MOODY'S
INVESTORS SERVICE

CROSS-SECTOR
RATING METHODOLOGY

Country Ceilings Methodology

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This rating methodology replaces the *Local and Foreign Currency Country Ceilings for Bonds and Other Obligations Methodology* published in November 2019. While this methodology reflects many of the same core principles as the 2019 methodology, we have unified our approach for country ceilings for bonds and other debt obligations with our approach for ceilings for deposits. We have also clarified the role of the sovereign rating as the starting point for assigning the local currency country ceiling. We have organized the concepts in our local currency country ceiling analysis into two factors that assess the level of non-diversifiable risk and more clearly capture the attributes of a country that may allow the ratings of the strongest locally domiciled issuers to exceed the rating of the sovereign. For the foreign currency country ceiling, we use the local currency country ceiling as a starting point, and we have simplified and enhanced the transparency of the drivers of transfer and convertibility risk that are incremental to the general country-level risk reflected in the local currency country ceiling. We have eliminated separate offshore foreign currency country ceilings. In addition, this updated methodology provides more detail regarding other considerations that may be important for ceilings in some countries.

Introduction

In this rating methodology, we explain our general approach to assigning local and foreign currency country ceilings globally. Ceilings are assigned to countries, and a ceiling applies to the ratings of non-sovereign issuers, debt obligations, transactions and deposits in a country.[1]

Country ceilings reflect the non-diversifiable risk incurred by investors in any sovereign credit environment. Country risk arises because non-sovereign issuers are typically subject to a country's prevailing economic, institutional, financial and political environment. The general economic disruptions, banking crises and currency crises that often accompany sovereign debt crises affect most issuers in a country. In or approaching a crisis, governments may take policy actions that negatively affect the debt-servicing ability of non-sovereign issuers. Governments may, for example, interfere with private sector payments to preserve foreign exchange.

We typically assign a local currency ceiling and foreign currency ceiling to each country that we rate. Local currency country ceilings are relevant to obligations denominated in the

[1] Country ceilings are inputs to Rating Services and are not credit ratings. For more information, see the "Moody's Related Publications" section for a link to *Rating Symbols and Definitions*.

currency of the country of domicile or origination, and foreign currency country ceilings are relevant to obligations denominated in a different currency. These ceilings facilitate the assignment of local and foreign currency ratings for bonds, other debt and debt-like obligations and deposits of locally domiciled issuers and obligors, including locally originated structured finance transactions.

Country ceilings indicate the highest rating level that would generally be assigned to the financially strongest issuers domiciled in a country, including the strongest structured finance transactions whose cash flows are generated predominantly from domestic assets or residents.[2] Notwithstanding the foregoing, obligations benefiting from meaningful support mechanisms, assets or cash flows based outside the country may on occasion be rated higher than the ceiling.[3]

Applied to deposits, local and foreign ceilings indicate the highest rating level that would generally be assigned to deposit obligations of domestic and foreign branches of banks headquartered in that domicile (including local subsidiaries of foreign banks), while foreign currency ceilings also apply to the branches of foreign banks operating in that domicile.

The country ceilings we assign are expressed on the alphanumeric global long-term rating scale. Ceilings apply to long-term and short-term obligations. The short-term ceiling equivalent can be inferred from the alphanumeric level of the country ceiling.[4]

In general, although not always, the ceiling for a country is multiple notches higher than the sovereign's rating.

Our presentation of this methodology proceeds with (i) the scope of this methodology; (ii) the methodology framework; (iii) a discussion of how we arrive at a local currency country ceiling; (iv) a discussion of how we arrive at a foreign currency country ceiling; (v) methodology assumptions; and (vi) limitations. In Appendix A, we describe how we use the local currency country ceiling scorecard to arrive at a scorecard-indicated outcome.

Scope of This Methodology

This methodology applies globally and is used for all countries where we assign ceilings.

Methodology Framework

This methodology framework starts with the sovereign rating and has two components. The first component is our local currency country risk analysis, which focuses on the attributes of a country that may allow the strongest locally domiciled issuers and transactions to have a rating on their local currency obligations that is higher than the sovereign rating.

The second component is our analysis of foreign currency country risk, which focuses on transfer and convertibility (T&C) risks. Transfer risk refers to the risk of not being able to transfer payments across

2 In other words, ceilings generally act as a cap on ratings for locally originated structured finance transactions and for other locally domiciled issuers.

3 For more information on the relationship of sovereign ratings, country ceilings and the ratings of issuers, obligations and transactions in a country, see our cross-sector methodology that discusses how we assess the impact of sovereign credit quality on other ratings and our sector methodology for banks. A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

4 The mapping of short-term ceiling equivalents is the same as the mapping of short-term ratings from long-term ratings. While the mapping includes some overlap in the short-term equivalent that can be inferred from a given country ceiling, countries with ceilings between A3 and Baa2 typically map to a short-term equivalent of P-2. For information, see *Rating Symbols and Definitions* and our methodology that discusses short-term ratings. The "Moody's Related Publications" section contains a link to these publications.

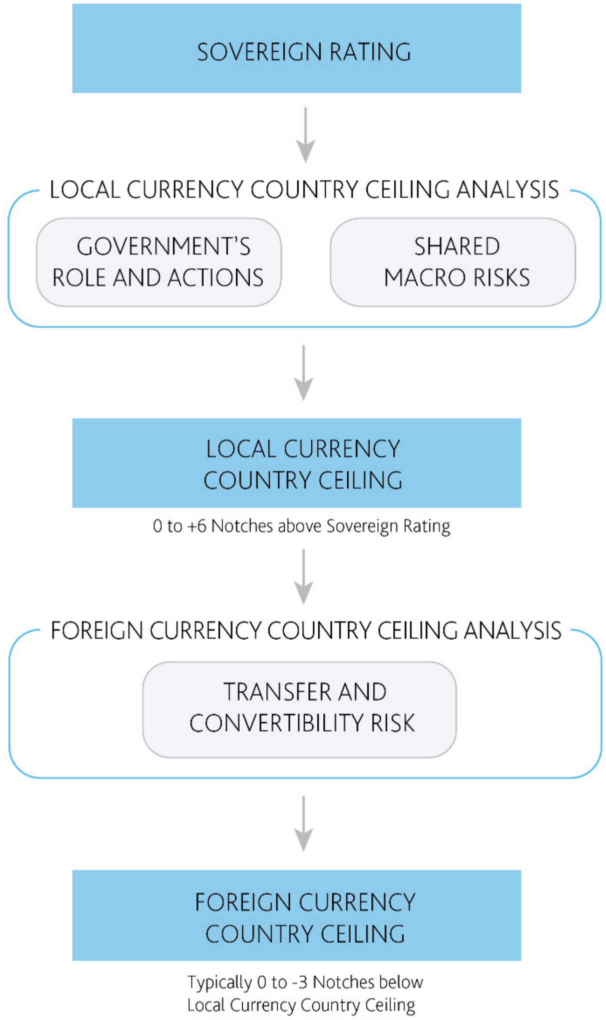
the border, while convertibility risk refers to the risk that local currency cannot be converted into foreign currency. Governments often impose restrictions on transfer and convertibility at the same time.

Our local currency country risk analysis starts from the sovereign rating[5] and incorporates the factors that may raise the risk of losses for non-sovereign creditors and depositors as the government approaches default. These factors include the government's role and actions (its role in the economy and the financial system and the actions it may take as it nears default) and shared macro risks (those that are common to the government and locally domiciled issuers). Within each category, we identify some considerations that we assess for all countries. A range of other considerations may be relevant for some countries or at particular times. The result of this analysis is the local currency country ceiling, which is zero to six notches above the sovereign rating.

Our foreign currency country risk analysis starts from the local currency country ceiling, reflecting the view that the risks that affect local currency creditors and depositors also affect foreign currency creditors and depositors. Additionally, we assess the likelihood that a government will impose transfer restrictions related to cross-border payments or foreign exchange convertibility restrictions. The result of this analysis is the foreign currency country ceiling, which is typically zero to three notches below the local currency country ceiling.

[5] For clarity, we use the local currency sovereign rating as the starting point for the local currency country ceiling. In some countries we view distinct territories or regions of a country as having different characteristics from the broader country, which may result in differentiated ratings or ceilings. Where we maintain a separate rating for such a region or territory we typically use that rating as the starting point for determining a distinct ceiling for that territory or region; otherwise we would use the country rating as the starting point, adjusting for the different characteristics of the territory or region where appropriate.

EXHIBIT 1
General Approach for Assigning Local and Foreign Currency Country Ceilings



Source: Moody's Investors Service

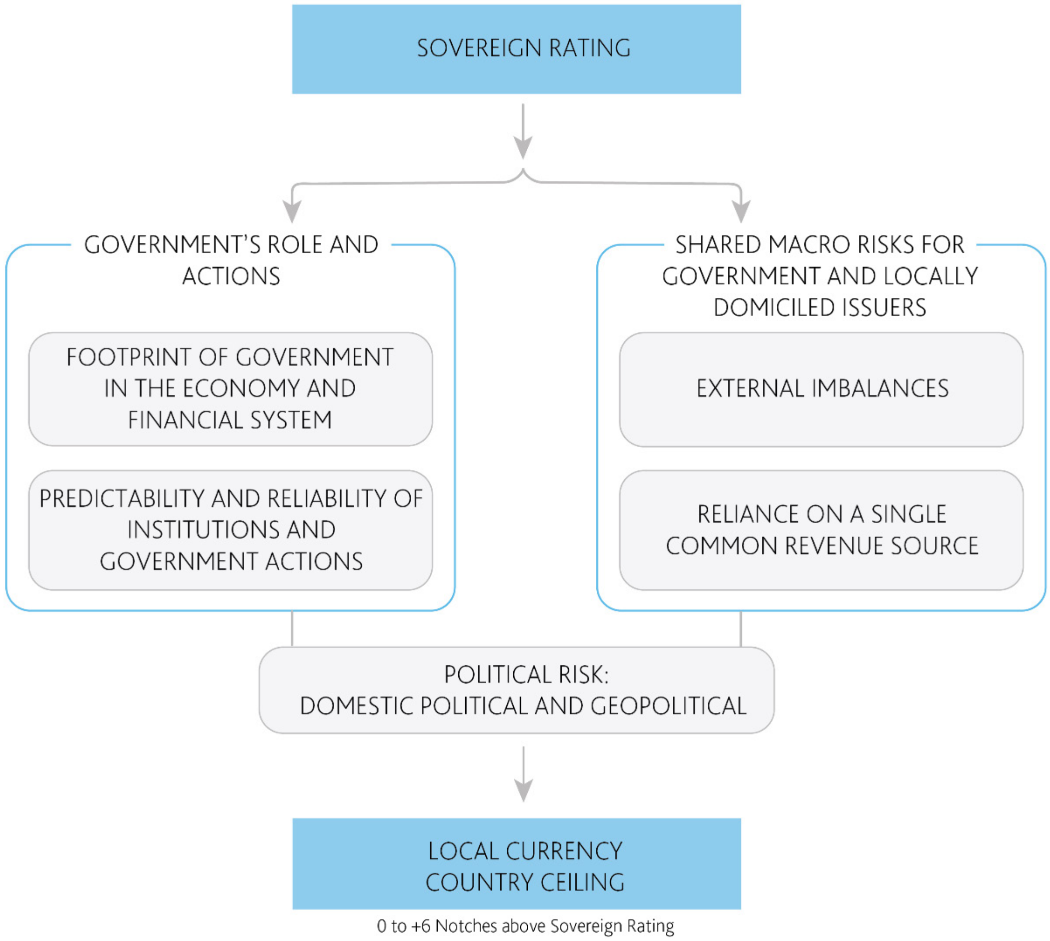
Discussion of Local Currency Country Ceiling Component

A local currency country ceiling reflects the general country-level risks that affect all local currency issues of locally domiciled obligors or structured transactions whose cash flows are primarily generated from domestic assets or residents.

These country-level risks are non-diversifiable. For a structured finance transaction, they cannot be mitigated by local diversification of the portfolio or by credit enhancement from local sources. For a fundamental issuer with primarily domestic assets and cash flows, they cannot be mitigated by, for example, the strength of its cash flow or balance sheet.[6] With very limited exceptions,[7] the local currency country ceiling caps the ratings of non-sovereign issuers and transactions in the country.

Local currency country ceilings reflect a broad range of institutional, economic, financial and political risks within that country or externally. We have grouped these risks into two broad factors: (i) the Government's Role and Actions; and (ii) Shared Macro Risks for Government and Locally Domiciled Issuers. Our assessment of each factor is based on a number of considerations (see Exhibit 2). Political risk spans both of these factors and is discussed separately.

EXHIBIT 2
General Approach for Assigning Local Currency Country Ceilings



Source: Moody's Investors Service

The gap between the sovereign rating and the ceiling is larger in countries where we consider there is a higher likelihood that the strongest non-sovereign issuers will be able to mitigate risks associated with the sovereign's own credit profile.

6 For a primarily domestic issuer, cash flow, assets and sources of financing outside the country of domicile are unlikely to be sufficient to allow the issuer's ratings to pierce the country ceiling. For more information, please see our cross-sector methodology that discusses how we assess the impact of sovereign credit quality on other ratings. A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

7 For more information on the relationship of sovereign ratings, country ceilings and the ratings of issuers, obligations and transactions in a country, please see our cross-sector methodology that discusses how we assess the impact of sovereign credit quality on other ratings and our sector methodology for banks. A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

As a sovereign's credit profile deteriorates, there may be greater clarity into the nature of prospective or actual sovereign default events and their likely impact on other issuers, including structured finance transactions. In cases where the sovereign rating is low, we may consider a wider gap between the sovereign rating and the local currency country ceiling if we believe that the strongest domestic issuers or transactions have a materially lower default probability than the sovereign, or a materially higher expected recovery in the event of a default.

Our qualitative analysis of local currency country ceiling risk is informed by a scorecard summarized in Exhibit 3 and described in more detail in Appendix A. While the scorecard's quantitative indicators are a starting point for our assessment,[8] ceilings also incorporate qualitative judgment. We consider how each country scores on each consideration, and how it compares to peers.

EXHIBIT 3
Local Currency Country Ceiling Scorecard

Factor	Consideration	Consideration Weighting	Indicator	Indicator Weighting
Government's Role and Actions	Footprint of Government in the Economy and Financial System	15%	Share of GDP Accounted for by State-owned and Partially State-owned Firms	7.5%
			Share of Administered Prices	7.5%
	Predictability and Reliability of Institutions and Government Actions	50%	Rule of Law	25%
			Regulatory Quality	25%
Shared Macro Risks for Government and Locally Domiciled Issuers	External Imbalances	15%	Sovereign External Vulnerability Risk Sub-factor Score	15%
	Reliance on a Single Common Revenue Source	Notching	Natural Resource Rent as a Percentage of GDP	Notching
Political Risk	Domestic Political and Geopolitical Risk	20%	Sovereign Political Risk Sub-factor Score	20%
Scorecard-indicated Notching (0 to +6 Notches)				
Sovereign Rating[9]				
Scorecard-indicated Local Currency Country Ceiling Outcome (Alphanumeric, 0 to 6 notches above the Sovereign Rating)				

Source: Moody's Investors Service

The section below explains the indicators that we typically use for each ceiling consideration.

Factor: Government's Role and Actions

Why It Matters

A government's role and actions, including the government's footprint and influence in the economy and financial system, provide an indication of the severity of economic and financial turmoil for non-sovereign issuers in a country if the government were near default.

This factor has two considerations:

[8] Where some data are not available for one country, we make qualitative assessments (e.g., using proxies) or rely on the other available quantitative indicators.

[9] For clarity, we use the local currency sovereign rating.

Footprint of Government's Role in the Economy and Financial System

In countries where the public sector is heavily involved in the production and consumption of goods and services (e.g., through large ownership stakes in companies across the economy), setting prices or supplying credit, the credit profile of the government and the health of the economy will be far more closely interlinked compared to countries where the economy is driven primarily by the private sector and the government's footprint is more limited.

For example, as financial stress on the government increases, strained capacity to invest, to spend or to pay suppliers affects non-government entities, and heightened uncertainty impairs demand and economic activity across sectors. In addition, public sector banks and, indirectly, private sector financial institutions experiencing funding stress may reduce the availability of credit.

Predictability and Reliability of Institutions and Government Actions

Where institutions are strong and their operation is predictable and transparent, an essential part of strong governance, there is a lower probability that the government will act to protect its own position in a way that disadvantages other issuers in the country. Conversely, a track record of less predictable, less transparent decisions by the government raises the likelihood of the government making decisions detrimental to other issuers or their creditors if the government faces acute financial stress.

For instance, weak and opaque legal frameworks raise the risk of a sudden change in regulation, legislation or, more generally, government intervention aimed at protecting the government's own interests, potentially to the detriment of other issuers. Weak or erratic regulation of the financial sector or other key sectors, such as utilities, reduces the predictability of the operating environment for all issuers. A relatively weak rule of law or a legal environment that is insufficiently developed or potentially adverse to the interests of creditors typically increases the risk of default and the severity of losses upon default. For example, there may be an inability to enforce contracts, or insolvency proceedings may not consistently account for contractual protections in creditor agreements. Expropriation of assets or other government intervention may also increase the likelihood of default and weaken recovery prospects for non-sovereign issuers.

How We Assess It for the Scorecard

FOOTPRINT OF GOVERNMENT'S ROLE IN THE ECONOMY AND FINANCIAL SYSTEM:

In the local currency country ceiling scorecard, we use quantitative indicators of the size of the public sector companies in the size of the overall economy (as indicated by GDP) and the share of prices that are administered, typically based on information from the Centre d'Etudes Prospectives et d'Informations' (CEPII) Institutional Profiles Database.

PREDICTABILITY AND RELIABILITY OF INSTITUTIONS AND GOVERNMENT ACTIONS:

In assessing the predictability and reliability of institutions and government actions that affect policy, regulation and the legal framework, we consider quantitative indicators, including Worldwide Governance Indicator scores (or similar international surveys) for the strength of the rule of law and the quality of regulation.

Factor: Shared Macro Risks for Government and Locally Domiciled Issuers

Why It Matters

While there is some commonality of exposure to economic dislocation or financial crises for the government and non-government issuers in any country, certain structural characteristics exacerbate shared risks. These include large external imbalances, which point to a risk of currency and balance of payment crises, and a lack of revenue diversification, which indicates exposure to sector-specific shocks.

This factor has two considerations:

External Imbalances

Countries with large external imbalances are exposed to balance of payments crises, which can lead to severe economy-wide disruption from sharp currency depreciation, a sudden halt in foreign financing, a steep increase in inflation, depressed economic activity, and significant pressure on the financial sector. In these cases, most issuers in the public and private sectors undergo a period of severe economic and financial stress.

Reliance on a Single Common Revenue Source

A lack of government or private sector revenue diversification increases the likelihood that a shock to a sector representing a large share of gross domestic product would cause a sharp decrease in the government's revenues and a large and widespread negative impact on income, profits, and the availability and cost of financing for non-sovereign issuers. Commodities (including hydrocarbons) are often a common revenue source. In some countries, revenue from other industries, e.g., tourism, may be an important revenue source for the government and the private sector.

How We Assess It for the Scorecard

EXTERNAL IMBALANCES:

In the local currency country ceiling scorecard, we use the External Vulnerability Risk sub-factor score from the sovereign scorecard.

RELIANCE ON A SINGLE COMMON REVENUE SOURCE:

In the local currency country ceiling scorecard, we use the size of natural resources rents in the economy as a percentage of GDP, generally on a three-year average basis.[10]

Economic reliance on a single revenue source exerts a negative or neutral influence on the local currency country ceiling.

Political Risk

Why It Matters

Elevated political risk[11] generally indicates that the government's actions, in the event of a sovereign default, will contribute to and exacerbate the economic and financial consequences of that default for the country as a whole and raise legal and regulatory risk, exerting downward credit pressure on other issuers. In extreme cases, political risk includes acts of war, civil conflicts, political chaos or confiscation (e.g., expropriation or nationalization).

Geopolitical tensions, a macro risk shared by the government and private sector issuers, may also contribute to broad-based economic and financial stress and policy unpredictability. As geopolitical tensions rise, the capacity and willingness of consumers and businesses to spend may decline, and the availability of financing at moderate costs may decrease for all issuers.

10 We typically use information from the World Bank. Total natural resources rents are the sum of oil rents, natural gas rents, coal rents (hard and soft), mineral rents and forest rents.

11 For a discussion of political risk, please see our methodology for sovereign ratings. A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

How We Assess It for the Scorecard

DOMESTIC POLITICAL AND GEOPOLITICAL RISK:

In the local currency country ceiling scorecard, we use the Political Risk sub-factor score from the sovereign scorecard.

Additional Considerations for Local Currency Country Ceilings

In addition to the factors and considerations discussed above, additional considerations may inform our overall qualitative assessment of local currency risk for some countries or at certain times.

Banking System Health

In addition to indicating heightened event risk for the sovereign, significant structural weakness in the banking system increases the risk of economic and financial turmoil for non-sovereign issuers as the sovereign approaches default. For example, a banking system that is very large relative to GDP, is highly concentrated or is poorly capitalized may result in a smaller gap between the sovereign rating and the country's local currency ceiling. Please see the discussion of the Banking Sector Risk sub-factor in our sovereign ratings methodology.

Susceptibility to Natural Disasters

Particularly high exposure to natural disasters that may not be mitigated by the government's and the economy's capacity to recover may also result in a smaller gap between the sovereign rating and the local currency country ceiling.

Quality of infrastructure

Weak infrastructure may exacerbate the consequences of a sovereign default by amplifying its impact– on the financial system and across the economy – by reducing the capacity of other issuers to continue to operate and generate revenue. In some cases, particularly weak infrastructure may result in a smaller gap between the sovereign rating and the country's local currency ceiling.

Discussion of the Foreign Currency Country Ceiling Component

A foreign currency country ceiling incorporates the transfer and convertibility (T&C) risks that are incremental to the general country-level risks reflected in local currency country ceilings. We characterize T&C risks broadly as the risks that government restrictions will interfere with the ability of a domiciled borrower to repay its cross-border debt or the ability of foreign currency depositors in a deposit-taking institution to withdraw their funds.

In some cases, a government may impose a moratorium on private sector debt repayments. However, because exchange and capital controls comprise a wide variety of policies, restrictions not formally referred to as a moratorium could also have the same effect. For example, some freezes on deposits, a freeze of the foreign exchange market, other regulations affecting foreign exchange holdings, or policies that encourage, implicitly or explicitly, the rescheduling of private foreign debt payments may have the same effect on non-sovereign issuers as a moratorium.

A country's foreign currency ceiling is typically zero to three notches below its local currency country ceiling and typically not lower than the sovereign rating. However, foreign currency ceilings reflect our full assessment of the impact of T&C risks, and the gap may be wider in circumstances where T&C risk is particularly high. In exceptional cases, the foreign currency ceiling may be lower than the sovereign rating[12] where severe impediments to foreign currency cross-border payments are highly likely to occur even outside a sovereign default.

Our qualitative analysis of foreign currency country ceiling risk includes considerations related to policy effectiveness, capital account openness and external indebtedness, and our analysis is informed by some quantitative indicators that provide initial guideposts for our assessment. We consider how countries score on these indicators relative to peers. However, the weight of each consideration in our analysis varies from country to country, and potentially over time, depending on the specific context, reflecting our observation that policy effectiveness, capital account openness and/or external indebtedness influence the probability of T&C restrictions being imposed but not in a systematic manner. In practice, our assessment of T&C risk rests to a large extent on our view of how policymakers will react to a sovereign debt crisis, but in some cases, capital account openness and/or external indebtedness will be particularly relevant. Thus, as compared to local currency country ceilings, qualitative judgment forms a relatively more important part of the foreign currency country ceiling assessment.[13]

For countries with strong institutions and a history of supporting currency convertibility and open capital accounts, we often consider that the incremental T&C risk is not material. In cases where there is no material difference in the likelihood of a foreign currency ceiling event and the likelihood of a local currency ceiling event, the local currency and foreign currency ceilings are aligned. Most countries rated Aaa and Aa and some rated A demonstrate these positive characteristics.[14] Sovereigns rated further down the scale often do not, and for countries with weaker institutions and track records of capital account restrictions, foreign currency ceilings are typically one or more notches lower than their local currency ceilings.

As a result, there is a broad association between the level of the sovereign rating and the closeness of local currency and foreign currency ceilings. This relationship may change over time, as the rating levels of sovereigns as well as the strength of their institutions and their commitment to capital account openness evolve.

Additionally, we may consider a narrower gap between the foreign currency and local currency country ceilings in certain cases where the sovereign's rating is low and its proximity to default offers greater insights into the likely impact of a sovereign default on non-sovereign issuers, including the likelihood and nature of T&C restrictions. Where we expect default and recovery rates for the foreign and local currency obligations of the country's strongest domestic issuers or transactions to be more similar, there may be a narrower gap between the foreign currency and local currency country ceilings.

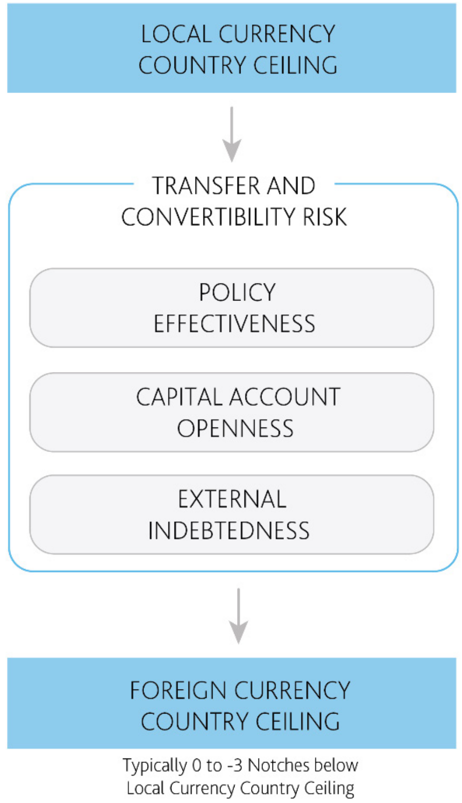
12 For clarity, the foreign currency ceiling is typically not lower than the foreign currency sovereign rating.

13 More specifically, we do not use a quantitative tool to suggest a gap between the local currency and foreign currency country ceilings.

14 It is possible, although much less likely, that some lower-rated countries may also have these positive characteristics.

EXHIBIT 4

General Approach for Assigning Foreign Currency Country Ceilings



Source: Moody's Investors Service

Consideration: Policy Effectiveness

Why It Matters

Weak policy effectiveness may indicate a higher likelihood that the country will need to impose T&C restrictions. For example, weakness in fiscal, monetary or macroeconomic management often leads to imbalances or stresses that can result in policy responses that implement measures to impede the flow of capital across borders. Moreover, in countries where policymaking is unpredictable or highly focused on the short term, there is a higher risk that the government would impose T&C restrictions.

How We Assess It

POLICY EFFECTIVENESS:

In our assessment of policy effectiveness, we consider the Fiscal Policy Effectiveness and the Monetary and Macroeconomic Policy Effectiveness sub-sub factors in the sovereign scorecard.

Consideration: Capital Account Openness

Why It Matters

The extent of capital account openness is an important consideration because a country with a commitment to free capital flows and a limited set of restrictions on cross-border financial transactions is typically less likely to impose T&C restrictions in times of crisis. For these countries, introducing restrictions on capital account transactions may damage the country's reputation and lead to a loss of investor confidence, with negative repercussions to the economy and financial system. By contrast, a country with a less open capital account framework may be more willing to impose T&C restrictions.

How We Assess It

CAPITAL ACCOUNT OPENNESS:

Our qualitative assessment of capital account openness is typically informed by the Chinn-Ito (KAOPEN) index, which is based on a classification of capital controls policies and regulations on cross-border financial transactions reported in the International Monetary Fund's *Annual Report on Exchange Arrangements and Exchange Restrictions*. The KAOPEN index focuses not only on direct capital account restrictions but also on restrictions on international transactions more broadly, including those related to the current account, such as exports, imports and interest payments, or the exchange rate, all of which could indirectly impact capital transactions.

Consideration: External Indebtedness

Why It Matters

A country's external debt burden is an indication of the incentive for the government to impose measures to impede foreign currency outflows as a means of preserving the availability of foreign currency in the country. High external indebtedness may point to larger foreign currency payments and hence a higher risk of T&C restrictions aimed at preserving foreign currency or supporting the exchange rate.

However, some highly rated countries have very high external debt to GDP because of their roles as large financial centers, which may not indicate high T&C risk.

All else being equal, the structure of external debt can also impact T&C risk because the denomination and maturity structure of external debt as well as the lender base can affect the country's financial flexibility, including the ability to refinance debt. Where a large share of external debt is denominated in local rather than foreign currency, the benefits of T&C restrictions in terms of foreign currency preservation, and hence the incentives for a government to impose them, are more limited. Similarly, the incentives to impose T&C restrictions may also be reduced where external debt has a longer average maturity, implying that immediate foreign currency needs are more limited. And a higher share of official sector debt (i.e., debt owed to multilateral institutions and bilateral lending governments) also reduces the benefits of imposing restrictions on private sector debt, because it would preserve a relatively limited amount of foreign currency.

How We Assess It

EXTERNAL INDEBTEDNESS:

Our assessment is primarily informed by the ratio of gross external debt to GDP. The numerator is a country's gross external debt, including cross-border claims on both the public and private sector irrespective of currency denomination. The denominator is a country's GDP.

In addition, where information is available, we may also consider the proportion of external debt denominated in local currency, the share of external debt owed to the official sector, and the average debt maturity and corresponding rollover needs, where these are particularly high.

Where policy effectiveness is very strong, we may place less emphasis on high external debt to GDP as an indicator of T&C risk.

Special Foreign Currency Country Ceiling Situations

Countries without Legal Tender

Some sovereigns have chosen to use a currency that is not issued by their own central bank, e.g., they may use US dollars or euros instead of their own currency. We do not maintain local currency country ceilings for these countries, and the considerations described in the "Discussion of Local Currency Country Ceiling Component" section are typically the principal considerations for assigning their foreign currency country ceilings. An analysis of transfer and convertibility risks is typically not relevant for these countries.

Additional Considerations for Foreign Currency Country Ceilings

In addition to the considerations discussed above, additional considerations may inform our overall qualitative assessment of T&C risks for some countries or at certain times.

Size of Foreign Exchange Reserves

A low level or rapidly falling foreign exchange reserves may point to a wider gap between the local and foreign currency country ceilings, all else being equal. Low or rapidly falling reserves may increase the need to preserve foreign currency and the incentive to take measures that are negative for creditors. For example, a government may institute a moratorium on private sector debt repayments to preserve foreign currency in order to import vital goods and services or to support the exchange rate.

Long-Established, Proven Fixed Exchange Rate Regimes

Apart from countries without legal tenders, a number of countries have long-established exchange rate regimes, such as currency boards and pegs. Where such exchange rate regimes have proved to be effective over many years, there is typically a smaller gap between local and foreign currency country ceilings, all else being equal.

History of Debt Moratoria

A country's history of private sector payment restrictions provides an indication of its future actions. All else being equal, the gap between the local and foreign currency country ceilings may be wider for countries that have taken actions in the relatively recent past that have impeded private sector debt repayments, unless we are confident that the institutional, economic or financial environment that led to such restrictions in the past has fundamentally changed.

Other Considerations

Ceilings may reflect consideration of additional factors, usually because the drivers of country risk vary between countries and over time.

In addition, the importance of a particular factor may vary based on an individual country's circumstances. We may also use additional metrics and data to inform our analysis of specific countries. In addition, while historical data tend to provide a starting point for our assessment, assigned ceilings reflect our forward-looking view of risk, and we often incorporate directional views of risks and mitigants in a qualitative way.

Environmental, Social and Governance Considerations

As described above, governance indicators are integral to our assessment of the Predictability and Reliability of Institutions and Government Actions, and natural disasters may also affect the local currency ceiling. More generally, environmental, social and governance (ESG) considerations affect local and foreign currency country ceilings primarily through their impact on the sovereign rating. ESG considerations may also affect the ratings that are capped by the ceilings.

For information about our approach to assessing ESG issues, please see our methodology that describes our general principles for assessing these risks.[15]

Additional Guidance for Specific Circumstances

Euro Area and Other Currency Unions

The local currency ceilings for countries that are part of a strong economic, banking and currency union may be higher than they would be if the country were not part of the union because an issuer domiciled in one country might derive revenue and obtain banking services and common currency anywhere within the union.

In particular, member countries of the euro area benefit from the area's strong common institutional, legal and regulatory framework, as well as liquidity support and other crisis management mechanisms. The main country-specific risk that may affect any issuer in a euro area country is the risk that the country exits the euro area and redenominates all local currency debt into a new, weaker currency. The ceilings applied to different euro area countries would therefore likely be determined predominantly by that country's (most likely very small) risk of currency redenomination.

Ceiling outcomes in the euro area consider not only the risk of exit, but also other possible sources of country risk. The risk of exit is likely greatest when a government's own risk of default is elevated, which would be expected to coincide with a severe disruption of the financial and economic environment. Therefore, our assessment of redenomination risk starts with the sovereign rating. To the extent that exit risk is viewed as very small, virtually de minimis, the local currency country ceiling is as much as six notches above the sovereign rating[16] and the foreign currency country ceiling is the same as the local currency country ceiling. In circumstances where a country's commitment to the currency union is perceived to be relatively weak, that country's ceilings are likely to be closer to its sovereign rating.

Key Rating Assumptions

For information about key rating assumptions that apply to methodologies generally, please see *Rating Symbols and Definitions*.[17]

Limitations

In the preceding sections, we have discussed the considerations that are generally important in assigning country ceilings. In this section, we discuss limitations that pertain to the overall methodology.

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

[16] A six-notch difference implies that a country would exit and redenominate its debts approximately one out of every 15 or 20 times that it defaulted on its debt; i.e., currency redenomination risk would be de minimis, the product of two very low risks – government default risk and the risk of currency union exit conditional on an event of default by the government.

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

Limitations of the Local Currency Country Ceilings Scorecard

There are various reasons why scorecard-indicated outcomes may not map closely to actual local currency country ceilings.

The local currency country ceilings scorecard is a relatively simple tool focused on indicators for country risk. Our country risk analysis is inherently qualitative.

The weights for each consideration in the scorecard represent an approximation of its importance for local currency country ceiling decisions, but the actual importance of a particular consideration may vary substantially based on an individual company's circumstances.

Considerations and indicators that are outside the scorecard, including those discussed above in the "Other Considerations" section, may be important for local currency country ceilings, and their relative importance may also vary from country to country.

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

General Limitations of the Methodology

This methodology document does not include an exhaustive description of all factors and considerations that we may consider in assigning local and foreign currency ceilings. Countries 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 our assessments and to take the most forward-looking perspective that visibility into these risks and mitigants permits.

Country ceilings reflect our expectations of undiversifiable risk and transfer and convertibility risk; however, as the forward horizon lengthens, uncertainty increases and the utility of precise estimates 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, disruptive technology, or regulatory and legal actions. In any case, predicting the future is subject to substantial uncertainty.

Appendix A: Using the Local Currency Country Ceiling Scorecard to Arrive at a Scorecard-Indicated Outcome

Based on a set of considerations and their respective indicators, the local currency country ceiling scorecard calculates an indicated number of upward notches, ranging from 0 to 6, which is then combined with the country's local currency sovereign rating to provide an alphanumeric scorecard-indicated local currency country ceiling outcome.

1. Measurement or Estimation of Factors in the Scorecard

In the "Discussion of Local Currency Country Ceiling Component" section, we explain our analytical approach for assessing each of the considerations comprised in the scorecard factors, why they are meaningful in assessing country risk, and the indicators that we typically use.

The information used in assessing the considerations comes from a variety of primarily public sources, described below. In some cases, the scores are based on other observations or are estimated by Moody's analysts (including cases where the indicator is not available). We may also incorporate non-public information.

2. Mapping Scorecard Considerations to a Numeric Score

The indicators are on a variety of scales. Where a consideration has multiple indicators, the scorecard first combines them. They are then rescaled, generally from 0 (worst) to 6 (best). Higher scores result in a greater number of scorecard-indicated upward notches. The considerations are weighted as shown in Exhibit 3, except for Reliance on a Single Common Revenue Source, which may result in downward notching of the score, as described in the following section.

Footprint of Government's Role in the Economy and Financial System (15%)[18]

The share of GDP accounted for by state-owned and partially state-owned enterprises and the share of prices that are administered are typically based on information provided by the Centre d'Etudes Prospectives et d'Informations' (CEPII) Institutional Profiles Database, which ranks each country on these indicators in whole numbers from 0 (very high proportion) to 4 (very low proportion).

To arrive at the score for this consideration, these indicators are summed, and the score is truncated at 6.

Sum of Indicators	0	1	2	3	4	5	6-8
Consideration Score	0	1	2	3	4	5	6

Source: Moody's Investors Service

Predictability and Reliability of Institutions and Government Actions (50%)

We typically use Worldwide Governance Indicators of the rule of law and the quality of regulation, which are on a continuous scale from (2.5) to 2.5. We first average the two indicators, and then rescale them as shown in the table below.

[18] In cases where the indicators are not available, the 15% weight for this consideration is equally redistributed to the remaining three weighted considerations.

Average of Indicators*	< (2.21)	(2.21) – (1.64)	(1.64) – (1.07)	(1.07) – (0.5)	(0.5) – 0.07	0.07 – 0.64	≥ 0.64
Consideration Score	0	1	2	3	4	5	6

*The ranges shown are rounded to two decimal places.

Source: Moody's Investors Service

External Imbalance (15%)

The indicator is the country's External Vulnerability Risk sub-factor score from our sovereign methodology scorecard.[19] This indicator is on a scale of eight broad alpha categories from ca to aaa, which is mapped according to the table below.

Indicator	ca - caa	b	ba	baa	a	aa	aaa
Consideration Score	0	1	2	3	4	5	6

Source: Moody's Investors Service

Domestic Political and Geopolitical Risk (20%)

The indicator is the Political Risk sub-factor score for the country from our sovereign methodology scorecard, and the mapping is the same as for External Imbalances.

Reliance on a Single Common Revenue Source (Notching)

The indicator is the country's natural resource rent as a percentage of GDP (average of latest three years of available data). Where the average is 8% and above, the score is one downward notch. Where the average is below 8%, there is no notching for this consideration.

3. Determining the Overall Scorecard-Indicated Outcome

The numeric score for each weighted consideration is multiplied by the weight for that consideration, with the results then summed and rounded to the nearest integer to produce a preliminary numeric score, in notches, ranging from 0 to 6.

We then apply the downward notching, if any, from the Reliance on a Single Common Revenue Source consideration to produce the scorecard-indicated notching, which ranges from 0 to 6.

Each notch has the effect of moving the scorecard-indicated Local Currency Country Ceiling Outcome one alphanumeric level higher than the sovereign rating. For example, if the sovereign rating is Baa2 and the scorecard-indicated notching is 4, the scorecard-indicated Local Currency Country Ceiling Outcome is A1.

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

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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