

# Panda Bond Credit Rating Methodology

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## I. Overview

Panda bond is a Renminbi (RMB)-denominated bond issued by non-Chinese issuers in Mainland China. Issuers of Panda bonds include foreign governments (regional or foreign local governments), international multilateral institutions, overseas financial institutions and non-financial corporates, etc.

Panda bond credit rating reflects the evaluation opinion on a Panda bond issuer's ability and willingness to honor its financial obligations in full and on time, which is also a prospective assessment of its probability of default and expected loss.

China Lianhe Credit Rating Co., Ltd. ("Lianhe Ratings") conducts both international rating and national rating on Panda bonds and Panda bond issuers: international rating is a credit opinion on the credit risk of an issuer or a Panda bond from a global perspective, which is comparable globally; national rating is a credit opinion on the credit risk of an issuer or a Panda bond according to standards in certain regions, applicable to Mainland China currently.

## II. Rating Categories and Definition

### (1) Long-term issuer international ratings

Similar with sovereign credit ratings, long-term issuer international ratings for Panda bond issuers assigned by Lianhe Ratings are classified into 3 grades 10 categories:  $AAA_i$ ,  $AA_i$ ,  $A_i$ ,  $BBB_i$ ,  $BB_i$ ,  $B_i$ ,  $CCC_i$ ,  $CC_i$ ,  $C_i$  and  $D_i$ . Ratings from 'AA<sub>i</sub>' to 'B<sub>i</sub>' may be modified by the addition of a plus (+) or minus (-) sign to show relative standing within the major rating categories. The ratings are defined as follows:

*Table 1 Definitions of Long-term Issuer International Ratings*

Ratings	Definitions
$AAA_i$	The lowest expectation of credit risk; the obligor's capacity to meet its financial commitment on the obligation is extremely strong; this capacity is highly unlikely to be adversely affected by foreseeable events.
$AA_i$	Expectations of very low credit risk; the obligor's capacity to meet its financial commitment on the obligation is very strong; this capacity is not significantly vulnerable to foreseeable events.

<b>A<sub>i</sub></b>	Expectations of low credit risk; the obligor's capacity to meet its financial commitment on the obligation is considered strong; this capacity may, nevertheless, be more vulnerable to adverse business or economic conditions.
<b>BBB<sub>i</sub></b>	Expectations of credit risk are currently low; the obligor's capacity to meet its financial commitment on the obligation is considered adequate but adverse business or economic conditions are more likely to impair this capacity.
<b>BB<sub>i</sub></b>	An elevated vulnerability to credit risk, particularly in the event of adverse changes in business or economic conditions over time; however, business or financial flexibility exists which supports the servicing of financial commitments.
<b>B<sub>i</sub></b>	Material credit risk is present, but a limited margin of safety remains. Financial commitments are currently being met; however, capacity for continued payment is vulnerable to deterioration in the business and economic environment.
<b>CCC<sub>i</sub></b>	Expectations of credit risk are high; the obligor's capacity to meet its financial commitment on the obligation is limited; default is a real possibility, with increasing indication occurring credit risk.
<b>CC<sub>i</sub></b>	Expectations of credit risk are very high; default of some kind appears probable.
<b>C<sub>i</sub></b>	Expectations of credit risk are extremely high; default is imminent or inevitable, or the issuer is in standstill.
<b>D<sub>i</sub></b>	Uncured payment default on a bond, loan or other financial obligation occurred, or entered into restructuring or bankruptcy filings

## (2) Long-term issue international ratings

Definitions of long-term issue international ratings for Panda bonds are the same with those of long-term issuer international ratings in Table 1.

## (3) Long-term issuer national ratings

Similar with long-term credit ratings in China Interbank Bond Market, long-term issuer national ratings for Panda bond issuers assigned by Lianhe Ratings are classified into 3 grades and 9 categories: AAA, AA, A, BBB, BB, B, CCC, CC and C. Ratings from 'AA' to 'B' may be modified by adding a plus (+) or minus (-) sign to show relative standing within the major rating categories. The ratings are defined as follows:

*Table 2 Definitions of Long-term Issuer National Ratings*

Ratings	Definitions
<b>AAA</b>	Extremely strong capacity for payment of financial commitment; highly unlikely to be affected by adverse economic conditions; the lowest expectation of default risk.
<b>AA</b>	Very strong capacity for payment of financial commitment; not significantly vulnerable to adverse economic conditions; very low default risk.
<b>A</b>	Strong capacity for payment of financial commitment; vulnerable to adverse economic conditions; low default risk.
<b>BBB</b>	Adequate capacity for payment of financial commitment; more likely to be impaired by adverse economic conditions; moderate default risk.

<b>BB</b>	Weak capacity for payment of financial commitment; significantly vulnerable to adverse economic conditions; high default risk.
<b>B</b>	Capacity for payment of financial commitment is largely dependent on favorable economic conditions; very high default risk.
<b>CCC</b>	Capacity for payment of financial commitment is extremely dependent on favorable economic conditions; extremely high default risk.
<b>CC</b>	Limited protection in the event of bankruptcy or reorganization; highly vulnerable to nonpayment.
<b>C</b>	Nonpayment has occurred.

#### (4) Long-term issue national ratings

Definitions of long-term issue national ratings for Panda bonds are the same with those of long-term issuer national ratings in Table 2.

#### (5) Short-term issue national ratings

Similar with short-term credit ratings in China Interbank Bond Market, short-term issue national ratings for Panda bonds assigned by Lianhe Ratings are classified into 6 categories: A-1, A-2, A-3, B, C and D. None of them can be modified by adding a plus (+) or minus (-) sign.

*Table 3 Definitions of Short-term Issue National Ratings*

<b>Ratings</b>	<b>Definitions</b>
<b>A-1</b>	Extremely strong capacity for payment of financial commitment and lowest expectation of default risk.
<b>A-2</b>	Strong capacity for payment of financial commitment and low default risk.
<b>A-3</b>	Moderate capacity for payment of financial commitment and vulnerable to adverse economic conditions.
<b>B</b>	Weak capacity for payment of financial commitment and high default risk.
<b>C</b>	Very weak capacity for payment of financial commitment and very high default risk.
<b>D</b>	Nonpayment has occurred.

### III Analytical Framework for Rating Panda Bonds

The framework for rating a Panda bond consists of the following steps: the first step is to determine the issuer international rating, which is capped by the sovereign credit rating of the country/region where the issuer locates (credit ratings of

multinational companies or multilateral institutions are less subject to sovereign credit rating); then to determine the issuer national rating through a mapping mechanism between international ratings and national ratings; finally to determine the Panda bond rating (issue national rating) based on the issuer national rating with a consideration for specific bond terms. The framework is shown in Figure 1.

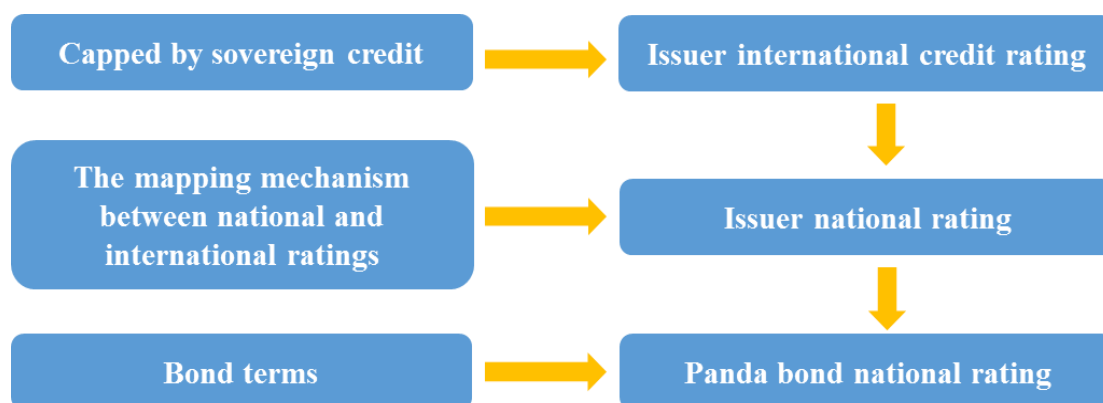


Figure 1 Analytical Framework for Rating a Panda Bond

### (1) Issuer international rating

#### *Sovereign governments*

As sovereign credit rating refers to the evaluation of a sovereign government's (in a country or region) credit quality, the issuer international rating for a sovereign government equals to the foreign-currency sovereign credit rating, which factors in the sovereign's institutional & economic risk, fiscal strength and external financing strength, etc. (For more details, see [Sovereign Credit Rating Methodology](#)).

#### *Non-Chinese local or regional governments*

The issuer international rating for a local or regional government outside Mainland China is determined by its economic & fiscal strengths, governance capability, debt burden and solvency, involving the assessment of the possibility and level of extraordinary supports from higher-tier governments. This rating is normally capped by the sovereign credit rating of the country or region where the issuer locates. However, a local or regional government that enjoys a high degree of autonomy and financial independence can have an issuer international rating higher than the sovereign credit rating if its intrinsic credit profile is stronger.

*International multilateral institutions*

The issuer international rating for an international multilateral institution is based on its intrinsic credit profile plus a credit uplift reflecting external supports: the former is an evaluation of operational risk and financial strength, while the latter captures the possibility and level of supports from its shareholders. An international multilateral institution normally have a much lower transfer and convertibility risk, therefore its issuer international credit rating is less subject to sovereign credit ratings of its shareholders, but considers the weighted average sovereign credit ratings of them<sup>1</sup>.

*Overseas financial institution and non-financial corporates*

The issuer international rating for an overseas financial institution or non-financial corporate is determined according to the following steps: the first step is to determine the sovereign credit rating of the country or region where the primary business of the issuer operates, instead of where the issuer domiciles or gets listed; then to evaluate the intrinsic credit profile of the issuer through analysis on its industry risk, operational risk and financial risk according to international standards; finally to determine the issuer international rating by combining the intrinsic credit profile and sovereign credit rating, with assessment of the transnational operation of the issuer. Although this rating is normally capped by the sovereign credit rating, an issuer can have an issuer international rating higher than the sovereign credit rating if it operates globally, monopolizes the international market, or likely receives liquidity support from its parent company in case of capital control.

**(2) Issuer national rating**

As international ratings are not well-positioned with fundamentals of China's bond market or regulatory standards in Mainland China, Lianhe Ratings will convert issuer international rating into issuer national rating according to the mapping mechanism based on the relationship between expected default rates of international

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<sup>1</sup> Weighted by ratios of investments from all shareholders.

and national ratings, and the relationship between them may be subject to changes in sovereign credit ratings and expected default rates.

### **(3) Panda bond credit rating (issue national rating)**

The assessment of Panda bond national rating is based on the issuer national rating of the Panda bond issuer, with considerations for specific bond terms, use of proceeds, impact on the issuer's credit profile, credit enhancement, transfer and convertibility risk, etc. Normally, unsubordinated and unsecured Panda bond credit rating equals to issuer national rating. When credit enhancement methods apply to a Panda bond, Panda bond credit rating may be higher than issuer national rating, but subordinated Panda bond credit rating may be lower than issuer national rating.

#### *Bond terms*

Analysis on bond terms includes bond type, offering size, tenor, coupon type, repayment method, etc.

#### *Use of proceeds*

Our analysis on use of proceeds focuses on the validity and feasibility of the use of proceeds, budget estimates, source of funding and funds in places (not limiting to own funds, bank loans, etc.), financing gap and other sources of refinancing, etc.

#### *Impact on the issuer's credit profile*

This part focuses on the changes of the issuer's debt structure, debt burden and refinancing risk if the proposed Panda bond was issued.

#### *Credit enhancement analysis*

Methods for credit enhancement or limiting terms includes priority of repayment, third-party guarantee, special sinking fund, collateral arrangement, line of credit, restrictions on financial indicators or financing activities, etc. Lianhe Ratings will evaluate how much these methods can enhance the creditworthiness of the Panda bond and adjust the Panda bond credit rating accordingly.

### *Transfer and convertibility risk*

As the repatriation of proceeds and remittance of repayment funds are subject to transfer and convertibility risk, risk mitigation instruments (such as currency swap agreement, foreign exchange swap, etc.) arranged for the Panda bond may have a positive impact on the Panda bond credit rating, but it does not necessarily lead to an upgrade.

## **IV Limitations**

In determining the issuer credit international ratings of financial institutions and non-financial corporates, limitations of global industry research and information gathering make it difficult to effectively identify all kinds of risks the issuer is exposed to, thus the issuer international rating cannot be confirmed. In this case, Lianhe Ratings will adopt an alternative approach to determine the issuer national rating directly: firstly, to determine the intrinsic rating by evaluating the operational risk and financial risk of the issuer according to local standards in China; secondly, to adjust the intrinsic rating by the transfer and convertibility risk or sovereign risk of these entities; thirdly, to adjust the intrinsic rating by the magnitude of the industry risk or macroeconomic risk the issuer is exposed to; finally, to finally to determine the issuer national rating based on intrinsic rating and the above considerations for adjustment.

With the development of international business, the accumulation of data and experiences, improvements of industry research and rating methodology, Lianhe Ratings will gradually conduct international ratings for all Panda bond issuers.