STAFF PAPER

19 – 23 March 2012

IASB Meeting

Project	**Macro Hedging**		
Paper topic	Information regarding the valuation of the risk position		
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Introduction

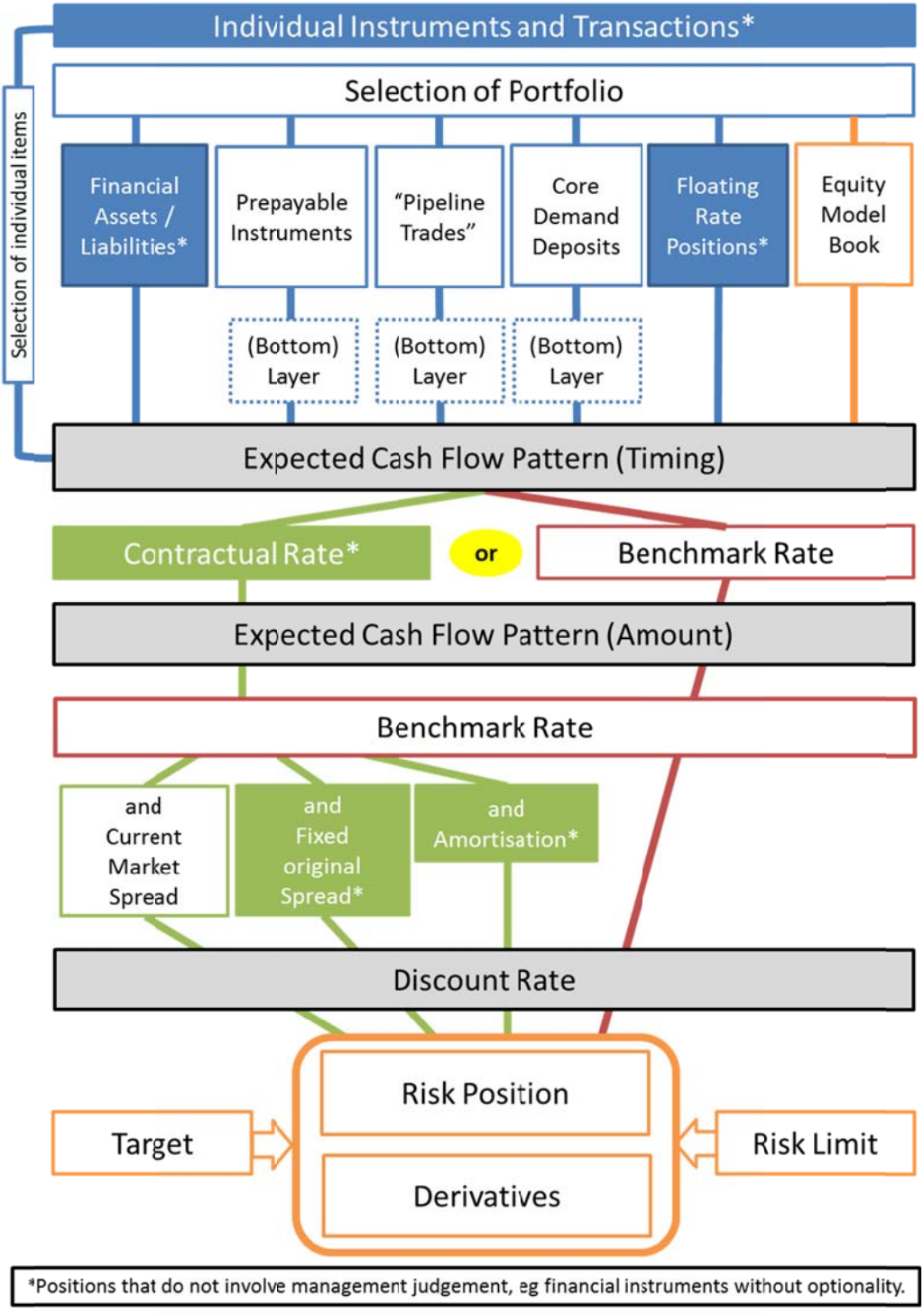
1. The purpose of this paper is to provide an overview of information required in a macro hedging model to understand the valuation of the risk position using the valuation approach. This complements the discussion of accounting alternatives on the basis of the 11 steps introduced with agenda paper 7A at the November 2011 IASB meeting.

2. To understand the risk position and its valuation, it is important to know the factors that influence the valuation, how they are determined, the rationale for their selection, and how and why they change. Hence, the basic idea of this paper is to describe the process required to value the risk position using a present value approach. The analysis is based on a common risk management process for interest rate risk management.

3. Dependent on the Board's decision on the future macro hedge accounting model this information can be used to develop related disclosure requirements. The Board might of course consider further disclosure requirements. That is not covered by this paper.

4. Finally, this paper facilitates the discussion of the accounting treatment of areas that depend on risk management's judgement.

Process to determine and quantify the risk position



5. The process starts with selecting financial instruments and transactions at a macro level for risk management purposes. The selection might occur on an individual instrument level or via allocation to portfolios. This establishes the scope of instruments and transactions relevant to be measured.

Cash flows

6. For the instruments that are allocated to portfolios *expected* **cash flows** are considered. Hence, the contractual terms and conditions of instruments are used as the *starting point* and then adjustments are made, eg introducing the effect of behaviour (of debtors or deposit holders) on cash flows. This takes into account the effect of portfolios on expected cash flow profiles (ie that the variation of possible cash flow outcomes at the portfolio level can be less than at the item level) and strategies. For example, this means that the effect of a "stable bottom layer" could be included in the expected cash flow profile at the portfolio level (ie the forecast minimum cash flows based on expected behaviour).

7. With these steps the expected timing of the cash flows of the risk position to be measured is set. The respective amounts of those cash flows can be determined on the basis of the contractual (ie entire) interest rate of the instruments involved. Alternatively, a benchmark interest rate (for example a transfer price) that reflects the hedged interest rate risk can be used.

Discount rate

8. The **discount rate** comprises two components:

   (a) a **benchmark** interest rate as a basis; and

   (b) if necessary, an **adjustment** to make it *internally consistent* with the expected cash flows discounted by that rate. Alternatively, the cash flows can be discounted at a rate that is different to that which is inconsistent with the expected cash flows. In this case a "day 1-valuation" arises that needs to be amortised over time. Dependent on the approach taken for determining the spread element of the discount rate compared to the benchmark interest rate this calculation results in a fair value-type measurement or a valuation attributable to the hedged interest rate risk.[1]

[1] This section refers to the valuation alternatives 3 and 4 regarding the determination of a measurement limited to interest rate risk as introduced with agenda paper 4A of the December 2011 IASB meeting. Both alternatives assume that the present value calculation is based on the contractual cash flows of the respective instrument while the discount rate used is a (different) benchmark interest rate. This difference in

Present value

9. This results in the remeasurement of the risk position at a **present value**. That present value contrasts with the (full) fair value measurement of the hedging instruments (derivatives). There is an offsetting effect in profit or loss to the extent that changes in the net position's present value offset the fair value changes on the hedging instrument. Whether the hedging relationship is considered "effective" *from a risk management perspective* is dependent on two factors:

   (a) The target set for the risk management activities. For example whether the entire identified risk position should be hedged or only a portion of it, or which target return the portfolio is supposed to achieve after hedging activities.[2]

   (b) The risk limits that indicate the level of tolerated deviation from the target.

10. A hedge that meets its target within the tolerated risk limits is considered effective *from a risk management perspective*.

Derivation of relevant complementary information

11. To understand the valuation of the risk position information is required about management's selection of items for the risk position as well as the valuation parameters, including the rationale for those decisions. To understand how and why the valuation changes it is necessary to understand all changes in those parameters, and in the population of hedged items. It is also necessary to understand any adjustment to the described "set-up" made by management (ie changes in the risk management strategy and how it is implemented).

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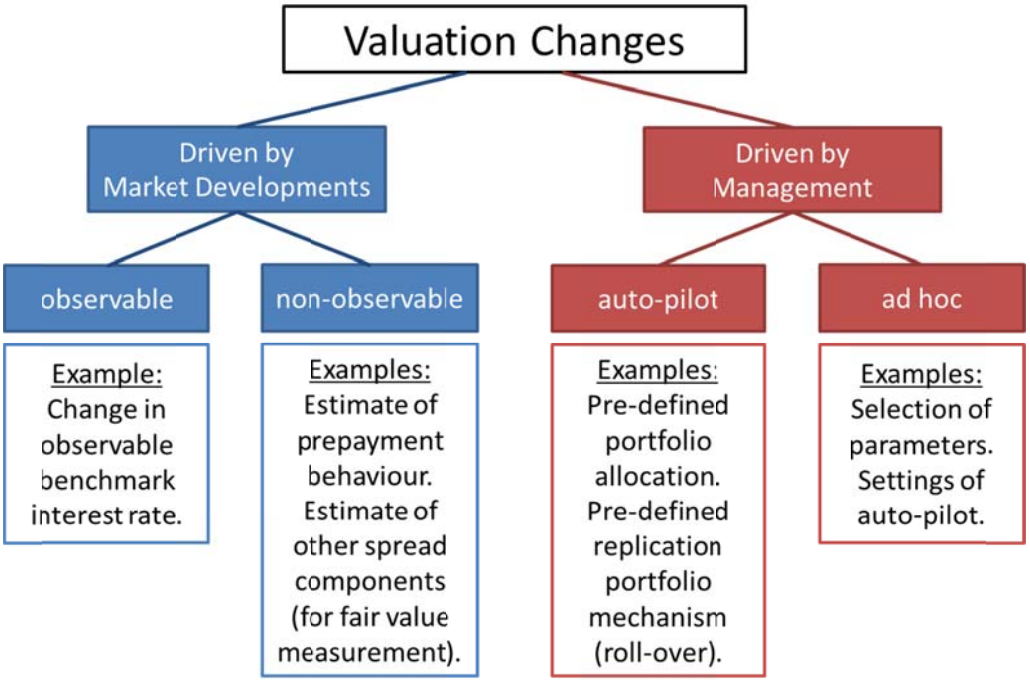
the basis of cash flows and discount rates is addressed by either adjusting the benchmark rate for a fixed spread (representing the starting deviation between benchmark rate and contractual rate)—alternative 3. Alternatively it is accepted that the mismatch between cash flows and discount rates immediately results in a valuation impact deviating from the transaction price (day 1-valuation). This impact is then amortised to the expected maturity of the respective instrument—alternative 4.

[2] This refers to situations where the risk management strategy is to hedge only a portion of the entire risk position or the activities are designed to achieve a pre-determined target return of the portfolio. In those situations hedging relationship would be considered "effective" from a risk management's perspective to the extent the target is met.

12. Based on that understanding a decision can be taken on the accounting treatment for each influencing factor (parameter and its change).

13. The changes that affect the valuation of the risk position can be classified as follows:



14. Changes that are driven by market developments are situations in which input parameters change over time because of market factors. Two situations have to be distinguished:

    (a) observable parameters; and

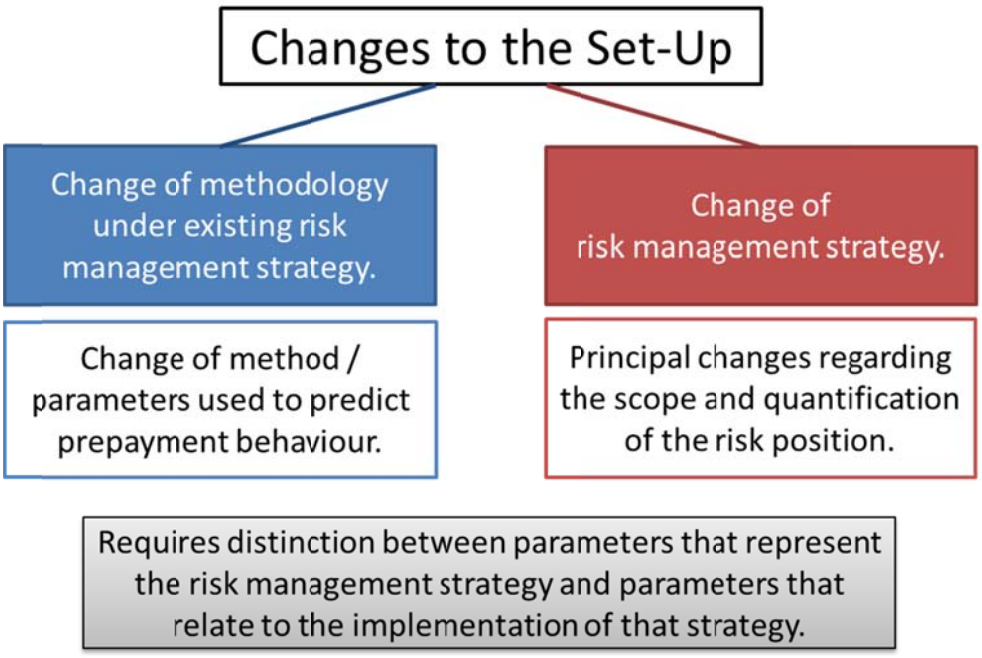
    (b) non-observable parameters. These require assessment by management on the basis of valuation techniques.

15. In contrast, changes driven by management are changes to input parameters *that are based on management decisions*. So unlike a fair value measurement that has an objective of determining a market-based measure, a valuation that reflects a risk management perspective is influenced by decisions management takes. Those decisions can result in an "auto-pilot" mechanism being established that pre-defines future adjustments to the risk management arrangement or set-up

dependent on the occurrence of events or the passage of time. Common examples are roll-over mechanisms or establishing a replication portfolio.[3]

16. Alternatively, management might change features of the risk management process at any time. This could include a change in risk management strategy or a refinement in valuation (for example improving the way in which prepayments are modelled).

17. Given the spectrum and "discretionary nature" of potential "ad hoc" changes by management those have to be analysed in more detail:



18. Analysing the potential effect on the valuation due to management's potential changes requires the following to be distinguished:

    (a) adjustments caused by changes to the risk management strategy; and

    (b) adjustments that improve the valuation of the risk position to better reflect the existing (unchanged) risk management strategy (for example, improving the measurement of prepayments).

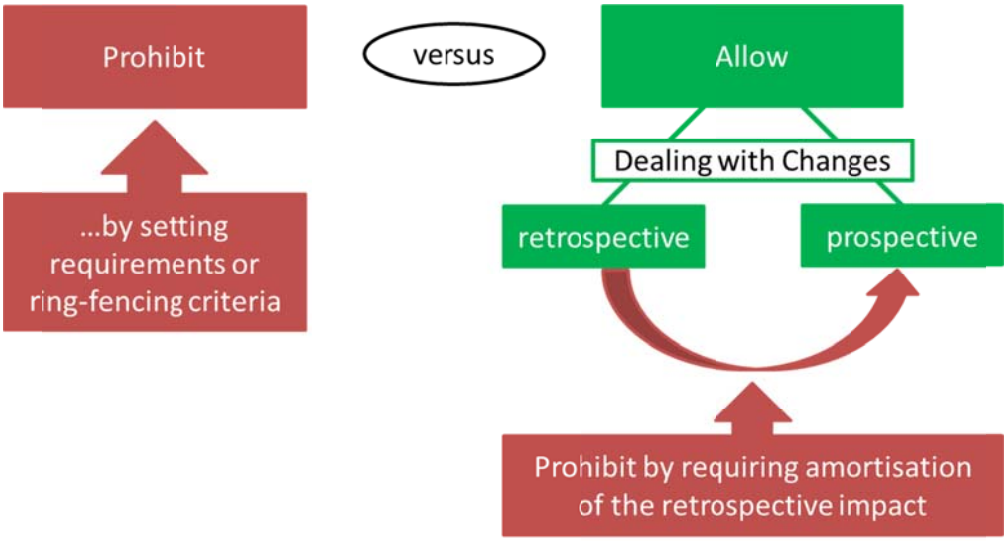
[3] This covers situations in which a risk position of an open portfolio is reflected through a series of tranches with different maturities. For example, a core demand deposit position with an expected "stickiness" of 5 years could be replicated with a portfolio of 60 tranches so that one tranche matures at the end of each month. Every matured tranche is automatically replaced by a new one with a term of 5 years, the same notional amount and priced on the basis of the same benchmark rate at the replacement date. This mechanism is pre-defined by management.

19. The distinction between strategic and operational decisions in this context is not always straight-forward. For example, whether the cash flow pattern is based on contractual cash flows or benchmark cash flows affects the quantification of the hedged risk for risk management purposes. Therefore it is an operational implementation decision. On the other hand the decision to use contractual or benchmark cash flows also changes the valuation of the risk position. This difference in cash flows that are considered might change actions taken by risk management (due to the different information obtained). From that perspective the decision gains a strategic dimension.

20. The distinction between strategic and operational decisions becomes important when it results in different accounting consequences. An operational decision to improve the valuation model to better capture the risk position for risk management purposes could be seen as an ongoing valuation event that should have an immediate impact on profit or loss. This is like reflecting better fair value measurement in the financial statements. However, changes to the risk management strategy usually do not result in immediate consequences for profit or loss. For example, the discontinuation of a hedging relationship because of a change in the risk management of a hedged risk does not result in an immediate release to profit or loss of the related hedge adjustment (fair value hedge) or accumulated other comprehensive income (cash flow hedge).

21. The other aspect that has to be considered is that most potential adjustments would have an effect on the valuation of current risk positions, which would, in substance be like a “retrospective change”. For example, a change in the selected benchmark interest rate used to discount expected cash flows is applied to all transactions considered for risk management purposes. It is not limited to new ones entered into from that day on. This leads to the question of how accounting should treat those retrospective adjustments to the valuation of the risk position.

22. To truly provide a risk management perspective the valuation would need to reflect risk management judgement and changes to it. The question is on the appropriate accounting treatment for these judgemental areas. In general the following alternatives can be distinguished regarding the treatment of management judgement for accounting purposes:



23. The influence of management judgement and therefore the topics described can be restricted by providing requirements or ring-fencing criteria for the extent to which management judgement should be reflected in the valuation. This improves comparability in the sense that all financial statements are based on the same criterion in this respect. The disadvantage is that it can create deviations between accounting and actual business activities.

24. When allowing management judgement to be reflected in the valuation for accounting purposes the question is whether changes to the exercise of judgement should only impact future financial statements or should also have retrospective effects. Retrospective effects can in effect be prohibited by requiring the amortisation over time of the related one-time valuation effects.

Appendix:

Potentially useful qualitative and quantitative information regarding the valuation of the risk position

A1. The appendix to this paper provides an overview of information required to understand the influencing factors and inputs to the valuation of the risk position (as described in this paper). It also lists potential changes to those factors and inputs as well as the trigger for those changes (driven by management or market) and whether there is a potential retrospective impact.

A2. Most of the information resembles the disclosure requirements of IFRS 13 *Fair Value Measurement*. Supplements are required to address specific features typical of risk management like the application of portfolio and layer approaches as well as the influence of risk management strategies. Those sections are shown with grey highlighting. The latter corresponds with questions common for general hedge accounting relationships or the categorisation of financial instruments on the basis of the actual business model.

Qualitative information

Understanding the valuation balance	**Understanding the change of the balance**	**Driver for the change (impact)***
Scope of macro hedging (for interest rate risk)		
Describe classes of financial instruments and transactions considered for interest rate risk management.	Additions. Derecognitions. Transfers between classes. Reclassifications (into / out of macro hedging).	Factual (prospective valuation). Factual (release of valuation adjustment). Factual (presentation). Management decision (prospective valuation unless applied retrospectively).
Determine expected cash flows (timing)		
Describe whether financial instruments / transactions are considered on an individual or on a portfolio level.	Change in the approach.	Management decision; might be factual for run-off portfolios (retrospective and prospective valuation).
Method used to determine expected cash flows		
Description of parameters used by class of transactions.	Change in parameters. Change in selection of parameters.	Observable / estimate (prospective valuation). Management decision; might be driven by back-testing (retrospective and prospective valuation).
Application of portfolio approaches		
Portfolio Level: Criteria for the definition of a portfolio (common criteria of portfolio items).	Change in the definition of portfolios.	Management decision; consideration of homogeneity and accuracy (retrospective and prospective valuation).
Portfolio Level: Allocation of items to the portfolio – individual or pre-defined process.	Change of the allocation criteria to portfolios.	Management decision (retrospective and prospective valuation).
Application of bottom layer approaches		
Describe whether bottom layers are used to determine expected cash flows.	Start / stop using bottom layers.	Management decision (retrospective and/or prospective valuation).
Bottom Layer: Criteria for setting a bottom layer (term, interest rate, volume).	Change in terms of the bottom layer.	Management decision, capped by the overall expected cash flows (retrospective and prospective valuation).
Bottom Layer: Describe the relation of the layer to the expected cash flows of the portfolio (hedged proportion) and the contractual terms of portfolio items (homogeneity).	Description only – no impact on valuation.	
Bottom Layer: Describe roll-over assumption (when applicable) – eg for a replication portfolio.	Change of the pre-defined roll-over assumption.	Management decision; might be based on auto-pilot (retrospective and prospective valuation).

Understanding the valuation balance	Understanding the change of the balance	Driver for the change (impact)*
Determine expected cash flows (amount)		
Whether the amount of cash flows is determined on the basis of the contractual rate or the benchmark rate.	Change in approach.	Management decision (retrospective and prospective valuation).
Benchmark Rate: Which benchmark rate is used and criteria for choosing it.	Change in approach (prospective / retrospective).	Management decision; might be an on-going retrospective resetting on an auto-pilot mechanism (retrospective and prospective valuation).
Discount rate		
Method used for the determination of the discount rate (benchmark rate with and without adjustment, market rate).	Change in approach.	Management decision (retrospective and prospective valuation).
Benchmark Rate used as a basis for the discount rate and rationale.	Change in benchmark rate. Change in selection of benchmark rate.	Observable / estimate Management decision (retrospective and prospective valuation).
Interaction with benchmark rate used for determining expected cash flows (if applicable).	Description only – no impact on valuation.	
Treatment of day 1 valuation impact (mismatch between cash flows and discount rate).	Change in approach taken.	Management decision on accounting policy (prospective impact on financial statements).
Target for the macro hedging relationship		
Definition of hedged portion and target risk profile.	Change in general approach; Pre-determined adjustments (roll-over).	Management decision; might be based on auto-pilot (retrospective and prospective valuation).
Risk limits		
Describe method used to determine sensitivity scenarios – relates to effectiveness testing.	Change in method.	Management decision (prospective financial statement presentation).
Actual setting of risk limits.	Change in limits.	Management decision (prospective financial statement presentation).
Maximum amount of profit or loss impact tolerated by risk limits.	Description only – no impact on valuation.	
*<u>Note:</u> *Retrospective valuation impacts represent one-time effects on the value of the risk position from changing the respective input. Prospective valuation impacts relate to the subsequent valuation.*		

Quantitative information: Development of the valuation adjustment of the risk position

		Change in Population			Change in Valuation				
Classes of transactions	Opening Balance	Transfers	Sales	De-designations Reclassifications	On-going	Roll-over Adjustments	Other Adjustments	Day 1-valuation	Ending Balance
Loans									
Mortgages									
Liabilities									
Deposits									
Pipeline									
EquityBook									
Risk Position									
Hedging Instruments									
Total									