

Managing and Developing Criteria and Models

Master Criteria

Key Highlights

Criteria Describe Ratings Processes: Rating criteria reports describe methodology used in assigning ratings. They contain clear, concise descriptions of the minimum rating factors in ratings of particular debt instruments or entities.

Ratings Not Determined by Models: Models are analytical tools developed to generate projections of the credit performance of issuers or issues under various scenarios, as defined by rating criteria. The rating of an issuer may involve no modeling, a single model, or multiple models, depending on the relevant rating criteria. The importance of a model in generating rating opinions ranges from substantial to minor. Published rating criteria provide information on how model projections are used in the overall rating process.

Reviewed Annually: All criteria and models for credit ratings are reviewed at least annually. The chief credit officer (CCO) and staff who report to him/her (collectively, members of the credit policy group, or CPG) are responsible for approving all criteria and models if the latter are included in criteria. The annual review of credit rating criteria must include both qualitative and quantitative criteria. Qualitative criteria must also be validated historically by considering how the importance of these criteria has changed over time. Partially this can be done by the consideration of India Ratings & Research (India Ratings) annual Transition and Default Studies, but other qualitative input can be considered where relevant. Models also undergo periodic monitoring and performance tests as part of India Ratings historical validation of criteria and periodic validation reviews.

Peer Review Committees: Peer review committees (PRCs) provide a broad cross-disciplinary perspective in evaluating all criteria for credit ratings at least once every three years. Senior analysts from divergent sectors and product groups comprise PRCs to consider consistency across groups. Voters for approval consist solely of chief credit officer (CCO) and product group heads (GH). Any proposal for amending a methodology or model that would have a material impact on a given set of credit ratings (as determined by the CCO or his or her designee) will be required to be reviewed by a PRC.

Related Research

The Rating Process,
September 12, 2012

Report to the Board

To ensure the independence and objectivity of the PRC process, the CCO is required to provide a report to the independent members of the board of directors of India Ratings annually. This report details the number, subject matter, and resolutions of the PRC reviews that occurred in the prior year. The report provides the independent board members an opportunity to ask the CCO questions about the operation of the PRCs and to provide input on how the process may be enhanced.

Objective of Criteria Reports

Criteria reports describe India Ratings analytical methodology when assigning its rating opinions. The most significant rating factors will be identified and typically number three to six. These factors will be the main focus of the criteria report. The significant rating factors must be defined so that a financial market professional will be able to review the criteria, look at published commentary and/or rating reports, and understand how India Ratings reached the rating. India Ratings criteria reports will also describe the strengths and limitations of the rating analysis.

Categories of Criteria

Master Criteria

Criteria will be created and organized in a three-level structure starting with master criteria. Master criteria define the analytical process across a wide range of subjects, such as explaining the basic foundation for all ratings, or within slightly less expansive groups such as all of corporate or structured finance.

Cross-Sector Criteria

The second level of criteria explains specific topics that pertain across multiple areas, i.e. cross-sector criteria. Examples of cross-sector criteria are India Ratings Research on "Reviewing Unique or Complex Transactions," dated Sept 12, 2012, which would apply across all issuers which is available on India Ratings Web site at www.indiaratings.co.in.

Sector-Specific Criteria

The third level of criteria pertains to sector-specific criteria, including such reports as India Ratings criteria for Rating Toll Road, Bridges and Tunnels. If sector-specific criteria are not available for a sector, the master criteria will apply to that sector. For example, if no sector-specific criteria are published for rating capital goods companies, then corporates master criteria would apply.

Explaining Rating Factors

Identification and Explanation of Significant Rating Factors

Criteria reports must identify and explain the significance of each rating factor. Factors may be quantitative and qualitative. Significant rating factors must remain relevant to credit aspects of each sector for the criteria to be current. India Ratings will issue a new criteria report if new significant rating factors emerge or previous factors lose their relevance.

The report shall address the degree to which the emphasis on some factors will vary, depending on the specifics of the rating analysis. To the extent criteria incorporate ratios in the rating analysis, an explanation of how the ratios relate to the ratings will be included in criteria reports. When ratio analysis is a factor used in determining ratings, criteria reports should include medians and ranges by rating category for key ratios such as debt to EBITDA, or India Ratings may publish separate special reports with the medians and ranges for key ratios.

Assumptions

Criteria need to include the forward-looking elements of the rating analysis. Criteria reports shall define what critical factors are used to establish the assumptions on which a rating is

Related Criteria
[Reviewing Unique or Complex Transactions, September 12, 2012](#)

based. Where multiple sensitivity analyses or forecasts are employed in the rating analysis, the criteria should describe in broad terms how these multiple analyses interact in the rating decision.

Where a rating is exposed to a limited number of key variables, such as the performance of a static pool of assets, the criteria should describe how sensitivity analyses would be applied to these variables. When an expected case and stress case analysis are appropriate for a sector, both cases should be described in the report.

Limitations

Criteria reports need to describe limitations in the criteria utilized to assign a rating, unless the limitations are already included in the Ratings Definitions section on India Ratings Web site under “Understanding Credit Ratings — Limitations and Usage,” dated September 12, 2012, available on India Ratings web site at www.indiaratings.co.in.

Scope of Criteria Reports

Each criteria report should clearly specify what the criteria cover, including a definition of the entity or securities issue to which the criteria apply. In addition, criteria in one report should not conflict in an unresolved manner with criteria for comparable instruments or situations in other sectors.

Who Develops Criteria

Experienced analysts assess and explain India Ratings rating criteria in specific areas of their expertise at the direction of senior managers. This is followed by appropriate review and input from other analytical sources before the report is published.

A managing director or a product group head will identify the analysts, with titles of associate director or higher, to work on specific criteria development. Analysts in all sectors impacted by particular criteria should be consulted to identify key rating factors of the criteria for each sector.

The criteria will be circulated to at least one analyst in each sector that will be affected by the criteria for gathering and coordinating that group’s constructive comments about the efficacy of the criteria. The small group that created the criteria will finalize the criteria and then present the results to a review committee for vetting. Only the CCO and GHs can approve criteria.

When to Issue Criteria

Criteria for ratings must be reviewed annually at a minimum. These are minimums and do not preclude criteria being reviewed more frequently.

In the case of a new sector, a criteria report need not be published, provided that issuers or transactions in the sector can be rated using existing master criteria. When India Ratings determines in accordance with its established policies that assigning a rating to an entity or securities issue requires creation of new criteria, prior to rating any entity or securities issue that requires creation of new criteria including a new model, the criteria needs to be developed and vetted the same way all criteria are created.

All new criteria must be reviewed and can only be approved by the CCO and GHs .

When India Ratings determines in accordance with its established policies that assigning a rating to an entity or a securities issue requires creation of new criteria, those criteria will be published prior to or simultaneously with the first rating that is issued utilizing the new criteria. The criteria may be published in a rating action commentary (RAC) rather than in a criteria report. A criteria report will be published when 10 or more ratings for transactions or issuers are outstanding, and India Ratings expects further ratings to be assigned. RACs must include

criteria and ratings factors used to determine the rating if no criteria have been published.

Issuing Surveillance Criteria

When surveillance analysis incorporates additional evaluation beyond the new issue rating criteria, India Ratings will publish surveillance criteria either as a stand-alone report or as an extension of an existing report. New surveillance criteria will describe how India Ratings would evaluate a criteria change for existing ratings that are maintained utilizing surveillance criteria.

Criteria Exceptions

Rating committees will make the final decision of when to deviate from criteria. Deviation may be appropriate when analysts evaluating issuers or issues identify a new risk characteristic or view a structural or regulatory shift in an industry that is not already captured in criteria. Examples include asset prices that move beyond historic peaks or troughs or economic conditions that exceed the normal cyclical patterns. Material deviations from criteria must be documented internally and explained in public commentary along with ratings disclosures.

When deviations become consistent, new criteria need to be vetted and published. GHs responsible for the sector or CCO are responsible for recognizing the need to modify criteria.

Applying Criteria Changes

Assessing Materiality

GHs are charged with considering materiality and recommending a full or partial portfolio review of existing ratings. Final criteria may be proposed by analytical groups for CPG approval. If a criteria change is deemed material by the committee considering the change, then the criteria change must be applied to both the new and the existing portfolio of outstanding ratings. Both the criteria considered for rating new entities or securities issues and the effect of any criteria change on the outstanding portfolio must be clearly described in public commentary.

Effect on New Ratings

Criteria changes must be applied consistently to all new ratings issued after the effective date of the modification. Deviations from new criteria should be rare and will be addressed as previously outlined.

Effect on Existing Ratings

Each sector must describe whether and why a portfolio review is warranted, the magnitude of the review, the likely scope of ratings that may be affected, and the expected duration to complete the review. These elements will be included in the public commentary described above. Rating Outlooks or Rating Watches should be considered during the portfolio review process.

The review of the affected ratings must be completed as soon as possible and no later than six months from the criteria change effective date. When indicating the likely scope of ratings that may be affected, India Ratings will communicate how the review is indicated at the entity or securities issue level. Rating Outlooks or Rating Watches should be considered as a means of indicating the review at the entity or securities issue level.

Communicating Criteria Changes

Criteria changes must be communicated with a RAC or a criteria report. Time-sensitive changes to criteria may be communicated by a RAC initially then followed by an updated criteria report. For incremental criteria changes, notification in a RAC will suffice until the next scheduled full review. Materiality must be considered if an accumulation of a series of revisions to existing criteria would be a material change. This warrants publication of a new criteria report. Communication of criteria changes must include an effective date for implementation. If no effective date is included, then the criteria will be deemed effective immediately.

Withdrawing or Substituting Criteria

Criteria reports may be withdrawn when India Ratings has less than 10 ratings outstanding for transactions or issuers and does not expect any new transactions or issuers to request ratings. Retention guidelines for old criteria reports are subject to India Ratings file maintenance and recordkeeping policy.

The withdrawal of a criteria report and the publication of a new or updated criteria report will be announced in a RAC. When relevant, either a RAC or the new criteria report itself will list all criteria reports that are being replaced as a result of publication of the new report. It is the responsibility of the primary author to identify any and all existing criteria reports that will be replaced as a result of the criteria update and include them in the RAC.

Using Models to Implement Criteria

Models are tools that may be used as part of the rating process. In rare instances, a model may be the sole basis for a rating. In such case, model-based ratings will be clearly disclosed in the rating definitions. Model controls are established to ensure that models are developed, implemented, and reviewed consistent with criteria.

Categorization of Models

India Ratings has devised a framework for categorizing models based on significance in the rating analysis, mathematical and computational complexity, implementation technology, and usage. In this framework, India Ratings models are designated as Category 1, Category 2, or Category 3.

Category 1 models are often implemented as bespoke software to permit analysis of hundreds or thousands of credits. Category 1 models may invoke a complex mathematical analytical process to evaluate asset, liability, or capital behavior, such as a Monte Carlo simulation. Category 2 models are less computationally intensive and are well suited to spreadsheet implementation, but like Category 1, they may represent an entity or structure of some complexity and possess high relevance to ratings conclusions.

Category 3 models are much less complex but fall within the purview of model management, due to their importance in rating analysis. Spreadsheets that are used to organize data and perform simple calculations that are inputs to the rating process are not considered models.

The nature and extent of the management functions for each model are based on the categorization. Models are categorized based on recommendations from the model officer that are approved by the GH and CCO. The appropriate categorization will be reviewed and confirmed as part of the validation process.

Responsibility for Model Oversight

Chief Credit Officer

The CCO has been assigned responsibility to coordinate model governance policies and procedures and operationally oversee model management implementation and validations. This also includes maintaining a central model inventory of models used globally across India Ratings.

Product Group Heads

The GH is responsible for model validation at the group level aided by the insight and perspective of the CCO.

Model Validation Committee

The MVC serves as an independent review committee of all model validations. It comprises CCO and other participants, including the model officer and GHs from the analytical groups or their representatives. The model validation committee (MVC) will review the model validation

process and results, approving the model for implementation. Approved models will be presented to criteria review committees as a part of the criteria review and approval process for criteria.

Model Officers

Model officers are appointed by the appropriate asset or product group head and residing in the analytical groups. Model officers are responsible for the day-to-day management and operational risks of the model. Model officers periodically monitor performance of the model.

Model Development Standards and Responsibilities

Responsibility for Model Design and Development Decisions

Analytical groups are responsible for model development, documentation, implementation, and training of staff when models are used in implementing criteria, evaluating ratings, or creating scenarios. Analytical decisions, assumptions, and processes regarding models must be presented to the analytical group head and voted on in a committee context comparable to the rating committee process. Major new model development efforts will be subject to the criteria review described above, in addition to approval by product group committees. The model officer appointed by the group head will document committee recommendations and decisions.

Model Development Standards

The following considerations should be included in all development processes:

Data Selection

Data must be of sufficient size, relevance, and depth to be relied on as the model base for models that are based on historical data. Depth refers to a historical series that encompasses a full credit cycle. Data must reflect the impact of risk factors that are relevant to current analysis.

Compensating for Lack of Data

The analytical group may establish modeling assumptions for certain risk factors that cannot be supported by historical data alone. These assumptions must be well documented as to significance and rationale. In some cases, lack of data will result in deterministic assumptions established at the criteria committee level.

Model Definition

The inputs, calculations, and outputs of the model must be clearly specified before development begins (see the *Required Model Documents* section, page 8). This definition will be updated as needed throughout the development process. The primary purpose for the development and maintenance of this document is to provide analysts with a detailed understanding of the model function and to aid in validating a model's implementation of rating criteria.

Implementation Technology Selection

Models will be implemented using appropriate technology selected in consultation with India Ratings Information Technology group. For example, a stochastic process required to analyze thousands of inputs may be so intensive as to make the use of spreadsheets a poor choice. When choosing to implement a computer program, supported development languages should be used unless otherwise justified.

Error Handling

Models should be designed to effectively flag/reject incorrect or missing data. User interfaces should also limit the potential for human error.

Report Generation

Output reports must provide sufficient detail to allow the user to understand the basis for the model result.

Data Provider Selection

In developing criteria and associated models, India Ratings makes use of data from a variety of sources. These include loan originators, issuers, and arrangers, as well as third-party data providers. While the requirements for any specific criteria or model will vary, India Ratings will apply the following criteria in selecting third-party data providers.

Applicability

The data described must be relevant to the kind of assets or liabilities being analyzed or modeled. Where there is not an exact fit, analysts will assess the distinctions and whether adjustments can be made to improve applicability.

Comprehensiveness

For time series data, India Ratings will seek datasets of sufficient depth to cover a full economic cycle. India Ratings will also seek data sets that cover as much of a market as possible given that some assets have an array of potential attributes (e.g. residential mortgages).

Timeliness

Where updated data is needed for monitoring or refreshing of criteria or models, India Ratings will seek data sets that are updated as frequently as possible.

Reliability and Accuracy

When selecting a data provider, India Ratings will consider whether the provider is well established and enjoys a good reputation, is widely used in the relevant market, and has a means of sourcing data that provides an advantage over other market participants.

India Ratings approach to determining the reliability of data is a function of the nature of the data and the provider. India Ratings will often employ historical data series from third-party sources. Many data series on which India Ratings models depend are publicly available from official government sources and can be considered reliable (e.g. historical interest rates). Similarly, market data and ratings data in many instances can be obtained directly from sources deemed to be definitive (e.g. Markit for CDS indices or a data feed of ratings from a major rating agency). The selection of these kinds of data provider is deemed to be self-evident and of high quality and not subject to checks for reliability and accuracy.

Other third-party data sources are subject to additional quality checks before being selected by India Ratings and are often subject to additional checks over time. Means by which India Ratings evaluates such data include, but are not limited to, a comparison of a subset of the data to equivalent data that India Ratings has received from other sources. For example, a database of individual residential mortgage loan historical data that contains information on loans backing RMBS rated by India Ratings is compared against the data on the same loans provided by the loan originator.

Required Model Documents

Models used to arrive at rating opinions must be described in ratings criteria. Some models are of sufficient complexity and/or importance that a separate criteria report detailing the model is produced. Criteria reports that describe models must discuss the nature, extent, and limitation of any development data used to develop the model. Additionally, the model inputs will be described and the significance of each input in determining model results will be clearly defined.

The criteria will describe the limitations and potential risks in applying the model.

For all models, a model definition document must be developed and maintained for the benefit of the analytical staff. The model definition document will provide the following:

- A list of input variables and their definitions.

- Clear description of statistical algorithms, if used.
- A description of output reports.
- For Category 1 models implemented as software, an algorithm definition.
- For Category 1 and Category 2 models implemented as spreadsheets, definitions of macros and major calculations.
- User guides.

Model documentation may be embedded within the model if sufficient explanation is available.

Model Testing and Validation

Rigorous testing of models by the chosen criteria and/or model implementation team and subsequently by independent review is essential to managing the risk inherent in these tools. India Ratings will conduct appropriate levels of testing. Models will be validated based on the outline provided below. Models used in assigning credit ratings will be reviewed annually. Validation will ideally be completed prior to production use. Annual performance reviews will be coordinated by the model officer.

Validation and Review

The GH is responsible for model validation at the group level, aided by the insight and perspective of the CCO. The CCO provides additional independent technical expertise in the testing and approval process. Importantly, the CCO also provides global oversight of model inventory and validation status across all model categories. The GH and CCO will approve the scope and sufficiency of tests proposed for the validation.

Models will be validated prior to use for ratings. Models will also be reviewed annually, alongside credit criteria approval. The detection of material errors will result in a model validation. In addition, models will be validated every three years, consistent with the PRC criteria cycle. Validation tests will be reviewed by independent staff for Category 1 and Category 2 models. The GH oversees this validation process following consultation with the CCO in corporate and public finance. A criteria and model management group is responsible for conducting model validation tests in structured finance. Validations of Category 1 and Category 2 models will be reviewed by a model validation committee with authority to approve the model for future or continued use. The GH and CCO will review and approve the testing results for Category 3 provided by the development team and recommend any additional testing, if necessary.

Model validation tests will include appropriate back tests, reviews of calculations, and implementation of the model to attest that the model appropriately implements criteria. Models that produce ratings cannot be tested for their predictability. India Ratings ratings are relative or ordinal and not cardinal. Discriminatory inputs to the models will be tested as part of criteria or model validations.

Model test and validation procedures for category 1 and 2 models will include, but are not limited to, the evaluation of:

- **Input Processing:** Checking population shifts, relevance of input variables, and changes in distributions of input variables.
- **Calculations:** Correct coding and implementation of the rating criteria, model fitness tests, and validity of assumptions.
- **Adjustment Factors:** Validity of factors of rating multiples.
- **Output Generation:** Includes all necessary information to support analytical decision-making and assist in error detection (e.g. crosschecks, bad data flagging, and versioning information).

Once errors or problems identified by the validation team have been resolved, the GH will convene a validation committee to formally review test results and approve the model for

production use.

Testing Model Performance

In the development and usage of criteria and any associated models, the criteria and/or model development team will collect and assess available historical data, performance data from available surveillance information, and general market performance data.

India Ratings models are not generally intended to predict future outcomes. Rather, they are intended to assess the resilience of an issuer or security under various rating stresses and scenarios.

Tests of the performance of models against historical data will be performed by the criteria development team and will include backtesting where appropriate. They will also be reviewed by criteria approval bodies (either PRC or standing criteria committees) annually.

Frequency of ongoing backtesting or performance testing of criteria and associated models will depend on changes in the external economic environment and other sector factors — for example, if any deviations from expectations are observed.

The MVC may suggest the scope and frequency of proposed back tests to be performed by the model officer for a periodic review where significant risk to ratings emerges between annual reviews. Parameters for back tests for validation and performance testing will be dependent on the use and structure of the model. Back tests may vary, depending on the structure of the model (cash flow or ratings) and the level of data available. The frequency of backtesting will be based on the usage of the model and risk to ratings.

Model Operation Standards and Responsibilities

The responsibility for effective use and management of models in production falls on the analytical group that relies on the model. Committees comprised of analytical team members similar to rating committees will review models and determine whether a model continues to be applicable to the process or will be used for a new credit or class of credits. The GH or their delegate should be present at these discussions.

The model officer is appointed by the asset or product group head and responsible for:

- Implementing quality-control procedures that decrease the risk of model errors.
- Training analysts in the function and use of the model.
- Detecting model errors not previously detected through the testing process.

The model officer will maintain a change log for model revisions, providing a description and rationale for each change, including impact on ratings, committee approval for a major change, and implementation date.

Analysts are expected to have a strong understanding of the theoretical basis for the model, how it applies criteria, the applicability of the model to specific credits, and any limitations or risk factors that must be considered when utilizing the model.

Model Error Detection and Resolution

India Ratings procedure for model error detection and resolution:

- If a member of the analytical staff detects or suspects an error, the model officer is to be notified immediately, as is the analytical group manager.
- If preliminary analysis by the model officer indicates that an error cannot be quickly ruled out, the GH is notified.
- These officers and managers will determine whether model use must be immediately halted for some or all ratings analyses.

- The model officer will coordinate identifying and resolving the cause of the error. The repaired model will be retested and revalidated following the resolution of any significant error.
- The model officer will coordinate an analysis of the impact of the error. Impact analysis includes identifying the number of ratings affected, identifying the timeframe in which the error has been present, and identifying the magnitude of the rating change, if any, indicated by analyzing the credit with a corrected model.
- If the impact is found to be material (i.e. corrections to ratings are warranted), a public announcement of the detection of the error will be made, together with changes to the affected ratings.
- If the model had been validated prior to the error detection, the GH will conduct a review as to why testing and validation processes failed to detect the error, and, where possible, recommend changes designed to prevent a recurrence.

Exceptions Process for Temporary Model Usage Approvals

Exceptions to allow temporary model usage include application of models to new products or models that have not received approval of full validation under model policy (i.e. subject to categorization).

Proposed exceptions will be made by the analytical team head and must be agreed by the GH. Proposals will establish an acceptable frame and safe limits as to the number of transactions allowed to be rated. Exceptions will also be subject to an acceptable level of errors.

Model Change Management

All changes must be documented and recorded by each model officer. Cosmetic or superficial changes that have no impact on the model output may be done without approval. Other changes need:

- Approval of criteria and model management (CMM) for calculation changes to resolve minor quantitative error.
- Approval of DMM for all major calculation changes.

Third-Party Models

The model management functions described in this report apply to India Ratings developed models. India Ratings may use third-party models and modeling tools in ratings processes. Cash flow projection models are commonly shared by arrangers or originators. In these cases, the model must permit the India Ratings analyst to review various scenarios that are considered in the rating process, independent of assumptions provided by the third party. Verification that calculations are correct should be done by the analytical group relying on the model.

India Ratings prefers that, when an external algorithmic model is used, the model has been independently checked or validated for accuracy, ideally by a reputable third party. Rating committees will consider the plausibility of results from external models by examining trends and sensitivities, making estimates, and adjusting individual parameters. Despite these precautions, as with all types of information provided by issuers, India Ratings relies on the issuer to ensure the information is timely, accurate, and complete.

ALL INDIA RATINGS CREDIT RATINGS ARE SUBJECT TO CERTAIN LIMITATIONS AND DISCLAIMERS. PLEASE READ THESE LIMITATIONS AND DISCLAIMERS BY FOLLOWING THIS LINK: [HTTP://INDIARATINGS.CO.IN/ UNDERSTANDING CREDIT RATINGS](http://indiaratings.co.in/understanding-credit-ratings). IN ADDITION, RATING DEFINITIONS AND THE TERMS OF USE OF SUCH RATINGS ARE AVAILABLE ON THE AGENCY'S PUBLIC WEB SITE AT WWW.INDIA RATINGS.CO.IN. PUBLISHED RATINGS, CRITERIA, AND METHODOLOGIES ARE AVAILABLE FROM THIS SITE AT ALL TIMES. INDIA RATINGS' CODE OF CONDUCT, CONFIDENTIALITY, CONFLICTS OF INTEREST, AFFILIATE FIREWALL, COMPLIANCE, AND OTHER RELEVANT POLICIES AND PROCEDURES ARE ALSO AVAILABLE FROM THE CODE OF CONDUCT SECTION OF THIS SITE.

Copyright © 2012 by Fitch, Inc., Fitch Ratings Ltd. and its subsidiaries. One State Street Plaza, NY, NY 10004. Telephone: 1-800-753-4824, (212) 908-0500. Fax: (212) 480-4435. Reproduction or retransmission in whole or in part is prohibited except by permission. All rights reserved. In issuing and maintaining its ratings, India Ratings relies on factual information it receives from issuers and underwriters and from other sources India Ratings believes to be credible. India Ratings conducts a reasonable investigation of the factual information relied upon by it in accordance with its ratings methodology, and obtains reasonable verification of that information from independent sources, to the extent such sources are available for a given security. The manner of India Ratings factual investigation and the scope of the third-party verification it obtains will vary depending on the nature of the rated security and its issuer, the availability and nature of relevant public information, access to the management of the issuer and its advisers, the availability of pre-existing third-party verifications such as audit reports, agreed-upon procedures letters, appraisals, actuarial reports, engineering reports, legal opinions and other reports provided by third parties, the availability of independent and competent third-party verification sources with respect to the particular security, and a variety of other factors. Users of India Ratings's rating should understand that neither an enhanced factual investigation nor any third-party verification can ensure that all of the information India Ratings relies on in connection with a rating will be accurate and complete. Ultimately, the issuer and its advisers are responsible for the accuracy of the information they provide to India Ratings and to the market in offering documents and other reports. In issuing its ratings India Ratings must rely on the work of experts, including independent auditors with respect to financial statements and attorneys with respect to legal and tax matters. Further, ratings are inherently forward-looking and embody assumptions and predictions about future events that by their nature cannot be verified as facts. As a result, despite any verification of current facts, ratings can be affected by future events or conditions that were not anticipated at the time a rating was issued or affirmed.

The information in this report is provided "as is" without any representation or warranty of any kind. A rating provided by India Ratings is an opinion as to the creditworthiness of a security. This opinion is based on established criteria and methodologies that India Ratings is continuously evaluating and updating. Therefore, ratings are the collective work product of India Ratings and no individual, or group of individuals, is solely responsible for a rating. The rating does not address the risk of loss due to risks other than credit risk, unless such risk is specifically mentioned. India Ratings is not engaged in the offer or sale of any security. All India Ratings reports have shared authorship. Individuals identified in a India Ratings report were involved in, but are not solely responsible for, the opinions stated therein. The individuals are named for contact purposes only. A report providing a India Ratings rating is neither a prospectus nor a substitute for the information assembled, verified and presented to investors by the issuer and its agents in connection with the sale of the securities. Ratings may be changed or withdrawn at any time for any reason in the sole discretion of India Ratings. India Ratings does not provide investment advice of any sort. Ratings are not a recommendation to buy, sell, or hold any security. Ratings do not comment on the adequacy of market price, the suitability of any security for a particular investor, or the tax-exempt nature or taxability of payments made in respect to any security. India Ratings receives fees from issuers, insurers, guarantors, other obligors, and underwriters for rating securities. In certain cases, India Ratings will rate all or a number of issues issued by a particular issuer, or insured or guaranteed by a particular insurer or guarantor, for a single annual fee. The assignment, publication, or dissemination of a rating by India Ratings shall not constitute consent by India Ratings to use its name as an expert in connection with any registration statement filed under the United States securities laws, the Financial Services and Markets Act of 2000 of Great Britain, or the securities laws of any particular jurisdiction. Due to the relative efficiency of electronic publishing and distribution, India Ratings research may be available to electronic subscribers up to three days earlier than to print subscribers.