
Project	Financial Instruments (Replacement of IAS 39) – Hedge Accounting
Topic	Macro hedge accounting – hedge ineffectiveness arising from the <i>proportional</i> approach to designation

Introduction

Background and purpose of this paper

1. This paper is one of a series of papers that discusses portfolio fair value hedge accounting for interest rate risk (PFVHA). Agenda paper 10 provides an overview of the staff's approach.
2. This paper analyses the hedge ineffectiveness that arises when an entity applies PFVHA under IAS 39, to less than 100% of a portfolio of prepayable fixed rate items. This issue is relevant because, as explained in paper 10A a bank's risk management objective is usually to under-hedge their interest rate risk exposure on a given portfolio.
3. For ease of analysis this paper will use the same example through out where the hedged item is a portfolio of prepayable mortgage assets.
4. There are no questions for the Board in this paper.

Structure of paper

5. This paper is structured as follows:
 - (a) Description of the hedge ineffectiveness that arises under the PFVHA model (see paragraphs 6 to 8)

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

- (b) Description of the *proportional* approach to identifying and designating the hedged item under IAS 39's PFVHA model that gives rise to the hedge ineffectiveness (see paragraphs 9 to 18);
- (c) Explanation of the accounting objective of the proportion approach (see paragraphs 19 to 25); and
- (d) Analysis of the consequences of the proportional approach (see paragraphs 26 to 34).
- (e) Next steps (see paragraph 35)

The Issue

Hedge ineffectiveness

6. One of the key issues with the current PFVHA model is in relation to the magnitude of hedge ineffectiveness recognised and the misalignment of hedge accounting ineffectiveness and risk management ineffectiveness.
7. Under the PFVHA model if the hedged cash flows are subject to a prepayment option, it is necessary to recognise fair value changes of that prepayment option as part of the fair value changes of the hedged item (for changes in interest rates). In other words an entity is not permitted to exclude fair value changes of any prepayment option (due to changes in interest rates) from the hedge designation.
8. This gives rise to a misalignment of the risk management objective and the hedge accounting objective. This is because a bank does not seek to hedge the fair value change of a prepayment option embedded in the loan portfolio (see paper 10A). Yet the hedge accounting requirements reports any mismatch as hedge ineffectiveness.

IASB Staff paper

Methodology applied under IAS 39¹*Expected rather than contractual*

9. Under IAS 39, the PFVHA model can be applied to a portfolio of fixed rate prepayable items analysed into time bands based upon their expected, rather than contractual, re-pricing dates². This concession to the general fair value hedge accounting model helps to make use of information used for risk management purposes in hedge accounting.
10. In a nutshell, the model allows an entity to measure the changes in fair value of the hedged portfolio due to change in interest rate risk using an approximation, instead of a full measurement of contractual terms of items in the hedged portfolio.

Proportion rather than layer

11. If an entity wishes to hedge less than the entire portfolio, it can designate *an amount* of assets or liabilities (but not a net amount) from the identified portfolio. Note that this designation does not identify individual assets or liabilities but instead designates *an amount* of assets or liabilities of an identified portfolio expected to re-price *in a given time-band*.
12. For each time-band, the designated hedged amount is expressed as a *proportion* (ie a *percentage component*) of that time-band.

Measurement of hedge ineffectiveness

13. The percentage amount hedged (derived from the hedged amount divided by the total amount in that time-band) is a key input in the measurement of hedge

¹ We provide only a summary of the methodology. See paragraphs XXX of IAS 39 for the full methodology.

² In other words, the date the instrument is no longer expected to carry the contracted fixed rate (either because it is paid off or because the rate resets to a market rate (ie 're-prices')).

IASB Staff paper

ineffectiveness. The way it is used is illustrated in the simplified example below³.

Example

14. Entity A analyses its portfolio of prepayable fixed rate assets into monthly time-bands based on expected re-pricing dates. For simplicity, this example considers only one of the monthly time-bands (March 20X1).
15. At 1 January 20X1, Entity A designates as the hedged item an amount of CU20m of CU100m of assets expected to re-price in the March-20X1 time-band. Hence, it hedges 20% of assets in that time-band.
16. Entity A measures hedge ineffectiveness at the end of January 20X1. The fair value measure used for the hedged item (which is then compared to the fair value change of the hedging instrument to derive hedge ineffectiveness) depends on the revised expectation of assets expected to re-price in March 20X1⁴.
17. The revised expectation, as at 31 January 20X1 is CU96m⁵. Therefore, the fair value change of the hedged item (used to measure ineffectiveness) is based on CU19.2m of hedged assets (20% x CU96m = 19.2m), not the original 20m designated.
18. Note that *if* the measure of hedge ineffectiveness was based on a bottom layer amount of CU20m rather than 20% of CU100m, the fact that the assets expected to re-price in March reduced from CU100 to CU96m would not have affected the hedge. This is because the change in expectation is attributed to the top layer (of which there is a 'buffer' of CU80m in this case).

³ The example is based on the illustrative example in IAS 39. For additional contextual information, please refer to that example.

⁴ Newly originated assets are excluded from this revised expectation. The revised expectation is intended to only consider the effect of changes in interest rates on the prepayment behaviour.

⁵ The revised expectation is that assets will prepay quicker because of an increase in interest rates.

IASB Staff paper

The accounting rationale behind the proportion approach

19. A full explanation of the rationale for a proportion approach can be found in IAS 39⁶. One of the key reasons for it is to capture in the measure of hedge ineffectiveness the change in fair value of the prepayment option in the hedged mortgages. Put another way it recognises hedge ineffectiveness when a customer's prepayment behavior changes due to a change in interest rates. This can be explained as follows.
20. A change in interest rates affects the fair value of a fixed rate debt instrument with a prepayment option in two ways:
- (a) it affects the fair value of the contractual fixed cash flows; and
 - (b) it affects the fair value of the prepayment option (ie the option to repay the contractual fixed cash flows in 19(a) early, at a price determined by the terms of the option).
21. For example, consider a mortgage asset with a 25-year term of which the first 10 years carries a fixed rate of 5% (after 10 years it reverts to a market-based rate). The mortgage is pre-payable by the customer with no penalty. This example assumes a flat yield curve (ie the expectation of interest rates for the future is the same as the current (spot) interest rate). If interest rates were to rise, to say 7%, all other things being equal, the fair value of the fixed cash flows on the mortgage would fall. At the same time the prepayment option (written by the bank to the customer, hence a liability to the bank) would reduce in value (because the benefit to the customer, based on interest rates, of being able to prepay its mortgage (and hence providing the opportunity to find an alternative mortgage with a cheaper rate) is reduced). Overall, the fair value of the mortgage asset for the bank would reduce, but not by as much as it would have if it was not prepayable.

⁶ See paragraphs xxx

IASB Staff paper

22. If interest rates were to fall, to say 3%, all other things being equal, the fair value of the fixed cash flows on the mortgage would rise. However, at the same time the bank's prepayment option liability would increase in value because the customer's option to repay its mortgage early (and find an alternative mortgage with a lower rate) becomes more valuable. Overall, the fair value of the mortgage asset for the bank increases, but not by as much as it would have if it was not prepayable.
23. In a portfolio of prepayable assets, a change in fair value of the prepayment options will usually be coupled with a change in expected prepayment behaviour of the borrowers.
24. Using the example above, as rates increase (and the prepayment option reduces in value), the behavioural term of the mortgage is likely to increase, and as rates decrease (and the prepayment option increase in value), the behavioural term is likely to decrease.
25. Using the proportional approach to defining the hedged item is used as an alternative to capture an approximation of the change in fair value of the prepayment option as well as the change in fair value of the hedged contractual flows.

Consequence of the methodology

26. The proportion approach for measuring hedge ineffectiveness has been criticised by some users for various reasons. Some of the key reasons are:
 - (a) The methodology is not in line with the risk management objective of a bank (from a risk management perspective the hedge is viewed as a bottom layer hedge).
 - (b) The recognition of hedge ineffectiveness does not provide useful information because:
 - (i) It results in artificial volatility in profit or loss in the period that ineffectiveness is recognised; and

IASB Staff paper

- (ii) It triggers amortisation of previous hedge adjustments and hence skews the recognition of interest income/expense.

Not in line with risk management

- 27. As described in paper 10A, bank's interest rate risk management strategies usually focus on stabilising net interest margin. For this purpose it hedges expected fixed rate cash flows, which are influenced by prepayment behaviour of customers.
- 28. Given this economic strategy banking entities that wish to apply hedge accounting tend to apply fair value hedge accounting (see paper 10B). This is despite the fact that for the portfolio as a whole, it is managing the net interest margin, rather than explicitly hedging the fair value interest rate risk of fixed rate products. Entities choose fair value hedge accounting because for them it is the best hedge accounting option available, which partly reflects the economic objective.
- 29. The misalignment of the hedge accounting objective and the risk management objective can result in unrepresentative accounting information. In other words, the accounting results do not reflect the economics of the hedging transactions.
- 30. For example, under the fair value hedge accounting model, the objective is to capture the change in fair value of the contractual cash flows and the prepayment option, for changes in interest rates.
- 31. However, as described in paper 10A this is not the objective of the risk management strategy. As a result, the hedge ineffectiveness that is recognised in profit or loss is not representative of the performance of the hedge from an economic (risk management) perspective.

Does not result in useful information

- 32. As described in 26(b) there are two aspects to this.
- 33. As explained earlier, there is the accounting ineffectiveness that is recognised in the period that does not reflect the economics of the transaction.

IASB Staff paper

34. In addition to this the recognition of hedge ineffectiveness has a knock-on consequence on the amortisation of the hedge adjustment posted to the balance sheet in respect of the fair value hedge. This is because the recognition of accounting hedge ineffectiveness prevents the future natural amortisation of the fair value hedge adjustments posted to the balance sheet in respect of the hedge (that normally results in interest recognition equivalent to the hedged floating rate). In other words, it distorts the interest profile of the hedged items by triggering the amortisation of the hedge adjustment . This distortion introduces volatility into the net interest margin – the opposite of the economic objective and partly the reason for applying fair value hedge accounting.

Next steps

35. Given that the current model does not effectively portray a bank's interest rate hedging strategy, the staff has considered an alternative approach based on identifying the hedged item as a (bottom) layer of the portfolio (see **agenda paper 10D**).