Rating Methodology

28 July 2022

Regional and Local Governments

Sub-sovereign rating methodology

CCXAP publishes its updated methodology for Regional and Local Governments.

Summary

This rating methodology replaces the Rating Methodology for Regional and Local Governments in May 2020. This methodology follows the core principals of the old methodology, while it adds ESG assessments and also clarifies the measurement of some rating factors in order to provide more transparency.

This rating methodology is adopted by China Chengxin (Asia Pacific) Credit Ratings Company Limited ("CCXAP") to regional and local governments in a global context. A regional or local government ("RLG") is typically an administration body for a specific geographic area such as a town, city, county or state, which has control over their specific geographical region.

The determination of the credit rating of a local government mainly consists of two components, the baseline credit assessment ("BCA") of the RLG and the likelihood of extraordinary support from higher-tier government. The BCA measures a RLG's standalone credit strength relative to other RLGs, in absence of any extraordinary support. On the other hand, the likelihood of extraordinary support from higher-tier government could further strengthen a RLG's credit quality.

Based on the risk characteristics of RLGs, this rating methodology introduces the key determinants for rating RLGs. CCXAP assigns credit ratings to them using its rating scale.

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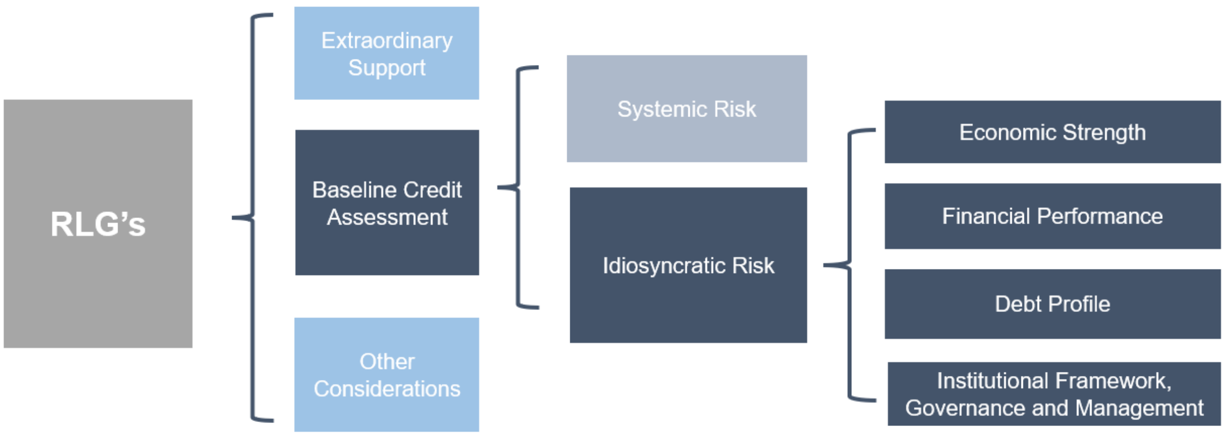
Introduction of Rating Methodology

This rating methodology has two key rating components, the BCA of a RLG and the likelihood of extraordinary support from higher-tier government in case of financial distress. CCXAP considers the BCA of a RLG does not only depend on its idiosyncratic risk, but also could be affected by the credit risk of its higher-tier government given their close linkage in economic and financial conditions. Therefore, the BCA of a RLG is assessed based on a matrix between idiosyncratic risk and systemic risk, which represents the risk of its operating environment.

In addition to the BCA of a RLG, CCXAP also considers the likelihood of extraordinary support from its higher-tier government in the case of liquidity stress, which will help increase its credit level and lower the probability of default. CCXAP measures the likelihood of extraordinary support from the higher-tier government mainly from the ability and willingness of support. In terms of ability to support, the main consideration is the credit strength of the higher-tier government. In terms of willingness to support, we consider the perspectives of political importance and economic importance, respectively. Political importance mainly refers to the special political status of the RLG, while economic importance mainly refers to the influence of the RLG on regional economic development. The greater the impact on regional economic development, the higher the economic importance, and the more support it may receive from the higher-tier government. Extraordinary support could be provided in any form, such as direct fund infusions for debt repayments, debt swaps or other contractual protections, as well as any actions to help the RLG refinance. The extraordinary support could help decrease the probability of default on a RLG's debt obligations. Therefore, the rating outcome of a RLG could be higher than its BCA given the rating uplift attributable to extraordinary support.

The sovereign rating of the country is generally set as a rating cap for RLGs.[1]

Exhibit 1. Framework of local and regional governments rating



Source: CCXAP research

This rating methodology provides a guideline that summarizes the important factors used in assigning ratings, but does not include an exhaustive description of all factors that CCXAP may use in its rating considerations. Thus, the mapped rating may not match the final rating of each rated entity.

Baseline Credit Assessment

The BCA of a RLG is assessed by its idiosyncratic risk and systemic risk. CCXAP measures the idiosyncratic

[1] In exceptional cases, the credit rating of local government may be higher than its upper level government or sovereign rating, e.g. if the local government has a very high degree of autonomy.

risk for a RLG based on 4 key rating factors from both quantitative and qualitative considerations. The detailed factors are presented in the following table.

Exhibit 2. Rating factors for idiosyncratic risk assessment

Rating Factors	Secondary Factors
Economic Strength	Gross Regional Product ("GRP")
	Real GRP Growth
	GRP per Capita
Financial Performance	Total Revenue
	Total Revenue Growth
	Taxes/Operating Revenue
	Operating Revenue/Operating Expenditure
Debt Profile	Debt/GRP
	Debt/Total Revenue
	Interest Payment/Operating Revenue
Institutional Framework,	Predictability, Stability and Responsiveness of Policies
Governance and Management	Quality of Internal Control and Planning
	Transparency and Accountability

Source: CCXAP research

Key Rating Determinants

1. Idiosyncratic Risk

The idiosyncratic risk of a RLG provides a fundamental understanding of its ability and willingness of debt servicing. Economic strength, financial performance and debt profile are the quantitative considerations; while institutional framework, governance and management are the qualitative considerations to measure the RLG's individual credit strength. Some adjustment factors may be considered in the BCA other than the above factors for a specific RLG.

(1) Economic Strength

The local economy is one of the most important factors to evaluate the credit level of a RLG. This factor indicates the level of economic development, potential of economic development and its potential influence on the sufficiency and reliability of revenues. The level of economic development is the basis for measuring the economic strength of a region. The potential of economic development directly affects the improvement or decline of the future economic strength of the region, thereby affecting the growth rate of the future fiscal revenue of local government. The economic strength of RLGs includes the following sub-factors, including GRP, real GRP growth and GRP per capita.

(i) GRP

GRP or Gross Regional Product is the total monetary measure of the market value of all final goods and services produced within a region. CCXAP considers GRP as an indicator to reflect the economic scale of a RLG. The economic scale of a RLG could represent its shock-absorption capability, which directly affect its debt-servicing capability. In general, a larger economic scale would provide a more consolidated shock-absorption capability for a RLG, while a smaller scale may suggest a weaker capability of withstanding abrupt changes.

(ii) Real GRP Growth

Real GRP growth is the indicator to analyze the economic growth of a RLG. A stable and high economic growth could provide more job opportunities, increasing the tax base and government revenue, and thereby improve the financial strength of a RLG. On the other hand, a RLG may have a lower revenue or need to increase its expenditure under recession, which could potentially cause an adverse effect on its fiscal position and debt repayments.

(iii) GRP per Capita

GRP per capita reflects the relative development strength of a regional economy and the relative wealth level of residents in the region as compared to other areas. A RLG with high GRP per capita suggests a wider tax base and more potential revenue for a RLG, which gives it extra financial and policy flexibility in different economic cycles.

(2) Financial Performance

Financial performance[2] is the basic measurement of a RLG's creditworthiness and debt profile based on its decisions on revenue and expenditure structure. When evaluating the financial performance of a RLG, CCXAP takes into account measurements such as total revenue, total revenue growth, proportion of taxes to operating revenue, and the ratio of operating revenue to operating expenditure.

(i) Total Revenue

CCXAP considers the total revenue of a RLG as an indicator of its fiscal strength. Total revenue includes all fiscal incomes, such as operating revenue and capital revenue. Total revenue is the source for RLG to undertake government expenditures for public services and debt repayments, therefore a larger scale of total revenue may reflect a RLG has more resources to service its debts.

(ii) Total Revenue Growth

Total revenue growth reflects the degree of improvement of a RLG's fiscal strength. An increase in total revenue could indicate that a RLG has more resources to fulfil its debts obligations, which is a positive factor for its credit profile.

(iii) Taxes/Operating Revenue

Operating revenue comprises taxes and non-taxes income, such as grants, interest income and fines. As taxes are considered as a stable revenue source, relative to non-tax income, the ratio of taxes over operating revenue is the indicator to evaluate a RLG's fiscal stability. If a RLG has a higher ratio of taxes to operating revenue, it may indicate that it has a more stable fiscal revenue as well as a stronger debt-repayment capability.

(iv) Operating Revenue/Operating Expenditure

[2] It is noticed that different local governments could adopt different accounting standards, budgetary practices and organization structure, so data sources may not be directly comparable in many cases. In order to provide comparability of the rating, CCXAP would adjust the data based on our definition and measurement of rating factors on a case-by-case basis.

CCXAP evaluates the financial balance of a RLG through the ratio of operating revenue over operating expenditure. A higher ratio indicates that a RLG have more flexibility in financial budgeting, which is positive to its debt-servicing capability. If the ratio stays below 100%, it may suggest that a RLG relies on other financing sources, such as issuing debts, to complete its financial budgeting, which could adversely affect its credit quality.

(3) Debt Profile

CCXAP evaluates the debt and interest burden of a RLG, based on debt to GRP ratio, debt to total revenue ratio and interest payment to operating revenue ratio.

(i) Debt/GRP

The ratio of debt to GRP reflects the level of debt of a RLG relative to its economic scale. We only incorporate direct debt in the evaluation of debt profile. It is recognized that indirect or hidden debts could adversely affect a RLG's debt profile. Therefore, we would consider notching down its rating in the assessment of other considerations if the RLG's indirect or hidden debts could significantly impair its credit quality. A high ratio of debt to GRP reflects a RLG's reliance on debts to support its economic growth, which may increase its debt leverage and potential credit risks.

(ii) Debt/Total Revenue

The ratio of debt to total revenue is used as a proxy to evaluate a RLG's debt profile. A higher ratio suggests that a RLG has more resources to fulfil its debt obligations.

(iii) Interest Payment/Operating Revenue

In general, we use the ratio of interest payment to operating revenue to evaluate the interest burden of a RLG. Yet, it is recognized that a RLG could raises debts to fund specific projects, and these debts' interest and principal are backed by the cash flow from the projects rather than operating revenue. If so, we may consider adjusting the operating revenue by adding revenue from these projects in the calculation of the ratio. A higher ratio means that a RLG will spend a larger proportion of its revenue on interest payments. CCXAP believes that a RLG with a higher ratio would have a higher credit risk than those with a lower ratio, as it suggests the RLG has lower financial flexibility.

(4) Institutional Framework, Governance and Management

CCXAP mainly considers the institutional framework, governance, and management of a RLG from a qualitative approach.

Institutional framework mainly evaluates whether the RLG applies clear law and regulation and retains stable power and responsibility, and whether the policy change is approved in a prudent and transparent approach. The stability and predictability of institutional framework for the RLGs has an influential impact on its management level, which is important to predict its income prospect and expenditure responsibility in the future.

Governance and management are another important factor to affect the credit worthiness of RLGs. CCXAP expects that a high degree of transparency and efficiency of a RLG could not only facilitate the development of regional economic and financial performance, but also lower the default risk of the RLG. Governance and management are considered from two aspects, internal control and planning, and information transparency and accountability.

2. Systemic Risk

Apart from the idiosyncratic risk, CCXAP incorporates the assessment of systematic risk in the evaluation of a RLG's BCA. The credit quality of a RLG may intricately link to the credit risk of its high-tier government, considering a high correlation between their economic and financial conditions. Therefore, it is unlikely that the rating of a RLG would exceed its higher-tier government. The credit creditworthiness of its higher-tier government is usually deemed as a proxy to reflect a systemic risk faced by the rated RLG. However, if a RLG enjoys a high degree of autonomy, CCXAP may review its systemic risk, and hence, its credit rating could be higher than its higher-tier government under these special circumstances.

Other Considerations

In assessing the rating of a RLG, there are other factors, including debt and liquidity, economic structure, and indirect and hidden debts, that could affect the credit quality of a RLG.

(1) Economic Structure

This factor evaluates the degree of economic diversification of a region. We will examine whether the economy of a region is well diversified or concentrated in several sectors. We use a quantitative approach by accounting the top three industries or service sectors as a percentage of GRP to assess a region's economic diversification. If the top three industries contribute a large percentage of GRP, this may indicate less economic diversification. We expect a well-diversified economy would be more resilient in economic downturn.

(2) Debt and Liquidity

The debt and liquidity of a RLG are measured by its debt structure and maturity profile, cash, and liquidity management. Debt structure measures the percentage of short-term debt by total debt, and maturity profile measures any concentration of debt repayments in the future. We also evaluate cash and liquidity management practice of the RLG in determining its credit rating.

(3) Indirect and Hidden Debts

Indirect debt refers to the debt which is issued by other entities but is guaranteed by the RLG; while hidden debt refers to the debt which is issued by the state-owned enterprises. These debts usually are not recorded in RLG's balance sheet but are considered as its contingent liabilities. Therefore, a RLG's debt-servicing capability could be affected by the scale of indirect and hidden debts. A small scale of indirect and hidden debts would not uplift a RLG's rating, but we may consider to notch down a RLG's rating if the debts are materialized or the RLG would help repay these debts, which could severely affect its debt-servicing capability, in a foreseeable future.

(4) ESG assessment

ESG assessment mainly evaluates the impact of credit risk-related environmental, social and governance factors on the credit strength of the RLG. The impact of ESG assessments on RLG credit risk is often negative, such as social instability caused by serious social security problems, deterioration of the living environment due to environmental pollution, and reduced governance capacity due to sudden security incidents.

Extraordinary Support

The next step after confirming the BCA of a RLG is to consider the likelihood of extraordinary support from higher-tier government in the case of acute liquidity stress, which will help increase a RLG's credit level and lower the default probability on its obligations. Extraordinary support from higher-tier government means that when the rated government is facing severe pressure of debt servicing, its higher-tier government would provide support to serve debt or take actions to avoid its obligations being in default. In assessing extraordinary support from higher-tier government, we consider the factors such as the economic and political importance of the rated RLG, the legal requirements and degree of oversight from higher-tier government, and the support and bailout histories of the RLG.

(1) Economic and Political Importance

The likelihood of extraordinary support from high-tier government is largely affected by the economic and political importance of a RLG. The measurement of economic importance is the GRP as a percentage of the GRP of higher-tier government. The assessment of political importance is the government policy stance for the higher-tier government. We may also consider the ratio of intergovernmental transfer to operating revenue. A steady and large scale of intergovernmental transfer is credit positive to a RLG as it shows a strong willingness of support from the higher-tier government.

(2) Legal Requirements and Degree of Oversight

Legal requirements mainly consider whether the legal environment requires or restricts the higher-tier government to support the lower-tier government. The degree of oversight from the higher-tier government shows its attention to the financial and debt stability of the lower-tier government.

(3) Support Strength and Support Willingness

The factor of support strength mainly assesses the creditworthiness of the higher-tier government. The higher creditworthiness of the higher-tier government, the stronger financial capability it has, which could provide greater support to the RLG. The factor of support willingness reflects whether the higher-tier government has responded in historical near-default events of the RLG by either providing bailouts or allowing defaults.

Assumptions and Limitations

The final ratings assigned are based on CCXAP's forward-looking opinions, which we assume any changes of the macro environment are aligned with our expectations, and do not incorporate any unanticipated changes, such as outbreak of war and destructive natural disaster.

CCXAP assumes that there is a strong correlation between the sovereign credit risk and the rated entity, while refinancing capability is the key driver of credit risk. The debt rating assigned is based on our view that legal priority of claims is the key factor affecting the ratings for different classes of debt issued by the same issuer. Also, we assume that the data used in the rating is true, legal and does not incorporate misleading statements.

The ratings incorporate our expectations of the rated entity's future performance, which are mainly deduced from the historical information via our forward-looking model. Under some circumstances, the expectations would incorporate confidential information. In addition, our expectations would consider the industrial trend, rival analysis, and other considerations. In any case, predication is subject to substantial uncertainty. Therefore, the mapped ratings may not match our final ratings. The ratings may include some qualitative factors. CCXAP would evaluate these factors in an objective and precise approach, but the assessment may be unavoidably affected by subjective view in some cases. Therefore, the weighting of rating considerations could be varied. Specifically, the variation in weighting would happen if the rated entity were in default or approaching to be in default.

Furthermore, the ratings rely on public information and information provided by the rated entity and underwriters. Despite the fact that CCXAP can ensure the integrity, truthiness, and completeness of the data, due to the delay of information, the ratings may on some occasions not reflect the rated entity’s credit risk in a timely manner.

Apart from that, the ratings are decided by our rating committee and could be influenced by their empirical views which may not be incorporated in the rating methodology. As a result, the final ratings could be varied with the mapped rating from the methodology.

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