ALCB FUND

ECL Calculator

Approach, Assumptions and Limitations

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LHGP asset management

1. Approach, Assumptions and Limitations (1/3)

Objective	The ECL calculator is developed to aid the end user to quantify the credit risk associated with the financial instruments at the pre-investment stage. This will provide a directional understanding of provision movement with the significant increase in credit risk. The key objective of this calculator is to make management decisions more informed with a quick view of estimated provision and associated components. The overall approach adopted in developing the calculator is aligned with the primary requirements of IFRS9 and local regulatory standard.

The table below summarises the approach adopted to estimate Expected Credit Loss and the associated assumptions and limitations if any

Components	Approach	Assumption	Limitation
Rating	○ Moody's rating scale is used to rate the instruments	○ A standard rating scale makes the estimates consistent with a globally understood definition of low/high credit risk for comparison ○ Definition of default is assumed as 90DPD or Rating Grade: D	○ Moody's ratings may not be as exact and internal rating based on historical default experience of regional market practice
PD	○ Moody's historical annual default rates over 20 years are used as starting point to derive the lifetime PD estimates. ○ The annual default rates published on Dec 2019 is currently being used in the tool. The PDs can be refreshed each year to get the ECL output more aligned with economic changes	○ Moody's historical annual default rates are used as a proxy representation of local default events	○ The defaults rates may not accurately reflect local environment
LGD	○ To reduce the complexity of the calculator LGD is kept constant; However a view of how provision changes with LGD is provided for better understanding	○ The LGD of the instruments are assumed as 45% which is equivalent of LGD of unsecured instrument	○ Assumption of fixed 45% LGD makes provision estimate conservative

2. Approach, Assumptions and Limitations (2/3)

Components	Approach	Assumption	Limitation
EAD	○ Bond Investments: Notional amount and accrued interest receivable. For subsequent years reducing balance per simplified amortisation schedule ○ Facilities with both drawn and undrawn components: Current Balance (Principal and interest accrued) + (CCF * Undrawn Portion)	○ Simple amortisation schedule is assumed to avoid computational complexity	○ Amortisation schedule is dependent on the user provide effective interest rate with could be subjective
Staging	○ Staging includes both qualitative and quantitative criteria. The qualitative are (i) Watchlist (ii) Default (iii) Breach of covenant etc. And the quantitative condition are to measure the SICR which will be based on days past due or the movement of lifetime PDs at origination and reporting date	**SICR Threshold: Delinquency** ○ The backstop indicator is assumed to be 30 DPD to determine significant increase in credit risk. Regardless of whether there is a significant change in rating grade or fulfilment of a secondary indicator condition, an exposure would be considered to have experienced SICR if it is more than (or equal to) 30 DPD	○ The thresholds used to measure SICR may not be an exact representative of a specific portfolio of the institution ○ The list of qualitative criteria used in the calculator are the commonly used in the industry. The tool could be lacking specific firm level categorisation of qualitative staging

3. Approach, Assumptions and Limitations (2/3)

Components	Approach	Assumption	Limitation
Staging	○ Staging includes both qualitative and quantitative criteria. The qualitative are (i) Watchlist (ii) Default (iii) Breach of covenant etc. And the quantitative condition are to measure the SICR which will be based on days past due or the movement of lifetime PDs at origination and reporting date	**SICR Threshold: Relative PD movement** The movement of 1-year Moody's average observed default rates between speculative grade rating groups ○ The PD delta between 'Baa3' (investment grade) and 'Ba1' (Sub-investment) is noted as 0.169% ○ Given that shifts between consecutive rating grades (e.g. 'Ba3' to 'B1') would typically be considered a significant credit deterioration (particularly in the sub-investment grade space), PD movements between successive rating groups were also explored. All such PD deltas were > 0.169% ○ As a result, a minimum delta of 0.169% is selected as the appropriate threshold The PD multiple in 1-year Moody's average observed default rates between speculative grade rating groups ○ The PD multiple between Baa3 (investment grade) and Ba1 (Sub-investment) is noted as 1.75X ○ Given that shifts between consecutive rating grades (e.g. 'Ba3' to 'B1') would typically be considered a significant credit deterioration (particularly in the sub-investment grade space), the PD multiples between these successive rating groups were also explored. The minimum PD multiple corresponded to 1.75X (observed between Ba3 and B1). ○ As a result, the minimum PD multiple of 1.75X is selected.	○ The thresholds used to measure SICR may not be an exact representative of a specific portfolio of the institution

4. Approach, Assumptions and Limitations (3/3)

Components	Approach	Assumption	Limitation
EIR	○ EIR is used to discount estimated future cash flow through the expected life of the financial instrument	○ EIR calculation is calculated in the tool. It is to be provided by the user	○ Approximated approach
Repayment	○ Yearly payments (Principal and interest) are to estimated by the user outside of the tool and to be provided as input	○ Depending of the contract, different investment may have different payment schedule; Hence the repayment is kept as user input to make the calculator flexible to cover investment/instrument specific repayment features	○ In cases where monthly, quarterly or semi annual repayment is expected the tool will provide approximated ECL calculated yearly
Macro Economic Variables	○ To introduce the forward looking component, a set of standard macro variables are collected for Uganda published by World Bank. Based on the strength of correlation with the Moody's rating scale a smaller subset is finally selected to forecaster forward looking PD for 20 years ○ MEVs used are: (i) Ease of Doing Business Score (ii) Gross domestic savings (% of GDP) and (iii) Inflation :consumer prices (annual %)	○ Macro forecasted for Uganda was assumed to be correlated with global default rate published by Moody's ○ The maximum possible lifetime of the instrument is assumed to be 20 years	○ Higher likelihood of weak correlation
ECL	○ 12 month and Lifetime ECLs are computed under three scenarios, Base, Upturn and Downturn. The final reported ECL is the weighted average the ECL from three scenarios which makes it unbiased estimate determined by evaluating a range of possible outcomes	○ Weight of Base, Upturn and Downturn are assumed to be 60%, 20% and 20% respectively	○ Element of subjectivity or expert judgement in scenario weights