MOODY'S INVESTORS SERVICE

CROSS-SECTOR METHODOLOGY

Structured Finance Counterparty Instrument Ratings Methodology

Table of Contents:

SCOPE 1
RATING APPROACH 2
SWAP AGREEMENTS 4
LIQUIDITY FACILITIES 8
MONITORING 11
MOODY'S RELATED PUBLICATIONS 12

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This rating methodology replaces *Moody's Approach to Counterparty Instrument Ratings* published in July 2021. We added a footnote to clarify our assumptions in Exhibit 2, and we also made editorial updates to improve readability. The updates do not change our methodological approach.

Scope

This rating methodology applies to structured finance counterparty instruments, such as interest rate and cross-currency swaps, and asset-backed commercial paper and term liquidity facilities.

In this methodology, we explain our approach to assessing credit risk for structured finance counterparty instruments. We typically assign structured finance counterparty instrument ratings (CIRs) to a financial contract such as interest rate and cross-currency swaps, and asset-backed commercial paper (ABCP) and term liquidity facilities. We measure the risk posed to a counterparty arising from a special purpose entity's (SPE) default concerning its obligations under the referenced financial contract.

The application of this methodology involves using inputs indicating the credit quality of certain entities. For ease of reference, we generically describe these inputs as "ratings."

Rating Approach

In this section, we summarize our approach to assessing credit risks for counterparty instruments, including qualitative factors that are likely to affect rating outcomes.

Overview

We base CIRs on an analysis of (i) the quality of the collateral underlying the structured finance transaction and the transaction structure; and (ii) the ranking of the SPE's payments to the counterparty under the structured finance transaction waterfall.

In addition, for swap CIRs, the financial strength of the SPE's counterparty may have a bearing on the expected loss posed to the counterparty; for example, in some transactions, payments owing to a defaulting swap counterparty have a lower ranking in the SPE's priority of payments than scheduled swap payments that fall due before counterparty default. Where the expected loss to a counterparty is linked to its own credit quality, we cap the CIR by reference to the rating of the counterparty plus a notching adjustment based on the assessed degree of linkage.

When applying this methodology, a rating committee considers these and additional qualitative factors that it deems relevant when determining CIRs, taking into account characteristics associated with each transaction.

References to Ratings and Rating Triggers

In this methodology:

1) If a swap counterparty is subject to an operational resolution regime and the governing law of the swap excludes or suspends any right of termination that would otherwise arise upon resolution, all references to the rating of that entity refer to its counterparty risk assessment (CR assessment).[1]
2) By way of exception to (1) above, if an entity does not have a CR assessment, we use the best alternative proxy, which we may, for example, derive from that entity's senior unsecured debt rating (or equivalent) or, in some cases, its deposit rating (or equivalent).
3) If a swap counterparty is not subject to an operational resolution regime, or the governing law of the swap does not exclude or suspend any right of termination that arises upon resolution, all references to the rating of that entity refer to its senior unsecured debt rating (or equivalent).
4) All references to a guarantor's rating refer to the senior unsecured debt rating (or equivalent) of that entity.
5) We give the same value for swap transfer triggers inserted by issuers in their deal documentation that reference senior unsecured debt ratings (or equivalent) as for those that track CR assessments.

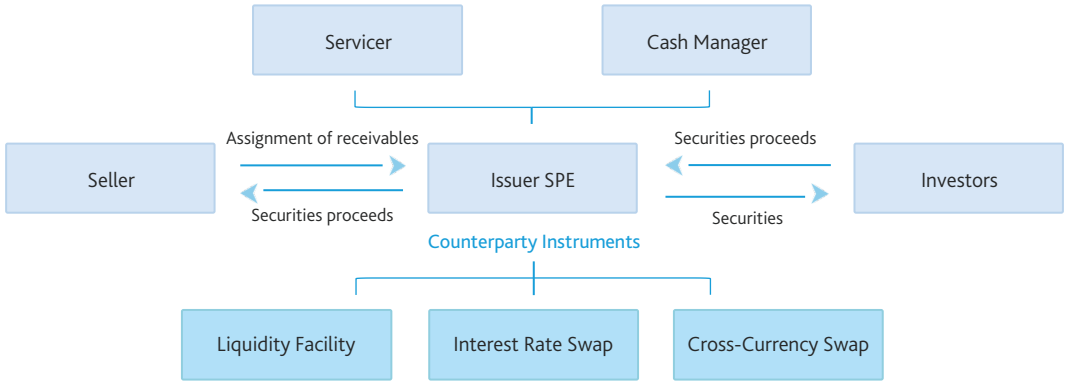
CIR Characteristics

We typically assign CIRs to interest rate and cross-currency swap agreements, and ABCP and term liquidity facilities.[2] The underlying transactions emanate from a wide range of asset classes, including residential

[1] For more information, see *Rating Symbols and Definitions.* A link can be found in the "Moody's Related Publications" section.
[2] Ibid.

mortgage-backed securities (RMBS), commercial mortgage-backed securities (CMBS), asset-backed securities (ABS) and ABCP.

EXHIBIT 1
Simplified Transaction Structure



Source: Moody's Investors Service

We highlight the following general characteristics of CIRs:

a) A CIR addresses an SPE's ability to meet its obligations under an instrument entered into to mitigate risks arising from, or to otherwise support, its primary activities, and not for the direct acquisition of assets or other investment purposes.

b) A CIR applies to a specific instrument entered into with a specific counterparty. If the instrument's terms are materially changed or the counterparty is replaced (by way of novation or otherwise), we may withdraw the CIR.

c) The operational risk considerations for other structured finance ratings also apply to CIRs.

d) In the context of swaps, CIRs relate to termination payments and scheduled payments (regardless of which party is the defaulting party).

e) The financial strength of the SPE's counterparty may have a bearing on a CIR. For example, in some transactions, swap termination payments owing to a defaulting counterparty have a lower ranking in the SPE's priority of payments than scheduled swap payments. For further discussion on this issue, see the "Counterparty Linkage" section.

f) CIRs do not address losses that counterparties may experience due to fluctuations in mark-to-market valuations, such as any market value loss as a result of a swap counterparty replacing itself. Rather, CIRs solely address the expected losses posed to counterparties in relation to payment obligations arising under the relevant instruments.

g) CIRs do not address any subordinated payments other than "core" obligations. For this purpose, core obligations are interest and principal payments under liquidity facilities and scheduled and termination payments under swaps.

h) Where the SPE's scheduled payment obligations under a swap or liquidity facility rank pari passu with payments under rated securities, the ratings assigned to those securities are generally the primary starting point in evaluating CIRs.

Swap Agreements

In this section, we describe our approach to assigning CIRs to swap agreements excluding CDS.

Our approach to assigning CIRs on interest rate and cross-currency swaps involves two steps. We may apply any relevant elements of our sector rating methodologies in relation to the ratings of securities backed by the same types of assets. First, we determine the CIR that we would assign on the assumption that the counterparty will not default; we generally do this by modeling an expected loss and converting it to a rating using Moody's Idealized Expected Loss Rates table,[3] although we do not necessarily model an expected loss. Instead of modeling an expected loss, we may use one of our alternative methods for determining structured finance ratings (as appropriate).[4] Second, we assess the degree of linkage to the swap counterparty and, where appropriate, cap the CIR accordingly.

Expected Loss Assuming No Counterparty Default

Suppose an SPE's obligations under a swap rank pari passu with rated securities and the swap will likely terminate when the securities are redeemed. In that case, the expected loss for the counterparty generally equals the expected loss for the corresponding security. Therefore, a CIR usually matches the rating of any pari passu-ranking securities (subject to the effect of counterparty linkage, as described in the next section). By way of exception, if the rating of the pari passu-ranking securities is impacted by counterparty linkage in relation to the relevant swap, the expected loss for the counterparty generally equals the expected loss we would have determined for the corresponding security but for such linkage.

Suppose the SPE's obligations under a swap do not rank pari passu with rated securities or the swap may continue after the pari passu-ranking securities are redeemed. In that case, we generally calculate the expected loss for the counterparty by comparing the stream of the SPE's liabilities under the swap (taking into consideration how the swap notional amount is defined and applying stresses for potential interest rate changes) and the SPE's projected available cash flows (taking into consideration the expected performance of the underlying assets and any available support facilities).[5]

Counterparty Linkage

We assume there is a material likelihood that contractual provisions agreed to by the parties are enforceable against a defaulting counterparty unless there is unequivocal statutory language or case law (typically from a senior appeal court) to the contrary. If, under contractual provisions, a counterparty's default may cause it to receive less than it would if it did not default, then we assume the counterparty's expected loss is linked to its credit quality. For example:

» If we expect an SPE will terminate its swap following counterparty default and any termination payment falling due to a defaulting counterparty may, under the contractual terms and the laws of the relevant jurisdiction, have a lower ranking than scheduled swap payments that fall due before counterparty default, the potential subordination creates linkage between a CIR and the counterparty's financial strength; and

[3] For more information, see the discussion of Idealized Probabilities of Default and Expected Losses in *Rating Symbols and Definitions* (a link can be found in the "Moody's Related Publications" section) and in the "Loss Benchmarks" section.
[4] A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.
[5] For this purpose, we may apply any relevant elements of our sector rating methodologies in relation to the ratings of securities backed by the same types of assets.

» If we expect that, following counterparty default, an SPE will not terminate its swap and may be entitled to suspend or subordinate its swap payments,[6] the CIR will be linked to the counterparty's financial strength.

When the expected loss posed to a counterparty is linked to its own credit quality, we cap the CIR by reference to the counterparty's rating plus a notching adjustment. If the counterparty's obligations are guaranteed, we generally apply the cap by reference to the guarantor's rating. The notching adjustment typically ranges from +5 to -1 and is calculated as the sum of (1) a "probability uplift" representing the likelihood that the counterparty incurs a loss following its default; and (2) a "severity modifier" representing the potential degree of loss to the counterparty.

Probability Uplift

We typically base the probability uplift on the following considerations:

» **Will the counterparty transfer the swap before it defaults?** Most structured finance swaps oblige the counterparty to transfer its rights and obligations to another counterparty upon being downgraded below a certain rating level. The presence of a transfer trigger can reduce the counterparty's likelihood of incurring losses following its default. We determine the notching uplift for a transfer trigger – which may be up to two notches – in accordance with our cross-sector rating methodology for assessing counterparty risk in structured finance cash flow transactions.[7]

» **What if the swap is out-of-the-money (OTM) for the counterparty when it defaults?** We increase the probability uplift by one notch if it is likely that the swap is OTM for the counterparty when it defaults, as the counterparty may not be entitled to receive any further payments under prevailing market rates. When the counterparty (or guarantor) is rated A3 or above, we generally apply this uplift even if the swap is presently in-the-money for the counterparty.

» **What if the contractual provisions that create counterparty linkage are unenforceable?** We generally increase the probability uplift by one notch if there is a good prospect that the courts in the relevant jurisdiction will refuse to enforce the contractual provision(s) that create counterparty linkage. Such contractual provisions may include, for example, those that subordinate payments to a defaulting counterparty or enable the SPE to suspend its payments to a defaulting counterparty.

[6] For example, by reason of Section 2(a)(iii) of the ISDA Master Agreement (often referred to as a "walkaway" clause).
[7] For more information, see the relevant cross-sector rating methodology. A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

EXHIBIT 2

Assessing Probability Uplift*

Transfer Trigger?	OTM Uplift?	Linkage Provisions Potentially Unenforceable?	Probability Uplift
Yes	Yes	Yes	+4
Yes	Yes	No	+3
Yes	No	Yes	+3
Yes	No	No	+2
No	Yes	Yes	+2
No	Yes	No	+1
No	No	Yes	+1
No	No	No	0

* This table assumes that transfer triggers are set at A3 or above. When a transfer trigger is set below A3 or, for any other reason, does not contribute a two-notch uplift under our cross-sector methodology for assessing counterparty risk in structured finance transactions, a lower probability uplift will apply.

Source: Moody's Investors Service

Severity Modifier

We typically base the severity modifier on the following considerations:

» **Will the SPE choose not to terminate the defaulting swap?** We assume the SPE will choose not to terminate the defaulting swap following a counterparty default if there is a material likelihood that swap termination would require the SPE to make a senior-ranking termination payment and the SPE is unlikely to enter into a replacement swap (for example, because of swap margining requirements). We also assume that, in these circumstances, the SPE will exercise any contractual right it may have to suspend or subordinate its scheduled swap payments, typically resulting in a severity modifier of minus one notch. We may apply a different notching adjustment considering the particular contractual provisions.

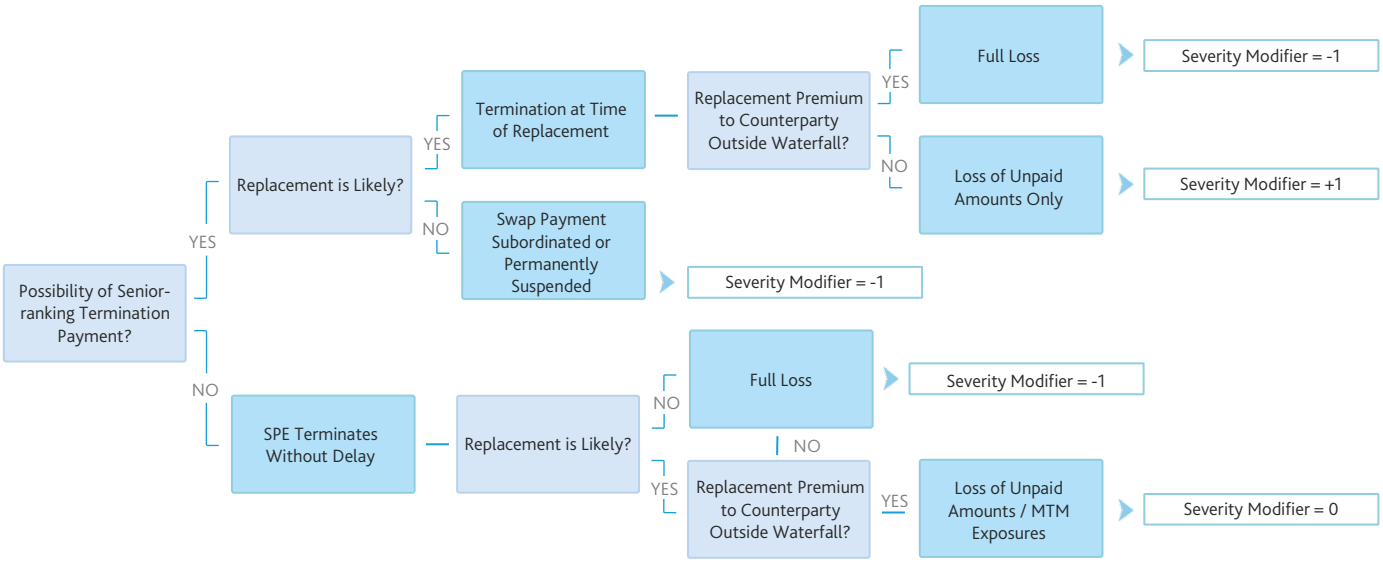
» **Will the SPE terminate the defaulting swap and simultaneously enter into a replacement swap?** We assume the SPE will simultaneously terminate and replace the defaulting swap if there is a material likelihood that swap termination would require the SPE to make a senior-ranking termination payment and the SPE is likely to enter into a replacement swap. In this case, the potential severity of loss relating to contractual subordination of the termination payment depends on whether any replacement premium received from the new counterparty is paid to the defaulting counterparty outside of the SPE's waterfall of payments. If the transaction documents provide for the replacement premium to be paid outside the waterfall, we assume the subordinated portion of the termination payment is limited to the amount of suspended payments (known as "unpaid amounts") that accrue during the period between counterparty default and termination, and we apply a positive severity modifier of one notch. Alternatively, if the replacement premium passes through the SPE's waterfall, we apply a severity modifier of minus one notch. Where the premium payment received from a replacement counterparty passes through the issuer's waterfall but the subordinated amount of the termination payment is limited to the difference between the termination payment and the premium payment, we view the degree of linkage to the swap provider as equivalent to those cases where the replacement fee is paid outside of the waterfall.

» **Will the SPE terminate the defaulting swap without waiting for replacement?** We expect the SPE will choose to terminate a defaulting swap as soon as possible without waiting to find a replacement counterparty if there is no material likelihood that, upon swap termination, the SPE will be required to

make a senior-ranking termination payment. In this case, the potential severity of loss relating to contractual subordination of the termination payment depends on whether the SPE ultimately enters into a replacement swap. We assume the entire termination payment will be subordinated, resulting in a severity modifier of minus one notch, if the SPE is not likely to enter into a replacement swap (for example, because of swap margining requirements[8]). Similarly, we apply a severity modifier of minus one notch if we expect the SPE to enter into a replacement swap and the replacement premium will pass through the SPE's waterfall. However, the severity modifier is zero if we expect the SPE to enter into a replacement swap and the transaction documents provide for the replacement premium to be paid to the defaulting counterparty outside the waterfall. We assume the loss severity will be limited to any "unpaid amounts" and the amount by which the swap's market value moves against the counterparty during the period between termination and replacement.

EXHIBIT 3

Assessing Severity of Loss Resulting from Swap Counterparty Linkage*



**This exhibit covers the most common contractual terms that create counterparty linkage, such as "flip" clauses and "walkaway" clauses. other terms may create linkage with different severity modifiers (to be determined following the principles described in this methodology).*

Source: Moody's Investors Service

[8] Ibid.

EXHIBIT 4

Illustration of Approach to Assigning Swap CIRs

Suppose a hypothetical swap with the following features:

- Pari passu ranking with Class A securities rated Aaa
- Notional amount tracks outstanding Class A
- Contractual subordination of termination payment upon counterparty default
- Swap counterparty rated A2
- Transfer trigger and associated provisions achieve a two-notch uplift
- Swap counterparty located in jurisdiction where enforceability of contractual subordination is legally certain
- Replacement premium will pass through the waterfall

We first determine the expected loss to the swap counterparty assuming it will not default. Since the swap ranks pari passu with the Class A securities (and the notional amount will fall to zero when Class A is redeemed), the expected loss to the counterparty equals the expected loss to the Class A securities and is consistent with a rating of Aaa.

Next, we assess the degree of linkage to the swap counterparty. If the counterparty defaults, any termination payment payable to it is subordinated. This means that we cap the rating at a level equal to the counterparty's rating plus the applicable notching adjustment. The notching adjustment is given by the sum of the probability uplift and the severity modifier.

In this case, the probability uplift is +3 (based on two notches for the transfer trigger and one notch for a high likelihood that the swap will be OTM for the counterparty when it defaults – see Exhibit 2) and the severity modifier is -1 (see Exhibit 3), giving a notching adjustment of +2.

The CIR is therefore capped at the counterparty's rating plus two notches, resulting in an assigned rating of Aa3.

If the expected loss to the counterparty (assuming no counterparty default) was consistent with a rating of Aa3 or below, then the CIR would not be impacted by counterparty linkage.

Source: Moody's Investors Service

Liquidity Facilities

In this section, we describe our approach to assigning CIRs to liquidity facilities.

Liquidity Facilities and ABCP Liquidity Facilities

Liquidity facilities provide liquidity in case of temporary cash flow disruption, enabling timely payment of interest on the related securities. The repayment of liquidity advances usually ranks at a senior level in the waterfall. The commitment amount of a term liquidity facility varies by asset class and depends on the potential causes of cash flow disruptions. In all cases, however, the commitment amount is smaller than the aggregate amount of rated securities.

By contrast, ABCP liquidity facilities act as backstop facilities which are drawn to repay ABCP investors if (i) the ABCP conduit cannot roll over maturing commercial paper; and (ii) there is a mismatch of maturity between the assets and ABCP. Therefore, ABCP liquidity facilities are generally sized to cover 100% of face CP plus potentially some senior costs of the issuer.

Ancillary Payment Obligations

Liquidity facility agreements often contain various provisions which can lead to counterparty claims against the SPE other than for the payment of principal and interest (e.g., tax gross-up, indemnity, costs and expenses, and increased costs clauses). It is difficult to predict the likelihood and amount of these ancillary payments. Suppose such payments rank at least pari passu with payment of liquidity interest and principal. In that case, we may be unable to assess the expected loss for the liquidity facility and therefore unable to assign a CIR. However, if such payments are subordinated to interest and principal payments, then we may exclude them from the scope of the rating analysis and assign a liquidity CIR.

Expected Loss Calculation[9]

Where an SPE's obligations under a liquidity facility rank pari passu with securities that have a long-term rating, the CIR generally matches the rating of those securities. However, this general rule does not always apply. For example, where the liquidity facility ranks pari passu with the most senior securities at closing but can be drawn to support the payment of other securities following the redemption of the most senior securities, the CIR is likely to be lower.

If a liquidity CIR cannot be matched with the long-term rating of pari passu notes, we employ a probability distribution to model the expected loss. We generally use a comprehensive cash flow model, such as ABSROM™, which enables us to model transaction cash flows and the associated liability structure. The model produces a series of loss scenarios, with outputs for each security that include the expected loss, weighted average life (WAL) and default probability.

Specifically, we calculate the expected loss as the sum of the probability weighted loss amounts under a liquidity instrument for each asset default scenario (taking account of the relevant priority of payments).[10]

For this purpose, the loss under a liquidity instrument is expressed as the net present value of the unpaid amounts (interest and principal) as a percentage of the commitment amount. To capture the effect of amortizing liquidity facility commitments, any reductions in the commitment amount are treated as repaid amounts. We also assume that any unused commitment amounts are repaid in full as soon as the facility can no longer be drawn.

Where possible, our modeling incorporates an assessment of whether, when and by how much liquidity will be drawn. However, if the likelihood of draw depends on circumstances that cannot easily be predicted, such as market disruptions, we generally assume a 100% probability of full drawdown. For example, when we determine the CIR for an ABCP liquidity facility, we generally assume the full liquidity commitment is already drawn as if it were directly funding the transaction instead of ABCP.

To translate the expected loss of a liquidity facility into a CIR, we need to determine the facility's WAL. Where we assume a 100% probability of draw, we generally model the WAL similarly to the corresponding rated securities. In other cases, we generally assume the liquidity facility's WAL is equal to the WAL of the underlying assets, taking into account any applicable revolving period, unless the facility can only be drawn to pay a particular class of securities and ranks at least as high as that class. In that case, we assume that the facility's WAL equals the WAL of such securities.

[9] For more information, see the discussion of Idealized Probabilities of Default and Expected Losses in *Rating Symbols and Definitions* (a link can be found in the "Moody's Related Publications" section) and in the "Loss Benchmarks" section.

[10] In this regard, we may apply any relevant elements of our rating methodologies in relation to the ratings of securities backed by the same types of assets.

Loss Benchmarks

For the purpose of mapping the expected loss posed to a counterparty to a CIR (prior to applying any rating cap relating to counterparty linkage), we use the expected loss benchmarks approach applicable to the underlying asset class. Please consult the relevant Moody's methodology for the structured finance asset class underlying a CIR for information about the loss benchmarks approach used for that asset class.

For example, in the case of counterparty instruments backed by residential or commercial mortgages, we select loss benchmarks referencing the Idealized Expected Loss table[11] using the Standard Asymmetric Range, in which the lower-bound of loss consistent with a given rating category is computed as an 80/20 weighted average on a logarithmic scale of the Idealized Expected Loss of the next higher rating category and the Idealized Expected Loss of the given rating category, respectively. For initial ratings and upgrade rating actions, the upper-bound of loss consistent with a given rating category is computed as an 80/20 weighted average on a logarithmic scale of the Idealized Expected Loss of the given rating category and the Idealized Expected Loss of the next lower rating category, respectively. When monitoring a rating for downgrade, the upper-bound of loss is computed as a 50/50 weighted average on a logarithmic scale. That is, the benchmark boundaries of loss appropriate for evaluating rating category *R* are given by:

EXHIBIT 5

$$[1]\ Rating\ Lower\ Bound_R = exp\{0.8 \cdot \log(Idealized\ Expected\ Loss_{R-1}) + 0.2 \cdot log(Idealized\ Expected\ Loss_R)\}$$

$$[2]\ Initial\ Rating\ Upper\ Bound_R = exp\{0.8 \cdot \log(Idealized\ Expected\ Loss_R) + 0.2 \cdot log(Idealized\ Expected\ Loss_{R+1})\}$$

$$[3]\ Current\ Rating\ Upper\ Bound_R = exp\{0.5 \cdot \log(Idealized\ Expected\ Loss_R) + 0.5 \cdot log(Idealized\ Expected\ Loss_{R+1})\}$$

Where:

- *Rating Lower Bound*$_R$ means the lowest Idealized Expected Loss associated with rating *R* and the expected loss range of rating *R* is inclusive of the *Rating Lower Bound*$_R$.
- *Initial Rating Upper Bound*$_R$ means the highest Idealized Expected Loss associated with rating *R* that is either initially assigned or upgraded and the expected loss range of rating *R* is exclusive of the *Rating Upper Bound*$_R$.
- *Current Rating Upper Bound*$_R$ means the highest Idealized Expected Loss associated with rating *R* that is currently outstanding and the expected loss range of rating *R* is exclusive of the *Rating Upper Bound*$_R$.
- *R-1* means the rating just above *R*.
- *R+1* means the rating just below *R*.
- The Rating Lower Bound for Aaa is 0% and the Rating Upper Bound for C is 100%. These are not derived using the formula.

Source: Moody's Investors Service

[11] For more information, see the discussion of Idealized Probabilities of Default and Expected Losses in *Rating Symbols and Definitions.* A link can be found in the "Moody's Related Publications" section.

Monitoring

In this section, we describe our approach when monitoring CIRs.

In monitoring CIRs, we apply the key components of this methodology. More specifically, we review expected loss for the CIR based on servicer or trustee reports that contain extensive transaction-specific performance information. We typically receive these reports periodically.

For CIRs with linkage to a counterparty, we also consider that counterparty's rating and the notching adjustment. For example, we monitor any counterparty's obligation to transfer a swap; non-performance of this obligation would imply an increased probability of loss to the counterparty compared with initial expectations and may lead to a downgrade of the CIR.

A material change in any relevant transaction feature prompts a more detailed reassessment of the CIR, and we will evaluate revised results as part of the review process.[12]

[12] For example, in methodologies where models are used, modeling is not relevant when it is determined that (1) a transaction is still revolving and performance has not changed from expectations, or (2) all tranches are at the highest achievable ratings and performance is at or better than expected performance, or (3) key model inputs are viewed as not having materially changed to the extent it would change outputs since the previous time a model was run, or (4) no new relevant information is available such that a model cannot be run in order to inform the rating, or (5) our analysis is limited to asset coverage ratios for transactions with undercollateralized tranches, or (6) a transaction has few remaining performing assets.

Moody's Related Publications

Cross-sector credit ratings are typically applied in tandem with sector credit rating methodologies, but in certain circumstances may be the basis for assigning credit ratings. A list of sector and cross-sector credit rating methodologies can be found here.

For data summarizing the historical robustness and predictive power of credit ratings, please click here.

For further information, please refer to *Rating Symbols and Definitions*, which includes a discussion of Moody's Idealized Probabilities of Default and Expected Losses, and which is available here.

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Report Number: 1316425

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