Project **Financial Instruments (Replacement of IAS 39) – Hedge Accounting**

Topic **Interaction between rebalancing and discontinuation**

## Introduction

### *Purpose of the paper*

1. This paper supports papers 17A and 17B. This paper provides an example with 4 scenarios that illustrate the relationship between rebalancing, discontinuation and changes to the hedge ratio. At the end of each scenario there is one question to the Board.

2. This paper does not address rebalancing and discontinuation in the context of *dynamic* hedging because this involves different considerations. Dynamic hedging is part of the discussions of macro hedging.[1]

## Example

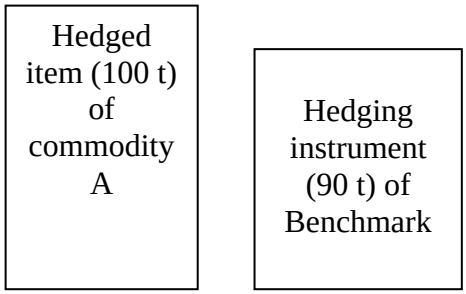
3. The example below illustrates rebalancing and the various issues arising when adjusting a hedging relationship. The example assumes that all the events occurring result in exceeding the expected level of ineffectiveness and that rebalancing is therefore required.

[1] The discussions of macro hedging have started at the September IASB meeting (see paper 14B of that meeting).

***Example—Reassessment of the hedge ratio***

4. Entity A wants to hedge a highly probable forecast transaction to buy 100 tonnes of commodity A at T2. To hedge this exposure Entity A enters into a forward contract for 90 tonnes of the benchmark commodity (ie the benchmark commodity is at a premium in relation to the commodity that entity A wants to purchase).

5. Based on the historical behaviour of the benchmark commodity, Entity A has determined that commodity A on average trades at about 90% of the price of the Benchmark for that type of commodity (ie a basis spread of 10%). That analysis also shows that the basis spread is rarely larger than 16% or smaller than 7%. Entity A considers that the cost of hedging the basis spread would outweigh the benefits and hence is not economical. Further, Entity A considers that the volatility within the band between 84% and 93% of the Benchmark quality of the commodity is frequent and of a moderate magnitude so that adjusting the hedge position in response to changes within that band would not be economical.

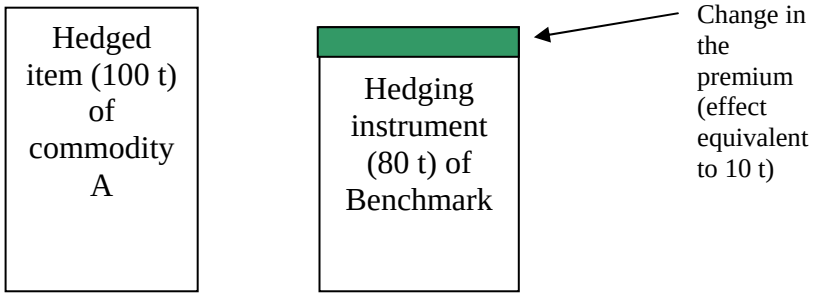



6. In order to illustrate the issues arising from the reassessment of the hedge ratio, the staff developed four scenarios involving changes to the hedged item and hedging instrument. These result from changes in the sources of ineffectiveness and weighting of the hedged item. They aim to illustrate the different issues preparers would face when rebalancing the hedging relationship following a change to the hedge ratio or when adjusting the quantities of forecast transactions (that are hedged items).

7. In all scenarios that involve rebalancing, all ineffectiveness is recognised prior to rebalancing any hedging relationship.

***Scenario 1—Changes in the behaviour of the benchmark: Increase in the premium between benchmark and hedged commodity with no change in the hedged item***

8. At the end of period 1 Entity A reassesses the conditions of the hedging relationship and concludes that the benchmark has increased its premium over the commodity, due to a supply and demand shift that was considered relevant for risk management purposes. The benchmark and the hedged commodity are showing the following relationship at T1.




9. At the end of period 1 Entity A is overhedged and therefore needs to unwind a proportion (10 tonnes) of the existing hedging instrument to achieve the hedge ratio that best reduces hedge ineffectiveness under the new conditions (100/80).

10. Reducing the derivative volume by 10 tonnes (notional amount) would result in the discontinuation of hedge accounting *in relation to that volume* because the hedging instrument does no longer exist for this amount. Even if Entity A is unable to unwind the proportion of the hedging derivative volume generating the overhedging, hedge accounting should still be discontinued for that part of the hedge and be treated as a non-designated hedging instrument.

11. However, because this is not a new hedging relationship and Entity A is only adjusting to reflect unanticipated changes in the basis, the hedging relationship should continue for the 80 tonnes of derivative volume and 100 tonnes of hedged volume (ie not be discontinued and restarted).

12. Another possibility in this scenario for entity A is to keep the original derivative at 90 tonnes and designate an additional layer because it thinks there is sill enough headroom to designate an additional layer of 12.5 tonnes of commodity

13. The staff notes that this scenario is not normally associated with risk management as it occurs as a result of designating in response to of a steep change in the basis a position previously left open. Risk management starts from the risk exposure subject to the hedge (commodity risk in this scenario) rather than from existing derivatives.

14. In summary, this means:

    (a) The measurement of the changes in value of the hedged item would remain unaffected by the adjustment of the hedge ratio. If the changes in value of the hedged item were measured using a 'hypothetical derivative' that would mean the hypothetical derivative remains the same.

    (b) For the hedging instrument the fair value changes from the date of rebalancing would be measured by reference to a nominal amount of 80 tonnes (instead of previously 90 tonnes).

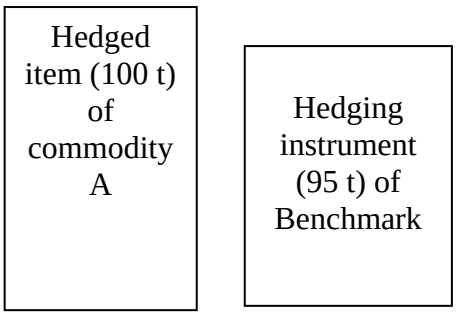
[2] The rest of this paper describes the effect of changes to the hedging relationship on the hedged item in terms of how a hypothetical derivative would be affected. This does not change the outcome but is used because it is a simple way to describe the effect.

(c) If an additional layer is added, the rebalanced hedging relationship will be a combination of two layers: Layer 1 with a reference nominal amount of 80 tonnes and Layer 2 with reference to a nominal amount of 10 tonnes.

**Question 1 –** Does the Board agree with the staff analysis for scenario 1? If not, what would the Board propose and why?

***Scenario 2—Changes in the behaviour of the benchmark: Reduction in the premium between benchmark and hedged commodity with no change in the hedged item***

15. Assume now that the benchmark's behaviour has changed such that the benchmark commodity is now trading at a *lower* premium when compared to the levels determined as at the inception date. This can be illustrated as follows:




16. At the end of period 1 Entity A cannot achieve the level of target effectiveness because of unanticipated changes in the behaviour of the benchmark (a steep decrease in the premium). The implied new hedge ratio is 100/95 and in order to reduce hedge ineffectiveness under the new conditions (ie to keep the hedging relationship unbiased) Entity A needs to enter into an additional derivative to rebalance the hedging relationship. Entering into an additional derivative to rebalance the hedging relationship raises the following issues:

    (a) The new derivative will have different terms from the original derivative and therefore the change in fair value of the new hedge position (ie the combination of the hedging instruments) will be a function of the two separate derivatives. This will generate ineffectiveness because a proportion of the original hypothetical derivative will be compared with a new hedging derivative. (In other words, the change in value of the hedged item is measured by reference to the date of inception of the hedging relationship).

    (b) Whether the inclusion of a new derivative means that the hedging relationship is subject to discontinuation and a restart, and the hypothetical derivative is reset.

(c) Whether the inclusion of a new derivative means that only a proportion of the hedging relationship (ie the proportion left unhedged as a result of the changes in the basis) is subject to discontinuation and a restart with consequential proportional reset of the hypothetical derivative (ie the measurement of the changes in value of the hedged item starts from the date of adjusting the hedge ratio).

17. The staff do not believe that there is any merit to issue (b) because Entity A is only rebalancing the hedge to respond to changes in the basis (in this scenario, to a steep decrease in the benchmark premium). As such, Entity A's objective in relation to this hedging relationship has not changed and it continues to manage the originally hedged exposure. Therefore, discontinuing and restarting is inappropriate. Restarting would mean that the changes in fair value of a newly reset hypothetical derivative (at market) would need to be compared to the changes in fair value of a combination of derivatives that are (taken together) not fully at market. This is because the first hedging derivative (a forward to buy 90 tonnes of the benchmark) has a non-zero fair value, while the new derivative, a forward to buy 5 tonnes of the benchmark) is at market. This will generate ineffectiveness resulting from the non-zero fair value of the original hedging derivative on the date of restarting the hedging relationship.

18. The issue of different critical terms (point (a) above) can be addressed by a proportional discontinuation and partial resetting of the original hypothetical derivative. For scenario 2 above it can be illustrated as follows:

| **T** | **T0** | **T1 (Before Rebalancing)** | **T1 (After Rebalancing)** |
|---|---|---|---|
| N.of tonnes to be purchased | 100 | 100 | 100 |
| Quantity of Benchmark | 90 | 95 | 95 |
| Ratio | 100/90 | 100/95 | 100/95 |
| Factor | 1.1111 | 1.0526 | 1.0526 |
| Hedged Quantities | **100** | **94.74** | **100** |
| Shortfall | | **5.26** | **0** |
| **Additional Hedging Derivative (Rebalancing Benchmark QTY)** | | **5** | Hedging derivative |
| **Additional Hypothetical Derivative (Rebalancing Commodity QTY)** | | **5.26** | Hypothetical derivative |

19. To achieve an unbiased hedge ratio for this hedging relationship upon rebalancing, the following adjustments to the hedging relationship would occur:

    (a) Adjust 5.26 tonnes from the original hypothetical derivative to balance it in relation to the existing derivative. The adjusted hypothetical derivative will be a forward to sell 94.74 tonnes of commodity A (hypothetical derivative 1).

    (b) Designate a new hypothetical derivative: A forward to sell 5.26 tonnes of commodity A (hypothetical derivative 2).

20. The hedging derivatives will be:

    (a) a forward to buy the 90 tonnes of the benchmark commodity (hedging derivative 1); plus

    (b) an additional forward to buy 5 tonnes of the benchmark commodity upon rebalancing (hedging derivative 2).

21. If there is no partial reset of the hypothetical derivative the relationship between hedging derivative 2 and the corresponding volume of the hypothetical derivative will reflect an imbalance. This imbalance arises from the difference in the critical terms of the hedging derivative 2 versus the proportion of hypothetical derivative set at T0. To remove the imbalance (and subsequent artificial ineffectiveness) a partial reset of the hypothetical derivative is needed.

22. An alternative would be to not reset the original hypothetical derivative on the basis that the hedged item has not changed. However if this view is followed, the hedging derivative, which will be a combination of two derivatives that have been entered into at different points in time (T0 and T1), will be compared to a hypothetical derivative that has been set at T0. This has several implications:

    (a) There will be a difference in the critical terms of the transactions when considered on an aggregated basis;

    (b) This difference in the critical terms creates a partial imbalance in the aggregated hedging relationship that is fully attributable to the portion

of the original transaction that was left unhedged due to the changes in the basis;

23. For the reasons outlined above and because of the fact that all the ineffectiveness will be recognised prior to the reset, the staff dismiss this alternative.

24. As a final note, the staff would like to draw the Board's attention to the fact that a scenario similar to the one described in paragraph 13. This scenario will occur if for example the volume of purchases has been reduced to 94.74 tonnes. The hedge would then continue as a relationship of 94.74 tonnes of commodity A against 90 tonnes of the benchmark. Therefore, a proportion of the hedging relationship corresponding to 5.26 tonnes would have been discontinued.

**Conclusion**

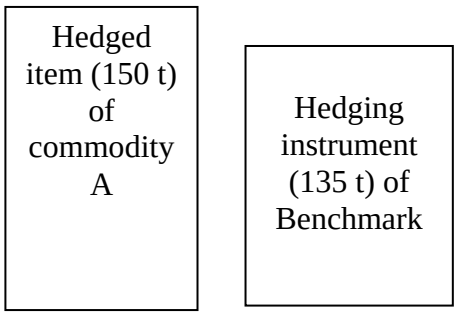
25. The staff believe that the hypothetical derivatives and the hedging derivatives should be considered together for the purpose of effectiveness testing. Hence, hypothetical derivative 1 and 2 should form the hedged item, and hedging derivatives 1 and 2 should form the hedging instrument. This is because they are part of one hedging objective (to hedge the exposure to the changes in price of commodity A) and this is most likely to be the way that this relationship is assessed from a risk management perspective.

26. In addition a partial reset of the hypothetical derivative is appropriate due to the reasons outlined in paragraphs 22 and 23.

**Question 2 –** Does the Board agree with the staff analysis for scenario 2? If not, what would the Board propose and why?

***Scenario 3—Changes in the quantity of the hedged item (increase) with no changes in the basis***

27. Assume now that at the end of period 1 Entity A reassesses its forecast purchases of the commodity A for T2 and concludes that its needs are now 150 tonnes. The desired aggregated hedging relationship can now be illustrated as follows:




28. In this scenario Entity A will need to enter into an additional hedging derivative to hedge the forecast purchase of additional 50 tonnes of commodity A.

29. The main issue is whether the additional 50 tonnes of commodity A that are regarded as a highly probable forecast transaction at T1 are a new hedge or alternatively an extension of the existing hedge.

30. If the additional 50 tonnes are considered an extension of the existing hedge, an additional question would arise as to whether the extension of the new hedge would require discontinuing and restarting the entire hedging relationship, because the designations occur at different points in time and therefore an 'extension' of the original hypothetical derivative (ie linking the measurement of the hedged item for the additional 50 tonnes back to T0) would be inappropriate.

31. This is the reflection of the fact that the additional 50 tonnes are not hedged between T0 and T1 as they were not considered to be highly probable and hence were left as headroom—or were not even anticipated at all at that stage.

32. An alternative would be to treat the whole hedging relationship as a discontinuation and a restart. The staff consider that this is inappropriate because at T0 Entity A was hedging a 'bottom layer' of 100 tonnes of

commodity A and left some of its forecast purchases unhedged because of uncertainty involved in the forecasting process. In the situation in which the additional 50 tonnes were not even anticipated in T0 it is obvious that they have nothing to do with the initially hedged 100 tonnes.

33. Based on the analysis in paragraphs 29to 32, the staff believe that treating each adjustment as a separate layer is the most appropriate way of approaching this issue. This treatment is linked to risk management and how the hedge was designated. The additional 50 tonnes hedged from T1 are an additional hedge rather than a rebalancing of an exiting one.

34. This means:

    (a) Each layer is a separate hedging relationship. As a result, rebalancing (if needed) becomes easier and artificial ineffectiveness as described above will not arise.

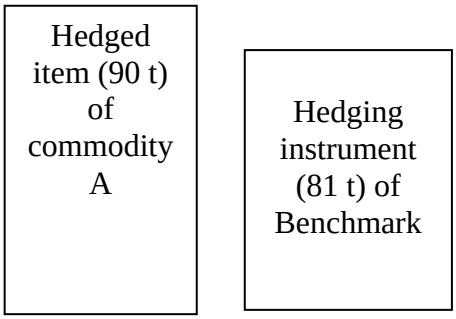
    (b) It easier to track changes to the various layers of the hedging relationship without tainting the combined hedge.

    (c) It is operationally easier to implement.

**Question 3 –** Does the Board agree with the staff analysis for scenario 3? If not, what would the Board propose and why?

***Scenario 4—Changes in the quantity of the hedged item (reduction) with no changes in the basis***

35. Assume now that at the end of period 1 Entity A reassesses its forecast purchases of the commodity A for T2 and concludes that its needs are now 90 tonnes. The desired aggregated hedging relationship can now be illustrated as follows:




36. In this scenario Entity A will need to dedesignate a part of the hedging derivative because at the rebalancing date the entity is overhedged. In substance Entity A reassessed its needs for commodity A at T2 and this will not trigger full discontinuation and a restart.

37. One could argue that Entity A has not left enough headroom, and provided that the hedging relationship has not been documented in layers it should be penalised by being forced to discontinue and restart the entire hedging relationship. This is the view arising from the application of IAS 39, which is described in paragraphs 19 to 22 of paper 17A on discontinuation of hedge accounting.

38. An alternative view would say that provided that all the ineffectiveness is recognised in profit or loss prior to rebalancing, and that the proportion of the hedging derivative that is not an effective hedging instrument is either unwound or treated as a non-designated derivative, the remaining original hedging relationship remains valid. This view is more consistent with risk management and will recognise all the ineffectiveness prior to rebalancing. At the same time it will not reset the hypothetical derivative and therefore the issue of recognising artificial ineffectiveness will not arise.

39. As a result of the application of this alternative view the staff believe that the following discontinuation of hedge accounting is needed:

| **T** | **T0** | **T1 (Before Rebalancing)** | **T1 (After Rebalancing)** |
|---|---|---|---|
| N.of tonnes to be purchased | 100 | 90 | 90 |
| Quantity of Benchmark | 90 | 81 | 81 |
| Ratio | 100/90 | 90/81 | 90/81 |
| Factor | 1.1111 | 1.1111 | 1.1111 |
| Hedged Quantities | **100** | **100.00** | **90** |
| Shortfall | | **-10.00** | **0** |
| **Reduction in Hedging Derivative (Rebalancing Benchmark QTY)** | | **-9** | Reduction in volume of the hedging derivative |
| **Reduction in Hedged Quantity (Rebalancing Commodity QTY)** | | **-10.00** | Reduction in volume of the hypothetical derivative |

40. This alternative view raises the issue of the 'highly probable' threshold for qualification for cash flow hedges because reducing previously forecast quantities calls into question that the entity is capable of predicting its forecasted purchases with sufficient reliability. Therefore, some believe that the entity should be penalised by having to discontinue hedge accounting.

41. The staff believe that this issue encompasses two other issues:

    (a) Issue 1 relates to the abusive behaviour of designating more forecasted items than the ones that are highly probable and therefore misrepresent the headroom. This is not a risk management strategy and it is only

done with the abusive intent of recognising derivative gains and losses in other comprehensive income (OCI).

(b) Issue 2[3] relates to updates in the forecasting process. These are genuine adjustments that result from the uncertainty in the entities business activities (commonly termed 'tail risk'). From a risk management perspective this should be rare as hedging relationships are established in a way that enough headroom is left to avoid overhedging. From a hedge accounting perspective, the staff consider that the appropriateness of the partial discontinuation can be assessed using criterion of 'past practice'. This not only sets a high 'hurdle' for partial discontinuation and therefore increases discipline, as it will penalise entities that failed to leave enough headroom from a risk management perspective.. In practice, the history of adjusting will be used to assess the frequency of adjustment of the hedging relationships attributable to updates to the headroom left for the volume of purchases or sales. If these updates are more than rare then the hedging relationship should be automatically discontinued. If the track record proves that Entity A is not capable of forecasting this type of transaction its ability to designate hedging relationships involving commodity A shall be removed until a new track record of is build.

42. Combining the two arguments, the staff believes that partial discontinuation is appropriate provided that the entity does not have a history of adjusting the hedge relationship due to insufficient headroom.

**Question 4 –** Does the Board agree with the staff analysis for scenario 4? If not, what would the Board propose and why?

[3] Refer to analysis on discontinuation of hedge accounting in paragraphs 48 to 60 of agenda paper 17A