquired / Present Value of Future Profits + Other Intangibles[11]) as % of shareholders' equity[12]

Interpreting the Metric – Goodwill and Intangibles:

This measure provides an indication of the strength and quality of a company's equity capital base. Companies with lower amounts of goodwill and other intangible assets relative to their equity base generally score higher on this factor than companies with higher amounts of goodwill and other intangible assets relative to their equity base. Extensive growth through acquisitions usually elevates the credit risk of a group because of the integration challenges and the uncertainty about the ultimate costs and benefits, as well as incremental earnings, to be realized from the acquisition in the context of the purchase price and financing. Nonetheless, we also assess acquisitions for strategic fit and consider implications for the company's market position and overall diversification.

As we do not believe any intangible asset is as leverageable as true equity, we also assess the risk related to other intangibles.

Besides these metrics, we also analyse the credit insurer's ALM (Asset Liability Management) policy, any duration mismatch, the interest rate risk and the risk related to other assets (e.g., receivables).

We also typically analyse other assets such as fixed assets and deferred tax assets for reasonableness. As such assets have less liquidity than investments and other financial assets, significant levels of these assets relative to total assets may be discounted when assessing asset quality.

EXHIBIT 5

Summary of Relevant Financial Metrics – Asset Quality

	Aaa	Aa	A	Baa	Ba	B	< B
High Risk Assets % Shareholders' Equity	x≤ 25%	25% < x < 50%	50% ≤ x < 100%	100% ≤ x < 175%	175% ≤ x < 250%	250% ≤ x < 325%	x ≥ 325%
Reinsurance recoverables % Shareholders' Equity	x < 35%	35% ≤ x < 70%	70% ≤ x < 100%	100% ≤ x < 150%	150% ≤ x < 200%	200% ≤ x < 250%	x ≥ 250%
Goodwill & Intangibles % Shareholders' Equity	x≤ 20%	20% < x < 30%	30% ≤ x < 40%	40% ≤ x <55%	55% ≤ x < 75%	75% ≤ x < 95%	x ≥ 95%

Source: Moody's Investors Service

Factor 4: Capital Adequacy

Why It Matters

At the heart of our assessment of a credit insurer's creditworthiness is an opinion about the company's economic capital and its capital adequacy (e.g., solvency) or operational leverage. Economic capital is the cushion available to the insurer to absorb unfavourable deviations in its results. Capital adequacy measures a company's leverage in terms of business volume generated and its risks relative to the company's capital.

11 We use gross intangible assets, instead of net of applicable deferred taxes, to simplify this ratio.

12 This metric is typically calculated on a consolidated basis if the analytic unit being considered is part of a larger group because goodwill due to acquisitions is not typically pushed down to the analytic unit for financial statement reporting purposes.

Capital adequacy is important for an insurer because it provides a signal of financial capacity to customers and because insurance regulators require minimum capital levels or ratios in order for the company to continue to operate. Capital constraints can also adversely affect a company's ability to grow its business.

Relevant Financial Metrics

Net operational leverage - (net total exposure) / (shareholders' equity – 10% of high risk assets)

Net underwriting leverage - (net premiums written + net loss reserves) / (shareholders' equity – 10% of high risk assets)

Interpreting the Financial Metrics

The main source of potential loss for credit insurers resides in the portfolio of accepted insurance risks. The size of this portfolio can be estimated by looking at the sum of all the credit limits that could theoretically be used by all the policyholders (total exposure). In general, the higher a company's operational leverage, the more risks it is assuming and the greater the impact on its capital position from variations in actual performance.

However, this relatively simple measure of total exposure is not risk-adjusted. Therefore, we supplement our analysis of capitalization by the measurement of the underwriting leverage ratio, which includes an estimation of the risk made by the company (the higher the risks are, the higher the premiums and reserves should be). In addition, we may also factor in our assessment of the group's dynamic management of the exposure, effectiveness of risk-monitoring tools and quality of the exposure together with our view on transition risk (i.e., the probability that a "good risk" will migrate to "a bad risk") supported by our macroeconomic and relevant sovereign analysis.

We adjust these ratios by subtracting from the denominator a percentage (10%) of high-risk assets which, in a stress scenario, are either illiquid, or likely to be impaired or sold for a loss, and would likely no longer be included among a company's assets or capital.

We view credit insurance as a highly cyclical activity. Credit insurers periodically report one or two years of very high claims after a series of years with very low claims, and in that respect, credit insurance is similar to catastrophe insurance.

We believe that both ratios are more comparable if calculated on a net basis, bearing in mind the large use of quota-share treaties by credit insurers and the predominant role of reinsurance as an alternative source of capital in this industry. We approximate net figures by using the premiums retention ratio.[13]

Notwithstanding the above, high reliance on reinsurance as a source of capital may represent a constraint for credit insurers, especially when capacity in the reinsurance industry decreases. This is why we usually also take into account gross ratios in our assessment of capital adequacy.

We also consider other sources of risks (e.g. asset risk, reinsurance counterparty risk or our assessment of reserve deficiency as highlighted below) when we interpret the ratios described above. In the adjusted scores, analysts may reflect the business mix of an entity, in order to take into account the differences of risks between trade credit insurance and surety insurance (probability of defaults and loss given defaults are different for these two lines of business), and, when capital is assessed on a consolidated basis, to subtract capital allocated to non-insurance activities.

[13] Among other things, this means that the protection of excess on loss treaties may be underestimated in these calculations, and this should be considered separately in the assessment of capitalization.

Furthermore, in the adjusted scores we may consider additional capital metrics such as those calculated under existing regulatory models.

We also incorporate in our assessment of capitalization the indications derived from an insurer's internal capital model, if available, including the volatility of the results. In this assessment, we consider the credibility of the company's own model based on a) our understanding of its scope and operation; b) the extent of its incorporation into the company's day-to-day decision-making processes; and c) regulatory review and approval, where relevant. We may also consider comparisons of capital positions using the companies' proprietary economic capital models within a peer group. This may lead to qualitative adjustments of scores, because assumptions made in one company's model may be different from assumptions used in another company's model.

In assessing capital adequacy, the potential impacts of stress environments are evaluated. These include pre-defined stress scenarios incorporating potential losses from sharp increases in claims frequency or severity at times of sudden deterioration in the economic environment and investments (see the "Incorporating Stress Scenario Analysis and Stress Testing for Trade Credit Insurers" section above). Also, emerging risk areas are considered in our assessment of prospective capital generation and adequacy.

EXHIBIT 6

Summary of Relevant Financial Metrics – Capital Adequacy

	Aaa	Aa	A	Baa	Ba	B	< B
Net Total Exposure to Shareholders' Equity	x ≤ 150x	150x < x < 200x	200x ≤ x < 300x	300x ≤ x < 400x	400x ≤ x < 500x	500x ≤ x < 600x	x ≥ 600x
Net Underwriting Leverage	x ≤ 1.0x	1.0x < x < 1.3x	1.3x ≤ x < 1.7x	1.7x ≤ x < 2.5x	2.5x ≤ x < 3.5x	3.5x ≤ x < 5x	x ≥ 5x

Source: Moody's Investors Service

Factor 5: Profitability

Why It Matters

A credit insurer's earnings capacity, both quality and sustainability, is a critical component of its creditworthiness because earnings are a primary determinant of the insurer's ability to meet its policy and financial obligations, the primary source of internal capital generation to assure capital adequacy and a key determinant of access to the capital markets on favourable terms. Diversification across multiple product lines and markets can result in more stable levels of earnings, increasing the predictability of internal capital growth and strengthening claims/debt-paying ability.

Relevant Financial Metrics

Gross combined ratio (five-year average) - (gross claims + operating expenses+ service result) / gross earned premiums

Sharpe ratio of return on capital- the mean of the company's annual return on capital (5-year average) divided by the standard deviation of return on capital (5-year period)[14]

Interpreting the Financial Metrics

In general, companies with higher scores for this factor tend to have higher profitability as measured by the combined ratio and have lower earnings volatility.

[14] If an analytic unit has reported a net loss in any of the past five calendar years, the ratio is not calculated and the analytic unit is automatically placed in the Ba rating category.

The combined ratio is a good measure of the ability of a company to generate profits out of its insurance activities. This ratio focuses on the level of claims that we use to differentiate companies with good underwriting discipline from those with more generous risk acceptance. The calculation of the loss ratio on a five-year average enables us to better capture the cyclical activity of credit insurance and the peak risk in credit insurers' profitability. Companies with higher scores for this sub-factor typically have the ability to limit the deterioration of their profitability in times of crisis. The inclusion of the expense ratio in our calculation also captures the operational efficiency of companies and is highly correlated to the size of the company in credit insurance as economies of scale are very high in the sector.

We typically consider the combined ratio on a gross basis, but we may also consider the use of non-proportional insurance in assessing the ability of the credit insurer to protect its net income.

We generally also assess profitability holistically, and we may consider measures such as return on capital, return on equity or return on revenues. These metrics are generally good indicators of an insurer's underwriting skill and pricing discipline relative to its peers while also capturing investment performance. However, we consider that net income can be meaningfully influenced by non-recurring favourable/unfavourable items, most notably realized gains/losses, and therefore, for analytic units with meaningful investment-related gains/losses, we also typically consider these ratios excluding such gains/losses.

The Sharpe ratio of return on capital gauges the inherent volatility in a company's earnings and helps us to formulate an opinion about the predictability and sustainability of a company's earnings. The ratio considers net income since this drives a company's internal capital generation, but we recognize that some capital gains/losses and taxes can at times be somewhat volatile and unpredictable or at other times be used to reduce underlying operational volatility. This ratio's analytic value has little meaning if the numerator is zero or negative, in which case the sub-factor weighting for the combined ratio metric, and within the overall profitability factor, will revert to 100%. However, the volatility metric is useful in comparing companies' earnings volatility to each other and in identifying trends relative to business mix.

EXHIBIT 7

Summary of Relevant Financial Metrics – Profitability

	Aaa	Aa	A	Baa	Ba	B	< B
Combined ratio (5 year average)	x ≤ 60%	60% < x < 75%	75% ≤ x < 90%	90% ≤ x < 100%	100% ≤ x <110%	110% ≤ x <120%	x ≥ 120%
Sharpe ratio of Return on Capital	x ≥ 400%	400% > x > 300%	300% ≥ x > 200%	200% ≥ x > 100%	100% ≥ x > 0%	n/a	n/a

Source: Moody's Investors Service

Factor 6: Reserve Adequacy

Why It Matters

Inadequate loss reserves have been a contributing, if not the primary, cause of most non-life insurance company failures over the past decade. Given the broad accounting latitude endemic to the insurance business, the importance of credible loss reserves cannot be overemphasized. The evaluation of redundancy or deficiency in an insurer's loss and loss adjustment reserves affects the analysis of its reported earnings and the assessment of its capital adequacy. When credit insurers' loss reserves develop unfavourably, the effect on the company's financial profile and flexibility can be material, as seen by the decrease in capital, increased operating and financial leverage ratios, and reduced dividend-paying capacity to the holding company. Although reserving in credit insurance is generally easier than in other non-life lines of business, given the relatively short development of claims, this factor remains important for us to monitor, especially for the longer-tailed segments of credit insurance such as bonding.

Relevant Financial Metrics

Worst reserve development for the last 10 years (as a percentage of beginning reserves)

Interpreting the Financial Metrics

As a general rule, we consider that reserving for credit insurers can be done with a relatively high degree of confidence, bearing in mind that most insured losses are reported quickly and most claims are settled quickly, and therefore we expect, on average, a higher level of redundancy of reserves in the industry. However, because the reserving problems are more likely to occur in periods of sharp dislocation in the economic environment or in economies with high levels of uncertainty, we focus on these years to assess the adequacy of the reserves, by calculating the worst reserve development of the last 10 years. The period of 10 years is designed to capture at least one full credit cycle, but we may consider a longer or a shorter period depending on what is appropriate for a specific company.

Our assessment may also be complemented by our view of the company's prudence on reserving and particularly on reserving processes, notably an assessment of Incurred But Not Reported (IBNR). IBNR is the main source of reserve underestimation given the strong connection between the risks in a credit insurer's portfolio and the potential delay (legally included in the policy) between the occurrence of a default payment and the time the insurer is notified of the default.

EXHIBIT 8

Summary of Relevant Financial Metrics – Reserve Adequacy

	Aaa	Aa	A	Baa	Ba	B	< B
Worst Reserve development of the last 10 years as a % of Beginning Reserves	x ≤ 0%	0% < x < 2%	2% ≤ x < 5%	5% ≤ x < 7%	7% ≤ x < 9%	9% ≤ x < 11%	x ≥ 11%

Source: Moody's Investors Service

Factor 7: Financial Flexibility

Why It Matters

It is important that a company is able not only to fund its business growth via internal capital generation, but also to demonstrate its ability to service its obligations without stress. Credit insurers benefit from having the capacity to raise capital externally for additional growth or acquisitions and to meet unexpected financial demands whether those come from an unusually negative credit/market environment, earnings volatility or other planned or unplanned capital needs. Financial flexibility, as indicated by financial leverage/double leverage, earnings coverage, dividend coverage and access to capital markets, is a key determinant of a credit insurer's credit profile.

Relevant Financial Metrics

Financial Leverage: Adjusted debt divided by (adjusted debt + shareholders' equity)

Earnings Coverage: Earnings before interest and taxes divided by interest expenses and preferred dividends (five-year average)

Interpreting the Financial Metrics

Financial leverage measures the amount of a company's capital base that is financed through borrowed money, typically short- and long-term debt and hybrid capital securities, which can be issued at an operating company or holding company. The calculation considers all forms of debt (including surplus notes and hybrid securities – adjusted for Moody's debt/equity continuum[15] – plus unfunded pension obligations and operating leases) – used to fund the company's operations as leverage. Shareholders' equity in the adjusted financial leverage calculation includes accumulated other comprehensive income (AOCI) as we believe reported equity and the impact of changes in AOCI, primarily from changes in value of investment securities, impact the markets' perception of credit insurers' ability to access capital markets at attractive funding costs. Consideration is also given to leverage metrics calculated using shareholders' equity without AOCI, especially during periods of volatile interest rate changes or where assets are reported at fair value but liabilities are reported at book value. In general, credit insurers with lower levels of financial leverage have higher scores for this sub-factor than peers with higher financial leverage.

In addition to our standard adjustments to financial leverage and earnings coverage, additional adjustments to these metrics are sometimes necessary for individual companies. For example, an adjustment may include adding back as debt an off-balance-sheet obligation because we believe the company will support the debt obligation, if necessary, because of reputation or economic incentives. In contrast, match-funded or self-liquidating debt appearing on a company's balance sheet is likely to be excluded from financial leverage and earnings coverage metrics because the debt is analytically viewed as operating debt rather than financial debt.[16]

It should be noted that our typical starting point for our leverage metrics is consolidated leverage, rather than the leverage ratio of individual entities or analytic units. Our attribution of an insurance group's consolidated financial leverage ratio to all members or analytic units of the group is based on our assumption that each subsidiary/analytic unit benefits from, as well as contributes to, the group's debt service coverage to a greater or lesser degree (in some cases, capped at the domestic sovereign bond rating cap, discussed below). Analysts

[15] We believe that it is appropriate for our credit analysis to limit the amount of total equity credit that is derived from the issuance of hybrid securities within a capital structure. Please refer to our cross-sector methodology for hybrid equity credit. A link to an index of our sector and cross-sector rating methodologies can be found in the "Moody's Related Publications" section.

[16] Please refer to our cross-sector methodology that discusses how we evaluate operating debt used by insurance companies. A link to an index of our sector and cross-sector rating methodologies can be found in the "Moody's Related Publications" section.

may then make adjustments for subsidiaries or units that are not core to the group, and are unlikely to benefit from parent company debt or equity capital support.

However, we also believe that it is important to consider, in tandem with our adjusted financial leverage metric, the total debt profile of a group, on an unadjusted basis (apart from pension obligations and operating leases) and including operating debt. Although potentially match-funded, operating debt nevertheless involves external debt raising and needs to meet certain criteria to avoid being classified as financial leverage.

Other considerations incorporated into our opinions about financial leverage may include – where applicable – a company's double leverage (i.e. investments in subsidiaries funded by parent company debt or a stacked ownership structure), historical trends, management's target level for leverage relative to the current position and the maturity profile, as well as the complexity of the capital structure itself.

The debt capacity of a credit insurer is also implied by its earnings capacity and dividend capacity relative to interest expenses and preferred dividends, although there can be substantial variation in these figures from year to year.

The earnings coverage ratio is calculated on a consolidated basis (US GAAP, IFRS or an equivalent standard) and considers consolidated earnings (pre-tax, pre-interest expenses and preferred dividend coverage of consolidated interest expenses and preferred dividends). The focus is typically on coverage of interest expenses and preferred dividends, although the numerator and denominator are also adjusted for pensions and leases. Because there can be regulatory restrictions on dividend capacity from an operating company to its holding company, the earnings coverage ratio is usually evaluated in the context of the credit insurer's actual flexibility in terms of cash available to be sent up to the holding company.

When analysing the coverage ratio, we generally consider any differences that may exist between interest expenses and the cash payments associated with interest. We also typically assess the interrelationship between cash flow coverage and earnings coverage by considering a) whether material earnings are generated in regions where dividend extraction is more difficult, b) if the parent has meaningful and consistent sources of cash flow from unregulated entities, and c) the relative levels of dividend capacity compared to earnings capacity. In instances where dividend capacity significantly exceeds earnings capacity, this may indicate dividend capacity is unlikely to be replenished should a significant dividend be made.

In addition to these metrics, we also may consider holding company liquidity, measuring the extent to which financial debt obligations, covering near-term debt maturities, interest expense and preferred and common stock dividends, are covered by readily realizable assets (i.e., cash, investment-grade bonds, and all publicly traded equities). This is relevant in light of the large proportion of debt typically issued by a parent company and the aforementioned regulatory restrictions regarding dividend up-streaming by operating companies. As with the coverage ratios, we also may assess the extent to which a holding company is unduly reliant on subsidiaries where dividend extraction is difficult, as well as any other liquidity resources which could be drawn upon if necessary.

We also recognize that it is important for a company to maintain capital market confidence. Ready access to the capital markets is necessary for many insurers in the event of needing to raise capital after a severe unexpected event, to fund an acquisition or simply for internal growth. The inability to access the capital markets at all or on non-attractive terms, vividly illustrated by the 2008-09 financial crisis, can significantly impair a company's financial flexibility or the need to rebuild its capital base. As a result, we view credit insurers' access to the capital markets – which can be limited by outsized financial leverage or poor coverage – as important given the inherent volatility of the business.

We additionally may consider a company's back-up lending facilities and letter of credit arrangements and the conservatism of covenants embedded in all borrowing arrangements. We regard strong back-up facilities with limited restrictive covenants as enhancing financial flexibility for a company, particularly in times of stress.

In assessing financial flexibility, we typically also consider the country in which a company or group is domiciled. We believe that the ability to raise debt and equity as governed by the scale and sophistication of a country's capital markets is an important adjunct to the level of debt and its debt servicing capability. As a result, our financial flexibility scores are typically capped by the local currency bond rating of the country in which the credit insurer operates. This cap applies as well to the local subsidiaries of foreign insurance groups, even if the foreign insurance group has strong financial flexibility.

EXHIBIT 9

Summary of Relevant Financial Metrics – Financial Flexibility

	Aaa	Aa	A	Baa	Ba	B	< B
Financial Leverage	x ≤ 15%	15% < x < 25%	25% ≤ x < 35%	35% ≤ x < 45%	45% ≤ x < 55%	55% ≤ x < 65%	x ≥ 65%
Earnings Coverage	x ≥ 14 x	14x > x > 9x	9x ≥ x > 5x	5x ≥ x > 2x	2x ≥ x > 0x	0x ≥ x > -2x	x ≤-2x

Source: Moody's Investors Service

Operating Environment

Why It Matters

Although our analysis of insurers is focused predominantly on company-specific characteristics and on business and financial parameters in the context of an insurer's operations within its industry sector, an important component of our analysis – particularly in developing markets – is the extent to which external conditions can exert a meaningful influence on insurers' credit profiles.

The Operating Environment serves to capture relevant economic, social, judicial, institutional and general business conditions in a particular country as regards the insurance sector. Country-specific trends and developments can over time have as much of a bearing on insurers' long-term viability as the intrinsic strength of their own operations. Considerations can include the trajectory of economic development relative to other countries, major social or political developments, and the degree of utilization, recognition and acceptance of insurance as a legitimate vehicle for asset accumulation and wealth protection.

Relevant Metrics

The Operating Environment is assessed by country, based on the country in which an insurer operates. For insurers that have meaningful operations in multiple countries or jurisdictions, we consider a blended approach to evaluating the overall Operating Environment score.

The three country-specific components of the Operating Environment score are based on macro-level indicators from our sovereign rating methodology[17] and country research:

Economic Strength: We use our published factor score for a sovereign's Economic Strength.

[17] For more details on our sovereign rating methodology, a link to an index of our sector and cross-sector credit rating methodologies can be found in the "Moody's Related Publications" section.

Institutions and Governance Strength: We use our published factor score for a sovereign's Institutions and Governance Strength.

Susceptibility to Event Risk: We use our published factor score for a sovereign's Susceptibility to Event Risk.

In each case, the broad alpha or alphanumeric sovereign factor score is mapped to a numeric as described below.

Interpreting the Metrics

In our view, the better the operating environment, the less it impinges on the intrinsic strength of an insurer's credit profile. To the extent the operating environment is considered more favourable than the insurer's own intrinsic credit profile, it is typically not a material consideration in the rating analysis. Furthermore, operating environments at the A or higher rating level are considered to be sufficiently strong so as to be neutral with respect to insurers' credit profiles, and are therefore not considered. Consequently, operating environments have only a neutral-to-negative impact on our ratings for insurers. Additionally, we believe that the weaker the operating environment is, the greater influence it has on an insurer's overall credit profile, as the structural strength of the credit insurance industry and contractual agreements increasingly come into question.

Economic Strength – The intrinsic strength of an economy provides critical indications of a sovereign's resilience to external shocks. A sovereign's ability to generate sufficient revenue to service debt over the medium term relies on sustained economic growth and prosperity, i.e., wealth.

Institutions and Governance Strength – The strength of institutions and governance are important determinants of a sovereign's creditworthiness because they influence the predictability and stability of the legal and regulatory environment. Institutions and governance provide a strong indication of a government's willingness to repay its debt. They influence the sovereign's capacity and willingness to formulate and implement economic, fiscal and monetary policies that support growth, socioeconomic stability and fiscal sustainability, which in turn protect the interests of creditors over the long term.

Susceptibility to Event Risk – Susceptibility to sudden, extreme events that could severely impact a country's economy or its institutions, or strain public finances is an important indicator of a sovereign's creditworthiness. Event risks are varied and typically include domestic political and geopolitical risks, government liquidity risk, banking sector risk and external vulnerability risk. We believe that such events could have significant negative implications for financial institutions such as insurance companies.

Calculating the Operating Environment Score

The Operating Environment score is derived by combining the scores for Economic Strength (25%), Institutions and Governance Strength (50%), and Susceptibility to Event Risk (25%).

For the Operating Environment, we start with the published factor scores for the sovereign's Economic Strength and Institutions and Governance Strength, which are expressed on an alphanumeric scale, and Susceptibility to Event Risk, which is expressed on a broad alpha scale.[18] We then convert these scores to numeric scores using the two Mapping Sovereign Rating Methodology Scoring tables below (Exhibits 10 and 11), and we combine them according to the weights described in the prior paragraph. Specifically, the numeric

[18] Broad alpha scores ranging from Aa to Caa are mapped at the midpoint of the associated alphanumeric scores; e.g., for an Aa broad alpha score, we would use Aa2, which maps to a numeric equivalent of 1.71 using the exhibit for Mapping Sovereign Rating Methodology Scoring for Susceptibility to Event Risk.

equivalent score for each sovereign methodology factor assigned score is multiplied by its weight, with the results then summed to produce a numeric Operating Environment factor score.

EXHIBIT 10

Mapping Sovereign Rating Methodology Scoring for Economic Strength and Institutions and Governance Strength*

Economic Strength and Institutions and Governance Strength	Numeric Equivalent
aaa, aa1	2.00
aa2, aa3	1.71
a1	1.43
a2	1.14
a3	0.86
baa1	0.57
baa2	0.29
baa3	0.00
ba1, ba2	-0.29
ba3	-0.57
b1	-0.86
b2	-1.14
b3	-1.43
caa1, caa2	-1.71
caa3, ca	-2.00

*The effect of this mapping is to compress the alphanumeric sovereign factor scores and convert them to a numeric score for use in the scorecard for trade credit insurers.

Source: Moody's Investors Service

EXHIBIT 11

Mapping Sovereign Rating Methodology Scoring for Susceptibility to Event Risk

Susceptibility to Event Risk	Numeric Equivalent
aaa	2.00
aa	1.71
a	1.43
baa	0.57
ba	0.00
b	-0.86
caa	-1.71
ca	-2.00

Source: Moody's Investors Service

The Operating Environment score is then mapped back to an alphanumeric score as shown in the table below.

Modifiers (1, 2, 3) for broad alpha categories from Aa to Caa are produced by interpolating the numerical result to the upper, middle and lower tercile of each factor range as indicated in the following table.

EXHIBIT 12

Summary of Relevant Metrics – Operating Environment

	Aaa	Aa	A	Baa	Ba	B	< B
Operating Environment	2.0	1.0 to 2.0	0.5 to 1.0	0.0 to 0.5	-0.5 to 0.0	-1.0 to -0.5	< -1.0

* The Operating Environment alphanumeric scoring bands are based on an equal-width partition of the corresponding broad alpha scoring bands shown in the table.

Source: Moody's Investors Service

Absent extraordinary systemic (e.g., economic, social, institutional, political, judicial) or market development considerations that may not be adequately reflected in these metrics, we generally expect to apply the Operating Environment result without further modification.

Other Scorecard Considerations in Determining the Standalone Credit Profile: Notching Factors

Management, Governance and Risk Management

We evaluate an insurer's management, governance, and risk management processes as part of our credit assessment. However, an insurer's management, governance, and risk management only affect the scorecard-indicated outcome to the extent we believe they are not reflected in the preliminary standalone outcome derived from the Business Profile, Financial Profile and Operating Environment discussed above. Notching for these factors has typically been limited. That said, in some instances, further assessment of management, governance or risk management may lead to upward or downward notching. Considerations in this factor include:

» Key person risk. A high dependence on a single executive or group of executives can pose increased risks, because the loss of a single person could adversely affect the insurer's future fundamentals. For example, an insurer whose corporate customers closely associate the chief executive with the institution itself could suffer loss of business, earnings and ultimately reduced capital if the chief executive were to leave, absent adequate succession planning.

» Strategy and management. A radical departure in strategy, a shake-up in management, or an untested team can all herald sudden change that increases the uncertainty about risk profile. An aggressive growth plan can also signal an elevated risk appetite, while clear weaknesses in risk management can increase exposure to adverse developments. Any concerns regarding the rigor of Board or management oversight may also be considered here.

» Dividend policy. An aggressive dividend policy may imply reduced financial flexibility. Management teams are often slow to reduce established dividend levels out of concern over negative signaling and adverse share price impact. (The same can be said of share buybacks, although to a lesser extent, as the timing and certainty of execution of even announced buyback programs leave greater management discretion).

» Compensation policy. Similarly, an aggressive compensation policy, for example, widespread use of high bonus payments relative to salaries, and skewed towards cash, may encourage short-term risk-taking behavior to the detriment of bondholders.

We may reduce our preliminary standalone outcome if we judge that any of these factors has a material bearing on the insurer's overall risk profile. Typically, this would be one notch but could be more if we perceive multiple and/or more deep-seated and serious issues. We may also adjust our preliminary standalone outcome upwards, for example where we perceive sustained exemplary stewardship over time, or exceptional risk management and controls, with a tangible impact on the insurer's risk profile.

Accounting Policy and Disclosures

Relevant and timely financial information is a critical part of any financial analysis. Many credit insurers prepare financial information under generally accepted accounting principles either developed by their home country or based on international standards. Financial information is also generally prepared on a regulatory basis of accounting that may be different from generally accepted accounting principles. We consider the presence of a strong government/independent body for financial standards as a positive factor when evaluating an accounting regime. Disclosure of financial information varies widely on a global basis and within regions. In certain locations, regulatory bodies provide access to financial information, although the depth of that information also varies. Poor quality financial reporting or lack of transparency in disclosure is considered a credit negative. In addition, internal control breakdowns, if severe, are also considered a credit negative.

Some companies have chosen to provide easy access to their own financial data, which we view favourably.

The consistent application of financial information is a fundamental presumption of financial analysis. When evaluating accounting principles, we consider how well financial reporting mirrors economic reality. Where we believe the economics of a transaction are not consistent with financial reporting, we may make analytic adjustments to metrics derived from financial statements to facilitate our analysis.

Sovereign and Regulatory Environment

Deterioration in sovereign credit quality can directly affect the credit standing of insurers domiciled within the sovereign, and, more generally, tends to be associated with macroeconomic and financial market trends that are unfavourable for all.[19] Issuers in the same sovereign environment are exposed to some degree to the transmission of shocks across sectors in the economy and the domestic banking system. In addition, they are subject to defensive sovereign actions that can include austerity measures, changes in tax or regulatory policies, and interference during a crisis. Given this linkage, sovereign credit quality can constrain the IFSR of an insurer.

Our cross-sector methodology that discusses how sovereign credit quality can affect other ratings describes how we consider the insurer's geographic diversification, direct exposure to government debt and product characteristics in analysing these impacts. Those insurers with high geographic diversification, low direct exposure to government debt and product characteristics less sensitive to sovereign risks can have an IFSR above the sovereign rating, but generally no more than two notches above.

Moving from the Standalone Credit Profile to the IFSR — Assessing Support

While the above factors are critical in order to determine the standalone credit profile of credit insurers, the analytic consideration of support - explicit or implicit - from a parent company or affiliate is necessary to determine the IFSR, which can be higher than the company's standalone credit profile. It is important to note, however, that a well-capitalized, profitable insurance operating company with a highly leveraged parent or a weak affiliate often has a lower IFSR than it would have were it a free-standing company because of the pressure those factors can place on its earnings and capital.

[19] See our methodology that discusses how sovereign credit quality can affect other ratings. A link to an index of our sector and cross-sector credit rating methodologies can be found in the "Moody's Related Publications" section.

Support from a Parent Company or Affiliate

The credit rating of an insurer can ultimately be affected by its relationship to its parent, a subsidiary, or affiliate companies through either explicit or implicit support.[20] We incorporate support from a parent company or affiliate into the rating by narrowing the spread (expressed in number of rating notches) between the standalone credit profile of the entity/security and the rating of the entity providing the support.[21]

Ultimately, our assessment of the extent to which the affiliation benefits the rating is based on a number of variables, including the supporting company's level of commitment to the country or region of the affiliate, brand name sharing, our assessment of how important this entity is to the overall enterprise business model, its size relative to the whole, its geographic proximity to the supporting entity, existence of shared regulatory oversight, full or partial ownership, and its integration with the rest of the organization from a management, distribution, and operating perspective, as well as our view of the company's ability and willingness to support that entity. Support is evaluated incorporating past actions of the support provider, current public statements of support and our assessment of the outlook for future support.

Our judgment of how the prospective supporting entity is likely to behave in the future is strongly influenced by our assessment of its prospective economic motivations. Accordingly, strong public statements of support would not be a persuasive reason to raise the rating of a weaker subsidiary if a sound economic rationale for doing so seems lacking. Although support may provide uplift to a company's rating, it may not necessarily raise it to the same level as that of the supporting entity.

While, in most instances, support is incrementally positive, there are instances where group affiliation may constrain the public rating of an entity/security relative to its standalone level. For example, if the insurer is affiliated with weak or highly leveraged entities, such associations usually, in turn, weaken the insurer. Capital often flows from stronger to weaker companies within a controlled group, and frequently before regulatory action can occur.

Explicit support is usually intended to transfer the credit of the supporting entity to the supported affiliate or obligation. Explicit support is generally in the form of a capital maintenance agreement, minimum net worth agreement, or some type of direct guarantee. It can also take the form of management contracts, marketing arrangements, reinsurance agreements, or tax-sharing agreements.

In analysing explicit support, we consider the specific legal nature and enforceability of the support, as well as its possible termination. Explicit support, depending on its structure, can achieve credit transference and bring the affiliate's rating up to that of the supporting entity. However, we also make an assessment as to whether the extension of this support (as well as with implicit support) will weaken the credit profile of the parent or affiliate.

Where support is present, the IFSR typically receives one or two notches of uplift from the standalone credit profile. Although rare, three or more notches of uplift is possible although typically only when strong explicit support is provided. In addition, uplift such that the supported entity's rating is equal to the supporter's rating is rare without meaningful explicit support. This can be the case even where the company's management states

[20] For additional discussion of Moody's rating guidance related to support, see our cross-sector rating methodology on rating non-guaranteed subsidiaries, which includes credit considerations for assigning subsidiary ratings in the absence of legally binding parental support. A link to an index of our sector and cross-sector credit rating methodologies can be found in the "Moody's Related Publications" section. In addition, affiliate companies generally refer to companies outside of the analytic unit being rated.

[21] When this occurs, our research typically describes the relationship between the analytic unit and the supporting organization and provides a discussion of the standalone credit profile of the analytic unit.

the subsidiary is "core" to its ongoing strategy and operation, primarily due to the risks that the supporter may change its strategy or the supporter's regulator may constrain support in times of stress, particularly if support is to be provided outside of their own jurisdiction.

Where the owner-supporter is a government and we are using this methodology to assign a BCA, to incorporate support we use our methodology that discusses government-related issuers and the joint default analysis approach described therein. For clarity, support from a non-government owner is incorporated using the support portion of the trade credit insurers scorecard, whereas support from a government owner is considered outside of the trade credit insurers scorecard.

Factoring in Support from Other-Than-Related Entities

Our ratings of trade credit insurers do not typically reflect an expectation of government support. Based on our observations, we believe government support would neither be widely offered nor sufficiently reliable nor predictable to be routinely incorporated into our trade credit insurance ratings. In the limited cases where such support is received, we consider its credit implications on a case-by-case basis. If we believe government support is long term in nature, or if the insurer is directly owned by the government, we may apply the rating methodology for government-related issuers when evaluating the credit profile of the insurer (Please see the section below on assigning IFSRs and instrument ratings).[22]

If the insurer is part of a bancassurance group, and there is clear evidence that failure of the insurer would have negative implications on the creditworthiness of banking operations, the likelihood of support by the government may increase. However, we expect such support to be rarely applied and focused on limiting any damage to the bank franchise.

[22] A link to an index of our sector and cross-sector credit rating methodologies can be found in the "Moody's Related Publications" section.

Other Rating Considerations

Ratings may include additional factors that are not in the scorecard, usually because they may have a meaningful effect in differentiating credit quality, but only in some cases. Such factors include financial controls and the quality of financial reporting; the quality and experience of management; 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.

Special Rating Situations

In a few, very special – and typically adverse – situations, a single rating factor or sub-factor may be so important to a company's financial health and solvency, that it overrides all of the others, despite its nominal weighting in the scorecard. This would typically occur in highly adverse situations, where a company's solvency or liquidity is at stake. Examples of this would include the breach of local capital-solvency or risk-based capital thresholds that precede regulatory intervention, or concerns of a looming liquidity crisis – e.g. a material holding company debt maturity with highly uncertain source of repayment.

If a rated entity has cliff-like rating triggers,[23] its susceptibility to events may be exacerbated.

Special Rating Situations often deal with information that is not necessarily captured by point-in-time ratios, or annual / quarterly regulatory or reporting requirements. For this reason, we may stress critical solvency ratios and liquidity needs to identify potentially severe pressure points, and the resultant scenario may be considered in an additional view of the scorecard.

Financial Institutions with Limited Financial History

Most rated insurers have many years of financial history and lengthy operating track records that generally act as the basis for our forward-looking credit analysis. Insurers with limited financial history may undergo rapid evolution initially, before developing readily distinguishable and stable operating characteristics. Financial institutions are highly confidence-sensitive. A demonstrable track record can be instrumental in building customer and market trust, which creates franchise value and supports the institution's performance during a down cycle.

The franchise value of start-up insurers is usually weak, and most tend to lack product depth, market share, operating experience as an institution (rather than as a collection of individuals) and a record of resilience through a full credit cycle. Their systems, policies and procedures tend to be less robust than those of established insurers.

For start-ups that lack a financial history of at least several years and in cases of a material transformation in an insurer's business, such that its financial history does not provide a good indication of future results (collectively, insurers with limited financial history), existing financial history provides less insight into the future credit profile. In these cases, our baseline projections may reflect more-conservative expectations than

[23] Rating triggers are typically used in credit agreements covering funded bank loans and unfunded credit lines (providing back-stop liquidity) and in bond indentures and reinsurance contracts. Creditors often use rating triggers in an attempt to protect themselves in the event of credit deterioration. A rating trigger typically provides creditors with certain rights in the event that a borrower's credit ratings change to predetermined levels. These rights run the gamut from step-ups in loan pricing (not very risky) to events of default that would enable the creditor to "put" or accelerate the debt (very risky).

management's projections. In addition, we are likely to make downward adjustments to several factors in our scorecard in order to reflect the considerable uncertainty around our baseline expectations of future operations and financial profile. To the extent these risks and uncertainties are not fully captured in the scorecard, they may be reflected in an assigned IFSR that is lower than the scorecard-indicated outcome.

Insurers with limited financial history may benefit from external support. When material, we incorporate that support into our ratings. In assessing the level of expected support, we generally consider whether the company's status as a start-up could affect the willingness of the support provider to step in should support be needed. For a highly publicized start-up subsidiary of a parent with a solid credit profile, we may expect a high level of support. Certain parent companies and affiliates, conversely, could be less willing to provide support if the reputational and financial risks attached to failure of an early-stage business venture were lower than for subsidiaries with long track records and entrenched businesses in their home markets. We generally expect that governmental support for start-ups, typically small players in the early years of operations that are not systemically important, to be low. Exceptions could include government-owned start-ups and start-up insurers of long-term strategic importance to government policy initiatives.

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' comments in financial reports and unusual financial statement restatements or delays in regulatory filings may indicate weaknesses in internal controls.

Additional Metrics

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

Environmental Considerations

Trade credit insurance protects against the risk of non-payment of goods or services by their buyers, whose credit quality could be affected by environmental factors. However, trade credit insurers' liability and asset exposures are typically of short duration, providing them with an opportunity to manage these risks.

Social Issues

For issuers in this sector, we also consider social issues that could materially affect the likelihood of default and severity of loss, for example through adverse impacts on business reputation, brand strength and employee relations.

Assigning Insurance Financial Strength and Instrument Ratings

IFSRs are opinions of the ability of insurance companies to pay punctually senior policyholder obligations and claims and also reflect the expected financial loss suffered in the event of default.[24] IFSRs are assigned to legal entities.

In contrast, our long-term debt and preferred stock ratings are assigned to specific instruments issued by either a holding or operating company. The relationship between IFSRs and instrument ratings depends on the legal and regulatory framework in a particular jurisdiction and the relative standing of policyholders and instrument holders in the event of insolvency, bankruptcy, reorganization or liquidation of the entity. The relationship between the ratings for these different classes of creditors is discussed in our cross-sector methodology providing guidance on assigning ratings to instruments issued by insurers. For issuers that benefit from rating uplift from parental support, government ownership or other institutional support, we may assign a Baseline Credit Assessment.[25]

Global and National Scale Ratings

With the extension of credit ratings to a broader range of markets, our rating scales have evolved to provide comparability on both a globally and nationally consistent basis.

We have developed two rating scale conventions, namely Global Foreign and Local Currency Ratings (GFC and GLC Ratings) and National Scale Ratings (NSRs).[26] By convention, reference to an insurer's IFSR is understood to refer to the Local Currency IFSR on the global rating scale, unless otherwise specified. Foreign Currency IFSRs are the same as the Local Currency IFSRs, except where the Local Currency IFSR is above the country's Foreign Currency Bond Ceiling, in which case it will be the same as the Foreign Currency Bond Ceiling.

Assumptions

Key rating assumptions that apply in this sector include our view that sovereign credit risk is strongly correlated with that of other domestic issuers, that legal priority of claim affects average recovery on different classes of debt sufficiently to generally warrant differences in ratings for different debt classes of the same issuer, and the assumption that access to liquidity is a strong driver of credit risk.

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.

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24 Please refer to *Rating Symbols and Definitions* for more details. A link can be found in the "Moody's Related Publications" section.

25 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 an index 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.

26 See our cross-sector methodology for mapping national scale ratings from global scale ratings. A link to an index of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

Limitations

In the preceding sections, we have discussed the scorecard factors, many of the other rating considerations that may be important in assigning ratings, and certain key assumptions. 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 tool focused on indicators for relative credit strength. 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 sub-factor and 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 Rating 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.[27] 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 rating considerations, typically diminishes. In any case, predicting the future is subject to substantial uncertainty.

[27] A link to an index of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

Appendix 1: Using the Scorecard

This appendix describes how we use the scorecard to arrive at an alphanumeric scorecard-indicated outcome.

Alphanumeric categories from Aaa to C are mapped to numeric values of 1 through 21 as follows:

Alphanumeric Categories	Numeric Value
Aaa	1
Aa1	2
Aa2	3
Aa3	4
A1	5
A2	6
A3	7
Baa1	8
Baa2	9
Baa3	10
Ba1	11
Ba2	12
Ba3	13
B1	14
B2	15
B3	16
Caa1	17
Caa2	18
Caa3	19
Ca	20
C	21

Source: Moody's Investors Service

Qualitative sub-factors are scored on a broad alpha scale based on the scoring descriptions (with an equivalent numeric score based on the midpoint of that alpha category), and these sub-factor scores are combined to produce an alphanumeric factor score. A numeric value for each score is mapped from the table above. A numeric value between 1 and 18 is established for each financial metric through linear interpolation. Taking, for example, the scoring ranges for the Financial Flexibility factor, a company with financial leverage of 22% would map to a numeric score of 3.4, and fall within the Aa range for that metric, and a company with financial leverage of 34% (mapping to a 6.8 numeric score) would fall within the A range. The weightings per the table below are then applied to arrive at an overall numeric value for each scorecard factor. The numeric value by scorecard factor is mapped back to the Aaa through C rating scale shown above.

Each scorecard factor is assessed and then weighted according to its importance within our rating approach for the industry. The Operating Environment score, to the extent it corresponds to a broad alpha category of Baa or below, is accorded a weight as shown in the following table. These weights apply regardless of the modifier (1, 2 or 3). The Operating Environment's weight is variable and increases toward the lower end of the rating scale for scores at the Baa level or below. Importantly, the Operating Environment component is reflected in an insurer's credit profile only to the extent that it exerts a downward influence.

	Aaa	Aa	A	Baa	Ba	B	Caa
Operating Environment Weights	n/a	n/a	n/a	20%	40%	60%	80%

Source: Moody's Investors Service

Once the weighted average result (based on the company-specific business and financial factors) is calculated, it is multiplied by one minus the Operating Environment weight, and then added to the result of the Operating Environment weight multiplied by the numeric value associated with the Operating Environment component. Using those weightings, a weighted average is calculated, which is then mapped back to the Aaa through C rating scale shown above. The result is oriented to the IFSR in the local or foreign currency. This scorecard-indicted outcome may be different from the final rating because it does not consider the analyst's input to the individual factors, or management and governance, special rating situations, and accounting policy and disclosures, as well as implicit/explicit support.

The weightings shown below are our assessment of the typical relative importance of the company-specific factors and sub-factors, and of the Operating Environment for credit insurers, but in assigning ratings, individual factors or sub-factors may have greater or lesser weight, depending on the specific characteristics of the insurer. The metrics are primarily calculated based on public information. Non-public financial data or public financial data modified due to accounting and reporting formats in other than US GAAP or IFRS may also be used.

	Factor Weighting	Metric Weighting (relative to factor weights)
BUSINESS PROFILE		
Factor 1: Market Position and Brand	10%	
Relative Market Share Ratio		60%
Distribution and Access to New Markets		40%
Factor 2: Product Risk and Diversification	20%	
Business Diversification		25%
Flexibility of Underwriting		25%
Risk Diversification		50%
FINANCIAL PROFILE		
Factor 3: Asset Quality	15%	
High Risk Assets % Shareholders' Equity		50%
Reinsurance Recoverables % Shareholders' Equity		25%
Goodwill and Intangibles % Shareholders' Equity		25%
Factor 4: Capital Adequacy	20%	
Net Total Exposure to Shareholders' Equity (x)		50%
Net Underwriting Leverage		50%
Factor 5: Profitability	20%	
Combined Ratio (5 yr avg)		50%
Sharpe Ratio of ROC (5 yr avg)*		50%
Factor 6: Reserve Adequacy	5%	
Worst Reserve Development for the Last 10 Years % Beg. Reserves		100%
Factor 7: Financial Flexibility	10%	
Financial Leverage		50%
Earnings Coverage (5 yr. avg.)		50%
Subtotal – company-specific factors	**100%**	
OPERATING ENVIRONMENT	**Variable (see above)**	

* When calculating the Sharpe ratio, if the average ROC of the analytic unit is 0 or negative, this ratio is not meaningful, and the weight of this sub-factor is reallocated to the Combined Ratio sub-factor.

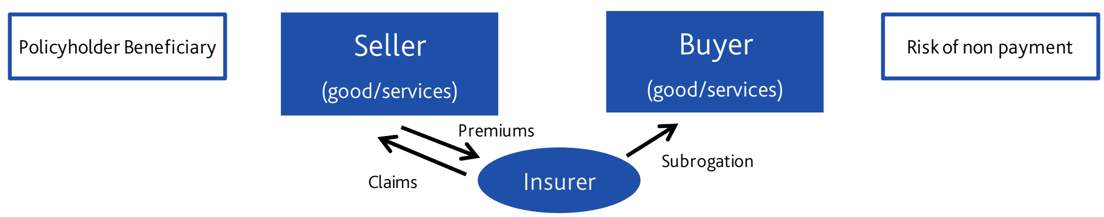
Source: Moody's Investors Service

Differences between the scorecard-indicated outcome and the standalone credit profile may exist due to analytic judgment regarding the weighting of the factors, the importance of the other analytic considerations, or other unique fundamentals of the company not appropriately captured or weighted by the scorecard. Furthermore, the standalone credit profile may be different from the actual rating due to affiliate support or sovereign considerations.

Appendix 2: Credit (and Surety) Insurance – Definitions

Definition of trade credit insurance and surety insurance (Source: ICISA, Moody's)

Trade credit insurance: Trade credit insurance insures suppliers against the risk of non-payment of goods or services by their buyers. This may be a buyer situated in the same country as the supplier (domestic risk) or a buyer situated in another country (export risk). The insurance covers non-payment as a result of insolvency of the buyer or non-payment after an agreed number of months after due-date (sometimes referred to as protracted default). It may also insure the risk of non-payment following an event outside the control of the buyer or the seller (political risk cover), for example the risk that money cannot be transferred from one country to another.

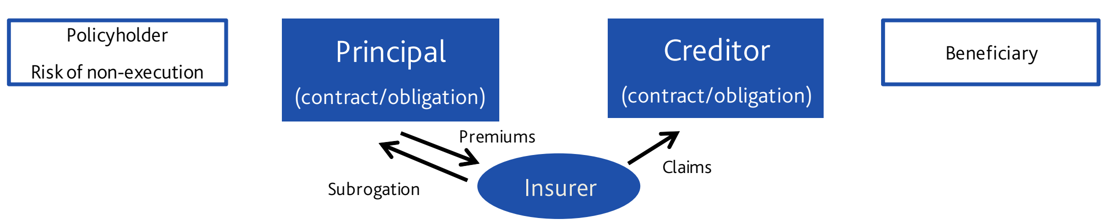


Source: Moody's Investors Service

Surety insurance: Surety bonds or guarantees secure the fulfilment of a contract or an obligation up to the limit of the bond. They protect the beneficiary (the creditor) against acts or events which impair the underlying obligations of the so called "principal" (the debtor). Surety bonds guarantee the performance of a variety of obligations, from construction or service contracts, to licensing, to commercial undertakings. Underlying obligations can either be negotiated or can have a statutory (legal) character (for example, obligation of an enterprise to pay taxes or customs duties to a government or department).

Almost any sale, service or compliance agreement can be secured by a surety bond.

The most common types of surety bonds can be categorized as follows: (i) customs, tax and/or similar bonds, (ii) bonds concerning concessions and licenses, (iii) judicial bonds, (iv) bonds concerning purchases of goods and/or services, (v) bonds concerning leases, (vi) bonds concerning construction and/or supply contracts, (vii) financial bonds.



Source: Moody's Investors Service

Definition of common terms in credit insurance (Source: ICISA, Moody's)

Ancillary services to credit insurance: Services complementary to credit insurance. These include "credit assessment" or "credit rating" (for which the insurance receive fees, known as *credit checking fees*, as a contribution to the costs of credit information gathered for the assessment of a buyer's risk), *receivables management* or *debt collection*, sale of *credit information*, and *factoring*. Some companies also underwrite export credit insurance in the names of governments and manage these risks (without bearing the risks), and are remunerated for this activity.

Credit limit: The credit insurer issues a credit limit for every buyer with whom the policyholder trades. The level of the limit is set at the maximum amount that can be owed by the buyer at any time. Limits are granted at a lower level, if the underlying information justifies this. The granted credit limit is the maximum insured credit line for a specific buyer and the policyholders can trade on an insured basis within the approved credit limit throughout the policy period without further reference to the insurer. The insurance company has the right to reduce or cancel a granted limit at any time, usually as a result of negative information. Credit insurers are not always aware of the exact usage of the granted credit limits, although average usage is known, and high risk exposures are actively monitored.

Discretionary limit: If a discretionary limit has been agreed, exposures up to that amount do not have to be agreed by the insurance company but are covered based on the payment experience of the policyholder.

Exposure: The total amount underwritten by the insurer as cover on a buyer, a country or under a policy or all policies.

Common features of credit insurance policies (Source: ICISA, Moody's)

Most credit insurance policies may include the following features:

» *Policy Deductible*, also known as *Aggregate First Loss* (total amount of approved claims during an insurance period, which are to be borne by the insured for their own account prior to indemnification by the insurer)

» *Maximum Liability*, or *Aggregate Limit* (if the total loss of a policy occurring in one year exceeds the amount of the agreed maximum liability, the actual loss for this policy is limited to this amount; the maximum liability is often defined as a multiple of the earned premiums in a given policy contract)

» *Minimum retention* (minimum amount of each loss that the insured has to bear for their own account); the Minimum Retention can also be expressed as a *Percentage of Cover* (percentage of each insured loss that is indemnified by the insurer)

Most policies are "*Whole Turnover Policies*" (or "*Comprehensive Covers*"), meaning that the insured's total credit sales are covered. These policies are opposed to "*Key Buyer Covers*", covering the insured's largest buyers only and to "*Single Risk Covers*", covering all sales to one debtor or for a single contract with one debtor.

What do we call the duration of an exposure?

We define the ***duration of an exposure*** as the incompressible period of time during which a credit insurer is exposed to the insolvency of a buyer.

As explained above, the insurance company has the right to reduce or cancel a granted limit at any time, usually as a result of negative information. However, the insurance company will continue to insure trades which have already been initiated, and therefore there is a certain period of time during which the insurance company remains exposed to the insolvency of covered buyers.

This period can be decomposed as follows: (i) the duration of the payment term (the period after delivery or shipment of goods or after rendering of services at the expiry of which invoices are due to be paid), plus (ii) a notification period (the period, usually starting from the due date of payment or intervention order, after the expiry of which a claim or an overdue has to be submitted to the insurance company).

This period can be augmented by Binding Order (or Pending Orders), which are orders from which the insured cannot be released if the buyer's financial soundness is deteriorating. Under pre-defined conditions, credit insurance may be offered for such contracts even after withdrawal of the credit limit.

In most cases, the duration of the payment term is between 60 and 90 days, while the notification period is between 60 and 120 days. Therefore, on average, the duration of most trade credit exposures is around 6 months. In surety insurance, where long term projects are covered, and where covers cannot be cancelled, the durations are much longer.

Appendix 3: Incorporating Stress Testing in Our Analysis — The Pre-defined Stress Scenario

In order to capture the risk to an insurer's credit profile posed by potentially volatile economic and financial conditions, as well as the possibility of catastrophic loss events, we typically consider stress scenarios as a fundamental part of our rating analysis. This appendix explains our approach and, more specifically, our pre-defined stress scenarios.

Combining results of a pre-defined stress scenario with an expected case allows us to gauge the impact of stress on capital of an individual insurer and relative to a group of insurers. Our stress scenario is generally focused on short-to-medium-term shock losses to earnings/capital and not on every risk faced by insurers. We also perform supplemental insurer-specific stress tests when an insurer's business profile does not lend itself well to the pre-defined stress scenario.

Our ratings reflect our assessment of the insurer's relative credit profile in a forward-looking expected scenario, but also consider the volatility of a company's credit profile implied by the results of our stress scenario. We generally expect that an insurer can withstand moderate stress while maintaining a credit profile consistent with its assigned rating. In cases where a more severe stress scenario indicates that the company's credit profile would deteriorate dramatically (e.g., by the equivalent of three or more rating notches), we would in most cases assign a rating lower than indicated by our analysis of the expected case scenario.

Our Stress Test Scenario Analysis Focuses on Common Near-to-Medium-Term Risks

We apply a specific stress scenario that is generally focused on short- to medium-term shock losses to earnings/capital and not on every risk faced by insurers (e.g., not on particularly long-term risks, such as prolonged low interest rates). While we recognize the lack of complete coverage of all risks, we typically assess shock events that offer the insurer limited time to correct for and manage through over a short time horizon. We consider long-term risks faced by insurers and we may additionally undertake insurer-specific stress analysis when an insurer's business profile does not lend itself well to the pre-defined stress test. However, we do not typically consider stress scenarios where the outcome is subject to meaningful variability that is contingent on management's future actions.

Our stress scenario analysis, when combined with an expected case, allows us to gauge the relative impact of stress on the capital and credit profile of an insurer compared to the performance of a group of insurers.

Key Risks Subject to the Stress Scenarios

In the table below, we identify the key "shock" risks we assess. In addition, we summarize the stress scenario we postulate for each key risk. Rather than trying to create stress scenarios that mimic specific historical events, we develop scenarios by specifying defined stresses to key financial attributes. This uniform application of stress analysis facilitates peer comparison.

Although we attribute no specific event probability to our stress scenario, we consider each scenario to be severe.

Key Risk Area	Risk	Stress Scenario[28]
Investments	The risk that investments perform worse than expected	See table below
Credit crisis	The risk of a sharp increase in claims frequency and/or severity at times of a significant deterioration in the economic environment	50% increase in claims per exposure

Source: Moody's Investors Service

Of note, our investment stress analysis is based on economic loss, instead of market value, because of the industry's strong liquidity profile and the nature of its (mostly) non-puttable liabilities (or puttable, with a meaningful penalty to the policyholder in terms of amount reimbursed or coverage forfeited). That said, we generally supplement our economic-loss-based investment scenarios analysis by considering the sensitivity of those results to actual market value losses in times of severe market dislocation. In certain instances, we may use the greater of actual market value losses or economic losses for our analysis of investment stress.

Investment Economic Loss Percentages

Investment Category	Stress Scenario Loss Percentages
Cash	0%
Fixed maturities[29]	
Aaa/Aa/A	0.5%
Baa	3.5%
Ba	11.7%
B	32.5%
Caa and below	50%
Mortgage/real estate	
Commercial mortgage loans	3.5%
Other mortgage loans	3.5%
Real estate investments	20%
All other	
Non-redeemable preferred securities	5%
Other equity securities	25%
Alternatives	25%
Derivatives	10%
All Other (including corporate and other loans)	10%

Source: Moody's Investors Service

Adding Up Stress for the Stress Test Scenario

Once stress losses from all sources are derived, we assess the impact on capital adequacy. While we recognize the likelihood of each risk occurring simultaneously is low, historical results have shown cycles in insured losses and the potential for confluent events to affect investment returns. For this scenario analysis, each risk is

[28] The information necessary to complete the stress test is sourced from public and private sources. When full information is not available, estimates may be used. In addition, adjustments to information may be warranted upon review.

[29] Our fixed income factors are derived from the two year expected loss after "notching" down from current rating levels. We adjust for material impairments taken for the lowest-rated instruments.

summed without the benefit of diversification to create a severe stress scenario.[30] The diversification benefit is less relevant given our objective to look for those insurers whose results deviate materially from the average.

In interpreting the results of the stress test on a subsidiary of a larger group, we consider the extent to which unencumbered excess[31] cash available at an unregulated holding company or affiliate would likely be made available to the operating company(ies)[32] as a capital contribution, if need be. Our analysis of excess cash considers the ongoing permanence of funds maintained outside of the operating company that is above and beyond any amount that would lead to a narrowing of standard debt notching practices for the holding company.

Below is our pre-defined stress scenario template for a trade credit insurance company. In this scenario, investment losses are based on idealized expected losses. When the actual market value of investment losses (calculated as the unrealized loss excluded from opening equity) exceeds severe stress economic investment loss, we may replace the economic loss with the market value of investment loss.

Pre-defined Stress Scenario - Equity Impact Analysis
Beginning Reported Surplus or Equity
Exclude Unrealized Gains or Losses on Investments
Adjusted Beginning Surplus or Equity
Equity Roll Forward:
Recurring Operating Income Before Taxes
Less Stress Losses:
Credit Losses
Investment Losses
Total: Stress Losses
EBIT
Tax Expense (Benefit)
Net Income
Preferred Dividends
Net Income to Common Shares
Change in Surplus or Equity
% Change in Adjusted Beginning Surplus or Equity Due to Stress Losses

Source: Moody's Investors Service

How Ratings Reflect the Stress Scenarios

We typically prepare an alternate view of the scorecard that shows the pre-defined stress scenario analysis. Each insurance scorecard includes an adjusted score for each key rating factor. We combine the adjusted factor scores to arrive at the scorecard-indicated outcome.[33]

While a company's expected performance is already reflected in the adjusted scores, a separate set of adjusted scores are typically prepared for our pre-defined stress scenario (which is severe). The adjusted scores for this severe scenario are generally lower than our expected case adjusted scores. Lower adjusted scores are typical

30 We do consider losses after tax benefits, although we reduce the tax benefit from local statutory rates to reflect recoverability risk.
31 E.g., after interest expense and other debt service coverage needs as well as expected shareholder dividend needs.
32 Scenario testing is performed on an analytic unit basis, which may include more than one legal operating company.
33 In certain instances, assigned ratings may reflect uplift where warranted from support from a parent or affiliate. Our scenario testing is performed on a standalone basis before consideration of support.

for several financial profile key factors, such as asset quality, capital adequacy, profitability and financial flexibility. In addition, some Business Profile scores may be lower under the pre-defined stress scenario. In many cases, the magnitude of the difference is directly influenced by the relative results of our stress testing.

In cases where the pre-defined stress scenario indicates that the company's credit profile would deteriorate dramatically (e.g., by the equivalent of three or more rating notches), the assigned rating would typically be lower than the expected case scorecard-indicated outcome, in recognition of the potential downside risk to the insurer's credit profile if the stress case were to occur over the medium term.

Moody's Related Publications

Credit ratings are primarily determined by 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. An index 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.

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