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Project **Financial Instruments – Recognition and Measurement**

Topic **Impairment: guidance for variable interest rates**

Introduction

Background

1. At its 17 September 2009 meeting the IASB decided that the impairment exposure draft (ED) should use a design that articulates a clear objective and emphasises principles reinforced by *concise* application guidance.
2. At its 22 September 2009 meeting the IASB discussed what issues should be addressed by application guidance and clarification in the ED. The application of the expected cash flow (ECF) approach to variable interest rate financial assets was not discussed at that meeting as the staff believed the topic warrants a separate paper.

Purpose

3. The purpose of this paper is to provide an analysis of the how the ECF approach might be applied to variable interest rate financial assets. This paper sets out a staff recommendation on how this issue should be addressed by application guidance in the ED and asks the Board for a decision (see paragraph 42).

This paper has been prepared by the technical staff of the IASCF 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 IFRIC 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

4. This paper only addresses financial instruments that will be in the scope of the new financial instruments standard and will be measured at amortised cost. References to variable rate(s) mean variable interest rate(s).

5. It is important to note that the effective interest method (EIM) applies to assets and liabilities. While for liabilities the EIM does not involve loss estimates a decision by the Board that specifies in general how to ensure that the carrying amount of a variable rate asset unwinds to the remaining expected cash flows would also affect liabilities (albeit to a lesser degree). This is further explained in the following sections.

Applying the ECF approach to variable interest rate instruments

The issue: ensuring unwinding of amortised cost (catch-up adjustment versus EIR reset)

6. The request for information (RFI) on the feasibility of the ECF approach solicited feedback on how to apply the ECF approach to variable rate instruments. In addition, in early August the staff posted on the IASB website some numerical examples with a narrative explanation of the issue.¹ For an explanation of the root cause of the (additional) complexity regarding variable rate instruments (the interaction between changing interest rates and two different reference bases) refer to Appendix A.

7. As set out in an earlier agenda paper,² there are two mathematical mechanisms that can be used to ensure that the carrying amount of a variable rate instrument unwinds to the remaining expected cash flows:

¹ See Appendix A for an extract from the narrative explanation.

² See agenda paper 12A of the 17 September 2009 IASB meeting (paragraph 31).

IASB Staff paper

- (a) **EIR reset:** resetting the effective interest rate (EIR), ie an iterative calculation that *changes the EIR* such that the carrying amount will unwind to changed cash flow estimates;
- (b) **Catch-up adjustment:** an adjustment to profit or loss, which *changes the carrying amount* so that the adjusted carrying amount will unwind to changed cash flow estimates.

Comments received on the RFI

8. At the 17 September 2009 IASB meeting, the staff provided the Board with a summary analysis of the responses to the RFI, including this issue (Question 4).³ The feedback to the RFI revealed:
- (a) many respondents do not have a view on this complex technical issue;
 - (b) the respondents who have a preference have conflicting views with about equal support for catch-up adjustments and EIR resets, with some preferring a different mechanisms depending on scenarios (impaired versus not impaired);
 - (c) rationales for particular preferences were mixed. Some focussed on the simpler (more pragmatic) solution in terms of mathematics and systems requirements. Others considered the economics and how they would best be portrayed;
 - (d) conflicting views whether resetting the EIR or catch-up adjustments are more difficult for systems to accommodate;
 - (e) a preference of some respondents for not specifying a required methodology for floating rate instruments, but rather state the measurement objective (including impairment) and allow an entity to determine the most practical approach to meet that objective.

³ See agenda paper 12A of the 17 September 2009 IASB meeting (paragraphs 31-37).

IASB Staff paper

9. The staff notes that the RFI focused on the feasibility of the ECF approach and, thus, operational rather than conceptual aspects. However, some respondents also looked at the conceptual merit (presentation of the economic phenomenon) as the rationale for preferring a view regarding the more appropriate mechanism. Most of those respondents preferred resetting the EIR although some also preferred catch-up adjustments. The reasons given for *why* one mechanism better reflects the economics of a variable rate instrument than the other mechanism were very brief. Broadly speaking, most of those who supported EIR resets thought this would avoid volatility of profit or loss that otherwise would result from catch-up adjustments in response to market interest rate changes. That volatility was perceived as counter-intuitive (or unnecessary).

10. Some of those who considered the conceptual merit also looked at the consistency with how fixed rate instruments are accounted for. However, this led respondents to different conclusions. Support of EIR resets was derived from the fact that fixed rate instruments do not involve a catch-up adjustment in response to changes in market interest rates while support for catch-up adjustments was derived from the fact that for fixed rate instruments the EIR must not be reset (and hence also implying that the *spread* should remain constant for variable rate instruments).

11. In summary, the responses to the RFI were:
 - (a) inconclusive regarding which of the two mechanisms is simpler from an operational perspective;
 - (b) very brief regarding the conceptual merit of the two mechanisms with most considering EIR resets the conceptually right answer.

IASB Staff paper

Staff analysis of the conceptual merits

12. The staff thinks the conceptual merit of the two mechanisms should be assessed against how (faithfully) they represent the underlying economic phenomenon, consistency with amortised cost measurement (including how fixed rate instruments are treated), and logic.

Economic phenomenon

13. The RFI explained the economic phenomenon of variable interest instruments after recognising an impairment loss:⁴

When an impairment loss is recognised, a portion of future contractual interest receipts that are still expected to be received partially become in substance repayments of principal because the contractual interest cash flow exceeds the effective interest accrual. In those situations, these portions reduce the carrying amount of the instrument rather than being recognised as interest revenue. For variable rate instruments, this repayment of principal might in part be effected through the variable benchmark interest component of the interest receipts. The economic effect is similar to a benchmark interest rate indexed principal repayment.

14. When part of the variable interest cash flows are in substance principal repayments (as explained above for an impairment scenario) then changes⁵ in the variable interest cash flows mean that there is a loss or gain. This loss (or gain) arises because the carrying amount will no longer be recovered (or for a gain more than the carrying amount will be recovered) through the remaining cash flows based on the original *spread*, which is the reference point for an amortised cost measurement.

⁴ See RFI, paragraph A5.

⁵ In this context 'changes' refer to a difference between the actual variable interest rate that crystallises in a future period and the (forward) rate that was used for that same period in the present value calculation at a measurement date before the start of that period. In other words, a change arises in every scenario in which actual variable interest over time does not follow the forward curve previously used in determining amortised cost.

IASB Staff paper

15. In other words, economically a variable rate instrument whose carrying amount differs from its nominal amount is that of an instrument with interest indexed principal repayments. Therefore, a catch-up adjustment is the right conceptual answer as it reflects what economically is a gain or loss.⁶
16. This analysis not only applies when a variable rate instrument is impaired but more generally. Variable interest cash flows can become principal repayments in other scenarios in which the carrying amount is different from the nominal amount (eg if the carrying amount of a variable rate asset includes capitalised transaction costs).
17. In contrast, resetting the EIR would mean not recognising the economic gain or loss immediately, but rather that economic gain or loss would be smoothed over the remaining life of the variable rate instrument.
18. Resetting the EIR would be continuous. Hence, if the rate changes in one direction (rather than fluctuate) the overall outcome is a smoothed EIR spread that moves further and further away from the initial spread.
19. Ultimately, that spread represents nothing but a form of moving average of the effect of changes in variable interest rates that rolls the unamortised difference (of unrecognised gains or losses from interest rate changes) into the next EIR reset. Resetting the EIR can even result in spreads becoming negative over time. This makes no economic sense. What has happened is that there has been a loss, or expected loss, of capital.⁷

⁶ An alternative analysis is provided in Appendix B.

⁷ The implication of a negative spread is that the interest on the asset recognised for financial reporting purposes would not even cover the time value of money.

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EIR resets and amortised cost measurement

20. This EIR reset mechanism is inconsistent with the whole notion of amortised cost. The basic principle of amortised cost is using a present value calculation that discounts expected cash flows with the EIR, which is the rate that equates that present value with the carrying amount.
21. For a fixed rate instrument that means using a constant EIR—the original EIR.
22. For a variable rate instrument that means using a constant *spread*. If the spread were reset then no element of the entire present value calculation would be fixed any more, neither the cash flows nor any component of the discount rate. Consequently, no input of the present value calculation would reflect the original conditions (ie those on initial recognition), which is inconsistent with a cost based measurement.
23. Thus, resetting the EIR for variable rate instruments would create inconsistencies with the accounting for fixed rate instruments measured at amortised cost. For example, for a fixed rate instrument that is prepayable a change in the prepayment estimate results in recognising a gain or loss by adjusting the carrying amount (a catch-up adjustment) rather than a reset of the EIR.⁸
24. The staff notes that the EIM guidance on variable rate instruments in IAS 39 *Financial Instruments: Recognition and Measurement* is, at best, ambiguous:
 - (a) The guidance in IAS 39.AG7 is (mathematically) nonsensical: it leaves an *infinite* range of possible EIR outcomes because it refers to changes

⁸ See IAS 39.AG8.

IASB Staff paper

of *both* the EIR and the carrying amount as a result of a change in market interest rates.⁹

- (b) The reference to the ‘current’ EIR¹⁰ might imply that the rate is reset in its entirety. However, that conflicts with the reference in IAS 39.AG7 to a change of the carrying amount, which given the full reset of the EIR would be impossible.

- 25. The staff believes this ambiguity and inconsistency has likely contributed to the confusion about how the EIM applies to variable rate instruments, in particular what changes (‘resets’) of the EIR are required in response to changes in the variable interest rate to be consistent with an amortised cost measurement.

Logic

- 26. The staff believes that intuition (always a dangerous trait!) is another key contributing factor to the confusion about how the EIM applies to variable rate instruments.
- 27. A widely held view is that interest rate changes should not have an effect on the carrying amount of an instrument (ie its amortised cost).
- 28. This ‘intuitively right outcome’ happens in the most basic scenario for a variable rate instrument, in which its carrying amount equals its nominal amount (and some other conditions apply¹¹). In *that* scenario (and only then) the effect of the

⁹ As set out in agenda paper 5 of the 29 September 2009 IASB meeting you must either fix the EIR or the carrying amount but you cannot change both at the same time (else there is an infinite number of combinations for the EIR and the carrying amount). The relevant paragraphs 5-6 of that agenda paper are reproduced in Appendix C.

¹⁰ See IAS 39.AG84.

¹¹ Other conditions are that the contractual reset date for the variable rate is the cash flow date and coincides with the measurement date for financial reporting purposes (ie a reporting period end).

IASB Staff paper

changes in the forward rate fully offsets the effect of the changes in the discount rate (ie the zero coupon rate)¹². Hence, the carrying amount¹³ remains constant. That is the scenario in which the contractual variable interest payments for a period are also the effective interest (revenue or expense) for that period for financial reporting purposes. This is also known as ‘as you go’ accounting.

29. The problem is that in all other scenarios this ‘intuitively right outcome’ does *not* occur. This is because, as previously discussed, economically there is, or is expected to be, a loss of capital.

30. Intuition means that ‘as you go’ accounting is widely mistaken for amortised cost of variable rate instruments. Many therefore also believe that changes in the carrying amount (ie catch-up adjustments) create ‘unnecessary’ volatility (without explaining *why* it is unnecessary—an indication that it is simply counter-intuitive). In other words, the ‘intuitively right outcome’ conflicts with the logically derived outcome¹⁴, ie the catch-up adjustment.

Conclusion

31. The staff believes that catch-up adjustments are the mechanism that should be used to ensure that the carrying amount of a variable rate instrument unwinds to the remaining expected cash flows. Catch-up adjustments both reflect the economic reality and are consistent with the notion of amortised cost. Conversely, resetting the EIR results in smoothing that conflicts with both these aspects. Therefore, catch-up adjustments are the conceptually right outcome.

¹² This offsetting effect exists because of the mathematical relationship between forward rates and zero coupon rates.

¹³ That is the amortised cost, ie the present value using the EIR as the discount rate.

¹⁴ The outcome that was logically derived from the implications of the economic substance and the nature of amortised cost (see the previous sections in this paper).

IASB Staff paper

32. However, the conceptually right outcome is different from what is widely perceived the 'intuitively right outcome'. Thus, the Board faces a difficult decision between conceptual merit and intuitive appeal.

Alternatives for the Board

33. The staff believes that the Board has three alternatives:
- (a) **Alternative 1:** not providing any application guidance for variable rate instruments in the ED;
 - (b) **Alternative 2:** explicitly allowing entities to determine the most *practical* approach;
 - (c) **Alternative 3:** specifying the mechanism to be used for properly unwinding the amortised cost of a variable rate instrument (ie mandate either the catch-up mechanism or the EIR reset mechanism and preclude the other).

Alternative 1

34. Alternative 1 would require entities to choose an approach that is consistent with the objective and principles of the standard. This means entities applying the requirements would have to make their own judgement whether the approach they adopt is consistent with the objective and the principles of the ECF approach (including impairment). In other words, this approach would require interpretation by each respective entity. Consequently, if an entity chose to implement a different approach than the one that is appropriate according to its interpretation (eg because of operational considerations) there would be an onus on the entity to perform a materiality assessment.
35. In the light of the staff's analyses of the implications of the notion of amortised cost and the economic reality for the two mechanisms to be used to ensure

IASB Staff paper

unwinding,¹⁵ the staff believes that an interpretation that logically derives the appropriate outcome under the ECF approach would result in choosing catch-up adjustments. However, the staff is aware that accounting practices are often driven by intuition rather than appropriate *interpretation* of requirements. Because for this issue the contrast between intuitive appeal and conceptual merit is stark the staff believes there is a high probability that Alternative 1 would result in diversity in practice, which also means misinterpretation by those choosing the EIR reset mechanism.

Alternative 2

36. Alternative 2 would relieve entities from making the judgement mentioned under Alternative 1. That means there would be no interpretation required and hence no onus on entities to perform any materiality assessments either. It would also mean that the diversity in practice that the staff expects under Alternative 1 would be explicitly allowed rather than resulting in non-compliance with IFRSs for those using EIR resets.
37. The staff notes that Alternative 2 is a practical expedient *exception* to the measurement objective (rather than a means to achieve the objective).

Alternative 3

38. Alternative 3 means in effect the Board would interpret which approach best achieves the objective of the ECF approach and mandate that approach for all entities (rather than have them develop their own interpretation as under Alternative 1 above). If the Board wants to specify an approach the staff's view is that on the basis of conceptual merit¹⁶ the catch-up adjustment mechanism should be mandated.

¹⁵ See sections 'EIR resets and amortised cost measurement' and 'Economic phenomenon'.

¹⁶ See paragraph 31.

IASB Staff paper

Staff recommendation

39. The staff does *not* recommend Alternative 1 because the stark contrast between intuitive appeal and conceptual merit would make it prone to misinterpretation (which creates a risk of resulting in restatement of errors).
40. The advantage of Alternative 2 is that it alleviates the implementation of the ECF approach by providing alternatives so that entities can choose the alternative that is easiest to implement in their specific circumstances. However, it has no conceptual merit but constitutes an *exception* to the measurement objective (as a practical expedient).
41. Alternative 3 has the advantage of conceptual merit but would make implementation of the ECF approach more difficult for some entities. It would also result in less acceptance by those who are ‘intuitive-minded’.
42. On balance the staff recommends Alternative 3 because:
- (a) the staff considers conceptual merit as pivotal; and
 - (b) it is consistent with principle-based standard setting (avoiding an exception).

Application guidance for variable rate instruments

Does the Board agree with the staff recommendation to include in the exposure draft application guidance on variable rate instruments that requires using catch-up adjustments (ie prohibits EIR resets)?

If the Board does not agree with the staff recommendation, what does the Board prefer instead, and why?

IASB Staff paper

Appendix A

- A1. This is an extract from the description that accompanied the staff's examples that were posted to the IASB website (as a supplement of the Request for Information regarding the feasibility of the ECF approach):

Examples illustrating possible ways of applying an expected cash flow approach to variable rate instruments

The IASB's Request for Information on the Expected Cash Flow (ECF) approach (view the Press Release) solicits feedback on how the approach might be applied to variable rate instruments. In order to promote the discussion of this particular issue the IASB staff have developed some numerical examples that illustrate:

1. the specific challenges arising when applying the ECF approach to variable rate financial assets; and
2. how those challenges might be addressed.

The root cause of the (additional) complexity regarding variable rate instruments is the interaction between changing interest rates and two different reference bases:

- for accounting purposes the effective interest method uses the carrying amount outstanding from time to time as the reference basis for applying the effective interest rate (EIR); and
- for contractual purposes the nominal amount is the reference basis for applying the contractual interest rate.

If the carrying amount equals the nominal amount the accounting for variable rate instruments is straightforward because the two reference bases coincide. However, once the carrying amount moves away from the nominal amount the interest revenue and the interest payments are different because of their different reference bases. While this can also occur for fixed rate instruments the contractual interest payments on these instruments allow determining the EIR as a fixed rate. In contrast, for variable rate instruments the interest payments change in response to changes in the benchmark interest curve so that it is not possible to determine an EIR that will ensure the unwinding of the carrying amount to the expected remaining cash flows without further adjustments. This issue for variable rate instruments can also arise under IAS 39 today. However, using the ECF approach would amplify this issue because the expected effective interest rate would result in the carrying amount moving away from the nominal amount given that it typically creates a differential between accounting interest and interest cash flows that reduces the carrying amount compared to the nominal amount (reflecting the initially expected credit losses).

The EIR is designed to provide a link between the carrying amount and the future expected cash flows (also) in scenarios in which the carrying amount is different from the nominal amount. However, in contrast to a fixed rate instrument, the changes in the variable interest rate prevent the carrying amount from (automatically) unwinding to the expected remaining cash flows. The numerical examples illustrate different possible ways of adjusting the amortised cost calculation in order to ensure that the carrying amount unwinds to the expected remaining cash flows after changes in the variable interest rate. The illustrated alternatives are (also refer to the general remarks on the calculations further below):

Alternatives 1A and 1B

- The expected EIR is determined as the benchmark variable interest rate plus the initial expected spread. This spread differs from the contractual spread in that it is determined as the spread that remains after all initially expected credit losses are covered (note: in the examples a significant

IASB Staff paper

difference between the contractual and the expected spread is used in order to better illustrate the resulting effect).

- **Alternative 1A:** After a change in the variable interest rate the expected EIR is reset by adjusting the expected spread. After that reset the carrying amount unwinds to the expected remaining cash flows. The reset of the expected EIR also changes the present value of the expected remaining cash flows (because discounting is based on the expected EIR) so that it equals the carrying amount.
- **Alternative 1B:** After a change in the variable interest rate a 'catch-up' adjustment (against profit or loss) is used in order to reset the carrying amount to the present value of the expected cash flows (discounted based on the expected EIR using the *initial* expected spread).

Alternative 2

- Interest revenue is determined using a 'split' approach that determines interest revenue in two components – the spread and the benchmark interest rate (eg LIBOR).
 - The expected spread is determined as if the instrument were a fixed rate instrument with a coupon of the contractual spread only and that coupon covers all initially expected credit losses (ie including those expected to arise on the interest payments).
 - The variable (benchmark) interest is determined by reference to the nominal amount (even when the carrying amount is different). In effect, this is an 'as you go' basis for this component of interest revenue.
 - Because of the 'split' approach the present value of the expected cash flows does not equal the carrying amount.
 - If the initial estimate for expected losses needs to be revised the carrying amount will no longer unwind to the expected remaining cash flows. Hence, the carrying amount is written down to the present value of the expected remaining cash flows, which implicitly results in recognising the difference between the present value and the carrying amount that existed from initial recognition. Therefore, the 'split' approach does not work any longer. Instead of the 'split' approach, the interest revenue is now determined based on the carrying amount from time to time for both the initial expected spread and the variable interest component (rather than using the nominal amount as the reference basis for this component).
 - If the credit losses are estimated as fixed monetary amounts rather than percentages of variable amounts this method does not require catch-up adjustments (or resets of the EIR) in order to ensure unwinding after variable interest rate changes. This scenario is illustrated in a separate, second example for Alternative 2.
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IASB Staff paper

Appendix B

B1. An alternative way of thinking about a variable rate instrument is looking at it as a combination of two components: a fixed rate instrument and an (embedded) interest rate swap (that swaps the fixed interest payments to variable interest payments). The fair value changes of these two components related to changes in the benchmark variable interest rate offset if the nominal amounts of the two components are the same. However, if the carrying amount of the variable rate instrument (which is the equivalent of the nominal amount of the fixed rate instrument) differs from its nominal amount (which is the equivalent of the nominal amount of the swap) the two components have different nominal amounts. Consequently, the fair value changes related to changes in the benchmark variable interest rate no longer offset but there is a net gain or loss. Thus, a catch-up adjustment is the right conceptual answer as it reflects what economically is a gain or loss.

IASB Staff paper

Appendix C

C1. This is an extract from agenda paper 5 of the 29 September 2009 IASB meeting:

Mechanism of the effective interest method and implications for transition

5. Before turning to transition using the EIR collar approach it is useful to recall the basics of the effective interest method. The EIR is a parameter determined by iteration rather than an observable parameter or determinable by a direct analytical method. The implications are that you can determine
 - (a) either the EIR if the carrying amount (starting point) and the future cash flows are known; **or**
 - (b) the carrying amount if the EIR and the future cash flows are known.

 6. When trying to determine the EIR and the carrying amount simultaneously an infinite number of combinations exist (ie neither variable is definite). That is to say you cannot change both at the same time, and you need to fix one of them.
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