

Why Indian Commercial Banks Need to Adopt Expected Credit Loss (ECL) Based Provisioning Approach?

Arindam Bandyopadhyay, *Professor*, NIBM

(Views are personal)

Background

Reserve Bank of India has recently proposed to adopt the Expected Credit Loss (ECL) approach used in International Financial Reporting Standards (IFRS 9). The central bank has released a discussion paper on 'Expected Credit Loss' model for loan loss provisioning by the commercial banks in India. Banks are currently making provisions after assets are identified as impaired or non-performing as per this regulatory definition. Under current accounting norms for banks and FIs, the quantum of provisioning is also specified by the regulator. However, provisioning under this approach has been criticized for being too little, too late. RBI's proposal for introducing expected credit loss-based provisioning by banks would be to formulate principle-based guidelines supplemented by regulatory backstops wherever felt necessary. The provision amount would be based on current internal risk estimate of potential future credit loss. Expected loss is applicable for both assets which are currently impaired (but exact loss amount is uncertain) and those which are currently performing, but may face impairment in the future.

ECL Framework

Conceptually, ECL is the bank's internal estimate of anticipated future loss on a credit exposure due to default expected to occur during normal course of business. It is an integral component of credit risk estimation. IFRS 9 or Ind AS 109 accounting standards explicitly require provisions and loss allowances to be made as per Expected Credit Loss. RBI's prescribed forward looking expected credit loss principle can follow Financial Accounting Standards Board's (FASB) Current Expected Credit Losses (CECL) model or International Accounting Standards Board's (IASB) IFRS 9 framework. CECL model requires that all financial instruments are to be projected over the life of the loan. It urges banks to estimate life time PDs (Probability of Defaults). However, the IFRS 9 standard varies its projection requirement based on whether an asset is classified as stage 1, 2 or 3. The ECL based provisions is to be applied at origination and for all subsequent reporting periods to loan assets till de-recognition. Under IFRS 9, three stages have been specified under the new accounting standard to determine the amount of impairment to be recognized as ECL at each reporting date. Twelve month ECL allowance is applicable for Stage 1 (performing) assets. These assets are at initial recognition having low

credit risk on reporting date and have not shown any significant increase in credit risk (SICR) since initial recognition. However, if the credit risk has increased significantly, assets will go to Stage 2 and allowances are to be made based on lifetime analysis of expected loss. If the loan is credit impaired, it will be put under stage 3 and the Standards require that provisions are to be based on lifetime expected losses where PD is to be considered as 100%. The impairment of the asset has to be identified on the basis of: 'Default Event' (objective, market/performance based evidence of non-payment of dues).

Under the extant RBI directives stipulated in Income Recognition, Asset Classification (IRAC) and Provisioning norms, for regulatory purpose, general provisions are held for standard assets against future unidentified losses which may subsequently materialise. The Basel norms on capital adequacy for banks permit inclusion of this provision in Tier 2 capital (up to 1.25 percent of credit risk weighted assets). Banks are required to make provisions for non-performing assets as well. For early recognition of stress assets, three sub categories have been suggested before a loan account turns into a non-performing asset (NPA). Three special mentioned account (SMA) categories are: SMA-0 (if principal or interest payment is not overdue for more than 30 days, but showing signs of incipient stress), SMA-1 (principal or interest overdue between 31 - 60 days) and SMA-2 (principal or interest payment overdue between 61 - 90 days). Provisioning rate under RBI's IRAC norm is 25 basis points for SME and Agriculture advances, 100 basis points for commercial real estate (CRE), 75 basis points for CRE RH and 40 basis points for all other standard advances. For sub-standard category under NPA, it is stipulated as 15% for secured loans and 25% for unsecured loan outstanding. The forward looking ECL approach is an improvement over this since it allows banks to use internal models to predict future risk of default and also define alerts for significant increase in credit risk. It is clear that transition to Ind AS 109 will entail a major change in the approach and provision amount that banks and FIs would be required to hold for their portfolios. It is expected that banking sector in India will be benefited from IFRS 9 ECL approach due to more granular 3 stage approach.

How Banks will do Provisioning Under ECL Model?

Credit risk is the possibility of losses associated with changes in the credit profile of borrowers or counterparties. Risk can be measured along two dimensions: expected loss and unexpected loss. Expected loss is the average rate of loss expected from a loan portfolio. Losses above the expected levels are usually referred to as unexpected losses (UL). Expected credit loss is intended to set reserve requirements for doubtful accounts, loan pricing, estimation of credit cost and for calculation of risk adjusted profitability. The capital cushion is required to absorb the unexpected loss which is long term in nature as capital cannot be raised immediately.

ECL is defined as losses anticipated on a credit exposure / credit portfolio due to defaults expected to occur during the normal course of business. It is clear that transition to Ind AS 109 will entail a major change in the approach and provision amount that banks and FIs would be required to hold for their portfolios. The major inputs of ECL are: a) Probability of Default (PD), b) Exposure at Default (EAD) and c) Loss Given Default (LGD). PD is the

estimate of the likelihood of default over a given time horizon. Exposure at Default (EAD) provides estimate of the exposure at a future default date, taking into account expected changes in the exposure after the reporting date, including repayments of principal and interest and expected drawdowns on committed facilities. The third driver - LGD is the estimate of the percentage loss arising on default. It is based on the difference between the contractual cash flows due and those that the lender would expect to receive, including those from any collateral. It is usually expressed as a percentage of EAD. IFRS 9 ECL based provisioning norms require institutions to use Point-in-Time (PIT) projections of PDs, LGDs and EADs. The new financial accounting system require banks and FIs to internally model the key elements of their credit risk losses and thereby derive more risk sensitive measures for loan loss provisions. In accordance with the requirement of the new standards all 3 risk drivers need to be forward looking. The new RBI framework also requires the use of credit-adjusted effective interest rate (EIR) to discount the estimated cash flows in order to factor in the time value of money.

Twelve month ECL is estimated by considering probability weighted scenario. When a bank is giving loan to a borrower, the options are either repayment (with probability of repayment, PS) or non-repayment (with probability of default, PD). If there is regular repayment, there is no Loss (LGD = 0). However, if the borrower fails to meet the contractual obligations and defaults on the loan (with 1 - PS probability), there is a loss (LGD >= 0).

$$\begin{aligned} \text{The expected loss of the loan would be (ECL)} &= \text{PS} \times \text{LGD} + (1 - \text{PS}) \times \text{LGD} \\ &= \text{PS} \times 0 + \text{PD} \times \text{LGD} \\ &= \text{PD} \times \text{LGD} \end{aligned}$$

where, LGD is = $\text{EAD} \times \text{LGD}\%$.

$$\text{Thus, one can write ECL} = \text{EAD} \times \text{PD} \times \text{LGD} \dots\dots\dots (1)$$

Under Ind AS 109, 12 month ECL for Stage 1 asset is estimated by the present value of probability weighted credit losses expected to occur due to default.

$$\text{Thus, Ind AS 109 12-month ECL} = \text{PV}_{\text{EIR}} \times \{ \text{EAD}_{t=1} \times \text{LGD}_{t=1} \times \text{PD}_{t=1} \} \dots\dots (2)$$

Banks are expected to use internal models to derive EAD, LGD and PD. LGD is estimated at facility level through net recovery cash flows discounted using the original effective interest rate of the loan. EAD considers current outstanding for term loans and future drawdowns captured for Cash Credit/Overdraft (CC/OD) and other commitments, and so it can be higher than current balance. Twelve month PD would be point in time estimates (based on current conditions, adjusted for forward looking scenarios).

Lifetime ECL can be estimated as below.

$$\text{Ind AS 109 Lifetime ECL} = \text{PVEIR} \{ \text{PD}_T \times \text{LGD}_T \times \text{EAD}_T \} \dots\dots\dots (3)$$

Here, time period $T=1, 2, \dots, N$ depending on the lifetime of the loan. The PD would be lifetime estimated which is termed as cumulative PD or conditional PD.

LGD can be derived from eligible financial collateral using haircut approach as given in Basel 3 Standardized or F-IRB approach. Banks can also use Basel 3 Foundation Internal Ratings-Based Approach (FIRBA) specified LGDs. Internal models based on written off data can also be applied for derivation of LGDs at facility level. EAD can be estimated using bank's internal credit conversion factors (CCFs) or RBI prescribed CCFs in case enough internal data is not available.

Banks need to estimate multi-period borrower wise default probabilities on a rigorous definition of term structure of default probability and conditional expectation given forward looking economic dynamics. They save ECL provision amount mainly for stage 2 accounts if they are able to track year-wise cash flows and apply conditional PDs instead of simply using cumulative PDs on current outstanding for estimation of their ECL-based provision.

The Benefits of ECL Based Provisioning

The ECL methodology takes into account the effect of historical PD trends as well as current and future economic scenarios and predictions. Thus, it significantly changes the bank's incentives by inclining them to manage and dispose of bad loans much more actively than the existing process.

Estimation of borrower level Probability of Default (PD) is the highlight of ECL based provisioning mainly for Stage 1 and Stage 2 accounts. Banks need to derive forward looking more recent PD estimates. The lifetime PDs are required for estimation of stage 2 loss provisions. Banks need to assess at each reporting date whether credit risk on a corporate loan facility has increased significantly since initial recognition. SICR (Significant Increase in Credit Risk) is a relative concept for classification of loans into stage 2 provisions. More objectively, it is done through changes in the risk of default at borrower level. The approach provides lot of flexibility to the bank and improves credit risk management capabilities. It allows banks to adopt simplified and sophisticated modeling strategies and hence creates incentives for banks to measure risk appropriately and is thus beneficial for ensuring financial stability.

Global research findings suggest that implementation of ECL approach is beneficial for commercial banks. A study by Jin and Wu (2022) reveal that switching to the ECL model decreases the risk of stock price crash of commercial banks.

Concluding Remarks

The new accounting standards aim to simplify and strengthen risk measurement apart from enabling the reporting of financial instruments in an efficient and forward-looking manner. The ECL based provisioning will enable banks to become more proactive in identifying credit impairment and make necessary loss provisions. Early detection of significant increase in credit risk may incentivize banks for better credit portfolio planning and thereby reduce any

further NPA burdens. It is anticipated that a forward-looking approach for identification of credit impairment and the estimation of ECL will provide a timely and adequate accounting treatment of loss provisions.

References

1. Bandyopadhyay, A. (2022); How Banks Should Estimate Their Expected Loan Loss Provisions to Survive in Difficult Times?; *Economic and Political Weekly*; Vol. LVII; Issue No. 22; pp. 13-16.
2. Bellini, T. (2019); *IFRS 9 and CECL Credit Risk Modelling and Validation - A Practical Guide with Examples Worked in R and SAS*; Elsevier.
3. Jin, Q. and Wu, S. (2022); Shifting From the Incurred to the Expected Credit Loss Model and Stock Price Crash Risk; *Journal of Accounting and Public Policy*; In Press (online since August 25, 2022); <https://doi.org/10.1016/j.jaccpubpol.2022.107014>
4. Kulkarni, V. (2014); Impairment Loss Methodology under Ind AS 109 - Financial Instruments; *The Chartered Accountant*; ICAI; December; pp. 89-98.
5. RBI. (2023); Discussion Paper on Expected Loss (EL)-based Approach for Loan Loss Provisioning by Banks; January 16.
6. Roy, S. (2018); Expected Credit Loss Estimation: Embedding the Forecasts of Future Economic Conditions as per IFRS 9 Guideline; *Prajnan*; Vol. 46; Issue No. 2; pp. 185-194.
7. Xu, X (2016); Estimating Lifetime Expected Credit Losses under IFRS9; SSRN Working Paper.