



Rating Criteria for Expected Loss Ratings for Infrastructure Projects

Background:

Infrastructure is not only the backbone of a growing economy but also imperative for faster economic and industrial growth in the country. Broadly, the sector consists of projects undertaken in power, roads, railways, ports, airports, urban infrastructure, and telecommunication sectors. These projects have a long gestation period and are exposed to various execution risks such as financial tie-ups, execution-related risks, and regulatory risks during the implementation stage. However, post-completion of the project, stable operations, and cash flow, if these are in line with initial expectations, will improve the overall credit profile of the rated entity and thus reduce default risk. On the flip side, even though the project may be completed on time and within budgeted costs, it may encounter liquidity mismatches mainly due to volatile cash flow arising out of delayed payments from counterparties, lower demand than estimated (like lower traffic for toll road projects) and high maintenance cost.

The infrastructure sector typically comprises road and transport (toll, annuity, and hybrid annuity), port (airport, seaport), railways, power (thermal, solar, wind, hydro, transmission and power distribution), telecommunication and urban infrastructure. The rating of infrastructure entities is driven by various factors such as policy changes by the government, tariff charged or pricing for services provided which are determined by the regulator or the government, and low impact of demand-supply driven risks especially in annuity-based infrastructure projects and urban infrastructure.

Due to the capital-intensive nature of the sector and heavy investments required, developers opt for a higher proportion of debt which is financed from commercial banks and NBFC's as there is lesser participation from the bond market. These projects face unpredictable, high implementation risks including time and cost overrun, risks pertaining to counterparties, single asset concentration, availability of alternatives, policy changes, etc.

Infrastructure projects often generate revenue over a longer horizon than their debt tenures, leading to unpredictable ramp-up phases and cash-flow mismatches. When a project's operational life does not align with its debt-repayment schedule, it may become necessary to secure new financing. If market conditions are unfavorable or the project underperforms financially, refinancing can prove difficult or more costly, straining cash flow and heightening financial risk.

To address these challenges, the EL scale for rating infrastructure projects was launched in 2017 with the backing of Ministry of Finance (MoF) and recognized by SEBI, IRDAI, and PFRDA. The EL rating system aims to provide broader and additional information on various risks associated with Infrastructure projects to the investors. It reflects opinion on the expected loss that may be incurred over the life of a debt instrument.

Scope of the Criteria:

EL ratings are currently limited to infrastructure and these ratings encompass projects in

- Roads (annuity-based, toll-based and hybrid annuity models)
- Power (generation, transmission and distribution)
- Ports (airports and seaports)
- Other infrastructure projects

EL rating is applied to projects throughout their lifecycle and cover debt issued by both special-purpose vehicles and infrastructure corporates.

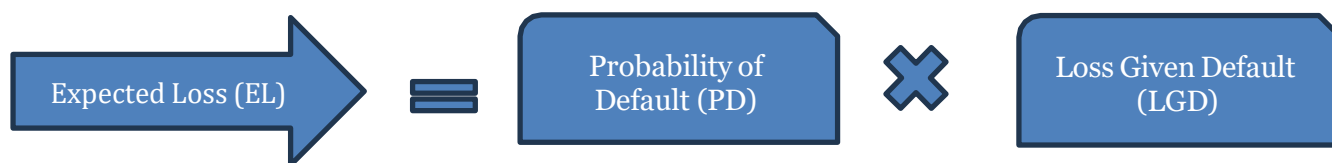
As per the circular published on May 15th, 2025, SEBI decided that CRAs may, in addition to the standardised rating scale, extend the EL-based Rating Scale for rating of Municipal Bonds which are issued for financing infrastructure assets. Accordingly, the BWR rating criteria “Expected Loss Ratings for Infrastructure Projects” will be applicable for the EL rating of 1) municipal bonds issued for the financing of infrastructure assets, and 2) projects/instruments associated with infrastructure sector.

The criteria will be applicable only for the estimation of “Expected Loss (EL)” and not “Expected Credit Loss (ECL)”. For EL calculations, default is recognized on ‘one day, one rupee’ basis as per the SEBI guidelines. However, ECL is applicable for banks and FIs and recognizes default when an account is 90 days past due.

Expected Loss Rating Methodology:

EL Ratings methodology critically assesses the clauses for termination payments, and the entity’s ability to refinance which help in evaluating the recovery of dues to the investors and lenders over the economic life of the infrastructure project. The approach also factors in the subordination clauses and the waterfall mechanism embedded in the project agreements.

The main components of EL are Probability of default (PD) and Loss given default (LGD).



The credit rating of infrastructure entities is constrained on account of high exposure to execution risks, i.e., during the implementation phase as well as post-completion. BWR’s rating scale for the expected loss rating is on a seven-point scale from BWR EL 1 to BWR EL7. Each rating on the scale corresponds to a range of EL values over the expected life of the instrument. These ratings are valid through the maturity of the debt instrument for which the project is being funded initially.

Rating Symbol	Indicative Range of Expected Loss	Definition
BWR EL 1	$\leq 1.25\%$	Instruments rated “EL 1” are considered to have the lowest expected loss, over the life of the instrument
BWR EL 2	$1.25\% < X \leq 3.5\%$	Instruments rated “EL 2” are considered to have very low expected loss, over the life of the instrument
BWR EL 3	$3.5\% < X \leq 7.5\%$	Instruments rated “EL 3” are considered to have low expected loss, over the life of the instrument
BWR EL 4	$7.5\% < X \leq 15\%$	Instruments rated “EL 4” are considered to have moderate expected loss over the life of the instrument
BWR EL 5	$15\% < X \leq 25\%$	Instruments rated “EL 5” are considered to have high expected loss, over the life of the instrument
BWR EL 6	$25\% < X \leq 35\%$	Instruments rated “EL 6” are considered to have very high expected loss, over the life of the instrument
BWR EL 7	$>35\%$	Instruments rated “EL 7” are considered to have highest expected loss, over the life of the instrument

Probability of Default Approach:

BWR has well-defined criteria for assigning ratings on the PD scale (‘AAA’ to ‘D’) for Infrastructure projects and entities. The criteria capture project risks at the planning and execution stage, as well as the operational and maintenance stage. It also captures the various liquidity challenges during the life of the project (Refer to the Rating Criteria for Infrastructure Sector on the Website <https://www.brickworkratings.com/download/Criteria-InfrastructureUpdated.pdf>).

The EL-based rating framework provides an opinion on the prospects of recovery (post-default) of their principal and interest in conjunction with the probability of default and thereby provides incremental information to the investors/lenders regarding expected loss.

Loss Given Default (LGD):

Expressed as a percentage of the amount defaulted by the issuer, the LGD gives an estimate of the actual loss which a lender/investor would have to incur. It is often expressed as $(1 - \text{Recovery Rate})$ where Recovery Rate (RR) is the amount recovered post-default as the percentage of the total outstanding amount at the time of default. The defaulted amount consists of the principal as well as accrued interest. Exposure at default (EAD) is the total value of a loan that a bank is exposed to when a borrower defaults. LGD depicts the extent of loss on a debt instrument over its life, after an issuer has defaulted on its repayment obligations on the instrument, i.e., if the project fails to repay on time even for a single day or even by Rs.1 then this is considered as a default, and the PD rating has gone into default category.

Loss given Default (LGD) = $1 - \text{Recovery Rate} = 1 - (\text{Amount Recovered post default}) / (\text{Total amount outstanding at the time of default})$

Recovery Prospects:

BWR evaluates various aspects to estimate recovery in the event of default. The following aspects of infrastructure projects are generally considered while estimating recovery:

- Adequacy of termination payments (PPP projects) in conjunction with the credit quality of the concessioning authority or loan-to-value (LTV) in case of non-PPP projects
- Sponsor's creditworthiness and undertaking to fund shortfalls during construction and operations phase
- Step-in/substitution rights available with lenders
- Adequacy of the insurance cover
- Project's expected cash flows and sensitivity to key variables
- Tail period of the project

Analyzing recovery rates involves a detailed analysis of the following scenarios:

Cash flow-based recovery:

This considers the debt servicing through the cash inflow generated from the project. Cash flow generation from the project depends on asset class, project characteristics and overall assessment of various credit risks related to the project viability. Different projects generate cash in different ways. For example, annuity-based road or transmission projects have a high level of revenue predictability. Thermal power generation or toll road projects on the other hand, may face demand and cost escalation pressure.

The inherent risks of asset classes along with the dynamics of the projects are some of the crucial factors considered for arriving at the extent of recovery of cash flows in servicing debt obligations.

Restructuring / Refinancing based recovery:

Normally, infrastructure projects such as highways or toll projects enter into longer concession agreements extending to 25 – 30 years. However, the loan tenure lasts a maximum up to 10-15 years, thus leading to cash flow mismatch. Later these loans can be refinanced or restructured for the remaining period which lasts up to the residual life of the project. However, this scenario is not covered under current PD analysis. This can be assessed under LGD, through various ways such as the possibility of refinancing, the economic life of the project, viability of restructuring, and stability of cash flow generation for the residual life of the project etc.

Security based recovery:

Infrastructure projects provide some form of security in the event of failure of a project or losses to lenders/investors. Normally in PPP, a common form of such security is the termination payment which protects investors/lenders from losses, as the payment for a proportion of outstanding debt is assured by the concessioning authority (typically a government entity as a counterparty) in the event of a borrower defaulting, or during events such as force majeure, etc. In general, realization of such termination payments takes longer than anticipated initially. BWR considers some delay in receipt of termination payments while arriving at the LGD.

Conclusion

BWR uses the PD approach, along with an assessment of LGD and Recovery Rates post default to arrive at EL Ratings of Infrastructure projects, which provides additional information and a broader perspective for the investors. The final rating factors in a comprehensive analysis of project implementation and execution risks, viability of the project, the structure of debt and various unique characteristics such as strength of concession, termination payment, predictability of cash flows, for each year, over the life of the infrastructure project.

The previous version of this document can be found in

<https://www.brickworkratings.com/download/Criteria-Rating%20Criteria%20for%20Expected%20Loss%20for%20Infrastructure%20Projects%201-NEW.pdf>

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