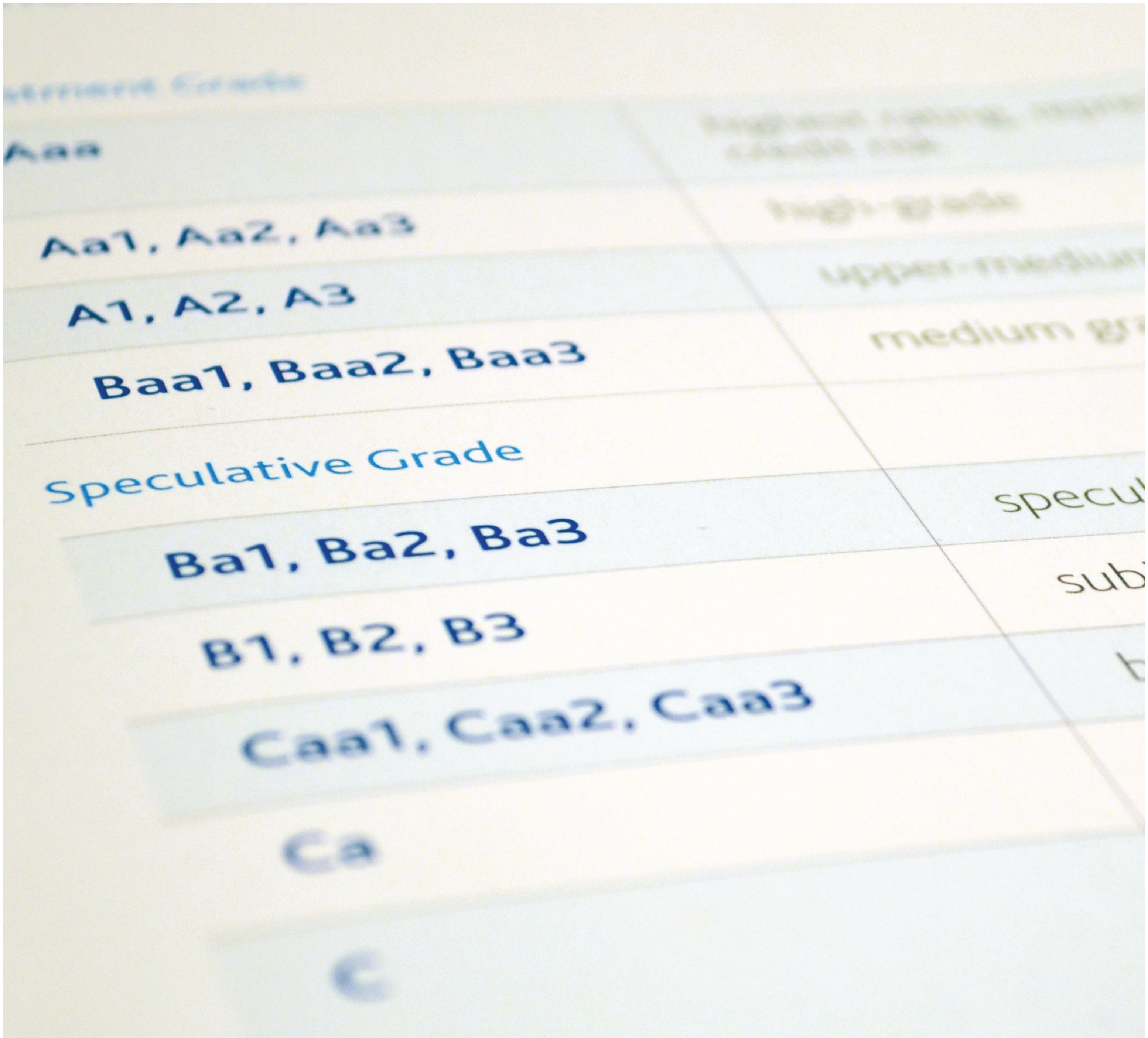
MOODY'S
INVESTORS SERVICE




# Rating Symbols and Definitions

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# Preface

In the spirit of promoting transparency and clarity, Moody's Standing Committee on Rating Symbols and Definitions offers this updated reference guide which defines Moody's various ratings symbols, rating scales and other ratings-related definitions.

Since John Moody devised the first bond ratings more than a century ago, Moody's rating systems have evolved in response to the increasing depth and breadth of the global capital markets. Much of the innovation in Moody's rating system is a response to market needs for clarity around the components of credit risk or to demands for finer distinctions in rating classifications.

I invite you to contact us with your comments.

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# Credit Rating Services

## Moody's Global Rating Scales

Ratings assigned on Moody's global long-term and short-term rating scales are forward-looking opinions of the relative credit risks of financial obligations issued by non-financial corporates, financial institutions, structured finance vehicles, project finance vehicles, and public sector entities. Long-term ratings are assigned to issuers or obligations with an original maturity of one year or more and reflect both on the likelihood of a default on contractually promised payments and the expected financial loss suffered in the event of default. Short-term ratings are assigned to obligations with an original maturity of thirteen months or less and reflect both on the likelihood of a default on contractually promised payments and the expected financial loss suffered in the event of default.[1 2]

Moody's differentiates structured finance ratings from fundamental ratings (i.e., ratings on nonfinancial corporate, financial institution, and public sector entities) on the global long-term scale by adding (sf ) to all structured finance ratings.[3] The addition of (sf ) to structured finance ratings should eliminate any presumption that such ratings and fundamental ratings at the same letter grade level will behave the same. The (sf ) indicator for structured finance security ratings indicates that otherwise similarly rated structured finance and fundamental securities may have different risk characteristics. Through its current methodologies, however, Moody's aspires to achieve broad expected equivalence in structured finance and fundamental rating performance when measured over a long period of time.

1 For certain structured finance, preferred stock and hybrid securities in which payment default events are either not defined or do not match investors' expectations for timely payment, long-term and short-term ratings reflect the likelihood of impairment (as defined below in this publication) and financial loss in the event of impairment.

2 Supranational institutions and central banks that hold sovereign debt or extend sovereign loans, such as the IMF or the European Central Bank, may not always be treated similarly to other investors and lenders with similar credit exposures. Long-term and short-term ratings assigned to obligations held by both supranational institutions and central banks, as well as other investors, reflect only the credit risks faced by other investors unless specifically noted otherwise.

3 Like other global scale ratings, (sf) ratings reflect both the likelihood of a default and the expected loss suffered in the event of default. Ratings are assigned based on a rating committee's assessment of a security's expected loss rate (default probability multiplied by expected loss severity), and may be subject to the constraint that the final expected loss rating assigned would not be more than a certain number of notches, typically three to five notches, above the rating that would be assigned based on an assessment of default probability alone. The magnitude of this constraint may vary with the level of the rating, the seasoning of the transaction, and the uncertainty around the assessments of expected loss and probability of default.

## Global Long-Term Rating Scale

| | |
|---|---|
| Aaa | Obligations rated Aaa are judged to be of the highest quality, subject to the lowest level of credit risk. |
| Aa | Obligations rated Aa are judged to be of high quality and are subject to very low credit risk. |
| A | Obligations rated A are judged to be upper-medium grade and are subject to low credit risk. |
| Baa | Obligations rated Baa are judged to be medium-grade and subject to moderate credit risk and as such may possess certain speculative characteristics. |
| Ba | Obligations rated Ba are judged to be speculative and are subject to substantial credit risk. |
| B | Obligations rated B are considered speculative and are subject to high credit risk. |
| Caa | Obligations rated Caa are judged to be speculative of poor standing and are subject to very high credit risk. |
| Ca | Obligations rated Ca are highly speculative and are likely in, or very near, default, with some prospect of recovery of principal and interest. |
| C | Obligations rated C are the lowest rated and are typically in default, with little prospect for recovery of principal or interest. |

Note: Moody's appends numerical modifiers 1, 2, and 3 to each generic rating classification from Aa through Caa. The modifier 1 indicates that the obligation ranks in the higher end of its generic rating category; the modifier 2 indicates a mid-range ranking; and the modifier 3 indicates a ranking in the lower end of that generic rating category. Additionally, a "(hyb)" indicator is appended to all ratings of hybrid securities issued by banks, insurers, finance companies, and securities firms.*

Note: For more information on long-term ratings assigned to obligations in default, please see the definition "Long-Term Credit Ratings for Defaulted or Impaired Securities" in the Other Definitions section of this publication.

** By their terms, hybrid securities allow for the omission of scheduled dividends, interest, or principal payments, which can potentially result in impairment if such an omission occurs. Hybrid securities may also be subject to contractually allowable write-downs of principal that could result in impairment. Together with the hybrid indicator, the long-term obligation rating assigned to a hybrid security is an expression of the relative credit risk associated with that security.*

## Global Short-Term Rating Scale

| | |
|---|---|
| P-1 | Issuers (or supporting institutions) rated Prime-1 have a superior ability to repay short-term debt obligations. |
| P-2 | Issuers (or supporting institutions) rated Prime-2 have a strong ability to repay short-term debt obligations. |
| P-3 | Issuers (or supporting institutions) rated Prime-3 have an acceptable ability to repay short-term obligations. |
| NP | Issuers (or supporting institutions) rated Not Prime do not fall within any of the Prime rating categories. |

## Standard Linkage Between the Global Long-Term and Short-Term Rating Scales

The following table indicates the long-term ratings consistent with different short-term ratings when such long-term ratings exist.[4]

| LONG-TERM RATING | SHORT-TERM RATING |
|---|---|
| Aaa | |
| Aa1 | |
| Aa2 | |
| Aa3 | |
| A1 | Prime-1 |
| A2 | |
| A3 | |
| Baa1 | Prime-2 |
| Baa2 | Prime-3 |
| Baa3 | |
| Ba1, Ba2, Ba3<br>B1, B2, B3<br>Caa1, Caa2, Caa3<br>Ca, C | Not Prime |

4 Structured finance short-term ratings are usually based either on the short-term rating of a support provider or on an assessment of cash flows available to retire the financial obligation.

## Obligations and Issuers Rated on the Global Long-Term and Short-Term Rating Scales

### BANK DEPOSIT RATINGS

Bank Deposit Ratings are opinions of a bank's ability to repay punctually its foreign and/or domestic currency deposit obligations and also reflect the expected financial loss of the default. Bank Deposit Ratings do not apply to deposits that are subject to a public or private insurance scheme; rather, the ratings apply to the most junior class of uninsured deposits, but they may in some cases incorporate the possibility that official support might in certain cases extend to the most junior class of uninsured as well as preferred and insured deposits. Foreign currency deposit ratings are subject to Moody's country ceilings for foreign currency deposits. This may result in the assignment of a different (and typically lower) rating for the foreign currency deposits relative to the bank's rating for domestic currency deposits.

### CLEARING COUNTERPARTY RATINGS

A Clearing Counterparty Rating (CCR) reflects Moody's opinion of a Central Counterparty Clearing House's (CCP) ability to meet the timely clearing and settlement of clearing obligations by the CCP as well as the expected financial loss in the event the obligation is not fulfilled. A CCR can be assigned at a CCP legal entity or clearing service level to the extent a legal entity operates multiple clearing services.

### CORPORATE FAMILY RATINGS

Moody's Corporate Family Ratings (CFRs) are long-term ratings that reflect the relative likelihood of a default on a corporate family's debt and debt-like obligations and the expected financial loss suffered in the event of default. A CFR is assigned to a corporate family as if it had a single class of debt and a single consolidated legal entity structure. CFRs are generally employed for speculative grade obligors, but may also be assigned to investment grade obligors. The CFR normally applies to all affiliates under the management control of the entity to which it is assigned. For financial institutions or other complex entities, CFRs may also be assigned to an association or group where the group may not exercise full management control, but where strong intra-group support and cohesion among individual group members may warrant a rating for the group or association. A CFR does not reference an obligation or class of debt and thus does not reflect priority of claim.

### CREDIT DEFAULT SWAP RATINGS

Credit Default Swap Ratings measure the risk associated with the obligations that a credit protection provider has with respect to credit events under the terms of the transaction. The ratings do not address potential losses resulting from an early termination of the transaction, nor any market risk associated with the transaction.

### ENHANCED RATINGS

Enhanced Ratings only pertain to US municipal securities. An enhanced rating is Moody's published assessment of a particular obligation's credit quality absent any insurance or wrap from a financial guarantor, but reflecting the underlying issue's standalone credit quality as well as any credit support provided by a state credit enhancement program.

## INSURANCE FINANCIAL STRENGTH RATINGS

Insurance Financial Strength Ratings are opinions of the ability of insurance companies to pay punctually senior policyholder claims and obligations and also reflect the expected financial loss suffered in the event of default. Specific obligations are considered unrated unless they are individually rated because the standing of a particular insurance obligation would depend on an assessment of its relative standing under those laws governing both the obligation and the insurance company.

## INSURED RATINGS

An insured or wrapped rating is Moody's assessment of a particular obligation's credit quality given the credit enhancement provided by a financial guarantor. Moody's insured ratings apply a credit substitution methodology, whereby the debt rating matches the higher of (i) the guarantor's financial strength rating and (ii) any published underlying or enhanced rating on the security.

## ISSUER RATINGS

Issuer Ratings are opinions of the ability of entities to honor senior unsecured debt and debt like obligations. As such, Issuer Ratings incorporate any external support that is expected to apply to all current and future issuance of senior unsecured financial obligations and contracts, such as explicit support stemming from a guarantee of all senior unsecured financial obligations and contracts, and/or implicit support for issuers subject to joint default analysis (e.g. banks and government-related issuers). Issuer Ratings do not incorporate support arrangements, such as guarantees, that apply only to specific (but not to all) senior unsecured financial obligations and contracts.

While Issuer Ratings reflect the risk that debt and debt-like claims are not serviced on a timely basis, they do not reflect the risk that a contract or other non-debt obligation will be subjected to commercial disputes.  Additionally, while an issuer may have senior unsecured obligations held by both supranational institutions and central banks (e.g., IMF, European Central Bank), as well as other investors, Issuer Ratings reflect only the risks faced by other investors.

## LONG-TERM AND SHORT-TERM OBLIGATION RATINGS

Moody's assigns ratings to long-term and short-term financial obligations.  Long-term ratings are assigned to issuers or obligations with an original maturity of one year or more and reflect both on the likelihood of a default on contractually promised payments and the expected financial loss suffered in the event of default. Short-term ratings are assigned to obligations with an original maturity of thirteen months or less and reflect both on the likelihood of a default on contractually promised payments and the expected financial loss suffered in the event of default.

## MEDIUM-TERM NOTE PROGRAM RATINGS

Moody's assigns provisional ratings to medium-term note (MTN) programs and definitive ratings to the individual debt securities issued from them (referred to as drawdowns or notes).

MTN program ratings are intended to reflect the ratings likely to be assigned to drawdowns issued from the program with the specified priority of claim (e.g. senior or subordinated).  To capture the contingent nature of a program rating, Moody's assigns provisional ratings to MTN programs. A provisional rating is denoted by a (P) in front of the rating and is defined elsewhere in this document.

The rating assigned to a drawdown from a rated MTN or bank/deposit note program is definitive in nature, and may differ from the program rating if the drawdown is exposed to additional credit risks besides the issuer's default, such as links to the defaults of other issuers, or has other structural features that warrant a different rating. In some circumstances, no rating may be assigned to a drawdown.

Moody's encourages market participants to contact Moody's Ratings Desks or visit www.moodys.com directly if they have questions regarding ratings for specific notes issued under a medium-term note program. Unrated notes issued under an MTN program may be assigned an NR (not rated) symbol.

## STRUCTURED FINANCE COUNTERPARTY INSTRUMENT RATINGS

Structured Finance Counterparty Instrument Ratings are assigned to a financial contract and measure the risk posed to a counterparty arising from a special purpose vehicle's (SPV's) default with respect to its obligations under the referenced financial contract.

## STRUCTURED FINANCE COUNTERPARTY RATINGS

Structured Finance Counterparty Ratings are assigned to structured financial operating companies and are founded upon an assessment of their ability and willingness to honor their obligations under financial contracts.

## STRUCTURED FINANCE INTEREST ONLY SECURITY (IO) RATINGS

A structured finance IO is a stream of cash flows that is a fraction of the interest flows from one or multiple referenced securities or assets in a structured finance transaction. IO ratings address the likelihood and degree to which payments made to the IO noteholders will be impacted by credit losses to the security, securities or assets referenced by the IO. Such IO securities generally do not have a principal balance. Other non-credit risks, such as a prepayment of the referenced securities or assets, are not addressed by the rating, although they may impact payments made to the noteholders.

## UNDERLYING RATINGS

An underlying rating is Moody's assessment of a particular obligation's credit quality absent any insurance or wrap from a financial guarantor or other credit enhancement.

For US municipal securities, the underlying rating will reflect the underlying issue's standalone credit quality absent any credit support provided by a state credit enhancement program.

## US Municipal Short-Term Debt and Demand Obligation Ratings

### SHORT-TERM OBLIGATION RATINGS

While the global short-term 'prime' rating scale is applied to US municipal tax-exempt commercial paper, these programs are typically backed by external letters of credit or liquidity facilities and their short-term prime ratings usually map to the long-term rating of the enhancing bank or financial institution and not to the municipality's rating. Other short-term municipal obligations, which generally have different funding sources for repayment, are rated using two additional short-term rating scales (i.e., the MIG and VMIG scales discussed below).

The Municipal Investment Grade (MIG) scale is used to rate US municipal bond anticipation notes of up to three years maturity. Municipal notes rated on the MIG scale may be secured by either pledged revenues or proceeds of a take-out financing received prior to note maturity. MIG ratings expire at the maturity of the obligation, and the issuer's long-term rating is only one consideration in assigning the MIG rating. MIG ratings are divided into three levels—MIG 1 through MIG 3—while speculative grade short-term obligations are designated SG.

| | |
|---|---|
| MIG 1 | This designation denotes superior credit quality. Excellent protection is afforded by established cash flows, highly reliable liquidity support, or demonstrated broad-based access to the market for refinancing. |
| MIG 2 | This designation denotes strong credit quality. Margins of protection are ample, although not as large as in the preceding group. |
| MIG 3 | This designation denotes acceptable credit quality. Liquidity and cash-flow protection may be narrow, and market access for refinancing is likely to be less well-established. |
| SG | This designation denotes speculative-grade credit quality. Debt instruments in this category may lack sufficient margins of protection. |

### DEMAND OBLIGATION RATINGS

In the case of variable rate demand obligations (VRDOs), a two-component rating is assigned: a long or short-term debt rating and a demand obligation rating. The first element represents Moody's evaluation of risk associated with scheduled principal and interest payments. The second element represents Moody's evaluation of risk associated with the ability to receive purchase price upon demand ("demand feature"). The second element uses a rating from a variation of the MIG scale called the Variable Municipal Investment Grade (VMIG) scale. The rating transitions on the VMIG scale, as shown in the diagram below, differ from those on the Prime scale to reflect the risk that external liquidity support generally will terminate if the issuer's long-term rating drops below investment grade.

| | |
|---|---|
| **VMIG 1** | This designation denotes superior credit quality. Excellent protection is afforded by the superior short-term credit strength of the liquidity provider and structural and legal protections that ensure the timely payment of purchase price upon demand. |
| **VMIG 2** | This designation denotes strong credit quality. Good protection is afforded by the strong short-term credit strength of the liquidity provider and structural and legal protections that ensure the timely payment of purchase price upon demand. |
| **VMIG 3** | This designation denotes acceptable credit quality. Adequate protection is afforded by the satisfactory short-term credit strength of the liquidity provider and structural and legal protections that ensure the timely payment of purchase price upon demand. |
| **SG** | This designation denotes speculative-grade credit quality. Demand features rated in this category may be supported by a liquidity provider that does not have an investment grade short-term rating or may lack the structural and/or legal protections necessary to ensure the timely payment of purchase price upon demand. |

## US MUNICIPAL SHORT- TERM VS. LONG-TERM RATINGS

| SHORT-TERM | LONG-TERM RATING | DEMAND OBLIGATION |
|---|---|---|
| MIG 1 | Aaa<br>Aa1<br>Aa2<br>Aa3<br>A1<br>A2 | VMIG 1 |
| MIG 2 | A3 | VMIG 2* |
| MIG 3 | Baa1 | VMIG 3* |
| MIG 3 | Baa2<br>Baa3 | SG |
| SG | Ba1, Ba2, Ba3<br>B1, B2, B3<br>Caa1, Caa2, Caa3<br>Ca, C | SG |

* For SBPA-backed VRDBs, The rating transitions are higher to allow for distance to downgrade to below investment grade due to the presence of automatic termination events in the SBPAs.

## National Scale Long-Term Ratings

Moody's long-term National Scale Ratings (NSRs) are opinions of the relative creditworthiness of issuers and financial obligations within a particular country. NSRs are not designed to be compared among countries; rather, they address relative credit risk within a given country. Moody's assigns national scale ratings in certain local capital markets in which investors have found the global rating scale provides inadequate differentiation among credits or is inconsistent with a rating scale already in common use in the country.

In each specific country, the last two characters of the rating indicate the country in which the issuer is located (e.g., Aaa.br for Brazil).

| | |
|---|---|
| Aaa.n | Issuers or issues rated Aaa.n demonstrate the strongest creditworthiness relative to other domestic issuers. |
| Aa.n | Issuers or issues rated Aa.n demonstrate very strong creditworthiness relative to other domestic issuers. |
| A.n | Issuers or issues rated A.n present above-average creditworthiness relative to other domestic issuers. |
| Baa.n | Issuers or issues rated Baa.n represent average creditworthiness relative to other domestic issuers. |
| Ba.n | Issuers or issues rated Ba.n demonstrate below-average creditworthiness relative to other domestic issuers. |
| B.n | Issuers or issues rated B.n demonstrate weak creditworthiness relative to other domestic issuers. |
| Caa.n | Issuers or issues rated Caa.n demonstrate very weak creditworthiness relative to other domestic issuers. |
| Ca.n | Issuers or issues rated Ca.n demonstrate extremely weak creditworthiness relative to other domestic issuers. |
| C.n | Issuers or issues rated C.n demonstrate the weakest creditworthiness relative to other domestic issuers. |

Note: Moody's appends numerical modifiers 1, 2, and 3 to each generic rating classification from Aa through Caa. The modifier 1 indicates that the obligation ranks in the higher end of its generic rating category; the modifier 2 indicates a mid-range ranking; and the modifier 3 indicates a ranking in the lower end of that generic rating category. National scale long-term ratings of D.ar and E.ar may also be applied to Argentine obligations.

## National Scale Short-Term Ratings

Moody's short-term NSRs are opinions of the ability of issuers in a given country, relative to other domestic issuers, to repay debt obligations that have an original maturity not exceeding one year. Short-term NSRs in one country should not be compared with short-term NSRs in another country, or with Moody's global ratings.

There are four categories of short-term national scale ratings, generically denoted N-1 through N-4 as defined below.

In each specific country, the first two letters indicate the country in which the issuer is located (e.g., BR-1 through BR-4 for Brazil).

| | |
|---|---|
| N-1 | Issuers rated N-1 have the strongest ability to repay short-term senior unsecured debt obligations relative to other domestic issuers. |
| N-2 | Issuers rated N-2 have an above average ability to repay short-term senior unsecured debt obligations relative to other domestic issuers. |
| N-3 | Issuers rated N-3 have an average ability to repay short-term senior unsecured debt obligations relative to other domestic issuers. |
| N-4 | Issuers rated N-4 have a below average ability to repay short-term senior unsecured debt obligations relative to other domestic issuers. |

Note: The short-term rating symbols P-1.za, P-2.za, P-3.za and NP.za are used in South Africa. National scale short-term ratings of AR-5 and AR-6 may also be applied to Argentine obligations.

Moody’s currently maintains long-term and short-term NSRs for the following countries:

- Argentina (.ar)
- Bolivia (.bo)
- Brazil (.br)
- Colombia (.co)
- Czech Republic (.cz)
- Kazakhstan (.kz)
- Lebanon (.lb)
- Mexico (.mx)
- Slovakia (.sk)
- South Africa (.za)
- Tunisia (.tn)
- Turkey (.tr)
- Ukraine (.ua)
- Uruguay (.uy)

## Probability of Default Ratings

A probability of default rating (PDR) is a corporate family-level opinion of the relative likelihood that any entity within a corporate family will default on one or more of its long-term debt obligations. For families in default on all of their long-term debt obligations (such as might be the case in bankruptcy), a PDR of D-PD is assigned. For families in default on a limited set of their debt obligations, the PDR is appended by the indicator "/LD", for example, Caa1-PD/LD.

A D-PD probability of default rating is not assigned (or /LD symbol appended) until a failure to pay interest or principal extends beyond any grace period specified by the terms of the debt obligation.

A D-PD probability of default rating is not assigned (or /LD indicator appended) for distressed exchanges until they have been completed, as opposed to simply announced.

Adding or removing the "/LD" indicator to an existing PDR is not a credit rating action.

| | |
|---|---|
| Aaa-PD | Corporate families rated Aaa-PD are judged to be of the highest quality, subject to the lowest level of default risk. |
| Aa-PD | Corporate families rated Aa-PD are judged to be of high quality and are subject to very low default risk. |
| A-PD | Corporate families rated A-PD are judged to be upper-medium grade and are subject to low default risk. |
| Baa-PD | Corporate families rated Baa-PD are judged to be medium-grade and subject to moderate default risk and as such may possess certain speculative characteristics. |
| Ba-PD | Corporate families rated Ba-PD are judged to be speculative and are subject to substantial default risk. |
| B-PD | Corporate families rated B-PD are considered speculative and are subject to high default risk. |
| Caa-PD | Corporate families rated Caa-PD are judged to be speculative of poor standing, subject to very high default risk, and may be in default on some but not all of their long-term debt obligations. |
| Ca-PD | Corporate families rated Ca-PD are highly speculative and are likely in, or very near, default on some but not all of their long-term debt obligations. |
| C-PD | Corporate families rated C-PD are the lowest rated and are typically in default on some but not all of their long-term debt obligations. |
| D-PD | Corporate families rated D are in default on all of their long-term debt obligations. |

Note: Moody's appends numerical modifiers 1, 2, and 3 to each generic rating classification from Aa-PD through Caa-PD (e.g., Aa1-PD). The modifier 1 indicates that the obligation ranks in the higher end of its generic rating category; the modifier 2 indicates a mid-range ranking; and the modifier 3 indicates a ranking in the lower end of that generic rating category.

# Other Permissible Services

## Assessments of Infonavit's Third Party Collection Agencies

Moody's Assessments of Infonavit's Third Party Collection Agencies are opinions regarding these agencies' ability to collect on Infonavit's mortgage loans. The assessments are provided to independent collection agencies that are contracted by Infonavit to collect on mortgage loans when the loan cannot be serviced via payroll deduction. They are assigned to agencies that service low delinquency pools or/and high delinquency pools. The assessment to these Infonavit service providers applies only in the context of Infonavit's primary servicing operations. As a result, these assessments are not stand-alone servicer/vendor quality ratings and do not refer to the ability of these third party collection agencies to service other types of loans.

Moody's maintains Assessments of Infonavit's Third Party Collection Agencies only in Mexico.

The Instituto del Fondo Nacional de la Vivienda para los Trabajadores (Infonavit) is the Mexican federal institute for workers housing, which originates and securitizes mortgage loans. While initially Infonavit loans are repaid via payroll deduction, once the borrower ceases to work for a company in the private sector the loan is serviced by Infonavit using a network of independent collection agencies.

» Strong

» Above Average

» Average

» Below Average

» Weak

Note: Where appropriate, a "+" or "-" modifier will be appended to the "Above Average", "Average", and "Below Average" category and a "-" modifier will be appended to the "Strong" category. A "+" modifier indicates the agency ranks in the higher end of the designated category. A "-" modifier indicates the agency ranks in the lower end of the designated category.

## Bond Fund Ratings

Bond Fund Ratings are opinions of the credit quality of investments within mutual funds and similar investment vehicles which principally invest in medium- and long-term fixed income obligations. As such, these ratings primarily reflect Moody's assessment of the creditworthiness of the assets held by the fund. Other risks, such as liquidity, operational, interest rate, currency and any other market risk, are excluded from the rating. In addition, as the ratings are intended to represent opinions on a fund's underlying assets, they specifically do not consider the historic, current, or prospective performance of a fund with respect to appreciation, volatility of net asset value, or yield.

| | |
|---|---|
| Aaa-bf | Bond Funds rated Aaa-bf generally hold assets judged to be of the highest credit quality. |
| Aa-bf | Bond Funds rated Aa-bf generally hold assets judged to be of high credit quality. |
| A-bf | Bond Funds rated A-bf generally hold assets considered upper-medium credit quality. |
| Baa-bf | Bond Funds rated Baa-bf generally hold assets considered medium credit quality. |
| Ba-bf | Bond Funds rated Ba-bf generally hold assets judged to have speculative elements. |
| B-bf | Bond Funds rated B-bf generally hold assets considered to be speculative. |
| Caa-bf | Bond Funds rated Caa-bf generally hold assets judged to be of poor standing. |
| Ca-bf | Bond Funds rated Ca-bf generally hold assets that are highly speculative and that are likely in, or very near, default, with some prospect of recovery of principal and interest. |
| C-bf | Bond Funds rated C-bf generally hold assets that are in default, with little prospect for recovery of principal or interest. |

## Common Representative Quality Assessments

Moody's Common Representative Quality (CRQ) Assessments are opinions regarding an organization's ability to represent the interests of investors, relative to other common representatives within a given country. The assessments represent Moody's assessment of a common representative's organizational structure and other management characteristics, including its human resources allocation, information technology, and operational controls and procedures.

The assessment definitions are as follows, with an "nn" modifier signifying the relevant country (e.g. CRQ1.mx for Mexico). Moody's currently maintains common representative assessments for Mexico.

| | |
|---|---|
| CRQ1.nn | Strong ability to represent interests of the trust certificate holders. |
| CRQ2.nn | Above-average ability to represent interests of the trust certificate holders. Common representative is judged to have "good" financial and operational stability. |
| CRQ3.nn | Average ability to represent interests of the trust certificate holders. Common representative is judged to have average financial and operational stability. |
| CRQ4.nn | Below-average ability to represent interests of the trust certificate holders, and below average financial and operational stability. |
| CRQ5.nn | Weak ability to represent interests of the trust certificate holders, and weak financial and operational stability. |

Note: Where appropriate, a "+" or "-" modifier will be appended to the CRQ2, CRQ3, and CRQ4 assessment category and a "-" modifier will be appended to the CRQ1 rating category (e.g. CRQ1-.nn). A "+" modifier indicates the common representative ranks in the higher end of the designated assessment category. A "-" modifier indicates the common representative ranks in the lower end of the designated assessment category.

## Contract Enforceability Indicators for Mexican States

Contract enforceability indicators are opinions of the relative effectiveness of Mexican states in enforcing disputed commercial contracts and mortgages. The indicators provide an ordinal ranking and do not address the absolute effectiveness of state judicial systems. Contract enforceability indicators are assigned to individual states based on a standardized weighting of results generated by independent, questionnaire-based, studies conducted by the Instituto Tecnológico Autonomy de México (ITAM), a Mexican university, and Gaxiola Calvo Sobrino y Asociados (GCSA), a Mexican law firm. As the indicators are derived primarily from public opinion polls, which may vary due to changes in participants and/or perceptions, they are not directly comparable from one study to another. Accordingly, the indicators are point-in-time assessments and are not monitored between studies.

| | |
|---|---|
| EC1 | Highest effectiveness in handling commercial cases and enforcing resolutions in Mexico. |
| EC2 | Above average effectiveness in handling commercial cases and enforcing resolutions in Mexico. |
| EC3 | Average effectiveness in handling commercial cases and enforcing resolutions in Mexico. |
| EC4 | Below average effectiveness in handling commercial cases and enforcing resolutions in Mexico. |
| EC5 | Weakest effectiveness in handling commercial cases and enforcing resolutions in Mexico. |

## Credit Estimates

A Credit Estimate (CE) is an unpublished point-in-time opinion of the approximate credit quality of individual securities, financial contracts, issuers, corporate families or loans. CEs are not Moody's Credit Ratings and are not assigned by rating committees. Had Moody's conducted an analysis commensurate with a full Moody's Credit Rating, the result may have been significantly different. Additionally, CEs are not monitored but are often updated from time to time.

CEs are widely used in the process of assessing elements of credit risk in transactions for which a traditional Moody's Credit Rating is to be determined. CEs are provided in the context of granular pools (where no one obligor represents an exposure of more than 3% of the total pool), chunky pools (where individual exposures represent 3% or more of the total pool) or single-name exposures.

CEs are typically assigned based on an analysis that uses public information (which at times may be limited) or information supplied by various third parties and usually does not involve any participation from the underlying obligor.

CEs are not expressed through the use of Moody's traditional 21-point, Aaa-C alphanumeric long-term rating scale; rather, they are expressed on a simple numerical 1-21 scale. They are calibrated, however, to be broadly comparable to Moody's alphanumeric rating scale and Moody's Rating Factors, which are used in CDO analysis.

## Equity Fund Assessments

Moody's equity fund assessments are opinions of the relative investment quality of investment funds, which principally invest in common stock or in a combination of common stock and fixed-income securities. Investment quality is judged based on the fund's historical performance relative to funds employing a similar investment strategy, as well as on the quality of the fund manager.

The assessments are not opinions on prospective performance of a fund with respect to asset appreciation, volatility of net asset value or yield.

| | |
|---|---|
| EF-1 | Equity funds assessed at EF-1 have the highest investment quality relative to funds with a similar investment strategy |
| EF-2 | Equity funds assessed at EF-2 have high investment quality relative to funds with a similar investment strategy |
| EF-3 | Equity funds assessed at EF-3 have moderate investment quality relative to funds with a similar investment strategy |
| EF-4 | Equity funds assessed at EF-4 have low investment quality relative to funds with a similar investment strategy |
| EF-5 | Equity funds assessed at EF-5 have the lowest investment quality relative to funds with a similar investment strategy |

## Green Bonds Assessments (GBAs)

Green Bonds Assessments are forward-looking opinions on the relative effectiveness of the approaches adopted by green bond issuers to manage, administer, allocate proceeds to and report on environmental projects financed with proceeds derived from green bond offerings. GBAs are assigned to individual green bonds.

| | |
|---|---|
| GB1 | Green bond issuer has adopted an excellent approach to manage, administer, allocate proceeds to and report on environmental projects financed with proceeds derived from green bond offerings. Prospects for achieving stated environmental objectives are excellent. |
| GB2 | Green bond issuer has adopted a very good approach to manage, administer, allocate proceeds to and report on environmental projects financed with proceeds derived from green bond offerings. Prospects for achieving stated environmental objectives are very good. |
| GB3 | Green bond issuer has adopted a good approach to manage, administer, allocate proceeds to and report on environmental projects financed with proceeds derived from green bond offerings. Prospects for achieving stated environmental objectives are good. |
| GB4 | Green bond issuer has adopted a fair approach to manage, administer, allocate proceeds to and report on environmental projects financed with proceeds derived from green bond offerings. Prospects for achieving stated environmental objectives are fair. |
| GB5 | Green bond issuer has adopted a poor approach to manage, administer, allocate proceeds to and report on environmental projects financed with proceeds derived from green bond offerings. Prospects for achieving stated environmental objectives are poor. |

## Indicative Ratings

An Indicative Rating is a confidential, unpublished, unmonitored, point-in-time opinion of the potential Credit Rating(s) of an issuer or a proposed debt issuance by an issuer contemplating such a debt issuance at some future date. Indicative Ratings are not equivalent to and do not represent traditional MIS Credit Ratings. However, Indicative Ratings are expressed on MIS's traditional rating scale.

## Investment Manager Quality Assessments

Moody's Investment Manager Quality assessments represent an analysis of the manner in which an investment manager creates, manages and monitors its investment offerings and serves its clientele. Investment managers are defined as entities whose principal activities involve the management of retail, high net worth and/or institutional assets.

The assessments incorporate Moody's analysis of the manager's investment activities and other management characteristics, including, as applicable, the performance of its product offerings, its financial profile and client servicing performance.

Moody's Investment Manager Quality assessments do not indicate a company's ability to repay a fixed financial obligation, or satisfy contractual financial obligations either in its own right or any that may have been entered into through actively managed portfolios.

Also, the assessments are not intended to consider the prospective performance of a portfolio, mutual fund or other investment vehicle with respect to appreciation, volatility of net asset value, or yield.

Investment Manager Quality assessment definitions are as follows:

| | |
|---|---|
| MQ1 | Investment managers assessed at MQ1 are judged to exhibit excellent management characteristics. |
| MQ2 | Investment managers assessed at MQ2 are judged to exhibit very good management characteristics. |
| MQ3 | Investment managers assessed at MQ3 are judged to exhibit good management characteristics. |
| MQ4 | Investment managers assessed at MQ4 are judged to exhibit adequate management characteristics. |
| MQ5 | Investment managers assessed at MQ5 are judged to exhibit poor management characteristics. |

Note: Where appropriate, a "+" or "-" modifier will be appended to the MQ2, MQ3, and MQ4 assessment category and a "-" modifier will be appended to the MQ1 assessment category. A "+" modifier indicates the fund ranks in the higher end of the designated assessment category. A "-" modifier indicates the fund ranks in the lower end of the designated assessment category

## Market Risk Assessments

Moody's Market Risk Assessments (MRAs) are opinions of the relative degree of historical volatility of a rated fund's NAV. MRAs are not intended to consider prospective performance of funds with respect to price appreciation or yield.

| | |
|---|---|
| MRA1 | Funds rated MRA1 have had **very low sensitivity** to changes in interest rates and other market conditions |
| MRA2 | Funds rated MRA2 have had **low sensitivity** to changes in interest rates and other market conditions |
| MRA3 | Funds rated MRA3 have had **between low and moderate sensitivity** to changes in interest rates and other market conditions |
| MRA4 | Funds rated MRA4 have had **moderate sensitivity** to changes in interest rates and other market conditions |
| MRA5 | Funds rated MRA5 have had **between moderate and high sensitivity** to changes in interest rates and other market conditions |
| MRA6 | Funds rated MRA6 have had **high sensitivity** to changes in interest rates and other market conditions |
| MRA7 | Funds rated MRA7 have had **very high sensitivity** to changes in interest rates and other market conditions |

Note: MRAs are assigned only in Mexico.

## Money Market Fund (mf) Ratings

Moody's Money Market Fund Ratings are opinions of the investment quality of shares in mutual funds and similar investment vehicles which principally invest in short-term fixed income obligations. As such, these ratings incorporate Moody's assessment of a fund's published investment objectives and policies, the creditworthiness of the assets held by the fund, the liquidity profile of the fund's assets relative to the fund's investor base, the assets' susceptibility to market risk, as well as the management characteristics of the fund. The ratings are not intended to consider the prospective performance of a fund with respect to appreciation, volatility of net asset value, or yield.

| | |
|---|---|
| Aaa-mf | Money market funds rated Aaa-mf have very strong ability to meet the dual objectives of providing liquidity and preserving capital. |
| Aa-mf | Money market funds rated Aa-mf have strong ability to meet the dual objectives of providing liquidity and preserving capital. |
| A-mf | Money market funds rated A-mf have moderate ability to meet the dual objectives of providing liquidity and preserving capital. |
| Baa-mf | Money market funds rated Baa-mf have marginal ability to meet the dual objectives of providing liquidity and preserving capital. |
| B-mf | Money market funds rated B-mf are unable to meet the objective of providing liquidity and have marginal ability to meet the objective of preserving capital. |
| C-mf | Money market funds rated C-mf are unable to meet either objective of providing liquidity or preserving capital. |

## National Scale Stock Ratings

National Scale Stock ("NSSR") ratings provide an ordinal ranking of a company's ability to pay and sustain common stock dividend payments while also providing an assessment of the stock's trading liquidity in its principal market. Moody's currently issues NSSRs for stocks traded on the Argentinean, Bolivian, Colombian, and Uruguayan stock markets. NSSRs are expressed on a 1 through 4 rating scale.

| | |
|---|---|
| 1 | Issuers that exhibit a very strong combination of liquidity and dividend sustainability. |
| 2 | Issuers that exhibit a strong combination of liquidity and dividend sustainability. |
| 3 | Issuers that exhibit a fair combination of liquidity and dividend sustainability. |
| 4 | Issuers that exhibit a poor combination of liquidity and dividend sustainability. |

## Originator Assessments

Moody's Originator Assessments (OAs) are Moody's opinions of the strength of originators' policies and practices as they affect defaults and losses in structured finance securities backed by loans. OAs consider early loan performance, originator ability and originator stability. Originator assessments look to isolate the effects an originator's policies and practices have on loan performance from the effects of external factors such as the macroeconomic environment and the ability of the servicer.

Moody's assigns originators one of the following six assessment levels: Strong, Above Average, Average, Below Average, Weak, Unacceptable.

## Q-scores

Q-scores are assessments that are scorecard generated, unpublished, point-in-time estimates of the approximate credit quality of individual sub-sovereign entities (regional & local governments and government related issuers). They provide a granular assessment of individual credit exposures within large pool transactions. Q-scores are not equivalent to and do not represent traditional Moody's Credit Ratings and are not assigned by a rating committee. Q-scores, in large numbers, assist in the analysis of mean portfolio credit risk and provide the distribution of credit risk of a large pool from the underlying exposures.

Q-scores are not expressed through the use of Moody's traditional 21-point, Aaa-C alphanumeric long-term rating scale; rather, they are expressed on a simple numerical 1.q-21.q scale.

## Rating Assessment Services

The Rating Assessment Service or RAS is a confidential, unpublished, unmonitored, point-in-time opinion of the potential Credit Rating(s), or the potential impact on the current Credit Rating(s), given one or more hypothetical Scenario(s) (defined below) communicated to MIS in writing by a Rated Entity or other applicant. Rating Assessments are not equivalent to and do not represent traditional MIS Credit Ratings. However, Rating Assessments are expressed on MIS's traditional rating scale.

## Scenario

A Scenario is a proposed credit transforming transaction, project and/or debt issuance which materially alters the issuer's current state (including acquisitions, disposals, share buybacks, listings, initial public offerings and material restructurings), or a materially different variation on such a transaction, project and/or debt issuance, including a material change in the overall size of the debt being contemplated.

## Servicer Quality Assessments

Moody's Servicer Quality (SQ) assessments are opinions of the ability of a servicer to prevent or mitigate losses in a securitization. SQ assessments are provided for servicers who act as the Primary Servicer (servicing the assets from beginning to end), Special Servicer (servicing only the more delinquent assets), or Master Servicer (overseeing the performance and reporting from underlying servicers). For Primary Servicers, each SQ assessment is assigned to a specific asset type.

SQ assessments represent Moody's assessment of a servicer's ability to affect losses based on factors under the servicer's control. The SQ approach works by separating a servicer's performance from the credit quality of the assets being serviced. In doing this, Moody's evaluates how effective a servicer is at preventing defaults and maximizing recoveries to a transaction when defaults occur.

SQ assessments consider the operational and financial stability of a servicer as well as its ability to respond to changing market conditions. This assessment is based on the company's organizational structure, management characteristics, financial profile, operational controls and procedures as well as its strategic goals.

Moody's SQ assessments are different from traditional debt ratings, which are opinions as to the credit quality of a specific instrument. SQ assessments do not apply to a company's ability to repay a fixed financial obligation or satisfy contractual financial obligations other than, in limited circumstances, the obligation to advance on delinquent assets it services, when such amounts are believed to be recoverable.

| | |
|---|---|
| SQ1 | Strong combined servicing ability and servicing stability |
| SQ2 | Above average combined servicing ability and servicing stability |
| SQ3 | Average combined servicing ability and servicing stability |
| SQ4 | Below average combined servicing ability and servicing stability |
| SQ5 | Weak combined servicing ability and servicing stability |

Note: Where appropriate, a "+" or "-" modifier will be appended to the SQ2, SQ3, and SQ4 rating category and a "-" modifier will be appended to the SQ1 rating category. A "+" modifier indicates the servicer ranks in the higher end of the designated rating category. A "-" modifier indicates the servicer ranks in the lower end of the designated rating category.

Moody's also assigns National Scale Servicer Quality Assessments. National Scale Servicer Quality Assessments append a suffix of ".nn" to the ratings on the above scale in order to signify the relevant country.

## Trustee Quality Assessments

Moody's Trustee Quality (TQ) Assessments are opinions regarding an organization's ability to manage the entrusted assets for the benefit of investors, relative to other trustees within a given country. The assessments represent Moody's assessment of a trustee's organizational structure and other management characteristics, including its monitoring and reporting system, human resources allocation, information technology, operational controls and procedures, and master servicing capability.

The assessment definitions are as follows, with an "nn" modifier signifying the relevant country (e.g. TQ1. ar for Argentina, or TQ4.mx for Mexico). Moody's currently maintains trustee quality assessments for the following countries:

» Argentina (TQ.ar)

» Brazil (TQ.br)

» Mexico (TQ.mx)

| | |
|---|---|
| TQ1.nn | Strong capability of managing entrusted assets for the benefit of the trust certificate holders. |
| TQ2.nn | Above-average capability of managing entrusted assets for the benefit of the trust certificate holders. Trustee is judged to have "good" financial and operational stability. |
| TQ3.nn | Average capability of managing entrusted assets for the benefit of the trust certificate holders. Trustee is judged to have average financial and operational stability. |
| TQ4.nn | Below-average capability of managing entrusted assets for the benefit of the trust certificate holders, and below-average financial and operational stability. |
| TQ5.nn | Weak capability of managing entrusted assets for the benefit of the trust certificate holders, and weak financial and operational stability. |

Note: Where appropriate, a "+" or "-" modifier will be appended to the TQ2, TQ3, and TQ4 assessment category and a "-" modifier will be appended to the TQ1 rating cat-egory (e.g. TQ1-.nn). A "+" modifier indicates the trustee ranks in the higher end of the designated rating category. A "-" modifier indicates the trustee ranks in the lower end of the designated assessment category.

# Other Rating Symbols

## Expected ratings - e

To address market demand for timely information on particular types of credit ratings, Moody's has licensed to certain third parties the right to generate "Expected Ratings." Expected Ratings are designated by an "e" after the rating code, and are intended to anticipate Moody's forthcoming rating assignments based on reliable information from third party sources (such as the issuer or underwriter associated with the particular securities) or established Moody's rating practices (i.e., medium term notes are typically, but not always, assigned the same rating as the note's program rating). Expected Ratings will exist only until Moody's confirms the Expected Rating, or issues a different rating for the relevant instrument. Moody's encourages market participants to contact Moody's Ratings Desk or visit www.moodys.com if they have questions regarding Expected Ratings, or wish Moody's to confirm an Expected Rating.

## Provisional Ratings - (P)

Moody's will often assign a provisional rating to program ratings or to an issuer or an instrument when the assignment of a definitive rating is subject to the fulfilment of contingencies that are highly likely to be completed. Upon fulfillment of these contingencies, such as finalization of documents and issuance of the securities, the provisional notation is removed.[5] A provisional rating is denoted by placing a (P) in front of the rating.

## Refundeds - #

Issues that are secured by escrowed funds held in trust, reinvested in direct, non-callable US government obligations or non-callable obligations unconditionally guaranteed by the US Government or Resolution Funding Corporation are identified with a # (hatch mark) symbol, e.g., #Aaa.

## Withdrawn - WR

When Moody's no longer rates an obligation on which it previously maintained a rating, the symbol WR is employed. Please see Moody's Guidelines for the Withdrawal of Ratings, available on www.moodys.com.

## Not Rated - NR

NR is assigned to an unrated issuer, obligation and/or program.

## Not Available - NAV

An issue that Moody's has not yet rated is denoted by the NAV symbol.

## Terminated Without Rating - TWR

The symbol TWR applies primarily to issues that mature or are redeemed without having been rated.

5 Program ratings for shelf registrations and medium term notes remain provisional while any ratings assigned to issues under these programs are definitive ratings. Provisional ratings may also be assigned to unexecuted credit default swap contracts or other debt-like obligations that define specific credit risk exposures facing individual financial institutions. In such cases, the drafter of the swap or other debt-like obligation may have no intention of executing the agreement, and, therefore, the provisional notation is unlikely to ever be removed.

# Inputs to Rating Services

Inputs to Rating Services are not Credit Ratings and they are expressed using differentiated symbols to distinguish them from Credit Ratings. Their use in helping to assign Credit Ratings is described in the respective Credit Rating Methodologies where they are used.

## Baseline Credit Assessments

Baseline credit assessments (BCAs) are opinions of issuers' standalone intrinsic strength, absent any extraordinary support from an affiliate[6] or a government. BCAs are essentially an opinion on the likelihood of an issuer requiring extraordinary support to avoid a default on one or more of its debt obligations or actually defaulting on one or more of its debt obligations in the absence of such extraordinary support. As probability measures, BCAs do not provide an opinion on the severity of a default that would occur in the absence of extraordinary support.

Contractual relationships and any expected ongoing annual subsidies from the government or an affiliate are incorporated in BCAs and, therefore, are considered intrinsic to an issuer's standalone financial strength. Extraordinary support is typically idiosyncratic in nature and is extended to prevent an issuer from becoming nonviable.

BCAs are expressed on a lower-case alpha-numeric scale that corresponds to the alpha-numeric ratings of the global long-term rating scale.

6 Affiliate includes a parent, cooperative groups and significant investors (typically with a greater than 20 percent voting interest). Government includes local, regional and national governments.

| | |
|---|---|
| aaa | Issuers assessed **aaa** are judged to have the highest intrinsic, or standalone, financial strength, and thus subject to the lowest level of credit risk absent any possibility of extraordinary support from an affiliate or a government. |
| aa | Issuers assessed **aa** are judged to have high intrinsic, or standalone, financial strength, and thus subject to very low credit risk absent any possibility of extraordinary support from an affiliate or a government. |
| a | Issuers assessed **a** are judged to have upper-medium-grade intrinsic, or standalone, financial strength, and thus subject to low credit risk absent any possibility of extraordinary support from an affiliate or a government. |
| baa | Issuers assessed **baa** are judged to have medium-grade intrinsic, or standalone, financial strength, and thus subject to moderate credit risk and, as such, may possess certain speculative credit elements absent any possibility of extraordinary support from an affiliate or a government. |
| ba | Issuers assessed **ba** are judged to have speculative intrinsic, or standalone, financial strength, and are subject to substantial credit risk absent any possibility of extraordinary support from an affiliate or a government. |
| b | Issuers assessed **b** are judged to have speculative intrinsic, or standalone, financial strength, and are subject to high credit risk absent any possibility of extraordinary support from an affiliate or a government. |
| caa | Issuers assessed **caa** are judged to have speculative intrinsic, or standalone, financial strength, and are subject to very high credit risk absent any possibility of extraordinary support from an affiliate or a government. |
| ca | Issuers assessed **ca** have highly speculative intrinsic, or standalone, financial strength, and are likely to be either in, or very near, default, with some prospect for recovery of principal and interest; or, these issuers have avoided default or are expected to avoid default through the provision of extraordinary support from an affiliate or a government. |
| c | Issuers assessed **c** are typically in default, with little prospect for recovery of principal or interest; or, these issuers are benefiting from a government or affiliate support but are likely to be liquidated over time; without support there would be little prospect for recovery of principal or interest. |

Note: Moody's appends numerical modifiers 1, 2, and 3 to each generic assessment classification from aa through caa. The modifier 1 indicates that the obligation ranks in the higher end of its generic assessment category; the modifier 2 indicates a mid-range ranking; and the modifier 3 indicates a ranking in the lower end of that generic assessment category.

## Counterparty Risk Assessments

Counterparty risk assessments (CR assessments) are opinions on the likelihood of a default by an issuer on certain senior operating obligations and other contractual commitments. CR assessments are assigned to legal entities in banking groups and, in some instances, other regulated institutions with similar bank-like senior obligations. CR assessments address the likelihood of default and do not take into consideration the expected severity of loss in the event of default.

Obligations and commitments typically covered by CR assessments include payment obligations associated with covered bonds (and certain other secured transactions), derivatives, letters of credit, third party guarantees, servicing and trustee obligations and other similar operational obligations that arise from a bank in performing its essential client-facing operating functions.

Long-term CR assessments reference obligations with an original maturity of one year or more. Short-term CR assessments reference obligations with an original maturity of thirteen months or less. CR assessments are expressed on alpha-numeric scales that correspond to the alpha-numeric ratings of the global long-term and short-term rating scales, with a "(cr)" modifier appended to the CR assessment symbols to differentiate them from our credit ratings.

### CR Assessment Long-Term Scale

| | |
|---|---|
| Aaa(cr) | Issuers assessed Aaa(cr) are judged to be of the highest quality, subject to the lowest level of risk of defaulting on certain senior operating obligations and other contractual commitments. |
| Aa(cr) | Issuers assessed Aa(cr) are judged to be of high quality and are subject to very low risk of defaulting on certain senior operating obligations and other contractual commitments. |
| A(cr) | Issuers assessed A(cr) are judged to be upper-medium grade and are subject to low risk of defaulting on certain senior operating obligations and other contractual commitments. |
| Baa(cr) | Issuers assessed Baa(cr) are judged to be medium-grade and subject to moderate risk of defaulting on certain senior operating obligations and other contractual commitments and as such may possess certain speculative characteristics. |
| Ba(cr) | Issuers assessed Ba(cr) are judged to be speculative and are subject to substantial risk of defaulting on certain senior operating obligations and other contractual commitments. |
| B(cr) | Issuers assessed B(cr) are considered speculative and are subject to high risk of defaulting on certain senior operating obligations and other contractual commitments. |
| Caa(cr) | Issuers assessed Caa(cr) are judged to be speculative of poor standing and are subject to very high risk of defaulting on certain senior operating obligations and other contractual commitments. |
| Ca(cr) | Issuers assessed Ca(cr) are highly speculative and are likely in, or very near, default on certain senior operating obligations and other contractual commitments. |
| C(cr) | Issuers assessed C(cr) are the lowest rated and are typically in default on certain senior operating obligations and other contractual commitments. |

Note: Moody's appends numerical modifiers 1, 2, and 3 to each generic assessment classification from Aa(cr) through Caa(cr). The modifier 1 indicates that the issuer ranks in the higher end of its generic assessment category; the modifier 2 indicates a mid-range ranking; and the modifier 3 indicates a ranking in the lower end of that generic assessment category.

## CR Assessment Short-Term Scale

| | |
|---|---|
| P-1(cr) | Issuers assessed Prime-1(cr) have a superior ability to honor short-term operating obligations.. |
| P-2(cr) | Issuers assessed Prime-2(cr) have a strong ability to honor short-term operating obligations. |
| P-3(cr) | Issuers assessed Prime-3(cr) have an acceptable ability to honor short-term operating obligations. |
| NP(cr) | Issuers assessed Not Prime(cr) do not fall within any of the Prime rating categories. |

## Loss Given Default Assessments

Moody's Loss Given Default (LGD) assessments are opinions about expected loss given default expressed as a percent of principal and accrued interest at the resolution of the default.7 LGD assessments are assigned to individual loan, bond, and preferred stock issues. The firm-wide or enterprise expected LGD rate generally approximates a weighted average of the expected LGD rates on the firm's liabilities (excluding preferred stock), where the weights equal each obligation's expected share of the total liabilities at default.

The following scale is used in the assignment of LGD assessments:

| Assessments | Loss range |
|---|---|
| LGD1 | ≥ 0% and < 10% |
| LGD2 | ≥ 10% and < 30% |
| LGD3 | ≥ 30% and < 50% |
| LGD4 | ≥ 50% and < 70% |
| LGD5 | ≥ 70% and < 90% |
| LGD6 | ≥ 90% and ≤ 100% |

7 The expected LGD rate is 100% minus the expected value that will be received at default resolution, discounted by the coupon rate back to the date the last debt service payment was made, and divided by the principal outstanding at the date of the last debt service payment.

## Structured Credit Assessments (SCAs)

Structured Credit Assessments (SCAs) are opinions of the relative credit quality of financial obligations that are collateral assets within securitizations. SCAs incorporate the credit implications of structural features of the securitization that are not intrinsic to the obligation, such as servicing, liquidity arrangements and tail periods.[8] In contrast, credit ratings on these same instruments do not reflect these structural features, as they would not be available to investors that invest in these assets directly outside of the securitization's structure.

Structured Credit Assessments are opinions of the expected loss associated with the financial obligation in the context of the corresponding securitization transaction and are expressed, with the sca indicator, on a lower-case alpha-numeric scale that corresponds to the alpha-numeric ratings of the global long-term rating scale.

| | |
|---|---|
| aaa (sca) | Financial obligations assessed aaa (sca) are judged to have the highest credit quality and thus subject to the lowest credit risk, when used as inputs in determining a structured finance transaction's rating. |
| aa (sca) | Financial obligations assessed aa (sca) are judged to have high credit quality and thus subject to very low credit risk, when used as inputs in determining a structured finance transaction's rating. |
| a (sca) | Financial obligations assessed a (sca) are judged to have upper-medium credit quality and thus subject to low credit risk, when used as inputs in determining a structured finance transaction's rating. |
| baa (sca) | Financial obligations assessed baa (sca) are judged to have medium-grade credit quality and thus subject to moderate credit risk, and as such, may possess certain speculative credit elements, when used as inputs in determining a structured finance transaction's rating. |
| ba (sca) | Financial obligations assessed ba (sca) are judged to have speculative credit quality and subject to substantial credit risk, when used as inputs in determining a structured finance transaction's rating. |
| b (sca) | Financial obligations assessed b (sca) are judged to have speculative credit quality and subject to high credit risk, when used as inputs in determining a structured finance transaction's rating. |
| caa (sca) | Financial obligations assessed caa (sca) are judged to have speculative credit quality and subject to very high credit risk, when used as inputs in determining a structured finance transaction's rating. |
| ca (sca) | Financial obligations assessed ca (sca) are judged to be highly speculative and are likely to be either in, or very near, default, with some prospect for recovery of principal or interest, when used as inputs in determining a structured finance transaction's rating. |
| c (sca) | Financial obligations assessed c (sca) are typically in default with little prospect for recovery of principal or interest, when used as inputs in determining a structured finance transaction's rating. |

Note:

1. Moody's appends numerical modifiers 1, 2, and 3 to each generic assessment classification from aa (sca) through caa (sca). The modifier 1 indicates that the obligation ranks in the higher end of its generic assessment category; the modifier 2 indicates a mid-range ranking; and the modifier 3 indicates a ranking in the lower end of that generic assessment category.
2. The modifier pd indicates a probability of default structured credit assessment (for example aaa (sca.pd)). A probability of default structured credit assessment is an opinion of the relative likelihood that the financial instrument will default.

8 Structural features of securitisations often include: servicing of the loans by third party experts, liquidity arrangements to mitigate specific risks or the risk of short term cash flow interruptions, and tail periods between the loan maturity date and the loss calculation date to allow for an orderly sale of the assets upon default.

# Other Definitions

## Rating Outlooks

A Moody's rating outlook is an opinion regarding the likely rating direction over the medium term. Rating outlooks fall into four categories: Positive (POS), Negative (NEG), Stable (STA), and Developing (DEV). Outlooks may be assigned at the issuer level or at the rating level. Where there is an outlook at the issuer level and the issuer has multiple ratings with differing outlooks, an "(m)" modifier to indicate multiple will be displayed and Moody's written research will describe and provide the rationale for these differences. A designation of RUR (Rating(s) Under Review) indicates that an issuer has one or more ratings under review, which overrides the outlook designation. A designation of RWR (Rating(s) Withdrawn) indicates that an issuer has no active ratings to which an outlook is applicable. Rating outlooks are not assigned to all rated entities. In some cases, this will be indicated by the display NOO (No Outlook).

A stable outlook indicates a low likelihood of a rating change over the medium term. A negative, positive or developing outlook indicates a higher likelihood of a rating change over the medium term. A rating committee that assigns an outlook of stable, negative, positive, or developing to an issuer's rating is also indicating its belief that the issuer's credit profile is consistent with the relevant rating level at that point in time.

The time between the assignment of a new rating outlook and a subsequent rating action has historically varied widely, depending upon the pace of new credit developments which materially affect the issuer's credit profile. On average, after the initial assignment of a positive or negative rating outlook, the next rating action – either a change in outlook, a rating review, or a change in rating – has followed within about a year, but outlooks have also remained in place for much shorter and much longer periods of time. The next rating action subsequent to the assignment of a negative (positive) rating outlook has historically been a downgrade or review for possible downgrade (upgrade or review for possible upgrade) about one half of the time; rating actions in the opposite direction are less common. After the initial assignment of a stable outlook, about 90% of ratings experience no change in rating during the following year.

## Rating Reviews

A review indicates that a rating is under consideration for a change in the near term.[9] A rating can be placed on review for upgrade (UPG), downgrade (DNG), or more rarely with direction uncertain (UNC). A review may end with a rating being upgraded, downgraded, or confirmed without a change to the rating. Ratings on review are said to be on Moody's "Watchlist" or "On Watch". Ratings are placed on review when a rating action may be warranted in the near term but further information or analysis is needed to reach a decision on the need for a rating change or the magnitude of the potential change.

The time between the origination of a rating review and its conclusion varies widely depending on the reason for the review and the amount of time needed to obtain and analyze the information relevant to make a rating determination. In some cases, the ability to conclude a review is dependent on whether a specific event occurs, such as the completion of a corporate merger or the execution of an amendment to a structured finance security. In these event-dependent cases and other unique situations, reviews can sometimes last 90 to 180 days or even longer. For the majority of reviews, however, where the conclusion of the review is not dependent on an event whose timing Moody's cannot control, reviews are typically concluded within 30 to 90 days.

Ratings on review for possible downgrade (upgrade) have historically concluded with a downgrade (upgrade) over half of the time.

9 Baseline Credit Assessments and Counterparty Risk Assessments may also be placed on review.

## Confirmation of a Rating

A Confirmation is a public statement that a previously announced review of a rating has been completed without a change to the rating.

## Affirmation of a Rating

An Affirmation is a public statement that the current Credit Rating assigned to an issuer or debt obligation, which is not currently under review, continues to be appropriately positioned. An Affirmation is generally issued to communicate Moody's opinion that a publicly visible credit development does not have a direct impact on an outstanding rating.

## Anticipated/Subsequent Ratings Process

The process of assigning Credit Ratings that are derived exclusively from an existing Credit Rating of a program, series, category/class of debt or primary Rated Entity. This includes:

» An assignment of a Credit Rating to a new issuance, take-down or take-down-like debt within or under an existing rated program, without impact on the program's Credit Rating (including frequent issues from a "shelf registration");

» Credit Ratings based on the pass-through of a primary Rated Entity's Credit Rating, including monoline or guarantee linked ratings;

» An assignment of Credit Ratings to securities of the same seniority as previously rated debt when existing Credit Ratings had already contemplated issuance of that debt (including Credit Ratings released from Federal Agency Queue issued by federal agencies or other specialty common queues). This also includes Credit Ratings assigned to new debts or amended and extended credit facilities which replace similarly structured debts or credit facilities at the same rating level;

» An assignment of a definitive Credit Rating to replace a previously assigned provisional rating (i.e., (P) rating) at the same rating level, or a definitive rating assigned to a security being issued from a program carrying a provisional rating, in each case where the transaction structure and terms have not changed prior to the assignment of the definitive Credit Rating in a manner that would have affected the Credit Rating.

## Rating Agency Conditions (RACs)

Parties to a transaction sometimes choose to include clauses in the transaction documents that require a party thereto to obtain an opinion from a rating agency that certain specified actions, events, changes to the structure of, or amendments to the documentation of, the transaction will not result in a reduction or withdrawal of the current rating maintained by that rating agency. Such an opinion is referred to by Moody's as a "RAC" and consists of a letter or other written communication, such as a press release,

from Moody's issued after consideration of a request that Moody's provide a RAC. The decision to issue a RAC remains entirely within Moody's discretion, and Moody's may choose not to provide a RAC even if the transaction documents require it. When Moody's chooses to issue a RAC, the RAC reflects Moody's opinion solely that the specified action, event, change in structure or amendment, in and of itself and as of that point in time, will not result in a reduction or withdrawal of Moody's current rating on the debt. A RAC is not a "confirmation" or "affirmation" of the rating, as those terms are defined elsewhere in this Rating Symbols and Definitions publication, nor should it be interpreted as Moody's "approval of" or "consent to" the RAC subject matter.

## Covenant Quality Assessments

Moody's covenant quality assessments measure the investor protections provided by key bond covenants within an indenture. The assessments are unmonitored, point-in-time scores, but may be updated as circumstances dictate. Key covenants assessed include provisions for restricted payments, change of control, limitations on debt incurrence, negative pledges, and merger restrictions, among others.

## Speculative Grade Liquidity Ratings

Moody's Speculative Grade Liquidity Ratings are opinions of an issuer's relative ability to generate cash from internal resources and the availability of external sources of committed financing, in relation to its cash obligations over the coming 12 months. Speculative Grade Liquidity Ratings will consider the likelihood that committed sources of financing will remain available. Other forms of liquidity support will be evaluated and consideration will be given to the likelihood that these sources will be available during the coming 12 months. Speculative Grade Liquidity Ratings are assigned to speculative grade issuers that are by definition Not Prime issuers.

| | |
|---|---|
| SGL-1 | Issuers rated SGL-1 possess very good liquidity. They are most likely to have the capacity to meet their obligations over the coming 12 months through internal resources without relying on external sources of committed financing. |
| SGL-2 | Issuers rated SGL-2 possess good liquidity. They are likely to meet their obligations over the coming 12 months through internal resources but may rely on external sources of committed financing. The issuer's ability to access committed sources of financing is highly likely based on Moody's evaluation of near-term covenant compliance. |
| SGL-3 | Issuers rated SGL-3 possess adequate liquidity. They are expected to rely on external sources of committed financing. Based on its evaluation of near-term covenant compliance, Moody's believes there is only a modest cushion, and the issuer may require covenant relief in order to maintain orderly access to funding lines. |
| SGL-4 | Issuers rated SGL-4 possess weak liquidity. They rely on external sources of financing and the availability of that financing is, in Moody's opinion, highly uncertain. |

## Definition of Default

Moody's definition of default is applicable only to debt or debt-like obligations (e.g., swap agreements). Four events constitute a debt default under Moody's definition:

a) a missed or delayed disbursement of a contractually-obligated interest or principal payment (excluding missed payments cured within a contractually allowed grace period), as defined in credit agreements and indentures;

b) a bankruptcy filing or legal receivership by the debt issuer or obligor that will likely cause a miss or delay in future contractually-obligated debt service payments;

c) a distressed exchange whereby 1) an obligor offers creditors a new or restructured debt, or a new package of securities, cash or assets that amount to a diminished financial obligation relative to the original obligation and 2) the exchange has the effect of allowing the obligor to avoid a bankruptcy or payment default in the future; or

d) a change in the payment terms of a credit agreement or indenture imposed by the sovereign that results in a diminished financial obligation, such as a forced currency re-denomination (imposed by the debtor, himself, or his sovereign) or a forced change in some other aspect of the original promise, such as indexation or maturity.[10]

Moody's definition of default does not include so-called "technical defaults," such as maximum leverage or minimum debt coverage violations, unless the obligor fails to cure the violation and fails to honor the resulting debt acceleration which may be required. For structured finance securities, technical defaults (such as breach of an overcollateralization test or certain other events of default as per the legal documentation of the issuer), or a temporary missed interest payment on a security whose terms allow for the deferral of such payments together with corresponding interest (such as PIKable securities) prior to its legal final maturity date do not constitute defaults. Also excluded are payments owed on long-term debt obligations which are missed due to purely technical or administrative errors which are 1) not related to the ability or willingness to make the payments and 2) are cured in very short order (typically, 1-2 business days). Finally, in select instances based on the facts and circumstances, missed payments on financial contracts or claims may be excluded if they are the result of legal disputes regarding the validity of those claims

## Definition of Impairment

A security is impaired when investors receive — or expect to receive with near certainty — less value than would be expected if the obligor were not experiencing financial distress or otherwise prevented from making payments by a third party, even if the indenture or contractual agreement does not provide the investor with a natural remedy for such events, such as the right to press for bankruptcy.

Moody's definition of impairment is applicable to debt, preferred stock, and other hybrid securities. A security is deemed to be impaired if:

a) all events that meet the definition of default (above);

b) contractually-allowable payment omissions of scheduled dividends, interest or principal payments on debt, preferred stock or other hybrid instruments[11] or contractually allowable interruptions of interest payments to similar structured finance instruments[12];

c) downgrades to Ca or C, signalling the near certain expectation of a significant level of future losses;

d) write-downs or "impairment distressed exchanges"[13] on debt, preferred stock or other hybrid instruments due to financial distress whereby (1) the principal promise to an investor is reduced according to the terms of the indenture or other governing agreement[14], or (2) an obligor offers investors a new or restructured debt, or a new package of securities, cash or assets and the exchange has the effect of allowing the obligor to avoid a contractually-allowable payment omission as described in b) above[15].

10 Moreover, unlike a general tax on financial wealth, the imposition of a tax by a sovereign on the coupon or principal payment on a specific class of government debt instruments (even if retroactive) would represent a default. Targeted taxation on government securities would represent a default even if the government's action were motivated by fairness or other considerations, rather than inability or unwillingness to pay.

11 For example, a debt security would become impaired when an obligor exercises a payment-in-kind option on a toggle bond. Examples of impairment events on non-debt securities include dividend omissions on preferred stock (both cumulative and non-cumulative) and coupon omissions on other hybrid debt securities.

12 Moody's studies of historical impairments are likely to focus on those impairments that are sustained and not cured. Among some structured finance asset classes, where cure rates within a 12-month time frame can be high, many impairments are not likely to be included in impairment studies.

13 Impairment distressed exchanges are similar to default distressed exchanges except that they have the effect of avoiding an impairment event, rather than a default event.

14 While contractually-allowable principal write-downs on structured finance securities are impairments, failures to pay principal as contractually required are defaults. Once written down, complete cures, in which securities are written back up to their original balances are extraordinarily rare; moreover, in most cases, a write-down of principal leads to an immediate and permanent loss of interest for investors, since the balance against which interest is calculated has been reduced.

15 Examples of such impairments include mandatory conversions of contingent capital securities to common equity and mandatory write-downs of other hybrid securities that are the direct result of obligor distress.

The impairment status of a security may change over time as it migrates from impaired to cured (e.g., if initially deferred cumulative preferred dividends are ultimately paid in full) and possibly back again to impaired.

### Definition of Loss-Given-Default

The loss-given-default rate for a security is 100% minus the value that is received at default resolution (which may occur at a single point in time or accrue over an interval of time), discounted by the coupon rate back to the date the last debt service payment was made, divided by the principal outstanding at the date of the last debt service payment.

In the special case of a distressed exchange default, when an investor is given new or modified securities in exchange, the LGD rate is 100% minus the trading value of the new securities received in exchange at the exchange date divided by the par value plus accrued interest of the original securities as of the exchange date.

### Long-Term Credit Ratings for Defaulted or Impaired Securities

When a debt instrument becomes impaired or defaults or is very likely to become impaired or to default, Moody's rating on that instrument will reflect our expectations for recovery of principal and interest, as well as the uncertainty around that expectation, as summarized in the table below.[16] Given the usual high level of uncertainty around recovery rate expectations, the table uses approximate expected recovery rates and is intended to present rough guidance rather than a rigid mapping.

APPROXIMATE EXPECTED RECOVERIES ASSOCIATED WITH RATINGS FOR DEFAULTED OR IMPAIRED SECURITIES

| Expected Recovery Rate | Fundamental | Structured Finance |
|---|---|---|
| 99 to 100%* | B1* | B1 (sf)* |
| 97 to 99%* | B2* | B2 (sf)* |
| 95 to 97%* | B3* | B3 (sf)* |
| 90 to 95% | Caa1 | Caa1 (sf) |
| 80 to 90% | Caa2 | Caa2 (sf) |
| 65 to 80% | Caa3 | Caa3 (sf) |
| 35 to 65% | Ca | Ca (sf) |
| Less than 35% | C | C (sf) |

* For instruments rated B1, B2, or B3, the uncertainty around expected recovery rates should also be low. For example, if a defaulted security has a higher than a 10% chance of recovering less than 90%, it would generally be rated lower than B3.

16 The approach to impairment is consistent with the approach to default. When an instrument is impaired or very likely to become impaired, the rating will reflect the expected loss relative to the value that was originally expected absent financial distress.

Additionally, the table may not apply directly in a variety of unusual circumstances. For example, a security in default where the default is likely to be fully cured over the short-term but remain very risky over a longer horizon might be rated much lower than suggested by this table. At the other end of the rating scale, very strong credits that experience temporary default events might be rated much higher than B1.[17] Under very rare circumstances a structured finance debt security may incur a one-time principal write-down that is very small (considerably less than 1% of par) and is not expected to recur.[18] In such cases, Moody's will add this small loss amount to its calculations of the expected loss associated with the security and may rate it higher than B1.

Securities in default where recovery rates are expected to be greater than 95% can be rated in the B category as outlined in the table above. In order to be assigned a rating in the single B category, the confidence level regarding the expected recovery rates should also be high. Or in other words, uncertainty should be low. As stated in the footnote to the table, if a security has a higher than a 10% chance of recovering less than 90%, then it would generally be rated lower than B3.

## Credit Rating Methodologies

Credit Rating Methodologies describe the analytical framework MIS rating committees use to assign credit ratings. They set out the key analytical factors which MIS believes are the most important determinants of credit risk for the relevant sector. Methodologies are not exhaustive treatments of all factors reflected in MIS' ratings; they simply set out the key qualitative and quantitative considerations used by MIS in determining ratings. In order to help third parties understand MIS' analytical approach, all methodologies are publicly available.

Methodologies governing fundamental credits (e.g., non-financial corporates, financial institutions and governments) generally (though not always) incorporate a scorecard. A scorecard is a reference tool explaining the factors that are generally most important in assigning ratings. It is a summary, and does not contain every rating consideration. The weights shown for each factor and sub-factor in the scorecard represent an approximation of their typical importance for rating decisions, but the actual importance of each factor may vary significantly depending on the circumstances of the issuer and the environment in which it is operating. In addition, quantitative factor and sub-factor variables generally use historical data, but our rating analyses are based on forward-looking expectations. Each rating committee will apply its own judgment in determining whether and how to emphasize rating factors which it considers to be of particular significance given, for example, the prevailing operating environment. As a consequence, assigned ratings may fall outside the range or level indicated by the scorecard, though they will generally be within one to two notches of the scorecard-indicated rating.

Methodologies governing structured finance credits often mention one or more rating models. A structured finance ratings model is a reference tool that explains how certain rating factors are considered in estimating a loss distribution for the collateral assets, or how the interplay between collateral cash flows, capital structure and credit enhancement jointly influence the credit risk of different tranches

17 Additionally, payments missed for operational or technical reasons may not be classified as Moody's default events. See "Assessing the Rating Impact of Debt Payments That Are Missed for Operational or Technical Reasons", Moody's Special Comment, April 2013. Also, in certain circumstances an issuer of a structured finance security may delay an interest and/or principal payment beyond the relevant grace period due to a temporary delay in recovery or an operational problem. In such cases, Moody's will consider the potential increase in expected loss should interest not be paid on the delayed payment and may rate the security higher than B1.

18 For example, some master servicers of US RMBS implemented a new loan modification program and divided the cost of its administration across all their transactions, resulting in a loss of a few hundred dollars per security. In other examples some rated synthetic transactions have seen a very small loss attributable to the non payment of a very small CDS premium.

of securities. While methodologies may contain fixed values for key model parameters to be applied to transactions across an entire sector, individual rating committees are expected to employ judgment in determining model inputs, and rating committee deliberations may fall outside model-indicated outputs.

While most methodologies relate to a particular industry, sector or class of issuers or transactions, a small number — cross-sector methodologies, many originally issued as 'Rating Implementation Guidance' — have implications for a number of (and in some cases all) sectors. Examples include the methodologies which govern:

» the assignment of short-term ratings across the Fundamental Group;

» the use of credit estimates in the analysis of structured finance transactions;

» the linkage between sovereign ratings and related ratings in other Fundamental Groups;

» the 'notching' guidelines used to assign ratings to different classes of corporate debt;

» and the determination of country ceilings which cap domestic ratings.

Typically, these are broad commentaries, the output of which may be general guidance to committees on ranges or caps on ratings rather than a specific rating assignment and which, to a greater extent than sector-specific methodologies, set out broad principles and relationships rather than detailed risk factors which can be summarized in a scorecard. However, in other respects cross-sector methodologies are no different from any sector-specific methodology, in providing an analytical framework to promote consistency rather than a set of rules which must be applied rigidly in all circumstances.

The set of methodologies comprises both 'primary' and 'secondary' methodologies, particularly in structured finance. Some secondary methodologies provide detailed guidance on the application of particular elements of broader 'primary' methodologies to particular sectors or regions, including in some cases the key model parameters deployed in assigning ratings in that region or sector. They need to be read alongside the relevant primary methodology.

## Key Rating Assumptions

Methodologies may (but need not) contain separately identifiable key rating assumptions ("KRAs"). KRAs are the fixed inputs (sometimes expressed as a possible range of values) described in Credit Rating Methodologies such as mathematical or correlation assumptions which are common to broad classes of ratings, may be common to multiple Credit Rating Methodologies, and which inform rating committee judgments in assigning ratings across each class. KRAs are considered methodological and are subject to the same governance process as the methodology to which they relate, including the need for any changes to be approved by the relevant Policy Committee within MIS.

KRAs are, by their nature, relatively stable inputs to the analytical process, and because they seek to bring a degree of stability, consistency and transparency to something that may in practice be uncertain, they are intended to be reasonably resilient to change. They may change over time in response to long-term structural changes or as more is learned about long-run relationships between risk factors, but they would be very unlikely to change as a result of a short-run change in economic or financial market conditions.

By contrast, credit judgments reached in rating committees regarding the impact of prevailing credit conditions on ratings within a particular sector, country or region are not KRAs, even where those judgments affect a large number of Credit Ratings (for example because they alter a country ceiling, systemic support indicator or a Timely Payment Indicator). Moreover, rating committees will, from time to time, reach credit judgments in relation to the application of KRAs in the assignment of credit ratings for a particular deal or set of deals which are the subject of that rating committee, to reflect prevailing credit conditions in the relevant region or sub-sector (for example to apply higher or lower correlation assumptions while a given set of credit conditions persist). Such judgments would not be deemed to have amended a KRA, since they were not intended to be applied consistently and systematically across most if not all debt instruments covered by the relevant methodology, and in a manner which was largely insensitive to further changes in credit conditions. Macro-economic or financial market projections which are by definition specific to a particular point in time are not KRAs.

**For Structured Finance Credit Rating Methodologies**, KRAs are generally assumptions that underlie the overall methodological construct — values assigned to parameters which influence the analysis of a prototypical transaction broadly across the relevant sector. Examples would include:

» sector correlation assumptions;

» loss severity assumptions for particular sectors;

» and idealized default rates when used as a proxy for collateral performance.

Inputs to the rating of structured finance transactions that result from credit judgments reached by rating committees or which reflect analytic deliberations  and that are not KRAs include, for example:

» the credit risk considerations (as reflected in credit ratings or other credit assessments) introduced by third parties, such as guarantors and other support providers, servicers, trust banks, swap providers, etc.;

» the credit risk introduced by the issuer's operating environment, as reflected, for example, by bond and deposit ceilings;

» changes in collateral asset risk expectations brought on by changes in the economic environment; and

» the maximum extent to which a bank's legal and operating environment would enable overcollateralization to provide lift for a covered bond's rating over the bank's own rating, as expressed in the Timely Payment Indicator.

**For Fundamental Credit Rating Methodologies**, KRAs are intrinsically less common (in part reflecting the less quantitative nature of Fundamental credit analysis), and where they do exist they may be embedded within the underlying Credit Rating Methodology. Generally, they are so deeply embedded in the overlying analytical structure that it would be meaningless and misleading to identify them as distinct from the Credit Rating Methodology itself: a KRA change would almost inevitably involve a corresponding change to the Credit Rating Methodology itself. Examples of deeply embedded KRAs in Fundamental that cannot be viewed distinctly from a Credit Rating Methodology include:

» the assumption that leverage and access to liquidity are strong drivers of credit risk and appropriate factors to include in Credit Rating Methodologies;

» the assumptions that there is very strong interdependence between bank and sovereign credit strength (from which MIS concludes that a lower-rated sovereign cannot generally provide ratings lift through support to a higher rated bank);

» the assumption that legal priority of claim affects average recovery on different classes of debt sufficiently to warrant higher or lower ratings for different classes of debt;

» and the assumption that sovereign credit risk is strongly correlated with that of other domestic issuers.

Examples of assumptions in Fundamental Credit Rating Methodologies that would be considered KRAs distinct from (though perhaps stated in) the Credit Rating Methodology to which each relates would include:

» loss severity assumptions for different sectors;

» and idealized loss rates when used as a proxy for  the ability of a sovereign to support its banking system;

Inputs to the fundamental ratings process that result from credit judgments reached by rating committees or which reflect analytic deliberations  which are not KRAs include:

» the credit risk considerations (as reflected in credit ratings or other credit assessments) introduced by third parties, such as guarantors and other support providers or affiliates;

» the credit risk introduced by the issuer's operating environment, as reflected, for example, by bond and deposit ceilings; and

» the ability a sovereign to provide support to, for example, banks, as expressed in a systemic support indicator.

» Such inputs may incorporate underlying assumptions which may be KRAs.

## Special Comments

MIS may from time to time issue Special Comments relating to particular industries, sectors, commodities, regions or issuers. Special Comments are not methodological either in content or in intent and do not modify the analytical approach described in rating methodologies. Rather, Special Comments are generally intended (i) to set out MIS's views on issuer-specific concerns or developments (ii) to describe macroeconomic or sector trends (such as changing industry demand conditions, new legislation or regulatory developments) and to comment on their directional impact on ratings, and (iii) to explain certain rating processes to help investors better understand how MIS's analysts do their work, including explaining how MIS will assess the impact of specific or broader trends

## Country Ceilings for Bonds and Other Foreign Currency Obligations

Moody's assigns long-term and short-term ceilings for foreign-currency bonds and notes to every country (or separate monetary area) in which there are rated obligors. The ceilings generally indicate the highest ratings that can be assigned to a foreign-currency denominated security issued by an entity subject to the monetary sovereignty of that country or area. Ratings that pierce the country ceilings may be permitted, however, for foreign-currency denominated securities benefiting from special characteristics that are judged to give them a lower risk of government interference than is indicated by the ceilings. Such characteristics may be intrinsic to the issuer and/or related to Moody's view regarding the government's likely policy actions during a foreign currency crisis. The country ceilings for foreign-currency bonds and notes are expressed on Moody's long-term and short-term global scales.

## Country Ceilings for Foreign Currency Bank Deposits

Moody's assigns long-term and short-term ceilings for foreign-currency bank deposits to every country (or distinct monetary area) in which there are rated bank deposits. The ceilings specify the highest ratings that can be assigned to foreign-currency denominated deposit obligations of 1) domestic and foreign branches of banks headquartered in that domicile (even if subsidiaries of foreign banks); and 2) domestic branches of foreign banks. The country ceilings for foreign-currency bank deposits are expressed on Moody's long-term and short-term global scales.

## Country Ceiling for Bonds and Other Local Currency Obligations

Moody's assigns a local currency ceiling for bonds and notes to every country (or distinct monetary areas) in order to facilitate the assignment of local currency ratings to issues and/or issuers. Local currency ratings measure the credit performance of obligations denominated in the local currency and therefore exclude the transfer risk relevant for foreign-currency obligations. They are intended to be globally comparable.

The local currency country ceiling for bonds summarizes the general country-level risks (excluding foreign-currency transfer risk) that should be taken into account in assigning local currency ratings to locally domiciled obligors or locally originated structured transactions. They indicate the rating level that will generally be assigned to the financially strongest obligations in the country, with the proviso that obligations benefiting from support mechanisms based outside the country (or area) may on occasion be rated higher. The country ceiling for local currency bonds and notes is expressed on the long-term global scale.

## Local Currency Deposit Ceiling

Moody's Local Currency Deposit Ceiling for a country or monetary region is the highest rating that can be assigned to the local currency deposits of a bank or other deposit taking institution domiciled within that rated jurisdiction. It reflects the risk that governmental authorities might impose a freeze on all local currency bank deposits in the system in response to a systemic run on deposits or a heightened risk of such a run. The local currency deposit ceiling is expressed on the long-term global scale.

## Hybrid Security Baskets

In determining equity credit for a hybrid security, Moody's analyzes the instrument along three dimensions of equity: No Maturity, No Ongoing Payments, and Loss Absorption. For each of these dimensions, Moody's ranks the instrument's features as either None, Weak, Moderate, or Strong, where None represents more debt-like and Strong represents more equity-like. The equity credit assigned to the instrument — expressed in baskets from A to E — weights the rankings for each dimension depending on the credit quality of the issuer.

### CLASSIFICATIONS FOR HYBRID BASKETS

| Basket | Debt | Equity |
|---|---|---|
| A | 100% | 0% |
| B | 75% | 25% |
| C | 50% | 50% |
| D | 25% | 75% |
| E | 0% | 100% |

## Timely Payment Indicator (TPI)

A TPI is Moody's assessment of the likelihood that timely payment would be made to covered bondholders following an Issuer Default. TPIs are assigned one of the following six assessment levels: Very High, High, Probable-High, Probable, Improbable, Very Improbable.

## Idealized Probabilities of Default and Expected Losses

For some obligations and asset classes we may use benchmark default probabilities and expected losses as input into rating models and other aspects of ratings analytics. These default probabilities and expected loss rates are referred to as Moody's Idealized Probabilities of Default and Moody's Idealized Expected Losses, respectively. Tables containing Moody's Idealized Default Probabilities and Expected Losses can be found here: Moody's Idealized Default and Loss Rates

These tables were derived from the corporate default and loss experience observed between 1970 and 1989, with several key adjustments, such as interpolation to help fill in gaps arising from lack of alpha-numeric rating (i.e. A2 vs. A3) default and loss rates prior to April 1983.

We note that while we use the idealized default and loss rates in models used in the rating process, the performance of ratings is benchmarked against past performance and rating performance in other sectors rather than against any idealized table.

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