ACRA

Methodology for Credit Ratings Assignment to Repackaging Transactions

February 1, 2021

Contents

1 Scope of the Methodology

The Methodology for Assigning Credit Ratings to Repackaging Transactions (hereinafter, the Methodology) of the Analytical Credit Rating Agency (Joint-Stock Company) (hereinafter, ACRA, or the Agency) determines ACRA's approach to assigning credit ratings to the respective types of financial liabilities.

ACRA defines repackaging transactions (hereinafter, Repacks, or rated instruments) as a specific range of asset-backed securities (including non-synthetic Structured Notes; Structured Notes are defined by Federal Law No. 39-FZ, dated April 22, 1996, "On the Securities Market" and Federal Law No. 75-FZ, dated April 18, 2018, "On changes to the Federal Law on the Securities Market with regard to the regulation of Structured Notes") that aim to replicate the credit quality of a single debt instrument. A Repack is typically issued by a special purpose vehicle (hereinafter, an SPV, or an issuer) created for that particular purpose to purchase debt instruments (hereinafter, the Underlying Asset) where cash flows from the Underlying Asset are used to repay debt and interest on the Rated Instrument.

This Methodology is used to assign credit ratings to rated instruments with the following specific features[1]:

- Issuance by an SPV created solely for repackaging purposes;
- Single Underlying Asset;
- True sale of an Underlying Asset, i.e. an SPV becomes the owner of an Underlying Asset;
- Single tranche for liability without subordination.

Rated instruments may also have the following features:

- Embedded derivatives that reference market variables;
- Guarantees provided by an originator.

The Agency does not apply this Methodology to the following types of rated instruments:

- Having an Underlying Asset in the form of a granulated portfolio consisting of multiple assets serving as underlying collateral;
- Instruments with embedded credit risk derivatives or references to third-party credit risk events (excluding those with mechanisms for reimbursing investors in the event of such events);
- Multiple-tranche instruments.

Additional specific features and the requirements for applying the Methodology are described in respective paragraphs of the Methodology.

Assigned credit ratings do not cover market risk of embedded derivatives. As recoveries may be negatively impacted in a default event due to negative mark-to-market of embedded derivatives (or hedging derivatives) at the early termination date, it could

[1] These features differentiate Repacks from structured finance transactions since Repacks for the purpose of the Methodology only contain a single Underlying Asset (unlike the granular portfolio that is typical for structured finance credit ratings), no tranching mechanism and no mandatory conditions on bankruptcy remoteness, at the same time they can include additional credit protection in the form of guarantees provided by originator or counterparties.

result in a loss to investors that is not captured by the rating. If this risk is present, ACRA highlights it via disclosures in the rating documentation.

Applying this Methodology may result in either assigning credit ratings or expected credit ratings to rated instruments; the analytical approaches are identical in both cases. Expected credit ratings are assigned based on the draft issuance documentation and the expected terms of the issue and marked with the letter "e". Credit ratings are assigned after receiving all issuance documentation registered in the manner set forth by law. Expected credit ratings are assigned based on the Key Concepts used by the Analytical Credit Rating Agency within the Scope of its Rating Activities, ACRA's Rating Actions Procedures and General Principles of the Rating Process, as well as ACRA's other internal documents.

The Methodology may be used to assign credit ratings on both ACRA's international rating scale and ACRA's national rating scale for the Russian Federation depending on customer needs and the scale applied for credit rating for the Underlying Asset.

The Methodology is not an exhaustive document and references other ACRA methodologies.

The 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 will review and amend it in the following cases:

- More than three deviations from this Methodology in a quarter when performing rating actions;
- A need to review based on the methodology application monitoring by ACRA's Methodology Group;
- Non-compliance with the requirements of Federal Law No. 222-FZ, dated July 13, 2015 "On the Activities 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 is requested by ACRA's Compliance and Internal Control Service.

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

When using this Methodology, any deviation from it is documented and disclosed by ACRA on its official website at www.acra-ratings.com when publishing a credit rating or a credit rating outlook, stating the reason for the deviation.

If any errors are found in this Methodology that have affected or may affect credit ratings and/or credit rating outlooks, ACRA will analyze and review it in accordance with established procedures. Information about such actions and the new version of the Methodology will be submitted to the Bank of Russia in the manner set forth below. If the identified errors affect previously assigned ratings, ACRA will disclose that 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) Provide the Bank of Russia with information about the proposed changes in the Methodology, stating the reasons for, and implications of, such changes, including the effect on the credit ratings assigned in accordance with the Methodology, and also post this information on its official website;
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 Methodology's amendment (provided the need to review them is discovered based on the conducted assessment).

2 Sources of Information

In its analytical activities, ACRA relies both on the information provided by the originator and information from other sources. The main sources of information used by ACRA to perform rating analysis include, but are not limited to, the following:

1) Securities prospectus;
2) Underlying Asset issuance documentation;
3) Periodic reports of a securities issuer;
4) Agreements with counterparties (if relevant);
5) Information on counterparties (if relevant);
6) Information provided orally or in writing during a rating meeting;
7) Information from publicly available sources:
   - Government statistics;
   - Publications by the regulator in the jurisdiction of the Rated Instrument;
   - Data from other sources believed by ACRA to be significant for rating analysis.
8) Credit ratings (credit estimates if a credit ratings are not available) assigned by ACRA to the Underlying Asset and counterparties (if applicable).

In the absence of sufficient information to apply the Methodology, ACRA refrains from assigning a credit rating. If ACRA identifies that there is not enough information to maintain the current credit rating, ACRA withdraws the credit rating with no further action taken with respect to it. All rating actions are reflected in rating press releases and/or reports published on ACRA's official website.

3 Default of Involved Parties

ACRA defines a default of involved parties according to the Key Concepts Used by the Analytical Credit Rating Agency within the Scope of its Rating Activities.

The default definition is applied to the Underlying Asset, Rated Instrument, and each counterparty being analyzed.

4 Rating Analysis Structure

The rating analysis includes the following steps:

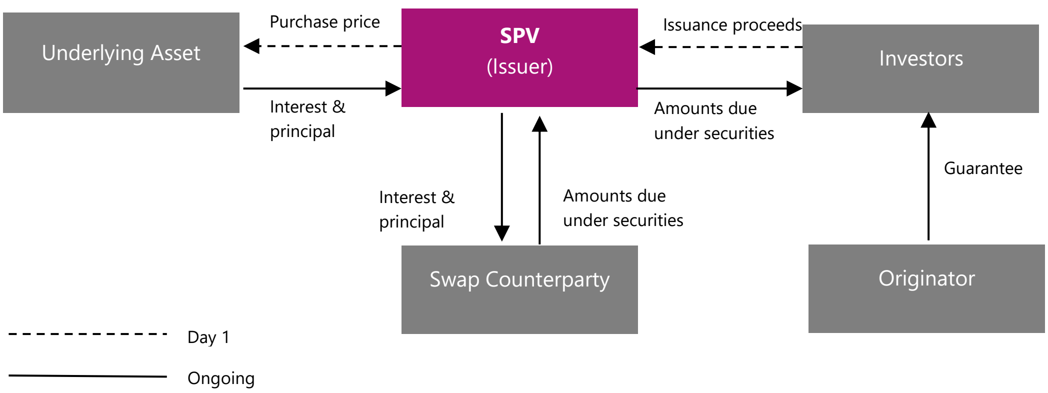
1) Transaction structure analysis and risk identification. During the analysis, ACRA checks for compliance with major conditions for the application of the Methodology and considers factors for qualitative adjustments;
2) Underlying Asset credit quality assessment. Following the analysis, ACRA assigns a credit rating (credit estimate) to the Underlying Asset. Underlying Asset credit risk is a major factor for analysis if the conditions described below are met;
3) Counterparty credit risk assessment. Additional exposures to counterparties' credit quality may also have a significant impact on the final credit rating and result in qualitative adjustments to the final credit rating;
4) Preliminary credit rating assignment to the rated instrument based on the quantitative model;
5) Final credit rating assignment to the rated instrument based on the preliminary credit rating and qualitative adjustments.

5 Analysis of Structural Features of the Transaction

Figure 1 shows the structure of a Repack involving the purchase of an Underlying Asset combined with a hedging derivative contract and a guarantee from the originator.

The sole activities of the SPV are assumed to involve the purchase of an Underlying Asset and associated hedging activities.

Figure 1. Typical Repack structure



Source: ACRA

5.1. Underlying Asset Requirements

Since the Underlying Asset is a major risk driver of Repacks, ACRA has certain eligibility criteria for the Underlying Asset (described below) for applying the Methodology.

Seniority. The Underlying Asset is a senior debt instrument (in the form of a bond or loan) with no convertibility clause to exclude additional risks of a non-credit nature, as well as subordination risks.

Underlying Asset structure. The Underlying Asset should have the following features:

- A finite maturity date;
- No explicit references to third-party credit risk events and embedded credit derivatives, or there are mechanisms to reimburse investors should such events occur.

Credit rating availability. The Underlying Asset has a credit rating (or a credit estimate in case of absence of an assigned credit rating) assigned by ACRA or respective ACRA methodology to assign a credit rating (credit estimate) to the Underlying Asset and/or its issuer is available. Exceptions may arise for government debt of the Russian Federation where the highest credit quality under the national scale for the Russian Federation is assumed.

Issuer type. The issuer of the instrument belongs to one of the following categories:

- Banks and organizations whose activities are close to banking in terms of their economic substance;
- Non-financial companies, including holding companies and project companies (including companies established to carry out projects under public-private partnerships);
- Insurance companies;
- Lease financing companies;
- Regional and municipal authorities;
- Sovereign governments.

If ACRA assigns a credit rating to a Repack under the national scale for the Russian Federation and the Underlying Asset has an ACRA credit rating (credit estimate) under the international scale, the credit rating (credit estimate) of the Underlying Asset under the international scale may be mapped to a credit rating (credit estimate) under the national scale for the Russian Federation.[2]

5.2. True Sale

The Methodology is only applied to instruments with a true sale of the Underlying Asset, that is, provided that the SPV becomes the owner of the Underlying Asset.

In certain cases, depending on the jurisdiction and the Rated Instrument's features, ACRA may receive a third-party legal opinion to confirm the true sale clause.

5.3. Clawback

ACRA analyzes the risk of clawback or re-characterization of the Underlying Asset for the considered Issuer jurisdiction.

In certain cases, depending on the jurisdiction and transaction features, ACRA may receive a third-party legal opinion to confirm the absence of the risk of clawback.

[2] Based on the Methodology for Mapping Credit Ratings Assigned on ACRA's International Scale to Credit Ratings Assigned on ACRA's National Scale for the Russian Federation.

5.4. Bankruptcy Remoteness

ACRA checks for the presence or absence of creditors' claims on the SPV in the event of originator default. If the risk of creditor claims on the SPV in the event of the originator default is present, ACRA also takes into account the credit risk of the originator.

In certain cases, depending on the jurisdiction and transaction features, ACRA may receive a third-party legal opinion on bankruptcy remoteness.

5.5. Cash Flow Structure

5.5.1. Matching Payments

ACRA considers the cash flow schedule for the Underlying Asset based on a going concern scenario (i.e. on the assumption that the Underlying Asset and other counterparties do not default) and requires that cash inflows do not occur later than payment of obligations in the amount sufficient to fulfill obligations (taking into account business day conventions and lags for settlement days if relevant) or the availability of a sufficient cash buffer in case of mismatch.

ACRA requires complete hedging of market risk exposures, i.e. a change of market variables should not result in a cash flow mismatch. Prepayment conditions and other embedded options (if relevant) on the asset and liabilities side of the issuer have to be matched if such features are present.

5.5.2. Recoveries

ACRA checks the following aspects for recoveries in the event of default.

Absence of conflicts of interest. Recovery procedures and other actions are to be carried out by a trustee (represented by the originator, controlling creditor or other third party) in a reasonable manner and in the interests of investors. If there is a conflict of interest between the trustee and investors, for example, if the counterparty is also the trustee whose authority is not suitably restricted, or the trustee has a negative track record, ACRA may account for the risk of conflicts of interest.

Recovery process assumption. Recovery assumptions are applied according to the reasonable conservatism principle; ACRA assumes that if the Underlying Asset is liquidated via a market sale, the liquidation price would be equivalent to its economic liquidation value.

Priority of payments. ACRA analyzes cash flow distribution in the event of default and discounts the Underlying Asset recovery amount for payments with higher priorities such as extraordinary expenses (e.g., costs of litigation).

5.5.3. Expenses

As the non-payment of expenses may have negative consequences (up to triggering an issuer default event), ACRA considers whether an issuer has sufficient funds to pay its expenses and the potential consequences for rated securities if it does not. The issuer's ordinary operating expenses (e.g., service provider fees) may be paid from such sources as:

- Third parties. In this case, ACRA analyzes third-party credit risk and terms and conditions of such liabilities;

- Special dedicated fund. In this case, ACRA analyzes the credit quality of the bank in which the respective amount is placed;
- Asset and liability interest difference (spread), i.e., the difference between income from the Underlying Asset and SPV expenses on the Rated Instrument.

5.6. Hedging Derivatives Analysis

If the issuer uses derivatives to hedge cash flow mismatches (including cases of embedded options), ACRA analyzes the corresponding risks and aspects for such deals.

Hedging derivatives include but are not limited to the following types of contracts:

- Swap transactions;
- Forward transactions;
- Options.

The purpose of respective derivative contracts is to hedge market risk, including but not limited to the following types of risk:

- Interest rate risk;
- Foreign currency risk;
- Volatility risk.

5.6.1. Legal Risk

ACRA analyzes the terms and conditions of contracts with derivatives counterparties to determine whether these contracts are legally enforceable (including derivatives collateral ownership if relevant).

If ISDA documentation is legally enforceable in the relevant jurisdiction, standard ISDA terms and conditions should be applied to derivative transactions.

In certain cases, depending on the jurisdiction and transaction features, ACRA may request a third-party legal opinion on the applicability of ISDA rules and the legal enforceability of non-ISDA documentation.

In case of absence or doubtful legal enforceability, ACRA refrains from assigning a credit rating.

5.6.2. Counterparty Risk

ACRA considers the following aspects of counterparty risk:

Counterparty credit quality. Derivative counterparties should be financial institutions with sufficient credit quality because a counterparty default may result in losses in the event of non-collateralized positive exposure (for example, if a variation margin call is not paid before default) and replacement could incur additional costs.

Counterparty exposure minimization. ACRA requires the availability of a credit support annex that ensures timely coverage of credit exposure toward the hedging counterparty.

If an issuer purchases an option, the premium should be paid at the option’s expiration date to avoid counterparty exposure.

Counterparty default consequences. In the event of a counterparty default, the derivative position should be unwound and replaced by an equivalent transaction to comply with the cash flow matching requirement. Therefore, the liquidity and complexity of hedging transactions and counterparty credit quality covenants (as a prevention measure) are jointly considered during the rating analysis.

In order to determine the termination amount in case of counterparty default, ACRA requires a strict mechanism and the involvement of reliable third parties in the terms and agreements with the derivatives counterparty.

5.6.3. Liquidity Risk

In order to estimate possibilities for mitigation of secondary liquidity risk, the Agency considers the following aspects.

Liquidity of collateral. Collateral (as a total of margin requirements) has to be provided in a convertible currency. Since the collateral amount is unpredictable, in order to avoid cash flow uncertainty, either interest paid on collateral should not be greater than the interest accrued by the account bank for cash received, or interest should not be accrued on the collateral amount.

Requirement to place collateral. In order to mitigate issuer liquidity risk, a unilateral variation margin provision is required, i.e., the issuer should not be required to place additional collateral in case of a negative hedging derivatives mark-to-market.

Credit quality covenants. Since any covenants on the issuer credit quality may cause early termination risk and liquidity outflow on the termination event, ACRA requires these covenants to be absent.

5.6.4. Early Termination Risk

In the event of default of the Underlying Asset, its cash flows may significantly differ from initial expectations, so hedging derivatives where the paying leg initially corresponds to the expected cash flow structure may require termination.

For an event of default on the Underlying Asset ACRA requires an early termination clause at a fair market price with the hedging counterparty.

In order to determine the termination amount in case of counterparty default, ACRA requires a strict mechanism and the involvement of reliable third parties in the terms and agreements with the derivatives counterparty.

Assigned credit ratings do not cover market risk from embedded derivatives. Taking into account the fact that the mark-to-market of hedging derivatives may significantly differ from zero at the termination date and derivative counterparty seniority is usually ranked senior to investors, recovery amounts for the rated instrument may differ from the initial Underlying Asset recovery amount. **Since respective differences in recovery amounts reflect the market risk from embedded and hedging derivatives, assigned credit ratings do not cover this market risk. If this risk is present, ACRA provides respective disclosures in rating documentation.**

5.6.5. Other Considerations

If the repack contains embedded options purchased by investors that require the buyers to decide to execute the option, ACRA requires the mechanism of prior notification and execution of such options.

5.7. Credit Risk of Other Parties

5.7.1. Account Bank

ACRA analyzes the following aspects relevant to account banks.

Credit quality of the account bank. The credit quality of account banks is expressed in ACRA's credit rating (credit estimate if a credit rating is not assigned) and is an important factor if significant amounts are placed in account banks for long periods.

Amounts and timing of cash placed at the account bank. Amounts and the length of time cash flows are kept at an account bank define the credit exposure to the account bank.

Account bank replacement conditions and requirements to the replacement bank. ACRA considers the conditions and timing for account bank replacement prescribed in documentation, as well as the minimum requirements for the alternative account bank in the event that the credit quality of the account bank deteriorates.

5.7.2. Guarantor

If the repack has a guarantee provided by the originator or contains a cross-default condition with the originator, ACRA analyzes and takes into account its credit quality in the rating analysis.

In certain cases, depending on the jurisdiction and transaction features, ACRA may request a third-party legal opinion on the eligibility of a guarantee or cross-default condition.

5.8. Transparency and Disclosure

ACRA requires a meaningful and transparent disclosure of all transaction aspects in issuance documentation for investors, including information on relevant risks. In case of absence of transparent and full disclosure, its unreliability or ambiguous interpretation, ACRA refrains from assigning a credit rating.

6 Credit Rating Assignment

6.1. Quantitative Model

ACRA uses a quantitative model to derive a preliminary rating, which has the following parameters as inputs:

- Expected loss EL_{Asset} of the Underlying Asset based on the credit rating (credit estimate) and duration of the Underlying Asset;
- Expected loss EL_{Orig} of the originator based on the credit rating (credit estimate) and duration of the Underlying Asset;
- Interrelation parameter $c \in [0,1]$ defining the dependence between Underlying Asset and originator default events (for $c = 1$ full dependence is assumed, for $c = 0$ default events of the originator and Underlying Asset are independent).

Expected loss parameters are derived from the following idealized tables:

- Idealized tables for the international scale (Appendix 1);
- Idealized tables for the national scale for the Russian Federation are calculated according to the idealized tables for the national scale for the Russian Federation calculation approach provided in the Methodology for Mapping Credit Ratings Assigned on ACRA's International Scale to Credit Ratings Assigned on ACRA's National Scale for the Russian Federation.

When assigning a preliminary credit rating, ACRA applies the quantitative approach. The probability of default for a rated instrument is derived using a complete probability formula:

$$P(D) = P(D|D_{Orig}) * pd_{Orig} + P(D|\overline{D_{Orig}}) * (1 - pd_{Orig})$$

and the interrelation assumption between the Underlying Asset and the originator:

$$P(D \cap D_{Orig}) = c * pd_{Orig} + (1 - c) * pd_{Orig} * pd_{Asset}$$

where D is the default event of the rated instrument and D_{Orig} is the default event of the originator.

The following cases are considered separately when applying the formula:

- If a guarantee is provided by the originator $P(D|\overline{D_{Orig}}) = 0$ since rated instrument default is not expected if the originator does not default and provides payment on the guarantee; loss given default on the asset side is calculated as $LGD = LGD_{Orig}$;
- $P(D|\overline{D_{Orig}}) = pd_{Asset} - (c * pd_{Orig} + (1 - c) * pd_{Orig} * pd_{Asset})$ if a guarantee is not provided;
- In the absence of bankruptcy remoteness $P(D|D_{Orig}) = 1$; loss given default on the Underlying Asset side is calculated as $LGD = LGD_{Orig}$.

In other cases, recoveries would be received from the Underlying Asset, so $LGD = LGD_{Asset}$.

Expected loss is defined as follows:

$$EL = P(D) * LGD * (1 - d)$$

where $P(D) * LGD$ is in its essence expected loss for the respective counterparty (EL_{Asset} or EL_{Orig}) and d is the discount of the recovery amount reflecting payments with higher priorities such as extraordinary expenses.

The preliminary credit rating of rated instruments is derived by matching calculated expected loss EL and rated instrument duration with the idealized tables rating. If the calculated values are between the values in the respective idealized tables, ACRA's rating committee decides on the final preliminary credit rating by choosing from the nearest rating categories.

6.2. Modifiers

ACRA derives the final credit rating by adjusting the preliminary credit rating according to the criteria and analytical judgments described below.

Table 1. Criteria for qualitative adjustments to the preliminary credit rating

Adjustment	Maximum adjustment[3]	Description of the adjustment
Alignment of interest	-1	Presence of conflict of interest of the trustee and investors OR Negative track record for the trustee.
Funds for expenses	-1	The credit quality of third party paying expenses is lower than the credit quality of the Underlying Asset OR The credit quality of the bank holding dedicated funds is lower than the credit quality of the Underlying Asset.
Derivatives counterparty risk	-2	Counterparty credit quality is lower than the credit quality of the Underlying Asset AND Low liquidity and/or high complexity of hedging derivative.
Account bank risk	-2 or cap with account bank credit rating	The credit quality of the account bank is lower than the credit quality of the Underlying Asset AND Significant amounts are placed at the account bank AND Absence of an account bank replacement mechanism.

Source: ACRA

Note: none of the applicable adjustments are automatic and are always subject to a decision made by ACRA's rating committee. The adjustment ranges provided above refer to the maximum possible adjustment. The rating committee may decide to make adjustments within the provided range.

7 Monitoring

ACRA monitors the credit quality of the Underlying Asset and third parties and the fulfillment of their obligations. A change in the credit rating of the Underlying Asset or third parties triggers a review of the credit rating assigned to the repack.

Certain components, such as reviews of legal structures of existing transactions or true sale opinions, are static and will generally not be re-reviewed unless circumstances warrant.

8 Credit Rating Outlook

ACRA assigns a credit rating outlook based on the credit rating outlook of the issuer of the Underlying Asset and third parties (if relevant).

[3] Hereinafter, a +1 notch adjustment means an upward adjustment, i.e., improvement of the factor by 1 notch, oppositely, a -1 notch adjustment means a downward adjustment, i.e., worsening of the factor by 1 notch.

Appendix 1. Idealized Tables for the International Scale

Table 1. Idealized table for probabilities of default

Rating\ Term	1y	2y	3y	4y	5y	6y	7y	8y	9y	10y	11y	12y	13y	14y	15y	16y	17y	18y	19y	20y	21y	22y	23y	24y	25y	26y	27y	28y	29y	30y
AAA	0,10%	0,22%	0,35%	0,51%	0,68%	0,86%	1,07%	1,29%	1,54%	1,80%	2,08%	2,38%	2,70%	3,03%	3,38%	3,74%	4,12%	4,52%	4,92%	5,34%	5,77%	6,22%	6,67%	7,13%	7,60%	8,08%	8,57%	9,06%	9,56%	10,07%
AA+	0,15%	0,32%	0,50%	0,70%	0,92%	1,16%	1,42%	1,69%	1,99%	2,31%	2,65%	3,00%	3,38%	3,77%	4,17%	4,59%	5,03%	5,47%	5,93%	6,40%	6,88%	7,37%	7,86%	8,37%	8,88%	9,39%	9,92%	10,44%	10,97%	11,51%
AA	0,22%	0,46%	0,71%	0,99%	1,29%	1,61%	1,95%	2,32%	2,70%	3,11%	3,53%	3,97%	4,43%	4,90%	5,38%	5,88%	6,39%	6,90%	7,43%	7,96%	8,50%	9,05%	9,60%	10,15%	10,71%	11,28%	11,84%	12,41%	12,97%	13,54%
AA-	0,32%	0,67%	1,04%	1,43%	1,86%	2,30%	2,78%	3,27%	3,79%	4,32%	4,87%	5,43%	6,01%	6,60%	7,19%	7,79%	8,40%	9,01%	9,63%	10,24%	10,86%	11,48%	12,10%	12,72%	13,34%	13,95%	14,57%	15,18%	15,79%	16,39%
A+	0,47%	0,99%	1,54%	2,14%	2,76%	3,42%	4,09%	4,79%	5,49%	6,21%	6,93%	7,66%	8,38%	9,11%	9,83%	10,56%	11,27%	11,99%	12,69%	13,39%	14,09%	14,78%	15,46%	16,13%	16,80%	17,46%	18,12%	18,77%	19,41%	20,04%
A	0,69%	1,44%	2,25%	3,09%	3,96%	4,85%	5,75%	6,65%	7,54%	8,43%	9,31%	10,18%	11,04%	11,89%	12,72%	13,54%	14,34%	15,13%	15,91%	16,67%	17,42%	18,16%	18,89%	19,60%	20,30%	20,99%	21,67%	22,34%	23,00%	23,64%
A-	1,00%	2,08%	3,21%	4,37%	5,53%	6,68%	7,81%	8,92%	10,00%	11,06%	12,08%	13,08%	14,05%	14,99%	15,90%	16,79%	17,65%	18,49%	19,31%	20,11%	20,89%	21,66%	22,40%	23,13%	23,84%	24,54%	25,23%	25,90%	26,56%	27,21%
BBB+	1,44%	2,92%	4,41%	5,86%	7,28%	8,64%	9,94%	11,19%	12,39%	13,53%	14,63%	15,68%	16,69%	17,66%	18,60%	19,51%	20,39%	21,24%	22,06%	22,86%	23,64%	24,40%	25,14%	25,86%	26,56%	27,25%	27,92%	28,58%	29,23%	29,87%
BBB	2,06%	4,04%	5,91%	7,66%	9,31%	10,84%	12,28%	13,64%	14,91%	16,12%	17,26%	18,34%	19,38%	20,37%	21,32%	22,23%	23,11%	23,96%	24,78%	25,58%	26,35%	27,10%	27,83%	28,54%	29,23%	29,91%	30,57%	31,21%	31,85%	32,47%
BBB-	2,95%	5,56%	7,88%	9,97%	11,85%	13,55%	15,11%	16,55%	17,89%	19,14%	20,31%	21,41%	22,46%	23,45%	24,40%	25,31%	26,19%	27,03%	27,84%	28,62%	29,38%	30,12%	30,83%	31,53%	32,20%	32,86%	33,51%	34,14%	34,75%	35,35%
BB+	4,19%	7,61%	10,48%	12,92%	15,05%	16,92%	18,60%	20,12%	21,51%	22,79%	23,99%	25,10%	26,15%	27,15%	28,09%	28,99%	29,85%	30,68%	31,47%	32,24%	32,98%	33,69%	34,39%	35,06%	35,72%	36,35%	36,98%	37,58%	38,17%	38,75%
BB	5,92%	10,53%	14,20%	17,20%	19,69%	21,82%	23,66%	25,28%	26,74%	28,06%	29,26%	30,38%	31,42%	32,39%	33,31%	34,18%	35,01%	35,80%	36,56%	37,29%	37,99%	38,67%	39,32%	39,96%	40,57%	41,17%	41,76%	42,32%	42,88%	43,42%
BB-	8,34%	14,56%	19,31%	23,02%	25,99%	28,42%	30,45%	32,19%	33,70%	35,04%	36,24%	37,33%	38,34%	39,27%	40,14%	40,96%	41,73%	42,47%	43,17%	43,84%	44,49%	45,11%	45,71%	46,29%	46,85%	47,40%	47,93%	48,45%	48,95%	49,44%
B+	11,69%	20,04%	26,12%	30,66%	34,13%	36,85%	39,03%	40,83%	42,34%	43,65%	44,80%	45,83%	46,76%	47,61%	48,40%	49,14%	49,83%	50,49%	51,11%	51,70%	52,27%	52,82%	53,34%	53,85%	54,34%	54,82%	55,28%	55,73%	56,17%	56,59%
B	16,30%	27,56%	35,44%	41,07%	45,17%	48,23%	50,57%	52,41%	53,90%	55,14%	56,19%	57,10%	57,91%	58,63%	59,30%	59,91%	60,48%	61,02%	61,53%	62,01%	62,47%	62,91%	63,33%	63,73%	64,13%	64,51%	64,88%	65,23%	65,58%	65,92%
B-	22,63%	37,32%	47,04%	53,61%	58,15%	61,36%	63,71%	65,46%	66,82%	67,90%	68,79%	69,53%	70,17%	70,74%	71,25%	71,71%	72,14%	72,54%	72,91%	73,26%	73,59%	73,91%	74,22%	74,51%	74,79%	75,06%	75,33%	75,58%	75,83%	76,07%
CCC	31,28%	49,64%	60,69%	67,51%	71,86%	74,73%	76,69%	78,08%	79,10%	79,88%	80,51%	81,02%	81,45%	81,83%	82,16%	82,46%	82,73%	82,99%	83,22%	83,45%	83,66%	83,86%	84,05%	84,23%	84,41%	84,58%	84,75%	84,91%	85,06%	85,21%
CC	43,03%	63,55%	73,94%	79,56%	82,80%	84,80%	86,10%	86,99%	87,64%	88,12%	88,51%	88,82%	89,08%	89,31%	89,51%	89,69%	89,85%	90,00%	90,14%	90,28%	90,40%	90,52%	90,63%	90,74%	90,85%	90,95%	91,04%	91,14%	91,23%	91,32%
C	58,91%	77,22%	85,47%	89,43%	91,48%	92,64%	93,36%	93,82%	94,15%	94,40%	94,59%	94,74%	94,87%	94,98%	95,08%	95,16%	95,24%	95,31%	95,38%	95,44%	95,50%	95,56%	95,61%	95,66%	95,71%	95,76%	95,81%	95,85%	95,89%	95,94%
D	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%

Source: ACRA

Table 2. Idealized table for expected loss

Rating\ Term	1y	2y	3y	4y	5y	6y	7y	8y	9y	10y	11y	12y	13y	14y	15y	16y	17y	18y	19y	20y	21y	22y	23y	24y	25y	26y	27y	28y	29y	30y
AAA	0,06%	0,12%	0,19%	0,28%	0,37%	0,47%	0,59%	0,71%	0,85%	0,99%	1,14%	1,31%	1,48%	1,67%	1,86%	2,06%	2,27%	2,48%	2,71%	2,94%	3,18%	3,42%	3,67%	3,92%	4,18%	4,45%	4,71%	4,98%	5,26%	5,54%
AA+	0,08%	0,17%	0,27%	0,38%	0,50%	0,64%	0,78%	0,93%	1,10%	1,27%	1,46%	1,65%	1,86%	2,07%	2,29%	2,53%	2,76%	3,01%	3,26%	3,52%	3,78%	4,05%	4,32%	4,60%	4,88%	5,17%	5,45%	5,74%	6,04%	6,33%
AA	0,12%	0,25%	0,39%	0,55%	0,71%	0,89%	1,07%	1,27%	1,49%	1,71%	1,94%	2,18%	2,43%	2,69%	2,96%	3,23%	3,51%	3,80%	4,09%	4,38%	4,68%	4,98%	5,28%	5,59%	5,89%	6,20%	6,51%	6,82%	7,14%	7,45%
AA-	0,18%	0,37%	0,57%	0,79%	1,02%	1,27%	1,53%	1,80%	2,08%	2,38%	2,68%	2,99%	3,31%	3,63%	3,96%	4,29%	4,62%	4,96%	5,30%	5,63%	5,97%	6,32%	6,66%	7,00%	7,34%	7,67%	8,01%	8,35%	8,68%	9,02%
A+	0,26%	0,54%	0,85%	1,18%	1,52%	1,88%	2,25%	2,63%	3,02%	3,41%	3,81%	4,21%	4,61%	5,01%	5,41%	5,81%	6,20%	6,59%	6,98%	7,37%	7,75%	8,13%	8,50%	8,87%	9,24%	9,60%	9,96%	10,32%	10,67%	11,02%
A	0,38%	0,79%	1,24%	1,70%	2,18%	2,67%	3,16%	3,65%	4,15%	4,64%	5,12%	5,60%	6,07%	6,54%	7,00%	7,45%	7,89%	8,32%	8,75%	9,17%	9,58%	9,99%	10,39%	10,78%	11,16%	11,54%	11,92%	12,29%	12,65%	13,00%
A-	0,55%	1,14%	1,77%	2,40%	3,04%	3,67%	4,30%	4,91%	5,50%	6,08%	6,65%	7,19%	7,72%	8,24%	8,74%	9,23%	9,71%	10,17%	10,62%	11,06%	11,49%	11,91%	12,32%	12,72%	13,11%	13,50%	13,88%	14,25%	14,61%	14,97%
BBB+	0,79%	1,61%	2,42%	3,23%	4,00%	4,75%	5,47%	6,16%	6,81%	7,44%	8,05%	8,62%	9,18%	9,72%	10,23%	10,73%	11,21%	11,68%	12,13%	12,57%	13,00%	13,42%	13,82%	14,22%	14,61%	14,99%	15,36%	15,72%	16,08%	16,43%
BBB	1,13%	2,22%	3,25%	4,22%	5,12%	5,96%	6,76%	7,50%	8,20%	8,86%	9,49%	10,09%	10,66%	11,20%	11,73%	12,23%	12,71%	13,18%	13,63%	14,07%	14,49%	14,90%	15,30%	15,70%	16,08%	16,45%	16,81%	17,17%	17,51%	17,86%
BBB-	1,62%	3,06%	4,34%	5,48%	6,51%	7,45%	8,31%	9,10%	9,84%	10,52%	11,17%	11,78%	12,35%	12,90%	13,42%	13,92%	14,40%	14,86%	15,31%	15,74%	16,16%	16,56%	16,96%	17,34%	17,71%	18,07%	18,43%	18,78%	19,11%	19,44%
BB+	2,30%	4,19%	5,76%	7,11%	8,28%	9,31%	10,23%	11,07%	11,83%	12,54%	13,19%	13,81%	14,38%	14,93%	15,45%	15,95%	16,42%	16,87%	17,31%	17,73%	18,14%	18,53%	18,91%	19,28%	19,64%	20,00%	20,34%	20,67%	21,00%	21,31%
BB	3,26%	5,79%	7,81%	9,46%	10,83%	12,00%	13,01%	13,91%	14,71%	15,43%	16,09%	16,71%	17,28%	17,81%	18,32%	18,80%	19,25%	19,69%	20,11%	20,51%	20,89%	21,27%	21,63%	21,98%	22,32%	22,64%	22,97%	23,28%	23,58%	23,88%
BB-	4,59%	8,01%	10,62%	12,66%	14,30%	15,63%	16,75%	17,70%	18,53%	19,27%	19,93%	20,53%	21,08%	21,60%	22,08%	22,53%	22,95%	23,36%	23,74%	24,11%	24,47%	24,81%	25,14%	25,46%	25,77%	26,07%	26,36%	26,65%	26,92%	27,19%
B+	6,43%	11,02%	14,37%	16,86%	18,77%	20,26%	21,47%	22,45%	23,29%	24,01%	24,64%	25,21%	25,72%	26,19%	26,62%	27,03%	27,41%	27,77%	28,11%	28,44%	28,75%	29,05%	29,34%	29,62%	29,89%	30,15%	30,40%	30,65%	30,89%	31,13%
B	8,97%	15,16%	19,49%	22,59%	24,84%	26,53%	27,81%	28,83%	29,65%	30,33%	30,90%	31,40%	31,85%	32,25%	32,61%	32,95%	33,27%	33,56%	33,84%	34,10%	34,36%	34,60%	34,83%	35,05%	35,27%	35,48%	35,68%	35,88%	36,07%	36,26%
B-	12,45%	20,53%	25,87%	29,48%	31,98%	33,75%	35,04%	36,00%	36,75%	37,34%	37,83%	38,24%	38,60%	38,91%	39,19%	39,44%	39,68%	39,90%	40,10%	40,29%	40,48%	40,65%	40,82%	40,98%	41,14%	41,29%	41,43%	41,57%	41,71%	41,84%
CCC	17,20%	27,30%	33,38%	37,13%	39,53%	41,10%	42,18%	42,94%	43,50%	43,94%	44,28%	44,56%	44,80%	45,00%	45,19%	45,35%	45,50%	45,64%	45,77%	45,90%	46,01%	46,12%	46,23%	46,33%	46,43%	46,52%	46,61%	46,70%	46,78%	46,87%
CC	23,67%	34,95%	40,67%	43,76%	45,54%	46,64%	47,35%	47,84%	48,20%	48,47%	48,68%	48,85%	49,00%	49,12%	49,23%	49,33%	49,42%	49,50%	49,58%	49,65%	49,72%	49,79%	49,85%	49,91%	49,97%	50,02%	50,07%	50,13%	50,18%	50,22%
C	32,40%	42,47%	47,01%	49,19%	50,32%	50,95%	51,35%	51,60%	51,78%	51,92%	52,02%	52,11%	52,18%	52,24%	52,29%	52,34%	52,38%	52,42%	52,46%	52,49%	52,53%	52,56%	52,59%	52,61%	52,64%	52,67%	52,69%	52,72%	52,74%	52,76%

Source: ACRA

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