1. What is Moody’s definition of default for the Default Risk Service? Is the definition the same for other risk management products?

The Default Risk Service uses the same definition for default as other Moody’s risk management products. Moody’s definition of default includes three types of credit events:

- A missed or delayed disbursement of interest and/or principal, including delayed payments made within a grace period;
- Bankruptcy, administration, legal receivership, or other legal blocks (perhaps by regulators) to the timely payment of interest and/or principal; or
- A distressed exchange occurs where: (i) the issuer offers debt holders a new security or package of securities that amount to a diminished financial obligation (such as preferred or common stock, or debt with a lower coupon or par amount, lower seniority, or longer maturity); or (ii) the exchange had the apparent purpose of helping the borrower avoid default.

2. Why are Moody's default rates based on issuers instead of bonds?

- The likelihood of default is primarily driven by the liability structure and operating performance of a firm. At the same time, firms often default on all their debt due to cross default provisions in bond indentures. (For more detail, see Senior Ratings Algorithm: “Why does Moody’s choose to use senior unsecured (or estimated senior unsecured) issuer-level ratings rather than bond-level ratings?”)
- However, Moody’s does also calculate dollar volume weighted default rates.

3. What is a cohort?

A pool of issuers formed on the basis of the rating held on a given calendar date (or set of dates),
4. How are Moody’s default rates calculated?

Moody’s uses a discrete-time hazard rate method to calculate its cumulative default rates. Cumulative default rates are calculated by compounding constituent marginal default rates. Moody’s calculation method controls for potential survival and censoring bias by adjusting for rating withdrawals. Hence, Moody’s default rates are useful both as statements of historical fact as well as unbiased estimates of expected default probabilities. For more details on the calculation, please see Moody’s methodology.

5. What is the difference between the marginal and the cumulative default rate?

- Marginal Default Rate: the probability that an issuer that has survived in the cohort up to the beginning of a particular interval will default by the end of the time interval.
- Cumulative Default Rate: the probability of default from the time of cohort formation up to and including measurement horizon.

6. What is the average cumulative default rate and why is this important?

The average cumulative default rate represents an estimate of expected cumulative default probabilities. It is calculated by taking the averages over many cohort periods (which capture the effects of several macroeconomic and credit cycle peaks and troughs).

7. How accurate are Moody’s average cumulative default rate estimates?

- The way Moody’s calculates the average cumulative default rate maximizes the existing historical information by using all the available rating and marginal default rate data, not just issuers with rating histories that endure for a specified period. This is particularly relevant for long-horizon default rate averages, as it prevents valuable data from being discarded unnecessarily.
- By adjusting for rating withdrawals, Moody’s default rates are not biased downward.

Rating Withdrawals

8. What is a ‘WR’ Rating?

WR stands for “withdrawn rating.” Reasons for withdrawals include: debt maturity; calls, puts, conversions, etc.; business reasons (e.g. change in the size of a debt issue), or the issuer defaults.

9. How does the method that Moody’s uses to adjust default rates for rating withdrawals differ from that of other agencies?

- Most rating agencies’ marginal default rates are NOT incrementally adjusted for defaults that occurred in the past. Moody’s performs this adjustment and also takes into account rating withdrawals that occur prior to the end of the measurement period.
- For more information on this topic, please see “Measuring Corporate Default Rates” November 2006.
10. Why does Moody’s choose to adjust for rating withdrawals in this manner?

- Unadjusted cumulative default rates are downwardly biased measures of default risk because one cannot observe all defaults experienced by issuers after their ratings are withdrawn. Moody’s method avoids this bias.

- The relevance of unadjusted default statistics as guides of future expected default experience is limited to sets of issuers with similar rating withdrawal patterns. In contrast, Moody’s withdrawal-adjusted default rates provide a common yardstick for measuring default risk for issuers and obligations across different sectors.

- Credit spreads are unlikely to be closely related with unadjusted default rates, whereas Moody’s adjusted default rates provide useful and relevant data for pricing a wide variety of debt obligations.

- The withdrawal-adjusted method used by Moody’s also generates default probability estimates with intuitive and appealing statistical characteristics. Specifically, at sufficiently long time horizons, cumulative default rates calculated using the withdrawal-adjusted approach will approach 100% more quickly than unadjusted default rates, which may never approach 100% over any measurement horizon.

Senior Ratings Algorithm:

11. What is the senior ratings algorithm and how is it related to issuer ratings?

- The process Moody’s uses to derive issuer-level ratings from particular debt obligation-level ratings is called the “senior ratings algorithm” (SRA), and the resulting ratings are called “estimated senior unsecured ratings.”

- In sum, the process works by setting a company’s estimated senior rating equal to its actual senior unsecured debt rating, or, if there is none, by implying such a rating on the basis of rated subordinated or secured debt. In most cases, this yields an assessment of credit risk that is relatively unaffected by collateral or position in the capital structure.

- For more information on this topic see, Senior Ratings Algorithm July 2005

12. Why does Moody’s choose to use senior unsecured (or estimated senior unsecured) issuer-level ratings rather than bond-level ratings?

Bond-level ratings are statements about expected loss severity, which incorporates loss-given-default as well as default probability. By inferring issuer-level ratings Moody’s controls for loss severity, allowing a clearer picture of the likelihood of default.

It is reasonable to assume that the likelihood of a bond default is tied to the issuer default for a variety of reasons.

- When a firm defaults on one bond it usually defaults on all its bonds due to cross-default clauses in bond indentures.

- In some bankruptcy codes (e.g. U.S. Chapter 11 and France’s “sauvegarde” procedure) an automatic stay provision triggered upon a bankruptcy filing creates perfect cross default, causing all debt to default at the same time (unless the bankruptcy judge grants a waiver).

- The structural view of credit risk (e.g. Merton (1974)) regards default as an issuer-level phenomenon that is primarily a function of firm-level characteristics, such as its operating performance and liability structure

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13. Is the senior ratings algorithm also used to populate the loan ratings table?

- While the senior ratings table and the loan ratings table are structured identically, the algorithm that populates these tables is slightly different.

- In contrast to the senior ratings table (senrratg), which reports estimated senior unsecured bond rating histories (i.e., actual senior unsecured bond ratings when available or, when unavailable, inferred senior unsecured ratings from other bond issues), the loan ratings table (loanratg) reports only actual loan ratings.

- For more information on the algorithm that populates the loan ratings table, see Senior Most Loan Ratings Table August 2005. For more information on the algorithm that populates the senior ratings table, see Senior Ratings Algorithm July 2005

14. What is the difference between the old senior ratings table and the new senior ratings table?

The senior ratings algorithm that is used to populate the new senior ratings table has been altered to include corporate bank loan issuers in addition to bond issuers. Further, any company with an outstanding corporate family rating is included.

The new senior ratings table has additional fields to identify the specific debt issue or debt class used to determine the estimated senior rating. For many issuers, this leads to additional records even when no rating changes have occurred.

The new senior ratings table has some additional fields designed to isolate specific types of rating changes.

- Change: This filters for rating changes that sometimes occur when the rating of the most senior debt is withdrawn and the rating of the next most senior debt in the capital structure is several notches down. The notching table incorporated into the senior rating algorithm compensates for most rating withdrawals; this filter merely provides yet another way of ensuring data integrity.

- Methodology: This filters for rating changes that are due to changes in methodology, rather than changes in the fundamental credit quality of the issuer. Updates to Moody’s methodologies ensure that our ratings stay in step with the evolving credit markets, but these changes can sometimes obscure analysis of historical ratings. This filter facilitates such historical analysis. This is currently set to 1 for LGD related rating changes and 2 for GRI / JDA related changes.

- Reverse: This filters for ratings that were changed in the opposite direction of any previous rating change within the span of a year.

- Large Mover: This filter marks those rating changes that cause the cumulative rating change over the previous year to be three or more notches in one direction.

The new senior ratings table has some additional fields designed to facilitate reporting, including the ultimate parent number, the debt number, the debt class, and the debt seniority. Please see DRS Technical Specifications for more details.
15. Why has Moody’s elected to update the senior ratings algorithm to include loans?

- The rated loan market has grown considerably since 1995 and has become an important source of capital for highly leveraged issuers. In 2002, only 17% of new speculative-grade rated issuers came to market with bank loans only (no bonds); that proportion increased to 52% in 2006.
- The net affect of the change is to increase the total number of issuers (and observed defaults) for all debt classes and issuers that share the same intended meaning (and for which data is available), allowing a more robust data set for analysis.

16. Under what circumstances would I use the old senior ratings table?

The old senior ratings table remains to allow clients to make accurate comparisons against analyses performed using older versions of DRS. We recommend using the new senior ratings table for any analysis that does not require such historical comparisons.

17. Does Moody’s backfill data? What could cause historical rating changes?

- While Moody’s will backfill default data in order to keep our database as complete as possible, historical rating changes are also sometimes caused by modifications to the senior ratings algorithm such as the recent addition of loans.
- Because some issuers do not have senior unsecured ratings, Moody’s estimates the ratings for this debt by notching the rating up a certain amount based on its position in the capital structure. Moody’s constantly seeks to refine and improve this algorithm and on occasion has made changes to increase the accuracy of its estimates.

Using the Default Risk Service:

18. Which industry classification should I use for my portfolio?

- The broad franchise classification is frequently used by Moody’s longstanding customers.
- Moody’s has recently updated its industry classifications to reflect the evolution of the financial markets. These new industry classifications will be implemented into all Moody’s products in 2007, running parallel to the old classifications to facilitate transition. More information on this soon.

19. Are there any mappings available between various industry classifications?

Yes. Please contact your sales representative to obtain an excel containing this mapping.
20. Are there any frequently used queries that you can share with me?

Moody’s provides the query logic for the following: list of defaulters, list of withdrawn ratings, and a ratings transition matrix.

This logic can be found in the following document: Moody’s Senior Ratings Algorithm & Estimated Senior Ratings July 2005

Moody’s has also designed a sophisticated tool for identifying and understanding default rates and ratings transitions: the Credit Risk Calculator (CRC).

21. Does DRS include recovery information? If so, how can I access this data?

DRS provides 30-day recovery pricing for all asset classes, including loans, in the defaulted issues (dfltissu) table.

This table may be linked to a variety of other tables in the database on the debt number or the default.

22. What are the various types of ratings included in DRS? What are the differences? How do I identify the different rating types in DRS?

DRS includes all ratings produced by Moody’s, including both general ratings and sector-specific ratings.

- General Ratings: long-term obligation ratings, medium-term note ratings, short-term ratings, issuer ratings
- Sector-Specific Ratings: senior-implied ratings, speculative grade liquidity ratings, bank deposit ratings, US bank other senior obligation ratings, bank financial strength ratings, insurance financial strength ratings, and national scale ratings.

For information on the differences between these rating types, please refer to Moody’s Rating Symbols & Definitions March 2007

In order to facilitate ease of use, Moody’s has added a flag for debt class that will allow clients to distinguish between rating types.

23. Is DRS going to include the new Loss Given Default ratings?

The loss given default ratings are being incorporated into the Risk Management Solution, a platform that integrates and enhances Moody’s risk management products, offering all related data, reporting functionality, research, and access to our default specialists.

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FAQs - continued

Miscellaneous:

24. Where can I find all of Moody’s default and recovery rate studies?
Moodys.com now has a credit policy research index that can be used to locate current default and recovery information of interest as well as historical reports.

25. Is this the database that is used to develop Moody’s Annual Default Study?
Yes. This is the same database used by our analysts.

26. How frequently is the database updated?
Monthly.

27. How many defaults does DRS cover?
More than 4,000 defaulted instruments across over 1,500 defaulted issuers.

28. Does DRS include information regarding leveraged loans and distressed debt?
Yes.