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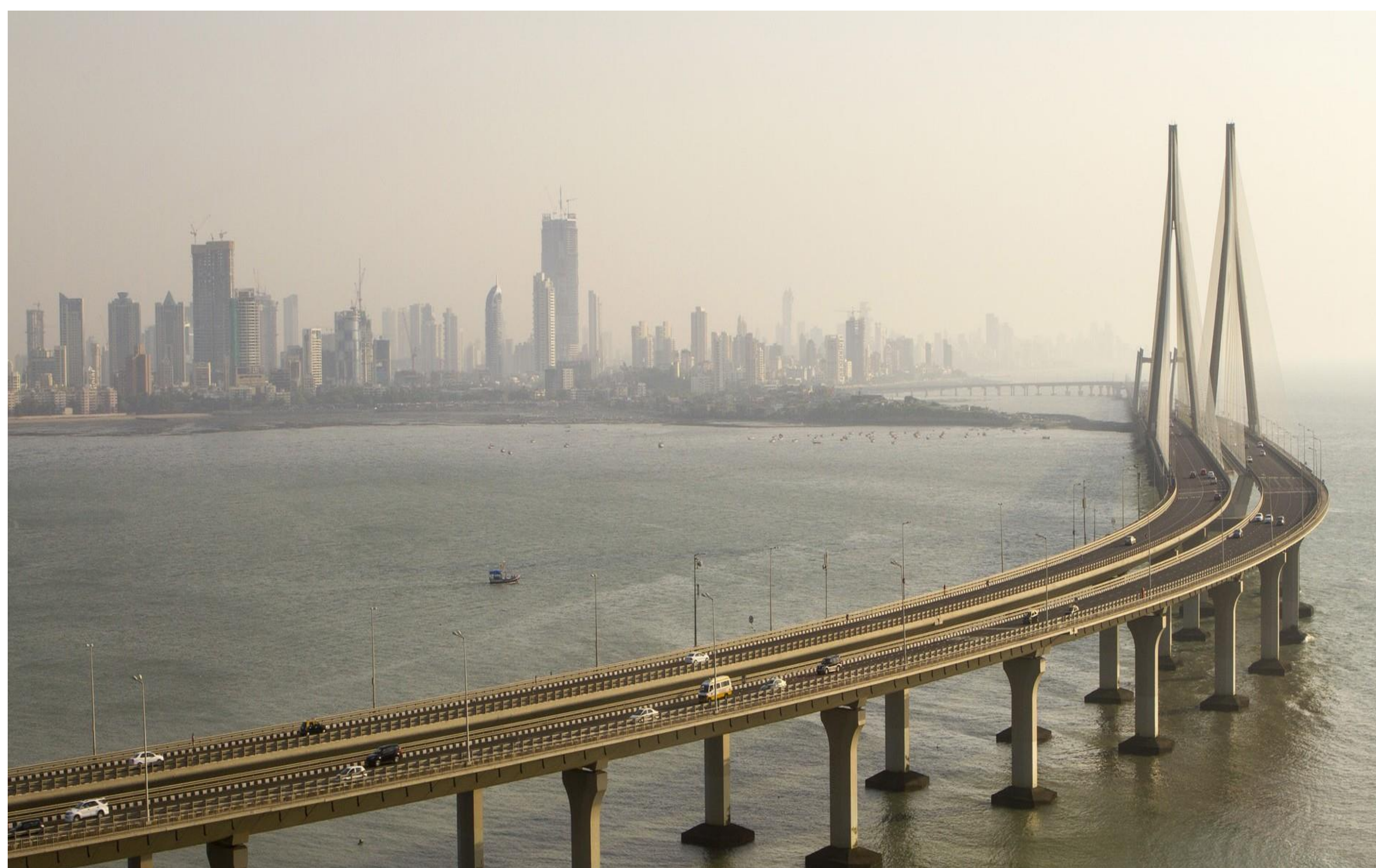
An Introduction to CRISIL EL Ratings

(Based on Expected Loss Methodology)



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CRISIL EL Ratings an innovation to facilitate participation from lenders in infrastructure projects and improve access of issuers to capital markets

In the backdrop of National Infrastructure pipeline of over Rs.111 lakh crore, CRISIL Ratings believes that India's infrastructure sector will need significant funding over next five years. The banking system alone cannot meet this requirement given its weak asset profile and limited ability to raise additional equity capital. Therefore, the debt market will have to play a significant role in funding this gap.

However, historically, debt market participation in the infrastructure sector in India has been limited due to the high degree of risk perceived by investors, as reflected in lower credit ratings for infrastructure projects

To address these issues CRISIL Ratings, in consultation with the Ministry of Finance and other stakeholders, including developers, regulators, investors etc. has developed a rating scale specifically for infrastructure projects based on the expected loss methodology that builds on

- CRISIL Ratings established methodology for assigning ratings on the conventional rating scale (based on the probability of default), that have demonstrated high degree of stability in rating transition as well default statistics and;
- Expertise in estimating post default recoveries or loss given default (LGD)

The rating scale for infrastructure projects comments upon the EL over the life of the instrument.

How are CRISIL EL ratings different from ratings under conventional methodology?

In a majority of cases ratings of infrastructure projects on the conventional rating scale (delay or missed payments constitute default) are constrained on account of cash flow mismatches due to delayed payments from counterparties or temporary variability in operating conditions.

However, given the long economic life of the infrastructure projects and presence of inbuilt mechanism such as termination payments and contractual protection, ultimate losses to debt investors, are likely to be low.

CRISIL EL ratings takes these factors into account and

- Builds upon the conventional rating scale that assesses the probability of default (PD)
- Assesses the expected losses (EL) over the life of the debt instrument by taking into account the prospects of recovery in event of default by considering cash flow based recovery, ability to refinance, value of security, termination payments etc.

Thus by combining the two pillars of credit risk – PD and LGD, EL rating complements the conventional rating scale and provides far more utility to investors, which will enable

- Long term investors such as infrastructure finance companies, pension funds, insurance companies to effectively price their investment decisions in infrastructure assets and;
- Allow issuers to access long-term funding from the capital markets at competitive rates and facilitate more capital market funding to infrastructure projects.

Rating Process and Methodology for CRISIL EL Ratings

CRISIL Ratings methodology for EL rating takes into account the two pillars of credit risk - PD, and LGD.

Key Inputs for arriving at EL Ratings:

PD methodology (or the conventional credit rating methodology)

Ratings on the PD approach – or the existing rating scale AAA to D – is an important input for arriving at the ratings based on the EL approach. A default in this is recognized on a 'one day, one rupee' basis, which means even if there is a delay of one day, or a shortfall of one rupee in fulfilling debt obligation, an instrument is considered to be in default.

CRISIL Ratings has a well-defined criteria for assigning these ratings on the PD scale for infrastructure projects, which is available on http://www.crisil.com.The PD rating of infrastructure projects primarily focusses on factors such as project risk, adequacy of cash flows to service debt (DSCR), and liquidity.

CRISIL Ratings methodology for EL ratings is scientifically designed to simulate certain default scenarios of the instrument, based on historical default rates generated from CRISIL Ratings proprietary statistics.

LGD or post-default recovery

LGD indicates the extent of loss on a debt instrument over its life after an issuer has defaulted on repayment obligation and the instrument has gone into default. While evaluating LGD for a particular debt instrument, CRISIL Ratings considers several scenarios.

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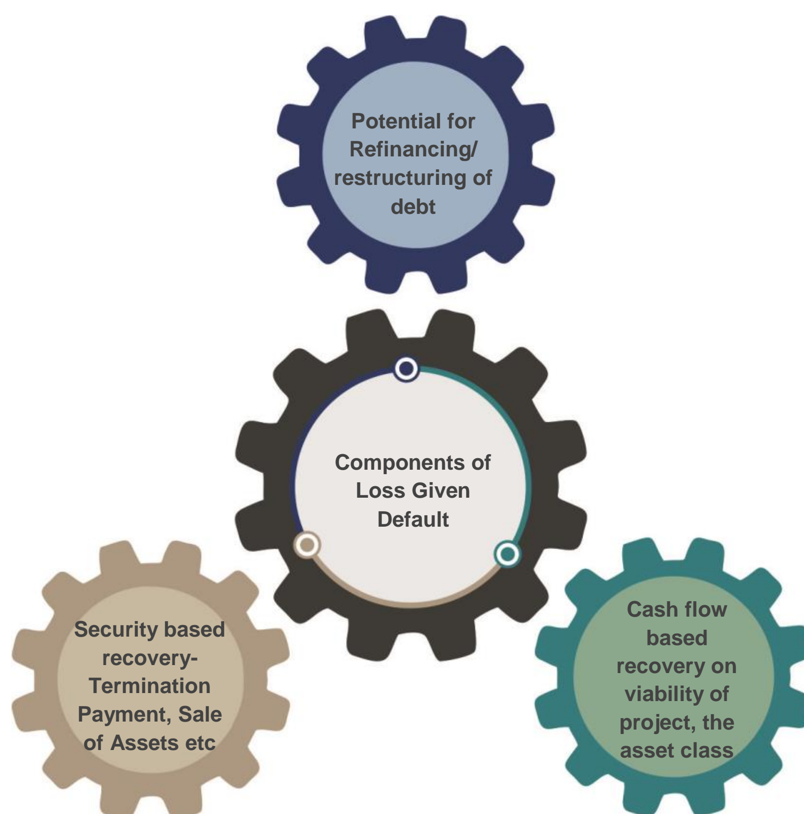
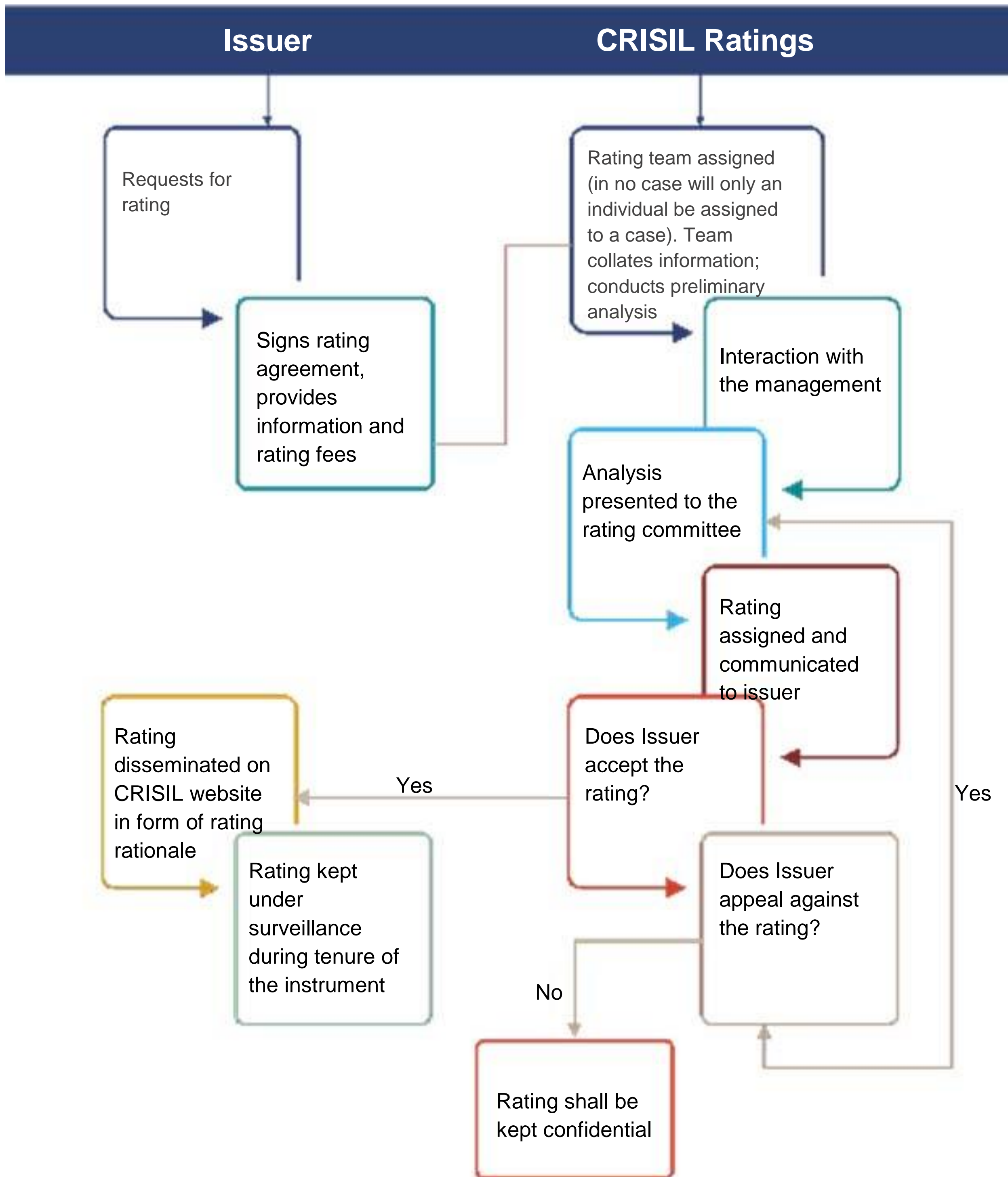


CRISIL EL Rating Scale for infrastructure projects[1]

Rating	Definition	Indicative EL Ranges
CRISIL EL 1 (Lowest expected loss)	Instruments rated 'EL 1' are considered to have the lowest expected loss, over the life of the instrument	$\leq$1.25%
CRISIL EL 2 (Very low expected loss)	Instruments rated 'EL 2' are considered to have very low expected loss, over the life of the instrument	1.25<X$\leq$3.5%
CRISIL EL 3 (Low expected loss)	Instruments rated 'EL 3' are considered to have low expected loss, over the life of the instrument	3.5<X$\leq$7.5%
CRISIL EL 4 (Moderate expected loss)	Instruments rated 'EL 4' are considered to have moderate expected loss, over the life of the instrument.	7.5<X$\leq$15%
CRISIL EL 5 (High expected loss)	Instruments rated 'EL 5' are considered to have high expected loss, over the life of the instrument	15<X$\leq$25%
CRISIL EL 6 (Very high expected loss)	Instruments rated 'EL 6' are considered to have very high expected loss, over the life of the instrument	25<X$\leq$35%
CRISIL EL 7 (Highest expected loss)	Instruments rated 'EL 7' are considered to have highest expected loss, over the life of the instrument	>35%

[1] CRISIL Ratings considers the 'life of the instrument' to be equivalent to the original maturity of the instrument plus two-and-a-half years. That is to account for the potential recoveries from the project which can occur even after maturity of the instrument (especially those of shorter duration). However, under no circumstances can the life of the instrument exceed the project's life.

Rating Process: Rating process for CRISIL EL ratings is largely similar to existing credit rating process. As mentioned in the flow chart below the process of rating starts with a rating request from the issuer, and the signing of a rating agreement. CRISIL Ratings employs a multi-layered, decision-making process in assigning a rating.



Benefits of EL Ratings

Benefits for issuers and lenders:

- Evaluate the optimal borrowing rates for infrastructure projects that take into account post default recoveries – will enable to price and differentiate two projects rated similarly on the conventional scale but with distinct recovery prospects

Lenders and investors factor the expectation of losses they may incur over the life of instruments in the form of credit spreads over risk-free instruments when pricing their investment decisions. The expectation of losses factors in both the conventional credit rating and the prospects of recovery. In infrastructure projects, the recoveries are typically high due to a number of salient features. This credit spread charged over and above the risk-free rate (G-secs) is the compensation for the risk of loss associated with the instrument on account of credit risk.

The illustration below indicates how borrowers can evaluate optimal borrowing rates using EL ratings and differentiate between projects having similar ratings on conventional rating scale but with different post default recovery prospects

Illustration of computing borrowing costs for instruments each rated 'BBB-'and with EL rating of CRISIL EL 1 and CRISIL EL 4 respectively

- Let us consider the case of two 'BBB-' rated instruments which have rating of EL 1 and EL 4 respectively on the EL scale
- Consider that on both these instruments a rate of 11% per annum is charged
- A CRISIL EL 1 rated instrument, has an expected loss over its life of about 0% to 1.25%. Let us take the midpoint and say its expected loss is 0.625% (A1)
- CRISIL EL 4 rated instrument, has an expected loss over its life of about 7.5% to 15%. Let us take the midpoint and say its expected loss is 11.25% (A2)
- Typical long-term infrastructure debt instruments have a long tenor (12-15 years), but are amortising in nature. They have an average duration of about 6-7 years. Let us assume that the average duration for both the instruments being considered for illustration is 7 years (B)
- On an annualised basis, the expected loss for the instrument rated EL 1 (A1) that needs to be factored into the credit spread works out to around 10 bps (C1 = A1 / B)
- On an annualized basis, the expected loss that needs to be factored for an instrument rated EL 4 (A2) into the credit spread works out to around 160 bps (C2 = A2 / B)
- Apart from the expected loss, lenders also price in unexpected losses (cost of servicing the equity capital), other losses etc. (losses on account of market risk, illiquidity etc.)
- On an annualized basis, the unexpected loss that needs to be factored into the spread for a BBB- instrument would be around 110 bps (D = a risk weight of 100% for the 'BBB-' credit quality * capital adequacy of 9% * return on capital of 12%). The unexpected loss for both the instruments rated EL 1 and EL 4 will be same given their similarity in PD ratings
- Apart from this, about 20 bps may be attributed to other risks such as illiquidity (E)

Hence using the above steps, the overall credit spread and borrowing cost for a BBB-, EL 4 instrument would be

Credit spread for instrument rated BBB- and EL 4 = C2 + D + E = 290 bps

Borrowing cost for instrument rated BBB- and EL4 = Credit spread + risk free rate = 2.9% + 8% =10.9%

Further using the above steps, the overall credit spread and borrowing cost for a BBB-, EL 1 instrument would be

Credit spread for instrument rated BBB- and E 1 = C1 + D + E = 140 bps

Borrowing cost for instrument rated BBB- and EL 1 = Credit spread + risk free rate = 1.4% + 8% = 9.4%

As observed in the above illustration, both projects having identical ratings of BBB- on the conventional rating scale are charged a similar interest rate of 11%.However the overall risks are quite different, primarily on account of distinct post default recoveries. This feature is adequately reflected in the EL ratings of the projects and is an important consideration in determining the borrowing costs for the instruments. Hence the instrument rated EL 1 should have a lower borrowing cost than instrument rated EL 4 even though both instruments have similar rating on the conventional rating scale

- Showcase a fundamentally sound infrastructure asset whose rating on a conventional scale is constrained due to liquidity, cash flow mismatches, and/or unfavourable debt structure.
- Improve access to diversified debt funding from long-term investors such as pension funds, infrastructure debt funds and insurance companies.
- Help financial institutions in estimation of Expected Credit Loss required under the revised Indian Accounting Standards.
- Evaluate optimal resolution strategies based on EL ratings during debt restructuring/refinancing process:
  - Approval for various restructuring schemes in the event of low EL indicated by EL ratings
  - Suggest higher haircut for debt instruments for proposals under restructuring in the event of high EL indicated by EL ratings
  - Initiate recovery process or trigger substitution/termination payment clause upfront in the event of very high EL indicated by EL ratings-saving time and costs for banks

Frequently asked Questions

Why this rating only for infrastructure and what are the sectors covered here?

The product has been developed after discussions with the Ministry of Finance post the Union Budget announcement on Feb 28th, 2016. Given the funding constraints and criticality of the infrastructure sector for the overall economic development, the rating scale has been proposed to be used for infrastructure projects in the initial phase.

The stability of cash flows in operational infrastructure projects, presence of embedded safeguards such as termination payments, long tenure and contractual protection lend a high degree of certainty in estimating post default recovery for these projects. As EL is a relatively innovative concept within the Indian parlance, it would be optimal to introduce this scale and concept where there is a high degree of predictability. As the investor confidence builds, the EL scale can be later extended to other sectors as well.

EL ratings shall be applicable for all the sub sectors covered under the Harmonized Master List of Infrastructure sub-sectors published vide Gazette Notifications dated April 8, 2016.

What is the acceptance of this new EL scale amongst bankers and lenders? Is the rating mandatory by RBI or any regulator?

EL rating has been developed taking into account extensive feedback from all stakeholders, i.e., infrastructure developers, mutual funds, banks and regulatory authorities. CRISIL Ratings has informed the Securities Exchange Board of India (SEBI), about the launch of the product, including the scale. All other regulators such as RBI, PFRDA and IRDAI have been involved along with the Ministry of Finance during the development of the product and are well versed with the nuances of EL rating scale.

The response from the regulators has been highly encouraging with IRDAI recognizing this scale in January 2021 by allowing insurers to classify investments in infrastructure debt instruments rated 'A' and 'EL1' to be classified as approved investments. Further, SEBI recognised and standardised the scale in July 2021. We expect recognition of this scale from other regulators in due course. Given the benefits of EL ratings for all the stakeholders, we believe the EL scale shall be a useful input along with existing ratings (based on PD methodology) and will find greater acceptance amongst lenders and investors in the long run.

Does CRISIL Ratings have a mapping of existing rating scale (PD) with that of the EL scale?

Ratings under the conventional rating scale and those under the EL scale, though both indicators of credit quality are two different but essential measures of credit risk. For example ratings assigned as per the conventional rating scale indicate the probability that an issuer is likely to repay its debt obligations in full and on time. Whereas EL ratings indicate the expected loss levels to be incurred over the life/tenure of the instrument.

Ratings on PD are an input in arriving at the EL ratings. Hence it is not possible to arrive at a mapping of these two scales. For example an issuer might be delaying on its repayment obligations by a few days on account of liquidity mismatch, however these repayments could be full. In such instance though a rating of the issuer on the conventional rating scale might be "D", the rating on EL scale may be significantly higher depending upon the characteristics of the underlying asset.

Will ratings on all facilities be the same under the EL scale?

EL ratings are an opinion on Expected loss over the life of the instrument and in some cases on account of different structural features of the debt instruments, the EL ratings may differ for the same issuer.

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About CRISIL Ratings Limited (A subsidiary of CRISIL Limited)

CRISIL Ratings pioneered the concept of credit rating in India in 1987. With a tradition of independence, analytical rigour and innovation, we set the standards in the credit rating business. We rate the entire range of debt instruments, such as, bank loans, certificates of deposit, commercial paper, non-convertible / convertible / partially convertible bonds and debentures, perpetual bonds, bank hybrid capital instruments, asset-backed and mortgage-backed securities, partial guarantees and other structured debt instruments. We have rated over 33,000 large and mid-scale corporates and financial institutions. We have also instituted several innovations in India in the rating business, including rating municipal bonds, partially guaranteed instruments and infrastructure investment trusts (InvITs).

CRISIL Ratings Limited ("CRISIL Ratings") is a wholly-owned subsidiary of CRISIL Limited ("CRISIL"). CRISIL Ratings Limited is registered in India as a credit rating agency with the Securities and Exchange Board of India ("SEBI").

For more information, visit www.crisilratings.com

About CRISIL Limited

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