

**METHODOLOGY FOR MAPPING CREDIT RATINGS ASSIGNED UNDER ACRA'S INTERNATIONAL SCALE TO CREDIT RATINGS ASSIGNED UNDER ACRA'S NATIONAL SCALES**

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## 1 SCOPE OF THE METHODOLOGY

This methodology describes ACRA's approach to mapping credit ratings (credit estimates) assigned by the Agency under the international credit rating scale to credit ratings (credit estimates) it assigns under the national credit rating scale for the Russian Federation, as well as on national scales for countries other than the Russian Federation.

This methodology is used to assign credit ratings to the following categories of rated entities (issuers): banking organizations and organizations whose economic activity is close to banking; international financial institutions; insurance companies; microfinance organizations; leasing companies; non-financial companies, including holding companies; regions and municipalities; project finance transactions; structured finance instruments and obligations, and individual issues of financial instruments.

The methodology can be applied to obtain credit ratings under the national scale for the Russian Federation, as well as to obtain credit ratings on national scales for countries other than the Russian Federation, based on credit ratings assigned to rated entities under the international scale. At the same time, in cases where credit ratings under the international scale in foreign and national currency differ, in order to obtain a credit rating under the national scale for the Russian Federation:

- In relation to national rating objects, the credit rating is used according to the international scale in the national currency;
- In relation to foreign rating objects, the credit rating is used according to the international scale in foreign currency.

The methodology can be applied to obtain credit ratings under the international scale based on credit ratings assigned under the national scale for the Russian Federation.

This methodology is not exhaustive and contains references to ACRA's other methodologies.

For the purpose of calculation of the idealized tables of probability of default levels and expected losses for credit ratings under the national scale, this methodology is also applicable to structured finance transactions.

This methodology shall be applied on an ongoing basis until a new version is approved by ACRA's Methodology Committee.

To keep this methodology up to date, ACRA may review and amend it ahead of schedule in the following cases:

- More than three deviations from this methodology in a quarter when performing rating actions;
- The need to review based on methodology application monitoring by ACRA's Methodology Group, including based on the results of checking the quality of the methodology in accordance with Bank of Russia Ordinance No. 6583-U<sup>1</sup>;
- Non-compliance with Federal Law No. 222-FZ<sup>2</sup>;

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<sup>1</sup> Ordinance of the Bank of Russia No. 6583-U dated October 23, 2023 "On the requirements for the provisions specified in Part 7 of Article 12 of Federal Law No. 222-FZ, cases, frequency, timing of verification of the quality of the methodology by a credit rating agency, requirements for its implementation, and also the form, procedure, and timing of sending a report by the credit rating agency to the Bank of Russia based on the results of checking the quality of the methodology, the procedure for the Bank of Russia to evaluate the methodology of the credit rating agency for compliance with the law of the Russian Federation and regulations of the Bank of Russia".

<sup>2</sup> Federal Law No. 222-FZ dated July 13, 2015 (with amendments dated December 19, 2022), "On the Activity of Credit Rating Agencies in the Russian Federation, on Amending Article 76.1 of the Federal Law 'On the Central Bank of the Russian Federation' and Recognizing Null and Void Certain Provisions of Legislative Acts of the Russian Federation" (including changes and addenda that came into force on December 20, 2023).

- Immediate review of the methodology requested by ACRA's Compliance and Internal Control Service.

ACRA reviews this methodology in accordance with its internal documents no later than one calendar year from the date of its latest review. This methodology may be amended based on the review.

Any deviation from this methodology is documented and disclosed by ACRA on its official website at [www.acra-ratings.ru](http://www.acra-ratings.ru) when publishing a credit rating or a credit rating outlook, stating the reason for the deviation.

If errors are found in this methodology that have affected or may affect credit ratings and/or credit rating outlooks, ACRA analyzes it and revises in accordance with the procedures established by ACRA. If identified errors affect previously assigned credit ratings, ACRA discloses this information on its official website.

If the proposed changes to this methodology are significant (such as the modification of individual factors or the wording of the methodology) and affect or may affect existing credit ratings, ACRA will:

1. Post information about the proposed changes in the methodology on its official website, stating the reasons for, and implications of, such changes, including the effect on credit ratings assigned in accordance with the methodology;
2. Assess whether it is necessary to review all credit ratings assigned in accordance with this methodology within six months of its amendment;
3. Review credit ratings within six months of the assessment specified in the previous point, provided the need to review them is discovered based on the conducted assessment.

## 2 RATING ANALYSIS STRUCTURE

A national scale is a granular system for assessing creditworthiness within a single jurisdiction. From an economic perspective, ACRA's national scale credit ratings are reflective of the probability of default or the rate of expected losses of rated entities or on individual issues of financial instruments compared to the highest level of creditworthiness in the country. With regard to the Russian Federation, in ACRA's opinion, this is the creditworthiness of, among other things, the obligations of the Government of the Russian Federation and some of their derivatives. Under the international scale, however, the creditworthiness of the Government of the Russian Federation is not a fixed value. Hence, the level of creditworthiness of a rated entity or credit risk of a financial instrument mapped under the national scale will either directly depend on the credit rating of the Russian Federation assigned under the international scale, or, if no credit rating is assigned, on the credit estimate assigned under the international scale. As the national scale is more granular, credit ratings assigned using the national scale generally change more often.

A change in a credit rating under the international scale may entail a more substantial change in the mapped credit rating level under the national scale.

The rating analysis structure when comparing credit ratings between scales consists of two stages:

**Stage 1** Determining the starting point. This is done based on the sovereign credit rating of the Russian Federation (or other sovereign issuer against which the comparison is being made) assigned by ACRA under the international scale, or the credit estimate if no credit rating has been assigned.

**Stage 2** Assigning the credit rating. This is done based on the standard rating scale comparison tables given in this methodology.

## 2.1. DETERMINING THE STARTING POINT

The starting point is the long-term sovereign credit rating of the Russian Federation in national currency (or other sovereign issuer against which the comparison is being made), as assigned by ACRA under the international scale or the credit estimate if no credit rating has been assigned.

## 2.2. ASSIGNING THE CREDIT RATING

Credit ratings under ACRA's national scale for the Russian Federation may be assigned based on the credit ratings assigned under ACRA's international scale, with the use of specialized methodologies, in accordance with the standard rating scale comparison tables given in Appendix 1.

Credit ratings under ACRA's international scale may be assigned based on the credit ratings assigned under ACRA's national scale for the Russian Federation, with the use of specialized methodologies, in accordance with the standard rating scale comparison tables given in Appendix 1.

Credit ratings under ACRA's national scales for countries other than the Russian Federation may be assigned based on the credit ratings assigned under ACRA's international scale, with the use of specialized methodologies, in accordance with the standard rating scale comparison tables given in Appendix 1.

Assignment of credit ratings under the international scale based on credit ratings assigned under the national scales of ACRA for countries other than the Russian Federation is not carried out.

Credit ratings under the international structured finance sector rating scale may be assigned based on credit ratings assigned under the national structured finance sector scale for the Russian Federation using specialized methodologies, in accordance with the standard rating scale comparison tables given in Appendix 1<sup>3</sup>.

The credit ratings under the national scale for the starting point, determined at AAA, are identical to the credit ratings under the international scale of the corresponding level. For a starting point defined at a level other than AAA, in some cases there is a multiple correspondence between the levels of credit ratings under various scales. In such cases, the credit quality of the rated entity/transaction/financial instrument is expertly assessed using comparative analysis vis-à-vis a group of comparable entities/transactions/instruments that have been rated or assigned a credit estimate.

If no entities/transactions/financial instruments with the required credit rating or credit estimate level are found in the comparative sample, ACRA's expert opinion is used regarding the creditworthiness development trend for the issuer to choose a specific rating. A credit rating forecast for the issuer can also be a factor taken into account by the rating committee when determining specific credit rating levels.

If a credit rating is assigned under the international scale based on a credit rating under ACRA's national scale for the Russian Federation, the assigned credit rating under the international scale cannot be higher than the starting point level.

## 2.3. ASSIGNING THE CREDIT RATING OUTLOOK

A credit rating assigned using this methodology may be assigned an outlook if applicable. The outlook will match the outlook assigned based on the original rating.

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<sup>3</sup> To clearly separate structured finance sector credit ratings from fundamental credit ratings, ACRA uses the identifiers ".sf" for the international credit rating scale and "ru.sf" for the national credit rating scale for the Russian Federation.

## APPENDIX 1. STANDARD MAPPING TABLES FOR RATING SCALES

**TABLE 1. STARTING POINT AA+**

INTERNATIONAL SCALE	NATIONAL SCALE
AAA	AAA(XX)
AA+	AAA(XX), AA+(XX)
AA	AA+(XX), AA(XX)
AA-	AA(XX), AA-(XX)
A+	AA-(XX), A+(XX)
A	A+(XX), A(XX)
A-	A(XX), A-(XX)
BBB+	A-(XX), BBB+(XX)
BBB	BBB+(XX), BBB(XX)
BBB-	BBB(XX), BBB-(XX)
BB+	BBB-(XX), BB+(XX)
BB	BB+(XX), BB(XX)
BB-	BB(XX), BB-(XX)
B+	BB-(XX), B+(XX)
B	B+(XX), B(XX)
B-	B(XX), B-(XX)
CCC	CCC(XX)
CC	CC(XX)
C	C(XX)
SD	SD(XX)
D	D(XX)

Source: ACRA

**TABLE 2. STARTING POINT AA**

INTERNATIONAL SCALE	NATIONAL SCALE
AAA	AAA(XX)
AA+	AAA(XX)
AA	AAA(XX), AA+(XX)
AA-	AA+(XX), AA(XX)
A+	AA(XX), AA-(XX)
A	AA-(XX), A+(XX)
A-	A+(XX), A(XX)
BBB+	A(XX), A-(XX)
BBB	A-(XX), BBB+(XX)
BBB-	BBB+(XX), BBB(XX)
BB+	BBB(XX), BBB-(XX), BB+(XX)
BB	BB+(XX), BB(XX)
BB-	BB(XX), BB-(XX)
B+	BB-(XX), B+(XX)
B	B+(XX), B(XX)
B-	B(XX), B-(XX)
CCC	CCC(XX)
CC	CC(XX)
C	C(XX)
SD	SD(XX)
D	D(XX)

Source: ACRA

**TABLE 3. STARTING POINT AA-**

INTERNATIONAL SCALE	NATIONAL SCALE
AAA	AAA(XX)
AA+	AAA(XX)
AA	AAA(XX)
AA-	AAA(XX), AA+(XX)
A+	AA+(XX), AA(XX)
A	AA(XX), AA-(XX)
A-	AA-(XX), A+(XX)
BBB+	A+(XX), A(XX)
BBB	A(XX), A-(XX), BBB+(XX)
BBB-	BBB+(XX), BBB(XX)
BB+	BBB(XX), BBB-(XX)
BB	BBB-(XX), BB+(XX)
BB-	BB+(XX), BB(XX)
B+	BB(XX), BB-(XX)
B	BB-(XX), B+(XX), B(XX)
B-	B(XX), B-(XX)
CCC	CCC(XX)
CC	CC(XX)
C	C(XX)
SD	SD(XX)
D	D(XX)

Source: ACRA

TABLE 4. STARTING POINT A+

INTERNATIONAL SCALE	NATIONAL SCALE
AAA	AAA(XX)
AA+	AAA(XX)
AA	AAA(XX)
AA-	AAA(XX)
A+	AAA(XX), AA+(XX)
A	AA+(XX), AA(XX)
A-	AA(XX), AA-(XX)
BBB+	AA-(XX), A+(XX)
BBB	A+(XX), A(XX), A-(XX)
BBB-	A-(XX), BBB+(XX)
BB+	BBB+(XX), BBB(XX)
BB	BBB(XX), BBB-(XX), BB+(XX)
BB-	BB+(XX), BB(XX)
B+	BB(XX), BB-(XX)
B	BB-(XX), B+(XX)
B-	B+(XX), B(XX), B-(XX)
CCC	CCC(XX)
CC	CC(XX)
C	C(XX)
SD	SD(XX)
D	D(XX)

Source: ACRA

TABLE 5. STARTING POINT A

INTERNATIONAL SCALE	NATIONAL SCALE
AAA	AAA(XX)
AA+	AAA(XX)
AA	AAA(XX)
AA-	AAA(XX)
A+	AAA(XX)
A	AAA(XX), AA+(XX)
A-	AA+(XX), AA(XX)
BBB+	AA(XX), AA-(XX)
BBB	AA-(XX), A+(XX), A(XX)
BBB-	A(XX), A-(XX)
BB+	A-(XX), BBB+(XX), BBB(XX)
BB	BBB(XX), BBB-(XX)
BB-	BBB-(XX), BB+(XX)
B+	BB+(XX), BB(XX), BB-(XX)
B	BB-(XX), B+(XX)
B-	B+(XX), B(XX), B-(XX)
CCC	CCC(XX)
CC	CC(XX)
C	C(XX)
SD	SD(XX)
D	D(XX)

Source: ACRA

TABLE 6. STARTING POINT A-

INTERNATIONAL SCALE	NATIONAL SCALE
AAA	AAA(XX)
AA+	AAA(XX)
AA	AAA(XX)
AA-	AAA(XX)
A+	AAA(XX)
A	AAA(XX)
A-	AAA(XX), AA+(XX)
BBB+	AA+(XX), AA(XX)
BBB	AA(XX), AA-(XX), A+(XX)
BBB-	A+(XX), A(XX)
BB+	A(XX), A-(XX), BBB+(XX)
BB	BBB+(XX), BBB(XX)
BB-	BBB(XX), BBB-(XX), BB+(XX)
B+	BB+(XX), BB(XX)
B	BB(XX), BB-(XX)
B-	BB-(XX), B+(XX), B(XX)
CCC	B-(XX), CCC(XX)
CC	CC(XX)
C	C(XX)
SD	SD(XX)
D	D(XX)

Source: ACRA

**TABLE 7. STARTING POINT BBB+**

INTERNATIONAL SCALE	NATIONAL SCALE
AAA	AAA(XX)
AA+	AAA(XX)
AA	AAA(XX)
AA-	AAA(XX)
A+	AAA(XX)
A	AAA(XX)
A-	AAA(XX)
BBB+	AAA(XX), AA+(XX)
BBB	AA+(XX), AA(XX)
BBB-	AA(XX), AA-(XX), A+(XX)
BB+	A+(XX), A(XX), A-(XX)
BB	A-(XX), BBB+(XX)
BB-	BBB+(XX), BBB(XX), BBB-(XX)
B+	BBB-(XX), BB+(XX)
B	BB+(XX), BB(XX), BB-(XX)
B-	BB-(XX), B+(XX), B(XX)
CCC	B(XX), B-(XX), CCC(XX)
CC	CC(XX)
C	C(XX)
SD	SD(XX)
D	D(XX)

Source: ACRA

**TABLE 8. STARTING POINT BBB**

INTERNATIONAL SCALE	NATIONAL SCALE
AAA	AAA(XX)
AA+	AAA(XX)
AA	AAA(XX)
AA-	AAA(XX)
A+	AAA(XX)
A	AAA(XX)
A-	AAA(XX)
BBB+	AAA(XX)
BBB	AAA(XX), AA+(XX)
BBB-	AA+(XX), AA(XX), AA-(XX)
BB+	AA-(XX), A+(XX)
BB	A+(XX), A(XX), A-(XX)
BB-	A-(XX), BBB+(XX), BBB(XX)
B+	BBB(XX), BBB-(XX), BB+(XX)
B	BB+(XX), BB(XX)
B-	BB(XX), BB-(XX), B+(XX)
CCC	B+(XX), B(XX), B-(XX), CCC(XX)
CC	CC(XX)
C	C(XX)
SD	SD(XX)
D	D(XX)

Source: ACRA

**TABLE 9. STARTING POINT BBB-**

INTERNATIONAL SCALE	NATIONAL SCALE
AAA	AAA(XX)
AA+	AAA(XX)
AA	AAA(XX)
AA-	AAA(XX)
A+	AAA(XX)
A	AAA(XX)
A-	AAA(XX)
BBB+	AAA(XX)
BBB	AAA(XX)
BBB-	AAA(XX), AA+(XX)
BB+	AA+(XX), AA(XX), AA-(XX)
BB	AA-(XX), A+(XX), A(XX)
BB-	A(XX), A-(XX), BBB+(XX)
B+	BBB+(XX), BBB(XX), BBB-(XX)
B	BBB-(XX), BB+(XX), BB(XX)
B-	BB(XX), BB-(XX), B+(XX)
CCC	B+(XX), B(XX), B-(XX), CCC(XX)
CC	CC(XX)
C	C(XX)
SD	SD(XX)
D	D(XX)

Source: ACRA



TABLE 10. STARTING POINT BB+

INTERNATIONAL SCALE	NATIONAL SCALE
AAA	AAA(XX)
AA+	AAA(XX)
AA	AAA(XX)
AA-	AAA(XX)
A+	AAA(XX)
A	AAA(XX)
A-	AAA(XX)
BBB+	AAA(XX)
BBB	AAA(XX)
BBB-	AAA(XX)
BB+	AAA(XX), AA+(XX)
BB	AA+(XX), AA(XX), AA-(XX)
BB-	AA-(XX), A+(XX), A(XX)
B+	A(XX), A-(XX), BBB+(XX)
B	BBB+(XX), BBB(XX), BBB-(XX), BB+(XX)
B-	BB+(XX), BB(XX), BB-(XX)
CCC	BB-(XX), B+(XX), B(XX), B-(XX), CCC(XX)
CC	CC(XX)
C	C(XX)
SD	SD(XX)
D	D(XX)

Source: ACRA

TABLE 11. STARTING POINT BB

INTERNATIONAL SCALE	NATIONAL SCALE
AAA	AAA(XX)
AA+	AAA(XX)
AA	AAA(XX)
AA-	AAA(XX)
A+	AAA(XX)
A	AAA(XX)
A-	AAA(XX)
BBB+	AAA(XX)
BBB	AAA(XX)
BBB-	AAA(XX)
BB+	AAA(XX)
BB	AAA(XX), AA+(XX)
BB-	AA+(XX), AA(XX), AA-(XX), A+(XX)
B+	A+(XX), A(XX), A-(XX)
B	A-(XX), BBB+(XX), BBB(XX)
B-	BBB(XX), BBB-(XX), BB+(XX), BB(XX)
CCC	BB(XX), BB-(XX), B+(XX), B(XX), B-(XX), CCC(XX)
CC	CC(XX)
C	C(XX)
SD	SD(XX)
D	D(XX)

Source: ACRA

TABLE 12. STARTING POINT BB-

INTERNATIONAL SCALE	NATIONAL SCALE
AAA	AAA(XX)
AA+	AAA(XX)
AA	AAA(XX)
AA-	AAA(XX)
A+	AAA(XX)
A	AAA(XX)
A-	AAA(XX)
BBB+	AAA(XX)
BBB	AAA(XX)
BBB-	AAA(XX)
BB+	AAA(XX)
BB	AAA(XX)
BB-	AAA(XX), AA+(XX), AA(XX)
B+	AA(XX), AA-(XX), A+(XX)
B	A+(XX), A(XX), A-(XX), BBB+(XX)
B-	BBB+(XX), BBB(XX), BBB-(XX), BB+(XX)
CCC	BB+(XX), BB(XX), BB-(XX), B+(XX), B(XX), B-(XX), CCC(XX)
CC	CC(XX)
C	C(XX)
SD	SD(XX)
D	D(XX)

Source: ACRA

TABLE 13. STARTING POINT B+

INTERNATIONAL SCALE	NATIONAL SCALE
AAA	AAA(XX)
AA+	AAA(XX)
AA	AAA(XX)
AA-	AAA(XX)
A+	AAA(XX)
A	AAA(XX)
A-	AAA(XX)
BBB+	AAA(XX)
BBB	AAA(XX)
BBB-	AAA(XX)
BB+	AAA(XX)
BB	AAA(XX)
BB-	AAA(XX)
B+	AAA(XX), AA+(XX), AA(XX)
B	AA(XX), AA-(XX), A+(XX), A(XX)
B-	A(XX), A-(XX), BBB+(XX), BBB(XX)
CCC	BBB(XX), BBB-(XX), BB+(XX), BB(XX), BB-(XX), B+(XX), B(XX), B-(XX), CCC(XX)
CC	CC(XX)
C	C(XX)
SD	SD(XX)
D	D(XX)

Source: ACRA

## APPENDIX 2. CALCULATING IDEALIZED TABLES OF PROBABILITIES OF DEFAULT AND EXPECTED LOSSES FOR CREDIT RATINGS UNDER THE NATIONAL SCALE FOR THE RUSSIAN FEDERATION

Calculation of idealized probabilities of default and expected losses for credit ratings under the national scale for the Russian Federation can be carried out on the basis of idealized tables of probabilities of default and expected losses for ACRA's international scale based on the credit rating of the Russian Federation (credit estimate in the absence of an assigned credit rating) under the international scale, as a starting point.

The following procedure is used for credit ratings under the national scale for the Russian Federation to calculate idealized tables of probabilities of default and expected losses:

1. For the corresponding credit rating under the national scale and the current creditworthiness of the Russian Federation under the international scale, the nearest ratings are determined: R1, R2 under the international scale and weights, W1 and W2.
2. For the corresponding expected transaction duration and credit ratings under the international scale R1 and R2, the corresponding values of the probability of default — Val1, Val2 — are determined based on the idealized tables of probabilities of default or expected losses under the international scale.
3. The idealized value of the probability of default (expected losses) (Val) for credit ratings R under the national scale is determined as the weighted sum of the corresponding values using the formula:

$$\text{Val} = \text{Val1} * \text{W1} + \text{Val2} * \text{W2} \quad (1)$$

The values of these weights are provided in Tables 1–16 of this appendix. Idealized tables for the national scale (at the current creditworthiness of the Russian Federation) are formed for the entire scale and expected transaction durations equivalent to durations specified in the idealized tables for the international scale.

TABLE 1. STARTING POINT AAA

P	P1	B1	P2	B2
AAA(RU)	AAA	100.00%	-	-
AA+(RU)	AA+	100.00%	-	-
AA(RU)	AA	100.00%	-	-
AA-(RU)	AA-	100.00%	-	-
A+(RU)	A+	100.00%	-	-
A(RU)	A	100.00%	-	-
A-(RU)	A-	100.00%	-	-
BBB+(RU)	BBB+	100.00%	-	-
BBB(RU)	BBB	100.00%	-	-
BBB-(RU)	BBB-	100.00%	-	-
BB+(RU)	BB+	100.00%	-	-
BB(RU)	BB	100.00%	-	-
BB-(RU)	BB-	100.00%	-	-
B+(RU)	B+	100.00%	-	-
B(RU)	B	100.00%	-	-
B-(RU)	B-	100.00%	-	-
CCC(RU)	CCC	100.00%	-	-
CC(RU)	CC	100.00%	-	-
C(RU)	C	100.00%	-	-
D(RU)	D	100.00%	-	-

Source: ACRA

TABLE 2. STARTING POINT AA+

P	P1	B1	P2	B2
AAA(RU)	AA+	100.00%	-	-
AA+(RU)	AA+	6.91%	AA	93.09%
AA(RU)	AA	13.54%	AA-	86.46%
AA-(RU)	AA-	19.93%	A+	80.07%
A+(RU)	A+	26.08%	A	73.92%
A(RU)	A	32.01%	A-	67.99%
A-(RU)	A-	37.75%	BBB+	62.25%
BBB+(RU)	BBB+	43.30%	BBB	56.70%
BBB(RU)	BBB	48.68%	BBB-	51.32%
BBB-(RU)	BBB-	53.91%	BB+	46.09%
BB+(RU)	BB+	58.99%	BB	41.01%
BB(RU)	BB	63.94%	BB-	36.06%
BB-(RU)	BB-	68.76%	B+	31.24%
B+(RU)	B+	73.48%	B	26.52%
B(RU)	B	78.10%	B-	21.90%
B-(RU)	B-	82.62%	CCC	17.38%
CCC(RU)	CCC	87.07%	CC	12.93%
CC(RU)	CC	91.44%	C	8.56%
C(RU)	C	97.46%	D	2.54%
D(RU)	D	100.00%	-	-

Source: ACRA

TABLE 3. STARTING POINT AA

P	P1	B1	P2	B2
AAA(RU)	AA	100.00%	-	-
AA+(RU)	AA	13.54%	AA-	86.46%
AA(RU)	AA-	26.17%	A+	73.83%
AA-(RU)	A+	37.98%	A	62.02%
A+(RU)	A	49.06%	A-	50.94%
A(RU)	A-	59.49%	BBB+	40.51%
A-(RU)	BBB+	69.33%	BBB	30.67%
BBB+(RU)	BBB	78.64%	BBB-	21.36%
BBB(RU)	BBB-	87.49%	BB+	12.51%
BBB-(RU)	BB+	95.92%	BB	4.08%
BB+(RU)	BB+	6.64%	BB	93.36%
BB(RU)	BB	19.32%	BB-	80.68%
BB-(RU)	BB-	31.27%	B+	68.73%
B+(RU)	B+	42.56%	B	57.44%
B(RU)	B	53.27%	B-	46.73%
B-(RU)	B-	63.45%	CCC	36.55%
CCC(RU)	CCC	73.17%	CC	26.83%
CC(RU)	CC	82.46%	C	17.54%
C(RU)	C	94.86%	D	5.14%
D(RU)	D	100.00%	-	-

Source: ACRA

TABLE 4. STARTING POINT AA-

P	P1	B1	P2	B2
AAA(RU)	AA-	100.00%	-	-
AA+(RU)	AA-	19.93%	A+	80.07%
AA(RU)	A+	37.98%	A	62.02%
AA-(RU)	A	54.42%	A-	45.58%
A+(RU)	A-	69.44%	BBB+	30.56%
A(RU)	BBB+	83.23%	BBB	16.77%
A-(RU)	BBB	95.97%	BBB-	4.03%
BBB+(RU)	BBB	13.21%	BBB-	86.79%
BBB(RU)	BBB-	31.59%	BB+	68.41%
BBB-(RU)	BB+	48.43%	BB	51.57%
BB+(RU)	BB	63.94%	BB-	36.06%
BB(RU)	BB-	78.28%	B+	21.72%
BB-(RU)	B+	91.61%	B	8.39%
B+(RU)	B+	6.55%	B	93.45%
B(RU)	B	25.15%	B-	74.85%
B-(RU)	B-	42.31%	CCC	57.69%
CCC(RU)	CCC	58.23%	CC	41.77%
CC(RU)	CC	73.06%	C	26.94%
C(RU)	C	92.19%	D	7.81%
D(RU)	D	100.00%	-	-

Source: ACRA

TABLE 5. STARTING POINT A+

P	P1	B1	P2	B2
AAA(RU)	A+	100.00%	-	-
AA+(RU)	A+	26.08%	A	73.92%
AA(RU)	A	49.06%	A-	50.94%
AA-(RU)	A-	69.44%	BBB+	30.56%
A+(RU)	BBB+	87.61%	BBB	12.39%
A(RU)	BBB+	6.73%	BBB	93.27%
A-(RU)	BBB	31.69%	BBB-	68.31%
BBB+(RU)	BBB-	53.91%	BB+	46.09%
BBB(RU)	BB+	73.79%	BB	26.21%
BBB-(RU)	BB	91.69%	BB-	8.31%
BB+(RU)	BB	13.05%	BB-	86.95%
BB(RU)	BB-	37.05%	B+	62.95%
BB-(RU)	B+	58.61%	B	41.39%
B+(RU)	B	78.10%	B-	21.90%
B(RU)	B-	95.81%	CCC	4.19%
B-(RU)	B-	19.01%	CCC	80.99%
CCC(RU)	CCC	42.19%	CC	57.81%
CC(RU)	CC	63.21%	C	36.79%
C(RU)	C	89.47%	D	10.53%
D(RU)	D	100.00%	-	-

Source: ACRA

TABLE 6. STARTING POINT A

P	P1	B1	P2	B2
AAA(RU)	A	100.00%	-	-
AA+(RU)	A	32.01%	A-	67.99%
AA(RU)	A-	59.49%	BBB+	40.51%
AA-(RU)	BBB+	83.23%	BBB	16.77%
A+(RU)	BBB+	6.73%	BBB	93.27%
A(RU)	BBB	37.52%	BBB-	62.48%
A-(RU)	BBB-	64.18%	BB+	35.82%
BBB+(RU)	BB+	87.43%	BB	12.57%
BBB(RU)	BB+	13.10%	BB	86.90%
BBB-(RU)	BB	42.81%	BB-	57.19%
BB+(RU)	BB-	68.76%	B+	31.24%
BB(RU)	B+	91.61%	B	8.39%
BB-(RU)	B+	19.17%	B	80.83%
B+(RU)	B	47.92%	B-	52.08%
B(RU)	B-	73.27%	CCC	26.73%
B-(RU)	CCC	95.79%	CC	4.21%
CCC(RU)	CCC	24.96%	CC	75.04%
CC(RU)	CC	52.88%	C	47.12%
C(RU)	C	86.68%	D	13.32%
D(RU)	D	100.00%	-	-

Source: ACRA

TABLE 7. STARTING POINT A-

P	P1	B1	P2	B2
AAA(RU)	A-	100.00%	-	-
AA+(RU)	A-	37.75%	BBB+	62.25%
AA(RU)	BBB+	69.33%	BBB	30.67%
AA-(RU)	BBB	95.97%	BBB-	4.03%
A+(RU)	BBB	31.69%	BBB-	68.31%
A(RU)	BBB-	64.18%	BB+	35.82%
A-(RU)	BB+	91.74%	BB	8.26%
BBB+(RU)	BB+	25.52%	BB	74.48%
BBB(RU)	BB	58.86%	BB-	41.14%
BBB-(RU)	BB-	87.31%	B+	12.69%
BB+(RU)	BB-	19.24%	B+	80.76%
BB(RU)	B+	53.40%	B	46.60%
BB-(RU)	B	82.70%	B-	17.30%
B+(RU)	B	12.88%	B-	87.12%
B(RU)	B-	47.79%	CCC	52.21%
B-(RU)	CCC	77.91%	CC	22.09%
CCC(RU)	CCC	6.46%	CC	93.54%
CC(RU)	CC	42.06%	C	57.94%
C(RU)	C	83.83%	D	16.17%
D(RU)	D	100.00%	-	-

Source: ACRA

TABLE 8. STARTING POINT BBB+

P	P1	B1	P2	B2
AAA(RU)	BBB+	100.00%	-	-
AA+(RU)	BBB+	43.30%	BBB	56.70%
AA(RU)	BBB	78.64%	BBB-	21.36%
AA-(RU)	BBB	13.21%	BBB-	86.79%
A+(RU)	BBB-	53.91%	BB+	46.09%
A(RU)	BB+	87.43%	BB	12.57%
A-(RU)	BB+	25.52%	BB	74.48%
BBB+(RU)	BB	63.94%	BB-	36.06%
BBB(RU)	BB-	95.88%	B+	4.12%
BBB-(RU)	BB-	37.05%	B+	62.95%
BB+(RU)	B+	73.48%	B	26.52%
BB(RU)	B+	6.55%	B	93.45%
BB-(RU)	B	47.92%	B-	52.08%
B+(RU)	B-	82.62%	CCC	17.38%
B(RU)	B-	19.01%	CCC	80.99%
B-(RU)	CCC	58.23%	CC	41.77%
CCC(RU)	CC	91.44%	C	8.56%
CC(RU)	CC	30.73%	C	69.27%
C(RU)	C	80.92%	D	19.08%
D(RU)	D	100.00%	-	-

Source: ACRA

TABLE 9. STARTING POINT BBB

P	P1	B1	P2	B2
AAA(RU)	BBB	100.00%	-	-
AA+(RU)	BBB	48.68%	BBB-	51.32%
AA(RU)	BBB-	87.49%	BB+	12.51%
AA-(RU)	BBB-	31.59%	BB+	68.41%
A+(RU)	BB+	73.79%	BB	26.21%
A(RU)	BB+	13.10%	BB	86.90%
A-(RU)	BB	58.86%	BB-	41.14%
BBB+(RU)	BB-	95.88%	B+	4.12%
BBB(RU)	BB-	42.68%	B+	57.32%
BBB-(RU)	B+	82.78%	B	17.22%
BB+(RU)	B+	25.24%	B	74.76%
BB(RU)	B	68.53%	B-	31.47%
BB-(RU)	B	6.52%	B-	93.48%
B+(RU)	B-	53.14%	CCC	46.86%
B(RU)	CCC	91.48%	CC	8.52%
B-(RU)	CCC	36.58%	CC	63.42%
CCC(RU)	CC	77.82%	C	22.18%
CC(RU)	CC	18.86%	C	81.14%
C(RU)	C	77.93%	D	22.07%
D(RU)	D	100.00%	-	-

Source: ACRA

TABLE 10. STARTING POINT BBB-

P	P1	B1	P2	B2
AAA(RU)	BBB-	100.00%	-	-
AA+(RU)	BBB-	53.91%	BB+	46.09%
AA(RU)	BB+	95.92%	BB	4.08%
AA-(RU)	BB+	48.43%	BB	51.57%
A+(RU)	BB	91.69%	BB-	8.31%
A(RU)	BB	42.81%	BB-	57.19%
A-(RU)	BB-	87.31%	B+	12.69%
BBB+(RU)	BB-	37.05%	B+	62.95%
BBB(RU)	B+	82.78%	B	17.22%
BBB-(RU)	B+	31.16%	B	68.84%
BB+(RU)	B	78.10%	B-	21.90%
BB(RU)	B	25.15%	B-	74.85%
BB-(RU)	B-	73.27%	CCC	26.73%
B+(RU)	B-	19.01%	CCC	80.99%
B(RU)	CCC	68.31%	CC	31.69%
B-(RU)	CCC	12.77%	CC	87.23%
CCC(RU)	CC	63.21%	C	36.79%
CC(RU)	CC	6.43%	C	93.57%
C(RU)	C	74.88%	D	25.12%
D(RU)	D	100.00%	-	-

Source: ACRA

TABLE 11. STARTING POINT BB+

P	P1	B1	P2	B2
AAA(RU)	BB+	100.00%	-	-
AA+(RU)	BB+	58.99%	BB	41.01%
AA(RU)	BB+	6.64%	BB	93.36%
AA-(RU)	BB	63.94%	BB-	36.06%
A+(RU)	BB	13.05%	BB-	86.95%
A(RU)	BB-	68.76%	B+	31.24%
A-(RU)	BB-	19.24%	B+	80.76%
BBB+(RU)	B+	73.48%	B	26.52%
BBB(RU)	B+	25.24%	B	74.76%
BBB-(RU)	B	78.10%	B-	21.90%
BB+(RU)	B	31.05%	B-	68.95%
BB(RU)	B-	82.62%	CCC	17.38%
BB-(RU)	B-	36.70%	CCC	63.30%
B+(RU)	CCC	87.07%	CC	12.93%
B(RU)	CCC	42.19%	CC	57.81%
B-(RU)	CC	91.44%	C	8.56%
CCC(RU)	CC	47.53%	C	52.47%
CC(RU)	C	97.46%	D	2.54%
C(RU)	C	71.76%	D	28.24%
D(RU)	D	100.00%	-	-

Source: ACRA

TABLE 12. STARTING POINT BB

P	P1	B1	P2	B2
AAA(RU)	BB	100.00%	-	-
AA+(RU)	BB	63.94%	BB-	36.06%
AA(RU)	BB	19.32%	BB-	80.68%
AA-(RU)	BB-	78.28%	B+	21.72%
A+(RU)	BB-	37.05%	B+	62.95%
A(RU)	B+	91.61%	B	8.39%
A-(RU)	B+	53.40%	B	46.60%
BBB+(RU)	B+	6.55%	B	93.45%
BBB(RU)	B	68.53%	B-	31.47%
BBB-(RU)	B	25.15%	B-	74.85%
BB+(RU)	B-	82.62%	CCC	17.38%
BB(RU)	B-	42.31%	CCC	57.69%
BB-(RU)	CCC	95.79%	CC	4.21%
B+(RU)	CCC	58.23%	CC	41.77%
B(RU)	CCC	12.77%	CC	87.23%
B-(RU)	CC	73.06%	C	26.94%
CCC(RU)	CC	30.73%	C	69.27%
CC(RU)	C	92.19%	D	7.81%
C(RU)	C	68.56%	D	31.44%
D(RU)	D	100.00%	-	-

Source: ACRA

TABLE 13. STARTING POINT BB-

P	P1	B1	P2	B2
AAA(RU)	BB-	100.00%	-	-
AA+(RU)	BB-	68.76%	B+	31.24%
AA(RU)	BB-	31.27%	B+	68.73%
AA-(RU)	B+	91.61%	B	8.39%
A+(RU)	B+	58.61%	B	41.39%
A(RU)	B+	19.17%	B	80.83%
A-(RU)	B	82.70%	B-	17.30%
BBB+(RU)	B	47.92%	B-	52.08%
BBB(RU)	B	6.52%	B-	93.48%
BBB-(RU)	B-	73.27%	CCC	26.73%
BB+(RU)	B-	36.70%	CCC	63.30%
BB(RU)	CCC	95.79%	CC	4.21%
BB-(RU)	CCC	63.33%	CC	36.67%
B+(RU)	CCC	24.96%	CC	75.04%
B(RU)	CC	87.00%	C	13.00%
B-(RU)	CC	52.88%	C	47.12%
CCC(RU)	CC	12.72%	C	87.28%
CC(RU)	C	86.68%	D	13.32%
C(RU)	C	65.29%	D	34.71%
D(RU)	D	100.00%	-	-

Source: ACRA

TABLE 14. STARTING POINT B+

P	P1	B1	P2	B2
AAA(RU)	B+	100.00%	-	-
AA+(RU)	B+	73.48%	B	26.52%
AA(RU)	B+	42.56%	B	57.44%
AA-(RU)	B+	6.55%	B	93.45%
A+(RU)	B	78.10%	B-	21.90%
A(RU)	B	47.92%	B-	52.08%
A-(RU)	B	12.88%	B-	87.12%
BBB+(RU)	B-	82.62%	CCC	17.38%
BBB(RU)	B-	53.14%	CCC	46.86%
BBB-(RU)	B-	19.01%	CCC	80.99%
BB+(RU)	CCC	87.07%	CC	12.93%
BB(RU)	CCC	58.23%	CC	41.77%
BB-(RU)	CCC	24.96%	CC	75.04%
B+(RU)	CC	91.44%	C	8.56%
B(RU)	CC	63.21%	C	36.79%
B-(RU)	CC	30.73%	C	69.27%
CCC(RU)	C	97.46%	D	2.54%
CC(RU)	C	80.92%	D	19.08%
C(RU)	C	61.95%	D	38.05%
D(RU)	D	100.00%	-	-

Source: ACRA

TABLE 15. STARTING POINT B

P	P1	B1	P2	B2
AAA(RU)	B	100.00%	-	-
AA+(RU)	B	78.10%	B-	21.90%
AA(RU)	B	53.27%	B-	46.73%
AA-(RU)	B	25.15%	B-	74.85%
A+(RU)	B-	95.81%	CCC	4.19%
A(RU)	B-	73.27%	CCC	26.73%
A-(RU)	B-	47.79%	CCC	52.21%
BBB+(RU)	B-	19.01%	CCC	80.99%
BBB(RU)	CCC	91.48%	CC	8.52%
BBB-(RU)	CCC	68.31%	CC	31.69%
BB+(RU)	CCC	42.19%	CC	57.81%
BB(RU)	CCC	12.77%	CC	87.23%
BB-(RU)	CC	87.00%	C	13.00%
B+(RU)	CC	63.21%	C	36.79%
B(RU)	CC	36.46%	C	63.54%
B-(RU)	CC	6.43%	C	93.57%
CCC(RU)	C	89.47%	D	10.53%
CC(RU)	C	74.88%	D	25.12%
C(RU)	C	58.53%	D	41.47%
D(RU)	D	100.00%	-	-

Source: ACRA

TABLE 16. STARTING POINT B-

P	P1	B1	P2	B2
AAA(RU)	B-	100.00%	-	-
AA+(RU)	B-	82.62%	CCC	17.38%
AA(RU)	B-	63.45%	CCC	36.55%
AA-(RU)	B-	42.31%	CCC	57.69%
A+(RU)	B-	19.01%	CCC	80.99%
A(RU)	CCC	95.79%	CC	4.21%
A-(RU)	CCC	77.91%	CC	22.09%
BBB+(RU)	CCC	58.23%	CC	41.77%
BBB(RU)	CCC	36.58%	CC	63.42%
BBB-(RU)	CCC	12.77%	CC	87.23%
BB+(RU)	CC	91.44%	C	8.56%
BB(RU)	CC	73.06%	C	26.94%
BB-(RU)	CC	52.88%	C	47.12%
B+(RU)	CC	30.73%	C	69.27%
B(RU)	CC	6.43%	C	93.57%
B-(RU)	C	92.19%	D	7.81%
CCC(RU)	C	80.92%	D	19.08%
CC(RU)	C	68.56%	D	31.44%
C(RU)	C	55.03%	D	44.97%
D(RU)	D	100.00%	-	-

Source: ACRA

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