

Project	Financial Instruments: Impairment
Topic	Variations of an expected loss approach

Background and purpose of paper

1. The ED describes the objective of amortised cost measurement as ‘to provide information about the effective return on a financial asset or financial liability by allocating interest revenue or interest expense over the expected life of the *financial instrument*.’ (See paragraph 3 in the ED.) Many respondents agree that the objective is clear and appropriate; however some disagree with the actual method, various measurement principles, or presentation described in the ED.
2. Agenda paper 4A discusses different ways of determining credit loss measures that can be used for an impairment model. Most respondents to the ED and feedback from outreach activities agree that an expected loss approach better reflects the economics of a lending transaction and how financial institutions manage credit risk. While agreeing with the overall impairment approach, many comment letters (and other outreach activities) provided suggestions of variations (and, sometimes an alternative model) to the ED’s model.
3. This paper describes the various suggestions relating to the following key features of an expected loss (EL) approach (refer to diagram in agenda paper 4), and has the following sections:
 - (a) The allocation of the initial EL estimate.
 - (b) The allocation of subsequent changes to the EL estimate.
 - (c) Whether a floor is needed or should be required for the allowance account on the balance sheet.

This paper has been prepared by the technical staff of the IFRS Foundation for discussion at a public meeting of the IASB.

The views expressed in this paper are those of the staff preparing the paper. They do not purport to represent the views of any individual members of the IASB.

Comments made in relation to the application of an IFRS do not purport to be acceptable or unacceptable application of that IFRS—only the IFRS Interpretations Committee or the IASB can make such a determination.

The tentative decisions made by the IASB at its public meetings are reported in *IASB Update*. Official pronouncements of the IASB, including Discussion Papers, Exposure Drafts, IFRSs and Interpretations are published only after it has completed its full due process, including appropriate public consultation and formal voting procedures.

IASB Staff paper

Allocation of initial EL estimate

4. As described in agenda paper 4A, EL are included in the initial pricing of an instrument. Many respondents argue that amount should somehow be allocated over the life of the instrument. The variations for that allocation are:
 - (a) Spread the initial estimate of EL over the life of the instrument using an integrated effective interest rate (EIR);
 - (b) Spread the initial estimate of EL over the life of the instrument using a ‘decoupled’ EIR. We have learnt from the Expert Advisory Panel (EAP) that ‘decoupling’ can be at least applied in the following two ways:
 - (i) Perform a separate discounted cash flow calculation on the EL, convert that amount to an annuity and allocate over the life of the instrument (the ‘annuity’ approach);
 - (ii) Estimate EL and then spread it using a straight-line method over the average life of the portfolio/instrument¹;
 - (c) After estimating the EL, record the entire amount in the initial period when EL are determined.

Spread EL over life of instrument using an integrated EIR

5. The ED specifically requires the use of an integrated EIR, considering expected cash flows including future credit losses.
6. By including the initial estimate of EL in determining the EIR, the proposed approach would avoid the systematic overstatement of interest revenue in periods before a loss event occurs and use a subsequent measurement that is internally consistent with the initial measurement of the financial asset (see

¹ Note that for this approach, the suggestion for the allocation of subsequent changes in estimates is to include experience adjustments (difference between actual and expected losses from current period) and changes in future expectations to the current period. But the initial EL is always allocated on a straight-line basis.

IASB Staff paper

agenda paper 4A for further discussion on consistency with initial measurement). It also facilitates an amortised cost measurement that at any point in time is a present value of the future cash flows.

7. However, we learnt from the EAP and others that an integrated EIR is operationally difficult. Most entities use separate credit risk systems and accounting systems which are rarely, if ever, linked to one another. Therefore it can be difficult to derive an integrated EIR in a cost-effective manner. Further, we also understand that some entities calculate the contractual rate on an individual instrument basis, whereas credit losses are often calculated on a portfolio basis. Integrating these two items would require precise identification of the period during which the losses would occur. The suggested solution: ‘decouple’ the EIR.

Decouple the EIR

8. One method of decoupling the EIR is to use an ‘annuity approach’. As described in paragraphs 18-21 of the EAP Summary paper included on the website (and reproduced in Appendix A for convenience), such an approach would require performing a separate DCF calculation on the EL to determine a present value of the EL. That amount is then transformed into an annuity, allocated over the life of the instrument and recognised in profit and loss as a periodic charge. The annuity approach can be applied in a way that results in a very close approximation to the proposed integrated EIR approach outlined in the ED.
9. Another suggested method for ‘decoupling’ is to determine the EL and allocate it over the life of the instrument using a straight-line method (see paragraphs 22-23 of the EAP summary included in Appendix A). Such a method may be useful in practice, albeit not as accurate as an integrated EIR or an annuity approach for allocating the initial EL. Even so, this method could provide a reasonable approximation to the ED.

IASB Staff paper

10. Operationally, both these ‘decoupled’ methods are simpler than an integrated EIR calculation because they separately source the risk data from the accounting data.
11. However, as with the current proposal, these methods would still require carrying forward historical data (ie the initial annuity or EL) for purposes of determining the amount to be recorded when estimates change in the future. If a different variation of the key feature ‘allocation of subsequent changes in EL estimate’ (see below section) is used, the concern around carrying forward historical data may be alleviated.

Record the entire EL in the first period

12. Perhaps the simplest (operationally) of all variations is to record the initial estimate of EL in the first period. Such an immediate recognition of EL is akin to a ‘day-1 loss’. Although no historical information would be required to be kept in systems, and no integrated EIR would be required to be calculated, requiring a loss to be recorded in the first period creates an accounting loss that economically does not exist. This also results in an accounting return that does not accurately reflect the effective return of a financial instrument over its life.

Allocation of subsequent changes in EL estimate

13. The next key feature of an EL approach is the allocation of the effect of subsequent *changes* in the EL estimate. There are three broad variations to this feature:²
 - (a) ‘Full’ catch-up of the effect of changes in the EL estimate, ie immediate recognition in profit or loss (no allocation)
 - (b) ‘Partial’ catch-up of the effect of changes in the EL estimate with spreading the remaining part of that effect over the remaining life using one of the following sub-variations:

² The allocation method can be applied to credit losses on a portfolio or an individual instrument level.

IASB Staff paper

- (i) Non-linear allocation (eg using a revised EIR restated from initial recognition);
 - (ii) Linear allocation (straight-line restated from initial recognition).
- (c) 'No' catch-up of the effect of changes in the EL estimate. Spread the effect of all changes over the remaining life using one of the following sub-variations:
- (i) Non-linear allocation (eg using a revised EIR reset such that the carrying amount unwinds over the remaining life);
 - (ii) Linear allocation over the average remaining life.

'Full' catch-up

14. Under a 'full' catch-up method, any changes in cash flow (or loss) estimates after the initial period would be recognised in profit or loss immediately at the present value (or, some suggest using undiscounted cash flows) of such changes. If an integrated EIR approach (such as in the ED) is used the balance sheet amount is always the present value of the current expected cash flows discounted at the (original) EIR. That provides a benchmark measurement to assess the original investment decision (including the original expected return).
15. Changes in EL estimates reflect a change of the credit quality of the financial instrument (although some preparers argue that subsequent changes may just be based on 'better information' and not necessarily related to the change in quality of an asset – see paragraph 21 below). That change reflects an economic gain or loss (the present value of the changes) because of the changes that have happened in that period.
16. Because the gain or loss is determined on the basis of a change in *present value* of *all* cash flows (principal and interest) the measurement of the gain or loss takes into account the interest on the financial asset in future periods.

'Partial' catch-up

IASB Staff paper

17. A variation we heard from feedback is to spread the effect of the change in estimate over the *entire* life of the financial instrument. In other words, assume the change relates to the entire life of the financial instrument and record in the current period the amount that would have otherwise been recorded had the revised estimate been the initial estimate. Then, allocate the remaining difference over the rest of the life of the instrument.
18. Two ways in which this can be done have been presented as follows:
 - (a) Calculate a rate that would allocate the difference another way than straight-line. For example, calculate a new EIR using the initial expected cash flows (or actual cash flows) used for current and previous periods and the revised expected cash flows for future periods. Calculate the present value of the revised future cash flows using the revised EIR. The difference between the carrying amount before the revision of estimates and the revised present value of future cash flows is recorded as the ‘partial’ adjustment.
 - (b) Another way of applying a ‘partial’ catch-up would be to recognise in profit or loss the difference between the current balance of the allowance and the time proportionate amount of total expected losses that would be recognised. Another way of thinking of this would be to calculate the ‘full’ catch-up and spread it evenly over the average life, taking into consideration the life to date³.
19. Resetting the discount rate as described in paragraph 18(a) could result in a rate below the risk-free rate – including negative rates. In addition, using a lower discount rate for a higher risk asset is counter-intuitive.
20. Some have suggested that a ‘partial’ catch-up would be consistent with the treatment of changes in accounting estimates under paragraph 36(b) of IAS 8

³ For example, if two years have elapsed on a portfolio with an average life of five years, two fifths of the revised expected loss is compared to the balance of the allowance and the difference is recorded in profit or loss.

IASB Staff paper

Accounting Policies, Changes in Accounting Estimates and Errors, whereby a change in accounting estimate is included in profit or loss in both the period of the change and future periods if the change affects both. However, paragraph 37 of IAS 8 states that if a change in an accounting estimate gives rise to a change in an asset, then that effect shall be recognised by adjusting the carrying amount in the period of change. This is illustrated in paragraph 38 by the requirement that a change in the estimate of bad debts affects only the current period's profit or loss and shall be recognised in the current period. That requirement reflects the view that the change in estimate is related to a change in the asset's quality.

21. However, as mentioned in paragraph 15 above, some preparers argue that a change in estimate may not necessarily be related to a change in asset quality. Rather it may just represent a better estimate based on better information. Therefore they feel that spreading the change over the current and future periods is a better representation of the economics. Others feel that by not requiring a 'full' catch-up, the effects of the changes are smoothed, which may negate the incentive of management to estimate as accurately as possible.

'No' catch-up

22. The third variation for allocating subsequent changes to the EL estimate is to take 'no' catch-up and simply spread the change over future periods. Two possible ways to spread are similar to those described in paragraph 18 above, although no consideration is given for amounts that would have been recorded in current or previous periods. The two methods are:
 - (a) Calculate a new EIR to be applied to the future periods. This could be done by calculating a new EIR based on the current carrying amount and the revised future expected cash flows (ie you would not consider the current and previous period estimates).
 - (b) Similar to the method described in paragraph 18(b) above, in the 'no' catch-up method, an entity would determine the total amount of EL and spread that over the remaining life of the portfolio. Or, an entity could

IASB Staff paper

simply spread the difference between what was already recorded in the allowance account and the revised EL.

23. Again, resetting the discount rate could result in a rate below the risk-free rate – including negative rates. In addition, using a lower discount rate for a higher risk asset is counter-intuitive.

Interaction of good book / bad book with ‘catch-ups’

24. We understand that many entities manage their assets using a good book / bad book approach. Performing assets are kept in the ‘good’ book. Non-performing assets are in the ‘bad’ book.
25. We have heard that non-performing assets are typically managed more actively (and frequently on an individual basis) with more detailed analysis performed on those assets. Conversely, statistical approaches at portfolio level are typically applied for the performing assets. For these reasons, respondents have suggested that different methods for allocating subsequent changes in estimates should be used for the good book versus the bad book. The bad book would always have a ‘full’ catch-up (see paragraph 26(b) below). The good book would get the ‘full’, ‘partial’, or ‘no’ catch-up described above.
26. Two different ways the allowance recognised on the good book for EL could be transferred with a bad loan to the bad book are:
 - (a) The entire allowance needed to cover the losses on the bad loan is transferred from the good book to the bad book.
 - (b) A proportionate amount of the good book allowance that reflects the part that has been recorded to date for that bad loan should be transferred to the bad book. However, the bad book would require an additional allowance amount to be recorded in order to fully provide for the bad loan (this would be akin to a ‘full’ catch-up for the bad book).
27. The question of how/when to move allowances between good and bad books is not important when using a ‘full’ or ‘partial’ catch-up method. The effect on profit or loss will be the same within either catch-up method (although

IASB Staff paper

obviously different between the methods) regardless of whether the full allowance or a proportionate allowance is moved to the bad book.

28. However, when applying a '*no*' *catch-up for good book* method to the allocation of subsequent changes in EL estimates, the question of when/how to transfer the allowance becomes more important. If one kept the non-performing loans in the good book and only revised the estimated EL, one could spread the changes in estimate over future years, instead of taking the 'full' catch-up if moved to the bad book.
29. In addition, depending on whether you transfer a proportionate amount of the loss to the bad book or the entire loss affects the amount recorded in profit or loss for the period. When transferring the entire allowance needed to the bad book and spreading any revised estimate for the good book over the life, the effect on profit or loss would generally be lower than if just a proportionate amount was transferred and a 'full' catch-up on the bad book was recorded.
30. Another unique issue to the '*no*' *catch up for good book* method relates to applying the straight-line method to an open portfolio. For an open portfolio of 5-year loans, '*no*' *catch-up for good book* would require an entity to record 1/5 of any change in estimate for the remaining life of the portfolio. If estimates on that open portfolio continue to change, 1/5 of the change is continually added to the allowance balance. This could result in a situation where the allowance balance grows so much that is greater than the total of EL and actual (incurred) losses for that portfolio. Because of that scenario, a ceiling would need to be put in place when using the '*no*' *catch-up for good book with a straight-line allocation* method. Such a ceiling could be the sum of the expected losses and the actual (incurred) losses.

Floor for measurement of EL

31. In a symmetrical model, such as that in the ED, a floor or a ceiling is neither mathematically nor conceptually necessary. Actually, a floor could distort the measurement, as well as negate the symmetry of the proposed model. For

IASB Staff paper

example in the case of a portfolio, expected early losses are already included in the calculation of the EIR. The EIR would be lower than if the same nominal amount of losses was expected later in the life of the instruments. As is the case when losses are expected later in the life of the portfolio, the allowance is built up over the life of the instrument (thereby creating a symmetrical model).

32. Many respondents feel that while mathematically not showing any additional profit or loss impact in the expected early year of loss may be correct, they want to see an increase in the allowance account on the balance sheet. They feel that the allowance in the balance sheet should, at all times, have enough in it to cover all actual (incurred) losses (even if the amount and timing of such losses was included in the initial expectation).

Summary

33. As re-deliberations move forward, it is important to understand how the variations on the key features of the EL approach are interrelated. The previous paragraphs highlight the main variations and how they might be applied. Agenda paper 4C provides an overview of the alternative models based on different variations discussed in this paper.

Appendix A: Excerpts from previous papers

A1. The following is an excerpt from the EAP Summary available on the IASB website:

...

17. We learnt that the following two ‘decoupling’ approaches (developed by the EAP) would avoid the complexity of an integrated EIR calculation while providing a close approximation to the ECF approach:
 - the annuity approach to EL measurement; and
 - the simplified approach using three building blocks for EL.
18. Under the **annuity approach to EL measurement**, a separate discounted cash flow (DCF) calculation is used for EL. This DCF calculation is used to allocate the initial EL over the life of the instrument by converting the present value of the EL into an annuity, which is recognised in profit or loss (as a periodic charge). Subsequent changes in EL result in an adjustment to the present value of EL, which is immediately recognised in profit or loss.
19. We learnt that this approach is flexible and can be applied to a wide range of instruments, including:
 - fixed rate bullet loan or bond;
 - amortising fixed rate loan;
 - floating rate loan; and
 - credit commitment (with fixed periodic fee).
20. One advantage of this approach is that it also works for loan commitments, where an internal rate of return (IRR) calculation often does not work. The approach would also significantly simplify the approach for floating rate loans.

IASB Staff paper

21. We also learnt that under the annuity approach the calculation of the annuity can be simplified in the following scenarios:

- for financial instruments with a single period cash flow or with a maturity of one year or less (e.g. overdrafts, short-term revolving facilities and letters of credit), the annuity amount charge is equal to or can be approximated by the undiscounted EL;
- for financial instruments with multi-period cash flows that have constant conditional periodic credit losses the annuity is the periodic credit loss;
- if the expected loss EL is not expected to change markedly (i.e. remain stationary) over the remaining life of the portfolio, the annuity can be approximated by the (geometric or simple) average loss; and would approximate the annuity charge; and
- for EL patterns that either have a constant growth rate or that change linearly over time the annuity can be determined using a closed form solution.

22. Under the **simplified approach using three building blocks for EL**, the calculation is disaggregated into the following three building blocks:

- allocation of initial EL;
- an experience adjustment (ie the difference between actual cash flows/losses and the last estimate for the current period); and
- adjustment for changes in future expectations.

This approach uses EL as an indirect way of determining the amortised cost carrying amount and hence does *not* need any explicit, direct estimate of expected cash flows.

23. We learnt that this simplified approach provides a good approximation for the following types of instruments:

- bullet loans and amortising loans;

IASB Staff paper

- fixed and floating rate instruments; and
 - changes in credit loss expectations and changes in forward rates.
- ...