

Local & Regional Government Rating Methodology

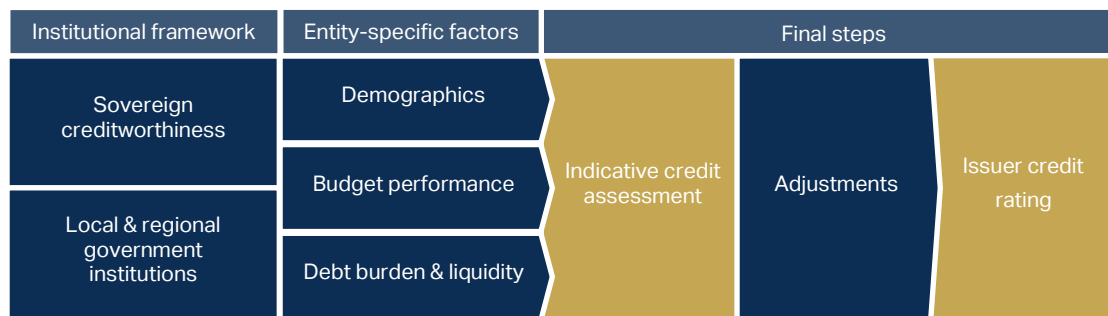
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INTRODUCTION

1. This methodology describes the framework within which Nordic Credit Rating AS (NCR) assigns credit ratings to primarily Nordic local and regional governments, as well as debt issued by rated entities. We define local and regional governments as some level of sub-sovereign government entity with the role of delivering public services, primarily using fees and tax-generated revenues from constituents and redistribution programmes from the sovereign or other levels of government.
2. The methodology is designed to be robust, continual and systematic, and consequently produce ratings that are relevant and comparable with other ratings assigned by NCR, as outlined in NCR's Rating Principles. NCR assigns long-term credit ratings on a scale comprising several categories ranging from 'AAA', reflecting the strongest credit quality, to 'D', reflecting the weakest. NCR also assigns short-term ratings, which are assigned to short-term debt instruments with a maturity of up to one year.
3. For a full explanation and definition of NCR ratings and the rating process, see Rating Principles, which can be found at www.nordiccreditrating.com.

FRAMEWORK OVERVIEW

Figure 1. NCR local and regional government rating framework



4. Our local and regional government ratings are forward-looking evaluations that combine our assessment of the institutional framework, creditworthiness of the sovereign and the strength of local and regional government institutions, with entity-specific factors – demographics, budget performance, debt burden and liquidity. We consider a local and regional government's contingent liabilities, guarantees, sustainability factors, and other exceptional factors that are relevant to the issuer in setting the final issuer rating.
5. NCR's ratings on local and regional government entities reflect the relative strength in relation to the sovereign and other local and regional government entities, considering the ongoing support from other layers of government. Issuer ratings on lower tiers of government are capped at the level of the sovereign credit assessment, with few exceptions. Definitions of default for local and regional governments can be found in Appendix 3.

INDICATIVE CREDIT ASSESSMENT

INSTITUTIONAL FRAMEWORK

6. Our institutional framework assessment combines our view of the sovereign creditworthiness and the institutions that define the operating environment of local and regional governments. NCR's sovereign

credit assessment serves as a rating cap¹ and basis, or 'anchor', for the indicative credit assessment for local and regional governments.

- The potential notching from the sovereign credit assessment is dependent on our evaluation of local and regional government institutions as 'strong', 'average' or 'weak'. Given our assessment of the strength of the link between sovereign creditworthiness and that of the local and regional governments, the credit ratings of local and regional government entities are calibrated so that issuer ratings are within three, four or five notches of the sovereign credit assessment, as shown in Figure 5. For example, where sovereigns have a 'aaa' credit assessment and strong local and regional institutions, the expected rating outcome for the entity is between 'AAA' and 'AA'.

ENTITY-SPECIFIC FACTOR SCORING

- The actual notching from the sovereign credit assessment for a specific local or regional government is dependent on our assessment of the entity-specific factors. Given the link between the sovereign credit assessment and the national laws governing the local and regional governments, NCR evaluates the rated entity in relation to all domestic local and regional government entities.
- The focus of this analysis is to establish areas of strength and weakness in terms of demographics, budget performance and an entity's debt burden and liquidity situation. Key metrics and their weighting in the analysis are considered in the indicative credit assessment shown in Figure 2.

Figure 2. Metrics included in the entity-specific factor assessment

Factors	Weighting	Metrics	Factor weight
Demographics	33.3%	Average income	30%
		Population growth	30%
		Old-age burden	20%
		Unemployment	20%
Budget performance	33.3%	Operating margin	60%
		Financial reserves	20%
		Operating and investment balance	20%
Debt burden & liquidity	33.3%	Gross debt burden	60%
		Interest burden	40%

¹A potential exception could be made due to the temporary use of a selective default ('SD') designation for a sovereign associated with a default event on a debt instrument with an unconditional and irrevocable sovereign guarantee.

10. Each entity-specific factor is scored based on the relative level of each metric in comparison with all domestic local and regional government entities. Financial factors are scored on a scale of 1 to 5, and demographic factors are scored either 1, 3 or 5, with 1 representing an outstanding metric, 3 indicating a metric close to the sector average, and 5 reflecting a relative weakness. In addition, each factor has the potential for qualitative calibrations to reflect specific strengths and weaknesses not captured in the selected metrics as described in each factor description below. These calibrations are typically used to adjust scoring up or down by one point, but may be used to adjust by two or three points, within the 1-to-5 scale, where initial scoring fails to capture extreme factors.

Figure 3. General scoring of entity-specific factors relative to local and regional governments

Score	Financial metrics	Demographic metrics
1	More than one standard deviation above average	One-half standard deviation above average
2	Between one and one-half standard deviation above average	
3	Plus or minus one-half standard deviation around the average	Plus or minus one-half standard deviation around the average
4	Between one and one-half standard deviation below average	
5	More than one standard deviation below average	One-half standard deviation below average

For some metrics, maximum and minimum values are used to maintain relevant scoring levels.

11. The weighted average score based on the factor weighting described in Figure 2 is between 1 and 5 and translated into an entity-specific factor assessment according to Figure 4. For example, a weighted score of 3.1 would translate into an entity-specific factor assessment of 'average'.

Figure 4. Entity-specific factors scoring

Entity-specific factors assessment	Weighted average score		
Strong	1.00	$\leq x <$	2.25
Above average	2.25	$\leq x <$	2.75
Average	2.75	$\leq x <$	3.25
Below average	3.25	$\leq x <$	3.75
Modest	3.75	$\leq x <$	4.00
Weak	4.00	$\leq x <$	4.25
Very weak	4.25	$\leq x \leq$	5.00

DETERMINING THE INDICATIVE CREDIT ASSESSMENT

12. To arrive at the indicative credit assessment, we combine the local and regional institutions assessment and the entity-specific factors assessment. Using the matrix below, these assessments determine one or two notching alternatives from NCR's sovereign credit assessment. For example, in a country with a 'aaa' sovereign credit assessment, an entity with 'strong' local and regional institutions and 'average' entity-specific factors would be notched down by one notch to an indicative credit assessment of 'aa+'.
13. When there are two alternative credit assessments, the choice of the higher or lower alternative is dependent on our entity-specific scoring and an evaluation of adjustment factors that are relevant to the issuer.

Figure 5. Standard notching from the sovereign credit assessment

		Entity-specific factors assessment						
		Strong	Above average	Average	Below average	Modest	Weak	Very weak
Local & regional institutions	Strong	0	0/-1	-1	-1/-2	-2	-2/-3	-3
	Average	-1	-1/-2	-2	-2/-3	-3	-3/-4	-4
	Weak	-2	-2/-3	-3	-3/-4	-4	-4/-5	-5

14. In instances of severe distress or other instances of selective instrument default, we may decouple the local and regional government rating from the sovereign credit assessment or apply the rating definitions in Appendix 3 to set the issuer credit rating.

ADJUSTMENTS TO THE INDICATIVE CREDIT ASSESSMENT

15. In addition to influencing the choice of the higher or lower alternative credit assessment (paragraph 13), where necessary, the qualitative assessment of adjustment factors determines whether the rating is notched downwards for risks not captured in the indicative credit assessment. In particular, we focus on the following attributes:
 - Contingent liabilities and guarantees;
 - sustainability concerns; and
 - exceptional factors.
16. Where there are material entity-specific concerns not reflected in the indicative credit assessment, our assessment of adjustment factors may lead to one or more negative notches, to the maximum standard notching, given the institutional assessment (the equivalent of assigning a 'very weak' entity-specific factors assessment in Figure 5). For example, the issuer rating of an entity in a country with 'average' local and regional government institutions that has material weaknesses not captured in the indicative credit assessment may be notched as many as four notches from the sovereign credit assessment. In instances of more severe financial distress, paragraph 14 is applied.

INSTITUTIONAL FRAMEWORK

17. The creditworthiness of the sovereign and the strength of local and regional government institutions drive our assessment of the institutional framework. Given the distribution of services provided, we believe that there is a strong link between the strength of central and local governments in terms of

governance standards, fiscal discipline and national objectives. In addition, in most European and OECD countries, we believe that the central government generally provides an implicit guarantee to its lower tiers of government via redistribution programmes and extraordinary support intervention.

SOVEREIGN CREDITWORTHINESS

- 18. NCR defines sovereign creditworthiness using its own Sovereign Credit Assessment Methodology. NCR's sovereign credit assessments are continual and forward-looking and intended to be comparable to published sovereign issuer ratings. Without a binding and timely guarantee, NCR's ratings on local and regional government entities and their debt instruments are not aligned with the sovereign credit assessment.

LOCAL AND REGIONAL GOVERNMENT INSTITUTIONS

- 19. Local and regional governments are closely linked to the institutional framework established at the sovereign level, and we assess factors such as revenue distribution regime, governance and transparency, and track record to understand the framework that the local and regional government operates under.

Figure 6. Local and regional government institution scoring guidelines

Subfactors	Strong	Average	Weak
Revenue distribution regime	A robust revenue distribution regime from the central government, characterised by a high level of predictability and a transparent outlook on future revenues. Effective revenue equalisation systems in place to mitigate wealth differences among local and regional governments.	A moderate revenue distribution regime from the central government, known for reasonable predictability and a relatively clear outlook on future revenues. Revenue equalisation systems have been implemented to somewhat mitigate differences among local and regional governments.	A weak revenue distribution regime from the central government or revenue distribution system lacking predictability and limits insight into future revenues. Lack of revenue equalisation systems or existing systems not able to mitigate wealth differences among local and regional governments.
Governance and transparency	A robust legal framework with consistent sectoral responsibilities, predictable policy changes, transparent system setup, and/or clear financial guidelines, including budget restrictions and borrowing limits.	A legal framework with stable sectoral responsibilities, reasonable predictable policy changes, transparent system setup, and/or relatively clear financial guidelines.	An underdeveloped framework with sectoral responsibilities not comprehensively defined, unpredictable policy changes, a diminished level of transparency in the system setup, and/or unclear or non-existent financial guidelines.
Track record	A demonstrated history of consistent government support during extraordinary circumstances for the entire sector or in situations where an individual entity faces financial distress.	Support from government is somewhat expected during extraordinary circumstances for the entire sector or in situations where an individual entity faces financial distress.	Inconsistent government support during extraordinary circumstances or in situations where an individual entity facing financial distress.

REVENUE DISTRIBUTION REGIME

20. We assess the local and regional governments' revenue distribution regime to identify the set of rules and regulations that govern how the entity benefits from revenues from the central government. Our assessment encompasses a range of critical fiscal elements, including transfers and grants and the tax revenue framework. Sources of income from the state could include tax revenues, grants and fees, earmarked for specified purposes or unrestricted distributions to cover the local and regional government entities' local needs. A robust and predictable revenue distribution regime with clear visibility of future revenues enables the local and regional government entities to make well-informed decisions for the future. The assessment also includes revenue equalisation systems and the degree to which they mitigate wealth and cash flow disparities between local and regional governments.

GOVERNANCE AND TRANSPARENCY

21. We consider the impact that central government policies and regulations can have on the local and regional government's responsibilities and revenues. We also look into recent events and policy changes, as well as the historical timeframe for policymaking and implementation. Predictable policy changes enable the local and regional government entity to plan accordingly and, if necessary, make changes to existing plans.
22. Furthermore, we assess the transparency within the sub-governmental sector by looking at the system setup for accounting, financial reporting, and planning, and whether this encourages transparency and visibility to the public. In addition, we assess the accountability of elected officials responsible for policymaking and overseeing the administration of local and regional government affairs, and, moreover, the degree to which officials are held accountable for their actions, including financial accountability, and ethical conduct.
23. We also address the financial management, including debt management guidelines for the local and regional government. This includes budget restrictions and borrowing limitations, which are important for establishing clear guidelines and responsible debt financing. We address funding practices and whether central government-backed banks are available for debt funding.

TRACK RECORD

24. We examine patterns of central government grants received historically, and the stability of the funding scheme. We also assess the likelihood of government support and the degree to which the entity will receive support to mitigate both revenue shortfalls and any funding gap caused by increased expenditure. This includes what type of grants the local and regional government has received historically, including any extraordinary 'emergency' funding (e.g., during the COVID-19 pandemic). We are more likely to expect domestic local and regional government entities to be supported under financial distress if the national track record has been consistent historically.

ENTITY-SPECIFIC FACTORS

25. The assessment of entity-specific factors is divided into three factors – demographics, budget performance, and debt burden and liquidity. For each factor, we compare the key credit metrics of the consolidated local and regional government entity, including entity-owned companies, with the consolidated figures for other domestic local and regional government entities.

DEMOGRAPHICS

Figure 7. Metrics included in the initial demographic factors assessment

Factors	Weighting	Metrics	Factor weight
Demographics	33.3%	Average income	30%
		Population growth	30%
		Old-age burden	20%
		Unemployment	20%

26. Current and projected demographic factors are important in determining the relative strength of the local economy and provide insight into the development of future service needs. Our analysis considers the local income levels and unemployment rates, giving an indication of the current strength of the local economy. In addition, we include projections for local population growth and the share of senior citizens to provide insight into the future expectations for growth and service needs. Finally, we consider calibrations for economic concentration and employment opportunities.

INCOME LEVELS

27. Regions with higher income levels tend to reflect stronger economic opportunity and fundamentals than those with lower income levels. In addition, higher income levels provide a potentially higher tax base for the government entity and generally indicate larger financial buffers among its households.

POPULATION GROWTH AND OLD-AGE BURDEN

28. We assess the changes in population characteristics over time, which is essential for understanding social, economic, and environmental trends in comparison with the country average and other local and regional governments. While population trends have a long-term impact, they provide an insight to make informed projections of the tax base and constituents' service needs related to changing population dynamics. We analyse population growth and aging trends and their effect on resource allocation, changing public service needs and environmental impact.

UNEMPLOYMENT

29. High unemployment levels are a drag on local and regional government resources, given the requirements of maintaining social safety nets and living standards, as well as adult education and training opportunities. Unemployment levels that are much higher or more volatile than the national average or those of peers are also an indication of the stability of the local economy compared with other regions.

CALIBRATIONS

Figure 8. Potential calibrations for demographics

Subfactors	Positive	Neutral	Negative
Economic concentration	Low economic concentration, not otherwise captured in demographic metrics.	Concentrations are moderate.	High concentration in specific sectors or corporations not reflected in the demographic metrics.
Employment alternatives	Close proximity to larger market mitigates some demographic weakness.	Employment options are well reflected in demographic metrics.	High level of economic isolation not otherwise captured in the demographic metrics.

ECONOMIC CONCENTRATION

- 30. We consider the degree to which some industries and businesses drive the local economy and whether there is a dominant industry or a few key companies accounting for a large portion of the employment or economic activity. In some instances, these factors are linked to long-term competitive advantages, such as natural resources or the strategic location of the local and regional government, while in others they could reflect potential weaknesses and risks for future employment in the local market.
- 31. We also consider the ability to attract investment from the private sector and the willingness from the government to invest in projects and develop infrastructure. This is a sign of the local and regional government's capacity to promote economic growth, encouraging a more diversified economy that is less vulnerable to economic shocks and shifts in the economic landscape. This can lead to job creation by attracting a new workforce and/or employing residents.

EMPLOYMENT ALTERNATIVES

- 32. We also assess the proximity to larger markets and commuting opportunities that could support smaller local or regional government. The location or geographical position of a small government entity could be beneficial if it is close to larger and more economically active areas. This can contribute to economic opportunities, as the residents of the smaller areas can easily commute for work or other business purposes.

BUDGET PERFORMANCE

Figure 9. Metrics included in the initial budget performance assessment

Factors	Weighting	Metrics	Factor weight
Budget performance	33.3%	Operating margin	60%
		Financial reserves	20%
		Operating and investment balance	20%

33. The local and regional government's financial planning and budgeting, and its ability to implement policies are key to maintaining fiscal balance and long-term financial stability. The budget performance section focuses on the key metrics in Figure 9, with calibrations for revenue development, cost projections and financial reserves. This allows us to determine whether the local and regional government has sufficient means to cover interest expenses and debt repayments, as well as day-to-day operating expenses and capital expenditures.

OPERATING MARGIN

34. Operating margins provide a good indication of the ability of the consolidated local or regional government to generate revenues that keep pace with expenditures. We consider the operating margin (with adjustments for one-off items or non-cash flow accounting impacts). The government entity revenues are generally driven by tax revenues, fees and central government subsidies. In addition, considering the consolidated margins provides insight into the strong performance, or financial drag, of entity-owned companies.

FINANCIAL RESERVES

35. We consider the level of financial reserves created by previous surpluses that are available to offset budget deficits or other expenditures. The ability to deploy these reserves may be defined at the national level and could restrict the use of these funds to support operational deficits. Material restrictions may reduce the ability to use the funds for interest or debt repayment.

OPERATING AND INVESTMENT BALANCE

36. The combination of the operating and investment balance provides an indication of the surplus or impending financing needs of the local and regional government. Large deficits indicate material future financing needs and could contribute to projected increases in leverage by the entity and/or its consolidated subsidiaries.

CALIBRATIONS

Figure 10. Potential calibrations for budget performance

Subfactors	Positive	Neutral	Negative
Revenue development	Exceptional ability to generate additional revenues not reflected in the metrics.	Average ability to generate additional revenues.	Minimal ability to generate additional revenues not captured in the metrics.
Cost projections	Exceptional ability to reduce costs without impacting service levels not reflected in the metrics.	Average ability to manage and reduce the cost base.	High share of fixed costs and minimal ability to reduce costs not adequately captured in the metrics.
Financial reserves	Exceptionally high level of reserves.	The benefit of reserves is well reflected in the metrics.	A lack of reserves not adequately reflected in the metrics.

REVENUE DEVELOPMENT

37. We inspect the local and regional government's strategies and actions to optimise its revenues, as effective revenue development is crucial to the financial stability and the funding of essential public services. The assessment also considers the flexibility to adjust taxes and fees to compensate for higher expenditures. In addition, we consider the policies for economic growth, and whether these attract businesses, create jobs, and stimulate economic activity, which could create a broader tax base.
38. We assess revenue diversification and the capacity of local and regional governments to derive income from sources beyond traditional taxes and grants. This involves ownership stakes in companies, such as infrastructure-related entities or investments in new revenue-generating projects. We also consider whether consolidated companies are for-profit or non-profit entities, and whether this affects performance compared with other local and regional government entities. Other pathways for revenue development could be the sale of assets, such as property, land or assets that are no longer needed, to cover liquidity needs.

COST PROJECTIONS

39. Cost projections are an integral part of the budgeting process and allow the local and regional government to make well-informed decisions on the allocation of resources. Robust planning is also necessary to ensure financing for larger investment projects. We assess the entity's budgeting, planning and control of the expenditure base, as well as its ability to monitor and adjust its expenditures for unforeseen events. We also consider the ability to manage or cut expenditures without reducing public service levels below mandatory requirements.

FINANCIAL RESERVES

40. Exceptionally high financial reserves can mitigate operational deficits for a number of years, whereas a lack of financial reserves can lead to more abrupt changes in financial strategy or severe reductions in service capabilities when operational and financial costs rise.

DEBT BURDEN & LIQUIDITY

Figure 11. Metrics included in the initial debt burden and liquidity assessment

Factors	Weighting	Metrics	Factor weight
Debt burden & liquidity	33.3%	Gross debt burden	60%
		Interest burden	40%

41. The amount of leverage, available liquidity and refinancing risk are important factors in determining the local and regional government's capacity to manage its financial obligations and provide an understanding of the risk policy and appetite. Understanding the size of unfunded pensions, the details of long-term lease liabilities and the share of consolidated leverage on and off the government entity's own balance sheet provides further insight into the debt burden on local and regional governments.

GROSS DEBT BURDEN

42. We consider the size of the consolidated local and regional government's gross debt, including bonds, bank loans and certificates, as a share of operating revenue. Elevated leverage heightens the potential for increased interest payments and vulnerability to financial distress, particularly during economic downturns.
43. We assess the type of debt, terms and maturity profile and their implications for the financial health and flexibility of the entity. Although market conditions determine or influence the demand for certain types of debt, local and regional governments in the Nordic region have access to municipality financing companies for low-cost financing.

INTEREST BURDEN

44. We consider the size of the consolidated local and regional government's interest expense as a share of operating revenues. While the interest burden is highly correlated with the overall debt burden, we consider whether the interest costs are primarily the responsibility of the government entity or are well supported by the repayment capacity of consolidated subsidiaries. We consider the exposure to floating interest rates, as well as hedging agreements that may stabilise interest rates, and allow for more deliberate adjustment to higher interest rates in our projections of future interest expenditure.

CALIBRATIONS

Figure 12. Potential calibrations for debt burden and liquidity

Subfactors	Positive	Neutral	Negative
Unfunded pension liabilities	Not applicable.	The share of unfunded pension liabilities is adequately reflected in the debt and interest burden assessment.	A significant portion of unfunded pension liabilities weighs negatively on the financial risk of the entity, increasing the risk of not meeting pension liabilities.
Long-term lease liabilities	Not applicable.	Long-term lease liabilities and expenses are adequately captured in the metrics.	Long-term lease liabilities reflect a significant share of the overall debt and interest burden, but are not adequately captured in the metrics.
Entity and consolidated leverage	A large portion of the consolidated debt is well supported by consolidated subsidiaries.	The share of entity and subsidiary debt is in line with national averages.	High leverage at the entity level is not adequately captured in the debt burden metrics.
Refinancing & liquidity management	An exceptional liquid asset/cash position with very strong access to capital and minimal short-term debt materially reduces refinancing risk compared with other domestic entities.	Liquidity position, capital access and the debt maturity profile are standard for the domestic sector.	A large share of short-term debt and liquidity concerns weaken the financial profile and may require external support. Access to capital may be constrained.

UNFUNDED PENSION LIABILITIES

45. Unfunded pension liabilities refer to the difference between the current value of future pension liabilities and the funds available to cover these obligations. We generally include both on- and off-balance-sheet exposures in our assessment of unfunded pension liabilities. An entity experiencing budget constraints may have limited capacity to make contributions to pension funds, potentially resulting in the entity not being able to meet its future pension obligations.
46. Robust pension management is essential to ensure the long-term sustainability of pension plans. Local and regional government entities employ diverse strategies in managing pension liabilities. Certain entities allocate funds to a pension trust or investment account, providing a transparent assessment of available pension funds. Alternatively, some entities purchase pension insurance for some or all liabilities. This approach serves as a safety net and could mitigate financial risk associated with events such as poor investment performance or demographic changes. Lastly, some entities choose to directly fund pension obligations from their operating budget as they mature. While this is a straightforward method and reduces financing costs of the pension assets, it introduces risks in the event of changes in

demographic or economic conditions and can result in periodical financial strain when pension payments rise, for example due to inflation.

LONG-TERM LEASE LIABILITIES

47. We consider the net present value of long-term lease liabilities as part of gross financial debt, and annual leasing expenses as depreciation and interest costs. However, the detail and thoroughness of reporting of financial leases and associated leasing costs vary among local and regional governments. Where necessary, we may adjust our view of the consolidated entity's debt and interest burden to reflect lease liabilities and costs that are inadequately reflected in the initial assessment.

ENTITY AND CONSOLIDATED LEVERAGE

48. We assess the relative debt and interest burden of the local and regional government by comparing the consolidated accounts, including gross debt and interest costs in the consolidated subsidiaries. In some instances, high leverage at the entity level may amplify the risk of encountering financial challenges and reveal weak financial management that is masked by the consolidated accounts. Conversely, where a substantial share of the consolidated gross debt is well supported by subsidiaries' operating revenues or strong cash positions, it could mitigate the risk of financial issues and improve our view of the relative financial situation.

REFINANCING & LIQUIDITY MANAGEMENT

49. Short-term debt is suitable for temporary cash flow needs, while larger investment such as infrastructure should be financed by long-term debt. We focus on the appropriateness of the debt maturity profile and diversification of funding sources. In our view, a substantial portion of short-term debt increases refinancing concerns and the need for emergency liquidity from the central government.
50. Effective liquidity management supports stable cash flows and ensures the resources needed to provide essential services. In this respect, a local and regional government's cash and liquid asset position and its ability to quickly access capital is crucial. We examine the entity's current cash position and the outlook for securing near-term funding based on an entity's track record and demonstrated access to financing.

ADJUSTMENT FACTORS

51. Where there are material entity-specific concerns not reflected in the indicative credit assessment, our assessment of adjustment factors can lead to one or more negative notches, to the maximum standard notching, given the institutional assessment (the equivalent of assigning a 'very weak' entity-specific factors assessment in Figure 5).

CONTINGENT LIABILITIES AND GUARANTEES

52. Where necessary, to reflect where contingent liabilities could have a serious impact on creditworthiness, the rating may be adjusted downwards, depending on an analysis of the severity and likelihood of the contingent liability materialising.
53. We examine whether contingent liabilities may be transferred to the government entity's balance sheet or materially affect the government entity's debt burden, if realised. Examples of contingent liabilities are obligations of entity-owned companies, legal claims, guarantees and contracts that may

need to be terminated, or the repayment of grants. It is important that local and regional governments have put in place systems to identify and monitor potential contingent liabilities, while also assessing the likelihood of these liabilities and incorporating them into financial planning/budgeting.

54. In entities where pension liabilities are exceptionally high, and unfunded pension liabilities are much larger than gross debt, we consider whether pension liabilities are adequately captured in our debt burden and liquidity assessment.

EXCEPTIONAL FACTORS

55. In rare cases, we may consider adjusting the final rating outcome to reflect credit-related factors that are not adequately addressed in other areas of the analysis. For example, we may consider this adjustment for local and regional governments with special characteristics that are not adequately captured in the indicative credit assessment, for significant one-off events that affect comparability, or for local governments going through a transitional period that could either support or constrain their credit quality.

SUSTAINABILITY CONCERNS

56. A number of sustainability concerns are already included in our indicative credit assessment. For example, governance, together with transparency, is an important factor in determining the strength of a country's local or regional government institutions. Similarly, many social factors are included in our analysis of an entity's demographic situation, in which we assess average income, old-age burden and unemployment levels. But where specific risks or characteristics relating to environmental, social or governance factors are not sufficiently reflected in the indicative credit assessment, this can be adjusted for in our evaluation of sustainability concerns.

Figure 13. Sustainability concerns for local and regional governments

Factor	Description
Environmental factors	
Natural resource management	Regions with substantial natural resource extraction such as metal mining could be exposed to the leaching of hazardous material or similar accidents. The closure of old industry sites may reveal environmental hazards in soil and water that need to be managed. Proper management during the lifetime of projects can minimise such risks.
Natural disaster	Natural disasters from extreme weather could pose major financial risks for the government in terms of necessary recovery and preventive measures. They could also require prompt supply of alternative housing and supplies to affected constituents.
Climate change	Extreme weather events could also lead to significant recovery investments for damaged infrastructure, or preventative infrastructure investments. In addition, gradual climate change could have longer-term implications (higher temperatures, increasing droughts, flooding) and eventually affect economic and industry growth.
Infrastructure needs	The switch to a low-carbon society will put a strain on infrastructure needs in terms of increased electrification, public transportation and alternative energy supply. Rising sea levels might require substantial investments to protect low-lying property and water supplies.
Social factors	
Demographic trends	Rapidly aging populations may result in an imbalance between the workforce and those in need of support, both requiring physical care (labour intensive) and financial requirements (increasing pension liabilities and outflows). A higher tax burden for working-age households or corporations may reduce the attractiveness of the local market.
Service levels	A high level of public services (as well as a positive green profile) may be viewed as desirable and attract new citizens. Conversely, poor public services may lead to people moving out.
Social unrest	Lack of social inclusion, insufficient systems to cope with criminality or high income inequality may lead to social unrest with negative implications for local or regional stability. This could exert pressure on public accounts or reduce local investment.
Governance factors	
Corruption	Corruption, fraud or the prevalence of a large shadow economy could lead to less effective tax systems and undermine the credibility of the local government.
Political instability	Weakening democracy or a weak track record of implementing public spending may lead to social and political instability.
Geopolitical risks	Risks of security breaches (IT threats, etc.) may put a strain on government activities and finances.
Track record	A weak history of balanced budgets, timely reporting, compliance with rules and regulations and adherence to established standards could affect our view.

57. We adjust for additional events or risks that we deem to have a material effect on the relative creditworthiness of a government entity. Some sustainability concerns such as environmental or climate issues are expected to have a credit-related or economic impact over a longer time horizon. Our sustainability concerns adjustment is focused on past, current or future sustainability issues that impact the near-term time horizon, typically the next 2-3 years, in line with our overall rating horizon. Figure 13 summarises some factors that could be relevant to the rating assessment, where they are deemed material enough to impact near-term credit worthiness.

58. As part of our analysis, we assess the potential financial obligations or risks related to environmental issues. For example, rebuilding damaged and deteriorating infrastructure, revitalising housing areas or ensuring that affected constituents have proper housing, water, food and supplies in the event of a

natural disaster. Climate change-related challenges such as extreme weather could pose major financial risks for local and regional governments in terms of the necessary investments and other preventative measures. In this assessment, we consider the degree to which the local economy and/or national funds are used in response to natural disasters.

- 59. An above-average assessment of sustainability concerns does not mitigate structural weaknesses in the quantitative assessment, but it does contribute to the protection of an already strong credit profile. For this reason, the sustainability concerns assessment has either a neutral or a negative impact on the final sovereign assessment.

Figure 14. Impact from sustainability concerns assessment

Assessment	Description	Impact
Adequate	There are few significant sustainability concerns.	No effect
Negative	There are significant concerns relating to sustainability that could impair the credit quality of the local or regional government.	Minus one notch

RATING INDIVIDUAL DEBT INSTRUMENTS

- 60. The issue rating for individual senior debt instruments is typically aligned with the issuer rating of the local or regional government. We do not anticipate the issuance of junior or otherwise subordinated instruments by a local or regional government entity.
- 61. While the analysis considers the consolidated accounts of the local or regional government, NCR only assigns instrument ratings to instruments directly issued by the government entity. In the absence of an explicit guarantee, NCR does not assign the local and regional government's issue ratings to consolidated subsidiaries' debt instruments, nor does it assume that the creditworthiness of these instruments is equal to that of the government entity. Default scenarios for entity-owned debt instruments with and without guarantees are described in paragraph 67.

SHORT-TERM DEBT RATINGS

- 62. The short-term rating scale and mapping between long- and short-term ratings are defined by our Rating Principles methodology.

APPENDICES

APPENDIX 1: CREDIT METRIC DEFINITIONS AND DATA SOURCES

Figure 15. Definition of credit metrics

Metric	Description
Demographics	
Average income	The average income level in the municipality or county.
Population growth	Projected figures for 10–20-year population growth in the municipality or county.
Old-age burden	The share of the senior-aged population in relation to the working age population in the municipality or county.
Unemployment rate	The share of unemployed individuals in the municipality or county.
Budget performance	
Operating margin	The operating balance of the consolidated entity as a percentage of operating revenues.
Financial reserves	The balance of financial reserves or other funds in the consolidated entity available for covering operational or other deficits, as a percentage of operating revenues.
Operating and investment balance	The sum of the municipality or county operating and investment balance as a percentage of operating revenues.
Debt burden and liquidity	
Gross debt burden	Gross interest-bearing debt and long-term leasing liabilities of the municipality or county as a percentage of operating revenues.
Interest burden	Total municipality or county interest payments as a percentage of operating revenues.

63. All financial metrics reflect the consolidated municipality or county, including entity-owned companies. We believe this better reflects the entity's financial obligations and reduces variations caused by pass-through lending in some municipalities or counties but not in others.
64. Local and regional government data used in the model is collected directly from the rated entity, as well as from public sector data available from national statistical bureaus.

APPENDIX 2: SAMPLE LOCAL AND REGIONAL GOVERNMENT SCORING AND RATING PROCESS

Figure 16. Sample rating process for local and regional governments

Step	Analysis	Method	Example
1	Sovereign credit assessment	Determine the sovereign credit assessment according to NCR's Sovereign Credit Assessment Methodology.	aaa
2	Local and regional institutions	Determine the assessment of the local and regional government institutions as described in paragraph 19.	Strong
3	Entity-specific assessment	<p>Complete the analysis of entity-specific factors by comparing key demographic and consolidated financial metrics with the consolidated accounts of all domestic local and regional governments. See Figure 17 for details.</p> <ul style="list-style-type: none"> Demographics has a weighted score of 2.40 and there are no adjustments for factors not captured in the metrics. Budget performance has a weighted score of 2.60, but there is a positive budget performance adjustment for strong financial reserves, which lowers the score by one point to 1.60. Debt burden & liquidity has a weighted score of 2.40, but are adjusted up by one point to 3.40 to reflect excessive unfunded pension liabilities. The average of 2.40, 1.60 and 3.40 is 2.47, which corresponds to an 'above average' assessment of the entity-specific factors according to Figure 4. 	Above average
4a	Standard notching	<p>Combine the outcomes of steps 2 and 3 using Figure 5 to determine the standard notching from the sovereign credit assessment.</p> <ul style="list-style-type: none"> The 'strong' local and regional government institutions score and the 'above average' entity-specific scores result in standard notching of '0/-1'. 	0/-1
4b	ICA step 1	The indicative credit assessment is either in line with or one notch below the sovereign credit assessment of 'aaa'.	aaa/aa+
5a	Alternative ICA	The combination of the entity-specific score of 2.40 and our view of adjustment factors results in the lower of the alternative indicative credit assessments.	Lower
5b	Indicative credit assessment	The indicative credit assessment is 'aa+'.	aa+
6	Adjustment factors	Consider whether other adjustments are necessary. Adjustment factors are adequately captured by the lower alternative indicated credit assessment; no additional notching is necessary.	0
7	Issuer rating & debt instruments	<p>Set the issuer rating and instrument ratings.</p> <ul style="list-style-type: none"> The issuer rating is set to 'AA+'. Senior unsecured debt instruments are rated in line with the issuer rating at 'AA+'. 	AA+

Figure 17. Sample entity-specific factors

Factors	Weighting	Metrics	Factor weight	Score	
Demographics	33.3%	Average income	30%	1.00	
		Population growth	30%	3.00	
		Old-age burden	20%	1.00	
		Unemployment	20%	5.00	
		Demographics calibration			0.00
		Weighted score			2.40
Budget performance	33.3%	Operating margin	60%	2.00	
		Financial reserves	20%	3.00	
		Operating and investment balance	20%	4.00	
		Budget performance calibration			-1.00
		Weighted score			1.60
Debt burden & liquidity	33.3%	Gross debt burden	60%	2.00	
		Interest burden	40%	3.00	
		Debt burden & liquidity calibration			1.00
		Weighted score			3.40
Weighted average entity-specific scoring				2.47	
Entity-specific scoring				Above average	

APPENDIX 3: DEFINITION-BASED ISSUER RATINGS AND DEFAULT DEFINITIONS

Figure 18. Definitions of lowest issuer ratings

Lowest possible issuer ratings	
B-	We assign the 'b-' issuer rating where there are acute liquidity concerns and a material shortage is projected. In these instances, the entity is likely receiving external assistance from the central government, but is deemed to be at risk of missing payments on outstanding obligations.
CCC	We assign the 'ccc' issuer rating in specific scenarios if we assess that an entity is distressed to the extent that we think there is a strong likelihood of a conventional default or distressed exchange on its external debt obligations, although this might not materialise within the next 12 months. At the 'ccc' level, the local and regional government entity might have the liquidity to meet short-term obligations, but we believe there are severe doubts over the long-term sustainability of the financial position.
CC	We assign the 'cc' issuer rating if we think it highly likely that a local and regional government entity will default on its external debt obligations in the near term, i.e. within the next 12 months.
C	We assign the 'c' issuer rating if a local and regional government entity has announced that it will default on an external debt obligation, but the default has not yet materialised. This may be the case if a local and regional government entity has announced a distressed debt exchange that has yet to take place.

DEFAULT DEFINITIONS FOR LOCAL AND REGIONAL GOVERNMENTS

- 65. Our standard definitions of default and the use of the default ('D') and selective default ('SD') rating categories are defined in our Rating Principles methodology. Non-payment of the coupon or principal, or other form of distressed exchange, on rated or unrated public debt securities issued by a local and regional government entity follow NCR's standard definitions of default.
- 66. We do not consider delays or non-payment to creditors from other tiers of government, including domestic municipality finance companies, as a default for a local or regional government. Non-payment to multilateral development banks or similar intra-government creditors are addressed on a case-by-case basis, depending on the consequences of the default event for the issuer.
- 67. While our analysis considers the consolidated accounts of the local or regional government, NCR does not automatically assign an issuer rating to related subsidiaries in the consolidated group, nor does it assume that the creditworthiness of the subsidiaries is equal to that of the government entity. A default event by an entity-owned company without an irrevocable and unconditional guarantee from the local or regional government entity is not considered a default by the government entity. However, a default event on a debt instrument that is unconditionally and irrevocably guaranteed by the local or regional government would be reflected as a selective default ('SD') for the government entity.

NORDIC CREDIT RATING AS

OSLO
Ruseløkkveien 34
0251 Oslo
Norway

www.nordiccreditrating.com
post@nordiccreditrating.com

STOCKHOLM
Norrlandsgatan 10
111 43 Stockholm
Sweden

For questions or comments regarding our methodologies, please use:
criteria@nordiccreditrating.com.

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