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RATING METHODOLOGY

Multilateral Development Banks and Other Supranational Entities Methodology

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This rating methodology replaces the *Multilateral Development Banks and Other Supranational Entities* methodology published in June 2019. This limited methodology update introduces guidance on how hybrid capital may have an impact on our assessment of an MDB's capital position and its shareholders' willingness to support. We also clarify how we assess the potential uplift to an MDB's capital position provided by sustained material profits. We also discuss how insurance mechanisms and asset securitizations may impact our assessment of the Development Asset Credit Quality sub-factor. In addition, we have made some minor clarifications, including the types of credit lines we include in our liquidity metric under the Availability of Liquid Resources sub-factor.

Introduction

In this rating methodology, we explain our general approach to assessing credit risk for multilateral development banks (MDBs) and other supranational entities (OSEs) globally, including the qualitative and quantitative factors that are likely to affect rating outcomes in this sector. We refer to these institutions collectively as supranational institutions.

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

We also discuss other considerations, which are factors that are assessed outside the scorecard, usually because the factor's credit importance varies widely among the issuers in the sector or because the factor may be important only under certain circumstances or for a subset of issuers. In addition, some of the methodological considerations described in one or more cross-sector rating methodologies may be relevant to ratings in this sector.[2] Furthermore, since ratings are forward-looking, we often incorporate directional views of risks and mitigants in a qualitative way.

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

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

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

Our presentation of this rating methodology proceeds with (i) the scope of this methodology; (ii) a sector overview; (iii) our overall approach to rating supranational institutions; (iv) the scorecard framework; (v) a discussion of the scorecard factors; (vi) other considerations not reflected in the scorecard; (vii) the assignment of issuer-level and instrument-level ratings; (viii) methodology assumptions; and (ix) limitations. In Appendix A, we describe how we use the scorecard to arrive at a scorecard-indicated outcome. Appendix B shows an example of an MDB scorecard, including factors, sub-factors, weights and thresholds. Appendix C describes the scorecard framework applied to OSEs and shows an example of an OSE scorecard.

Scope of This Methodology

This methodology applies to supranational institutions globally. These institutions include multilateral development banks and other supranational entities.

An MDB is a financial institution that is principally owned jointly, directly or indirectly, by a group of sovereign governments, is legally distinct from its member governments and has a public policy mandate. Often, the purpose of an MDB is to further the economic and social development policy goals of its member governments.

Like MDBs, OSEs are entities that are owned by two or more sovereigns and have a public policy mandate. However, OSEs generally have little or no capital to support ongoing operations, and they typically have a narrower mandate than MDBs, which does not necessarily target development. The structure of an OSE reflects its unique mandate, which varies widely within the universe of OSEs.

Financial institutions with a profit motive are rated under other methodologies. For example, government-owned commercial banks are rated under our methodology for banks. Financial institutions owned by a single government, even if they operate under a public policy mandate, are also rated under other methodologies. For example, some development banks owned by a single government are rated under our methodology for government-related issuers.[3]

Sector Overview

There are many types of supranational institutions[4] involved in a very diverse array of activities; most seek to foster trade or financial, economic or social development. The vast majority of supranational institutions are chartered by international treaty.

Supranational institutions are not profit-maximizing entities; instead, their aim is to fulfill their policy goal, for example, enhancing economic development. While members or shareholders expect supranational institutions to be financially viable and to operate to different degrees in accordance with commercial norms, they typically do not require the institutions to distribute dividends.

Supranational institutions are normally tax-exempt and immune from prosecution, transfer and convertibility risk. From a credit assessment perspective, this privileged status means that supranational institutions are

3 For a description of our general approach to rating banks, other financial institutions and government-related issuers, please see the "Moody's Related Publications" section, which provides a link to a list of our sector and cross-sector methodologies.

4 In this methodology, the term "supranational institution" refers to multilateral banks and to other supranational entities. The terms "members" and "shareholders" are used interchangeably.

largely protected against interference by the governments of the country in which they are headquartered or operate, and as such their ratings are not constrained by the country ceilings of their country of domicile.[5]

MDBs have constituted the largest share of the rated universe of supranational institutions. MDBs typically seek to leverage the capital and commitments of their member governments by accessing debt markets to increase the funds they channel toward development beyond what governments are able or willing to do through their own budgetary means. Another way that MDBs leverage the credit standing of their member governments is that only a fraction of an MDB's capital is typically paid in, so that the initial cash outlay associated with the creation of an MDB is often relatively small. The rest of members' committed capital is callable upon request (to service debt, in most cases) and represents a contingent claim on the resources of shareholder governments.

MDBs have in many cases been created in response to a perceived failure of the market to provide sufficient financing to a sector or in a geographical area that governments seek to target. Some primarily extend loans to sovereign borrowers, and others invest in the private sector, including in the form of loans, equity investments or through the extension of guarantees. MDBs do not hold a national banking license and generally are neither regulated nor supervised by a national authority. They do, however, operate under self-imposed rules for capital adequacy, liquidity and governance.

Governments customarily have treated MDBs and some other supranational institutions as preferred creditors. One reason that governments treat these institutions as their most senior creditors is that these institutions are not just another source of financing; they often are the only available source of external funding in a situation of sovereign stress. For a government, treating its obligations toward a supranational institution as a priority claim can be in its best long-term interests.

OSEs are not banks and have little or no capital to support ongoing operations; their structures rely heavily on member support. They have less capacity to function independently from their members or to maintain significant financial buffers that could absorb shocks and mitigate risks. Relative to MDBs, an OSE's credit profile is typically much more closely linked with its sovereign members' creditworthiness; however, some OSEs have elements of financial strength that are independent of their sovereign members.

Overall Approach to Rating Supranational Institutions

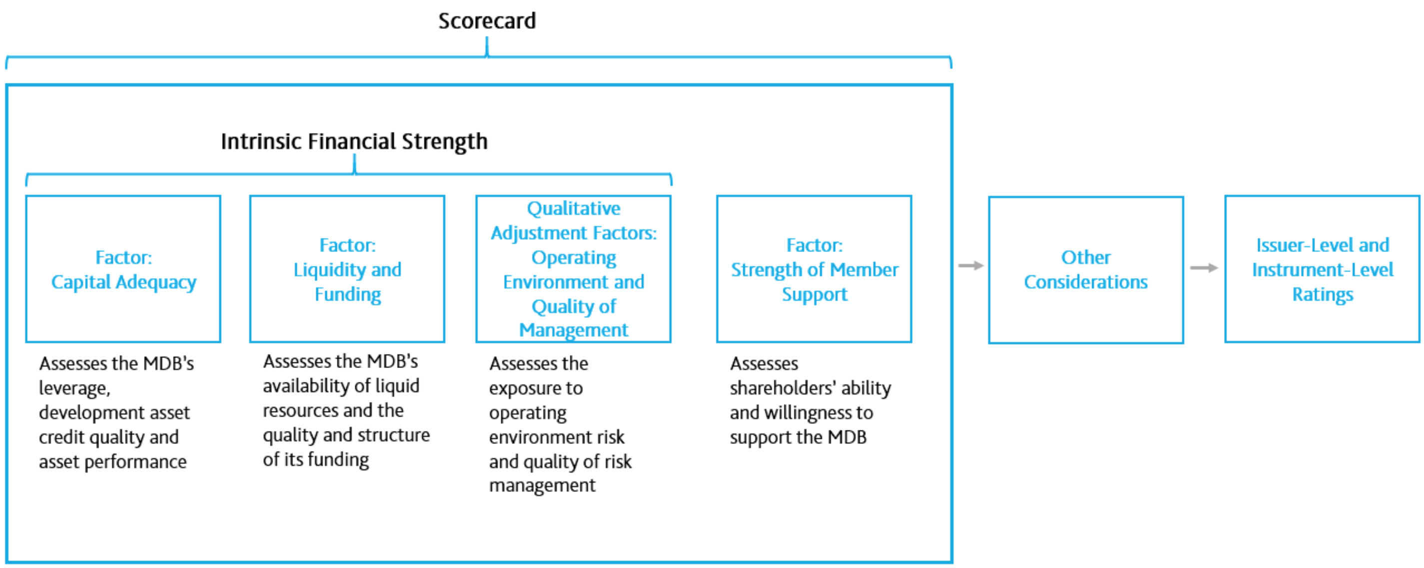
The scorecards used in this methodology capture the inherent differences between MDBs and OSEs. Capital adequacy is a key consideration for MDBs, while for OSEs, member support is typically the starting point of our analysis. Liquidity, operating environment and risk management are common to both scorecards. Our overall approach is illustrated in Exhibit 1.

The MDB and OSE scorecards are oriented to the issuer rating. Scorecard-indicated outcomes are expressed as three-notch ranges on our rating scale. The assigned rating is expressed on our 21-point rating scale and is often but not always within the three-notch range.

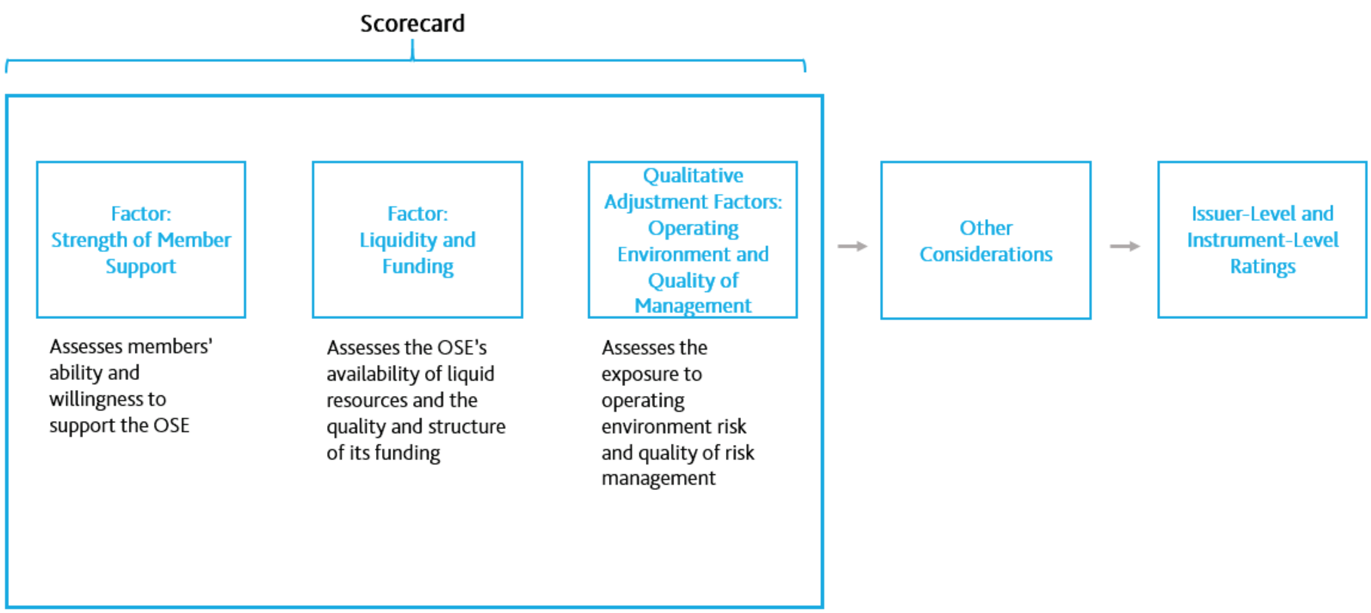
5 Please see *Rating Symbols and Definitions* for a description of country ceilings. A link can be found in the "Moody's Related Publications" section.

EXHIBIT 1

Overall Approach to Rating Multilateral Development Banks



Overall Approach to Rating Other Supranational Entities



Source: Moody's Investors Service

Scorecard Framework for MDBs

The MDB scorecard in this rating methodology is composed of three factors. Some of the three factors comprise a number of sub-factors. In addition, the scorecard includes certain considerations that may result in adjustments to the sub-factor scores.

EXHIBIT 2

Multilateral Development Banks Scorecard Overview

Factor	Sub-factor	Metric	Sub-factor Weighting / Adjustment
Factor: Capital Adequacy (50%)	Leverage	*Assets / Useable Equity*	20%
	*Adjustments to Sub-factor Score**	*Trend*	*[-3 to +3]*
		Impact of Profit and Loss on Leverage	*[-1 to +1]*
	Development Asset Credit Quality	**	10%
	*Adjustment to Sub-factor Score**	*Trend*	*[-2 to + 2]*
	Asset Performance	Non-Performing Assets / Development Assets	20%
	*Adjustments to Sub-factor Score**	*Trend*	*[-3 to +3]*
		Excessive Development Asset Growth	*[-3 to 0]*
Factor: Liquidity and Funding (50%)	Availability of Liquid Resources	Liquid Assets / Net Cash Outflows	Variable weight
	*Adjustments to Sub-factor Score**	*Trend*	*[-3 to +3]*
		Access to Extraordinary Liquidity	*[0 to +3]*
	Quality and Structure of Funding	**	Variable weight
		Preliminary Intrinsic Financial Strength Outcome	
Qualitative Adjustment Factors			
Operating Environment***			*[-3 to 0]*
Quality of Management, Including Risk Management and Governance***			*[-2 to +1]*
		Adjusted Intrinsic Financial Strength Outcome	
Factor: Strength of Member Support	Ability to Support	Weighted Average Shareholder Rating	50%
	Willingness to Support	Contractual Support: Callable Capital / Total Debt	25%
		*Adjustments to Sub-factor Score**: Strong Enforcement Mechanisms*	*[0 to +2]*
		*Adjustments to Sub-factor Score**: Payment Enhancements*	*[0 to +1]*
		Non-contractual Support	25%
		Scorecard-Indicated Outcome	

*The range of the adjustment indicates the potential number of scoring categories of upward or downward adjustment relative to the initial score.

**This sub-factor has no metric.

***The range of the adjustment indicates the potential number of alphanumeric notches of upward or downward adjustment relative to the preliminary intrinsic financial strength outcome.

Source: Moody's Investors Service

Please see Appendix A for general information relating to how we use the MDB scorecard and for a discussion of scorecard mechanics. The MDB and OSE scorecards do not include every rating consideration.[6]

[6] Please see the "Other Considerations" and "Limitations" sections.

Discussion of the Scorecard Factors

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

Factor: Capital Adequacy (50% Weight)

Why It Matters

Capital adequacy is a critical indicator of an MDB's capacity to absorb credit or market losses stemming from its operations and hence its ability to repay debtholders. Because of their mandate, MDBs typically lend to, or invest in, risky sectors or regions where financing from the private sector is scarce, which makes capital buffers extremely important. An MDB's ability to replenish an eroded capital base through earning is typically limited by the institution's mandate.

The factor comprises three sub-factors:

Leverage

The ratio of assets to useable equity is an indicator of how much capital is available to cover the assets from which risks typically arise. An institution with lower leverage is typically better equipped to withstand losses on its assets and thereby protect its credit standing. A large asset stock relative to equity implies a higher risk that capital will be insufficient to absorb losses on an MDB's loans and investments, potentially leading to insolvency and an inability to repay debt as it comes due.

Development Asset Credit Quality

The quality of an MDB's development portfolio, which typically represents the largest share of its assets, is an important driver of an MDB's creditworthiness because losses may erode capital buffers as well as market confidence in the solvency of the MDB. Lending to less creditworthy borrowers, in particular when the loan and investment portfolio is concentrated, exposes an MDB to the risk that adverse developments in a sector or region will negatively impact the quality of a significant portion of the portfolio at the same time, thereby straining its capital adequacy position.

Asset Performance

The ratio of non-performing development assets (NPAs) to total development assets is a useful indicator of asset performance. If asset quality deteriorates, the problem asset ratio typically rises, signaling potential credit losses that can lead to reduced earnings capacity as well as pressure on the capital buffers that protect debtholders.

How We Assess It for the Scorecard

LEVERAGE SUB-FACTOR — ASSETS / USEABLE EQUITY:

The numerator is development assets and treasury assets rated A3 and lower, and the denominator is useable equity.

Development assets comprise gross loans, equity investments and guarantees extended as part of the policy mandate of an MDB.[7] Useable equity corresponds to total shareholders' equity as reported by the supranational institution, including paid-in capital, reserves, retained earnings and excluding callable capital and any planned future capital installments.

[7] We would also include any comparable form of exposure that relates to an MDB's mandate (e.g., insurance operations).

For historical periods, we use the weaker of (i) the ratio based on the most recently reported annual period; and (ii) the average ratio for the three most recently reported annual periods.

Some MDBs may have hybrid capital instruments that demonstrate characteristics of both debt and equity. We typically include in our calculation of useable equity a portion of the value of those instruments that absorb losses while the entity remains a going concern, i.e., well in advance of the MDB experiencing severe financial stress. In our assessment of an instrument's loss-absorbing nature, we typically apply the broad principles described in our cross-sector methodology for assessing hybrid equity credit.[8] Instruments with high loss-absorbing characteristics typically (i) rank junior to all other debt or capital instruments other than paid-in capital; (ii) have strong triggers to allow the MDB to avoid or defer interest and principal payments well ahead of default; and (iii) have a long maturity. In applying these principles, we may take into account considerations that are specific to MDBs. For example, holders of hybrid instruments issued by MDBs are often holders of common shares as well, potentially indicating high willingness from holders to treat those instruments as essentially junior to all debt instruments or to roll them over in order to provide financial protection for a going concern.

Examples of hybrid instruments that may qualify for equity credit include redeemable shares where the MDB retains significant control over the ability to redeem and over the timing of any redemption; and subordinated debt facilities that would qualify for equity credit under our cross-sector methodology. After having assessed the loss-absorbing nature of the hybrid instrument, we typically establish how much equity credit to include in useable equity based on: (i) the cross-sector methodology guidance, e.g., applying equity credit in 25% increments; and (ii) MDB-specific considerations. We add this equity credit to the denominator of our leverage ratio.

Even where no or only partial equity credit is established for a hybrid instrument, we may still consider the hybrid capital instrument in our qualitative assessment of the Strength of Member Support factor.

DEVELOPMENT ASSET CREDIT QUALITY SUB-FACTOR:

We assess this sub-factor qualitatively, primarily based on the credit quality of the development assets, and we assess the diversity of the portfolio in terms of geography and sectors, the level of exposure to riskier types of assets and obligor concentration risk.

The credit quality of the loans and guaranteed exposures, typically informed by a weighted average,[9] serves as the primary anchor for our assessment. Our estimation of the credit quality of those assets is based on combinations of: (i) our ratings for the borrowers in the MDB's portfolio; (ii) where there are no ratings but there is sufficient information on the loan portfolio, a rating committee's assessment of the average credit risk of an MDB's exposures according to our understanding of the principal sectors, geographies and concentrations in the loan portfolio;[10] or (iii) where information on the loan portfolio or a portion thereof is limited, we typically assume that the credit quality of such part of the portfolio is equivalent to a Caa1 rating,[11] consistent with our view that the development mission of MDBs is to lend into situations of low credit quality. In cases

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

[9] To estimate weighted average credit quality, we use a tool that associates idealized expected loss rates with ratings or reference points described in (ii) and (iii) and weigh them according to the nominal amount of development assets. For a link to Moody's idealized default and expected loss tables, please see *Rating Symbols and Definitions*; a link can be found in the "Moody's Related Publications" section.

[10] Our assessment of unrated development assets may also be informed by an MDB's own internal credit risk framework and assessments as well as ratings from other rating agencies. In considering an MDB's internal loan-grading system, we seek to assess how these loan grades generally relate to our ratings and create a mapping from the MDB's loan grades to Moody's rating scale. If we find that the MDB's grades tend to be generally higher than Moody's ratings, we may notch down from what a simple mapping would imply.

[11] In some cases, we may assume a different rating based on available information and our view of the portfolio.

where explicit guarantees of the entire loan amount exist, we typically use the higher of the guarantor or borrower rating.[12]

We expect MDBs to derive some benefit from preferred creditor status. In cases where we have particularly high confidence that an MDB will face no loss even under stressed conditions for its borrowers, we may incorporate some uplift into our estimate of credit quality. For example, where an MDB's operations are heavily geared toward sovereigns,[13] there is no track record of arrears and there is a track record of the supranational being paid despite the borrowers defaulting on other creditors, we typically incorporate an uplift, by one alpha score (e.g., from B to Ba), to our estimate of credit quality that serves as the primary anchor of our assessment.

In addition, we may incorporate an uplift based on the existence of credit protections. Credit protections, beyond de facto preferred creditor status, may also limit credit risk from development operations. Typical forms of credit protection include high-quality collateral, portfolio or loan guarantees by higher-rated entities, asset securitization (see box below for a more detailed description of how it may impact our assessment of capital adequacy), and insurance policies that result in a partial or full risk transfer.

Where we consider that these protections materially reduce potential losses in the portfolio, we may incorporate some uplift, typically limited to two alpha scores, to our estimate of credit quality.

The uplift that insurance mechanisms can provide to the credit quality of development assets is typically more limited than under an explicit guarantee mechanism, because insurance policies typically do not cover all scenarios of missed payment by the borrower, and even where the scenario is covered, the reimbursement by the insurer can happen well after the MDB incurs the loss.

Our overall assessment of development asset credit quality also considers the riskiness of different types of assets as well as portfolio concentration risk. These considerations may lead us to assign a different sub-factor score than indicated by our estimate of credit quality after any uplift for preferred creditor status and other credit protections. In particular, we consider exposure to equity investments. Equities typically carry higher risk than loans owing to a higher risk of a full investment loss as well as the risk of higher price volatility. We typically assign a lower score to this sub-factor in cases where an MDB has a large exposure to such investments.

Our assessment also considers portfolio concentration. An unusually high exposure to a single entity or to a limited number of entities typically constrains the score for this sub-factor. We may consider other measures of concentration, such as portfolio concentration at the sector and country levels using the Herfindahl-Hirschman Index (HHI).[14, 15]

The scoring table below describes the typical characteristics of a supranational institution for each scoring category. We generally do not expect all of the characteristics of a given institution to exactly match each of the listed attributes for any single scoring category. The factor score is typically assigned to the alpha category

12 For more details on how we consider partial guarantees, please see the "Other Considerations" section.

13 We typically consider an MDB's operations heavily geared towards sovereigns where more than 75% of total development assets are exposed to sovereigns, although we may still apply some uplift to our estimate of credit quality for an MDB that has a lower proportion of sovereign exposure if we view the benefit as material.

14 The HHI provides a measure of the concentration of individual sectors, countries or regions in relation to the relevant sectors, countries or regions as a whole. It is calculated by summing the squares of the exposures, with their exposure shares expressed as fractions. The HHI is expressed in a range of 0.0 to 1.0, where 0 indicates low concentration and 1 indicates very high concentration.

15 In some cases, concentration risk may be assessed as lower than indicated by an MDB's portfolio of development assets, for example in the presence of an Exposure Exchange Agreement (EEA), typically between two MDBs. Under an EEA, an MDB swaps a portfolio of development assets against another MDB's portfolio of development assets of the same credit quality but with different exposures. The EEA is primarily used by MDBs as a risk management tool to allow them to continue lending to some borrowers without exceeding their internal risk exposure limits. Where the usage of EEA results in a material diversification of the underlying portfolio, we typically consider the additional benefit in our assessment of the sub-factor score.

for which the issuer has the greatest number of characteristics, and the presence of one characteristic may not be sufficient to score the sub-factor at the respective level. For example, we may assign a score of Baa to a supranational institution whose development asset portfolio primarily consists of exposure to sovereigns that have strong credit quality (i.e., low A equivalent, incorporating preferred creditor status and credit protections) but with concentration risk that is characteristic of the Ba scoring category. However, there may be cases in which one credit weakness or strength is sufficiently important to a particular issuer that it is determinative of the factor score.

ASSET PERFORMANCE SUB-FACTOR — NON-PERFORMING ASSETS / DEVELOPMENT ASSETS:

The numerator is non-performing development assets (NPAs), and the denominator is total development assets.

Non-performing assets include non-performing loans, and take into account impairments or losses on equity investments, and called guarantees. For any period, we include the sum of all guarantees called during the period minus repayments during the period received from the obligors of the called guarantees. For comparability across institutions, we typically standardize the numerator to include loans (including guaranteed loans) with interest or principal payments that are 90 days or more overdue.[16]

For historical periods we use the weaker of (i) the ratio based on the most recently reported annual period; and (ii) the average ratio for the three most recently reported annual periods.

[16] We do not include in the numerator loans that are current (i.e., less than 90 days overdue) but for which there is a partial provision.

FACTOR

Capital Adequacy (50%)

Sub-factor	Sub-factor Weight	aaa	aa	a	baa	ba	b	caa	ca
Leverage: *Assets / Useable Equity*	20%	≤ 1x	1 – 1.5x	1.5 – 2.5x	2.5 – 4x	4 – 6x	6x – 10x	10x - 16x	> 16x
Development Asset Credit Quality	10%	Assets have overall extremely strong credit quality (Aaa or high Aa equivalent); equity investments typically account for a very limited share (less than 5% of total development assets); portfolio is extremely well diversified across sectors and geographies; concentration risk is very low, both in terms of single-name concentration and top 10 exposures (typically no obligor represents more than 5% of total development assets and top 10 obligors represent no more than 20%).	Assets have overall very strong credit quality (low Aa or high A equivalent); equity investments typically account for a small share (less than 5% of total development assets); portfolio is very well diversified across sectors and geographies; concentration risk is very low, both in terms of single-name concentration and top 10 exposures (typically no obligor represents more than 5% of total development assets and top 10 obligors represent no more than 20%).	Assets have overall strong credit quality (typically low A or high Baa equivalent); equity investments typically account for a limited share (less than 10% of total development assets); portfolio is well diversified across sectors and geographies; concentration risk is low, both in terms of single-name concentration and top 10 exposures (typically no obligor represents more than 10% of total development assets and top 10 obligors represent no more than 40%).	Assets are primarily of moderate credit quality (typically low Baa or high Ba equivalent), while the remainder may be in higher-risk categories; equity investments typically account for a somewhat limited share (less than 15% of total development assets); portfolio is somewhat diversified across sectors and geographies; concentration risk is fairly low (typically no obligor represents more than 15% of total development assets and top 10 obligors represent no more than 60%).	Assets are primarily of moderate to low credit quality (typically Ba equivalent), while the remainder may be in higher-risk categories; equity investments typically account for a moderate share (less than 20% of total development assets); concentration risk is somewhat high (typically, one obligor represents more than 15% of total development assets or top 10 obligors represent more than 60%).	Significant portion of assets is of moderate to low credit quality (typically low Ba or B equivalent); equity investments typically account for a large share (20 to 30% of total development assets); concentration risk is high (typically one obligor represents more than 30% of total development assets or top 10 obligors represent 70-80%).	Significant portion of assets is of high credit risk (typically Caa equivalent); equity investments typically account for a very large share (30 to 50%); concentration risk is very high (typically one obligor represents more than 40% of total development assets or top 10 obligors represent 80-90%).	Assets have extremely high credit risk (typically below Caa equivalent); extremely high single-name concentration risk (one obligor represents more than 50% of total development assets or top 10 obligors represent more than 90%).
Asset Performance: *Non-Performing Assets / Development Assets*	20%	≤ 0.5%	0.5 – 1%	1 – 3%	3 – 6%	6 – 10%	10 – 15%	15 – 20%	> 20%

Source: Moody's Investors Service

Adjustments to the Leverage Sub-factor Score

Trend

We may adjust the sub-factor score based on our forward-looking view of leverage. The adjustment is based on a qualitative assessment of the near-term leverage trend, typically over a two-year forward horizon, as well as scenario analysis and the sub-factor scoring ranges shown in the table above. We typically would apply an adjustment only where we expect a material change in leverage. The adjustment can be upward or downward and is limited to three scoring categories.

Impact of Profit and Loss on Leverage

We may also adjust the sub-factor score to take into account the impact of retained profits or future losses on leverage. Recurrent losses negatively affect capital levels and weaken the institution's ability to absorb shocks, but losses that we view as temporary are not likely to lead us to apply a negative adjustment. Conversely, where an institution has consistently been able to use retained earnings to build up its capital base and is expected to continue to do so, we may apply a positive adjustment. The level and consistency of retained earnings over a number of years is an important indicator in this respect. Other indicators, such as return on average assets or net interest margin, also inform the assessment of the impact of profitability on leverage. The adjustment can be upward or downward and is limited to one scoring category. We limit the potential upward adjustment because of the non-profit-oriented nature of these institutions. The downward adjustment to this sub-factor is limited because losses would normally be offset by additional capital contributions from members; if they are not, it would affect our view of leverage trend and member support.

Adjustment to the Development Asset Credit Quality Sub-factor Score

Trend

We may adjust the sub-factor score based on our forward estimate of the quality of development assets. The adjustment is based on a qualitative assessment of the near-term development asset credit quality trend, typically over a two-year forward horizon, which may be based on scenario analysis. We typically apply an adjustment only where we expect a material change in development asset credit quality. The adjustment can be upward or downward and is limited to two scoring categories.

Adjustments to the Asset Performance Sub-factor Score

Trend

We may adjust the sub-factor score based on our forward-looking view of asset performance. The adjustment is based on a qualitative assessment of the near-term asset performance trend, typically over a two-year forward horizon, which may be based on scenario analysis. We typically apply an adjustment only where we expect a material change in asset performance. The adjustment can be upward or downward and is limited to three scoring categories.

Excessive Development Asset Growth

We may also adjust the sub-factor score downward if there is excessive growth in development assets. Development asset growth in excess of 10% a year over a three-year period typically triggers closer analysis to gauge whether this growth in operations may be an indicator of an aggressive posture that could pose challenges to the entity in the future. In our assessment, we typically consider the origin and nature of the growth, together with any other mitigating factors. At the same time, we recognize that MDBs — because of the counter-cyclical nature of their business — typically increase their lending in times of economic stress in their borrowing countries.

We typically apply a downward adjustment by one scoring category if growth exceeds 10% a year over three years. If the sub-factor score is already very low, e.g., in the caa category, we may not adjust the score because the problem loan ratio may already reflect the consequences of high loan growth.

We also may not consider that there is excessive development asset growth where an MDB is in ramp-up mode, and rapid growth in operations is relative to a small base. However, in such cases, the asset performance trend adjustment would typically incorporate a forward view that NPAs will grow well above current levels, because portfolio problems take time to become apparent. Similarly, growth in development assets relative to MDBs with similar types of operations and exposures is an important consideration in our assessment. For example, in cases where an MDB continues to rapidly expand its operations in a region or a sector where, after a period of high growth, other MDBs are slowing down their growth or even reducing their exposures, it may be an indication that the MDB is taking excessive risk positions.

We are likely to apply a downward adjustment of more than one scoring category in cases where growth in development operations is significantly higher than 10% a year over three years, or is concentrated in high-risk exposures (typically B equivalent or below). A downward adjustment by three scoring categories could be warranted if both conditions apply.

EXHIBIT 3

Capital Adequacy: Adjustments to Sub-factor Scores

Sub-factor	Metric	Sub-factor Weighting / Adjustment
Leverage	Assets / Useable Equity	20%
*Adjustments to Sub-factor Score**	*Trend*	*[-3 to +3]*
	Impact of Profit and Loss on Leverage	*[-1 to +1]*
Development Asset Credit Quality	**	10%
*Adjustment to Sub-factor Score**	*Trend*	*[-2 to +2]*
Asset Performance	Non-Performing Assets / Development Assets	20%
*Adjustments to Sub-factor Score**	*Trend*	*[-3 to +3]*
	Excessive Development Asset Growth	*[-3 to 0]*

*The range of the adjustment indicates the potential number of scoring categories of upward or downward adjustment relative to the initial score.

**This sub-factor has no metric.

Source: Moody's Investors Service

How We Assess the Impact of Asset Securitization on Capital Adequacy

MDBs may securitize parts of their loan portfolios to reduce credit risk and to free up capital. Securitization can be used to support increased lending or to enhance capital adequacy. Securitization can have an impact on the Capital Adequacy factor scores principally through our assessment of the Development Asset Credit Quality sub-factor but also through our forward-looking assessment of the Leverage sub-factor, which depends in part on our expectations of how the freed-up capital will be used.

In assessing the Development Asset Credit Quality sub-factor for MDBs that have entered into synthetic securitizations, considerations include the structural features of the securitization (including the credit quality and type of assets for which the risk is transferred) and the size of the securitized assets relative to the size of the overall development asset portfolio.

In synthetic securitizations, the credit risk of a pool of assets (or reference portfolio) can be transformed into different risk exposures using tranching. The credit risk of the reference portfolio is sliced into several tranches, which typically include a senior, a mezzanine and a junior tranche. The junior tranche is typically the first to absorb credit losses and the senior tranche is typically the last. As a result, the senior tranche is subject to lower expected loss and can achieve a higher credit quality than the reference portfolio itself.

When MDBs use synthetic securitizations, they typically sell the mezzanine tranches to external investors and retain the junior (or first loss) piece along with the senior tranche. In doing so, they are no longer exposed to the portion of the credit risk of the assets that corresponds to the mezzanine tranche. This means that the credit risk of the pool of assets to which the MDB is exposed has been transformed into the credit risk of the junior and senior retained tranches. Thus, in our overall assessment of the Development Asset Credit Quality sub-factor, we typically consider only the credit risk of the retained tranches. We typically assess their credit quality based on the analytical considerations described in our methodology for rating collateralized synthetic obligations (CSOs).[17] Within the reference portfolio, the estimation of the credit quality of the assets is based on the same principles as discussed above in the Development Asset Credit Quality sub-factor section.

Securitization may also have an impact on the MDB's portfolio by raising or lowering the concentration risk toward certain geographies or sectors.

Synthetic securitizations, as described above, may also impact our forward-looking assessment of the Leverage sub-factor, if leverage is expected to decrease. Many MDBs determine their capital requirements by using economic capital considerations and risk-weighted assets. By reducing risk-weighted assets on the MDB's balance sheet, a securitization transaction frees capital and improves point-in-time capital adequacy metrics. However, we not only consider the immediate impact but also take into consideration how the freed-up capital may be used. Where we expect the freed-up capital to be used to further expand an MDB's activities, through additional lending, we incorporate this consideration into our forward-looking view of the Development Asset Credit Quality and Leverage sub-factors and may adjust the sub-factors scores correspondingly.

Source: Moody's Investors Service

Assigning the Capital Adequacy Factor Score

In unusual cases, we may assign a factor score that is different from the adjusted factor score, because the issuer's characteristics as captured by the sub-factors, metrics and their respective adjustments do not fully reflect our overall view of its capital adequacy or leverage, for example where some off-balance sheet items not already included in the leverage ratio materially alter the risk profile.

Factor: Liquidity and Funding (50%)

Why It Matters

A supranational institution's liquidity is an important indicator of its ability to meet its obligations. For a financial institution, a lack of high-quality assets that can be readily sold at minimal losses when needed is often a primary cause of failure, given the typically large mismatch between the maturities of its assets and liabilities.

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

In addition, MDBs tend not to have stable deposits (with a limited number of exceptions), and most do not have access to the liquidity facilities that central banks provide to commercial banks, which makes liquidity at hand and the ability to access credit markets particularly important for this sector.

The factor comprises two sub-factors:

Availability of Liquid Resources

The composition and size of a supranational institution's liquid assets are important indicators of its capacity to readily sell assets in order to offset a deterioration in its cash inflows or its access to funding.

Quality and Structure of Funding

A supranational institution's ability to consistently access stable financing sources is an important element of its ability to finance its business and avoid a liquidity squeeze. Many MDBs rely exclusively on wholesale markets to fund their operations. Others tap loan markets or obtain funding from other financial intermediaries — bilateral or multilateral — with a development focus. Whether the MDB is looking to the bond market or its relationship lenders, the stability and breadth of the funding channel is dependent on the market's or the lenders' perception of the institution's creditworthiness and financial condition. Adverse news or generalized market disruptions can cause funding interruptions.

The more diverse an MDB's funding sources are — by markets and types of lenders —– the less likely that the entity will have difficulties in refinancing its debt. An entity with only intermittent or limited access to funding runs higher refinancing risks. Limited access can also result in a higher cost of funding, lower profitability, shorter duration of liabilities, larger asset-liability mismatches, or a need to sell assets ahead of maturity, potentially leading to losses that reduce capital.

How We Assess It for the Scorecard

AVAILABILITY OF LIQUID RESOURCES SUB-FACTOR — LIQUID ASSETS / NET CASH OUTFLOWS:

The numerator is liquid assets based on the latest reported financials, and the denominator is estimated net cash outflows in the 18 months following the most recently reported period.

Liquid assets include cash and cash equivalents, deposits with a term of less than one year held by financial institutions rated Baa3 or higher, treasury assets rated A2 or higher,[18] and committed, unrestricted[19] and undrawn credit lines with Prime-1 counterparties with a maturity greater than two years. In cases where securities are unrated, we do not include them in the numerator. We also do not include committed but undisbursed capital contributions in the calculation of the ratio.

Estimated net cash outflows are outflows from mandate activities[20] minus inflows from mandate activities[21] plus debt repayments (both principal and interest), net derivative flows[22] and repurchase agreement (repo) flows.[23] The calculation of the ratio assumes no access to funding over the period covered (apart from already committed, unrestricted and undrawn credit lines with Prime-1 lenders with a maturity greater than two years, which are included in the liquid assets calculation). We do not include scheduled cash inflows from

18 Where the treasury assets are not rated by Moody's, we may also consider the ratings of other credit rating agencies.

19 Examples of possible restrictions include Material Adverse Change or Material Adverse Litigation clauses, covenants that materially constrain additional borrowing, or restrictions on usage of the funds for purposes other than debt servicing.

20 Outflows from mandate activities include approved and expected loan and guarantee disbursements, and operating costs.

21 Inflows from mandate activities include contractual repayments from borrowers and other cash inflows related to the operations of the MDB, such as commissions and other fees related to the extension of guarantees.

22 Net derivative flows are net cash flows from derivative assets.

23 In this scenario analysis, maturing repo and reverse repo agreements with pledged securities rated A3 or lower are assumed to be repaid at maturity and are recorded in the cash flow forecast. Repos and reverse repos with pledged securities rated A2 or higher are assumed to be rolled over.

shareholders. For MDBs that rely on deposits as a source of funding, we assume some withdrawal rate under a stress scenario, the level of which is typically set at 1-2 times the peak historical level, based on our view of the future stability of those deposits, considering the breakdown between demand and time deposits. Similarly, for MDBs that extend guarantees, we typically assume a level set at 1-2 times the peak historical level of guarantee calls, based on the underlying credit quality of the counterparties and credit conditions in the region.

QUALITY AND STRUCTURE OF FUNDING SUB-FACTOR:

We assess this sub-factor qualitatively based on the institution's funding structure. Considerations may include the track record of bond issuance, the cost of funding relative to peers, the availability of credit lines and the diversity of funding sources and the investor base.

We consider an established presence in global capital markets, illustrated by the regular issuance of debt instruments, as positive in our assessment of funding structure. Indications that may suggest a very strong capacity to access global capital markets include acceptance by central banks and clearing houses of bonds issued by an MDB as collateral.[24] The absence of a track record, or a history of issuances only in regional markets, typically weighs negatively in our assessment.

The cost of funding provides a further indication of an MDB's capacity to access credit markets. Observed loan or bond issuance costs (in relation to past issuances and relative to comparable issuances of similarly rated peers), spreads (either on bonds or on credit default swaps) may provide an indication of the market's appetite for an MDB's debt. Where these indicators suggest that the MDB is paying a significantly higher interest rate than would be expected relative to comparable peers, we typically assign a lower score for this sub-factor. In considering issuance costs in our assessment, we also may consider market or other circumstances that may distort the signals sent by those indicators. MDBs considered benchmark issuers in the supranational sector or ones that are able to issue regularly with very low spreads typically receive higher scores for this sub-factor. In our assessment, we may also consider market-implied ratings (MIR), based on bond prices or credit default swaps. Where there is a major gap with respect to the issuer rating, or the MIR is at a low absolute level, we may consider the MDB's market access impaired; however, we would typically also consider trends in the MIR, local market conditions and peer comparisons.

Not all MDBs choose to issue securities. The availability of credit lines with financial institutions therefore may be another important consideration in our assessment of this sub-factor, and a track record of securing credit lines with a broad range of prime lenders (large, international commercial banks) typically leads to higher scores for this sub-factor. Where access to credit lines (including commitments to a supranational institution's syndicated loans) is restricted to regional lenders or development financial institutions (DFIs), it may indicate limited or no capacity to obtain financing from other types of lenders, which typically leads to lower scores for this sub-factor. We also typically consider the terms and conditions of the credit lines, since restrictions on usage (for specific projects or lending in particular countries, for example) or stricter termination clauses (either at the discretion of the creditor or related to specific events) also indicate lower appetite from financial institutions to renew those lines.

The diversification of funding sources and the investor base is also part of our assessment of funding structure. Important considerations include the capacity to access non-local markets, to access markets in various currencies and the range of investors in the MDB's bonds. The more varied and diverse the investor base, the less likely that an MDB finds itself negatively impacted by unfavorable funding conditions or stress in specific markets. An MDB that funds itself only in its local market typically receives lower scores for this sub-factor.

[24] E.g., recognition under Basel IV as High-Quality Liquid Assets.

FACTOR

Liquidity and Funding (50%)

Sub-factor	Sub-factor Weight	aaa	aa	a	baa	ba	b	caa	ca
Availability of Liquid Resources: *Liquid Assets/Net Cash Outflows*	Variable	≥ 200%	120 – 200%	75 – 120%	25 – 75%	15 – 25%	10 – 15%	5 – 10%	< 5%
Quality and Structure of Funding	Variable	Long-established presence in international bond markets and considered a benchmark issuer in the supranational sector; bonds generally accepted as collateral by central banks and clearing houses and considered liquid securities for bank regulatory purposes; access to an extremely diverse range of prime lenders and track record of successful syndicated issuance; ability to fund in different global markets, including key global currencies; and extremely diversified investor base, including buy-to-hold investors such as central banks and sovereign wealth funds (SWFs).	Well-established presence in international bond markets and considered a benchmark issuer in the supranational sector; typically a smaller issuer with consequently somewhat lesser presence and liquidity; bonds access to a diverse range of prime lenders and track record of successful syndicated issuance; ability to fund in different global markets, including key global currencies; and highly diversified investor base, including buy-to-hold investors such as central banks and SWFs.	Established presence in international bond markets; not considered a benchmark issuer but proven ability to fund at reasonably low spreads over benchmark issuers; demonstrated access to prime international lenders; some track record of successful syndicated loans; ability to fund in different global markets but mainly focuses on own currency issuance; diversified investor base, including major institutional investors.	Established presence in regional bond markets; some track record of international market access, including successful repayment of previous issues; moderate premium over risk-free equivalents (150-300 bps); mainly funded by local banks in local/regional currencies and development financial institutions(DFIs); limited access to lines of credit from prime international lenders; mainly focused on own currency issuance, but some ability to fund in international markets; investor base is somewhat diversified but limited by investor mandate constraints (e.g., only high-yield or emerging-market funds).	Some presence in regional markets and rare presence in international markets; or large premium over risk-free equivalents (>300 bps); or mainly funded by local banks and DFIs in local/regional currencies; or reliant on regional markets for issuance, reasonably diversified access to DFI and local lenders; or investor base mainly constrained to regional financial institutions.	No bond issuance in major markets, possibly some presence in small regional markets; or very high premium over risk-free rate (> 500 bps) but unlikely to have any bond market access; or funding predominantly or exclusively from DFIs, but with restrictions on usage for debt repayments; or exclusively relies on a single regional market for issuance, or a handful of DFI/local lenders;	No bond issuance in any market; funding predominantly or exclusively from DFIs, but with meaningful restrictions on usage, e.g., for debt repayments; or reliance on handful of DFIs/local lenders that have limited resources or are hesitant or unwilling to lend;	No bond issuance in any market; no active credit lines; no access to funding.

Source: Moody's Investors Service

Adjustments to Availability of Liquid Resources Sub-factor Score

Trend

We may adjust the sub-factor score based on our forward-looking view of liquid asset coverage beyond 18 months. Considerations that may lead to a materially different level of liquid asset coverage typically include sizable bullet debt-repayments beyond 18 months and large mismatches between operating inflows (e.g., loan reimbursements) and outflows (e.g., called guarantees or loans disbursements). The horizon for our adjustment is typically limited to 36 months, but where we do have visibility and the trend is material, there is no maximum horizon for our adjustment. The adjustment can be upward or downward and is limited to three scoring categories.

Access to Extraordinary Liquidity

We may also adjust the sub-factor score based on the presence of special liquidity mechanisms that effectively mitigate liquidity risk. We consider access to central bank financing the strongest form of a liquidity support mechanism, taking into account the capacity and commitment of the central bank to extend liquidity to an MDB. Other forms of liquidity support could be the availability of extraordinary liquidity resources at a group level for associates and subsidiaries. We may apply a positive adjustment to reflect access to liquidity unconditionally available from a liquidity provider that has a Baa3-equivalent credit quality or higher.[25] The adjustment can only be upward and is limited to three scoring categories.

EXHIBIT 4

Liquidity and Funding: Adjustments to Sub-factor Scores

Sub-factor	Metric	Sub-factor Weighting / Adjustments
Availability of Liquid Resources	Liquid Assets / Net Cash Outflows	Variable weight
*Adjustments to Sub-factor Score**	*Trend*	*[-3 to +3]*
	Access to Extraordinary Liquidity	*[0 to +3]*
Quality and Structure of Funding	**	Variable weight

*The range of the adjustment indicates the potential number of scoring categories of upward or downward adjustment relative to the initial score.

**This sub-factor has no metric.

Source: Moody's Investors Service

We combine the two-sub factors using variable weights based on the score for Quality and Structure of Funding (see Exhibit 5), recognizing that supranational institutions that have stronger access to funding generally hold and need less liquid assets on their balance sheet. As a corollary, supranational institutions with less secure market access need to hold more liquidity.

25 In cases where the liquidity provider is unrated, we may use a credit estimate. Please see our cross-sector methodology for the use of credit estimates. A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section of this report. We may also use a rating committee's assessment of the credit quality of the liquidity provider, where a rating committee has the expertise to make such an assessment, or we may use a rating that is based on an affiliate's rating, after considering the liquidity provider's legal position and the importance of its activities to its corporate or government family.

EXHIBIT 5

Combining Sub-factors Using Variable Weights

Quality and Structure of Funding Score	Availability of Liquid Resources Weight	Quality and Structure of Funding Weight
aaa	20%	80%
aa	20%	80%
a	30%	70%
baa	40%	60%
ba	40%	60%
b	50%	50%
caa	60%	40%
ca	70%	30%

Source: Moody's Investors Service

Assigning the Liquidity and Funding Factor Score

In unusual cases, we may assign a factor score that is different from the adjusted factor score, because the issuer's characteristics as captured by the sub-factors, metrics and their respective adjustments do not fully reflect our overall view of its liquidity and funding risk profile. For example, in cases where there is an absence of a debt issuance track record, the Quality and Structure of Funding sub-factor score and the factor score would typically be constrained by apparently uncertain access to capital markets. However, if the institution's business model does not require any issuance of debt, we would typically take that into account in assigning the factor score.

Qualitative Adjustment Factors

The Capital Adequacy and the Liquidity and Funding factors represent the key drivers of our assessment of an institution's intrinsic financial strength (IFS). However, assessments of the operating environment and the quality of management are also important components of our analysis. To capture these considerations, we may adjust the preliminary IFS outcome that results from the Capital Adequacy factor and the Liquidity and Funding factor. The result of this analysis is the adjusted IFS outcome.

Why It Matters

Operating Environment

Risks arising from the MDB's operating environment, including those which accentuate economic or financial linkages among borrowing entities, are important because a worsening operating environment could signal higher future losses and erosion of capital, particularly where that deterioration could exacerbate risks arising from correlated exposures. Linkages could be the result of operating within a currency union or extending loans to borrowers active in one industry, such as oil commodity exporters, among other examples. Where correlations exist among regions or sectors, adverse developments can cause asset quality to deteriorate in a significant portion of the portfolio at the same time, which strains capital buffers and may negatively impact access to funding.

Quality of Management, Including Risk Management and Governance

The quality of management, in particular risk management and governance considerations, is important because weaknesses in management practices heighten development asset or liquidity risks. Governance and internal risk-management practices have been generally strong among supranational institutions. However, practices that are materially weaker than the norm, or that deteriorate over time, may weigh negatively in our assessment of the supranational institution's credit profile. Conversely, practices that better equip an institution to anticipate and withstand solvency and liquidity stresses are credit strengths.

How We Assess It for the Scorecard

OPERATING ENVIRONMENT:

We assess operating environment risk qualitatively, and operating environment adjustments are primarily applied in unusual cases. We typically apply this adjustment where there are warning signs of a rising risk of a broad material deterioration in the supranational's credit metrics, resulting from ongoing or anticipated developments in the credit markets in which it operates. Considerations that may inform our view on operating environment risks include whether the supranational is active in politically or economically volatile regions or sectors and whether the correlation among regions and sectors in its development asset portfolio is elevated. For example, highly correlated operations and development assets portfolios could be affected by commodity price swings, a regional economic or banking sector crisis or geopolitical conflict. Our views on the relevant operating and macroeconomic environments are informed by our sovereign risk outlook for the relevant regions, as well as forecasts for key macroeconomic variables. Any notching we apply in this adjustment factor would reflect broad and potentially severe risks to an MDB's operations and could also reflect relatively large uncertainty surrounding the timing and severity of such shocks. For clarity, we do not double count with any trend adjustments made to sub-factor scores in other factors.

The adjustment can only be downward and is limited to three alphanumeric notches.

QUALITY OF MANAGEMENT, INCLUDING RISK MANAGEMENT AND GOVERNANCE:

This qualitative assessment is based on several considerations, including the willingness and capacity of the board and senior executives to identify and address key risks and whether there is an independent risk management officer (see Exhibit 6). The availability and robustness of data as well as the frequency of reporting are also important considerations, because they underpin risk-management decision-making.

We generally apply an adjustment only in cases where we have strong indications that management quality is superior or has clear weaknesses. Although positive adjustments are relatively rare, we may adjust upward the IFS of an institution that shows an outstanding willingness to adopt best-in-class practices, for example, through voluntary monitoring, supervision and dialogue with central banks or financial regulators, including through active discussion and review of internal models with financial regulators. Conversely, the IFS of an institution that exhibits weak risk management standards or that falls short of meeting its own self-imposed standards is likely to be adjusted downward. Considerations may include a track record of breaching its internal minimum liquidity coverage ratio or a reclassification of loans as non-performing after an external audit.

The adjustment can be upward by one alphanumeric notch and downward by up to two alphanumeric notches.

EXHIBIT 6

Superior Quality of Management (+1 alphanumeric notch)	Typically: Very strong willingness and capacity to adopt best-in-class practices. Very high awareness of the key risks of the institution by both board and senior executives, who together establish the institution's risk-taking guidelines, review these guidelines at least annually and meet to discuss all material risk issues at least quarterly. Policies require senior managers to formally review material risk issues at least monthly and encourage ongoing risk discussions. Dedicated chief risk officer (CRO), who reports independently to the board. Risk function is fully independent from business line management, sets credit limits and takes part in decisions relating to investments and extensions of credit, supervises and monitors adherence to standards. Policies, organizational structure and executive actions show that risk management is a key component of the institution's decision-making processes. Very high-quality and robust information systems and practices. Risks are estimated individually and by using one or more measures of aggregate risk. Quarterly credit portfolio reviews as well as regular topical customer or industry credit reviews. Regular, rigorous stress analyses on all material risks of the institution.
Developing Management Quality (-1 alphanumeric notch)	Typically: Modest awareness of the key risks of the institution by the board and senior executives and some areas of weakness in the governance structure. Senior executives establish the institution's risk-taking guidelines, with very limited involvement of the board. Risk issues may be discussed only annually by the board and senior executives. Developing risk governance structure: e.g., the chief risk officer (CRO) has other material responsibilities, or there are weaknesses in the CRO's functions or reporting lines. Risk function is not fully independent and may report to business line management. Developing information systems. Uneven quality, availability and timeless of risk data: some weakness in measuring and monitoring risks. Formally scheduled annual credit portfolio reviews are less frequent than annual, or ad hoc only, but with reasonable coverage of the portfolio. Use of stress tests is relatively limited.
Weaker Quality of Management (-2 alphanumeric notches)	Typically: Limited awareness of the key risks of the institution by the board and senior executives and a generally weak risk governance structure. Board not involved in establishing risk-taking guidelines or strategy of the institution. Policies do not require regular meetings of executives to discuss risk issues or these meetings may be infrequent (e.g., once a year or less); discussions may be too superficial to be effective. No dedicated chief risk officer (CRO) overseeing all business risks. Risk function not independent from business line management. Poor or limited information systems, leading to weak quality, availability or timeliness of risk data. Credit portfolio reviews are very limited. Stress test measures are not used or are cursory.

Source: Moody's Investors Service

Factor: Strength of Member Support

After arriving at an adjusted IFS outcome, we consider the strength of member support. This factor may increase the adjusted IFS outcome by one to three alphanumeric notches.[26] The result is the scorecard-indicated outcome.

We classify the strength of member support in five categories: "Very High," "High," "Moderate," "Low" and "Very Low" (see Exhibit 7).

EXHIBIT 7

Strength of Member Support

Member Support Score	Member Support	Uplift to Adjusted Intrinsic Financial Strength Outcome
aaa-aa3	Very High	+3
a1-a3	High	+2
baa1-baa3	Moderate	+1
ba1-b3	Low	0
caa1-ca	Very Low	0

Source: Moody's Investors Service

26 In exceptional circumstances, we may assign a scorecard-indicated outcome that is more than three notches above the adjusted IFS outcome.

Why It Matters

Expectation of member support, beyond the ongoing involvement of members already captured in the IFS outcome,[27] is a defining characteristic of the MDB sector, given that the members set up the institution specifically to further their developmental or other objectives. Strength of member support is essentially driven by (1i) the ability of members to provide support; and (2ii) their willingness to support the institution. The credit profile of a supranational institution whose members have limited financial flexibility or limited incentive to extend assistance when needed would generally be no higher than its stand-alone assessment, as indicated by the adjusted IFS outcome.

The factor comprises two sub-factors:

Ability to Support

The ability of members to extend financial assistance when needed may be critical to an institution's ability to advance its objectives or shore up liquidity. Members with strong credit profiles tend to have more leeway to support an institution.

Willingness to Support

Contractual support is a strong indication of the willingness of an MDB's shareholders to financially support the institution. The most common form of contractual support for MDBs is callable capital, which is a contractual obligation to provide additional capital if the MDB requests it. In most cases, an MDB can only do so to service debt.

Support, beyond callable capital and other types of contractual support, is another important element of the strength of member support. Not all MDBs have callable capital, which is typically the clearest and strongest manifestation of shareholders' willingness to support the MDB in case of need. However, members can provide support through other means, or may be committed to equipping the MDB with a sufficiently large paid-in capital cushion in relation to its mandated business operations.

How We Assess It for the Scorecard[28]

ABILITY TO SUPPORT — WEIGHTED AVERAGE SHAREHOLDER RATING:

Our assessment for this sub-factor is based on the weighted average credit rating of all shareholders. The weight is based on the share of subscribed capital or, where there is no capital, the weight is based on the pro rata share of members' budget contributions or of guarantees extended by members. Subscribed capital includes both paid-in and callable capital. We may use credit estimates[29] to assess the credit quality of shareholders that we do not rate. We may also use a rating committee's assessment of the credit quality of unrated shareholders where a rating committee has the expertise to make such an assessment. However, when information on an unrated shareholder is limited, we typically assume that credit quality is equivalent to a Caa1 rating.

27 Ongoing member involvement, beyond the initial capital injections, includes periodic capital increases to support the extension of operations, specific liquidity mechanisms and active board participation.

28 Because support is included in the scorecards for MDBs and OSEs, we do not apply our methodology for government-related issuers.

29 For more information, please see our methodology that describes the use of credit estimates. A link to a list of our sector and cross-sector credit rating methodologies can be found in the "Moody's Related Publications" section.

WILLINGNESS TO SUPPORT — CONTRACTUAL SUPPORT:

Our assessment of contractual support is based on the ratio of callable capital to total (gross) debt. The numerator is callable capital, and the denominator is total (gross) debt, in each case as of the most recent annual reporting period.

WILLINGNESS TO SUPPORT — NON-CONTRACTUAL SUPPORT:

We assess this sub-factor qualitatively based on several considerations, including the institution's track record of capital increases, whether shareholders have remained current on their capital payments, the importance of the institution's mandate for the shareholders as well as their reputational risk in the event the institution fails to repay its debt.

Past capital injections, either in the form of general capital increases to support an extension of operations or in the form of emergency support to address solvency or liquidity concerns, provide a good indication that the entity may receive support in the future. Of similar importance is whether shareholders have paid capital pledges in full and on time. Capital installments are typically made according to a pre-defined schedule to dilute the budgetary impact for shareholders. A history of arrears by some shareholders typically leads to lower scores in this sub-factor. We usually consider capital contributions to be in arrears when they are more than 90 days overdue, although we may consider some contributions that are overdue by more than 90 days not to be in arrears when we have a reasonable degree of certainty that they will be paid in the subsequent three to six months and that the reason for the delay is unrelated to a lack of capacity or willingness to pay. For example, disbursement of contributions by some shareholders may require legislative approvals or be subject to other forms of contingencies that are not reflective of a lack of willingness to support.

Voluntary increases in shareholding in addition to calls on capital pledges may weigh positively in our assessment of non-contractual support, as may the presence of hybrid capital instruments that do not qualify as equity under our definition.[30] Even if these capital instruments are not considered equity in our analysis of leverage metrics, we may consider that they indicate strong shareholder support. Such instruments may include redeemable shares where the MDB's shareholders retain significant discretion over the timing of redemption, and certain types of subordinated debt instruments with relatively weak loss-absorption features.

In assessing this sub-factor, we also consider the importance of the institution's mandate for its members. The greater the perceived importance of the mandate, the higher the likelihood of support. Where the institution's mandate aligns with the policies of its members, such as the funding of vital infrastructure projects or the advancement of other economic or social policies, it is more likely that members will step in to support the institution. Also, an institution whose mandate allows it to act as a backstop for members in a crisis situation typically would receive a higher score for this sub-factor. Considerations such as member participation in board meetings or in the decision-making process, including participation by representatives of key ministries, may also provide indications of the members' attitudes toward the relevance of the institution. Conversely, an institution's departure from the mandate or a limited record of fulfilling it would typically weigh negatively in our assessment.

In some cases, where there is a market perception of a strong linkage between members and the supranational institution, there may be a stronger propensity among members to support the institution in order to avoid any reputational risk related to a failure of the institution.

In our assessment of non-contractual support, we typically take into account the institution's overall importance for members and typically consider any perceived difference in its importance for individual members or for a bloc of members. Individual shareholders may advance their interests by participating in an

[30] For more details on our definition of capital, see the Capital Adequacy factor section.

MDB where interests are closely aligned. Conversely, shareholders that perceive they are marginalized by the decision-making process, for instance where the orientations of projects do not align with their interests, could be less willing to support the institution. We also consider the rules that govern the withdrawal of a shareholder from a multilateral institution. In general, the harder it is for a shareholder to obtain reimbursement of equity and the longer the process takes, the stronger the effective support. We may also view positively rules that ensure swift replacement of a withdrawing member's equity by other shareholders.

Adjustments to Willingness to Support Sub-factor Score

Adjustments to Contractual Support — Strong Enforcement Mechanisms

We may adjust the Contractual Support score upward if strong mechanisms are in place to ensure the rapid disbursement of callable capital.

Should a call occur, members are likely to pay in capital at different speeds based on the availability of funds and other budgetary and administrative considerations. Where there are mechanisms in place that ensure a very rapid disbursement of callable capital after a call (e.g., a maximum time frame for payment specified in the statutes of the MDB), we may apply a positive adjustment to the sub-factor score.

One of the strongest enforcement mechanisms is the joint-and-several legal clause for callable capital. Where this clause exists, and where we consider that shareholders would honor their commitment, we typically apply a positive adjustment by at least one scoring category.

We may also adjust the score upward in the absence of explicit joint-and-several legal clauses, where a supranational has put in place other mechanisms to ensure the payment of contractual obligations other than on a pro rata basis. The magnitude of the adjustment would typically be based on (i) the nature and quality of the pledge, e.g., the pledge may be included in the statutes of the supranational or a letter of comfort, or made through oral communication; and (ii) the credit standing of the shareholders that have given the pledge. Where we view the largest members or members with the strongest credit profiles as likely to compensate the institution when other members renege on their commitments, regardless of the nominal amount of their own individual pledges being surpassed, we typically provide more uplift to the sub-factor score. The adjustment can only be upward and is limited to two scoring categories.

Adjustments to Contractual Support — Payment Enhancement

We may also adjust the Contractual Support score based on the presence of payment enhancements that provide higher certainty that callable capital will be provided. We typically provide uplift only where (i) the payment enhancement covers a sizable share of total callable capital (typically more than 30%); (ii) the process for calling on capital is expected to be essentially free from timing and logistical constraints; and (iii) the terms of the mechanism provide a very high degree of assurance that the proceeds of the mechanism will be made available to the MDB in full, without challenge and within a month in the event of the failure of a shareholder to pay in capital in accordance with the timing and other terms of the capital call. The adjustment for payment enhancement can only be upward and is limited to one scoring category.

FACTOR

Strength of Member Support

Sub-factor/ Metric	Weight	aaa	aa	a	baa	ba	b	caa	ca
Ability to Support: *Weighted Average Shareholder Rating*	50%	aaa	aa	a	baa	ba	b	caa	ca
Contractual Support: *Callable Capital / Total Debt*	25%	≥ 100%	66.7 – 100%	50 – 66.7%	33.3 – 50%	16.7 – 33.3%	10 – 16.7%	5 – 10%	< 5%

		Very High	High	Medium	Low	Very Low
Non-contractual Support	25%	MDB has a track record of general capital increases or has received other forms of material support from shareholders (e.g., grants); no track record of arrears on capital contributions, capital increases have been paid in full and on schedule; MDB is considered to fulfill a policy mandate that is viewed as having very high strategic, economic or financial importance for its shareholders; and a failure or default of the MDB would impair the shareholders' reputations.	MDB has a track record of general capital increases or has received other forms of material support (e.g., grants); no track record of arrears on capital contributions, capital increases have essentially been paid in full and on schedule; MDB is considered to fulfill a policy mandate that is viewed as important for its shareholders from a strategic, economic or financial perspective; a failure or default of the MDB could have some negative repercussions for shareholders' reputations.	MDB has a track record of general capital increases or has received other forms of support (e.g., grants); generally no arrears in capital contributions although some small delays in payments due may have occurred in the past with arrears on no more than 10% of called-in capital; MDB's policy mandate has moderate strategic, economic or financial importance for shareholders; a failure or default of the MDB would have limited impact on shareholders' reputations.	MDB has no track record of general capital increases; or delays in payments have occurred with arrears on no more than 20% of called-in capital; or MDB's policy mandate has very limited importance for shareholders; or a failure or default of the MDB would have very limited impact on the shareholders' reputations.	MDB has no track record of general capital increases and extremely limited prospects for large future increases; or delays in payments have occurred with arrears on more than 20% of called-in capital; MDB's policy mandate has negligible importance for shareholders; or a failure or default of the MDB would have essentially no impact on the shareholders' reputations.

Source: Moody's Investors Service

Assigning the Strength of Member Support Factor Score

In unusual cases, we may assign a factor score that is different from the adjusted factor score, because the issuer's characteristics as captured by the sub-factors, metrics and their respective adjustments do not fully reflect our overall view of member support. For example, in cases where we consider that non-contractual mechanisms offer greater probability of support than would normally be associated with such mechanisms,[31] we would typically take that into account in assigning the factor score. Similarly, where a small number of members in the supranational institution exhibit capacity and willingness to support that surpass that of other members and those members have a substantial participation in the MDB, we may take that into account in assigning the factor score, even in the absence of enforcement mechanisms such as joint-and-several pledges. Conversely, we may assign a lower factor score if we see some risks that shareholders representing a large share of the MDB's capital are likely to face stress at the same time owing to their correlated profiles. Our assessment may be informed by our sovereign risk outlook for the relevant shareholders, as well as forecasts for key macroeconomic variables.

Other Considerations

Ratings may reflect consideration of additional factors that are not in the scorecard, usually because the factor's credit importance varies widely among the issuers in the sector or because the factor may be important only under certain circumstances or for a subset of issuers. Such factors include financial controls, the quality of financial reporting, and assessments of environmental and social considerations. Regulatory, litigation, liquidity, technology and reputational risk, as well as changes to demand patterns, can also affect ratings.

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

Financial Controls

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

MDBs and OSEs with Limited Financial History

Most rated MDBs and OSEs have many years of financial history and lengthy operating track records that generally act as the basis of our forward-looking credit analysis. MDBs and OSEs with limited financial history may undergo rapid evolution initially, before developing readily distinguishable and stable operating characteristics.

MDBs and OSEs are generally confidence-sensitive. A demonstrated track record can be instrumental in building market trust, which supports the institution's performance even during times of stress on its borrowers.

The systems, policies and procedures of start-up MDBs may be less robust than those of established MDBs.

For start-ups that lack a financial history of at least several years and in cases of a material transformation in an MDB's or OSE's mission, such that its financial history does not provide a good indication of future results, existing financial history provides less insight into the future credit profile. In these cases, our baseline projections may reflect more-conservative expectations than management's projections. In addition, we may

31 For example, some entities may be precluded or constrained from having callable capital by risk management policies or legal considerations.

make downward adjustments to some of the factors or sub-factors in our scorecard in order to reflect the considerable uncertainty around our baseline expectations of future operations and financial profile. To the extent these risks and uncertainties are not fully captured in the scorecard, they may be reflected in an assigned rating that is lower than the scorecard-indicated outcome.

In addition, for MDBs with limited financial history, support considerations may have a heavier weight than is indicated in the scorecard.

Partial Guarantees

Supranational institutions may benefit from partial guarantees extended by another entity, often by member states or by another supranational. This entity may partially guarantee a loan or other form of credit made by the MDB or OSE to a borrower (partial guarantee of credit extension), thereby reducing credit risk, or it may partially guarantee debt instruments issued by the MDB or OSE (direct partial guarantee) in order to lower the interest rate or otherwise improve the terms and conditions. The guarantee is partial if it covers a portion of the loan or debt issuance, rather than the full amount. We consider that such guarantees materially reduce credit risk only in cases where the guarantor has a higher rating than the supranational institution (for a direct partial guarantee) or a higher rating than the borrower (for a partial guarantee of credit extension).

Assessing the Impact on the MDB's Asset Quality

For partial guarantees of credit extensions, we typically take the credit benefit into account in our assessment of the Development Asset Credit Quality sub-factor. We typically adjust our estimate of the weighted average credit quality of development assets by including our estimate of the enhanced credit quality of the loan or other credit extension.

Assessing the Benefit of a Partial Guarantee on a Debt Instrument Issued by the MDB

Where a higher-rated entity provides a direct partial guarantee[32] for a supranational institution's bond issuance, the difference in the expected loss on the enhanced instrument relative to the expected loss on an unsupported instrument helps us gauge the extent, if any, to which the rating of the enhanced instrument may be notched up from the supranational institution's unenhanced debt rating. For the purposes of considering partial guarantees for supranational institutions, and on the basis of broad historical average loss experience at various horizons, a one notch downward movement on the alphanumeric rating scale can be thought of as generally implying an average 60% increase in expected losses for investment grade ratings (Aaa – Baa3) and generally implying an average 40% increase in expected losses for non-investment grade ratings (Ba1 and lower). The impact of the partial guarantee on expected loss will depend on the coverage it provides of future debt payments (the percentage of principal and/or interest) and the rating of the entity providing the partial guarantee.[33] Where the coverage is high and the credit profile of the guarantor is substantially stronger than the unenhanced credit profile of the supranational institution, the uplift can be material because it would reflect the reduced expected loss on the relevant instrument.

32 Where a higher-rated entity provides a full guarantee for another entity's bond issuance, the security is rated under our cross-sector methodology that discusses credit substitution. A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

33 The impact of the partial guarantee is typically informed by the 10-year Moody's Idealized Cumulative Loss Rates associated with the rating level of the guarantor, for the guaranteed portion, and the unenhanced rating or equivalent of the supranational institution for the unguaranteed portion.

Impact on Member Support

For full or partial guarantees extended on debt instruments issued by a supranational, we take into account the credit benefit primarily at the instrument rating level, though where guarantees cover a substantial share of the MDB's rated debt obligations we may also reflect any credit benefits through uplift to the issuer rating.[34]

In some limited cases, the partial guarantee may also impact our assessment of member support and in particular of non-contractual support. In cases where a member provides guarantees that, while partial, are sufficiently large to make pre-emptive support for the supranational institution worthwhile to avoid a default and a call on the guarantees, it may positively impact our assessment of non-contractual support.

Environmental, Social and Governance Considerations

Environmental, social and governance (ESG) considerations may affect the ratings of supranational institutions. For information about our approach to assessing ESG issues, please see our methodology that describes our general principles for assessing these risks.[35]

Environmental issues could affect the reputation of a supranational institution and its members, for example in the unlikely event that the activities of the MDB are perceived to exacerbate environmental issues or where the institution fails to fulfill its environmental mandate. Development assets may also be exposed to environmental risks that could affect credit quality although diversification in an MDB portfolio can help mitigate the environmental risks facing some borrowers.

We consider social issues that could materially affect the likelihood of default and severity of loss, for example through adverse impacts on member support and development asset credit quality.

Governance issues are included in the scoring of the Quality of Management, Including Risk Management and Governance adjustment factor. In unusual cases, very weak governance may not be fully captured in the scorecard.

Event Risk

We also recognize the possibility that an unexpected event could cause a sudden and sharp decline in an issuer's fundamental creditworthiness, which may cause actual ratings to be lower than the scorecard-indicated outcome. Event risks — which are varied and can range from litigation and pandemics to significant cyber-crime events — can overwhelm even a well-capitalized MDB or stable OSE.

Assigning Issuer-Level and Instrument-Level Ratings

After considering the scorecard-indicated outcome, other considerations and relevant cross-sector methodologies, we typically assign an issuer rating. We may also assign senior unsecured debt ratings. Were an MDB to issue debt instruments other than senior unsecured debt, individual debt instrument ratings may be notched upward or downward from the senior unsecured rating to reflect our assessment of any differences in expected loss arising from an instrument's seniority and any collateral.

34 For more details, see the section on assigning issuer-level and instrument-level ratings.

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

We also use this methodology to rate asset-based sukuk instruments where we conclude, based on the terms and conditions of the financing documents, that a sukuk instrument represents an obligation equivalent to a senior unsecured obligation of the sponsoring supranational.

We may also assign short-term ratings based on our methodology for assigning short-term ratings.[36]

Supranational institutions are largely immune from prosecution, transfer and convertibility risk, and as such issuer or instrument ratings are not constrained by the country ceilings of the supranational institution's country of domicile.

Key Rating Assumptions

For information about key rating assumptions that apply to methodologies generally, please see *Rating Symbols and Definitions*.[37]

Limitations

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

Limitations of the Scorecard

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

The scorecard in this rating methodology is a relatively simple tool focused on indicators for relative credit strength. Credit loss and recovery considerations, which are typically more important as an issuer gets closer to default, may not be fully captured in the scorecard. The scorecard is also limited by its upper and lower bounds, causing scorecard-indicated outcomes to be less likely to align with ratings for issuers at the upper and lower ends of the rating scale.

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

Factors that are outside the scorecard, including those discussed above in the "Other Considerations" section, may be important for ratings, and their relative importance may also vary from issuer to issuer. In addition, certain broad methodological considerations described in one or more cross-sector rating methodologies may be relevant to ratings in this sector.[38] Examples of such considerations include the following: the relative ranking of different classes of debt and hybrid securities, and the assignment of short-term ratings.

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

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

37 A link to *Rating Symbols and Definitions* can be found in the "Moody's Related Publications" section.

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

General Limitations of the Methodology

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

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

Appendix A: Using the Scorecard to Arrive at a Scorecard-Indicated Outcome Range

1. Measurement or Estimation of Factors in the Scorecard

In the "Discussion of the Scorecard Factors" section, we explain our analytical approach for scoring each scorecard factor or sub-factor,[39] and we describe why they are meaningful as credit indicators.

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

Our ratings are forward-looking and reflect our expectations for future financial and operating performance. However, historical results are helpful in understanding patterns and trends of an issuer's performance as well as for peer comparisons. The typical periods used to calculate historical financial ratios are described in the "Discussion of the Scorecard Factors" section. 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.

We may make analytical adjustments to income statement, cash flow statement and balance sheet amounts that are specific to a particular issuer.

2. Assigning Sub-factor and Factor Scores and Mapping to a Numeric Score

Qualitative factors and sub-factors are scored based on the description in the scorecard and are mapped to a broad Moody's rating category (aaa, aa, a, baa, ba, b, caa or ca, also called alpha categories) or, in the case of the Non-contractual Support sub-factor, to a five-point scale.

Quantitative metrics are scored on an alphanumeric scale. For each metric, the scorecard shows the range by alpha category. To arrive at an unadjusted sub-factor score, the alpha range is divided into three equal alphanumeric ranges, to which the metric is mapped. For example, if the scorecard indicates that a ba range for a particular metric is 3x to 4.5x (with 4.5x being strongest), the alpha range is divided into a range of 3x to 3.5x, which corresponds to a score of ba3; a range of 3.5x to 4x, corresponding to a score of ba2; and a range of 4x to 4.5x, corresponding to a score of ba1. The scorecard shows the corresponding unadjusted alphanumeric score for the sub-factor.

Sub-factor scores may be adjusted upward or downward by a defined number of scoring categories, based on the adjustments to sub-factor scores described in the "Discussion of the Scorecard Factors" section. An adjustment of one corresponds to an adjustment by one scoring category (e.g., for a quantitative sub-factor, from baa2 to baa3; for a qualitative sub-factor, from baa to ba). Each sub-factor thus has an unadjusted score, or initial score, and an adjusted score.

[39] When a factor comprises sub-factors, we score at the sub-factor level.

The numeric value of most unadjusted and adjusted qualitative alpha scores is based on the scale in the first table below, except for the Non-contractual Support sub-factor, which is scored on a five-point scale and mapped to a numeric score based on the second table below.

aaa	aa	a	baa	ba	b	caa	ca
1	3	6	9	12	15	18	20

Source: Moody's Investors Service

Non-contractual Support Scoring Scale	Very High	High	Medium	Low	Very Low
Numeric Equivalent	2.5	6.5	10.5	14.5	18.5

Source: Moody's Investors Service

Unadjusted and adjusted quantitative sub-factor scores are converted to numeric values of 1 to 20 and 1 to 21 respectively, based on the table below.

EXHIBIT 8

Rating Scale Numeric Equivalents

Alphanumeric	Numeric Equivalent
aaa	1
aa1	2
aa2	3
aa3	4
a1	5
a2	6
a3	7
baa1	8
baa2	9
baa3	10
ba1	11
ba2	12
ba3	13
b1	14
b2	15
b3	16
caa1	17
caa2	18
caa3	19
ca	20
c	21

Source: Moody's Investors Service

The numeric score for each adjusted sub-factor score is multiplied by the weight for that sub-factor in the factor, with the results then summed to produce an aggregate weighted factor score. The preliminary alphanumeric factor score may be adjusted as described in the "Measurement or Estimation of Factors in the Scorecard" section. Each factor thus has a preliminary score (or initial score) and an assigned score. The aggregate weighted factor score is then mapped back to an alphanumeric equivalent based on the table above to arrive at an adjusted alphanumeric factor score.

Special calculation considerations:

» *Assets / Useable Equity.* For purposes of calculating the historical ratio for the scorecard, the following conditions are applied to each of the annual ratios for the three-year average calculation: if useable equity is zero or negative and assets is positive, then the ratio for that year is reassigned a value consistent with a ca score.

» *Liquid Assets / Net Cash Outflows.* The following conditions apply: If net cash outflows are negative or equal to 0 the score is aaa. If the MDB or OSE has no liquid assets because it is structured as a budget-driven entity, no score is assigned to the sub-factor and the weight assigned to this sub-factor is allocated to the Quality and Structure of Funding sub-factor.

» *Callable Capital / Total Debt.* The following conditions apply: If callable capital is 0, the score is ca. If gross debt is 0, we instead score the metric Callable Capital / (Total Development Assets + A3 or lower rated treasury assets – Paid-in Capital), measured or estimated as of the most recent annual period and based on the scoring ranges in the table below.

Metric	Weight	aaa	aa	a	baa	ba	b	caa	ca
Callable Capital / (Total Development Assets + A3 or lower rated treasury assets – Paid-in Capital)	25%	≥ 100%	90 – 100%	75 – 90%	50 – 75%	25 – 50%	10 – 25%	2.5 – 10%	< 2.5%

Source: Moody's Investors Service

3. Determining the Intrinsic Financial Strength Outcome

The numeric score for the Capital Adequacy and Liquidity and Funding factors is multiplied by the weight for each factor, with the results then summed to produce an aggregate weighted factor score. The aggregate weighted factor score is then mapped back to an alphanumeric equivalent based on the Rating Scale Numeric Equivalents table on the previous page, which is the preliminary alphanumeric Intrinsic Financial Strength (IFS) score.

The preliminary IFS outcome may be notched upward or downward,[40] based on the notching factors (Operating Environment and Quality of Management, Including Risk Management and Governance) described in the "Discussion of the Scorecard Factors" section to arrive at the adjusted IFS outcome.

[40] Overall, a notching factor directly adjusts the alphanumeric-equivalent of the preliminary IFS score. The meaning of an upward whole notch is that it raises the alphanumeric-equivalent of the preliminary IFS score by one alphanumeric category (e.g., from b2 to b1). Numerically, an upward whole notch subtracts 1 from the IFS preliminary score.

4. Determining the Notching for Strength of Member Support

The numeric score for the Strength of Member Support factor is mapped to an alphanumeric equivalent based on the Rating Scale Numeric Equivalents table on the previous page. Alphanumeric equivalents are then bucketed into five categories, "Very High," "High," "Moderate," "Low" and "Very Low" that correspond to different levels of notching uplift from the adjusted IFS outcome (see Exhibit below).

EXHIBIT 9

Determining Notching for Strength of Member Support

Strength of Member Support Score	Strength of Member Support	Uplift to Adjusted Intrinsic Financial Strength Outcome
aaa-aa3	Very High	+3
a1-a3	High	+2
baa1-baa3	Moderate	+1
ba1-b3	Low	0
caa1-ca	Very Low	0

Source: Moody's Investors Service

5. Determining the Overall Scorecard-Indicated Outcome Range

We combine the adjusted IFS outcome with the upward notching, if any, of the Strength of Member Support factor to arrive at an alphanumeric equivalent that is midpoint of the scorecard-indicated outcome, expressed as a three-notch range on our alphanumeric scale.

Appendix B: Multilateral Development Bank Example Scorecard

	Input	Initial Score	Adjusted Score	Assigned Score	Factor/Sub-Factor Weight
Factor 1: Capital Adequacy			a3	a3	50%
Capital Position		baa2	baa1		20%
Leverage Ratio - Assets/ Usable Equity	3.50x				
Trend	0				
Impact of Profit and Loss on Leverage	+1				
Development Asset Credit Quality		a	a		10%
DACQ Assessment	a				
Trend	0				
Asset Performance		a3	a3		20%
Non-Performing Assets - Non-Performing Assets / Development Assets	2.50%				
Trend	0				
Excessive Development Asset Growth	0				
Factor 2: Liquidity and Funding			aa2	aa2	50%
Liquid Resources*		a1	a1		10%
Availability of Liquid Resources - Liquid Assets/Net Cash Outflows	110.0%				
Trend in Coverage Outflow	0				
Access to Extraordinary Liquidity	0				
Quality of Funding*			aa		40%
Funding Structure	aa				
Preliminary Intrinsic Financial Strength (F1 + F2)				a1	
Other Adjustments				-1	
Operating Environment	-1				
Quality of Management	0				
Adjusted Intrinsic Financial Strength				a2	
Factor 3: Strength of Member Support			H	VH	+3
Ability to Support			baa3		50%
Weighted Average Shareholder Rating	baa3				
Willingness to Support					50%
Contractual Support -	186.0%	aaa	aaa		25%
Strong Enforcement Mechanisms	0				
Payment Enhancements	0				
Non-Contractual Support	Very High				25%
			Scorecard-Indicated Outcome	Aa1-Aa3	

*Variable weights

Source: Moody's Investors Service

Appendix C: Scorecard Framework for Other Supranational Entities

Multilateral development banks (MDBs) and other supranational entities (OSEs) are assessed based on several common factors. However, OSE credit quality is typically much more closely linked to the credit quality of sovereign members, and the scorecard for OSEs reflects this inherent difference.

An OSE typically is structured in a way that limits its independence from its sovereign members. OSEs have little or no capital and, compared with MDBs, their structure relies more on regular cash inflows from members, guarantees by members, grants from members, taxes levied on members' economies and other forms of member support. While OSEs have some ability to maintain financial buffers, typically these buffers do not fully insulate them from the risk of underperformances by members. As such, the creditworthiness of an OSE is less dependent on its intrinsic financial strength and more dependent on the actual or potential funding from members.

For this reason, the starting point of our OSE scorecard is member support. Liquidity as well as the qualitative adjustments for operating environment and risk management are common to both scorecards.

» **Strength of Member Support.** The Strength of Member Support factor score results from the combination of the Ability to Support - Weighted Average Shareholder Rating sub-factor score and the Non-contractual Support sub-factor score, which are equally weighted. The alphanumeric equivalent resulting from the combination of sub-factors in the Strength of Member Support factor is the midpoint of the factor score, which is expressed as a three-notch range on our alphanumeric scale. OSEs typically do not have capital and therefore do not have callable capital. We therefore assign no weight in the OSE scorecard to contractual support. Since OSEs typically benefit from other forms of contractual support, we may assign a Member Support factor score that is different from the initial score based on scenario analysis, taking into account the credit benefit provided by these other forms of contractual support. For example, in assigning a score for Member Support, we may consider explicit guarantees or legally binding grant payments in the assignment of the factor score.

» **Liquidity and Funding.** The Liquidity and Funding sub-factors, Availability of Liquid Resources (Liquid Assets/Net Outflows) and Quality and Structure of Funding, are assessed in the same manner for OSEs as they are for MDBs. To combine them, we use the same approach as for MDBs. The same adjustments to the Liquidity factor score that apply to MDBs also apply to OSEs. Using the table below, this alphanumeric score is converted to notches. This factor can provide up to three alphanumeric notches of uplift from the Strength of Member Support factor score if it is assessed as "Very High," two notches of uplift if it is assessed as "High," one notch of uplift if it is assessed as "Moderate" and no uplift if it is assessed as "Low" or "Very Low".

  If an OSE does not have liquid assets — perhaps because it has a budget-driven structure, and regular cash inflows from members provide the funds for debt service — the Availability of Liquid Resources sub-factor is not applicable, and the Quality and Structure of Funding sub-factor is the sub-factor used to assign the initial Liquidity factor score. Quality and Structure of Funding is scored for OSEs in the same manner as for MDBs.

EXHIBIT 10

Adjusted Member Support Strength

Adjusted (or initial if budget driven) Liquidity Score	Liquidity	Uplift to Adjusted Member Support Strength
aaa-aa3	Very High	+3
a1-a3	High	+2
baa1-baa3	Moderate	+1
ba1-b3	Low	0
caa1-ca	Very Low	0

Source: Moody's Investors Service

» We then apply qualitative adjustments based on our assessments of the operating environment and the quality of management, including risk management and governance. These are assessed for OSEs in the same manner as for MDBs.

Other Supranational Entities Example Scorecard

	Input	Initial Score	Adjusted Score	Assigned Score	Factor/Sub-Factor Weight
Factor 1: Strength of Member Support			aa3	aa3	100%
Ability to Support			a1		50%
Weighted Average Shareholder Rating	a1				
Willingness to Support					50%
Non-Contractual Support	Very High				
Factor 2: Liquidity and Funding			VH	VH	+3
Liquid Resources*		ba2	ba2		20%
Availability of Liquid Resources - Liquid Assets/Net Cash Outflows	19.0%				
Trend in Coverage Outflow	0				
Access to Extraordinary Liquidity	0				
Quality of Funding*			aaa		80%
Funding Structure	aaa				
Other Adjustments				-1	
Operating Environment	-2				
Quality of Management	+1				
			Scorecard-Indicated Outcome	Aaa-Aa2	

*Variable weights

Source: Moody's Investors Service

Moody's Related Publications

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

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

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

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