RISK-ENTERPRISE ANALYTICS

LGD (Loss Given Default) for Defaulted and Distressed Assets – A Best Practice Approach

Risk-Enterprise Analytics

Introduction

LGD assessments are required for a variety of purposes including compliance, internal capital allocation, pricing, stress testing and securitisation. For individual assets, each asset will typically also have a number of different (albeit analytically consistent) LGD values at any time– including expected LGD (for IFRS9 accounting), downturn LGD (for Basel capital allocation), stressed LGD, and other values for internal purposes.

For most financial institutions, the majority of assets are performing. The focus of all those LGD assessments (irrespective of the assessment goal) is therefore naturally on estimating the loss in the event that a (currently performing) asset defaults in the future.

However, distressed and already-defaulted assets raise specific additional considerations. This article discusses best practice in dealing with those issues.

General Considerations

Once a borrower's credit profile deteriorates to a point that it is designated as being "distressed", it typically becomes subject to greater scrutiny and more frequent review.

LGD assessments (and PD for non-defaulted cases) must now be reviewed not only in line with the rest of the portfolio for external reporting purposes (e.g. for IFRS9 and Basel reporting) and regular internal management reporting but also on a more frequent basis. In particular, PD designations may change (as obligations fall further overdue from 1-day to 30 days to 60 days to 90 days) and LGD assessments need to be updated in tandem. Similarly, as more information becomes available (about larger cases), LGD assessments may need refinement even if the PD designation remains unchanged.

Critically, LGD (and PD, when appropriate) must be updated using methodologies that are analytically consistent to those applied to non-distressed assets and also analytically consistent with the goal of the revised LGD assessment (i.e. IFRS9, Basel, internal reporting).

An Analytically Consistent LGD Methodology

A robust LGD methodology operates by:

- Firstly, determining a firm-specific "economic value of assets" (EVA) for those firms that are "going concerns" and a "liquidation value of assets" (LVA) for those firms that have ceased trading
- For "going concerns" the EVA is then stressed consistently with the severity of stress (or greater) required for the borrower to default to determine the probability distribution of EVA within the post-default space.
- For those firms that have otherwise ceased trading, the probability distribution of LVA is used.
- The reduced (or stressed) EVA (or LVA) at each level (and its associated probabilities) are then compared with the borrower's debt in order to compute LGD

In evaluating LGD (and in addition to the probability distributions of EVA and LVA) the following attributes are also taken into consideration:

- The goal of the computation (i.e. downturn LGD, expected LGD, or LGD relative to a specified stress assumption or risk tolerance) which determine the minimum stress to be applied to EVA (or LVA).

- The seniority of the loan, debt or facility being assessed (i.e. the quantum of liabilities that rank ahead of, parri-passu with, or behind the facility being evaluated)
- The creditor-friendliness of the country in which the obligor is domiciled (which influences ultimate recovery values and the terms upon which liabilities may be restructured)
- The quantum, quality and volatility of any specific assets pledged against specific liabilities.
- Anticipated recovery expenses
- The sector and economic environment in which the borrower operates
- Any external mechanisms or support available to enhance recovery.

Distressed but Not Defaulted

While a borrower is classified as "distressed" (but not in default), the borrower continues to be regarded as a "going concern" (since there is not – yet- an expectation of default) and EVA is used within the assessment of LGD (albeit EVA is computed on the basis of the distressed financial profile).

Defaulted

Defaults can be partitioned into:

- Those that have defaulted but not (yet) entered into an insolvency regime
- Those that have entered an insolvency regime for administration but are not (yet) undergoing (compulsory or voluntary) liquidation or wind-up
- Those that have entered into an insolvency regime for the purposes of liquidation or wind-up.

Over the course of time, defaults may: migrate from one of these sub-groups to another sub-group; emerge from default without having entered an insolvency regime (due to rescue or restructuring); emerge from default as a (restructured) going concern (typically emergence from insolvency administration rather than liquidation); or may be fully liquidated or wound-up (with the consequent ultimate loss now known and received).

Defaulted but Not Insolvent

Best-practice for defaults in this status involves firstly evaluating both the firm's EVA (economic value of assets) and the firm's LVA (liquidation value of assets).

EVA is determined in the same manner as for non-defaulted borrowers that are "going concerns" (i.e. in broad terms as the adjusted value of balance sheet assets plus the value attributable to future business that will be produced as a "going concern"). LVA is determined on a liquidation basis (i.e. assuming the imminent cessation of trading as the adjusted value of balance sheet assets).

The first basis (EVA) is analytically appropriate for defaulting firms that do not enter an insolvency regime (or enter and subsequently emerge from an insolvency regime) but instead either restructure their liabilities or are rescued or acquired by third-parties (with or without economic loss for lenders). The second basis (LVA) is analytically appropriate for firms entering an insolvency or liquidation regime (that subsequently are liquidated or wound-up).

The LGD model is then deployed in the normal manner to calculate prospective LGD rates on both bases (i.e. separate initial values using EVA and LVA)

Finally, the migration rates from default (but not insolvent) status to (a) emergence from default and (b) insolvency are then employed as weights to the two prospective LGD values to finalise the result.

Migration Probabilities	Emergence from Default (without entering Insolvency Regime)	Default Insolvent (NOT Liquidation or Wind-Up)	Default Insolvent (Liquidation or Wind-Up)
Default NOT Insolvent	P1	P2	P3
Note: P1 + P2 + P3 =1			
Migration Probabilities	**Emergence from Default (after entering Insolvency Regime)**	**Default Insolvent (Liquidation or Wind-Up)**	
Default Insolvent (NOT Liquidation or Wind-Up)	P4	P5	
Note: P4 + P5 = 1			

LGD1 = LGD value derived using EVA

LGD2 = LGD value derived using LVA

LGD3 = the migration rate weighted average of LGD1 and LGD2

LGD3 = [P1 + (P2 x P4)] x LGD1 + [(P2 x P5) + P3] x LGD2

As migration typically occurs over a short time period and migration rates vary as a function of economic conditions, best-practice involves using point-in-time (PIT) migration rates (reflecting current and prospective economic conditions) rather than long-run average migration rates.

In cases when up to date information about the borrower's distressed financial profile is not available, we typically deploy tools to estimate values for EVA and LVA as a function of: the latest financial information available; the corresponding PD rates to that financial information; and macro-economic considerations relating to the period from the financial statements.

Defaulted and Insolvent (but NOT liquidation or wind-up)

The same weighted approach is used as for defaulted NOT insolvent.

In this case:

LGD3 = P4 x LGD1 + P5 x LGD2

Defaulted and Insolvent in liquidation or wind-up

For defaults in this sub-category, LGD is computed solely using the liquidation value of assets (LVA)

Case-by-Case versus Quantitative Estimates of LGD

A “case-by-case” approach involves estimating LGD (or modifying a quantitatively derived LGD) as a function of specific information provided in respect of a particular borrower or facility.

In general, a “case-by-case” approach is good risk management practice when (i) the exposure amount is large (and important to the lender) and (ii) the lender has specific information about the defaulting borrower and its current financial profile that enables a more precise firm-specific calculation to be made.

More generalised quantitative approaches are appropriate on practical grounds when the exposure amounts are small (so that the cost of evaluating a precise firm-specific approach outweighs the benefits of the extra precision) or insufficient information is available (at the calculation date) to facilitate a firm-specific approach (in which case any attempt at a firm-specific computation would be spurious). Furthermore, for large portfolios of modest exposures (such as SME or retail) a collective approach will also typically be adopted with quantitative techniques applied to a sub-portfolio of defaults.

There may also be circumstances whereby a quantitative approach is initially followed for a large case, due to lack of information to facilitate a firm-specific calculation, but the case is subsequently migrated at later accounting periods to a firm-specific approach (once more information is available).

When case-by-case approaches are being used the quantitative LGD methodology is still deployed (albeit in a subsidiary role) as:

- A “sanity check” on case estimates (consistent with best practice)
- To assist case-assessors formulate their more informed assessment
- To facilitate the derivation of other LGD values for the same case that are needed for other reporting purposes (e.g. Basel, IFRS9)

Contact us
EMEA
Risk-Enterprise
Email: info@risk-enterprise.com

Disclaimer
The information contained in this brochure is both of a specific and general nature and is provided for your guidance and assistance. Whilst any recommendations are intended to advise or direct you on the specific actions believed to be required by your business, neither the Document's authors nor Risk-Enterprise Limited will accept liability or responsibility for any loss or damage suffered by you or another party as a result of reliance being placed on the information or guidance supplied.
If you wish to unsubscribe please let us know by email.