

Sovereign and Public Sector

11 October 2023

Contacts

Giacomo Barisone Managing Director Sovereign & Public Sector g.barisone@scoperatings.com Thibault Vasse
Associate Director
Sovereign & Public Sector
t.vasse@scoperatings.com

Julian Zimmermann
Associate Director
Sovereign & Public Sector
j.zimmermann@scoperatings.com

11 October 2023 1/22



Sub-sovereign Rating Methodology Sovereign and Public Sector

Table of Contents

1.	Introd	ductionduction	3
1.1	Definiti	tions	4
1.2	Summa	nary of Scope's sub-sovereign rating approach	4
2.	Institu	tutional framework assessment	6
2.1	Overvi	riew	6
2.2	Intergo	overnmental integration – Qualitative Scorecard 1 (QS1)	6
2.3	Indicat	ative rating range	9
3.	Indivi	idual credit profile or ICP	10
3.1	Overvi	/iew	10
3.2	Individ	dual credit profile: Qualitative Scorecard 2	10
	3.2.1	Debt and liquidity (40%)	12
	3.2.2	Budget (30%)	13
	3.2.3	Economy (20%)	14
	3.2.4	Governance (10%)	15
	3.2.5	Additional environmental and social considerations	15
4.	Indica	ative sub-sovereign rating	
5.	Additi	tional considerations	16
5.1	Systen	mic importance	17
5.2	Rating	g anchor ceiling and rating sensitivity	17
	5.2.1	Criteria to be rated above the rating anchor	17
	5.2.2	Sensitivity to rating anchor level changes	17
5.3	Review	w of exceptional circumstances	18
6.	Long-	-term and short-term issuer ratings	18
7.	Case	study: Stylised sub-sovereign rating	19



Sovereign and Public Sector

1. Introduction

This document presents our methodology for assigning short-term and long-term issuer credit ratings to sub-sovereigns and to their debt obligations¹. The criteria in this methodology are applicable to higher-tier governments (regional governments, states, or communities) and lower-tier governments (cities, districts, and municipalities). We believe that a 'framework-driven approach' is best suited for sub-sovereign ratings. This approach reflects the importance of the varying frameworks and intergovernmental relationships between sub-sovereign and sovereign entities as well as the resulting country-specific budget structures, spending and investment responsibilities, debt management procedures, and liquidity practices. Our methodology predominately covers sub-sovereigns in Europe, but it can be applied globally provided reliability of information is adequate and institutional characteristics can be appropriately captured via our framework-driven approach².

Our sub-sovereign methodology has the following characteristics:

Framework-driven approach

Our analysis acknowledges the importance of the relationship between sub-sovereign and sovereign government tiers. We therefore determine the degree of intergovernmental integration across government tiers by analysing the institutional framework, which results in an indicative downward rating range from the sovereign (or higher-tier government) rating. This approach allows us to explicitly consider the interdependence between institutional frameworks and individual credit profiles.

Use of transparent scorecards and guidance tables

We provide a transparent and detailed presentation of our analytical framework, including a rationale for each key rating factor. Our methodology uses scorecards to enhance rating transparency and comparability, underpinned by consistent assessments of: i) the institutional framework across countries per government tier; and ii) the individual credit profile of an issuer. Our assessment of a sub-sovereign's individual credit profile (ICP) is underpinned by explicit quantitative metrics.

> Emphasis on quantitative metrics and exclusion of mechanistic thresholds

Our ICP assessment determines the indicative rating within the rating range generated by our framework assessment. Our assessments are underpinned by quantitative peer comparisons. This approach acknowledges that sub-sovereign budgetary and debt data: i) need to be viewed in the context of the respective framework; and ii) are susceptible to distortion due to differing accounting policies. Therefore, our approach ensures that the selected ratios are meaningful and interpretable.

Extended balance sheet and liquidity assessment

Liquidity pressures and the accumulation of high off-balance-sheet risks can be a major source of fiscal deterioration for a sub-sovereign, as observed in past crises. Our ICP analysis emphasises a sub-sovereign's liquidity practices and its ability to service debt in cases of interrupted access to capital markets and external liquidity. We also focus on risks from off-balance-sheet financing, including contractual contingent liabilities, implicit contingent liabilities, and policy commitments.

> Incorporation of environmental, social and governance aspects

Our approach includes a systematic and explicit assessment of environmental (E), social (S) and governance (G) risks. Governance considerations are examined as part of the institutional framework analysis (Chapter 2) and the ICP (Chapter 3). Environmental and social risks are also important for sub-sovereign credit quality given rising long-term environmental and social challenges as well as the increasingly pivotal role sub-sovereigns play in supporting sustainability objectives. We recognise these environmental and social factors explicitly and systematically through adjustments to the ICP.

11 October 2023 3/22

¹ In case of debt obligations issued jointly, for example joint and several payment obligations, we would assign an issue rating equal to the weighted average issuer rating of all participating entities, subject to a review of the terms and conditions. We would apply this approach if we expected timely liquidity provision among participating issuers to ensure debt service. Otherwise, we would assign an issue rating equal to the lowest issuer rating among participants.

² For instance, our methodology does not apply to sub-sovereigns in the United States.



Sovereign and Public Sector

1.1 Definitions

Sub-sovereign

We define sub-sovereigns as regional or local governments, such as states, regions, provinces, or municipalities, depending on a country's administrative structure. We do not consider public or private entities that provide public services on behalf of governments (such as hospitals, schools or universities, municipal enterprises) as sub-sovereigns. Public or private entities whose credit quality is tied to national or sub-sovereign governments are rated under Scope's Government-Related Entities Rating Methodology.

Sub-sovereign default

Our definition of default is applicable to sub-sovereign financial debt obligations owed to public and private sector creditors. We also treat failure to service debt benefiting from an irrevocable and unconditional guarantee issued by the sub-sovereign as a default. We would not consider a sub-sovereign's failure to service financial debt that benefits from formal or informal government support in the context of a public policy mandate owed to official creditors - typically a higher-tier government, multilateral institution, or government-related entity – to constitute a default. However, and for the avoidance of doubt, such sub-sovereign liabilities to official creditors are accounted for in our risk assessments.

Rating anchor

Throughout this methodology, we refer to the 'rating anchor' as the sovereign or a higher-tier sub-sovereign entity whose rating is used as a starting point to define the rating range for a sub-sovereign rating. The rating anchor is often the sovereign, given that it is usually responsible for defining the institutional framework characteristics, ensuring oversight of sub-sovereign finances, and providing ordinary and exceptional budgetary and funding support. However, in some systems, such as highly decentralised federal systems, those responsibilities can lie with a higher-tier sub-sovereign government. In such instances, we may use the state or regional government rating as the rating anchor level for lower-tier governments, the former which themselves would nevertheless remain linked to the sovereign rating.

Intergovernmental integration

Throughout this methodology, we refer to 'intergovernmental integration' as the relationship between government tiers, emphasising the degree of mutual reliance, burden sharing, support mechanisms and coherent policymaking between sub-sovereigns and the sovereign or higher-tier governments. Our institutional framework assessment focuses on the degree of intergovernmental integration between the sub-sovereign tier and the rating anchor rather than the general strength or supportiveness of the framework. In our view, a framework with high integration, characterised, for instance, by extensive, legally anchored exceptional and ordinary support, robust fiscal rules and oversight mechanisms, and shared decision-making between a sub-sovereign and its rating anchor, entails close ties between their respective credit quality and mitigates differentials in sub-sovereigns' ICPs. Conversely, a framework with high autonomy and weak ties among government tiers can widen differences in credit quality and underscore the importance of the sub-sovereign's individual strengths and weaknesses for its credit quality. As such, our analysis of intergovernmental integration measures the ordinary support provided by the rating anchor and its willingness to provide exceptional support if needed to sub-sovereigns in a given government tier.

1.2 Summary of Scope's sub-sovereign rating approach

Our approach to rating sub-sovereigns is structured along four steps. In the first step, we determine the intergovernmental integration between the rating anchor and a sub-sovereign entity based on our assessment of the institutional framework under which a sub-sovereign operates. This determines a rating range vis-à-vis the rating anchor whereby, the higher (lower) the integration, the narrower (wider) the rating range. The framework assessment generally applies to all sub-sovereigns of the same government tier in a country. The second step relates to the sub-sovereign's ICP, which includes qualitative assessments underpinned by quantitative metrics to position the sub-sovereign rating within the range defined by the framework assessment per our mapping table (which is the third step). The fourth step considers additional factors that could result in the credit rating being adjusted lower or higher and the conditions under which a sub-sovereign could be rated above the rating anchor.

Under our approach, an integrated institutional framework is enough to rate a sub-sovereign close to the rating anchor, whereas a strong individual credit profile would be needed to rate a sub-sovereign close to the rating anchor if intergovernmental integration is low. This view is underpinned by three considerations:

1. In cases of economic shocks or financial challenges, a sub-sovereign's ultimate recourse to honour its obligations is not its own balance sheet but rather the willingness and ability of the sovereign or higher-tier government to provide additional resources.

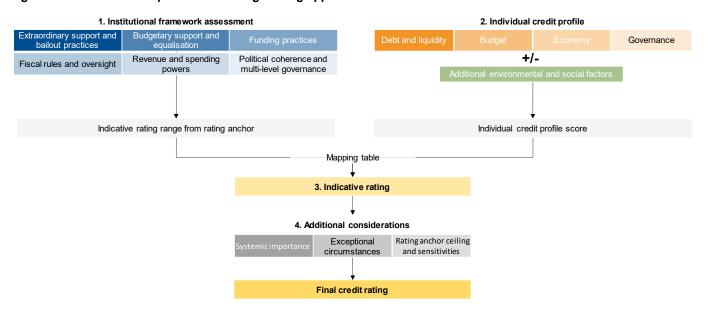
11 October 2023 4/22



Sovereign and Public Sector

- 2. A sub-sovereign's ability to honour debt obligations depends on the functioning of the relevant national legal systems, regulations and/or policy frameworks as these entities are usually not shielded from the jurisdictions of national courts, while access to capital market funding may be strongly impaired if the sovereign faces financial distress. Consequently, a sub-sovereign rating pierces the rating anchor level only in rare and exceptional circumstances, justified on a case-by-case basis.
- 3. Different institutional frameworks have varying effects on a sub-sovereign's ICP, specifically, its budgetary structure, spending and investment responsibilities, debt management and liquidity practices. By starting our analysis with the institutional framework and complementing it with a peer comparison per national government tier or among entities operating under similar frameworks, we evaluate the differences between the strongest and weakest entities within each framework.

Figure 1: Overview of Scope's sub-sovereign rating approach



Source: Scope Ratings

Step 1: Institutional framework assessment

In this part of the assessment, we determine the intergovernmental integration between a sub-sovereign and its rating anchor by assessing the institutional framework under which the sub-sovereign operates. This step is based on six analytical factors. The outcome of this assessment determines the indicative downward rating range from the rating anchor. It generally applies to all sub-sovereigns within a government tier in a country. The rating range can extend from 0 to 10 notches, whereby higher (lower) intergovernmental integration results in a narrower (wider) range from the rating anchor. Details are provided in Chapter 2.

Step 2: Individual credit profile or ICP

Having established the indicative rating range, we assess a sub-sovereign's ICP based on 10 assessments across four risk pillars: i) debt and liquidity; ii) budget; iii) economy; and iv) governance. This risk assessment results in a score from 0 to 100; a high (low) score is associated with a strong (weak) credit profile. We also incorporate additional environmental and social factors which can adjust the ICP score by up to +/- 10 points. Details are provided in Chapter 3.

Step 3: Indicative sub-sovereign rating

We derive the indicative sub-sovereign rating by mapping the rating range from the sovereign (or higher-tier government) rating, as determined by the institutional framework assessment, to the ICP score. Details are provided in Chapter 4.

Step 4: Additional considerations

Based on this indicative sub-sovereign rating, we incorporate additional rating factors such as: i) the systemic importance of the sub-sovereign; ii) the sensitivity of the sub-sovereign's rating to changes in the rating anchor level and the appropriateness of the implied rating anchor ceiling; and iii) other exceptional circumstances. Details are provided in Chapter 5.

11 October 2023 5/22



Sovereign and Public Sector

2. Institutional framework assessment

2.1 Overview

In our view, the degree of ordinary and extraordinary support provided by the sovereign or higher-tier government as well as the degree to which the framework entails intergovernmental oversight and common decision-making are key determinants of a subsovereign's creditworthiness. The rating anchor's ability to provide support is assessed by the sovereign's or the higher-tier government's issuer rating (i.e., the rating anchor level), while the degree of ordinary support being provided and the willingness to provide exceptional support depend on the level of intergovernmental integration between the government tiers.

The framework assessment is identical across sub-sovereigns of the same government layer within a country except in rare cases where a sub-sovereign operates under significantly different legal frameworks than its peers, the specificities of which cannot be fully captured by the ICP assessment. In these cases, assessments under the institutional framework may differ across sub-sovereigns of the same government tier within a country.

2.2 Intergovernmental integration – Qualitative Scorecard 1 (QS1)

Our Qualitative Scorecard 1 (QS1) structures our analysis of intergovernmental integration across government tiers around six components: i) extraordinary support and bailout practices; ii) ordinary budgetary support and fiscal equalisation; iii) funding practices; iv) fiscal rules and oversight; v) revenue and spending powers; and vi) political coherence and multi-level governance.

For each analytical component, assessments are made on a five-point scale. We use a scoring system assigning 0 to 'low integration', 25 to 'some integration', 50 to 'medium integration', 75 to 'strong integration, and 100 to 'full integration' for each component. The institutional framework score, ranging from 0 to 100, is calculated as a simple average of these assessments. The score is then used to determine a rating range from the rating anchor level, within which the sub-sovereign's rating can be positioned.

The rationales underpinning each assessment are detailed in the qualitative assessment guidance tables for every analytical component presented in the following sections. To ensure that our analysis is consistent across frameworks, we may perform comparative analyses with similar frameworks in other countries where relevant. Details on mapping the score to the rating range from the rating anchor are provided in Chapter 2.3.

11 October 2023 6/22



Sovereign and Public Sector

Figure 2. The institutional framework scorecard (QS1)

Analytical components	Full integration (100)	Strong integration (75)	Medium integration (50)	Some integration (25)	Low integration (0)
Extraordinary support and bailout practices	0	0	0	0	0
Ordinary budgetary support and fiscal equalisation	0	0	0	0	0
Funding practices	0	0	0	0	0
Fiscal rules and oversight	0	0	0	0	0
Revenue and spending powers	0	0	0	0	0
Political coherence and multi-level governance	0	0	0	0	0

Integration score	-
Downward rating range	-

Source: Scope Ratings

> Extraordinary support and bailout practices

This component examines the formal and informal extraordinary support and bailout practices of the rating anchor for lower-tier governments. We consider the degree to which extraordinary support mechanisms are: i) embedded in legislation; ii) part of a formal, transparent, rules-based procedure; or iii) provided on an *ad-hoc* basis, in contrast with systems with a credible history of no-bailouts. Extraordinary support can include exceptional budgetary transfers, liquidity assistance, concessional lending, bond buybacks, and comparable schemes. Our assessment pays attention to the rating anchor's record of providing extraordinary support in cases of system-wide shocks and individual financial distress. When analysing the exceptional support record of any *ad-hoc* support, we consider the underlying reasons for providing such support and whether it is reasonable to assume that such support will be extended to other sub-sovereigns under similar circumstances ³.

Assessment	Full integration (100)	Strong integration (75)	Medium integration (50)	Some integration (25)	Low integration (0)
Rationale	Strong legal framework entailing very predictable bailout responsibilities for the rating anchor; and/or consistent record of forceful extraordinary support to shield subsovereigns' finances from cases of systemwide or individual financial distress	Formal and predictable bailout processes; and/or a stable record of extraordinary support to mitigate the impact of system-wide shocks or individual financial distress, or our expectation thereof	Mostly informal bailout processes; and/or inconsistent record of extraordinary support to mitigate the impact of system-wide shocks and/or individual financial distress	Credible preference for no-bailout; and/or extraordinary support granted only in selected instances of system-wide shocks and/or individual financial distress	Past instances and/or credible expectation of no bailouts

Source: Scope Ratings

11 October 2023 7/22

_

³ For instance, if extraordinary support were provided to a systemic sub-sovereign entity (such as a capital city) but is unlikely to be extended to other sub-sovereigns, we would consider this instance to have a limited bearing on our assessment of system-wide support.



Sovereign and Public Sector

> Ordinary budgetary support and fiscal equalisation

This component examines the degree to which sub-sovereigns benefit from ordinary budgetary support from their rating anchor. This can include regular transfers as well as fiscal equalisation schemes. When making this assessment, we consider whether budgetary transfers and equalisation flows allow sub-sovereigns to adequately cover mandated responsibilities and compensate for differing fiscal capacities. We also consider the predictability and transparency of these budgetary support mechanisms.

Assessment	Full integration (100)	Strong integration (75)	Medium integration (50)	Some integration (25)	Low integration (0)
Rationale	Comprehensive and highly predictable transfer and fiscal equalisation schemes; and/or disparities in sub-sovereign fiscal capacities mostly eliminated	Sizeable and predictable transfer and fiscal equalisation schemes; and/or disparities in subsovereign fiscal capacities significantly reduced	Transfer or fiscal equalisation schemes in place; and/or disparities in subsovereign fiscal capacities somewhat reduced	Lack of institutionalised transfer or fiscal equalisation schemes; and/or disparities in sub-sovereign fiscal capacities somewhat reduced via ad-hoc, less predictable transfers	Lack of consistent transfer or fiscal equalisation schemes; and/or sub-sovereigns relying solely on own fiscal capacities, resulting in potentially high disparities

Source: Scope Ratings

> Funding practices

In assessing this component, we consider whether sub-sovereigns' funding profiles are mostly reflective of their standalone credit fundamentals or closely tied to the rating anchor's credit and funding profile. We examine the degree to which sub-sovereigns benefit from ordinary funding support from their rating anchor. This can include on-lending, access to central credit or liquidity lines, common debt issuance and other funding schemes.

Assessment	Full integration (100)	Strong integration (75)	Medium integration (50)	Some integration (25)	Low integration (0)
Rationale	Very strong funding support eliminates own exposure to financial markets; and/or borrowing can be fully covered through available sovereign on-lending or via common debt issuance	Strong funding support greatly reduces own exposure to financial markets; and/or a large portion of borrowing can be covered through on- lending or via common debt issuance	Funding support is occasionally provided and reduces own exposure to financial markets; and/or access to centralised credit or liquidity lines exists	Funding is mostly autonomous; and/or access to centralised credit or liquidity lines is possible on a case- by-case basis	Funding is fully autonomous and reflects idiosyncratic strengths and weaknesses; and/or the sovereign does not provide any tangible funding support

Source: Scope Ratings

> Fiscal rules and oversight

This component examines the institutional arrangements that govern sub-sovereign financial management and borrowing practices. We consider the scope, stringency, and credibility of sub-sovereign fiscal rules. Our analysis focuses on aspects such as the rating anchor's ability to oversee sub-sovereign financial management and impose borrowing restrictions (e.g., permitting borrowing only to finance investments, subject to pre-authorisation). Stringent fiscal rules with robust monitoring mechanisms by higher-tier government authorities typically reflect strong integration.

Assessment	Full integration (100)	Strong integration (75)	Medium integration (50)	Some integration (25)	Low integration (0)
Rationale	Stringent and credible fiscal rules that ensure fiscal discipline and strictly constrain borrowing with very robust oversight by the rating anchor	Stringent and credible fiscal rules that strengthen fiscal discipline and impose borrowing restrictions; and/or robust oversight by the rating anchor	Fiscal rules exist and support fiscal discipline although borrowing is only moderately constrained; and/or the rating anchor performs regular oversight	Fiscal rules are largely self-imposed with some coordination over fiscal policy with central or lower-tier governments; and/or the rating anchor imposes little to no restriction on borrowing	No oversight by or coordination with other government tiers over financial management; and/or sub-sovereigns have full discretion over budgetary targets and borrowing

Source: Scope Ratings

11 October 2023 8/22



Sovereign and Public Sector

> Revenue and spending powers

This component examines the distribution of taxation and spending powers across government tiers and the degree of coordination required. We consider the rules that govern tax-sharing and rate-setting as well as those defining spending mandates across government tiers, including the degree to which sub-sovereigns have a say on national revenue and spending arrangements. Systems in which sub-sovereigns share control on resources, decide on spending responsibilities jointly with the rating anchor and can influence national revenue and spending powers are more integrated. A balanced and stable distribution of revenue and spending powers can support long-term financial planning and reduce budgetary uncertainties. Conversely, siloed systems where sub-sovereigns decide independently on spending responsibilities and have autonomy over their own revenues indicate low integration. We also look at systems where the rating anchor exerts unilateral control over major fiscal resources and/or spending responsibilities. A limited taxing capacity could lead to budgetary and political pressures if a sub-sovereign's resources cannot fully fund the services for which it is responsible.

Assessment	Full integration (100)	Strong integration (75)	Medium integration (50)	Some integration (25)	Low integration (0)
Rationale	Control over fiscal arrangements is fully shared across government tiers with joint decision-making on tax sharing, tax base and rate-setting as well as spending responsibilities at national and subsovereign levels	Control over fiscal arrangements is largely shared across government tiers with strong coordination on tax-sharing, tax base and/or rate-setting as well as spending responsibilities at the national level	Fiscal arrangements are dominated by the rating anchor, which has control over main decisions regarding tax sharing, tax base and rate-setting and/or spending responsibilities	Fiscal arrangements are largely controlled by the sub-sovereign, which has control over main decisions regarding tax base and rate-setting as well as spending responsibilities; and/or coordination across government tiers is common but there is no joint decision-making on national fiscal arrangements	Sub-sovereigns have autonomy over their fiscal arrangements and decide independently on tax base and rate-setting as well as spending responsibilities with no joint decision-making on national fiscal arrangements

Source: Scope Ratings

> Political coherence and multi-level governance

This component examines the degree of system-wide political integration between the sub-sovereign government tier and the rating anchor. We assess the degree of policy coordination between different government tiers and the extent to which sub-sovereign legislative powers influence national policymaking and contribute to predictable, balanced developments in their institutional frameworks. In addition, we consider whether governance systems are prone to conflict or can minimise conflict between local/regional entities and the central government. For example, strong integration is reflected in multi-level governance frameworks that favour effective policy coordination between different government tiers and/or improve the predictability of changes to the framework that are relevant for sub-sovereigns.

Assessment	Full integration (100)	Strong integration (75)	Medium integration (50)	Some integration (25)	Low integration (0)
Rationale	Policymaking benefits from robust coordination; subsovereigns have a strong and consistent impact on national policymaking; the framework is mature, very transparent, and highly predictable; and/or multi-level governance is mostly conflict-free	Policymaking benefits from robust coordination; subsovereigns have a material impact on national policymaking; the framework is stable, transparent and predictable; and/or multi-level governance is generally conflict-free	Policymaking is coordinated; subsovereigns have a say on national policymaking; the framework is broadly stable and predictable; and/or interjurisdictional conflicts are effectively managed by multilevel governance	Political coherence is moderate; coordination in policymaking is limited with a negligible subsovereign impact on national policymaking; and/or multi-level governance is conflict-prone	Political coherence is low with little to no coordination in policymaking; subsovereigns have no tangible say on decision-making at national level; and/or ineffective multi-level governance often results in conflict

Source: Scope Ratings

2.3 Indicative rating range

The degree of intergovernmental integration between the rating anchor and the sub-sovereign's government tier determines the indicative maximum deviation of the sub-sovereign's rating from the rating anchor level. This methodology defines low intergovernmental integration with a maximum indicative distance of negative 10 notches. A history of rare default events given usually strong economic and institutional ties between government tiers justifies the maximum 10-notch indicative range. We usually

11 October 2023 9/22



Sovereign and Public Sector

consider the rating anchor level as an indicative upper ceiling for sub-sovereigns unless conditions for rating above the rating anchor level apply as defined in Chapter 5.1. We set the lowest indicative range of between zero notches and negative one notch to reflect that even sub-sovereigns in highly integrated systems are: i) separate legal entities; and ii) still rely to some extent on their credit strength.

To derive the indicative rating range, we map the score from the institutional framework scorecard (QS1) to the table as presented below. A high (low) integration score thus results in a narrow (wide) differential from the rating anchor level.

Figure 3. Mapping the institutional framework scores to indicative rating ranges

Institutional framework score	100 > x≥ 90	90 > x≥ 80	80 > x≥ 70	70 > x≥ 60	60 > x≥ 50	50 > x≥ 40	40 > x ≥ 30	30 > x≥ 20	20 > x≥ 10	10 > x ≥ 0
Indicative rating range	0-1	0-2	0-3	0-4	0-5	0-6	0-7	0-8	0-9	0-10

Source: Scope Ratings NB. Notches are indicative downward adjustments from the rating anchor level.

3. Individual credit profile or ICP

3.1 Overview

In this second stage of the analysis, we derive the ICP score of a sub-sovereign via 10 assessments structured around four risk pillars. The components presented in the following sections are generally underpinned by quantitative metrics that inform our assessments

For our quantitative metrics, we focus on peer benchmarking with other sub-sovereigns operating under the same or similar institutional frameworks⁴. In doing so, we acknowledge that analysing the financial performance of a sub-sovereign must be conducted in view of the differing budget structures, spending and investment responsibilities, and debt and liquidity management practices. For instance, framework-induced differences in financial ratios that limit comparability can include: i) sub-sovereigns can have important investments responsibilities, which require wider operating margins to fulfil than sub-sovereigns with little to no investment responsibilities; ii) a large share of sub-sovereigns' operating revenue can be earmarked for specific spending responsibilities which can lead to apparently stronger debt metrics despite the fact that those revenues are not available to the sub-sovereigns to service debt; or iii) there can be regulatory requirements that disincentivise cash holdings such as the obligation to place cash in centralised Treasury accounts at zero interest, impacting liquidity metrics. In addition, disparities in accounting and reporting methods can further distort financial metrics, limiting international comparability. Typically, we rely on multi-year averages to smooth out volatility and reflect more structural credit fundamentals.

Our assessments also incorporate qualitative and forward-looking factors that require analyst judgment and can be underpinned by additional quantitative metrics, which are relevant on a framework- and country-specific basis. These qualitative factors are outlined in the guidance tables provided in the following section.

3.2 Individual credit profile: Qualitative Scorecard 2

To assess the ICP, we apply a Qualitative Scorecard 2 (QS2), centred around 10 components underpinned by peer benchmarking. This analysis is structured around four risk pillars: i) *debt and liquidity* (four components); ii) *budget* (three components); iii) *economy* (two components); and iv) *governance* (one component). We assess each analytical component on a three-point scale by benchmarking a sub-sovereign's performance and risk exposures to that of peers. Scores are 0 for 'weaker', 50 for 'mid-range', and 100 for 'stronger' for each component. The individual credit profile score, ranging from 0 to 100, is calculated as a simple average of these assessments.

In addition, we make two additional assessments for *environmental factors and resilience* and *social factors and resilience*, which can lead to adjustments of the ICP score by up to +/- 10 points. We adjust the ICP by +5 points for components with a 'positive impact', 0 points for 'no impact', and -5 points for 'negative impact'.

We provide guidance for the classification of qualitative assessments in the guidance tables provided in the following sections. For the analytical components that are also underpinned by quantitative metrics, we make our assessments as follows:

11 October 2023 10/22

⁴ Should we deem that there are not enough comparable peers operating under the same institutional framework, we will also include international peers that operate under similar institutional frameworks with comparable budget structures, investment, and spending responsibilities.



Sovereign and Public Sector

Preliminary quantitatively driven assessments

Our preliminary assessments are based on the quantitative metrics outlined per component and are mapped to the three-point scale. Financial ratios are benchmarked against that of peers whereby we analyse the distribution of the metrics and identify the sub-sovereigns that substantially deviated from the average/median as the 'stronger' or 'weaker' entities. In instances where an analytical component is underpinned by two quantitative metrics that indicate two different assessments, we would derive the preliminary assessment as follows: 'stronger' and 'mid-range' = 'stronger'; 'stronger' and 'weaker' = 'mid-range'; 'weaker' and 'mid-range' = 'weaker'.

> Qualitative adjustments

The preliminary assessments can thereafter be adjusted based on qualitative factors which cannot be assessed purely on a quantitative basis and incorporate forward-looking views. Based on these qualitative factors, we can adjust the assessment by at most one category on the three-point scale.

Figure 4. The 'individual credit profile' scorecard (QS2)

Risk pillar		Analytical components	Stronger (100)	Mid-range (50)	Weaker (0)
		Debt burden and trajectory	0	0	0
Debt and	40%	Debt profile and affordability	0	0	0
liquidity	40	Contingent liabilities	0	0	0
		Liquidity position and funding flexibility	0	0	0
		Budgetary performance and outlook	0	0	0
Budget		Revenue flexibility	0	0	0
		Expenditure flexibility	0	0	0
Foonemy	20%	Wealth levels and economic resilience	0	0	0
Economy	20	Economic sustainability	0	0	0
Governance	10%	Governance and financial management quality	0	0	0
Additional environmental and social factors			Positive impact (+5)	No impact (0)	Negative impact (-5)
Environmental factors and resilience			0	0	0
Social factors	s an	d resilience	0	0	0

Individual credit profile score	-
Indicative notching	-

Source: Scope Ratings

11 October 2023 11/22



Sovereign and Public Sector

3.2.1 Debt and liquidity (40%)

We assign the highest weight to this category to reflect our view that (contingent) debt and liquidity risks are central to a subsovereign's debt servicing capacity. Our analysis places strong emphasis on a sub-sovereign's financing ability as reflected in its interest payments and debt position. The liquidity profile is an important factor in the ability to service debt payments on time, particularly when access to capital markets is interrupted. The combination of risk-taking strategies and a high recourse to debt to finance investments realised via guarantees of conventional debt issued by government-related entities can lead to financial distress, for instance due to depleted reserves or the bypassing of budget or direct debt limitations. Consequently, we use an 'extended-balance sheet approach' to assess the crystallisation risk of explicit and implicit contingent liabilities.

> Debt burden and trajectory

This component assesses the sub-sovereign's debt burden. The quantitative assessment considers the sub-sovereign's gross direct debt⁵ relative to its operating revenue. However, high and rigid operating expenditure can constrain a sub-sovereign's ability to service debt with operating revenue. We thus complement our quantitative assessment with the payback ratio (gross debt/operating balance). We also inform our assessment with a forward-looking analysis of the debt trajectory over a multi-year horizon, in view of expected budgetary performance and investment needs.

	Stronger (100)	Mid-range (50)	Weaker (0)		
Quantitative assessment	Low debt burden relative to peers	Moderate debt burden relative to peers	Elevated debt burden relative to peers		
Qualitative adjustment	Debt is on a firm downward trajectory	Debt is broadly stable	Debt is on a firm upward trajectory		

Source: Scope Ratings

> Debt profile and affordability

This component assesses the affordability of a sub-sovereign's debt as well as its exposure to interest rate and foreign currency risks and changing financial conditions. Our quantitative assessment is underpinned by the sub-sovereign's interest payment burden relative to its operating revenue and its implicit interest rate, which are critical for assessing debt affordability. We also supplement our analysis with a view on structural interest burden trends and the sub-sovereign's debt profile.

	Stronger (100)	Mid-range (50)	Weaker (0)
Quantitative assessment	Low interest payment burden relative to peers	Moderate interest payment burden relative to peers	Elevated interest payment burden relative to peers
Qualitative adjustment	Structurally improving interest burden; and/or favourable debt profile with limited interest rate or foreign exchange risks and high share of long-term debt with a favourable maturity/repayment structure	Stable interest burden and/or balanced debt profile with manageable interest rate or foreign exchange risks and a balanced maturity/repayment structure	Structurally deteriorating interest burden; and/or weak debt profile with material interest rate or foreign exchange risks and an unfavourable maturity/repayment structure

Source: Scope Ratings

Contingent liabilities

This component assesses the size and materialisation risk of explicit and implicit contingent liabilities that have the potential to damage the sub-sovereign's balance sheet. Importantly, we analyse not only the size of contingent liabilities but also the likelihood of those liabilities crystallising onto the sub-sovereign's balance sheet. We consider the degree of oversight of related public sector entities, their debt burden and financial resilience, financial guarantees granted by the sub-sovereign, and implicit liabilities such as pension liabilities, legal liabilities, commitments related to public-private-partnerships, and other policy commitments. Finally, our assessment also reflects the level of transparency, disclosure, and management of a sub-sovereign's contingent liabilities.

11 October 2023 12/22

⁵ We refer to direct debt as the total gross consolidated debt in currency and deposits, debt securities and loans that are owed by the sub-sovereign. We do not include off balance sheet debt which is accounted for under *contingent liabilities*.



Sovereign and Public Sector

	Stronger (100)	Mid-range (50)	Weaker (0)
Qualitative assessment	Limited share of contingent explicit and implicit liabilities relative to subsovereign's revenue base; and/or very low risk of crystallisation on the subsovereign balance sheet	Sizeable but manageable contingent liabilities relative to sub-sovereign's revenue base with a moderate risk of crystallisation on the sub-sovereign balance sheet	Large contingent liabilities relative to sub-sovereign's revenue base and/or elevated risks of crystallisation on the sub-sovereign balance sheet

Source: Scope Ratings

> Liquidity position and funding flexibility

This component examines the sub-sovereign's liquidity management practices and assesses its ability to meet short-term financial obligations. We consider both internal sources of liquidity, including budgetary resources and cash holdings, as well as external sources including access to capital market funding and private or public credit liquidity lines such as credit facilities and short-term commercial paper programmes. Our assessment also accounts for the diversification and reliability of the creditor base. A well-diversified funding strategy that includes multiple sources of financing enhances the sub-sovereign's resilience and ability to navigate market fluctuations. To determine the strength of the liquidity position, we compare the sub-sovereign's short-term debt liabilities with available liquidity.

	Stronger (100)	Mid-range (50)	Weaker (0)
Qualitative assessment	Access to external liquidity is strong with a diversified and reliable creditor base; and/or own liquidity sources can cover the next 12 months of debt service with significant buffers	Internal and external liquidity is adequate; and/or own liquidity sources can comfortably cover next 12 months of debt service	Internal liquidity buffers do not fully cover the next 12 months of debt service; and/or the sub-sovereign is overly reliant on short-term, external liquidity lines with a concentrated creditor base

Source: Scope Ratings

3.2.2 Budget (30%)

The assessment of a sub-sovereign's revenue adequacy and ability to adjust resources to cover interest expenses and debt repayments is critical. Persistent fiscal imbalances can increase the probability of a sub-sovereign default, particularly under adverse economic and market conditions. Our evaluation of budgetary performance and risks focuses on a sub-sovereign's ability to maintain balanced budgets and its available budgetary buffers to cover investment expenditure, interest expenditure and debt repayments. We also assess the predictability of revenue and expenditure flows from operations and investment activities which can be used to service debt.

> Budgetary performance and outlook

This component examines the sub-sovereign's budgetary performance. We consider the degree to which the sub-sovereign can generate sufficient budgetary margins to cover its debt obligations and investment programme without overly relying on debt. Our quantitative assessment is underpinned by a historical review of the operating balance relative to operating revenue and balance before debt movement relative to total revenue. We complement this with a forward-looking assessment of budgetary performance in view of the sub-sovereign's investment plans.

	Stronger (100)	Mid-range (50)	Weaker (0)		
Quantitative assessment	Strong budgetary performance relative to peers	Average budgetary performance relative to peers	Weak budgetary performance relative to peers		
Qualitative adjustment	Strong fiscal outlook; and/or ample operating margins to cover investments with limited recourse to debt in coming years	Moderate fiscal outlook with broadly stable operating margins; and/or operating margins providing limited room to increase investments without recourse to debt in coming years	Weak fiscal outlook with deteriorating operating margins; and/or operating margins that are insufficient to fund investments or signal long-term fiscal imbalances in coming years		

Source: Scope Ratings

> Revenue flexibility

This component assesses the sub-sovereign's ability to increase its revenues through higher tax rates, an expansion of the tax base or asset sales. Our quantitative assessment is underpinned by the share of transfers and grants in operating revenue. In

11 October 2023 13/22



Sovereign and Public Sector

addition, we estimate the adjustable share of tax revenue, consider the tax rates applied nationally and examine any political commitments that may constrain the government's ability to increase revenue.

	Stronger (100)	Mid-range (50)	Weaker (0)		
Quantitative assessment	Low reliance on transfers and grants relative to peers	Average reliance on transfers and grants relative to peers	High reliance on transfers and grants relative to peers		
Qualitative adjustment	Ample room to increase revenue if needed with little to no political impediment	Limited share of adjustable revenue with some room to increase revenue if needed	Little to no room to increase revenue; and/or political commitments that constrain ability to raise tax rates		

Source: Scope Ratings

Expenditure flexibility

This component examines the sub-sovereign's expenditure structure and ability to manage or reduce expenditure. Our quantitative assessment is underpinned by the share of personnel expenditure in operating expenditure and the share of capital expenditure in total expenditure. In addition, we assess essential expenditure items mandated by the national (or higher-tier) government as well as the spending needed to maintain public services as intended. We also analyse the sub-sovereign's record in reducing expenditure, which indicates its ability and willingness to consolidate finances. In this context, we identify the potential for investment backlogs, which would reveal threats to sustainable growth, and/or consider whether, if needed, investments can be postponed without major repercussions on the local economy. We also examine whether any legal or political constraints have the potential to materially limit the sub-sovereign's ability to reduce expenditure if needed.

	Stronger (100)	Mid-range (50)	Weaker (0)
Quantitative assessment	Good expenditure flexibility relative to peers	Average expenditure flexibility relative to peers	Low expenditure flexibility relative to peers
Qualitative adjustment	Ample room and willingness to lower operating expenditure, good record of lowering operating expenditure under stressed scenarios; and/or sizeable capital expenditure can be postponed easily	Some room and willingness to lower operating expenditure; and/or capital expenditure provides an additional buffer if needed	Constrained ability and/or willingness to lower operating and capital expenditure leading to high budgetary vulnerability to shocks

Source: Scope Ratings

3.2.3 Economy (20%)⁶

Under this risk category we review the reliability of the revenue base against future spending needs, as both ultimately affect a subsovereign's ability to service debt in the medium to long term. The relatively low weight of this risk pillar reflects our view that in many countries, material transfer-dependency may weaken the link between the sub-sovereign's ICP and the performance of the regional/local economy. In addition, the rating anchor level already captures critical elements related to the overall macro-economic environment.

Wealth levels and economic resilience

This component assesses the resilience of the sub-sovereign's economic and tax base by focusing on its wealth levels and economic diversification. The sub-sovereign's ability to generate sufficient and sustainable revenue depends, in part, on its wealth levels. Regional disparities in wealth can imply differing fiscal capacities. Our quantitative assessment is thus underpinned by local or regional GDP per capita levels. We also analyse the resilience of a sub-sovereign's economic base in view of its economic size and diversification and exposure to local, regional and/or global shocks. Usually, a narrow economic base with high reliance on a specific sector increases the volatility of a sub-sovereign's economic performance, and thus its tax revenue, weighing on budgetary performance.

11 October 2023 14/22

-

⁶ For ratings at the local level, we can use economic data for the surrounding region if local level economic data is not available.



Sovereign and Public Sector

	Stronger (100)	Mid-range (50)	Weaker (0)	
Quantitative assessment	High wealth levels: GDP per capita exceeds 120% of national GDP per capita	Moderate wealth levels: GDP per capita is between 120% and 80% of national GDP per capita	Low wealth levels: GDP per capita is below 80% of national GDP per capita	
Qualitative adjustment	Diversified economic base that underpins strong resilience to shocks and stability of the tax base	Moderate economic diversification that is somewhat resilient to shocks	Narrow or highly concentrated economic base, leading to high vulnerability to shocks	

Source: Scope Ratings

Economic sustainability

This component analyses the growth prospects of a sub-sovereign's local and regional economy. We consider the growth potential of the region, demographic trends, long-term business dynamism and structural labour market dynamics. We also consider the competitive advantages of the respective region, such as its strategic location, transport infrastructure, industrial strength and natural resources.

	Stronger (100)	Mid-range (50)	Weaker (0)
Qualitative assessment	Robust economic growth and employment prospects; favourable demographics; and/or strong business dynamism	Moderate economic growth and employment prospects; adequate demographic dynamics; and/or average business dynamism	Weak economic growth and employment prospects; unfavourable demographic dynamics; and/or sluggish business dynamism

Source: Scope Ratings

3.2.4 **Governance** (10%)

Our analysis of a sub-sovereign's governance focuses on political and institutional strengths, mostly as pertains the quality of its financial management and broad policy outlook. The weighting of this key category for the ICP is justified by our framework-driven assessment, which already captures key credit-relevant governance elements at the sub-sovereign level. At the same time, severe policy and political risks that may trigger a default are captured under 'additional considerations' (Chapter 5).

Governance and financial management

This component examines the quality of a sub-sovereign's governance and financial management. We consider the sub-sovereign's political and institutional strengths, including as regards transparency, accountability, policy predictability and decision-making capacity. This includes a review of recent political events that may influence a sub-sovereign's policy as well as the frequency of changes in governing and management bodies. We regard instances of - or tangible concerns related to - corruption to be a strong indication of weak governance. We also review the sub-sovereign's record of designing and implementing financial plans and delivering on fiscal and financial targets as well as the quality of its internal and external controls.

	Stronger (100)	Mid-range (50)	Weaker (0)
Qualitative assessment	Strong governance quality; transparent, effective, and consistent policymaking; very stable and predictable political environment; robust financial management with prudent long-term financial planning and conservative debt management; and/or good internal and external controls and disclosure of key risks	Medium governance quality; transparent policymaking; broadly stable political environment; good financial management with manageable risk appetite; and/or adequate internal controls	Weak governance quality; long-term policymaking lacking a clear strategy or showing inefficiencies; unstable political environment leads to limited policy predictability; lax financial management with weak record of delivering on fiscal targets; lack of effective and credible controls with limited disclosure; and/or tangible corruption concerns

Source: Scope Ratings

3.2.5 Additional environmental and social considerations

Environmental (E) and social (S) factors are credit-relevant and captured through several analytical components. First, our assessment of a sovereign's credit quality, a key input for our sub-sovereign ratings, incorporates ESG risks (25% weight) as detailed in our Sovereign Rating Methodology. In addition, E and S factors are reflected in a sub-sovereign's *debt and liquidity* profile (for instance, to capture debt issued with E and S purposes in mind) and *budget* profile (for instance, to reflect the budgetary implications of E and S spending). However, additional E and S factors can be material for sub-sovereign creditworthiness beyond what is already captured in other sections of the methodology or reflected in historical and forecasted financial and economic data. Our analysis of additional E and S factors looks at sub-sovereigns' exposure to E and S risks as well as the degree to which they are delivering on their E and S policy objectives in view of their mandated responsibilities.

11 October 2023 15/22



Sovereign and Public Sector

Additional adjustments can be warranted if there are wide regional disparities in terms of E and S exposures. This may require a positive or negative credit-relevant adjustment to reflect instances where the associated risks and/or benefits deviate significantly from country-wide averages and long-term trends. E risks can include high (low) transition risks due to a large (small) exposure to fossil-fuel dependent industries and above-national-average (below-national average) physical risks due to climate change. Social risks can include high (low) poverty rates, strong (weak) employment prospects and adverse (favourable) demographic trends that would not be fully captured under our assessment of 'economic sustainability'.

In addition, we assess E and S factors in terms of a sub-sovereign's related policies and their effectiveness in view of its framework-defined spending responsibilities. Sub-sovereigns that outperform (underperform) on their E and S policy objectives are likely to face lower (higher) spending pressures or investment needs in the long term, with associated benefits (risks) for their credit profiles. To identify whether a sub-sovereign has a material responsibility for specific E and S policy interventions, we analyse the sub-sovereign's budget structure and identify competencies that entail clear spending responsibilities in line with E/S-related UN Sustainable Development Goals. We consider E and S spending responsibilities to be credit-relevant if spending on a policy issue represents at least 5%-10% of expenditure for that government tier.

We adjust a sub-sovereign's ICP based on its strength or weakness against peers on relevant E and S criteria (as it entails medium-to long-term implications for its budgetary planning and performance, investment needs, debt burden or economic base) by up to +/-5 points per component as follows:

	Positive impact (+5)	No impact (0)	Negative impact (-5)
Qualitative assessment	Low exposure to E/S risks relative to peers; and/or the sub-sovereign is outperforming on its E/S policy objectives	Average exposure to E/S risks relative to peers; and/or the sub-sovereign is delivering on its E/S policy objectives	High exposure to E/S risks relative to peers; and/or the sub-sovereign is underperforming on its E/S policy objectives

Source: Scope Ratings

4. Indicative sub-sovereign rating

We derive the indicative sub-sovereign rating by mapping the result of the institutional framework assessment (i.e. the indicative rating range) to the ICP score, as depicted in **Figure 5** below. Based on our approach, a strong ICP score is enough for a high rating, regardless of the framework, while a strong framework supports the ratings of sub-sovereigns with weak ICP scores. When the mapping table provides two indicative notching possibilities, we consider the historical position of the sub-sovereign, its expected future performance and peer comparisons to determine the indicative notching.

Figure 5. Deriving the indicative sub-sovereign rating

Institutional frame	work assessment	nt Individual credit profile score							
Score	Downward rating range	100 > x≥ 80	80 > x≥ 70	70 > x≥ 60	60 > x≥ 50	50 > x ≥ 40	40 > x ≥ 30	30 > x≥ 20	20 > x≥0
100 > x≥ 90	0-1	0	0	0	0	0	0	-1	-1
90 > x ≥ 80	0-2	0	0	-1	-1	-1	-1	-2	-2
80 > x ≥ 70	0-3	0	-1	-1	-1	-2	-2	-3	-3
70 > x ≥ 60	0-4	0	-1	-1	-2	-2	-3	-3	-4
60 > x ≥ 50	0-5	0	-1	-1	-2	-2	-3	-4	-5
50 > x ≥ 40	0-6	0	-1	-1/-2	-2/-3	-2/-3	-3/-4	-4/-5	-6
40 > x ≥ 30	0-7	0	-1/-2	-1/-2	-2/-3	-3/-4	-4/-5	-5/-6	-7
30 > x ≥ 20	0-8	0	-1/-2	-2/-3	-3/-4	-4/-5	-5/-6	-6/-7	-8
20 > x≥ 10	0-9	0	-1/-2	-2/-3	-3/-4	-4/-5	-5/-6	-7/-8	-9
10 > x ≥ 0	0-10	0	-1/-2	-2/-3	-3/-4	-5/-6	-7/-8	-9/-10	-10

Source: Scope Ratings

5. Additional considerations

The combination of the rating anchor level, the institutional framework assessment and the ICP score provides an indicative sub-sovereign rating. Given the idiosyncratic nature of the sub-sovereign universe, however, we include additional considerations when determining the final rating. These include: i) potential adjustments to reflect a sub-sovereign's systemic importance; ii) a review of whether the sub-sovereign can be rated above the rating anchor level and its sensitivity to changes in rating anchor levels; and

11 October 2023 16/22



Sovereign and Public Sector

iii) a review of exceptional circumstances that could lead to additional adjustments. Although these adjustments have no defined limit, each assessment that causes deviation from the indicative rating will be explicitly communicated and justified.

5.1 Systemic importance

While the institutional framework assessment described in Chapter 2 gives a comprehensive view of the degree to which a subsovereign's credit quality is tied to that of the rating anchor, some entities may have intrinsic qualities that make the rating anchor more willing to provide support in cases of financial distress.

For example, a systemically important entity is more likely to benefit from extraordinary support than typical entities of the same government tier. Alternatively, entities with low systemic importance, whose default would entail little to no spill-over risk to other public entities, are less likely to receive extraordinary support. In both cases, an additional adjustment to the indicative ratings may be appropriate.

Where relevant, we make this judgment by considering the relevance of the sub-sovereign's economy, debt, expenditure, and population relative to other sub-sovereigns within the same government tier, as well as its clout as a public sector issuer, for instance, underpinned by a capital city status. The *systemic importance* assessment can lead to an upwards or downwards indicative rating adjustment from the indicative sub-sovereign rating resulting from the mapping table by typically up to two notches.

5.2 Rating anchor ceiling and rating sensitivity

In this part of the analysis, we assess whether i) the sub-sovereign can be rated above the rating anchor; and ii) the sensitivity of the sub-sovereign's ratings to changes in the rating anchor level, that is, the degree of automaticity between the rating anchor and sub-sovereign rating changes.

5.2.1 Criteria to be rated above the rating anchor

Under our approach, a sub-sovereign rating is indicatively capped by the rating anchor level. Exceptions can exist but are unlikely. The indicative cap reflects our view that there is a minimum degree of default interdependence between sub-sovereigns and rating anchors, even among highly autonomous entities. Sub-sovereigns are typically not shielded from the jurisdictions of national courts and consequently their ability to honour debt obligations depends on the functioning of their national legal system, regulation and/or policy framework. Recent crises confirmed that a sub-sovereign's (even those whose autonomy is enshrined in the national constitution) ability to gain capital market funding will be strongly impaired if the rating anchor faces financial distress. Consequently, we would only pierce the rating anchor level in exceptional circumstances, justified on a case-by-case basis.

A sub-sovereign rating above the rating anchor can be justified based on two conditions: i) the extent to which a special legal status or fiscal autonomy shields the sub-sovereign from central government intervention regarding its tax revenues, expenditures, and treasury accounts; and ii) an exceptionally strong ICP score among peers.

The two factors in combination must ensure exceptional liquidity and financing profiles as well as budgetary flexibility and resilience. We define these factors as: i) autonomous access to liquidity with a very strong debt profile, typically reflected by very low financing needs, comfortable cash buffers covering stressed cash outflows over the next 12-18 months, and exceptionally high autonomy to incur debt without rating anchor interference, i.e. sub-sovereign finances are fully protected from political interference by constitution or public law; ii) extraordinary budget flexibility, reflected by robust revenues through economic cycles, very low transfer-dependency and a sub-sovereign's control over the tax payment system with no obligation to forward tax receipts to other government tiers or to redistribute them, enabling it to withstand long periods of macro-economic and financial stress; and iii) exceptional revenue resilience to external shocks and a high potential to outperform, also in cases of rating anchor stress/default.

A positive assessment of these factors indicates a sub-sovereign that can consistently service debt obligations, even if the rating anchor defaults and can thus result in a sub-sovereign rating above the rating anchor level.

5.2.2 Sensitivity to rating anchor level changes

To assess the sensitivity of a sub-sovereign's rating to a change in the rating anchor level, we analyse on a case-by-case basis: i) the drivers of the rating action on the rating anchor, specifically, their effect to the rating anchor's ability to provide support; ii) any possible implications for the institutional framework; and iii) the expected impact on a sub-sovereign's ICP score relative to peers.

In general, sub-sovereigns operating in less aligned institutional frameworks, coupled with a strong ICP score, are less affected by a change in the rating anchor level. Conversely, sub-sovereigns that are institutionally highly integrated with the rating anchor and/or have a weak ICP score are usually more affected by a change in the rating anchor level. This reflects our view that institutional frameworks with low intergovernmental integration typically dampen the direct impact of a change in the rating anchor

11 October 2023 17/22



Sovereign and Public Sector

level. A change in the rating anchor level does not automatically trickle down to all entities equally and will depend on their individual credit strengths.

5.3 Review of exceptional circumstances

Our rating approach indicatively limits the maximum distance to the sovereign rating, or alternatively to the higher-tier government level, as established by our framework assessment. The indicative rating range reflects that there is always some degree of intergovernmental integration between the sub-sovereign and the rating anchor, also in very decentralised frameworks. However, in exceptional circumstances that cannot be captured by the quantitative and qualitative scorecards, we may adjust the indicative sub-sovereign rating further downwards, that is, below the indicative rating range.

Certain additional factors that might not be fully captured by our scorecards can carry important rating considerations for sub-sovereigns. In exceptional circumstances, we may thus adjust the indicative sub-sovereign rating further downwards, even below the indicative rating range. Additional factors can lead to a one-notch adjustment to the rating, but extreme circumstances may warrant multiple notches. Additional factors can include the following (non-exclusive) considerations:

- Excessive debt (downward adjustment)
- Sizeable, growing and very risky contingent liabilities (downward)
- Excessive budget deficits after capital accounts (downward)
- Very weak and deteriorating liquidity, limited to no market access, or access to alternative liquidity sources and substantial refinancing needs (downward)
- Very weak financial management, consistent weaknesses in fiscal practices, debt management and transparency (downward)
- · Highly concentrated and narrow economic base with weak economic fundamentals (downward)
- High political risk and/or acute political interference undermining the ability and/or willingness to service debt (downward)
- Political conflict with a higher-tier government, increasing the uncertainty around the latter's willingness to provide timely support (downward)
- Event risk, such as wars, natural disasters or global economic and financial crises, undermining the ability to service debt (downward)
- · Recent history of default or debt restructuring (downward)
- Significant, ring-fenced cash buffers (upward)

6. Long-term and short-term issuer ratings

Our Rating Definitions apply to sub-sovereign issuers and their long-term and short-term debt obligations.

See our Rating Definitions for more information on long-term and short-term rating scales. The long-term issuer rating is a measure of a sub-sovereign's fundamental credit quality, which also includes the consideration of short-term risks related to the liquidity position and funding flexibility. Short-term ratings are correlated with the long-term ratings but also emphasize risks and considerations related to liquidity aspects, including an assessment of available cash, liquid assets, access to external short-term liquidity and flexibility in borrowing.

Our evaluation of short-term credit quality is typically highly correlated with our assessment of a sub-sovereign's liquidity position (see Chapter 3.2.1) as well with our framework assessments for 'funding practices' and/or 'extraordinary and bailout practices' (see Chapter 2.2). When two short-term ratings can be derived from the long-term rating as per the correspondence in our rating definitions, the higher of the two short-term ratings will typically be assigned when our assessment of the sub-sovereign's 'lliquidity position and funding flexibility' is either 'stronger' or 'mid-range' and/or we deem that the 'funding practices' and/or 'extraordinary support and bailout practices' in the institutional framework benefit from 'strong' or 'full' integration with the sovereign (or higher-tier government). Sources of information

The institutional framework assessment is underpinned by national legislative and regulatory texts, policy documents, academic research, and other related materials. Our analysis is based on the sub-sovereign's respective statutes and governing documents, annual financial reports and budgetary documents, financial/economic statements/figures, and investor relations presentations. We complement this with centralised financial data provided by national authorities to ensure comparability across sub-sovereigns. We also make use of economic data from national and international sources. In general, we adopt the presentation of accounts as provided by the issuer and/or national authorities, but in some cases, we may modify some budgetary items to ensure consistency in the quantitative metrics across frameworks. For instance, we may adjust some metrics by depreciation and amortisation effects, unrealised gains or losses on investments which do not directly impact cash flow.

11 October 2023 18/22



Sovereign and Public Sector

7. Case study: Stylised sub-sovereign rating

In this section, we provide a stylised example of a sub-sovereign rating, detailing each analytical step and rating drivers. This example refers to a hypothetical sub-sovereign entity at the local government level.

Rating anchor

In this example, we assume that the rating anchor for the sub-sovereign's government tier is the sovereign, hypothetically rated at AA. However, if we deem that, due to a highly decentralised federal system, the higher-tier regional government is in charge of defining the institutional framework characteristics, independently conducting oversight of local finances, setting revenue and spending powers, and thus is ultimately responsible for the finances of its local authorities, we are likely to adopt that regional government rating as the rating anchor, which itself has the sovereign rating as its own anchor.

> Step 1: Institutional framework assessment

Figure 6. Application of QS1

Indicative rating range

Analytical components	Full integration (100)	Strong integration (75)	Medium integration (50)	Some integration (25)	Low integration (0)	
Extraordinary support and bailout practices	0	•	0	0	0	
Ordinary budgetary support and fiscal equalisation	0	•	0	0	0	
Funding practices	0	0	•	0	0	
Fiscal rules and oversight	0	•	0	0	0	
Revenue and spending powers	0	0	0	•	0	
Political coherence and multi-level governance	0	•	0	0	0	
Integration score	63					
Downward rating range	0-4	l				
Institutional framework score 100 > x ≥ 90	00 > x ≥ 80 80 > x ≥ 70	70 > x ≥ 60 60 > x ≥	50 50 > x ≥ 40 40)>x≥30 30>x≥20	20 > x ≥ 10 10 > x ≥ 0	

Source: Scope Ratings

As a first step, we assess the intergovernmental integration between the rated sub-sovereign's government tier and its rating anchor, typically the sovereign, based on the relevant institutional framework, as detailed in Chapter 2. The outcome of this assessment is the indicative rating range from the rating anchor level, within which the sub-sovereigns operating under that framework can be positioned. An integration score of 63 indicates a sub-sovereign rating range of between zero notches and negative four notches from the sovereign rating, namely between AA (the sovereign rating) and A- (four notches downward).

11 October 2023 19/22



Sovereign and Public Sector

> Step 2: Individual credit profile or ICP

Figure 7. Application of QS2

Risk pillar	Analytical components	Stronger (100)	Mid-range (50)	Weaker (0)
Debt & %	Debt burden & trajectory	0	0	•
	Debt profile & affordability	•	0	0
	Contingent liabilities	0	•	0
	Liquidity position & funding flexibility	0	•	0
Budget %	Budgetary performance & prospects	0	•	0
	Revenue flexibility	0	•	0
	Expenditure flexibility	•	0	0
Economy %	Wealth levels & economic resilience	0	0	•
Economy	Economic sustainability	0	•	0
Governance	Governance & financial management quality	•	0	0
Additional environmental and social factors		Positive impact (+5)	No impact (0)	Negative impact (-5)
Environmental	factors & resilience	○ ●		0
Social factors 8	Social factors & resilience		0	•
	<u> </u>			

Source: Scope Ratings

We then assess the rated entity's standalone credit fundamentals, to position its rating within the range determined by the framework assessment. This analysis follows the guidance tables as detailed in Chapter 3. We start with preliminary assessments based on the quantitative metrics linked to the assessments (as per the guidance tables). For financial ratios, we benchmark based on peers operating under the same (or a similar) framework. We then complement preliminary assessments incorporating additional qualitative, quantitative, and forward-looking factors that require analyst judgment, as outlined in the guidance tables. We also evaluate the materiality of additional environmental and social considerations, as detailed in Chapter 3.2.5.

In this example, the rated sub-sovereign has an ICP score of 50 out of 100.

ICP score

11 October 2023 20/22



Sovereign and Public Sector

> Step 3: Mapping and indicative rating

Figure 8. Mapping of rating range and ICP score

Institutional frame	Individual credit profile score								
Score		100 > x≥ 80	80 > x≥ 70	70 > x ≥ 60	60 > x≥ 50	50 > x≥ 40	40 > x≥ 30	30 > x≥ 20	20 > x≥0
100 > x≥ 90	0-1	0	0	0	0	0	0	-1	-1
90 > x ≥ 80	0-2	0	0	-1	-1	-1	-1	-2	-2
80 > x ≥ 70	0-3	00	-1	-1	-1	-2	2	-3	-3
70 > x≥ 60	0-4	0	-1	-1	-2	-2	-3	-3	-4
60 > x ≥ 50	0-5	0	-1	-1	-2	-2	-3	-4	-5
50 > x ≥ 40	0-6	0	-1	-1/-2	-2/-3	-2/-3	-3/-4	-4/-5	-6
40 > x ≥ 30	0-7	0	-1/-2	-1/-2	-2/-3	-3/-4	-4/-5	-5/-6	-7
30 > x ≥ 20	0-8	0	-1/-2	-2/-3	-3/-4	-4/-5	-5/-6	-6/-7	-8
20 > x≥ 10	0-9	0	-1/-2	-2/-3	-3/-4	-4/-5	-5/-6	-7/-8	-9
10 > x ≥ 0	0-10	0	-1/-2	-2/-3	-3/-4	-5/-6	-7/-8	-9/-10	-10

Source: Scope Ratings

We map the results of Step 1 and Step 2 according to the table above to derive the sub-sovereign's indicative rating. In this example, an ICP score of 50 in a downward rating range of 0-4 notches results in an indicative rating for the sub-sovereign of two notches below the rating anchor. In this example, the sub-sovereign indicative rating is thus A+, two notches below the sovereign rating of AA.

> Step 4: Additional considerations

As a final step, we capture any additional considerations as outlined in Chapter 5. In this example, we assume that no such considerations apply to this entity and make no additional adjustments. As such the final rating for this hypothetical sub-sovereign corresponds to its indicative rating of A+.

11 October 2023 21/22



Sovereign and Public Sector

Scope Ratings GmbH

Headquarters Berlin

Lennéstraße 5 D-10785 Berlin

Phone +49 30 27891-0

Oslo

Karenslyst allé 53 N-0279 Oslo

Phone +47 21 09 38 35

Frankfurt am Main

Neue Mainzer Straße 66-68 D-60311 Frankfurt am Main

Phone +49 69 66 77 389 0

Madrid

Paseo de la Castellana 141 E-28046 Madrid

Phone +34 91 572 67 11

Paris

10 avenue de Messine F-75008 Paris

Phone +33 6 6289 3512

Milan

Via Nino Bixio, 31 20129 Milano MI

Phone +39 02 30315 814

Scope Ratings UK Limited

London

52 Grosvenor Gardens London SW1W 0AU

Phone +44 20 7824 5180

info@scoperatings.com www.scoperatings.com

Disclaimer

© 2023 Scope SE & Co. KGaA and all its subsidiaries including Scope Ratings GmbH, Scope Ratings UK Limited, Scope Fund Analysis GmbH, and Scope ESG Analysis GmbH (collectively, Scope). All rights reserved. The information and data supporting Scope's ratings, rating reports, rating opinions and related research and credit opinions originate from sources Scope considers to be reliable and accurate. Scope does not, however, independently verify the reliability and accuracy of the information and data. Scope's ratings, rating reports, rating opinions, or related research and credit opinions are provided 'as is' without any representation or warranty of any kind. In no circumstance shall Scope or its directors, officers, employees and other representatives be liable to any party for any direct, indirect, incidental or other damages, expenses of any kind, or losses arising from any use of Scope's ratings, rating reports, rating opinions, related research or credit opinions. Ratings and other related credit opinions issued by Scope are, and have to be viewed by any party as, opinions on relative credit risk and not a statement of fact or recommendation to purchase, hold or sell securities. Past performance does not necessarily predict future results. Any report issued by Scope is not a prospectus or similar document related to a debt security or issuing entity. Scope issues credit ratings and related research and opinions with the understanding and expectation that parties using them will assess independently the suitability of each security for investment or transaction purposes. Scope's credit ratings address relative credit risk, they do not address other risks such as market, liquidity, legal, or volatility. The information and data included herein is protected by copyright and other laws. To reproduce, transmit, transfer, disseminate, translate, resell, or store for subsequent use for any such purpose the information and data contained herein, contact Scope Ratings GmbH at Lennéstraße 5 D-10785 Berlin.

11 October 2023 22/22