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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 scale to credit ratings (credit estimates) it assigns under the national 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; non-financial companies, including holding companies and small and medium-sized businesses; insurance companies; leasing companies; microfinance organizations; supranational development institutions; regions and municipalities; sovereign issuers; 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;
- Non-compliance with Federal Law No. 222-FZ dated July 13, 2015, "On 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";
- 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 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 2.

Credit ratings under the national structured finance sector rating scale for the Russian Federation may be assigned based on credit ratings assigned under the international structured finance sector scale using specialized methodologies, in accordance with the standard rating scale comparison tables given in Appendix 2.

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.

# Appendix 1 STANDARD MAPPING TABLES FOR RATING SCALES

TABLE 1. STARTING POINT AA+	
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#### **TABLE 2. STARTING POINT AA**

**TABLE 3. STARTING POINT AA-**

INTERNATIONAL S	SCALE NATIONAL SCALE	INTERNATIONAL SCALE	NATIONAL SCALE	INTERNATIONAL SCALE	NATIONAL SCALE
AAA	AAA(XX)	AAA	AAA(XX)	AAA	AAA(XX)
AA+	AAA(XX), AA+(XX)	AA+	AAA(XX)	AA+	AAA(XX)
AA	AA+(XX), AA(XX)	AA	AAA(XX), AA+(XX)	AA	AAA(XX)
AA-	AA(XX), AA-(XX)	AA-	AA+(XX), AA(XX)	AA-	AAA(XX), AA+(XX)
A+	AA-(XX), A+(XX)	A+	AA(XX), AA-(XX)	A+	AA+(XX), AA(XX)
A	A+(XX), A(XX)	A	AA-(XX), A+(XX)	A	AA(XX), AA-(XX)
A-	A(XX), A-(XX)	A-	A+(XX), A(XX)	A-	AA-(XX), A+(XX)
BBB+	A-(XX), BBB+(XX)	BBB+	A(XX), A-(XX)	BBB+	A+(XX), A(XX)
BBB	BBB+(XX), BBB(XX)	BBB	A-(XX), BBB+(XX)	BBB	A(XX), A-(XX), BBB+(XX)
BBB-	BBB(XX), BBB-(XX)	BBB-	BBB+(XX), BBB(XX)	BBB-	BBB+(XX), BBB(XX)
BB+	BBB-(XX), BB+(XX)	BB+	BBB(XX), BBB-(XX), BB+(XX)	BB+	BBB(XX), BBB-(XX)
ВВ	BB+(XX), BB(XX)	ВВ	BB+(XX), BB(XX)	ВВ	BBB-(XX), BB+(XX)
BB-	BB(XX), BB-(XX)	BB-	BB(XX), BB-(XX)	BB-	BB+(XX), BB(XX)
B+	BB-(XX), B+(XX)	B+	BB-(XX), B+(XX)	B+	BB(XX), BB-(XX)
В	B+(XX), B(XX)	В	B+(XX), B(XX)	В	BB-(XX), B+(XX), B(XX)
B-	B(XX), B-(XX)	B-	B(XX), B-(XX)	B-	B(XX), B-(XX)
CCC	CCC(XX)	CCC	CCC(XX)	CCC	CCC(XX)
СС	CC(XX)	СС	CC(XX)	СС	CC(XX)
С	C(XX)	С	C(XX)	С	C(XX)
RD	RD(XX)	RD	RD(XX)	RD	RD(XX)
SD	SD(XX)	SD	SD(XX)	SD	SD(XX)
D	D(XX)	D	D(XX)	D	D(XX)

#### **TABLE 4. STARTING POINT A+**

**TABLE 5. STARTING POINT A** 

**TABLE 6. STARTING POINT A-**

INTERNATIONAL SCALE	NATIONAL SCALE	INTERNATIONAL SCALE	NATIONAL SCALE	INTERNATIONAL SCALE	NATIONAL SCALE
AAA	AAA(XX)	AAA	AAA(XX)	AAA	AAA(XX)
AA+	AAA(XX)	AA+	AAA(XX)	AA+	AAA(XX)
AA	AAA(XX)	AA	AAA(XX)	AA	AAA(XX)
<b>A</b> A-	AAA(XX)	AA-	AAA(XX)	AA-	AAA(XX)
<b>\</b> +	AAA(XX), AA+(XX)	A+	AAA(XX)	A+	AAA(XX)
4	AA+(XX), AA(XX)	Α	AAA(XX), AA+(XX)	A	AAA(XX)
<b>Α</b> -	AA(XX), AA-(XX)	A-	AA+(XX), AA(XX)	A-	AAA(XX), AA+(XX)
BBB+	AA-(XX), A+(XX)	BBB+	AA(XX), AA-(XX)	BBB+	AA+(XX), AA(XX)
BBB	A+(XX), A(XX), A-(XX)	BBB	AA-(XX), A+(XX), A(XX)	BBB	AA(XX), AA-(XX), A+(XX)
BBB-	A-(XX), BBB+(XX)	BBB-	A(XX), A-(XX)	BBB-	A+(XX), A(XX)
BB+	BBB+(XX), BBB(XX)	BB+	A-(XX), BBB+(XX), BBB(XX)	BB+	A(XX), A-(XX), BBB+(XX)
ВВ	BBB(XX), BBB-(XX), BB+(XX)	ВВ	BBB(XX), BBB-(XX)	BB	BBB+(XX), BBB(XX)
BB-	BB+(XX), BB(XX)	BB-	BBB-(XX), BB+(XX)	BB-	BBB(XX), BBB-(XX), BB+(XX)
B+	BB(XX), BB-(XX)	B+	BB+(XX), BB(XX), BB-(XX)	B+	BB+(XX), BB(XX)
В	BB-(XX), B+(XX)	В	BB-(XX), B+(XX)	B	BB(XX), BB-(XX)
B-	B+(XX), B(XX), B-(XX)	B-	B+(XX), B(XX), B-(XX)	B-	BB-(XX), B+(XX), B(XX)
CCC	CCC(XX)	CCC	CCC(XX)	CCC	B-(XX), CCC(XX)
СС	CC(XX)	СС	CC(XX)	CC	CC(XX)
С	C(XX)	С	C(XX)	C	C(XX)
RD	RD(XX)	RD	RD(XX)	RD	RD(XX)
SD	SD(XX)	SD	SD(XX)	SD	SD(XX)
D	D(XX)	D	D(XX)	D	D(XX)

TABLE 7. STARTING POINT BBB+

**TABLE 8. STARTING POINT BBB** 

**TABLE 9. STARTING POINT BBB-**

ABLE 7. STARTING P	OINT BBB+	TABLE 8. STARTING	POINT BBB
INTERNATIONAL SCALE	NATIONAL SCALE	INTERNATIONAL SCALE	NATIONAL SCALE
AAA	AAA(XX)	AAA	AAA(XX)
AA+	AAA(XX)	AA+	AAA(XX)
AA	AAA(XX)	AA	AAA(XX)
AA-	AAA(XX)	AA-	AAA(XX)
A+	AAA(XX)	A+	AAA(XX)
Α	AAA(XX)	Α	AAA(XX)
A-	AAA(XX)	A-	AAA(XX)
BBB+	AAA(XX), AA+(XX)	BBB+	AAA(XX)
ВВВ	AA+(XX), AA(XX)	BBB	AAA(XX), AA+(XX)
BBB-	AA(XX), AA-(XX), A+(XX)	BBB-	AA+(XX), AA(XX), AA-(XX)
BB+	A+(XX), A(XX), A-(XX)	BB+	AA-(XX), A+(XX)
ВВ	A-(XX), BBB+(XX)	BB	A+(XX), A(XX), A-(XX)
BB-	BBB+(XX), BBB(XX), BBB-(XX)	BB-	A-(XX), BBB+(XX), BBB(XX)
B+	BBB-(XX), BB+(XX)	B+	BBB(XX), BBB-(XX), BB+(XX)
В	BB+(XX), BB(XX), BB-(XX)	В	BB+(XX), BB(XX)
B-	BB-(XX), B+(XX), B(XX)	B-	BB(XX), BB-(XX), B+(XX)
CCC	B(XX), B-(XX), CCC(XX)	CCC	B+(XX), B(XX), B-(XX), CCC(X
СС	CC(XX)	СС	CC(XX)
С	C(XX)	C	C(XX)
RD	RD(XX)	RD	RD(XX)
SD	SD(XX)	SD	SD(XX)
D	D(XX)	D	D(XX)
ource: ACRA		Source: ACRA	

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)
ВВ	AA-(XX), A+(XX), A(XX)
BB-	A(XX), A-(XX), BBB+(XX)
B+	BBB+(XX), BBB(XX), BBB-(XX)
В	BBB-(XX), BB+(XX), BB(XX)
B-	BB(XX), BB-(XX), B+(XX)
ccc	B+(XX), B(XX), B-(XX), CCC(XX)
СС	CC(XX)
С	C(XX)
RD	RD(XX)
SD	SD(XX)
D	D(XX)

#### **TABLE 10. STARTING POINT BB+**

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

#### **TABLE 12. STARTING POINT BB-**

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

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)
В	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)
СС	CC(XX)
С	C(XX)
RD	RD(XX)
SD	SD(XX)
D	D(XX)

## Appendix 2

#### STANDARD MAPPING TABLES FOR STRUCTURED FINANCE RATING SCALES

**TABLE 1. STARTING POINT AA+** 

**TABLE 2. STARTING POINT AA** 

**TABLE 3. STARTING POINT AA-**

INTERNATIONAL SCALE	NATIONAL SCALE	INTERNATIONAL SCALE	NATIONAL SCALE	INTERNATIONAL SCALE	NATIONAL SCALE
AAA.sf	AAA(ru.sf)	AAA.sf	AAA(ru.sf)	AAA.sf	AAA(ru.sf)
AA+.sf	AAA(ru.sf), AA+(ru.sf)	AA+.sf	AAA(ru.sf)	AA+.sf	AAA(ru.sf)
AA.sf	AA+(ru.sf), AA(ru.sf)	AA.sf	AAA(ru.sf), AA+(ru.sf)	AA.sf	AAA(ru.sf)
AAsf	AA(ru.sf), AA-(ru.sf)	AAsf	AA+(ru.sf), AA(ru.sf)	AAsf	AAA(ru.sf), AA+(ru.sf)
A+.sf	AA-(ru.sf), A+(ru.sf)	A+.sf	AA(ru.sf), AA-(ru.sf)	A+.sf	AA+(ru.sf), AA(ru.sf)
A.sf	A+(ru.sf), A(ru.sf)	A.sf	AA-(ru.sf), A+(ru.sf)	A.sf	AA(ru.sf), AA-(ru.sf)
Asf	A(ru.sf), A-(ru.sf)	Asf	A+(ru.sf), A(ru.sf)	Asf	AA-(ru.sf), A+(ru.sf)
BBB+.sf	A-(ru.sf), BBB+(ru.sf)	BBB+.sf	A(ru.sf), A-(ru.sf)	BBB+.sf	A+(ru.sf), A(ru.sf)
BBB.sf	BBB+(ru.sf), BBB(ru.sf)	BBB.sf	A-(ru.sf), BBB+(ru.sf)	BBB.sf	A(ru.sf), A-(ru.sf), BBB+(ru.sf)
BBBsf	BBB(ru.sf), BBB-(ru.sf)	BBBsf	BBB+(ru.sf), BBB(ru.sf)	BBBsf	BBB+(ru.sf), BBB(ru.sf)
BB+.sf	BBB-(ru.sf), BB+(ru.sf)	BB+.sf	BBB(ru.sf), BBB-(ru.sf), BB+(ru.sf)	BB+.sf	BBB(ru.sf), BBB-(ru.sf)
BB.sf	BB+(ru.sf), BB(ru.sf)	BB.sf	BB+(ru.sf), BB(ru.sf)	BB.sf	BBB-(ru.sf), BB+(ru.sf)
BBsf	BB(ru.sf), BB-(ru.sf)	BBsf	BB(ru.sf), BB-(ru.sf)	BBsf	BB+(ru.sf), BB(ru.sf)
B+.sf	BB-(ru.sf), B+(ru.sf)	B+.sf	BB-(ru.sf), B+(ru.sf)	B+.sf	BB(ru.sf), BB-(ru.sf)
B.sf	B+(ru.sf), B(ru.sf)	B.sf	B+(ru.sf), B(ru.sf)	B.sf	BB-(ru.sf), B+(ru.sf), B(ru.sf)
Bsf	B(ru.sf), B-(ru.sf)	Bsf	B(ru.sf), B-(ru.sf)	Bsf	B(ru.sf), B-(ru.sf)
CCC.sf	CCC(ru.sf)	CCC.sf	CCC(ru.sf)	CCC.sf	CCC(ru.sf)
CC.sf	CC(ru.sf)	CC.sf	CC(ru.sf)	CC.sf	CC(ru.sf)
C.sf	C(ru.sf)	C.sf	C(ru.sf)	C.sf	C(ru.sf)
D.sf	D(ru.sf)	D.sf	D(ru.sf)	D.sf	D(ru.sf)
ource: ACRA		Source: ACRA		Source: ACRA	

**TABLE 4. STARTING POINT A+** 

TABLE 5. STARTING POINT A

**TABLE 6. STARTING POINT A-**

INTERNATIONAL SCALE	NATIONAL SCALE	INTERNATIONAL SCALE	NATIONAL SCALE	INTERNATIONAL SCALE	NATIONAL SCALE
AAA.sf	AAA(ru.sf)	AAA.sf	AAA(ru.sf)	AAA.sf	AAA(ru.sf)
AA+.sf	AAA(ru.sf)	AA+.sf	AAA(ru.sf)	AA+.sf	AAA(ru.sf)
AA.sf	AAA(ru.sf)	AA.sf	AAA(ru.sf)	AA.sf	AAA(ru.sf)
AAsf	AAA(ru.sf)	AAsf	AAA(ru.sf)	AAsf	AAA(ru.sf)
A+.sf	AAA(ru.sf), AA+(ru.sf)	A+.sf	AAA(ru.sf)	A+.sf	AAA(ru.sf)
A.sf	AA+(ru.sf), AA(ru.sf)	A.sf	AAA(ru.sf), AA+(ru.sf)	A.sf	AAA(ru.sf)
Asf	AA(ru.sf), AA-(ru.sf)	Asf	AA+(ru.sf), AA(ru.sf)	Asf	AAA(ru.sf), AA+(ru.sf)
BBB+.sf	AA-(ru.sf), A+(ru.sf)	BBB+.sf	AA(ru.sf), AA-(ru.sf)	BBB+.sf	AA+(ru.sf), AA(ru.sf)
BBB.sf	A+(ru.sf), A(ru.sf), A-(ru.sf)	BBB.sf	AA-(ru.sf), A+(ru.sf), A(ru.sf)	BBB.sf	AA(ru.sf), AA-(ru.sf), A+(ru.sf)
BBBsf	A-(ru.sf), BBB+(ru.sf)	BBBsf	A(ru.sf), A-(ru.sf)	BBBsf	A+(ru.sf), A(ru.sf)
3B+.sf	BBB+(ru.sf), BBB(ru.sf)	BB+.sf	A-(ru.sf), BBB+(ru.sf), BBB(ru.sf)	BB+.sf	A(ru.sf), A-(ru.sf), BBB+(ru.sf)
BB.sf	BBB(ru.sf), BBB-(ru.sf), BB+(ru.sf)	BB.sf	BBB(ru.sf), BBB-(ru.sf)	BB.sf	BBB+(ru.sf), BBB(ru.sf)
3Bsf	BB+(ru.sf), BB(ru.sf)	BBsf	BBB-(ru.sf), BB+(ru.sf)	BBsf	BBB(ru.sf), BBB-(ru.sf), BB+(ru.sf)
3+.sf	BB(ru.sf), BB-(ru.sf)	B+.sf	BB+(ru.sf), BB(ru.sf), BB-(ru.sf)	B+.sf	BB+(ru.sf), BB(ru.sf)
3.sf	BB-(ru.sf), B+(ru.sf)	B.sf	BB-(ru.sf), B+(ru.sf)	B.sf	BB(ru.sf), BB-(ru.sf)
3sf	B+(ru.sf), B(ru.sf), B-(ru.sf)	Bsf	B+(ru.sf), B(ru.sf), B-(ru.sf)	Bsf	BB-(ru.sf), B+(ru.sf), B(ru.sf)
CCC.sf	CCC(ru.sf)	CCC.sf	CCC(ru.sf)	CCC.sf	B-(ru.sf), CCC(ru.sf)
CC.sf	CC(ru.sf)	CC.sf	CC(ru.sf)	CC.sf	CC(ru.sf)
C.sf	C(ru.sf)	C.sf	C(ru.sf)	C.sf	C(ru.sf)
D.sf	D(ru.sf)	D.sf	D(ru.sf)	D.sf	D(ru.sf)
urce: ACRA		Source: ACRA		Source: ACRA	

#### **TABLE 7. STARTING POINT BBB+**

#### **TABLE 8. STARTING POINT BBB**

**TABLE 9. STARTING POINT BBB-**

INTERNATIONAL SCALE	NATIONAL SCALE
AAA.sf	AAA(ru.sf)
AA+.sf	AAA(ru.sf)
AA.sf	AAA(ru.sf)
AAsf	AAA(ru.sf)
A+.sf	AAA(ru.sf)
A.sf	AAA(ru.sf)
Asf	AAA(ru.sf)
BBB+.sf	AAA(ru.sf), AA+(ru.sf)
BBB.sf	AA+(ru.sf), AA(ru.sf)
BBBsf	AA(ru.sf), AA-(ru.sf), A+(ru.sf)
BB+.sf	A+(ru.sf), A(ru.sf), A-(ru.sf)
BB.sf	A-(ru.sf), BBB+(ru.sf)
BBsf	BBB+(ru.sf), BBB(ru.sf), BBB-(ru.sf)
B+.sf	BBB-(ru.sf), BB+(ru.sf)
B.sf	BB+(ru.sf), BB(ru.sf), BB-(ru.sf)
Bsf	BB-(ru.sf), B+(ru.sf), B(ru.sf)
CCC.sf	B(ru.sf), B-(ru.sf), CCC(ru.sf)
CC.sf	CC(ru.sf)
C.sf	C(ru.sf)
D.sf	D(ru.sf)

INTERNATIONAL SCALE	NATIONAL SCALE
AAA.sf	AAA(ru.sf)
AA+.sf	AAA(ru.sf)
AA.sf	AAA(ru.sf)
AAsf	AAA(ru.sf)
A+.sf	AAA(ru.sf)
A.sf	AAA(ru.sf)
Asf	AAA(ru.sf)
BBB+.sf	AAA(ru.sf)
BBB.sf	AAA(ru.sf), AA+(ru.sf)
BBBsf	AA+(ru.sf), AA(ru.sf), AA-(ru.sf)
BB+.sf	AA-(ru.sf), A+(ru.sf)
BB.sf	A+(ru.sf), A(ru.sf), A-(ru.sf)
BBsf	A-(ru.sf), BBB+(ru.sf), BBB(ru.sf)
B+.sf	BBB(ru.sf), BBB-(ru.sf), BB+(ru.sf)
B.sf	BB+(ru.sf), BB(ru.sf)
Bsf	BB(ru.sf), BB-(ru.sf), B+(ru.sf)
CCC.sf	B+(ru.sf), B(ru.sf), B-(ru.sf), CCC(ru.sf)
CC.sf	CC(ru.sf)
C.sf	C(ru.sf)
D.sf	D(ru.sf)

INTERNATIONAL SCALE	NATIONAL SCALE
AAA.sf	AAA(ru.sf)
AA+.sf	AAA(ru.sf)
AA.sf	AAA(ru.sf)
AAsf	AAA(ru.sf)
A+.sf	AAA(ru.sf)
A.sf	AAA(ru.sf)
Asf	AAA(ru.sf)
BBB+.sf	AAA(ru.sf)
BBB.sf	AAA(ru.sf)
BBBsf	AAA(ru.sf), AA+(ru.sf)
BB+.sf	AA+(ru.sf), AA(ru.sf), AA-(ru.sf)
BB.sf	AA-(ru.sf), A+(ru.sf), A(ru.sf)
BBsf	A(ru.sf), A-(ru.sf), BBB+(ru.sf)
B+.sf	BBB+(ru.sf), BBB(ru.sf), BBB-(ru.sf)
B.sf	BBB-(ru.sf), BB+(ru.sf), BB(ru.sf)
Bsf	BB(ru.sf), BB-(ru.sf), B+(ru.sf)
CCC.sf	B+(ru.sf), B(ru.sf), B-(ru.sf), CCC(ru.sf)
CC.sf	CC(ru.sf)
C.sf	C(ru.sf)
D.sf	D(ru.sf)
Source: ACRA	

#### TABLE 10. STARTING POINT BB+

INTERNATIONAL SCALE	NATIONAL SCALE
AAA.sf	AAA(ru.sf)
AA+.sf	AAA(ru.sf)
AA.sf	AAA(ru.sf)
AAsf	AAA(ru.sf)
A+.sf	AAA(ru.sf)
A.sf	AAA(ru.sf)
Asf	AAA(ru.sf)
BBB+.sf	AAA(ru.sf)
BBB.sf	AAA(ru.sf)
BBBsf	AAA(ru.sf)
BB+.sf	AAA(ru.sf), AA+(ru.sf)
BB.sf	AA+(ru.sf), AA(ru.sf), AA-(ru.sf)
BBsf	AA-(ru.sf), A+(ru.sf)
B+.sf	A(ru.sf), A-(ru.sf), BBB+(ru.sf)
B.sf	BBB+(ru.sf), BBB(ru.sf), BBB-(ru.sf), BB+(ru.sf)
Bsf	BB+(ru.sf), BB(ru.sf), BB-(ru.sf)
CCC.sf	BB-(ru.sf), B+(ru.sf), B(ru.sf), CCC(ru.sf)
CC.sf	CC(ru.sf)
C.sf	C(ru.sf)
D.sf	D(ru.sf)
D.SI	- / /

Source: ACRA

**TABLE 11. STARTING POINT BB** 

AAA(ru.sf)
AAA(ru.sf)
AAA(ru.sf), AA+(ru.sf)
AA+(ru.sf), AA(ru.sf), AA-(ru.sf), A+(ru.sf)
A+(ru.sf), A(ru.sf), A-(ru.sf)
A-(ru.sf), BBB+(ru.sf), BBB(ru.sf)
BBB(ru.sf), BBB-(ru.sf), BB+(ru.sf)
BB(ru.sf), BB-(ru.sf), B+(ru.sf), B-(ru.sf), CCC(ru.sf)
CC(ru.sf)
C(ru.sf)
D(ru.sf)

#### TABLE 12. STARTING POINT BB-

TABLE 13. STARTING POINT B+

INTERNATIONA SCALE	AL NATIONAL SCALE	INTERNATION SCALE	IAL
AAA.sf	AAA(ru.sf)	AAA.sf	AAA(ru.
AA+.sf	AAA(ru.sf)	AA+.sf	AAA(ru.
AA.sf	AAA(ru.sf)	AA.sf	AAA(ru.
AAsf	AAA(ru.sf)	AAsf	AAA(ru.
A+.sf	AAA(ru.sf)	A+.sf	AAA(ru.
A.sf	AAA(ru.sf)	A.sf	AAA(ru.
Asf	AAA(ru.sf)	Asf	AAA(ru.
BBB+.sf	AAA(ru.sf)	BBB+.sf	AAA(ru.
BBB.sf	AAA(ru.sf)	BBB.sf	AAA(ru.
BBBsf	AAA(ru.sf)	BBBsf	AAA(ru.
BB+.sf	AAA(ru.sf)	BB+.sf	AAA(ru.
BB.sf	AAA(ru.sf)	BB.sf	AAA(ru.
BBsf	AAA(ru.sf), AA+(ru.sf), AA(ru.sf)	BBsf	AAA(ru.
B+.sf	AA(ru.sf), AA-(ru.sf), A+(ru.sf)	B+.sf	AAA(ru.
B.sf	A+(ru.sf), A(ru.sf), A-(ru.sf), BBB+(ru.sf)	B.sf	AA(ru.sf
Bsf	BBB+(ru.sf), BBB(ru.sf), BBB-(ru.sf), BB+(ru.sf)	Bsf	A(ru.sf),
CCC.sf	BB+(ru.sf), BB(ru.sf), BB-(ru.sf), B+(ru.sf), B(ru.sf), B-(ru.sf), CCC(ru.sf)	CCC.sf	BBB(ru.s B+(ru.sf
CC.sf	CC(ru.sf)	CC.sf	CC(ru.sf
C.sf	C(ru.sf)	C.sf	C(ru.sf)
D.sf	D(ru.sf)	D.sf	D(ru.sf)
ource: ACRA		Source: ACRA	

INTERNATIONAL SCALE	NATIONAL SCALE
AAA.sf	AAA(ru.sf)
AA+.sf	AAA(ru.sf)
AA.sf	AAA(ru.sf)
AAsf	AAA(ru.sf)
A+.sf	AAA(ru.sf)
A.sf	AAA(ru.sf)
Asf	AAA(ru.sf)
BBB+.sf	AAA(ru.sf)
BBB.sf	AAA(ru.sf)
BBBsf	AAA(ru.sf)
BB+.sf	AAA(ru.sf)
BB.sf	AAA(ru.sf)
BBsf	AAA(ru.sf)
B+.sf	AAA(ru.sf), AA+(ru.sf), AA(ru.sf)
B.sf	AA(ru.sf), AA-(ru.sf), A+(ru.sf), A(ru.sf)
Bsf	A(ru.sf), A-(ru.sf), BBB+(ru.sf), BBB(ru.sf)
CCC.sf	BBB(ru.sf), BBB-(ru.sf), BB+(ru.sf), BB(ru.sf), BB-(ru.sf), B+(ru.sf), B(ru.sf), B-(ru.sf), B-(ru.sf)
CC.sf	CC(ru.sf)
C.sf	C(ru.sf)
D.sf	D(ru.sf)
Source: ACDA	

### **Appendix 3**

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

If the idealized tables for the international scale are disclosed, the calculation of the idealized tables under the national scale for Russian Federation is based on these tables and the credit rating (a credit estimate in the absence of an assigned credit rating) of the Russian Federation under the international scale.

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

- 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: Rating1, Rating2 under the international scale and weights, Weight1 and Weight2.
- For the corresponding expected transaction duration and credit ratings (credit estimates) under the international scale Rating1 and Rating2, the corresponding values of Val1, Val2 of the probability of default (expected losses) are determined based on the idealized table of probabilities of default (expected losses) under the international scale.
- 3. The idealized value Val of the probability of default (expected losses) for credit ratings (credit estimates) under the national scale is determined as the weighted sum of the corresponding values:

#### Val = Val1\*Weight1 + Val2\*Weight2

The values of these weights are provided in Tables 1–4 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.

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#### TABLE 1. WEIGHTS FOR CALCULATING IDEALIZED PROBABILITIES OF DEFAULT UNDER THE NATIONAL SCALE FOR THE RUSSIAN FEDERATION (STARTING POINTS AAA – AA-)

Starting point: AAA credit rating (credit estimate)				)	Starting point: AA+ credit rating (credit estimate)					Starting poin	Starting point: AA- credit rating (credit estimate)							
Rating (nat. scale)	R1	W1	R2	W2	Rating (nat. scale)	R1	W1	R2	W2	Rating (nat. scale)	R1	W1	R2	W2	Rating (nat. scale)	R1	W1 R2	W2
AAA(ru.sf)/AAA(RU)	AAA.sf/AAA	100.00%	-	-	AAA(ru.sf)/AAA(RU)	AA+.sf	100.00%	-	-	AAA(ru.sf)/AAA(RU)	AA.sf/AA	100.00%	=	-	AAA(ru.sf)/AAA(RU)	AAsf/AA-	100.00% -	-
AA+(ru.sf)/AA+(RU)	AA+.sf/AA+	100.00%	-	-	AA+(ru.sf)/AA+(RU)	AA+.sf	6.91%	AA.sf	93.09%	AA+(ru.sf)/AA+(RU)	AA.sf/AA	13.54%	AAsf/AA-	86.46%	AA+(ru.sf)/AA+(RU)	AAsf/AA-	19.93% A+.sf/A+	80.079
AA(ru.sf)/AA(RU)	AA.sf/AA	100.00%	-	-	AA(ru.sf)/AA(RU)	AA.sf	13.54%	AAsf	86.46%	AA(ru.sf)/AA(RU)	AAsf/AA-	26.17%	A+.sf/A+	73.83%	AA(ru.sf)/AA(RU)	A+.sf/A+	37.98% A.sf/A	62.029
AA-(ru.sf)/AA-(RU)	AAsf/AA-	100.00%	-	-	AA-(ru.sf)/AA-(RU)	AAsf	19.93%	A+.sf	80.07%	AA-(ru.sf)/AA-(RU)	A+.sf/A+	37.98%	A.sf/A	62.02%	AA-(ru.sf)/AA-(RU)	A.sf/A	54.42% Asf/A-	45.589
A+(ru.sf)/A+(RU)	A+.sf/A+	100.00%	-	-	A+(ru.sf)/A+(RU)	A+.sf	26.08%	A.sf	73.92%	A+(ru.sf)/A+(RU)	A.sf/A	49.06%	Asf/A-	50.94%	A+(ru.sf)/A+(RU)	Asf/A-	69.44% BBB+.sf/BB	30.569
A(ru.sf)/A(RU)	A.sf/A	100.00%	-	-	A(ru.sf)/A(RU)	A.sf	32.01%	Asf	67.99%	A(ru.sf)/A(RU)	Asf/A-	59.49%	BBB+.sf/BBB+	40.51%	A(ru.sf)/A(RU)	BBB+.sf/BBB+	83.23% BBB.sf/BBB	16.779
A-(ru.sf)/A-(RU)	Asf/A-	100.00%	-	-	A-(ru.sf)/A-(RU)	Asf	37.75%	BBB+.sf	62.25%	A-(ru.sf)/A-(RU)	BBB+.sf/BBB+	69.33%	BBB.sf/BBB	30.67%	A-(ru.sf)/A-(RU)	BBB.sf/BBB	95.97% BBBsf/BBI	- 4.039
BBB+(ru.sf)/BBB+(RU)	BBB+.sf/BBB+	100.00%	-	-	BBB+(ru.sf)/BBB+(RU)	BBB+.sf	43.30%	BBB.sf	56.70%	BBB+(ru.sf)/BBB+(RU)	BBB.sf/BBB	78.64%	BBBsf/BBB-	21.36%	BBB+(ru.sf)/BBB+(RU)	BBB.sf/BBB	13.21% BBBsf/BBI	- 86.799
BBB(ru.sf)/BBB(RU)	BBB.sf/BBB	100.00%	-	-	BBB(ru.sf)/BBB(RU)	BBB.sf	48.68%	BBBsf	51.32%	BBB(ru.sf)/BBB(RU)	BBBsf/BBB-	87.49%	BB+.sf/BB+	12.51%	BBB(ru.sf)/BBB(RU)	BBBsf/BBB-	31.59% BB+.sf/BB+	68.419
BBB-(ru.sf)/BBB-(RU)	BBBsf/BBB-	100.00%	-	-	BBB-(ru.sf)/BBB-(RU)	BBBsf	53.91%	BB+.sf	46.09%	BBB-(ru.sf)/BBB-(RU)	BB+.sf/BB+	95.92%	BB.sf/BB	4.08%	BBB-(ru.sf)/BBB-(RU)	BB+.sf/BB+	48.43% BB.sf/BB	51.579
BB+(ru.sf)/BB+(RU)	BB+.sf/BB+	100.00%	-	-	BB+(ru.sf)/BB+(RU)	BB+.sf	58.99%	BB.sf	41.01%	BB+(ru.sf)/BB+(RU)	BB+.sf/BB+	6.64%	BB.sf/BB	93.36%	BB+(ru.sf)/BB+(RU)	BB.sf/BB	63.94% BBsf/BB-	36.069
BB(ru.sf)/BB(RU)	BB.sf/BB	100.00%	-	-	BB(ru.sf)/BB(RU)	BB.sf	63.94%	BBsf	36.06%	BB(ru.sf)/BB(RU)	BB.sf/BB	19.32%	BBsf/BB-	80.68%	BB(ru.sf)/BB(RU)	BBsf/BB-	78.28% B+.sf/B+	21.729
BB-(ru.sf)/BB-(RU)	BBsf/BB-	100.00%	-	-	BB-(ru.sf)/BB-(RU)	BBsf	68.76%	B+.sf	31.24%	BB-(ru.sf)/BB-(RU)	BBsf/BB-	31.27%	B+.sf/B+	68.73%	BB-(ru.sf)/BB-(RU)	B+.sf/B+	91.61% B.sf/B	8.399
B+(ru.sf)/B+(RU)	B+.sf/B+	100.00%	-	-	B+(ru.sf)/B+(RU)	B+.sf	73.48%	B.sf	26.52%	B+(ru.sf)/B+(RU)	B+.sf/B+	42.56%	B.sf/B	57.44%	B+(ru.sf)/B+(RU)	B+.sf/B+	6.55% B.sf/B	93.459
B(ru.sf)/B(RU)	B.sf/B	100.00%	-	-	B(ru.sf)/B(RU)	B.sf	78.10%	Bsf	21.90%	B(ru.sf)/B(RU)	B.sf/B	53.27%	Bsf/B-	46.73%	B(ru.sf)/B(RU)	B.sf/B	25.15% Bsf/B-	74.859
B-(ru.sf)/B-(RU)	Bsf/B-	100.00%	-	-	B-(ru.sf)/B-(RU)	Bsf	82.62%	CCC.sf	17.38%	B-(ru.sf)/B-(RU)	Bsf/B-	63.45%	CCC.sf/CCC	36.55%	B-(ru.sf)/B-(RU)	Bsf/B-	42.31% CCC.sf/CC0	57.69%
CCC(ru.sf)/CCC(RU)	CCC.sf/CCC	100.00%	-	-	CCC(ru.sf)/CCC(RU)	CCC.sf	87.07%	CC.sf	12.93%	CCC(ru.sf)/CCC(RU)	CCC.sf/CCC	73.17%	CC.sf/CC	26.83%	CCC(ru.sf)/CCC(RU)	CCC.sf/CCC	58.23% CC.sf/CC	41.779
CC(ru.sf)/CC(RU)	CC.sf/CC	100.00%	-	-	CC(ru.sf)/CC(RU)	CC.sf	91.44%	C.sf	8.56%	CC(ru.sf)/CC(RU)	CC.sf/CC	82.46%	C.sf/C	17.54%	CC(ru.sf)/CC(RU)	CC.sf/CC	73.06% C.sf/C	26.949
C(ru.sf)/C(RU)	C.sf/C	100.00%	-	-	C(ru.sf)/C(RU)	C.sf	97.46%	D.sf	2.54%	C(ru.sf)/C(RU)	C.sf/C	94.86%	D.sf/D	5.14%	C(ru.sf)/C(RU)	C.sf/C	92.19% D.sf/D	7.819
D(ru.sf)/D(RU)	D.sf/D	100.00%	-	-	D(ru.sf)/D(RU)	D.sf	100.00%	-	-	D(ru.sf)/D(RU)	D.sf/D	100.00%	-	-	D(ru.sf)/D(RU)	D.sf/D	100.00% -	-

Source: ACRA

TABLE 2. WEIGHTS FOR CALCULATING IDEALIZED PROBABILITIES OF DEFAULT UNDER THE NATIONAL SCALE FOR THE RUSSIAN FEDERATION (STARTING POINTS A+ - BBB+)

Starting point: A+ credit rating (credit estimate)					Starting poir	Starting point: A credit rating (credit estimate)					Starting point: A- credit rating (credit estimate)				Starting point: BBB+ credit rating (credit estimate)				
Rating (nat. scale)	R1	W1	R2	W2	Rating (nat. scale)	R1	W1	R2	W2	Rating (nat. scale)	R1	W1	R2	W2	Rating (nat. scale)	R1	W1	R2	W2
AAA(ru.sf)/AAA(RU)	A+.sf/A+	100.00%	-	-	AAA(ru.sf)/AAA(RU)	A.sf/A	100.00% -		-	AAA(ru.sf)/AAA(RU)	Asf/A-	100.00%	-	-	AAA(ru.sf)/AAA(RU)	BBB+.sf/BBB+	100.00%	-	-
AA+(ru.sf)/AA+(RU)	A+.sf/A+	26.08%	A.sf/A	73.92%	AA+(ru.sf)/AA+(RU)	A.sf/A	32.01% A	sf/A-	67.99%	AA+(ru.sf)/AA+(RU)	Asf/A-	37.75%	BBB+.sf/BBB+	62.25%	AA+(ru.sf)/AA+(RU)	BBB+.sf/BBB+	43.30%	BBB.sf/BBB	56.70%
AA(ru.sf)/AA(RU)	A.sf/A	49.06%	Asf/A-	50.94%	AA(ru.sf)/AA(RU)	Asf/A-	59.49% BI	BB+.sf/BBB+	40.51%	AA(ru.sf)/AA(RU)	BBB+.sf/BBB+	69.33%	BBB.sf/BBB	30.67%	AA(ru.sf)/AA(RU)	BBB.sf/BBB	78.64%	BBBsf/BBB-	21.36%
AA-(ru.sf)/AA-(RU)	Asf/A-	69.44%	BBB+.sf/BBB+	30.56%	AA-(ru.sf)/AA-(RU)	BBB+.sf/BBB+	83.23% BI	BB.sf/BBB	16.77%	AA-(ru.sf)/AA-(RU)	BBB.sf/BBB	95.97%	BBBsf/BBB-	4.03%	AA-(ru.sf)/AA-(RU)	BBB.sf/BBB	13.21%	BBBsf/BBB-	86.79%
A+(ru.sf)/A+(RU)	BBB+.sf/BBB+	87.61%	BBB.sf/BBB	12.39%	A+(ru.sf)/A+(RU)	BBB+.sf/BBB+	6.73% BI	BB.sf/BBB	93.27%	A+(ru.sf)/A+(RU)	BBB.sf/BBB	31.69%	BBBsf/BBB-	68.31%	A+(ru.sf)/A+(RU)	BBBsf/BBB-	53.91%	BB+.sf/BB+	46.09%
A(ru.sf)/A(RU)	BBB+.sf/BBB+	6.73%	BBB.sf/BBB	93.27%	A(ru.sf)/A(RU)	BBB.sf/BBB	37.52% BI	BBsf/BBB-	62.48%	A(ru.sf)/A(RU)	BBBsf/BBB-	64.18%	BB+.sf/BB+	35.82%	A(ru.sf)/A(RU)	BB+.sf/BB+	87.43%	BB.sf/BB	12.57%
A-(ru.sf)/A-(RU)	BBB.sf/BBB	31.69%	BBBsf/BBB-	68.31%	A-(ru.sf)/A-(RU)	BBBsf/BBB-	64.18% BI	3+.sf/BB+	35.82%	A-(ru.sf)/A-(RU)	BB+.sf/BB+	91.74%	BB.sf/BB	8.26%	A-(ru.sf)/A-(RU)	BB+.sf/BB+	25.52%	BB.sf/BB	74.48%
BBB+(ru.sf)/BBB+(RU)	BBBsf/BBB-	53.91%	BB+.sf/BB+	46.09%	BBB+(ru.sf)/BBB+(RU)	BB+.sf/BB+	87.43% BI	3.sf/BB	12.57%	BBB+(ru.sf)/BBB+(RU)	BB+.sf/BB+	25.52%	BB.sf/BB	74.48%	BBB+(ru.sf)/BBB+(RU)	BB.sf/BB	63.94%	BBsf/BB-	36.06%
BBB(ru.sf)/BBB(RU)	BB+.sf/BB+	73.79%	BB.sf/BB	26.21%	BBB(ru.sf)/BBB(RU)	BB+.sf/BB+	13.10% BI	3.sf/BB	86.90%	BBB(ru.sf)/BBB(RU)	BB.sf/BB	58.86%	BBsf/BB-	41.14%	BBB(ru.sf)/BBB(RU)	BBsf/BB-	95.88%	B+.sf/B+	4.12%
BBB-(ru.sf)/BBB-(RU)	BB.sf/BB	91.69%	BBsf/BB-	8.31%	BBB-(ru.sf)/BBB-(RU)	BB.sf/BB	42.81% BI	Bsf/BB-	57.19%	BBB-(ru.sf)/BBB-(RU)	BBsf/BB-	87.31%	B+.sf/B+	12.69%	BBB-(ru.sf)/BBB-(RU)	BBsf/BB-	37.05%	B+.sf/B+	62.95%
BB+(ru.sf)/BB+(RU)	BB.sf/BB	13.05%	BBsf/BB-	86.95%	BB+(ru.sf)/BB+(RU)	BBsf/BB-	68.76% B	+.sf/B+	31.24%	BB+(ru.sf)/BB+(RU)	BBsf/BB-	19.24%	B+.sf/B+	80.76%	BB+(ru.sf)/BB+(RU)	B+.sf/B+	73.48%	B.sf/B	26.52%
BB(ru.sf)/BB(RU)	BBsf/BB-	37.05%	B+.sf/B+	62.95%	BB(ru.sf)/BB(RU)	B+.sf/B+	91.61% B.	sf/B	8.39%	BB(ru.sf)/BB(RU)	B+.sf/B+	53.40%	B.sf/B	46.60%	BB(ru.sf)/BB(RU)	B+.sf/B+	6.55%	B.sf/B	93.45%
BB-(ru.sf)/BB-(RU)	B+.sf/B+	58.61%	B.sf/B	41.39%	BB-(ru.sf)/BB-(RU)	B+.sf/B+	19.17% B.	sf/B	80.83%	BB-(ru.sf)/BB-(RU)	B.sf/B	82.70%	Bsf/B-	17.30%	BB-(ru.sf)/BB-(RU)	B.sf/B	47.92%	Bsf/B-	52.08%
B+(ru.sf)/B+(RU)	B.sf/B	78.10%	Bsf/B-	21.90%	B+(ru.sf)/B+(RU)	B.sf/B	47.92% B-	.sf/B-	52.08%	B+(ru.sf)/B+(RU)	B.sf/B	12.88%	Bsf/B-	87.12%	B+(ru.sf)/B+(RU)	Bsf/B-	82.62%	CCC.sf/CCC	17.38%
B(ru.sf)/B(RU)	Bsf/B-	95.81%	CCC.sf/CCC	4.19%	B(ru.sf)/B(RU)	Bsf/B-	73.27% C	CC.sf/CCC	26.73%	B(ru.sf)/B(RU)	Bsf/B-	47.79%	CCC.sf/CCC	52.21%	B(ru.sf)/B(RU)	Bsf/B-	19.01%	CCC.sf/CCC	80.99%
B-(ru.sf)/B-(RU)	Bsf/B-	19.01%	CCC.sf/CCC	80.99%	B-(ru.sf)/B-(RU)	CCC.sf/CCC	95.79% C	C.sf/CC	4.21%	B-(ru.sf)/B-(RU)	CCC.sf/CCC	77.91%	CC.sf/CC	22.09%	B-(ru.sf)/B-(RU)	CCC.sf/CCC	58.23%	CC.sf/CC	41.77%
CCC(ru.sf)/CCC(RU)	CCC.sf/CCC	42.19%	CC.sf/CC	57.81%	CCC(ru.sf)/CCC(RU)	CCC.sf/CCC	24.96% C	C.sf/CC	75.04%	CCC(ru.sf)/CCC(RU)	CCC.sf/CCC	6.46%	CC.sf/CC	93.54%	CCC(ru.sf)/CCC(RU)	CC.sf/CC	91.44%	C.sf/C	8.56%
CC(ru.sf)/CC(RU)	CC.sf/CC	63.21%	C.sf/C	36.79%	CC(ru.sf)/CC(RU)	CC.sf/CC	52.88% C.	sf/C	47.12%	CC(ru.sf)/CC(RU)	CC.sf/CC	42.06%	C.sf/C	57.94%	CC(ru.sf)/CC(RU)	CC.sf/CC	30.73%	C.sf/C	69.27%
C(ru.sf)/C(RU)	C.sf/C	89.47%	D.sf/D	10.53%	C(ru.sf)/C(RU)	C.sf/C	86.68% D	.sf/D	13.32%	C(ru.sf)/C(RU)	C.sf/C	83.83%	D.sf/D	16.17%	C(ru.sf)/C(RU)	C.sf/C	80.92%	D.sf/D	19.08%
D(ru.sf)/D(RU)	D.sf/D	100.00%	-	-	D(ru.sf)/D(RU)	D.sf/D	100.00% -		-	D(ru.sf)/D(RU)	D.sf/D	100.00%	-	-	D(ru.sf)/D(RU)	D.sf/D	100.00%	-	-

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#### TABLE 3. WEIGHTS FOR CALCULATING IDEALIZED PROBABILITIES OF DEFAULT UNDER THE NATIONAL SCALE FOR THE RUSSIAN FEDERATION (STARTING POINTS BBB – BB)

Starting point: I	BBB credit rat	ting (credit o	estimate)		Starting point: E	Starting point: BB+ credit rating (credit estimate)				Starting point: BB credit rating (credit estimate)								
Rating (nat. scale)	R1	W1	R2	W2	Rating (nat. scale)	R1	W1	R2	W2	Rating (nat. scale)	R1	W1	R2	W2	Rating (nat. scale)	R1	W1 R2	W2
AAA(ru.sf)/AAA(RU)	BBB.sf/BBB	100.00% -		-	AAA(ru.sf)/AAA(RU)	BBBsf/BBB-	100.00%	-	-	AAA(ru.sf)/AAA(RU)	BB+.sf/BB+	100.00% -		-	AAA(ru.sf)/AAA(RU)	BB.sf/BB	100.00% -	-
AA+(ru.sf)/AA+(RU)	BBB.sf/BBB	48.68% BB	Bsf/BBB-	51.32%	AA+(ru.sf)/AA+(RU)	BBBsf/BBB-	53.91%	BB+.sf/BB+	46.09%	AA+(ru.sf)/AA+(RU)	BB+.sf/BB+	58.99% E	BB.sf/BB	41.01%	AA+(ru.sf)/AA+(RU)	BB.sf/BB	63.94% BBsf/BB-	36.06%
AA(ru.sf)/AA(RU)	BBBsf/BBB-	87.49% BB	3+.sf/BB+	12.51%	AA(ru.sf)/AA(RU)	BB+.sf/BB+	95.92%	BB.sf/BB	4.08%	AA(ru.sf)/AA(RU)	BB+.sf/BB+	6.64% E	BB.sf/BB	93.36%	AA(ru.sf)/AA(RU)	BB.sf/BB	19.32% BBsf/BB-	80.68%
AA-(ru.sf)/AA-(RU)	BBBsf/BBB-	31.59% BB	+.sf/BB+	68.41%	AA-(ru.sf)/AA-(RU)	BB+.sf/BB+	48.43%	BB.sf/BB	51.57%	AA-(ru.sf)/AA-(RU)	BB.sf/BB	63.94% E	Bsf/BB-	36.06%	AA-(ru.sf)/AA-(RU)	BBsf/BB-	78.28% B+.sf/B+	21.72%
A+(ru.sf)/A+(RU)	BB+.sf/BB+	73.79% BB	3.sf/BB	26.21%	A+(ru.sf)/A+(RU)	BB.sf/BB	91.69%	BBsf/BB-	8.31%	A+(ru.sf)/A+(RU)	BB.sf/BB	13.05% E	BBsf/BB-	86.95%	A+(ru.sf)/A+(RU)	BBsf/BB-	37.05% B+.sf/B+	62.95%
A(ru.sf)/A(RU)	BB+.sf/BB+	13.10% BB	3.sf/BB	86.90%	A(ru.sf)/A(RU)	BB.sf/BB	42.81%	BBsf/BB-	57.19%	A(ru.sf)/A(RU)	BBsf/BB-	68.76% E	8+.sf/B+	31.24%	A(ru.sf)/A(RU)	B+.sf/B+	91.61% B.sf/B	8.39%
A-(ru.sf)/A-(RU)	BB.sf/BB	58.86% BB	3sf/BB-	41.14%	A-(ru.sf)/A-(RU)	BBsf/BB-	87.31%	B+.sf/B+	12.69%	A-(ru.sf)/A-(RU)	BBsf/BB-	19.24% E	8+.sf/B+	80.76%	A-(ru.sf)/A-(RU)	B+.sf/B+	53.40% B.sf/B	46.60%
BBB+(ru.sf)/BBB+(RU)	BBsf/BB-	95.88% B+	sf/B+	4.12%	BBB+(ru.sf)/BBB+(RU)	BBsf/BB-	37.05%	B+.sf/B+	62.95%	BBB+(ru.sf)/BBB+(RU)	B+.sf/B+	73.48% E	3.sf/B	26.52%	BBB+(ru.sf)/BBB+(RU)	B+.sf/B+	6.55% B.sf/B	93.45%
BBB(ru.sf)/BBB(RU)	BBsf/BB-	42.68% B+	sf/B+	57.32%	BBB(ru.sf)/BBB(RU)	B+.sf/B+	82.78%	B.sf/B	17.22%	BBB(ru.sf)/BBB(RU)	B+.sf/B+	25.24% E	3.sf/B	74.76%	BBB(ru.sf)/BBB(RU)	B.sf/B	68.53% Bsf/B-	31.47%
BBB-(ru.sf)/BBB-(RU)	B+.sf/B+	82.78% B.s	sf/B	17.22%	BBB-(ru.sf)/BBB-(RU)	B+.sf/B+	31.16%	B.sf/B	68.84%	BBB-(ru.sf)/BBB-(RU)	B.sf/B	78.10% E	8sf/B-	21.90%	BBB-(ru.sf)/BBB-(RU)	B.sf/B	25.15% Bsf/B-	74.85%
BB+(ru.sf)/BB+(RU)	B+.sf/B+	25.24% B.s	sf/B	74.76%	BB+(ru.sf)/BB+(RU)	B.sf/B	78.10%	Bsf/B-	21.90%	BB+(ru.sf)/BB+(RU)	B.sf/B	31.05% E	3sf/B-	68.95%	BB+(ru.sf)/BB+(RU)	Bsf/B-	82.62% CCC.sf/CCC	17.38%
BB(ru.sf)/BB(RU)	B.sf/B	68.53% B-	.sf/B-	31.47%	BB(ru.sf)/BB(RU)	B.sf/B	25.15%	Bsf/B-	74.85%	BB(ru.sf)/BB(RU)	Bsf/B-	82.62%	CC.sf/CCC	17.38%	BB(ru.sf)/BB(RU)	Bsf/B-	42.31% CCC.sf/CCC	57.69%
BB-(ru.sf)/BB-(RU)	B.sf/B	6.52% B-	.sf/B-	93.48%	BB-(ru.sf)/BB-(RU)	Bsf/B-	73.27%	CCC.sf/CCC	26.73%	BB-(ru.sf)/BB-(RU)	Bsf/B-	36.70%	CCC.sf/CCC	63.30%	BB-(ru.sf)/BB-(RU)	CCC.sf/CCC	95.79% CC.sf/CC	4.21%
B+(ru.sf)/B+(RU)	Bsf/B-	53.14% CC	CC.sf/CCC	46.86%	B+(ru.sf)/B+(RU)	Bsf/B-	19.01%	CCC.sf/CCC	80.99%	B+(ru.sf)/B+(RU)	CCC.sf/CCC	87.07%	CC.sf/CC	12.93%	B+(ru.sf)/B+(RU)	CCC.sf/CCC	58.23% CC.sf/CC	41.77%
B(ru.sf)/B(RU)	CCC.sf/CCC	91.48% CC	C.sf/CC	8.52%	B(ru.sf)/B(RU)	CCC.sf/CCC	68.31%	CC.sf/CC	31.69%	B(ru.sf)/B(RU)	CCC.sf/CCC	42.19%	CC.sf/CC	57.81%	B(ru.sf)/B(RU)	CCC.sf/CCC	12.77% CC.sf/CC	87.23%
B-(ru.sf)/B-(RU)	CCC.sf/CCC	36.58% CC	C.sf/CC	63.42%	B-(ru.sf)/B-(RU)	CCC.sf/CCC	12.77%	CC.sf/CC	87.23%	B-(ru.sf)/B-(RU)	CC.sf/CC	91.44%	C.sf/C	8.56%	B-(ru.sf)/B-(RU)	CC.sf/CC	73.06% C.sf/C	26.94%
CCC(ru.sf)/CCC(RU)	CC.sf/CC	77.82% C.s	sf/C	22.18%	CCC(ru.sf)/CCC(RU)	CC.sf/CC	63.21%	C.sf/C	36.79%	CCC(ru.sf)/CCC(RU)	CC.sf/CC	47.53%	C.sf/C	52.47%	CCC(ru.sf)/CCC(RU)	CC.sf/CC	30.73% C.sf/C	69.27%
CC(ru.sf)/CC(RU)	CC.sf/CC	18.86% C.s	sf/C	81.14%	CC(ru.sf)/CC(RU)	CC.sf/CC	6.43%	C.sf/C	93.57%	CC(ru.sf)/CC(RU)	C.sf/C	97.46%	D.sf/D	2.54%	CC(ru.sf)/CC(RU)	C.sf/C	92.19% D.sf/D	7.81%
C(ru.sf)/C(RU)	C.sf/C	77.93% D.	sf/D	22.07%	C(ru.sf)/C(RU)	C.sf/C	74.88%	D.sf/D	25.12%	C(ru.sf)/C(RU)	C.sf/C	71.76%	D.sf/D	28.24%	C(ru.sf)/C(RU)	C.sf/C	68.56% D.sf/D	31.44%
D(ru.sf)/D(RU)	D.sf/D	100.00% -		-	D(ru.sf)/D(RU)	D.sf/D	100.00%	-	-	D(ru.sf)/D(RU)	D.sf/D	100.00% -		-	D(ru.sf)/D(RU)	D.sf/D	100.00% -	-

Source: ACRA

TABLE 4. WEIGHTS FOR CALCULATING IDEALIZED PROBABILITIES OF DEFAULT UNDER THE NATIONAL SCALE FOR THE RUSSIAN FEDERATION (STARTING POINTS BB- – B+)

Starting point: B	B- credit rat	ing (cred	it estimate)	Starting point: B+ credit rating (credit estimate)						
Rating (nat. scale)	R1	W1	R2	W2	Rating (nat. scale)	R1	W1	R2	W2	
AAA(ru.sf)/AAA(RU)	BBsf/BB-	100.00%	-	-	AAA(ru.sf)/AAA(RU)	B+.sf/B+	100.00%	-	-	
AA+(ru.sf)/AA+(RU)	BBsf/BB-	68.76%	B+.sf/B+	31.24%	AA+(ru.sf)/AA+(RU)	B+.sf/B+	73.48%	B.sf/B	26.52%	
AA(ru.sf)/AA(RU)	BBsf/BB-	31.27%	B+.sf/B+	68.73%	AA(ru.sf)/AA(RU)	B+.sf/B+	42.56%	B.sf/B	57.44%	
AA-(ru.sf)/AA-(RU)	B+.sf/B+	91.61%	B.sf/B	8.39%	AA-(ru.sf)/AA-(RU)	B+.sf/B+	6.55%	B.sf/B	93.45%	
A+(ru.sf)/A+(RU)	B+.sf/B+	58.61%	B.sf/B	41.39%	A+(ru.sf)/A+(RU)	B.sf/B	78.10%	Bsf/B-	21.90%	
A(ru.sf)/A(RU)	B+.sf/B+	19.17%	B.sf/B	80.83%	A(ru.sf)/A(RU)	B.sf/B	47.92%	Bsf/B-	52.08%	
A-(ru.sf)/A-(RU)	B.sf/B	82.70%	Bsf/B-	17.30%	A-(ru.sf)/A-(RU)	B.sf/B	12.88%	Bsf/B-	87.12%	
BBB+(ru.sf)/BBB+(RU)	B.sf/B	47.92%	Bsf/B-	52.08%	BBB+(ru.sf)/BBB+(RU)	Bsf/B-	82.62%	CCC.sf/CCC	17.38%	
BBB(ru.sf)/BBB(RU)	B.sf/B	6.52%	Bsf/B-	93.48%	BBB(ru.sf)/BBB(RU)	Bsf/B-	53.14%	CCC.sf/CCC	46.86%	
BBB-(ru.sf)/BBB-(RU)	Bsf/B-	73.27%	CCC.sf/CCC	26.73%	BBB-(ru.sf)/BBB-(RU)	Bsf/B-	19.01%	CCC.sf/CCC	80.99%	
BB+(ru.sf)/BB+(RU)	Bsf/B-	36.70%	CCC.sf/CCC	63.30%	BB+(ru.sf)/BB+(RU)	CCC.sf/CCC	87.07%	CC.sf/CC	12.93%	
BB(ru.sf)/BB(RU)	CCC.sf/CCC	95.79%	CC.sf/CC	4.21%	BB(ru.sf)/BB(RU)	CCC.sf/CCC	58.23%	CC.sf/CC	41.77%	
BB-(ru.sf)/BB-(RU)	CCC.sf/CCC	63.33%	CC.sf/CC	36.67%	BB-(ru.sf)/BB-(RU)	CCC.sf/CCC	24.96%	CC.sf/CC	75.04%	
B+(ru.sf)/B+(RU)	CCC.sf/CCC	24.96%	CC.sf/CC	75.04%	B+(ru.sf)/B+(RU)	CC.sf/CC	91.44%	C.sf/C	8.56%	
B(ru.sf)/B(RU)	CC.sf/CC	87.00%	C.sf/C	13.00%	B(ru.sf)/B(RU)	CC.sf/CC	63.21%	C.sf/C	36.79%	
B-(ru.sf)/B-(RU)	CC.sf/CC	52.88%	C.sf/C	47.12%	B-(ru.sf)/B-(RU)	CC.sf/CC	30.73%	C.sf/C	69.27%	
CCC(ru.sf)/CCC(RU)	CC.sf/CC	12.72%	C.sf/C	87.28%	CCC(ru.sf)/CCC(RU)	C.sf/C	97.46%	D.sf/D	2.54%	
CC(ru.sf)/CC(RU)	C.sf/C	86.68%	D.sf/D	13.32%	CC(ru.sf)/CC(RU)	C.sf/C	80.92%	D.sf/D	19.08%	
C(ru.sf)/C(RU)	C.sf/C	65.29%	D.sf/D	34.71%	C(ru.sf)/C(RU)	C.sf/C	61.95%	D.sf/D	38.05%	
D(ru.sf)/D(RU)	D.sf/D	100.00%	-	-	D(ru.sf)/D(RU)	D.sf/D	100.00%	-	-	

### METHODOLOGY FOR MAPPING CREDIT RATINGS ASSIGNED UNDER ACRA'S INTERNATIONAL SCALE TO CREDIT RATINGS ASSIGNED UNDER ACRA'S NATIONALS

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