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Project	**Accounting for macro hedging**		
Paper topic	What the model should apply to		
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Introduction

1. In the considerations on the accounting for macro hedging so far, issues regarding the 'scope' of the accounting model have not been explicitly considered. In the outreach meetings the staff have undertaken with a limited number of constituents[1] in March and April, they showed enormous interest in how the IASB would consider the scope issues in applying the model to revalue items on a portfolio basis and by risk (portfolio valuation approach). The staff are of the view that this issue should be covered in the forthcoming Discussion Paper.

2. The interests of participants in the outreach can be categorised into the following aspects:

   (a) What portfolios are to be revalued when an entity applies this approach?:

      (i) Should application follow the approach to risk management, to include all exposures dynamically managed together by the Asset Liability Management (ALM) for interest rate risk

[1] The constituents contacted included some major banks in Europe, North America, Asia/Oceania, as well as users that have expertise in that industry.

(this would ordinarily result in application to all portfolios in the banking book if risk managed as a whole[2]); **or**

(ii) Can application be more focused to permit a selection of discrete portfolios within the banking book exposures managed by ALM?

(b) Is the application of the accounting for macro hedging mandatory **or** optional, and is it conditional on particular risk management conditions (eg dynamic risk management of open portfolios)?

3. Answers to the above would be influenced by the Board's view on how the application of the accounting model for macro hedging interacts with the basic classification and measurement principles as well as the hedge accounting[3] requirements in IFRS 9 *Financial Instruments*.

4. The purpose of this paper is to outline the scope issues (ie the items in 2 above). The accounting for macro hedging is intended to be used to represent dynamic risk management for open portfolios for various types of risks by entities in financial as well as non-financial industries[4]. In this paper, however, the focus is on interest rate risk management in the banking sector, as it is a well known example of a need for the accounting model and it is the scenario that the Board has considered in most detail. The Board is not being asked to make any decisions. Rather the purpose of the paper is to facilitate debate and to obtain thoughts from the Board for inclusion in the Discussion Paper.

Divergent views on *risk management*

5. The Board has undertaken the project on accounting for macro hedging to develop an accounting model that provides financial information reflecting risk management approaches. However, outreach results so far showed a divergence in

[2] If an entity has multiple portfolios that are exposed to the same risk but managed completely separately, and the entity manages only one of them dynamically, it makes sense the entity applies the proposed portfolio revaluation approach only to the portfolio that is dynamically managed. In the case of the banking industry, however, the working assumption is that banks tend to manage interest rate risk exposures in all portfolios together with risk management derivatives in contemplation of each other in a comprehensive and integrated manner.

[3] Hedge accounting in this paper refers to the 'general' hedge accounting under IFRS 9.

[4] See the agenda paper 4 at the December 2012 IASB meeting.

views regarding what 'reflecting risk management' means. Those different views could broadly be categorised into two types that are set out below.

A 'holistic' view

6. This view assumes there is basically a common business model and risk management approach in banks, and the portfolio revaluation approach is well suited to describe important features of the industry. According to this view, risk management includes both *hedging* and *non-hedging*, and applying the model to account for macro hedging would enable financial statement readers to understand the profits and corresponding risks by the profit source. It would provide a picture of the risks after considering all risk management activities. Currently, entities use hedge accounting to the extent risk is managed by hedging, but do not show open positions. This accounting approach does not provide a holistic picture. To represent a holistic picture it is necessary to essentially reflect the effect of remeasuring the managed risk. This works irrespective of whether risk management results in hedging or leaving positions open. Additionally, there is no suggestion that the accounting solution for macro hedging would only be applied where risk has been reduced[5], as one of the aims of the solution is to represent risk management activities, irrespective of whether risks have been eliminated or not.

7. Banks earn a net interest rate margin that is the difference between the yield on assets (eg loans) and the costs of funding (eg deposits). An interest rate margin is derived from two different sources—a customer margin (eg a lending margin and a deposit margin) and the open interest rate risk position with respect to the benchmark interest rate (eg LIBOR-SWAP yield curve). The nature of profits from these two sources is different. For instance, a lending margin reflects credit risk of each borrower, the pricing policy of each bank and the overall competitive environment in the loan market. In contrast, profits derived from open interest rate positions are gains from taking an interest rate position. A bank with a long net receive position (ie an open position in which it overall receives interest on longer

[5]Whether 'risk' has been reduced or increased is in the eye of the beholder, depending on whether variable or fixed rate cash flows are considered to be a risk.

maturities and pays interest on shorter ones[6]) can be profitable in a steep yield curve environment. However, the bank may make losses once the yield curve shifts upwards or the shape of the yield curve turns to an inverted one. Banks' macro hedging activities focus on this type of risk with respect to the benchmark interest rates[7]. These two profit sources have different implications in terms of sustainability of reported net income.

8. It could be argued that given the dynamic approach to risk management of interest rate risk from external exposures, perhaps a full fair value approach would better reflect the full risks within those exposures. However, such an approach would not appropriately reflect the underlying business model of the bank with respect to the non benchmark interest rate risk element (the customer margin). In addition, the dynamic risk management activity is usually performed on a 'by risk' basis and so a revaluation for all risks would not provide useful information on actual risk management activities[8]. It is for these reasons that the Board has previously confirmed a focus on remeasuring for *particular* risks rather than to full fair value.

9. There is a view that financial statements of banks today fail to provide important information[9] on risk management activities. One of the reasons quoted is the 'patchwork' application of hedge accounting, which makes it difficult for readers to understand what the accounting numbers (eg profit or loss volatility) imply. This is because hedge accounting is not best suited to provide a *holistic* picture of the risk position, which includes *un-hedged* risks as well. It is in fact often used today to address profit or loss volatility rather than represent risk management per se. In the context of banks' huge balance sheets connecting some specific items

[6] In the upward sloping yield curve environment, banks can make profits by funding with shorter maturity instruments at lower interest rates but investing with longer maturity ones at higher interest rates.

[7] In order for banks to have such a holistic view, they usually use techniques such as sensitivity analysis. This is because it enables them to capture the valuations of *each* and *all* portfolios and hedging derivatives with respect to the change in the benchmark interest rates, thereby letting management know how the bank is exposed to the risk on a *net* basis. As a result, management is able to make decisions regarding the necessity, timing and amount of macro hedging activities. As interest rate risks are usually managed by maturity, the holistic interest rate risk management is typically based on Grid Point Sensitivity (GPS) analysis. See the agenda paper 4B at the September 2012 IASB meeting.

[8] For example, interest rate swaps transacted to mitigate the interest rate risk within a dynamic portfolio of debt instruments are not designed to manage liquidity or credit risk within the portfolio.

[9] For instance, a user mentioned he had no choice but to ask banks to submit data based on management accounting in order to make a critical assessment of how each bank is exposed to the remaining open interest rate position after macro hedging activities, and how much profit arises as a result of the open risk position.

out of the large total by designating them in specific hedging relationships naturally has its limits when it comes to representing the risk position as a whole. If the objective is to provide information about sources of profit, the portfolio revaluation approach would be most useful if it is applied to the whole banking book, ie all portfolios that it comprises as this reflects the open risk position, rather than select portfolios with a view to addressing profit or loss volatility.

A view to focus on hedging activity

10. This view effectively focuses on hedging as a *subset* of risk management. It looks at the risk management purpose of each hedging decision, each of which reflects risk management. For instance, some hedging decisions are made with a view to stabilise a net interest rate margin. In other cases, however, hedging decisions lead to a particular interest rate position being taken that leaves the net interest margin exposed to interest rate changes. But, this also reflects risk management. According to this view, risk management involves various aspects at different levels and stages, and accounting that emphasises the holistic view does not necessarily correctly describe actual risk management activities. Typical views include:

    (a) Intentionally un-hedged open interest rate risk positions should not lead to profit or loss volatility. Assets (eg loans) and liabilities (eg deposits) are accounted for at amortised cost once the IFRS 9 classification criteria are met, *regardless of* whether they are fixed or variable rate items. This accounting treatment is in line with banks' business model to collect contractual cash flows (principals and interest payments). If not hedged, the mismatches in repricing dates between assets and liabilities *do not* create immediate volatility in reported profit or loss[10]. If the portfolio revaluation approach is applied to all the banking book exposures, however, even intentionally un-hedged open positions are revalued, thereby leading to immediate volatility for interest rate risk. It is argued that reported profit or loss that shows more volatility for a

[10] Where no hedging transactions are undertaken, fluctuations in net interest margin due to open interest rate positions would be shown in profit or loss through net interest income, over time as the effects of open positions unfold. Some banks have argued this is an appropriate representation of the outcome from this risk management activity.

bank that *hedges* a part of an open risk position than another bank that does *not hedge* at all does not show each bank's risk management correctly.

(b) Regardless of implications in a holistic sense (eg impacts on stabilisation of an interest rate margin), accounting treatments that help to reduce volatility in reported profit or loss[11] (eg fair value and/or cash flow hedge accounting solutions) are consistent with the business model and risk management, as long as transactions are undertaken for *hedging* purposes.

Summary

11. These risk management views can be summarised as follows in terms of accounting objectives to reflect risk management:

(a) Accounting to reflect the risk position in financial reporting *irrespective of whether it is hedged*, which corresponds to the holistic view; **vs.**

(b) Accounting for risk only *to the extent it is hedged*, which corresponds to the view to focus on each hedging activity.

12. These contrasting views have implications not only for the information provided to users of financial statements, but also for the operational feasibility of the model. The latter aspect will be discussed later in the paper.

Examples

13. The interactions of the accounting model for macro hedging, hedge accounting, and divergent views on risk management can be illustrated using simple examples shown below. For simplicity, all fixed rate items have a 10 year maturity, while all variable rate items are repriced every three months with 3 month LIBOR as a reference rate. Numbers in parentheses are notional amounts in CU.

[11] According to this view, volatility in reported profit or loss should arise only as a result of ineffectiveness of hedging.

Example 1: Fair value hedge accounting

14. Bank A has three fixed rate loan portfolios (X1, X2 and X3). The amounts outstanding of X1, X2 and X3 are all CU20. All liabilities are variable rate deposits. Risk managers responsible for X1 and X2 entered into pay-fixed receive-variable swaps (Y1 and Y2) with the intention of eliminating open risk positions in these two loan portfolios. Y1 and Y2 correspond to X1 and X2 respectively. Bank A applies fair value hedge accounting for these two separate hedge transactions. However, the risk manager responsible for X3 decides not to hedge, leaving the interest rate risk in X3 open.

15. Now, the risk manager who takes *ultimate* responsibility for ALM checks the 10 year interest rate exposure (ie the 10 year bucket of the GPS diagram[12]) and finds the amount of the *net* open position is +20. In addition, s/he confirms the open position is in line with overall risk management policies (eg risk limits) and the views on interest rate market developments. For instance, the views might include that it is unlikely the short-term benchmark interest rate (ie 3 month LIBOR) will rise in the near term, hence the possibility that a negative interest rate margin will materialise between fixed rate loans and variable rate deposits is considered low.

16. As a result, the ultimate risk manager decides not to take any additional action for macro hedging, leaving the net interest rate position open (+20). What is important here is that the decision of the ultimate risk manager does not focus on each hedging relationship (between X1 and Y1, X2 and Y2). Rather, the focus is on the *net* open risk position. This aspect of risk management corresponds with the holistic view that volatility reported in the profit or loss would reflect the *net* open risk position. This view reflects that risk management includes *both* hedging and non-hedging aspects (ie leaving risk positions open).

17. On the contrary, if one focuses on each *hedging* activity, the volatility in the reported profit or loss would be zero (assuming for arguments sake the X1/Y1 and X2/Y2 hedges are ‘perfectly’ effective). This is because X1 and X2 are perfectly hedged by Y1 and Y2 respectively, and X3 is *intentionally un-hedged*. Those who support this view would agree that an entity that had a completely open position

[12] See the footnote 7.

(ie did not hedge the exposure arising from X1, X2 *or* X3) should show no volatility in profit or loss.

Example 2: Cash flow hedge accounting

18. Bank B has open portfolios of loans (100) and deposits (100). The loans are variable rate items, while the deposits are fixed rate. Bank B hedges the mismatch in repricing dates between loans and deposits using 10 year receive-fix pay-variable swaps (100). For argument's sake, a 'perfect' economic hedge is assumed. With the use of cash flow hedge accounting, Bank B achieves perfect stability in reported profit or loss. It should be noted here that both the elimination of the open risk position and no volatility in reported profit or loss are achieved at the same time.

19. The other example is Bank C that also has open portfolios of loans (100) and deposits (100). The difference is that both its loans and deposits are variable rate items. Bank C manages its interest rate risk by entering into pay-variable receive-fixed swap transactions. Bank C applies cash flow hedge accounting with the interest cash flows on its loans as the hedged item, leading to the elimination of volatility in its reported profit or loss that would otherwise arise as a result of accounting for the hedging derivatives. Unlike the above-mentioned case, however, the open interest rate position for the reporting entity as a whole actually *increased* in this case.

20. From the viewpoint of focusing on each hedging activity separately, hedge accounting can reduce volatility in reported profit or loss in the case of both Bank B and C. However, from the holistic perspective the fact that the reported profit or loss in both of Bank B and C shows no volatility would fail to show that the overall economic situation of Bank B and C is actually different.

Considerations

21. The scope issues can be basically considered from the aspects explained in paragraphs 2 and 3, but these aspects are closely interwoven. Therefore, the design of the scope of accounting for macro hedging includes various possibilities.

Accounting alternatives

(a) Neither hedge accounting nor an accounting model for macro hedging	Accounting for individual items without regard to risk management activity (ie follow the basic classification and measurement requirements in IFRS 9).
(b) Hedge accounting	Accounting information reflects items that are linked by designation at the level of specific hedging relationships. There are choices to apply hedge accounting or not for each hedging relationship.
(c) Accounting for macro hedging	Accounting information reflects the view that all banking book items are ultimately managed in contemplation of each other in an integrated and comprehensive manner (the holistic view).

22. The Board needs to decide which accounting model could or must apply to represent macro hedging activities from the list shown above.

23. If a free choice is allowed among the above alternatives, it is likely many banks would choose (b), as it would give the least volatility in reported profit or loss. If the Board believes the accounting for macro hedging should be applied to all banking book portfolios in line with the holistic view, the staff propose that the following matters are the key considerations for the Board:

In order for banks to share the view that the holistic approach provides useful information, the approach would need to balance the need for transparency with the resultant profit or loss volatility. This creates a dilemma for the Board; the *more* the Board is willing to accept approaches that enable entities to reduce reported profit or loss volatility, the *less* it may be consistent with conventional accounting concepts. There is a **trade-off** here. Specific topics the Board has to consider are the inclusion of behaviourisation (eg core demand deposits), the equity model book (EMB), pipeline transactions, risk limits, etc. For instance, it is true that the risk limit concept reflects one aspect of risk management. However,

it is also true the accounting results based on the concept would be counter-intuitive, in that the wider the risk limits are, the less volatility the reported profit and loss shows. In other words, the more tolerant entities are to taking open positions or risk, the more stable the reported profit and loss is[13], hence the Board may find a risk limits approach difficult to accept for accounting purposes.

24. The other approach for the Board is to make the application of the accounting model for macro hedging mandatory. **If** the Board believes that the portfolio revaluation approach that is applied to the whole banking book is superior, in that it provides transparent information for dynamic macro hedging activities, then it would be difficult to argue that it should not be mandatory. However, this approach involves conceptual as well as technical questions:

    (a) Interaction with the IFRS 9 classification and measurement requirements: The interaction with the IFRS 9 model is critical. The Board has noted consistently that managing interest rate risk is **not** inconsistent with holding items to collect contractual cash flows. Thus IFRS 9 enables amortised cost measurement to apply even when interest rate risk is managed.

    (b) Interaction with hedge accounting: Macro hedging activity can to some extent be represented by hedge accounting. Hence, there is a need to assess whether the accounting model for macro hedging should be given priority over hedge accounting or 'competition' between the models should be allowed[14].

    (c) Difficulty in articulating the circumstances under which the approach is applied: It would be difficult for the standard for the accounting for macro hedging to correctly articulate all the circumstances under which the approach is mandatorily applied, when taking into account the fact there are some diversities in risk management purposes and approaches even within the banking industry. For instance, is it realistic to make the

[13] Note incorporating the risk limit idea into accounting also involves operational difficulties, in that it needs mechanics that enables to 'switch on/off' the revaluations of the hedged positions. See the agenda paper 4B for the September 2012 IASB meeting.

[14] It should be noted, however, when hedge accounting solutions are used, there could be cases where accounting results are similar but actual risk management results from a holistic perspective are completely different. See the above example of the applications of cash flow hedge accounting by Bank B and C.

application of the portfolio revaluation approach to all banking book portfolios mandatory even to a bank whose assets and liabilities mostly consist of variable rate items, and accordingly that does not depend on the (re)valuation technique in risk management? The problem would likely be bigger when taking into account the management of other risks than interest rate risk in non-financial industries.

The application of the accounting for macro hedging to discrete portfolios

25. The Board also could let banks choose the discrete portfolios to which they apply the accounting model for macro hedging. If the Board follows this approach, a likely outcome would be that banks would use the portfolio revaluation approach only for open portfolios that are difficult to account for with hedge accounting solutions. A typical example would be core demand deposits. This approach mitigates the problem for banks affected by the inability to use hedge accounting for the *deemed* fixed rate risk in core demand deposits. In that case, banks may *voluntarily* choose the portfolio revaluation approach for core demand deposit portfolios in those circumstances.

26. However, there are also inherent shortcomings in this approach. The most serious problem would be that this approach fails to show the holistic risk management view to users of financial statements.

27. The other complication is whether a *combination* of applications of the accounting model for macro hedging and hedge accounting is allowed or not. There could be an argument that if each of the accounting model for macro hedging and hedge accounting in IFRS 9 is applied properly to discrete portfolios, it could collectively present management's view of risk management. For example a bank may have a risk management objective to lock in interest rates for certain portfolios, in which case they may view the application of IFRS 9 cash flow hedge accounting to be more aligned with their risk management activities.

28. However, there could also be a counter-argument that a free choice between the two accounting models (and with a choice to use *neither*) to discrete portfolios just means an entity is equipped with a more enriched *toolkit* to reduce the volatility in reported profit or loss. This could appeal to those who view hedge accounting and/or accounting for macro hedging being developed primarily as a

means to manage volatility in profit or loss arising from accounting mismatches. However, there is a possibility that such an approach makes the existing problems resulting from patchwork solutions even worse. Entities' decision on which accounting model to use could be driven by the desire to reduce volatility in reported profit or loss instead of reflecting their economic situation.

Operational feasibility

29. In general, an expected advantage of the portfolio revaluation approach to account for macro hedging is its operational feasibility, once the approach has been implemented[15]. The application of this approach to all banking book exposures allows an accounting solution that does *not* need individual hedged items and hedging instruments to be linked. For entities such as banks that perform macro hedging based on the holistic view, if hedge accounting was applied it requires widespread changes to normal measurement and recognition requirements because of the pervasive effect of risk management on the entity's transactions. This pervasive effect reflects that holistic risk management does not occur at the item level, but at an aggregated level for the net risk position that results from many different items that continuously change. In such situations hedge accounting is operationally onerous, as an entity needs to frequently adjust its hedge accounting to match the dynamic nature of risk management. This means hedge accounting is inevitably accompanied with tracking efforts.

30. It also should be noted, however, there may be cases where the benefit of the information provided by the application of the portfolio revaluation approach to all banking book exposures is outweighed by the operational effort involved in applying it. A possible scenario might be where a bank has predominantly variable rate exposures in the balance sheet, with only minimal naturally occurring fixed rate risk exposure. If a bank was able to select discrete portfolios for application of the portfolio revaluation approach, as described in paragraph 25 above, it *may* be able to select particular portfolios for the application of the portfolio revaluation approach that represent overall risk management activities.

[15] It is recognised that there will be an operational burden in order to initially implement the proposed approach, even though there is an expectation that existing information systems used for risk management purposes will become useful for accounting purposes under this approach.

However, the Board may not consider the resulting information to be sufficiently transparent on the full risk management activities[16].

31. Note that the analyses above have focused only on interest rate risk management in banks. The scope issues should be discussed from broader perspectives when the Board takes non-interest rate risk management in non-financial industries into account.

Conclusion

32. The scope issues include a wide spectrum of aspects, ranging from which portfolios should be revalued once the accounting for macro hedging is applied, to the discussion on mandatory or optional application. Hence, there are various alternative ways to deal with these issues. Each alternative has its own pros and cons. When the analyses go further to non-interest rate risk in non-financial institutions, the focus of considerations would be wider.

33. The analyses shown in this paper are only preliminary, based on outreach with a limited number of constituents. It is desirable different accounting alternatives should be presented in the Discussion Paper in order to get feedback from a broader audience.

[16] Even variable rate exposures include some exposure to interest rate changes as these instruments do not reprice continually. The difference between variable rate exposures and fixed rate ones is the former has *smaller* revaluation risk reflecting shorter duration (ie sensitivity). Thus, the approach to let a bank to select discrete portfolios mean that some valuation risk will inevitably not be captured.