

## RATING METHODOLOGY

# Regional and Local Governments

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This rating methodology replaces the *Regional and Local Governments* methodology published in June 2017. This update includes an appendix that provides more transparency into our approach for assessing the risk related to contingent liabilities. We have also clarified the definition of indirect debt and provided more transparency into how the scorecard combines individual scores to arrive at a scorecard-indicated outcome.

### Introduction

This rating methodology explains our general approach to assessing credit risk for rated regional and local governments (RLGs) outside of the US.

Highlights of this report include:

- » The scope of this methodology
- » A general overview of our approach
- » A description of the scorecard components and factors
- » Comments on the rating methodology assumptions and limitations

This document provides general guidance intended to help the reader understand how qualitative and quantitative risk characteristics are likely to affect rating outcomes for regional and local governments outside of the US.

This methodology does not include an exhaustive description of all factors that our analysts may consider in assigning ratings in this sector. For instance, our analysis for ratings in this sector covers factors that are common across all public sector entities but that are not explained in detail in this document, such as management and environmental, social and governance considerations.<sup>1</sup> However, this methodology should enable the reader to understand the qualitative and quantitative considerations, including financial information and metrics, that are usually most important for ratings in this sector.

THIS RATING METHODOLOGY WAS UPDATED ON JANUARY 31, 2020. WE HAVE UPDATED SOME OUTDATED REFERENCES AND ALSO MADE SOME MINOR FORMATTING CHANGES.

<sup>1</sup> See the "Limitations and Assumptions" section.

This methodology includes a scorecard,<sup>2</sup> which 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, the factors that are generally most important in assigning ratings to regional and local governments. However, scorecard-indicated outcomes may not map closely to actual ratings. The scorecard is a summary that does not include every rating consideration, and other quantitative or qualitative considerations that may not lend themselves to a transparent presentation in a scorecard format can also affect ratings. In addition, some rating factors that are not important for the sector as a whole may be very important for a specific regional or local government. Furthermore, the weights shown for each factor in the scorecard represent an approximation of their importance for rating decisions, but actual importance may vary substantially.

In addition, ratings are based on our forward-looking expectations, which may vary from historical data, and our long-term forward view may be different from our near-term forward view.

We seek to incorporate all material credit risks into our ratings, whether long-term or short-term risks, with the most forward-looking view that visibility into these risks permits. In most cases, nearer-term risks are more meaningful to issuer credit profiles and thus have a more direct impact on ratings. However, in some cases, our views of longer-term trends may have an impact on ratings. We may from time to time publish scorecards for an issuer using forward-looking metrics, which are typically based on our near-term projections, in part because we may not have sufficient visibility into an issuer's future results beyond this horizon that would enable us to accurately score these factors. Instead, longer-term risks that we can identify may be incorporated qualitatively in our ratings analysis. For example, we may incorporate our forward view of trends in financial results beyond the period of the financial projections included in the scorecard.

As a result, the scorecard-indicated outcome is not expected to match the actual rating of each regional or local government.

This methodology describes the analytical framework used in determining credit ratings in this sector. In some instances, our analysis is also guided by additional methodologies that describe our approach for analytical considerations that are not specific to any single sector. Examples of such considerations include the following: the assignment of short-term ratings and how sovereign credit quality affects non-sovereign issuers, and the assessment of credit support from other entities.<sup>3</sup>

## Scope of This Methodology

This methodology applies to regional and local governments outside the US, collectively, RLGs. RLGs typically include municipal, provincial and regional governmental entities, but do not include municipal enterprises. Although their responsibilities can be diverse in scope, RLGs are generally responsible for delivering public services and developing infrastructure supported by taxation, fees or transfers from other governments or entities.

US local governments, states and territories are rated under separate methodologies.<sup>4</sup>

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

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

<sup>3</sup> A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

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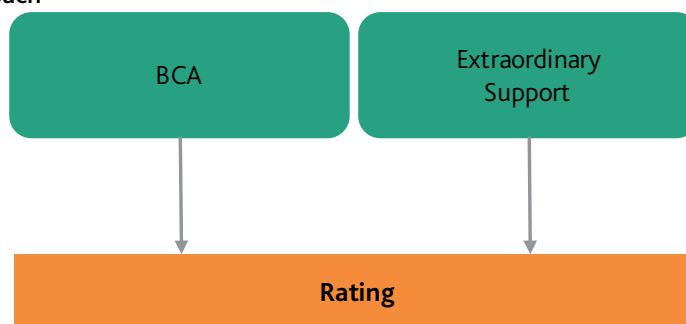
## Overview of Our Approach

Our overall methodological approach for rating RLGs has two components: the baseline credit assessment (BCA), our opinion of the government's standalone intrinsic strength, absent any extraordinary support from a different level of government; and the likelihood of extraordinary support from another entity in the case of acute liquidity stress.

In the following sections, we provide general descriptions of the BCA, how we typically assess the likelihood of extraordinary support, and how we combine these two components to arrive at a scorecard-indicated outcome.<sup>5</sup>

EXHIBIT 1

### Our Overall Approach



The information used in assessing the BCA and extraordinary support is generally found in or calculated from information in the issuer's financial or budget statements, or treasury reports or from national statistical offices, derived from other observations or estimated by Moody's analysts.

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

Quantitative credit metrics incorporate adjustments that analysts may make related to budget statements and debt amounts for items such as underfunded pension obligations.

<sup>5</sup> In general, the scorecard-indicated outcome is oriented to the senior unsecured rating. Individual debt instrument ratings factor in decisions on notching for seniority level and collateral.

## Baseline Credit Assessment Component

The BCA is the first component of our overall approach for rating RLGs that are outside of the US. BCAs are opinions of issuers' standalone intrinsic strength, absent any extraordinary support from a government. We incorporate ongoing annual subsidies from a government to the RLG into the BCAs; these subsidies are considered ongoing support rather than extraordinary support and, therefore, are considered intrinsic to an issuer's standalone financial strength.

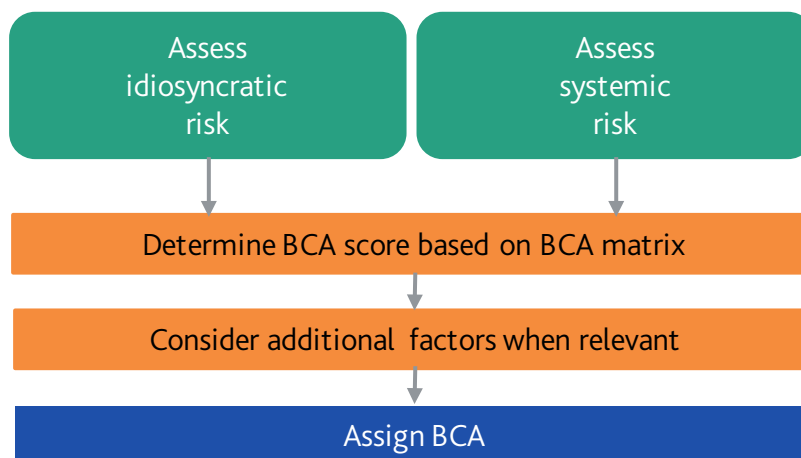
BCAs are expressed on a lowercase alphanumeric scale that corresponds to the alphanumeric ratings on our global long-term rating scale (e.g., aaa is equivalent to Aaa, aa1 is equivalent to Aa1.).

RLG credit risk can be viewed as a combination of idiosyncratic risk and systemic risk arising from the operating environment. To determine the BCA for an RLG, we typically first assess the RLG-specific credit risk to determine the idiosyncratic risk score. We then combine the idiosyncratic risk score with an assessment of systemic risk, according to the matrix shown in Appendix A.:

- » Assess idiosyncratic risk, based on the scorecard
- » Assess systemic risk, based on the sovereign bond rating
- » Determine the suggested BCA before additional factors, based on a matrix combining idiosyncratic risk with systemic risk
- » Consider additional factors when relevant and assign the BCA

### EXHIBIT 2

#### Determining the BCA



**Idiosyncratic risk:** We assess the idiosyncratic risk score based on four weighted factors: economic fundamentals; institutional framework; financial performance and debt profile; and governance and management. We then arrange the categories into tiers of performance on the scorecard and generate an estimated idiosyncratic risk score by weighting each of the factors.

**Systemic risk:** We also assess an RLG's BCA in the context of its operating environment, which is represented by the systemic risk embodied in the sovereign rating. The environment in which an RLG operates has a significant influence on the credit risk of an RLG given the significant macroeconomic and financial linkages within a country and between the sovereign government and lower-tier governments. Our ratings of RLGs are therefore to some extent linked to those of their respective sovereigns.

**The BCA matrix:** The BCA matrix combines the two risk scores (idiosyncratic and systemic) to produce a suggested BCA score (see Appendix A). The idiosyncratic risk score on its own is not comparable across countries; instead it is viewed in conjunction with the systemic risk score. It is the BCA score that provides comparability of RLGs across countries. Use of the BCA scorecard and matrix helps make BCAs more consistent across the rated universe.

**Additional factors:** Ratings reflect a number of additional considerations. There are times when events or particular circumstances factor more heavily in rating decisions than weightings in the scorecard would imply, or when there may be other additional factors that are important in rating considerations but are not fully captured in the scorecard factors. When they are relevant, we consider additional factors in determining the BCA score and in assigning the BCA (see the "Additional Factors" section).

In the following sections, we explain our general approach for scoring each BCA scorecard factor and show the weights used in the scorecard. We also provide a rationale for why these scorecard factors are meaningful as credit indicators.

### BCA Sub-component: Idiosyncratic Risk Score

An assessment of idiosyncratic risk provides important indications of the credit strength of the entity based on four factors: economic fundamentals, institutional framework, financial performance and debt profile, and governance and management.

Each factor is assigned a score between 1 and 9 in the scorecard, where 1 represents the strongest relative credit quality and 9 the weakest (for a description of how idiosyncratic risk scores map to alphanumeric ratings, see Appendix A).

#### EXHIBIT 3

#### BCA Sub-component: Idiosyncratic Risk

Key Factors	Scorecard Weight	Sub-Factors
Economic Fundamentals	20%	Economic strength Economic volatility
Institutional Framework	20%	Legislative background Financial Flexibility
Financial Performance and Debt Profile	30%	Operating margin Interest burden Liquidity Debt burden Debt structure
Governance and Management	30%	Risk controls and financial management Investment and debt management Transparency and disclosure

## Factor 1: Economic Fundamentals

### Why It Matters

An RLG's ability to service its debt depends on, among other factors, the sufficiency and reliability of its future revenues. These are tied, at least in part, to the local economy's ability to generate necessary revenues for the programs and services it provides. Furthermore, within a country, the dispersion of wealth may be uneven, reflecting regional concentrations of economic activity. These differences may influence the fiscal capacities of sub-sovereign governments. Economic performance relative to national peers will likely impact an RLG's ability to generate own-source revenues and its dependence on fiscal transfers. In general, a relatively wealthier region would have a more productive tax base and could therefore generate necessary own-source revenues more readily.

Even for RLGs whose revenues are derived mainly from fiscal transfers, the local economy and population mix are key determinants of a government's spending needs. For example, a region with an ageing population may face increased pressure to spend more on healthcare, while a region undergoing economic expansion with growing job opportunities may experience rapid population growth, generating demand for increased services and requiring costly infrastructure upgrades.

All else being equal, a large, diverse economy can better withstand economic shocks over the long run than one that is small and highly concentrated.

In considering the impact of economic fundamentals on debt-servicing capacity, we typically analyze the RLG's economic profile, compare it with other regions using measures of output, economic diversity and labor market performance, and consider pertinent trends in order to estimate future performance.

Many of the economic performance measures we use are not universally available or are not universally comparable. Unemployment rates, for example, may be calculated in different ways by different countries. In these cases, we make use of locally or regionally comparable data sources.

### How We Assess It for the Scorecard

In assessing the impact of economic fundamentals on the BCA, we use two sub-factors:

- » Economic strength, based on regional GDP per capita as a percentage of national GDP per capita. We consider the relative wealth of the RLG compared to the national average.<sup>6</sup> For RLGs without reported GDP, we may extrapolate from the amount reported for the next higher level of government.
- » Economic volatility, based on industrial concentration. We assess whether the economy is highly diversified with limited concentration in a particular sector, whether there is some level of concentration, or whether there is a high level of concentration.

The economic volatility sub-factor score is assigned in one of three buckets: 1, 5 and 9. The lower the RLG's economic volatility score, the more positive the contribution to the factor score.

<sup>6</sup> The absolute wealth of a country is reflected in the systemic risk score (see next section). The idiosyncratic risk score considers the dispersion of wealth within the country and looks at the relative wealth of the RLG compared to other RLGs within the same jurisdiction. To calculate this metric, we use a three-year weighted average, with the highest weight given to the most recent year, i.e.,  $\frac{4}{7}y_0 + \frac{2}{7}y_{-1} + \frac{1}{7}y_{-2}$ .

## EXHIBIT 4

**Economic Fundamentals**

Score	1	3	5	7	9
<b>1.1 Economic strength</b>					
Regional GDP per capita as % of national GDP per capita	$\geq 120\%$	$< 120\% \text{ \& } \geq 105\%$	$< 105\% \text{ \& } \geq 95\%$	$< 95\% \text{ \& } \geq 80\%$	$< 80\%$
<b>1.2 Economic volatility*</b>					
Industrial concentration	Highly diversified; limited concentration		Moderately diversified; some concentration		Not diversified; high level of concentration

\*The economic volatility sub-factor score is assigned in three buckets: 1, 5 and 9.

**Factor 2: Institutional Framework****Why It Matters**

The institutional framework encompasses the arrangements that determine intergovernmental relations and that shape RLG powers and responsibilities, including the stability of an RLG's public-policy responsibilities and the adequacy of its fiscal powers to meet them. We also assess the way in which these responsibilities and powers may be altered, whether by a higher-tier entity or by the RLG itself.

We typically consider the laws, regulations and practices that shape the RLG's service responsibilities and revenue-raising powers. These influence the predictability and stability of fiscal responsibilities and the extent to which the RLG is constrained by external forces. They also affect the degree to which the government may determine the nature and level of taxes and fees and whether the government may rely on a stable and predictable flow of fiscal transfers.

The structure of and flexibility afforded by the existing framework, the ability to alter the framework in response to changing needs, and the way in which changes are carried out (e.g., at a measured pace or in a hurried, unpredictable fashion) are relevant. Higher assessments typically result from clearly defined and predictable revenue and spending responsibilities, greater fiscal flexibility, greater responsiveness to changing needs and a change-management process that produces orderly transitions to new circumstances.

We may also consider the scope and effectiveness of the oversight exercised by higher-tier governments over RLGs' fiscal performances. Oversight may take many different forms: service standards, budget approval authority, borrowing restrictions, reporting requirements and the authority to conduct audits. It may involve the higher-tier government's assigning an administrator to take over an RLG's financial affairs, under certain circumstances. More-effective oversight typically produces higher, more closely aligned assessments of RLGs within a country.

Our assessment of baseline credit risk may also incorporate ongoing fiscal transfers from higher-tier governments. In some instances, the system of transfers is highly flexible and timely and, where this flexibility exists, we may consider the responsiveness of transfers to changing circumstances as part of the idiosyncratic risk score, and not as examples of extraordinary support.

**How We Assess It for the Scorecard**

Because the institutional framework represents risk applying to all governments of the same tier within a country, we typically assess RLGs on a sector-wide basis, e.g., all states within a country or all municipalities within a state.

The measures we use in the idiosyncratic risk scorecard to assess the impact of the institutional framework on credit risk are qualitative. They include our assessments of the framework's predictability, stability and responsiveness to RLG needs, as well as its contribution to fiscal flexibility.

- » In assessing legislative background, we consider predictability, stability and responsiveness, typically based on whether and how RLG powers and responsibilities (including for revenues and spending) may be altered in response to changing circumstances. We consider the stability and predictability of revenues and expenditures as well as the relative ease and process by which changes may be made when necessary.
- » In assessing financial flexibility, we typically consider own-source revenue flexibility and the RLG sector's spending flexibility.



## EXHIBIT 5

## Institutional Framework

Score	1	3	5	7	9
<b>2.1 Legislative background*</b>					
Predictability, stability, responsiveness	There is a mature and robust framework for the RLG sector with stable responsibilities, clearly defined (in law/legislation). Any changes are made at a deliberate and predictable pace. Revenues are predictable with clear visibility of future revenues. There are minimal changes year-on-year or changes made at a deliberate and predictable pace. Spending responsibilities are highly stable and predictable over time.		There is an overall solid framework for the RLG sector with responsibilities mostly stable, defined (in law/legislation) and somewhat predictable. Revenues are mostly predictable with good visibility of future revenues. Changes year-on-year can be significant or changes can be made quickly. Spending responsibilities are somewhat stable and predictable.		The framework of the RLG sector is new or developing with responsibilities not clearly defined and difficult to predict. Revenues are not predictable and there is no clear visibility of future revenues. There are year-on-year negotiations/changes or changes are made unpredictably. Spending responsibilities are unstable and unpredictable.
<b>2.2 Financial flexibility**</b>					
Fiscal flexibility	<u>Strong revenue and expenditure flexibility.</u> Law allows RLGs broad discretion over a significant portion of revenues and expenditures. The RLG has the flexibility to change taxes/fees on a significant share of operating revenues and increases are politically acceptable at the local level. The RLG also has the flexibility to change the level and nature of spending, such as by cutting public services or changing service standards, on a significant share of operating expenditures. These cuts are politically acceptable at the local level.	<u>Strong revenue flexibility and moderate expenditure flexibility or strong expenditure flexibility and moderate revenue flexibility.</u>	<u>Moderate revenue and expenditure flexibility.</u> RLG has moderate discretion over changes to revenues and expenditures. The RLG has the flexibility to change taxes/fees on a moderate share of operating revenues that is politically acceptable at the local level. The RLG also has the flexibility to change the level and nature of spending, such as by cutting public services or changing service standards on a moderate share of operating expenditure that is politically acceptable at the local level.	<u>Moderate revenue flexibility and weak expenditure flexibility or moderate expenditure flexibility and weak revenue flexibility.</u>	<u>Weak revenue and expenditure flexibility.</u> Law allows RLGs little or no discretion over rates and objects of revenues and/or expenditures. The RLG has very limited flexibility to change rates and objects of operating revenues and expenditures that are politically acceptable at the local level.

\* The legislative background sub-factor score is assigned in three buckets: 1, 5 or 9.

\*\* The score for sub-factor 2.2 (financial flexibility) is the average of the scores of the following two elements: revenue flexibility and expenditure flexibility, which can each score 9 for Weak, 5 for Moderate, and 1 for Strong; and is assigned one of five buckets 1,3,5,7 or 9.

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### Factor 3: Financial Performance and Debt Profile

#### Why It Matters

Financial performance is the product of accumulated decisions of policymakers regarding an RLG's revenue structure and expenditure base, as well as the economic environment in which the government operates. To maintain fiscal balance, an RLG must collect sufficient revenues to cover its operating and capital expenditures, as well as interest expenses and debt principal payments. The ability of an RLG to implement policy decisions that generate balanced or positive fiscal outcomes, which enhance long-term financial strength, is a key credit strength.

We assess how effective the government is at generating the revenues needed to cover its spending, including debt service. We typically assess recent fiscal performances and project the RLG's performance over the medium term. We typically consider whether recurring revenues will cover ongoing spending commitments, given existing policies and expected demographic trends and economic outlook. We typically consider each side of the budget, revenues and expenditures, and may review the track record to see whether the government is afforded sufficient flexibility – and exercises that flexibility – to adjust taxes and spending when needed to restore fiscal balance. A government that demonstrates balanced financial operations on a consistent basis typically have higher scores for this factor.

In assessing revenue, we may consider the scope of the government's taxing powers and its effectiveness in exercising those powers, including the range of revenue sources as well as the sensitivity to economic growth and the collection capabilities of the government. In assessing expenditures, we may consider not only the total and its rate of growth but also the drivers of that growth. Service responsibilities can vary substantially among jurisdictions. We may consider the functions the RLG carries out and how these functions are affected by demographic patterns and trends.

We also assess a government's financial position by evaluating its liquidity and cash management. This typically includes an assessment of the operating cushion afforded by its cash balances and, in most cases, its access to internal and external sources of liquidity to meet cash flow needs. We may consider, for example, free cash flow and unrestricted liquid assets available to cover short- and long-term obligations. We also may consider the amount of any overdue payables or the use of increasing commercial liabilities to meet liquidity needs.

The government's debt profile includes the amount of debt, the burden it poses, its structure and composition, as well as past trends and future borrowing needs – all important determinants of credit quality. Our assessment of government debt typically includes an analysis of the legal framework for debt issuance and payment, as well as any limits set on the amount or structure of the debt.

We relate the government's debt level to measures of the ability to pay, primarily the government's revenue flow, but in some instances relative to the jurisdiction's economic output measured by GDP.

Debt structure is another aspect of the profile. When principal payments are amortized over time, our analysis focuses on the issuer's ability to cover debt payments (both principal and interest) from operating revenue. When all or a major part of debt principal comes due at maturity, we also consider the maturity schedule, the government's refinancing needs over time and its likely market access.

Another aspect of debt structure involves relative reliance on short-term and variable-rate debt. While such reliance requires, as for bullet maturities, consideration of refinancing and market access risks, we may also consider the issuer's exposure to interest-rate risk and its ability to manage through adverse interest-rate

movements. As the share of short-term and variable-rate debt rises, the corresponding loss of predictability about future costs may lead us to consider more serious stress scenarios when assessing the revenue stream's adequacy to cover debt payments.

In assessing credit quality, we also typically consider the laws that govern the purposes for which debt may be issued, the amount that may legally be borrowed, and the debt structure. We recognize that legal restrictions may pose a serious impediment to borrowing in some cases and only a modest impediment in other cases, because governments can be quite resourceful at finding ways to comply with the letter of the law while still increasing their debt-like obligations.

For many jurisdictions, RLG borrowing may legally be used solely for capital investment, and not to cover operating deficits. Yet many governments in need find ways to access borrowed funds. Governments may circumvent a debt limit imposed upon them by engaging in debt-like or off-balance sheet transactions. Whether the restriction exists or not, a borrowing undertaken to finance an operating deficit or a capital-purpose borrowing whose repayment extends beyond the expected life of the project financed is typically viewed as credit negative.

There has been a general trend toward increased reliance on off-balance sheet transactions. In consideration of the associated risks, we typically take into account items that may not be consolidated in RLG's financial statements. Our measurement of an RLG's total debt profile includes debt guaranteed by the RLG, debt obligations issued by majority-owned enterprises that may or may not be guaranteed by the RLG, and debt-like instruments or commitments such as capital leases, public-private partnerships (PPPs) and securitization transactions for which the RLG is or may become responsible. However, debts of government-owned entities that are considered self-supporting, generating sufficient funds to support their operations, including interest payments, are deducted from the RLG's measure of net direct and indirect debt, where this information is available. Deducted debts include all debt obligations, including guarantees extended by the RLG. Our assessment of the self-supporting nature of a government-owned entity is typically based on whether it is financially sustainable in the absence of any ongoing direct subsidy from the RLG. Indirect forms of ongoing financial support such as revenue-setting mechanisms that do not involve any direct transfer from the RLG (e.g., fee-based systems such as utilities) are not considered as direct subsidies in our assessment. We also generally do not consider the direct purchase of goods or services by the RLG as a hidden form of direct subsidy unless there is evidence that the nature of the transaction is not at arm's length and is a way to support the entity.

Contingent liabilities can impinge on credit quality and may arise from debt issued by other entities, whether through guarantees, ownership, or some other means, even in the absence of debt, if the RLG considers the entity's operations important enough to support (see Appendix C).

We also consider in our analysis the RLG's pension obligations and the extent of the consequent budgetary pressures and liability burden. Our analysis includes both the balance sheet burden generated by the unfunded portion of the pension liabilities, relative to the RLG's budget size and existing debt burden, as well as the annual budgetary pressures stemming from payment of normal costs and amortization of any unfunded liability. While our scorecard debt metrics focus primarily on direct and indirect debt, we also consider total long-term liabilities, including unfunded pension liabilities. In assessing the RLG's credit profile, we consider entities that show large unfunded liabilities and their progress towards addressing long-term funding problems.

### How We Assess It for the Scorecard

Our assessment of financial performance and debt profile in the idiosyncratic risk scorecard is based on five sub-factors:<sup>7</sup>

- » The ratio of gross operating balance (operating revenues minus operating expenditure including interest payments) to operating revenue: This three-year weighted average ratio measures the government's ability to contain operating expenditures below operating revenues and generate surpluses needed for capital spending and debt amortizations. All else equal, the higher the ratio, the lower the risk.<sup>8</sup>
- » The ratio of interest payments to operating revenues:<sup>9</sup> Since increases in interest payments call for either corresponding decreases in program spending or increases in revenue flows, the relative share of operating revenue consumed by interest payments is an important consideration; the lower the ratio, the lower the risk. In some jurisdictions, due to reporting limitations, only aggregate debt service (principal and interest combined) is available, and we use the corresponding ratio (with an appropriate adjustment) when necessary.
- » Cash and liquidity management: We assess the cash management and liquidity practices of the RLG, including whether there is a need for borrowing for cash flow purposes or a reliance on credit lines or payment delays to ensure adequate access to liquidity. We may also consider the average and minimum cash balances available during the fiscal year. A history of weak average liquidity likely signifies little cash cushion available if revenues decline unexpectedly in the year. For example, an RLG with adequate cash balances and committed credit facilities and/or unquestioned market access to cover cash flow and debt servicing over the next year, which also conducts regular detailed cash flow planning and monitoring, would typically score in the highest bucket, i.e. the lowest risk.
- » The debt burden: We use the ratio of net direct and indirect debt to operating revenues of the most recent year. This measure of debt burden uses the government's operating revenue as a proxy for debt-servicing capacity and compares debt burden to recurrent resources available to cover debt service; all else equal, the lower the ratio, the lower the risk.
- » The debt structure: We use the ratio of short-term direct debt to total direct debt of the most recent year. Since it includes debt instruments with a maturity of less than one year and the current portion of long-term borrowings, this ratio helps in assessing refinancing risks and interest-rate risks over a one-year time horizon; all else equal, the lower the ratio, the lower the risk.

<sup>7</sup> As a reflection of cross-country differences in accounting standards, budgetary practices and organizational structure, data sources are not, in many cases, directly comparable on an international basis. In order to manage these reporting discrepancies, we rely on a collaborative process of cross-country information sharing to ensure consistency in coverage, definitions and measurement. Furthermore, calculation methods may be different across RLGs, such as the calculation and consolidation of revenues; we typically consider different alternatives and evaluate the most appropriate measure on a case-by-case basis.

<sup>8</sup> To calculate the ratio of gross operating balance to operating revenue, a three-year weighted average is used, with the highest weight given to the most recent year, i.e.  $\frac{4}{7}y_0 + \frac{2}{7}y_{-1} + \frac{1}{7}y_{-2}$ .

<sup>9</sup> To calculate the ratio of interest payments to operating revenues, a three-year weighted average is used, with the highest weight given to the most recent year, i.e.  $\frac{4}{7}y_0 + \frac{2}{7}y_{-1} + \frac{1}{7}y_{-2}$ .

## EXHIBIT 6

**Financial Performance and Debt Profile**

Score	1	3	5	7	9
3.1 Operating margin					
Gross operating balance/operating revenues (%)	>= 10%	< 10% & >= 5%	< 5% & >= 0%	< 0% & >= -5%	< -5%
3.2 Interest burden					
Interest payments/operating revenues (%)	<= 1%	> 1% & <= 3%	> 3% & <= 5%	> 5% & <= 7%	> 7%
3.3 Liquidity*					
Cash and liquidity management	No need for external cash flow borrowing and/or unquestioned market access.		RLG uses short-term borrowing regularly to smooth out cash flow needs and/or relies on its credit lines with banks to ensure adequate access to liquidity.		High reliance on credit lines that are fully utilized and/or use of payment delays to suppliers.
3.4 Debt burden					
Net direct and indirect debt/operating revenues (%)	<= 35%	> 35% & <= 65%	> 65% & <= 100%	> 100% & <= 200%	> 200%
3.5 Debt structure					
Short-term direct debt / total direct debt (%)	<= 10%	> 10% & <= 20%	> 20% & <= 30%	> 30% & <= 40%	> 40%

\* The liquidity sub-factor is assigned in three buckets: 1, 5 and 9.

## Factor 4: Governance and Management

### Why It Matters

Our assessment of an RLG's credit standing includes an assessment of the quality of financial decision-making and execution with a review of the government structure, financial management practices and the transparency of financial disclosures. Some features may be found in local law, others in institutional practices and political traditions that have developed over time. In some cases, the law may appear to strengthen credit standing, yet actual practice may have the opposite effect.

We consider the RLG's quality of internal controls and financial planning. This typically includes whether the government possesses the tools for successful financial planning, whether it is accustomed to enacting a realistically balanced budget at the start of the fiscal year, its monitoring of budget execution and its practice of making prompt adjustments when necessary. We may consider the government's record of revenue forecast accuracy or conservatism, particularly for volatile revenue streams. The attainment of budgetary balance on a regular basis is clearly a credit strength.

We assess the extent to which the government clearly articulates a capital plan appropriate to its needs. We also typically assess whether the government makes effective use of multi-year planning for operating and capital spending, and has experience in accessing the debt capital markets.

We may consider whether the executive and legislative branches have regular access to objective information and analysis concerning the costs and benefits of service programs and the revenue

implications of tax changes, which can be aided by the availability of professional fiscal staff. We also typically consider the depth of management experience at the senior administrative level.

We may assess the executive branch's ability to move its fiscal program through the legislature in a timely fashion and then carry it out effectively, both in governments where the two branches are separately elected and in parliamentary systems.

We typically consider whether the electoral cycle allows the government to remain in office long enough to formulate and carry out multi-year fiscal and capital plans, and to obtain the potential benefits that such plans offer. For example, in a country that has a three-year electoral cycle for most mayors, and which prohibits their immediate re-election, along with the custom of conducting wholesale changes at the senior administrative level when the government changes, we would likely consider that the government has a reduced ability to apply a long-term perspective to its plans.

We assess the government's cash management, debt management and investment management policies, including the use of derivatives, considering how clearly articulated they are and whether actual practice conforms to the stated policies. The ability to avoid pitfalls in these areas of fiscal management is a credit strength.

Some governments are required by law, or follow the practice, to allocate revenues that exceed forecast amounts to reserves intended for use in future years when revenues may fall short. Some governments are prohibited from accumulating such reserves. In our analysis, we may consider how the law or stated practice is actually carried out, and how it affects financial performance.

We also assess the quality and transparency of information disclosure. This typically includes whether the government prepares timely annual and interim financial reports, as well as actuarial pension reports. We consider whether the information is accurate and detailed and whether it is independently audited. Strong transparency and disclosure practices, including timely and accurate reporting, typically result in a higher score for this sub-factor.

#### How We Assess It for the Scorecard

We use the following sub-factors to assess the effects of governance and management practices:

- » We assess each RLG's risk controls and financial management practices. This typically includes an assessment of whether the RLG has the expertise and planning tools appropriate for strong financial management as well as the degree to which it applies prudent economic assumptions in estimating revenues, exercises caution in its spending forecasts, and is thus able to meet or exceed its bottom-line fiscal targets.
- » We assess each RLG's investment and debt management policies and practices, and the extent to which these practices help the RLG avoid exposure to a variety of risks.
- » We assess each RLG's transparency and disclosure practices, i.e., the timeliness, completeness and reliability of the financial statements it makes available.

Given the importance of governance and management in credit risk, we take the highest score of the three sub-factors (which indicates the weakest score) and apply it to the entire factor.

## EXHIBIT 7

**Governance and Management\***

Score	1	5	9
<b>4.1 Risk controls and financial management</b>			
Quality of internal controls and planning	Strong internal controls and fiscal planning. Assumptions for projections are prudent, including conservative projections for volatile revenue streams; long-term planning and in-year monitoring is used; quality of planning tools and expertise of management is strong; typically meets or exceeds fiscal targets.	Moderate internal controls and fiscal planning. Assumptions for projections are somewhat prudent, but subject to volatility; projections for volatile revenue streams not conservative; there is limited use of long-term planning and in-year monitoring; quality of planning tools and expertise of management is moderate; meets fiscal targets in most years.	Weak internal controls and fiscal planning. Assumptions for projections imprudent; overoptimistic projections, particularly for volatile revenue streams; there is no long-term planning or monitoring; quality of planning tools and expertise of management is weak; fiscal targets generally not met.
<b>4.2 Investment and debt management**</b>			
Management policies and practices	There are clear policies and guidelines on debt and investment management that are followed. Management adheres to a conservative approach regarding debt and investment management, avoiding exposure to investments and debt structures that pose more than nominal risk. For example, avoiding exposure to high or rapidly changing debt costs or substantial foreign currency, interest rate or counterparty risk.	There are policies and guidelines on debt and investment management that are mostly followed. Management adheres to an approach that is neither notably conservative nor lax regarding debt and investment management. There is acceptance of exposure to investments and debt structures that pose risks. For example, some exposure to high or rapidly changing debt costs or foreign currency, interest rate or counterparty risk.	There are no policies and guidelines on debt and investment management or policies are not followed. Management adheres to a lax or aggressive approach regarding debt and investment management. There is acceptance of exposure to investments and debt structures that pose significant risks. For example, significant exposure to high or rapidly changing debt costs or substantial foreign currency, interest rate or counterparty risk.
<b>4.3 Transparency and disclosure</b>			
Quality of information	Consistently delivers documents in a timely manner; accuracy and detail of information are complete; financial statements are independently audited with an auditor's opinion that contains no serious qualifications.	Delivers documents in a somewhat timely manner; accuracy and detail of information are largely complete with some manageable shortfalls; financial statements are independently audited with an auditor's opinion that contains no serious qualifications.	Documents delivered with severe delays; accuracy and detail of information are incomplete; financial statements are not independently audited or are audited but qualified.

\* The highest (worst) score in the three sub-factors is applied to the entire factor.

\*\* The sub-factor 4.2 Investment and Debt Management has two components, interest rate volatility and counterparty risk, and management policies and practices, which can each score 9 for Weak, 5 for Moderate, and 1 for Strong. The score assigned to the sub-factor 4.2 is the highest (worst) score assigned to either of these two components.

## Idiosyncratic Risk Scorecard

Using the factors and sub-factors described above along with associated scores and weights (shown in the exhibit below), we arrive at an idiosyncratic risk score (for more details on scorecard mechanics, see Appendix A).

EXHIBIT 8

### BCA Idiosyncratic Risk Scorecard Factors and Weightings

Scorecard	Sub-factor weighting	Factor weighting
<b>1. Economic fundamentals</b>		<b>20%</b>
1.1 Economic strength	70%	
Regional GDP per capita as % of national GDP per capita		
1.2 Economic volatility	30%	
Industrial concentration		
<b>2. Institutional framework</b>		<b>20%</b>
2.1 Legislative background	50%	
Predictability, stability, responsiveness		
2.2 Financial flexibility	50%	
Fiscal flexibility		
<b>3. Financial performance and debt profile</b>		<b>30%</b>
3.1 Operating margin	12.5%	
Gross operating balance/operating revenues (%)		
3.2 Interest burden	12.5%	
Interest payments/operating revenues (%)		
3.3 Liquidity	25%	
Cash and liquidity management		
3.4 Debt burden	25%	
Net direct and indirect debt/ operating revenues (%)		
3.5. Debt structure	25%	
Short-term direct debt / total direct debt (%)		
<b>4. Governance and management</b>		<b>30%</b>
4.1 Risk controls and financial management		
Quality of internal controls and planning		
4.2 Investment and debt management		
Management policies and practices		
4.3 Transparency and disclosure		
Quality of information		



## EXHIBIT 9

## Idiosyncratic Risk Scorecard

		1	3	5	7	9
Economic Fundamentals: 20%						
Economic Strength	RLG economy against national average	>= 120%	<120% & >= 105%	< 105% & >= 95%	< 95% & >= 80%	< 80%
Economic Volatility	Concentration	Highly diversified; limited concentration		Moderately diversified; some concentration		Not diversified; high level of concentration
Institutional Framework: 20%						
Legislative Background	Predictability, stability, responsiveness	There is a mature and robust framework for the RLG sector with stable responsibilities, clearly defined (in law/legislation). Any changes are made at a deliberate and predictable pace. Revenues are predictable with clear visibility of future revenues. There are minimal changes year-on-year or changes made at a deliberate and predictable pace. Spending responsibilities are highly stable and predictable over time.		There is an overall solid framework for the RLG sector with responsibilities mostly stable, defined (in law/legislation) and somewhat predictable. Revenues are mostly predictable with good visibility of future revenues. Changes year-on-year can be significant or changes can be made quickly. Spending responsibilities are somewhat stable and predictable.		The framework of the RLG sector is new or developing with responsibilities not clearly defined and difficult to predict. Revenues are not predictable and there is no clear visibility of future revenues. There are year-on-year negotiations/changes or changes are made unpredictably. Spending responsibilities are unstable and unpredictable.

## Financial Flexibility

## Fiscal flexibility

Strong revenue and expenditure flexibility.

Law allows RLGs broad discretion over a significant portion of revenues and expenditures. The RLG has the flexibility to change taxes/fees on a significant share of operating revenues and increases are politically acceptable at the local level.

The RLG also has the flexibility to change the level and nature of spending, such as by cutting public services or changing service standards, on a significant share of operating expenditures. These cuts are politically acceptable at the local level.

Strong revenue flexibility and moderate expenditure flexibility, or strong expenditure flexibility and moderate revenue flexibility.Moderate revenue and expenditure flexibility.

RLG has moderate discretion over changes to revenues and expenditures. The RLG has the flexibility to change taxes/fees on a moderate share of operating revenues that is politically acceptable at the local level.

The RLG also has the flexibility to change the level and nature of spending, such as by cutting public services or changing service standards on a moderate share of operating expenditure that is politically acceptable at the local level.

Moderate revenue flexibility and weak expenditure flexibility, or moderate expenditure flexibility and weak revenue flexibility.Weak revenue and expenditure flexibility.

Law allows RLGs little or no discretion over rates and objects of revenues and/or expenditures.

The RLG has very limited flexibility to change rates and objects of operating revenues and expenditures that are politically acceptable at the local level.

## Financial Performance and Debt Profile: 30%

Operating Margin	GOB / Operating revenues	$\geq 10\%$	$< 10\% \text{ \& } \geq 5\%$	$< 5\% \text{ \& } \geq 0\%$	$< 0\% \text{ \& } \geq -5\%$	$< -5\%$
Interest Burden	Interest / Operating revenues	$\leq 1\%$	$> 1\% \text{ \& } \leq 3\%$	$> 3\% \text{ \& } \leq 5\%$	$> 5\% \text{ \& } \leq 7\%$	$> 7\%$
Liquidity	Cash and liquidity management	No need for external cash flow borrowing and/or unquestioned market access.		RLG uses short-term borrowing regularly to smooth out cash flow needs and/or relies on its credit lines with banks to ensure adequate access to liquidity.		High reliance on credit lines that are fully utilized and/or use of payment delays to suppliers.
Debt Burden	Net direct and indirect debt / Operating revenues	$\leq 35\%$	$> 35\% \text{ \& } \leq 65\%$	$> 65\% \text{ \& } \leq 100\%$	$> 100\% \text{ \& } \leq 200\%$	$> 200\%$
Debt Structure	Short-term direct debt / Total direct debt	$\leq 10\%$	$> 10\% \text{ \& } \leq 20\%$	$> 20\% \text{ \& } \leq 30\%$	$> 30\% \text{ \& } \leq 40\%$	$> 40\%$

		1	3	5	7	9
<b>Governance and Management: 30%</b>						
<b>Risk Controls &amp; Financial Management</b>	<b>Quality of internal control and planning</b>	<p>Strong internal controls and fiscal planning.</p> <p>Assumptions for projections are prudent, including conservative projections for volatile revenue streams; long-term planning and in-year monitoring is used; quality of planning tools and expertise of management is strong; typically meets or exceeds fiscal targets.</p>		<p>Moderate internal controls and fiscal planning.</p> <p>Assumptions for projections are somewhat prudent, but subject to volatility; projections for volatile revenue streams not conservative; there is limited use of long-term planning and in-year monitoring; quality of planning tools and expertise of management is moderate; meets fiscal targets in most years.</p>		<p>Weak internal controls and fiscal planning.</p> <p>Assumptions for projections imprudent; overoptimistic projections, particularly for volatile revenue streams; there is no long-term planning or monitoring; quality of planning tools and expertise of management is weak; fiscal targets generally not met.</p>
<b>Investment &amp; Debt Management</b>	<b>Management policies and practices</b>	<p>There are clear policies and guidelines on debt and investment management that are followed.</p> <p>Management adheres to a conservative approach regarding debt and investment management, avoiding exposure to investments and debt structures that pose more than nominal risk. For example, avoiding exposure to high or rapidly changing debt costs or substantial foreign currency, interest rate or counterparty risk.</p>		<p>There are policies and guidelines on debt and investment management that are mostly followed.</p> <p>Management adheres to an approach that is neither notably conservative nor lax regarding debt and investment management.</p> <p>There is acceptance of exposure to investments and debt structures that pose risks. For example, some exposure to high or rapidly changing debt costs or foreign currency, interest rate or counterparty risk.</p>		<p>There are no policies and guidelines on debt and investment management or policies are not followed. Management adheres to a lax or aggressive approach regarding debt and investment management.</p> <p>There is acceptance of exposure to investments and debt structures that pose significant risks. For example, significant exposure to high or rapidly changing debt costs or substantial foreign currency, interest rate or counterparty risk.</p>

**Transparency and  
Disclosure**
**Quality of information**

Consistently delivers documents in a timely manner; accuracy and detail of information are complete; financial statements are independently audited with an auditor's opinion that contains no serious qualifications.

Delivers documents in a somewhat timely manner; accuracy and detail of information are largely complete with some manageable shortfalls; financial statements are independently audited with an auditor's opinion that contains no serious qualifications.

Documents delivered with severe delays; accuracy and detail of information are incomplete; financial statements are not independently audited or are audited but qualified or have been recently qualified.

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## BCA Sub-component: Systemic Risk Score

In this sub-component of our BCA analysis, we consider the general risks that apply to all RLGs in a country. These risks primarily relate to the RLG's operating environment.

### Why It Matters

We believe that an RLG's BCA must also be assessed in the context of its operating environment. This assessment produces a systemic risk score from which an RLG's suggested BCA is determined. This systemic risk score is typically the corresponding sovereign bond rating. We normally consider RLGs to be enduringly linked to their respective sovereign given their macroeconomic and financial linkages. Because of their correlation with sovereign credit risk, RLG ratings are typically positioned at or below the sovereign rating and rarely exceed the rating of their respective sovereign.

Macroeconomic conditions in a country affect the credit profiles of other domestic issuers. National fiscal and monetary policies impact national and regional economic growth, with consequent impacts on government finances. Moreover, a strong macroeconomic environment that strengthens the sovereign's fiscal position through faster revenue growth typically has the same direct effect on the finances of RLGs, just as, conversely, a weaker macroeconomic environment typically dampens revenue growth.

Financial linkages also impact the credit risk of both sovereigns and RLGs. For instance, declining sovereign credit quality is often accompanied by a contraction in domestic credit and, in severe situations, a banking crisis. Only sub-sovereigns with limited refinancing needs and not running deficits requiring external financing would be to some extent insulated from financial market pressures.

The importance of these credit linkages is supported by empirical evidence that when sovereigns have defaulted, the default rates of RLGs have also increased rapidly. Accordingly, the credit linkages between the sovereign and other domestic issuers will likely be more visible as the sovereign's rating declines, and they may increase, depending on the magnitude of the issuer's exposure to the macro-economy, federal taxation, the revision of government services, the domestic banking system and variations in foreign exchange rates.

### How We Assess It

In assessing the systemic risk score, we use the country's sovereign bond rating. Generally, an RLG is unlikely to be rated above the sovereign's rating, which means that the sovereign bond rating represents an effective cap on the RLG's rating. There may be certain instances, however, when an RLG's rating can exceed the sovereign's rating. In these cases, the systemic risk score may be one or two notches above the sovereign rating. Given the significant macroeconomic and financial linkages between the sovereign government and lower-tier governments, however, it is unusual for an RLG to be rated more than two notches above the sovereign's rating.<sup>10</sup>

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<sup>10</sup> For more information, see our cross-sector methodology that describes the impact of sovereign credit quality on other ratings. A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

The systemic risk score may be higher than the sovereign bond rating if the following two conditions are met:

1. Market insulation:
  - (i) The RLG has limited borrowing and refinancing requirements; or
  - (ii) Large cash reserves are readily available to compensate for any loss of market access for an extended period of time.
2. Fiscal autonomy:
  - (i) The RLG is sheltered from any sovereign decision that could affect its financials, either through constitutional protection or some type of arrangement under which such change would require the RLG's prior consent; or
  - (ii) Any sovereign decision detrimental to the RLG's financials could easily be offset by the RLG's extremely robust revenue or expenditure flexibility. In addition, there is no expectation of any significant change in the existing institutional framework for the considered jurisdiction in the foreseeable future.

## The BCA Matrix

We combine the scores for idiosyncratic risk and systemic risk to arrive at the suggested BCA score, using the matrix below.

EXHIBIT 10

### BCA Matrix

		Idiosyncratic Risk								
		1	2	3	4	5	6	7	8	9
Systemic Risk	Aaa	aaa	aa1	aa2	aa3	a1	a2	a3	baa1	baa2
	Aa1	aa1	aa2	aa3	a1	a2	a3	baa1	baa2	baa3
	Aa2	aa2	aa3	a1	a2	a3	baa1	baa2	baa3	ba1
	Aa3	aa3	a1	a2	a3	baa1	baa2	baa3	ba1	ba2
	A1	a1	a2	a3	baa1	baa2	baa3	ba1	ba2	ba3
	A2	a2	a3	baa1	baa2	baa3	ba1	ba2	ba2	ba3
	A3	a3	baa1	baa2	baa3	baa3	ba1	ba2	ba3	b1
	Baa1	baa1	baa2	baa3	baa3	ba1	ba2	ba3	b1	b1
	Baa2	baa2	baa3	baa3	ba1	ba2	ba2	ba3	b1	b2
	Baa3	baa3	ba1	ba1	ba2	ba2	ba3	ba3	b1	b2
	Ba1	ba1	ba1	ba2	ba2	ba3	ba3	b1	b2	b3
	Ba2	ba2	ba2	ba3	ba3	ba3	b1	b1	b2	b3
	Ba3	ba3	ba3	ba3	b1	b1	b2	b2	b3	b3
	B1	b1	b1	b1	b1	b2	b2	b2	b3	b3
	B2	b2	b2	b2	b2	b2	b2	b3	b3	b3
	B3	b3	b3	b3	b3	b3	b3	caa1	caa1	caa1
	Caa1	caa1	caa1	caa1	caa1	caa1	caa1	caa1	caa1	caa1
	Caa2	caa2	caa2	caa2	caa2	caa2	caa2	caa2	caa2	caa2
	Caa3	caa3	caa3	caa3	caa3	caa3	caa3	caa3	caa3	caa3
	Ca	ca	ca	ca	ca	ca	ca	ca	ca	ca
	C	c	c	c	c	c	c	c	c	c

For example, the mapping for an RLG with an idiosyncratic risk score of 3 residing in a country with a Aaa bond rating would generate an overall score of aa2. For an RLG with an idiosyncratic risk score of 3 and a systemic risk score of Baa3 the BCA matrix would generate a BCA score of ba1.

As discussed above, we consider RLGs to be enduringly linked to their respective sovereign. As a result, the sovereign's credit quality will to some extent anchor the credit quality of the RLG. Sovereign rating downgrades have often coincided with an increase in long-term credit risk for other domestic issuers, even in the absence of direct credit linkages. As we move down the rating scale, we observe that credit risks for RLGs tend to align closer to sovereign credit risk and that ratings for RLGs tend to compress closer to the sovereign bond rating. That is to say, there may be a wider distribution of ratings for RLGs in an environment in which the sovereign is rated at Aaa than in an environment in which the sovereign is rated at B1, for example.

Furthermore, sovereign and sub-sovereign entities are more likely to be affected by event risk at lower rating levels, arguing for smaller differences in rating levels between the sovereign and sub-sovereign entities and a greater importance of systemic risk.

Reflecting this correspondence, we have constructed the BCA matrix so that the BCA aligns more closely with the systemic risk score as the systemic risk score moves down the rating scale. When the systemic risk score is Caa1 or below, the RLG's BCA will typically wholly reflect the systemic risk score.

Using the scorecard-estimated idiosyncratic risk score and the systemic risk score, the BCA matrix produces a suggested BCA, before additional factors are considered.

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### Additional Factors

Using the idiosyncratic risk score and systemic risk score in the BCA matrix described above, we arrive at a suggested BCA, before additional factors are considered. There are times, however, when events or particular circumstances factor more heavily in rating decisions than weightings in the scorecard would imply, or when there may be other additional factors that are important in rating considerations but are not fully captured in the scorecard factors.

Because this methodology applies globally outside the US, it is necessarily general in some respects and, as described in the Introduction, the scorecard is a relatively simple reference tool. In addition, certain RLGs may exhibit special characteristics – for example, those on the verge of default or bail out - that are not captured in the scorecard.

Certain additional factors may bring a suggested BCA up or down relative to the suggested BCA before additional factors. Generally, additional factors may change the suggested BCA by one full notch, but in certain circumstances they may change the suggested BCA by multiple notches. These additional factors that are considered within the scorecard include the following:

- » A very narrow economy, with little expectation of growth and/or diversification, and/or shrinking population due to outmigration (could bring the suggested BCA down)
- » Strained/lack of market access and need for refinancing of short- or long-term borrowing (could bring the suggested BCA down)
- » Cash flow notes, commercial liabilities or other cash-management tools used due to severe liquidity strain (could bring the suggested BCA down)
- » Significant cash and investments that allows RLG to negate need for market access for extended periods (could bring the suggested BCA up)
- » Extremely high debt ratios relative to peers, including material contingent liabilities<sup>11</sup> (could bring the suggested BCA down)
- » Significant budgetary pressures or large unfunded liabilities stemming from pension obligations (could bring the suggested BCA down)
- » History of default (could bring the suggested BCA down)
- » Political risk/interference that puts risk on willingness to fulfill obligations (could bring the suggested BCA down)
- » Long history of conservative financial management (could bring the suggested BCA up)

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<sup>11</sup> See Appendix C for a discussion of how an RLG's contingent liabilities are considered in our analysis.



- » Significant weaknesses in fiscal best practices, e.g., consistently over-estimating revenues (could bring the suggested BCA down)
- » Use of aggressive debt management, e.g., risky debt structure including high interest rate resetting exposure (could bring the suggested BCA down)
- » Impact of an event, e.g., an earthquake, that materially damages the RLG's ability to pay debt service, either through reduced revenues or need for significant spending (could bring the suggested BCA down)
- » Instances where there are weak metrics in several areas, for example, if the RLG has a very high debt burden in combination with high liquidity risk (could bring the suggested BCA down).

After applying the above-described additional considerations, we arrive at the suggested BCA with additional factors, also known as the BCA scorecard-indicated outcome. In some cases, considerations not described above may affect an RLG's ratings in a manner not fully reflected in the scorecard. For example, long-term environmental or demographic risks may be considered qualitatively rather than being incorporated into forward metrics. As a result, an RLG's scorecard-indicated outcome may not match the actual rating.

## Extraordinary Support Component

The second component of our overall approach is an assessment of the likelihood of extraordinary support from a higher-tier government.

We define extraordinary support as the likelihood that a higher-tier government would provide financial support or other contractual protections to an RLG undergoing acute liquidity stress, or to avoid a default on the RLG's debt obligations. Support could take different forms, such as a one-time cash infusion or any action facilitating negotiations with lenders that enhances access to interim financing for the RLG. The BCA may be viewed as the likelihood that an RLG would require such support. The BCA incorporates the intrinsic financial strength of an RLG and considers aspects of ongoing, normal subsidies and transfers from the higher-tier government.

A straightforward example of extraordinary support is when a higher-tier government, such as a sovereign or state government, unconditionally guarantees the debt obligations of a lower-tier government, such as a city or municipality. In this case, if we viewed the conditions of the guarantee as timely and credible, we would typically consider the likelihood of extraordinary government support to be 100%. We reserve 100% support for situations where we expect the government will in all cases act to avoid a default by the RLG. In other words, 100% support tends to reflect either an irrevocable and unconditional guarantee from the government or that the RLG and the supporting government are indistinguishable from an operating and financing perspective.<sup>12</sup>

A zero likelihood of extraordinary support implies that the higher-tier government would not be expected in any foreseeable case to provide any form of bail-out to an RLG on the verge of default. In most instances, the estimated likelihood of extraordinary support would fall somewhere between zero and 100%.

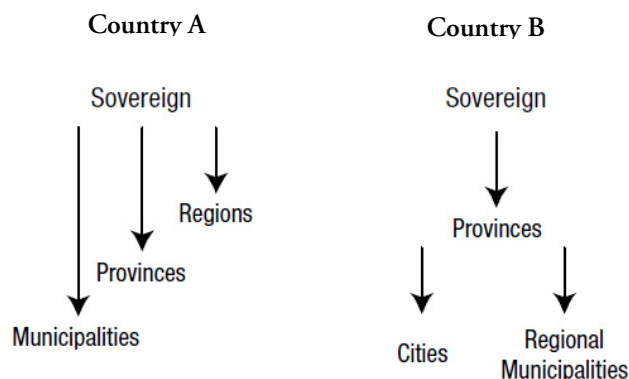
The higher level of government that acts as the potential support provider varies from jurisdiction to jurisdiction, depending on the constitutionally defined divisions of power. For example, in some countries, the support provider for a province is the federal government, while the support provider for a city or

<sup>12</sup> For more information, see our cross-sector methodology for rating transactions based on the credit substitution approach. A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

regional municipality is the associated province. In other cases, however, the central government is the support provider for lower-tier governments, including regions, provinces and municipalities.

EXHIBIT 11

### Hierarchy of Support Providers in Country A and Country B



Source: Moody's

In assessing extraordinary support, we consider the following:<sup>13</sup>

- » The supporting government's rating
- » An estimate of the default correlation between the two entities (dependence)
- » An estimate of the likelihood of extraordinary government support (support)

### How We Assess It for the Scorecard

In assessing the likelihood of extraordinary support, we consider the institutional framework and historical behavior of the higher-tier government as well as individual characteristics of the RLG. No one factor — with the exception of the existence of credible legal statutes requiring, or forbidding, the provision of extraordinary support — determines, in isolation, our assessment of the likelihood of support.

We also consider a measure of default dependence between the RLG and the supporting government, reflecting the tendency that the RLG and its supporting government could be jointly susceptible to adverse circumstances that simultaneously move them closer to default. In general, default dependence is very high given the strong linkages between governments within a country, as discussed above.<sup>14</sup>

<sup>13</sup> This follows the Joint-Default Analysis (JDA) framework. For more information, including a technical overview of JDA, see our cross-sector methodology for government-related issuers. A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

<sup>14</sup> In practice, default dependence among RLGs has tended to be very high, reflecting the strong linkages between RLGs and their supporting governments. Consequently, default dependence is assigned at very high for RLGs, reflecting these strong linkages.

Within the rating framework for RLGs, our support classifications fall into five ranges: low (0% - 30%); moderate (31% - 50%); strong (51% - 70%); high (71% - 90%); and very high (91% - 100%).<sup>15</sup> The use of ranges recognizes the uncertainty surrounding assessments of potential support before it occurs. By definition, we are in most cases estimating likelihood of extraordinary support in advance of having details about the situation that may call for such support, thus making it difficult to pinpoint the circumstances and motivations impacting a support decision.

### Institutional Framework

The institutional framework in which an RLG operates is the constitutional and legal arrangement by which a jurisdiction is governed. It also includes well-established governing customs, intergovernmental relations, including how conflict between levels of government is addressed, and public expectations in respect to the role of government. We consider a number of factors in assessing the level of extraordinary support inherent in the institutional framework. These include:

- » Legal requirements or barriers: We review the legal/constitutional framework to determine whether there are requirements for, or barriers to, a higher-tier government providing extraordinary support. Our assessment is typically based on the existence of requirements/barriers within credible institutional frameworks (i.e., mature, stable and transparent, such that the legal/constitutional requirement would be respected); any institutional framework that is nascent or in a state of flux would likely not be considered credible.
- » Government policy stance: We consider current policies to formulate a view of whether extraordinary support would be forthcoming or not. Policies could include letters of comfort, clear public policy commitments or public statements indicating that the higher-tier government would or would not come to the aid of an RLG on the verge of default.
- » Degree of oversight: We consider the degree of oversight exercised by the higher level of government to be a measure of its interest in maintaining a lower-tier government's financial stability. The degree of oversight also speaks to the capacity and willingness of the higher level of government, as a regulator, to intervene in the financial affairs of the lower-tier government. Oversight in itself is not sufficient to justify high support unless it is accompanied by a track record of successful and timely resolution where problems are identified.
- » Reputation risk: In assessing reputation risk, we typically consider incentives to minimize the potential damage or disruptions to capital markets if the RLG were to default and the potential political embarrassment that could be suffered by the supporting government on the domestic or international stage. Our qualitative assessment of reputation risk may be based on local, regional, and national issues and how these issues might influence the potential supporting government's decision whether to act to prevent a default by an RLG.
- » Moral hazard: Our assessment of a higher-tier government's perception of the risk of moral hazard (i.e., fostering imprudent budgetary practices among RLGs if one is bailed out), typically based on the supporter's track record as well as our understanding of local, regional and national issues.

<sup>15</sup> These ranges align with the support ranges used for government-related issuers (GRIs). For more details, see our cross-sector methodology for government-related issuers. A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

### Historical Behavior

We consider, for each jurisdiction, cases in which defaults or near-defaults have occurred and how the higher-tier government responded, with a particular emphasis on recent action. Greater emphasis is placed on more recent events because institutional frameworks evolve over time, thereby limiting what we can infer about future actions from past behavior. Where there is a clear track record of support by a higher-tier government, this information is of key import to our overall assessment.

While there have been a number of examples of higher levels of government showing a propensity to provide assistance after a default, such potential support typically provides limited uplift in our rating analysis because it does not prevent the default from occurring.

### Individual Characteristics

We consider specific attributes of the RLG that may be relevant for a higher-tier government when deciding whether or not to provide support.<sup>16</sup>

- » Strategic Role: If the RLG has a high public profile, a higher-tier government may consider providing support to the RLG in order to avoid embarrassment or a financial market disruption. Factors in determining the strategic role of the RLG may include international name recognition or a lack thereof, economic importance to the jurisdiction, capital city status or relative population size, and associated electoral importance for the higher-tier government.
- » Debt Structure: A default on a high profile obligation, e.g., a cross border bond, as opposed to a domestic currency bank loan, could encourage a higher likelihood of support due to the potential for capital market disruptions leading to higher costs of borrowing or a loss of access for other RLGs.

<sup>16</sup> In some cases, as a reflection of a jurisdiction's institutional framework and the nature of intergovernmental relations, we may conclude that a higher-tier government would likely not differentiate among RLGs within a given jurisdiction.

## EXHIBIT 12

## Extraordinary Support Scorecard

	Criteria	Factors	Suggested Settings	Score
Institutional Framework	1. Legal Requirements / Barriers	Are there unambiguous legal/constitutional requirements for, or barriers to, a higher-tier government providing extraordinary support?	Requirements: Credible and direct legal requirement	50
			Neutral: Legal statutes silent on issue of support	0
			Barriers: Credible legal barriers	-50
	2. Government Policy Stance	Do current policies indicate, convincingly, that extraordinary support would be either forthcoming or not forthcoming?	Strong Positive: Letters of comfort; clear policy commitments; responsive intergovernmental fiscal arrangements	25
			Moderate Positive: Above conditions hold, but with mitigating factors (e.g. nascent institutional framework)	10
			Neutral	0
			Moderate Negative: Evolving policy commitments or public statements	-10
			Strong Negative: Clear policy commitments	-25
	3. Degree of Oversight	What degree of oversight does the higher-tier government exercise?	High: Frequent reporting requirements, approval of operating and capital budgets; authorization required to issue debt; debt/debt service limits; capacity to appoint financial administrator	10
			Moderate: Moderate reporting requirements; non-binding review of budgets; limited capacity to influence RLG policy decisions	5
			Low: Low or minimal oversight exercised	0
	4. Reputation Risk	Does the higher-tier government's attitude toward the risk to its own reputation and/or risk of potential disruptions or damage to capital markets suggest a higher likelihood of support?	High: Strong concern; concern about reputation or the risks to potential disruptions in capital markets; perception of implicit guarantee	25
			Neutral	0
	5. Moral Hazard	Does the higher-tier government's attitude toward the risk of moral hazard (i.e. fostering imprudent practices) suggest a lower likelihood of support?	High: Recent initiatives to decentralize authority and actions to control moral hazard	-25
			Neutral	0
Historical Behaviour	6. Bailout History	Has the higher-tier government responded in a consistent fashion to near-default events by either providing bail-outs or allowing defaults?	Strong Positive: Clear and recent action (in the last 5 years)	25
			Moderate Positive: Clear action (since 1990)	10
			Neutral	0
			Moderate Negative: Clear non-action (since 1990)	-10
			Strong Negative: Clear and recent non-action (in the last 5 years)	-25
Individual Characteristics	7. Strategic Role	Does the RLG play a strategic role that suggest a higher likelihood of support?	Yes: Economic importance; population size; capital city status; international name recognition	25
			No	0
	8. Debt Structure	Would the structure of this RLG's debt imply a higher likelihood of support?	Yes: High profile borrower; cross border bonds or foreign currency obligations; debt represents large share of national debt markets	15
			No	0

Support Score (Total of Individual Scores)	Guideline for Support Range
< -15	Low (0% - 30%)
-15 to 15	Moderate (31% - 50%)
20 to 30	Strong (51% - 70%)
35 to 45	High (71% - 90%)
> 45	Very High (91% - 100%)

## Scorecard-Indicated Outcome After Extraordinary Support

Based on the likelihood of extraordinary support, and the RLG's assigned BCA and the supporting government's rating, the scorecard provides a range of indicated outcomes.<sup>17</sup> Actual ratings often, but not always, fall within the indicated range. Similar to the discussion of additional factors, there are times when particular circumstances factor more heavily in rating decisions than what would be suggested by combining the assigned BCA with the support scorecard outcome.

For example, in very specific circumstances, we may conclude that the overwhelming factor in the rating for a particular RLG is the support factor, due to very strong linkages between the RLG and its support provider. In such circumstances, we may conclude that the individual characteristics of the RLG are less relevant or irrelevant to the assessment of its creditworthiness. In these circumstances, we may not assign a BCA and instead assign a final rating at or very near to the support provider's rating. This is similar to the analytical approach for GRIs without a BCA, rated solely on support that is described in our rating methodology for government-related issuers.<sup>18</sup>

## Scorecard-Indicated Outcome Range

The scorecard's outcome of a range, rather than a specific alpha-numeric, is consistent with the assessment of likelihood of support in a range. The actual rating incorporates analytical judgment regarding elements outside the scorecard, including evolving market dynamics and shifts in credit culture.

As an example, in the case where the guidance for the support range is Moderate (31%-50%), the RLG's assigned BCA is ba1 (equivalent to Ba1) and the supporting government's credit rating is Baa2, the scorecard provides a range of outcomes, which is between Baa3 and Ba1, as shown in Exhibit 13, and a rating committee would likely assign a rating within this range.

Certain additional factors, which might not be fully captured by the support scorecard, however, can represent serious limitations for extraordinary support to materialize for some RLGs. In general, these additional factors may lead us to limit the number of notches of uplift generated by extraordinary support by assigning the lowest possible rating within the outcome range indicated by the support scorecard.<sup>19</sup> In a limited number of cases, we may decide to assign a final rating that is lower than the lowest rating in the scorecard-indicated outcome range, generally by one notch. Considerations may include the following:

- » The RLG is small in size. As a result, the government has little incentive to support the RLG given that its default is unlikely to affect the government's or other RLGs' reputations and, by extension, their access to financing. If a country comprises many small RLGs, government oversight may be limited. Our assessment of the size of the RLG may vary according to the country.
- » The RLG's reported data are dated or incomplete. This may prevent the supporting government from anticipating a possible distress scenario. For example, the data available to the central government regarding the RLG's debt and liquidity positions are incomplete or the data are collected with a significant time lag or are unreliable or limited in scope.

<sup>17</sup> For a technical overview of JDA, see our cross-sector methodology for government-related issuers. A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

<sup>18</sup> See our cross-sector methodology for government-related issuers. A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

<sup>19</sup> As explained above, the support scorecard suggests ranges of support (for example, moderate support corresponds to a 31%-50% probability of extraordinary support); in this case, the rating committee would assign the lowest possible rating resulting from a moderate support, i.e. the rating corresponding to a 31% probability of extraordinary support.

- » There is uncertainty surrounding the government's timely intervention due to (i) the slowness of the administrative machinery or in garnering sufficient political support; this might be the case if the government has to legislate before it can take any support action, or if we believe that the government may not be able to organize support in a prompt manner; (ii) government support is only likely after the RLG's default. This can occur if a government fails to appreciate the importance of a default and the implications that a default could have; or if we believe that the government would allow RLGs to default (e.g., to make the RLGs more accountable) but organize a rescue operation at a subsequent stage to minimize creditor losses.

EXHIBIT 13

## Scorecard-Indicated Outcome: Example Range

Support	V Hi	Hi	Strong	Mod	Lo
Aaa					
Aa1					
Aa2					
Aa3					
A1					
A2					
A3					
Baa1					
Baa2					
Baa3					
Ba1					
Ba2					
Ba3					
B1					
B2					
B3					
Caa1					
Caa2					
Caa3					
Ca					
C					

BCA: **ba1** ▼Supporter Rating: **Baa2** ▼



## Limitations and Assumptions

Scorecard-indicated outcomes may not map closely to actual ratings. In this section, we discuss limitations and assumptions that pertain to the overall rating methodology and some of the additional factors that are not included in the scorecard but can be important in determining ratings.

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### Limitations

Our ratings incorporate expectations for future performance. In some cases, our expectations for future performance may be informed by confidential information that we cannot disclose. In other cases, we estimate future results based on past performance or other considerations. In any case, predicting the future is subject to substantial uncertainty.

In addition, our forward-looking expectations may vary from historical data, and our long-term forward view may be different from our near-term forward view.

We seek to incorporate all material credit risks into our ratings, whether long-term or short-term risks, with the most forward-looking view that visibility into these risks permits. In most cases, nearer-term risks are more meaningful to issuer credit profiles and thus have a more direct impact on ratings. However, in some cases, our views of longer-term trends may have an impact on ratings. We may from time to time publish scorecards for an issuer using forward-looking metrics, which are typically based on our near-term projections, in part because we may not have sufficient visibility into an issuer's future results beyond this horizon that would enable us to accurately score these factors. Instead, longer-term risks that we can identify may be incorporated qualitatively in our ratings analysis. For example, we may incorporate our forward view of trends in financial results beyond the period of the financial projections included in the scorecard.

While our ratings reflect both the likelihood of a default on contractually promised payments and the expected financial loss suffered in the event of default, the scorecard in this rating methodology is principally intended to capture fundamental characteristics that drive going-concern credit risk. As a debt instrument becomes impaired or defaults, or is very likely to become impaired or to default, ratings typically include additional considerations not captured within the scorecard that reflect our expectations for recovery of principal and interest, as well as the uncertainty around that expectation.

The weights for each factor in the scorecard represent an approximation of their importance for rating decisions, but the actual importance of a particular factor may vary substantially based on the circumstances. This variation in the relative importance of rating considerations can also apply to factors that we choose not to represent in the scorecard.

For example, liquidity is a consideration frequently critical to ratings; however, in other circumstances, it may not have a substantial impact in discriminating between two issuers with a similar credit profile. As an example of the limitations, ratings can be heavily affected by extremely weak liquidity that magnifies default risk. However, two identical RLGs might be rated the same if their only differentiating feature is that one has a good liquidity position while the other has an extremely good liquidity position, unless these are low rated RLGs for which liquidity can be a substantial differentiator for relative default risk.

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### Assumptions

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, disruptive technology, or regulatory and legal actions.

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.

## Appendix A: Example BCA Scorecard and the BCA Matrix

A numeric score is assigned for each sub-factor in the scorecard based on the description for qualitative sub-factors and on the ranges for quantitative sub-factors. The numeric score for each sub-factor is multiplied by the weight for that sub-factor, with the results then summed to produce a numeric score for each factor. The exception is the governance and management factor, where we take the highest score of the individual sub-factors and apply this score to the main factor.<sup>20</sup> Once factor scores are determined, we then multiply each factor score by the weight for that factor, with the results then summed to produce an aggregate numeric value. This can be described as:

$$\text{Idiosyncratic risk score} = \sum(\text{factor score} \times \text{factor weights})$$

The aggregate numeric value is rounded to the nearest whole number and represents the idiosyncratic risk assessment.

Exhibit 14 shows an example of the idiosyncratic risk portion of the BCA scorecard, with the four factors. For the economic fundamentals factor, an RLG that is highly diversified with high economic strength would typically score 1 for each of the economic fundamentals sub-factors. The metrics for the economic fundamentals factor and for the financial performance and debt profile factor are primarily calculated based on public information. The exception is the liquidity measure for which private information from the issuer is more likely to be required, due to variations in reporting. (See the exhibits in the factor discussions above for the value ranges associated with the scoring of the sub-factors that compose each factor.)

For the institutional framework factor, an RLG that has a clearly defined, mature and highly predictable framework for revenue and spending responsibilities would likely score a 1 for the legislative background sub-factor. With regard to financial flexibility, a framework that allows RLGs moderate discretion over local taxation and spending (moderate flexibility may be seen as a median between highly flexible systems that enable an RLG to generate substantial amounts of own-source revenue and to change the level and nature of spending and rigid systems that provide little or no discretion on local revenue-raising and expenditure flexibility) would typically be assigned a score of 5 on this sub-factor.

In scoring the sub-factors of the institutional framework factor and the governance and management factor, analysts' judgments are typically informed by peer comparisons with other local government systems and arrangements, regionally and globally, and by the particular circumstances of the RLG being considered as well as the national context in which it operates.

Continuing the example above, for the financial performance and debt profile factor, a gross operating balance/operating revenue ratio of 3% would generate a sub-factor score of 5. If the same government had an interest payments/operating revenue ratio of 1.7% (sub-factor score of 3), did not require external cash flow borrowing for liquidity purposes (sub-factor score of 1), had a net debt/operating revenue of 40% (sub-factor score of 3) and a short-term direct debt/ total direct debt ratio of 15% (sub-factor score of 3), then — after multiplying the scores of these five sub-factors by their respective weights — the financial performance and debt profile factor would produce a score of 2.75.

For the governance and management factor, an RLG that generally exhibits strong internal controls and fiscal planning and has clear policy and guidelines on debt and investment management would typically

<sup>20</sup> Given the importance of governance and management in credit risk, we take the highest numerical score in any sub-factor and apply it to the entire factor. For example, scores of 1, 5 and 1 on sub-factors 4.1, 4.2 and 4.3, respectively, will generate a score of 5 for factor 4.

receive a score of 1 for each of these sub-factors; however, in this example, there are often delays in delivering documents, with some shortfalls in accuracy and detail of information, resulting in a score of 5 for this sub-factor. In this case, the overall factor score would be 5, because we take the highest score for any sub-factor and apply it to the factor.

After calculating the scores for the main factors, the four factor scores are weighted as indicated in Exhibit 14. The sum of the four weighted scores is then rounded to the nearest integer provides the idiosyncratic risk assessment (on a scale of 1 to 9). In this example, the idiosyncratic risk scorecard produces an idiosyncratic risk assessment of 3.

EXHIBIT 14

**Example BCA Idiosyncratic Risk Scorecard**

	Sub-factor score		Sub-factor weighting	Sub-factor total	Factor weighting	Total
<b>1. Economic fundamentals</b>						
<b>1.1 Economic strength</b>	1	x	70%			
Regional GDP per capita as % of national GDP per capita						
<b>1.2 Economic volatility</b>	1	x	30%			
Industrial concentration						
				1.0	x	20% = 0.2
<b>2. Institutional framework</b>						
<b>2.1 Legislative background</b>	1	x	50%			
Predictability, stability, responsiveness						
<b>2.2 Financial flexibility</b>	5	x	50%			
Fiscal flexibility						
				3.0	x	20% = 0.6
<b>3. Financial performance and debt profile</b>						
<b>3.1 Operating margin</b>	5	x	12.5%			
Gross operating balance/operating revenues (%)						
<b>3.2 Interest burden</b>	3	x	12.5%			
Interest payments/operating revenues (%)						
<b>3.3 Liquidity</b>	1	x	25%			
Cash and liquidity management						
<b>3.4 Debt burden</b>	3	x	25%			
Net direct and indirect debt/ operating revenues (%)						
<b>3.5 Debt structure</b>	3	x	25%			
Short-term direct debt / total direct debt (%)						
				2.75	30%	0.825
<b>4. Governance and management</b>			MAX			
<b>4.1 Risk controls and financial management</b>	1					
Quality of internal controls and planning						

EXHIBIT 14

**Example BCA Idiosyncratic Risk Scorecard**

<b>4.2 Investment and debt management</b>	<b>1</b>			
Management policies and practices				
<b>4.3 Transparency and disclosure</b>	<b>5</b>			
Quality of information				
		5.0	30%	1.5
				3.125
<b>Idiosyncratic Risk Assessment</b>	<b>3</b>			

Continuing this example, using the estimated idiosyncratic risk assessment along with the systemic risk score in the BCA matrix presented again below provides a suggested BCA. In this example, the RLG is operating in an environment where the sovereign bond rating is Aaa. Using the idiosyncratic risk score (3) and systemic risk score (Aaa) in the BCA matrix produces a suggested BCA of aa2.

EXHIBIT 15

**BCA Matrix**

		Idiosyncratic Risk								
		1	2	3	4	5	6	7	8	9
Systemic Risk	<b>Aaa</b>	aaa	aa1	aa2	aa3	a1	a2	a3	baa1	baa2
	<b>Aa1</b>	aa1	aa2	aa3	a1	a2	a3	baa1	baa2	baa3
	<b>Aa2</b>	aa2	aa3	a1	a2	a3	baa1	baa2	baa3	ba1
	<b>Aa3</b>	aa3	a1	a2	a3	baa1	baa2	baa3	ba1	ba2
	<b>A1</b>	a1	a2	a3	baa1	baa2	baa3	ba1	ba2	ba3
	<b>A2</b>	a2	a3	baa1	baa2	baa3	ba1	ba2	ba2	ba3
	<b>A3</b>	a3	baa1	baa2	baa3	baa3	ba1	ba2	ba3	b1
	<b>Baa1</b>	baa1	baa2	baa3	baa3	ba1	ba2	ba3	b1	b1
	<b>Baa2</b>	baa2	baa3	baa3	ba1	ba2	ba2	ba3	b1	b2
	<b>Baa3</b>	baa3	ba1	ba1	ba2	ba2	ba3	ba3	b1	b2
	<b>Ba1</b>	ba1	ba1	ba2	ba2	ba3	ba3	b1	b2	b3
	<b>Ba2</b>	ba2	ba2	ba3	ba3	ba3	b1	b1	b2	b3
	<b>Ba3</b>	ba3	ba3	ba3	b1	b1	b2	b2	b3	b3
	<b>B1</b>	b1	b1	b1	b1	b2	b2	b2	b3	b3
	<b>B2</b>	b2	b2	b2	b2	b2	b2	b3	b3	b3
	<b>B3</b>	b3	b3	b3	b3	b3	b3	caa1	caa1	caa1
	<b>Caa1</b>	caa1	caa1	caa1	caa1	caa1	caa1	caa1	caa1	caa1
	<b>Caa2</b>	caa2	caa2	caa2	caa2	caa2	caa2	caa2	caa2	caa2
	<b>Caa3</b>	caa3	caa3	caa3	caa3	caa3	caa3	caa3	caa3	caa3
	<b>Ca</b>	ca	ca	ca	ca	ca	ca	ca	ca	ca
	<b>C</b>	c	c	c	c	c	c	c	c	c

We then consider whether the suggested BCA that results from the combination of the idiosyncratic risk score and the systemic risk score should be notched upward or downward,<sup>21</sup> based on the additional factors described in the BCA component section, in order to arrive at the suggested BCA with additional factors.

Similarly to the final rating assigned, the actual BCA assigned may be different than indicated by the scorecard when, in our opinion, some of the qualitative factors or other credit fundamentals of the RLG are not fully captured in the scorecard, or when we place a different weight on a particular factor or sub-factor than the standard weight in the scorecard. The scorecard and matrix are tools that inform the rating, but actual BCAs and ratings reflect all material considerations that, in the opinion of the rating committee, are pertinent to our assessment of the relative credit risks of financial obligations issued by an RLG.

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<sup>21</sup> Additional factors are applied in increments of one notch (i.e., by one alphanumeric rating category).

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### Example Support Scorecard

Using the same example above, this entity operates in a country in which the bond rating of the country (higher-tier government) is Aaa. Based on the idiosyncratic and systemic risks, our BCA of the region is aa2, which includes ongoing fiscal transfers from the sovereign, but excludes the likelihood of extraordinary support. Although there is no history of defaults or near-defaults by regional governments, and the national law is silent on the issue of support, the national government has made public statements to the effect that extraordinary support would always be forthcoming. The national government also exercises a high degree of oversight over the financial affairs of the region and upholds a perception held by capital market participants that it implicitly stands behind the debt obligations of all regional governments. The national government's policy stance, as articulated in its public statements, suggests that it would not differentiate between regions when considering the provision of extraordinary support. Under these circumstances, the support scorecard would typically generate a score of 35 points (see Exhibit 12), which maps to a high likelihood of extraordinary support (71% - 90%).

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### Example Rating Range

Given the BCA of aa2, the supporting government rating of Aaa and the high likelihood of support (71%-90%), the scorecard suggests the range of outcomes would be Aa1 to Aaa. Actual ratings are in most cases within the suggested range. The actual rating reflects our overall assessment of the RLG's fundamentals and the likelihood of extraordinary support, typically considering whether that likelihood is at a low, medium or high level within the suggested range or, in rare circumstances, outside the suggested range.

## Appendix B: Analytical Approach for RLGs Without a BCA, Rated Solely on Support

As noted above, our standard approach to assigning ratings to RLGs is to determine a BCA and then consider uplift for support. BCA analysis provides useful information on fundamental credit factors (e.g., economic fundamentals, institutional framework, financial performance and debt profile, and governance and management), which influence the likelihood that support is needed.

This approach also allows us to more clearly express a view on the likelihood of support being made available and the risks for investors if support does not materialize. However, in certain circumstances, we will rate an RLG that is very closely integrated with its respective higher-tier government at or near the higher-tier government's rating without assigning a standalone BCA, even in the absence of a formal guarantee or similar undertaking. Where we see very strong linkages between a higher-tier government and its lower-tier governments, our analysis focuses more squarely on the strength of those linkages and the implications for very high support. Where material doubts exist over support and linkages with the higher-tier government, but it is not possible to derive a meaningful BCA, it is unlikely that we would be able to rate the issuer. This approach is very similar to how we assign ratings to some of the government-related issuers (GRIs) in our rated universe.<sup>22</sup>

Typical characteristics of such RLGs without a BCA, which would be rated solely on support, include:

- » A highly centralized system where the decision-making process at the RLG level is greatly influenced by the higher-tier government.
- » A close and enduring alignment of interests and objectives at all levels of government, most often seen in single-party systems, where government programs are delivered by different layers of what is seen as effectively the same government. In such circumstances, there is limited strategic or operational autonomy for the RLG, with the higher-tier government influencing all major decisions concerning service delivery and capital investment. The provision of financial or logistical resources by the higher-tier government under any circumstances would be presumed in the normal exercise of government activities.
- » In the circumstances described above, standalone financial performance and metrics are essentially meaningless, irrelevant to the credit risk bondholders face, and likely impossible to assess independently. Changes in fundamental factors – e.g., revenues, expenses, liquidity – are of little if any analytical interest to the rating. In other words, no matter how poor the issuer's intrinsic strength or how fast its deterioration, the sole analytical concern is the likelihood of the higher-tier government providing support.
- » The RLG's default would substantially damage the higher-tier government's own credit standing because the RLG is viewed as part of the higher-tier government and the two are considered indistinguishable by market participants. Expectation of extraordinary support is therefore very close to 100%.

<sup>22</sup> For more information, see our cross-sector methodology for government-related issuers. A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.



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### RLG's rating will be close to the supporter's, but not always the same

When rating an RLG without a BCA, we focus solely on support, and start from the expectation that extraordinary support is near certain. However, absent a formal guarantee, certainty of support is rarely 100%, so we may reflect some degree of uncertainty by rating the RLG one, two or three notches below the higher-tier government's rating.

There are no formulaic rules, and each rating decision reflects rating committee judgment about the particular circumstances. Rating committees consider what would happen were both the higher-tier government and the RLG to face severe financial stress, the priority the higher-tier government would ascribe to supporting the RLG, and whether providing support to the RLG would exacerbate or potentially lessen the stress on the higher-tier government.

An important consideration is whether there is any material likelihood that the higher-tier government might choose to prioritize its own debt obligations – considering itself separate and distinct from the RLG — in circumstances in which it was itself facing serious difficulties meeting those obligations.

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### Even a small amount of uncertainty can justify notching

The expectation of extraordinary support does not need to fall far short of 100% for notching to be appropriate. For example, if an RLG did have a BCA, with its intrinsic strength consistent with a Caa1 rating, in order to lift its rating to the same as its A1-rated higher-tier government a 100% probability of support would typically be necessary.

Any sense that support is less certain would quickly imply a lower rating for this issuer. The judgments involved are very fine and common sense is required, but the additional uncertainty required to justify a two or three notch gap is not great. Even if those sensitivities will reduce somewhat where the intrinsic strength of the RLG and the higher-tier government's rating are closer together, the key point is that an exceptionally high degree of certainty of support is required to lift an RLG to the same rating as the higher-tier government, and only very small increments of uncertainty are needed to imply lower ratings for the RLG.

Overall, notching for such an RLG would only very rarely exceed two downward notches; either an issuer is sufficiently closely and enduringly linked to the higher-tier government to justify this approach – in which case linkage will by definition be close – or it is not. So once a rating committee has chosen an approach focusing solely upon support, the next step will be to determine whether to rate at par, or lower – usually by no more than one, two, or in exceptional circumstances, three notches.

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### Characteristics of RLGs without a BCA, which are rated solely on support and are equal to or notched down from their higher-tier government's rating

An RLG's rating would be equal to that of its higher-tier government only where at least some of the following conditions are met; where they are not, the RLG's rating will likely be notched below the higher-tier government's rating.

- » It is currently extremely unlikely that the higher-tier government would prioritize repayment of its own debt over and above that of the RLG. The higher-tier government should be expected to treat the RLG's debt *pari passu* with its own in all circumstances.
- » The higher-tier government is a sovereign and its institutional strength and fiscal strength are both very high and the government has provided strong indications that an RLG's credit quality is almost

indivisible from its own. Where the sovereign's credit quality is not very high (i.e., ratings in the A-range and below) or subject to a combination of large off-balance-sheet liabilities and macroeconomic stress, the risk of prioritization is at least fractionally higher, so the RLG's rating is more likely to be notched down.

- » The higher-tier government would suffer extremely high reputational damage were the RLG to default, which would undermine market confidence in the government very severely. This would most likely be the case where the higher-tier government and the RLG are widely perceived as being part of the same entity and the RLG has a high international profile and strong name recognition. At higher rating levels, capacity to support will be undoubted and reputational damage would likely be disproportionate; so par ratings for RLGs would be more likely. At lower rating levels or where a reputation has already been damaged, prioritization may be introduced by the higher-tier government as a deliberate and positive policy tool to start to rebuild both reputation and credit quality; so the RLG's rating is more likely to be rated below the government.

## Appendix C: Assessing the Risk Related to Contingent Liabilities

This appendix provides general guidance on our approach for determining the extent of the downward notching adjustment to the suggested BCA, owing to material contingent liabilities<sup>23</sup>.

Contingent liabilities are off-balance-sheet liabilities that may create on-balance-sheet liabilities for the entity in the future, depending on the occurrence of specific events. Contingent liabilities may arise from any sector of the economy the RLG supports (including other governmental entities, households, the financial sector and other supported sectors). Because of their potentially disruptive nature<sup>24</sup> and the high variability in the financial burden they can represent, contingent liabilities can be an important consideration in our assessment of an RLG's credit profile.

In their most explicit form, contingent liabilities are off-balance-sheet contractual commitments of an RLG to bear a cost if a contractual clause is triggered. Guarantees to repay the debt of a separate entity or to support the assets of a separate entity, such as a bank or utility, are examples of contractual contingent liabilities.

There are also implicit (or constructive<sup>25</sup>) forms of contingent liabilities, whereby the government is not obligated by law or by contract to provide support but we expect that it is likely to do so. Implicit contingent liabilities include varying forms of support, such as recapitalizations or the payment of reconstruction expenses following a natural or technological disaster.<sup>26</sup> For instance, an RLG may decide to repay a failing bank's direct obligations even if it is not legally or contractually obligated to do so. A more remote case would be where infrastructure needs to be replaced after a hurricane and the government may decide to cover the cost. Litigation risk is another implicit form of contingent liability.

Our typical approach for assessing the credit risks that may arise from contingent liabilities is primarily qualitative and typically includes the following:

1. We identify the perimeter of analysis, i.e., the entities or events that represent an explicit contingent liability or are most susceptible to becoming implicit liabilities.
2. We estimate the net cost that contingent liabilities represent for the RLG. This assessment is typically based on a scenario analysis that considers the nature of the contingent liabilities, an estimation of the cost for the RLG and an assessment of the likelihood that the liabilities will materialize.
3. We assess the extent to which the potential increase in the RLG's existing or forecast debt burden, based on our scenario analysis, weakens its credit profile and warrants a downward adjustment to the suggested BCA.

<sup>23</sup> Extremely high debt ratios relative to peers, including material contingent liabilities, can cause downward notching of an RLG. Please see the "Additional Factors" section.

<sup>24</sup> Contingent liabilities are event-driven and thus typically unexpected; they are typically not part of an RLG's budgetary planning and operations.

<sup>25</sup> Constructive obligations derive from an established pattern of past practice, published policies or a reiterated statement that an entity will accept certain responsibilities, thereby creating a reasonable expectation on the part of others that it will meet those responsibilities.

<sup>26</sup> Implicit forms of contingent liabilities are not the same as implicit debt. Implicit debt reflects the accumulation of future fiscal imbalances over the long term, including fiscal imbalances related to RLG-sponsored Social Security insurance, but also from various future committed expenditures. Implicit debt is a longer-term obligation for which the attached risk is mitigated by the RLG's tax power and its capacity to pass legislative changes in order to reduce committed expenditures.

## Delineating the Perimeter

In assessing contingent liabilities, we consider explicit and implicit contingent liabilities. We generally restrict the perimeter of our assessment to (a) events or entities that are material contingent liabilities relative to the RLG's size and debt burden;<sup>27</sup> and (b) whether there is sufficient visibility, i.e., sufficient information available to form an opinion, including an opinion on the government's propensity to intervene.<sup>28</sup>

The perimeter of our analysis excludes entities whose financial obligations are already included in the scorecard ratio of net direct and indirect debt to operating revenues.<sup>29</sup>

In assessing an RLG's propensity to intervene, we typically consider the essentiality of the services or goods provided by the entity, the systemic risk posed by a failure of the entity, a public ownership stake in the entity, whether there is a public mandate to support the entity and whether it has special legal status. Provisions or reserves earmarked for the financing of a contingent liability may also provide insight into an RLG's propensity to intervene if needed. We usually also consider the RLG's track record of support for the entity or sector. For example, we may have observed that regional governments in a country have intervened on behalf of entities that perform vital economic functions, such as banks or utilities, or we may have observed that they have allowed these entities to default on their debt obligations without a material disruption to the provision of vital services.

In assessing whether to fully or partially include an entity in the perimeter of an RLG's contingent liabilities, we may also consider whether the entity plays a vital role for other tiers of government. For example, a bank or a mass transit operator may play a very important role in an RLG's operating environment but may also be perceived as serving a vital function for the sovereign, and thus is ultimately considered a full or partial contingent liability of the latter. The same distinction applies to events such as natural or technological disasters (e.g., nuclear decommissioning, the cost of which may be supported by higher tiers of government even if the plant is located in an RLG's territory).

## Estimating the Net Cost

We typically estimate the net cost that an RLG may incur for contingent liabilities using various scenarios. Our assessment is primarily based on the following:

- » **The likelihood that the RLG will extend support.** The likelihood of support depends on the financial robustness of the entity and the propensity of the government to grant support. Our assessment of the standalone credit risk of the entity (i.e., excluding the likelihood that extraordinary support from the RLG will be extended) provides insight into the financial robustness of the entity and the probability that it will need support. The likelihood that the RLG will extend support, if needed, is largely based on the entity's operational importance to the RLG, as discussed above.
- » **The net cost for the RLG, if it extends support.** Approximating the cost of support is one of the most complex parts of contingent liability analysis because it requires an assessment of the type of government intervention and its timing.

Support can take varied forms, depending on considerations such as the entity's capital structure, its debt-service requirements or its overall financial soundness. The expected timing of the support also

<sup>27</sup> The assessment of materiality of the contingent liabilities is typically based on a comparison between the gross level of exposure (without accounting for the risk), for example the gross total debt of a company that may benefit from an implicit form of support from the RLG, and the RLG's revenues or debt stock.

<sup>28</sup> For example, we may consider natural or technological disasters as a source of contingent liabilities under our approach only when there is sufficient visibility into the occurrence of such events, which may be based on the frequency of an occurrence (e.g., frequent hurricanes), the track record of damage, etc.

<sup>29</sup> As described in this methodology, this ratio considers non-self-supporting entities as well as entities consolidated within the RLG's reporting perimeter.

informs our estimates of the amount of financing necessary to restore the entity's financial viability. Generally, the sooner the RLG provides support, the lower the associated cost for the RLG. Because support generally comes in times of stress, our assessment of the amount of financial support is generally forward-looking and assumes some degree of deterioration in the supported entity's financial position. The following scenarios illustrate how the reaction of an RLG can lead to different costs:

- The cost of support may sometimes be higher than indicated by disclosures of financial shortfalls because the RLG may want to limit the risk that it will need to inject an even greater amount of funding in the future. For example, in the case of a bank that we view as a candidate for an RLG's financial support, we often consider different scenarios, including stress scenarios, and estimate the amount of financing necessary to restore its capitalization at or above the regulatory minimum or to a level that we view as necessary for the bank to remain a going concern.
- Conversely, based on a cost-benefit analysis, a government may preventively intervene to support an institution that is not immediately undergoing financial stress in order to lower the future cost of its support. Such support typically takes the form of a capital injection or, less often, tax relief.<sup>30</sup> In these cases, we may assume an amount of financing extended by the RLG that corresponds to what we consider would be necessary to restore the entity's viability and allow it to service its own debt obligations.

For each type of contingent liability, we typically consider cash reserves or provisions earmarked for contingent liabilities that may reduce the RLG's net cost and thus the need for additional borrowing if the RLG were to extend support. Cash not explicitly earmarked to the payment of these liabilities is typically not deducted in our assessment of the net cost of these liabilities. We also typically do not consider the possibility that an RLG will raise taxes or create an additional tax to fund the liability, because a tax increase is unlikely to be an immediate source of funding.

To arrive at an estimated net cost of the contingent liability, we multiply the likelihood of support by the net cost for the RLG if it were to extend support.

Because estimating the potential debt burden related to contingent liabilities relies on analytical judgment is a form of scenario analysis, and because any change in the assumptions underlying a particular scenario may result in very different estimates, we may run various scenarios using a wide spectrum of assumptions, from an optimistic scenario to a tail risk scenario (e.g., contingent liabilities materialize at the same time<sup>31</sup>). We then consider the outcomes of the scenarios in light of our confidence in the underlying assumptions and arrive at a central assessment of the potential debt burden for the RLG.<sup>32</sup>

Beyond a central assessment, we also may consider the variability of the outcomes of the individual scenarios. All else being equal, we are more likely to apply a greater notching adjustment in cases where our assessment of the potential debt burden is highly sensitive to our assumptions, resulting in a wider spectrum of risk, rather than in cases where our assessment points to a narrow range of risk.

<sup>30</sup> In some cases, the government may decide to grant guarantees to support an entity's capacity to secure financing from capital markets or banks. We would generally expect such a form of intervention where there is relatively limited uncertainty about the viability of the entity's financials (excluding access to external liquidity). In these cases, once granted, our consideration of the guarantee would migrate from our assessment of contingent liability risk to our ratio of net direct and indirect debt.

<sup>31</sup> In the remote scenario in which all identified contingent liabilities materialize at the same time, we would generally expect an RLG to further prioritize its support for entities whose continuity of operations is considered of paramount importance. As such, even in this remote scenario, the expected cost related to contingent liabilities is unlikely to be the sum of the expected costs of all individual contingent liabilities.

<sup>32</sup> Because of the complexity (and in some cases, the opacity) of banks' operations, we may employ conservative assumptions when assessing the spectrum of contingent liability risk that these entities' banks represent for a RLG.

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### Assessing the additional credit risk for the RLG

The extent of the downward notching adjustment to the RLG's suggested BCA is typically driven by our overall view of the additional credit risk that the estimated net cost adds to the RLG's existing debt load, which is captured by the ratio of net direct and indirect debt.

For example, we typically consider where the sum of net direct and indirect debt and of the estimated net cost fits in the scorecard ranges for the debt burden sub-factor. This approach allows us to take into consideration the varying absorption capacities across RLGs.

Our view of the credit risk related to contingent liabilities may evolve with changes in the perimeter of the analysis or in the estimated net cost. As contingent liabilities materialize and migrate to the RLG's balance sheet, we also generally consider related contingent risks to have receded, unless there is a large residual exposure.

Because our estimates are subject to uncertainty, we generally limit the downward adjustment to the suggested BCA to two notches. In cases where we have high visibility into the likelihood of contingent liabilities materializing, and where the estimated net cost could have a greater than two-notch negative effect on an RLG's credit profile, we may assign a BCA that is more than two notches below the suggested BCA.

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