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Project **Insurance contracts**

Topic **Discounting for ultra long duration cash flows**

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## What is this paper about?

1. The purpose of this paper is to provide the boards with an analysis of additional considerations for the discount rate in cases where the yield curve is extended beyond observable market prices (so-called ‘ultra-long duration’ contracts).
2. This paper does not discuss:
  - (a) the selection of the discount rate. This topic was discussed in the joint board meeting on 17 February 2011.
  - (b) *locking in* the discount rate. This topic was discussed in the joint board meeting on 1 March 2011.
  - (c) whether *other changes in assumptions* should be recorded in other comprehensive income. We will discuss this topic at a future meeting.

This paper has been prepared by the technical staff of the IFRS Foundation and the FASB for discussion at a public meeting of the FASB or 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 FASB or the IASB.

Comments made in relation to the application of U.S. GAAP or IFRSs do not purport to be acceptable or unacceptable application of U.S. GAAP or IFRSs.

The tentative decisions made by the FASB or the IASB at public meetings are reported in FASB *Action Alert* or in IASB *Update*. Official pronouncements of the FASB or the IASB are published only after each board has completed its full due process, including appropriate public consultation and formal voting procedures.

## Staff recommendation

3. The staff recommends that the effects of changes in discount rate for ultra-long duration cash flows should be presented in other comprehensive income. The amount should reflect all changes in measurement attributable to changes in the unobservable part of the yield curve (**‘spread approach’**).

## Structure of this paper

4. This paper provides:
  - (a) Background
  - (b) An analysis of the issue of the ultra long duration contracts
  - (c) staff recommendation.
  - (d) implications of any decisions made by the boards about the ultra-long durations on other parts of the project.

## Background

### *Summary of the IASB’s proposals and the FASB’s preliminary views<sup>1</sup>*

*Discounting – A rate that reflects the characteristics of the liability*

5. The ED proposes that an insurer adjusts the future cash flows for the time value of money using discount rates that
  - (a) are consistent with observable current market prices for instruments with cash flows whose characteristics reflect those of the insurance contract liability, in terms of, for example, timing, currency and liquidity.**

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<sup>1</sup> The views expressed in the ED and DP are consistent with respect to the discount rate.

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**(b) exclude any factors that influence the observed rates but are not relevant to the insurance contract liability (eg risks not present in the liability but present in the instrument for which the market prices are observed). (paragraph 30)**

6. The ED further explained in paragraph 31:

**...if the cash flows of an insurance contract do not depend on the performance of specific assets, the discount rate shall reflect the yield curve in the appropriate currency for instruments that expose the holder to no or negligible credit risk, with an adjustment for illiquidity...**

***Relevant questions in the ED/ DP***

7. Question 3 of the ED asked respondents the following:

(c) Some have expressed concerns that the proposed discount rate may misrepresent the economic substance of some long-duration insurance contracts. Are those concerns valid? Why or why not? If they are valid, what approach do you suggest and why? For example, should the Board reconsider its conclusion that the present value of the fulfilment cash flows should not reflect the risk of non-performance by the insurer?

8. Question 12 of the DP asked respondents the following:

... Do you agree with the proposed guidance on the discount rate that should be used to measure the carrying amount of insurance contracts? If not, which discount rate should be used?

***Overview of comments on the ED / DP***

9. The responses to the questions in the ED / DP can be clustered as follows:

(a) Some disagreed that the discount rate should reflect the characteristics of the liability only. These respondents asked for an asset-based discount rate to reflect the asset-liability management of the insurer even if there is no link between the contractual cash flows and the assets backing the liabilities. The boards discussed this issue at the 17 February 2011

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meeting and confirmed that the discount rate should reflect the characteristics of the liability (but noted that there is more than one way to achieve that objective). In the boards' view it is not appropriate to include any investment risk of the insurer in the discount rate, if that risk is not passed to the policyholder.

- (b) Some disagree that insurers should account for all duration mismatches. Proponents of this view base their arguments on the long term nature of the insurance contract liabilities and the lack of financial assets with cash flows of similar durations. These people argue that for these ultra long durations there is no management action possible to avoid a mismatch other than holding shorter term assets and rebalance the portfolio as it matures. Under this view, accounting for these duration mismatches is not relevant for users of the financial statements.
  - (c) Many respondents raised a concern regarding the lack of observable long term discount rates and are uncomfortable that the changes to these discount rates are reported in profit or loss. Some have argued that the discount rate as proposed will suit short to medium-duration contracts better than long duration contracts. They asked the boards to consider providing guidance on how the discount rate can be extrapolated with reasonable accuracy to discount cash flows in long-duration contracts with reasonable precision. Others have argued that the liabilities are being marked-to-model and any fluctuation in the measurement of liabilities is dominated by the valuation techniques in relation to model selection and parameter estimation rather than the actual change in financial market.
10. The comments discussed above in paragraphs 9(b) and 9(c) have one similarity: the lack of a market for some financial instruments. This paper further analyses the discount rate for durations beyond observable market data.

## Staff Analysis and Recommendation

### *Background for discount rates for very long durations*

11. Agenda paper 3D / 58D of the 17 February 2011 meeting noted that it can be very difficult to determine the discount rate for ultra-long durations as an issue (paragraphs 28 – 30 of Agenda paper 3D / 58D). For ultra-long durations, there are no instruments that have similar characteristics as the insurance contract liability in terms of timing. The yield curve needs to be extended. We have attached an extract of the Agenda paper in Appendix A of this paper.

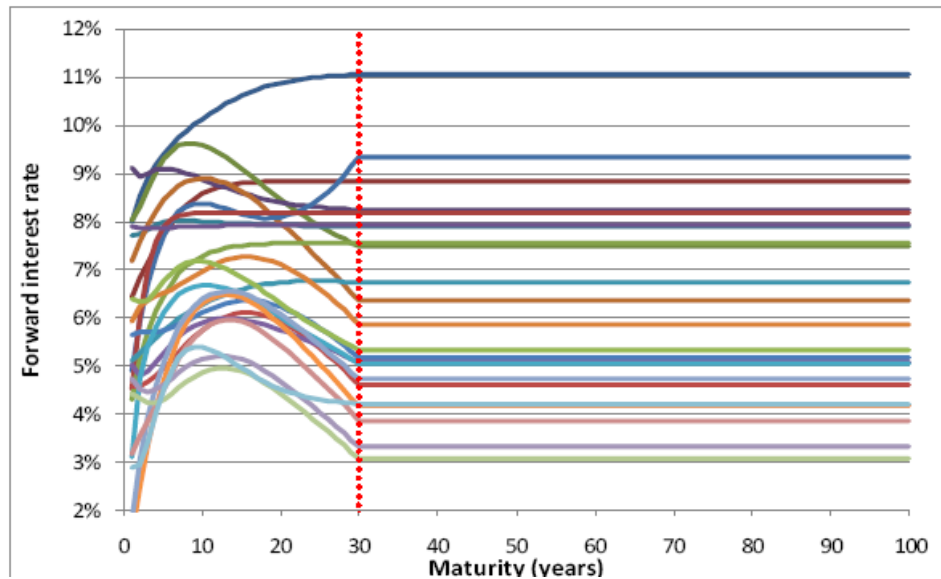
### *Determining the yield curve beyond observable prices*

12. In the past, extending the yield curve was less complex in most insurance accounting regimes, for different reasons:
  - (a) In some countries, a regulatory discount rate was prescribed sometimes without even considering changes in a yield curve.
  - (b) Other countries used the rates from pricing which often were based on a long-term average or historic rates (such as the long-term earned rate minus defaults, average of the last 10 year government bond rates etc.)
  - (c) This was often combined with other factors which reduced the complexity of this particular issue: locked-in assumptions and/or conservative other assumptions in determining cash flows.
13. The accounting model proposed in the ED/DP (and in other current or market consistent valuations) requires the insurer to use current market assumptions which leads to the need to extend the yield curve beyond observable points. The issue that arises when extending the yield curve used can be illustrated easily through the following charts. They show different accepted methods to extend the yield curve. They are taken from 'Market-consistent valuation of

ultra long-term cash flows’ by John Hibbert, October 2008.<sup>2</sup> In the first example, the yield curve remains constant from the last observable data point:

**Exhibit 1**

USD government forward interest rates assuming constant rate beyond the longest maturity (30 years), end-December 1985-2007

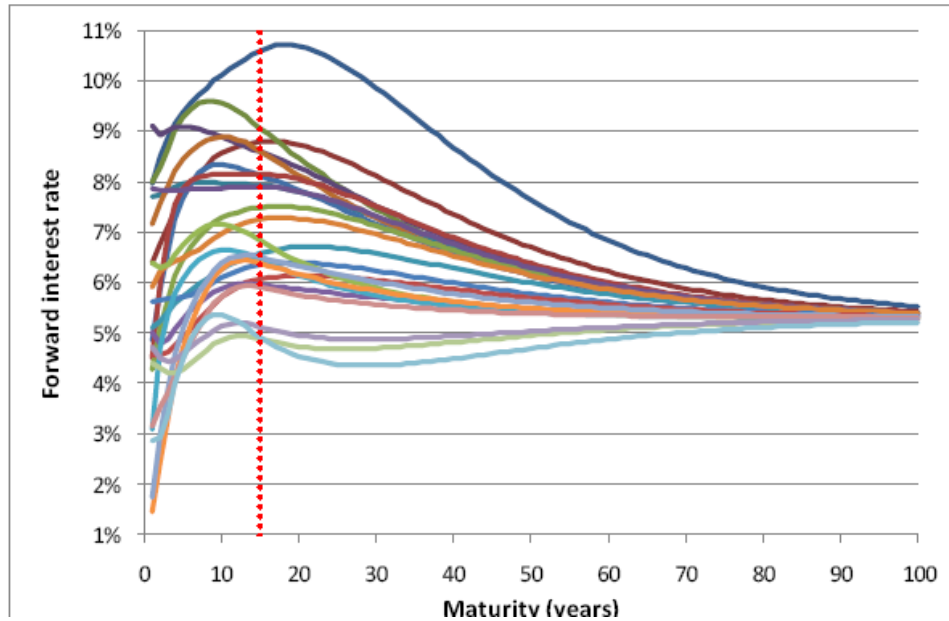


- 14. Some of the extended yield curves under this approach look quite reasonable, while others fail to fit to the market data which has been used as a starting point.
- 15. Another method would result in the following yield curves. The below graphs demonstrate a concept that the long term risk free discount rate converges around longer term expectations as discussed in the 17 February 2011 Agenda paper 3D / 58D:

<sup>2</sup> The graphs have been included with the kind permission of John Hibbert from Barrie-Hibbert.

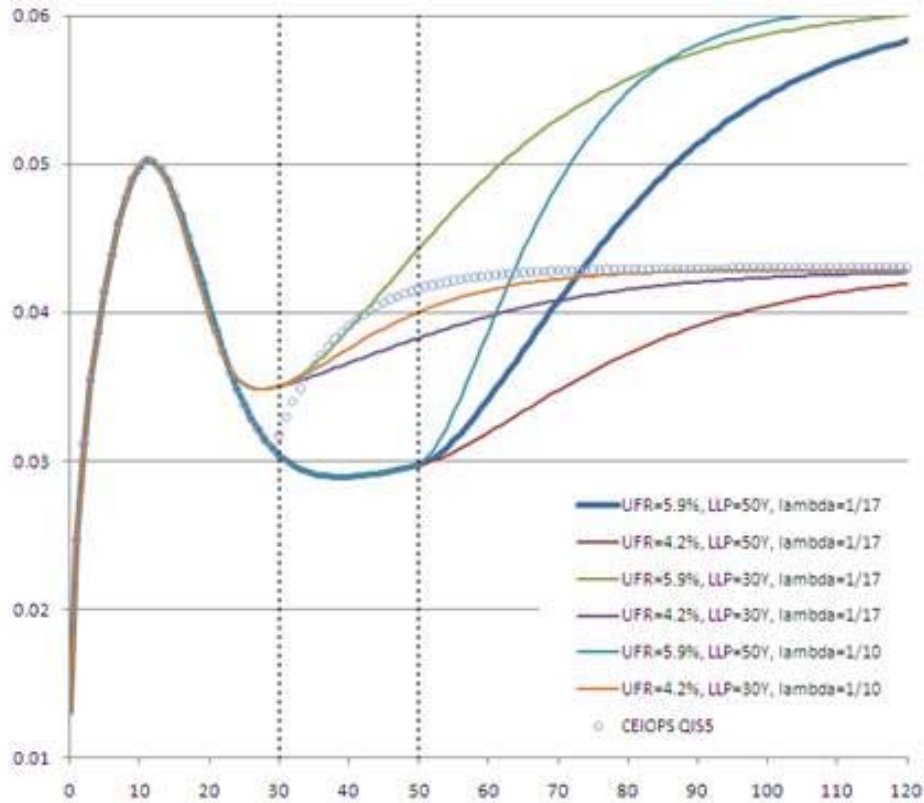
**Exhibit 6**

USD government forward rates extrapolated from year 15 using B+H method



16. There are various other methods available to estimate the yield curve beyond observable points. Without further analysis whether one method or any other method provides more appropriate results, it becomes clear that expanding the yield curve leads to an additional estimate and involves significant judgment by the preparer. There are various practical issues and still ongoing debate on the best methodology to expand yield curves.
17. The following graph shows how the same yield curve can be extended beyond observable data, using different methods or parameters. The graphs describe the EUR forward rate curve at the end of 2009.

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*An example illustrating the issue*

An insurer has a portfolio of annuity contracts which will generate cash flows for 40 years. The longest observable discount rate for this currency is 30 years, because there is no bond or similar instrument in the market that provides cash flows beyond this term. The yield curve is on an upward slope from year 1 (3.0%) through year 30 (4.0% being the last observable point). Which yield should be used, to discount the cash flows of this contract for years 30 to 40?

Following the approach illustrated in paragraph 12 and 14 this would mean that all cash flows of the insurance contract would be discounted at 4.0%. We now assume that the yield curve moves to 3.5% in year one sloping to 4.5%. The cash flows would now be discounted at 4.5%. The insurance contract liability would decrease by more than 5%.

Following the approach illustrated in paragraph 15, we assume that the long-term market expectations are 3.75%. Depending on the speed of the convergence to these long-term expectations, the cash flows in our example will be discounted with discount rates close to 3.75% and the change in the observable yields will have little to no impact to the present value of the fulfillment cash flows. This could mean that there is a



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difference in the insurance contracts liability of possibly more than 10% between different approaches.

In year 10 all cash flows can be discounted using discount rates that are based on the observable yields with the same term. However, it is not possible to back test whether the discount rates were appropriate for the unobservable years, as these remain not observable.

*Asset-liability management*

18. Apart from the difficulties in determining the correct yield curve, the staff observes that there are no available debt instruments in the market to match the cash flows of these ultra-long durations, in other words, it is not possible for the insurer to have a fully balanced asset-liability management. Because of the long-term nature of the liabilities insurers often invest in real estate which provides relatively stable returns that are not directly influenced by market movements in interest rates. Changes in the extended yield curve will not change or influence this investment strategy. The insurer can only monitor the situation and incorporate an appropriate reinvestment strategy to allow for rebalancing as soon as the cash flows can be matched. However, as the contract matures, the insurer is able to invest in assets to cover the liability cash flows.

*Summary*

19. Based on the above discussion and the example, we can highlight the following points regarding the nature of ultra-long duration contracts:
- (a) Discount rates for ultra long durations cannot be observed.
  - (b) It is impossible to back test an assumption about the yield curve beyond the longest durations for which market data exist. For example, suppose the longest duration with observable rates is 30 years and the liabilities have a duration of 40 years, so that the insurer needs to estimate the yield curve for years 31-40. After another 10 years, all the cash flows will now be at durations for which there is observable data, but there is still no

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observable (or indeed other) data to confirm whether the previous estimates for years 31-40 have any validity.

- (c) As the contract matures, the cash flows will be discounted with more observable rates. Any difference between discount rates for the longest observable durations and discount rates in the extended yield curve will reduce naturally as the cash flows move closer to the point of observability.
  - (d) An asset-liability management strategy cannot match the cash flows from an ultra-long duration contract with supporting debt instruments.
20. In the remainder of the paper, the staff analyses whether the changes in the yield curves for ultra-long durations and the result from discounting with these yield curves provides financial information that is useful.

***Analysis of the results from changes in measuring the very long durations based on the Qualitative characteristics of the Conceptual Framework***

21. In determining the usefulness of reporting the effects from changes in measurement because of changes in the discount rate for ultra-long durations at each reporting period, we considered the boards' *Conceptual Framework for Financial Reporting* (the *Framework*) which states in QC4:
- If financial information is to be useful, it must be relevant and faithfully represents what it purports to represent. The usefulness of financial information is enhanced if it is comparable, verifiable, timely and understandable.
22. We note that the Framework also lists the four enhancing qualitative characteristics of useful information of: comparability, verifiability, timeliness and understandability. QC33 states:
- Enhancing qualitative characteristics should be maximised to the extent possible. However, the enhancing qualitative characteristics, either individually or as a group, cannot make information useful if that information is irrelevant or not faithfully represented.

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23. We will adhere to the approach set out in QC18 of the *Framework*:

The most efficient and effective process for applying the fundamental qualitative characteristics would usually be as follows (subject to the enhancing qualitative characteristics and the cost constraint, which are not considered in this example). First, identify an economic phenomenon that has the potential to be useful to users of the reporting entity's financial information. Second, identify the type of information about that phenomenon that would be most relevant if it is available and can be faithfully represented. Third, determine whether that information is available and can be faithfully represented.

24. The discount rate is intended to represent the time value of money which represents the economic difference between a cash flow today and cash flow at one particular point in time. A change in discount rates is intended to represent a change in the time value of money.

*Relevance*

25. In order to be useful, a change in discount rates for ultra-long duration contracts needs to be relevant for users of financial information. Financial information is relevant if it has predictive value, confirmatory value or both.
26. In general, changes in the discount rate can add confirmatory value to the users about the mismatches between assets and liabilities. However, we do not believe that changes in discount rates for ultra-long duration insurance contracts add confirmatory value, because these changes cannot be back tested. However, in the staff's view the changes in the observable part of the yield curve can add predictive value to the measurement of insurance liabilities. Paragraph QC8 of the *Framework* states that:

QC8 Financial information has predictive value if it can be used as an input to processes employed by users to predict future outcomes. Financial information need not be a prediction or forecast to have predictive value. Financial information with predictive value is employed by users in making their own predictions.

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27. Furthermore, when describing the objective, usefulness and limitations of general purpose financial reporting, the *Framework* states:

OB3 Investors', lenders' and other creditors' expectations about returns depend on their assessment of the amount, timing and uncertainty of (the prospects for) future net cash inflows to the entity. Consequently, existing and potential investors, lenders and other creditors need information to help them assess the prospects for future net cash inflows to an entity.

28. However some may doubt the predictive value added by the change from measuring ultra-long duration.

*Faithful representation*

29. Financial information should faithfully represent the phenomena that it purports to represent. Because the extended part of the yield curve is not observable and cannot be back-tested, some argue that it is impossible to assess whether the yield curve for ultra-long durations (and changes in that yield curve) faithfully represent the time value of money (and changes in the time value of money) for those durations. However, the *Framework* specifically discusses whether an estimate is capable of faithful representation as follows:

QC15 Faithful representation does not mean accurate in all respects. Free from error means that there are no errors or omissions in the description of the phenomenon, and the process used to produce the reported information has been selected and applied with no errors in the process. In this context, free from error does not mean perfectly accurate in all respects. However, a representation of that estimate can be faithful if the amount is described clearly and accurately as being an estimate, the nature and limitations of the estimating process are explained, and no errors have been made in selecting and applying an appropriate process for developing the estimate.

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30. A variety of techniques for expanding the yield curve exist. As is the case of other assumptions and techniques used in determining the probability weighted cash flows, determining the extended yield curve may require significant judgment by the preparer. However, the *Framework* also warns:
- A faithful representation, by itself, does not necessarily result in useful information. [...] [An] estimate can be a faithful representation if the reporting entity has properly applied an appropriate process, properly described the estimate and explained any uncertainties that significantly affect the estimate. However, if the level of uncertainty in such an estimate is sufficiently large, that estimate will not be particularly useful. In other words, the relevance of the asset being faithfully represented is questionable. If there is no alternative representation that is more faithful, that estimate may provide the best available information.
31. In the staff's view, there is no bright line to determine whether the changes in the discount rate yield curve for ultra-long durations are useful. As laid out above, extending the yield curves is an estimate of an unobservable input that cannot be back tested. The lack of back testing combined with the self-reversal are significant differences between this estimate and other (uncertain) estimates in the insurance contracts model which can be confirmed by experience. For example, an estimate about the amount and timing of a claim made can be back tested with experience.
32. One important point is that although discount rates for ultra-long durations (and changes in them) cannot be verified, the discount rates (and changes in them) for any given set of cash flows will converge towards observable rates over time as the remaining duration shortens towards the periods for which rates are observable.
33. Another compelling argument to the staff is that the insurer cannot manage the risk of valuation changes to the extent there is no market for financial assets to 'hedge' the risk. This means that the performance of asset-liability management of the insurer is not represented by reporting changes from ultra-long duration parts of the yield curve in profit or loss. Once the insurer has

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issued the insurance contracts, it has no means of hedging interest rate risk over ultra-long durations.

34. Some would argue that it is complex to decide what the longest observable duration is. In the staffs view it is possible to determine the longest observable duration for each market, based on whether there is an active market for instruments with cash flows of similar timing, currency and liquidity. The active market should be defined consistently with fair value measurement guidance and similar to level 2 inputs. This is the point in time were the yield curve needs to be extended.
35. Some would argue that the longest observable duration would differ from market to market and therefore that lack of comparability will arise from applying different treatments depending on whether a particular cash flow is at a duration for which observable inputs exist. However, in the staff's view, product design is likely to be influenced by the 'investable universe' (ie the range of available and acceptable investments). In other words, differences in markets represent differences in the economic circumstances of each insurer. As a result, two contracts with the same duration, but in different economies, are not necessarily economically equivalent if observable rates exist in one economy but not in the other.
36. Based on the combination of the arguments in paragraphs 31 - 33 and the summary in paragraph 19, the staff believes it is appropriate to analyse further whether the measurement changes in ultra-long duration cash flows should be should be accounted for differently from the rest of the cash flows. The question arises what a more useful representation of these value changes could be. Alternatives include:
  - (a) **Lock-in the discount rate for the ultra-long duration contracts** and not report the changes in the statement of comprehensive income. To the extent that the discount rates become observable, they are used to discount instead of the original locked in rate. Effectively with every year that the contract gets closer to maturity, a current observable rate is

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used for an additional year. If this approach was further considered and with the discount rate moving into the observable years, there is a risk of an increasing gap between the locked-in discount rate for ultra-long durations and the current discount rate for shorter durations for the same contract, ie a cliff effect. If a cash flow that has originally been discounted at a higher discount rate is now discounted at a lower observable rate because the contract's cash flows move into the observable timeframe, there is a relatively large effect in profit or loss from this treatment. In the staff's view, this alternative is not useful, as it would not provide a predictive value to the user of financial statements of insurance companies with regards to the ultra-long duration. It would not provide any additional information from a change in the overall interest rate environment. Consequently, the staff does not view locking in the discount rate as a viable alternative for the overall presentation of the insurance contract liability.

(b) **Include the effect of changed discount rates for ultra-long durations in:**

- (i) **Other comprehensive income.** While the staff believes that information about the effect of changes to the discount rate is useful along the entire yield curve, we weigh the argument high that the changes in the discount rate for these ultra-long duration cash flows do not add predictive value. Using other comprehensive income in this situation is consistent with what the boards decided in other areas when financial information had different grades of usefulness (see IFRS 9 BC 5.21 on investments in equity instruments or in the recent project on IAS 19). In addition, we note that one of the approaches would not require an explicit reclassification from other comprehensive income to profit or loss because the cash flows are measured at observable rates as they mature.

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- (ii) A potential **unlocking of the residual/composite margin**. The boards have reached tentative decisions to explore re-measurement approaches for the residual/ composite margin. The boards have also indicated a tentative preference to only include non-financial variables in the unlocking. However, as laid out above, the ultra-long duration yield curve represents an estimate that – while financial – could also be seen as not fundamentally different from other estimates included in unlocking the residual/ composite margin. If the boards decide to allow unlocking the residual/ composite margin, these changes in estimates could also be included in the unlocking of the residual margin.

37. The staff believes that both alternatives under paragraph 36(b) have merit and are feasible. The Framework and IAS 1 *Presentation of Financial Statements* do not describe a principle identifying the items to be presented in other comprehensive income rather than in profit or loss. In the staff's view, the most informative way to disaggregate the measurement changes for ultra-long duration contracts is to present these changes in other comprehensive income. The staff therefore recommends that the boards decide to include a portion of the changes in the measurement of the ultra-long duration liabilities in other comprehensive income. The staff does not recommend to lock in the discount rate for ultra-long duration cash flows.

**Question 1 for the boards**

Do the boards agree that the effect of discount rate movements for ultra-long duration cash flows should be presented in other comprehensive income?



*If the boards agree with the staff recommendation on Question 1*

38. There are two different methods to determine which measurement results of the extended yield curve movement can be treated differently from the rest of the measurement:
- (a) The first method would report all changes in measurement (**‘change approach’**) attributable to changes in the unobservable part of the yield curve. This approach would not recognize market yield movements at the end of the observable part of the yield curve which also influence the measurement in the ultra-long duration in profit or loss through the changed starting point of the extended yield curve. Proponents of this approach put more weight on the argument that an insurer cannot have an investment strategy to match the risks beyond the existing market. This approach faces similar cliff effects as for the lock-in discussed in paragraph 36(a). Under this approach, some would want to reclassify the ‘cliff’ amount from other comprehensive income into profit or loss.
  - (b) The second method would only report in other comprehensive income the effect of the difference between the last observable interest rate and the extended yield curve (**‘spread approach’**). For the ultra-long duration contracts, this approach would include in profit or loss the effect of changes in the discount rate at the longest duration for which that rate is observable. Thus an insurer would include in accumulated other comprehensive income the difference between the effects of (i) the discount rate at the longest observable duration and (ii) the discount rates for those longer durations. Proponents of this approach put more weight on the unobservability of the inputs needed to extend the yield curve beyond the longest duration with an observable rate. There are no cliff effects in this approach. In addition, this approach would result in the recognition of an amount in other comprehensive income at initial recognition of the contract.

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39. An example in Appendix B illustrates how the two approaches work.

**Fact pattern**

There is one cash flow of CU 10,000 in 50 years to be discounted. The last observable rate is in year 40. At the beginning of the contract this yield curve slopes from 4.5% (year 40) through 5.0% (year 50). After 2 years the extended yield curve moves and becomes steeper and now slopes from 5.0% to 6.5%.

**Change Approach**

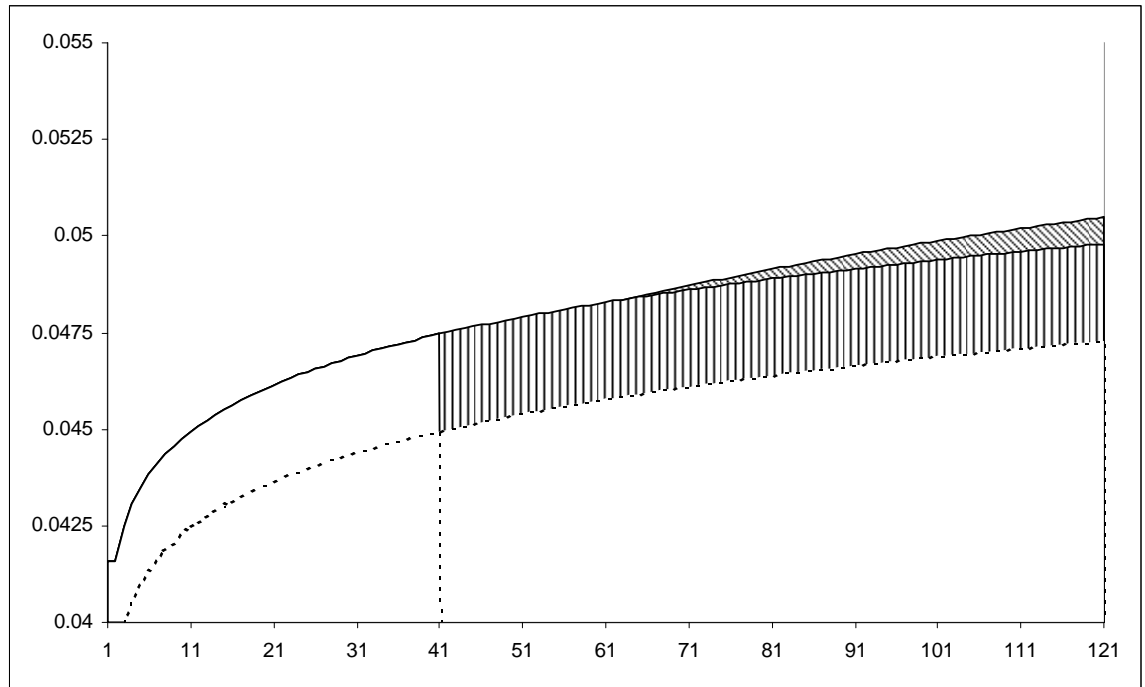
Until the yield curve changes, nothing is reported in OCI. The effect of the change is fully reported in OCI (CU 3,385). The amount recorded in OCI is always the difference between the original extended yield curve and the changed extended yield curve. In the year the cash flow becomes observable, there is an amount left in OCI (CU 3,123 'cliff').

**Spread Approach**

At recognition, the discounting effect of the spread between the last observable discount rate and the discount rate used to discount the cash flows (CU 2,351) is reported in OCI. As time passes, the new differences in spreads between the last observable amount (firstly 4.5%, later 5.0%) and the rate of that year are reported in OCI. Because the amount determined through this method is always the spread between the last observable amount and the interest used to discount the liability, this method reverses naturally as the cash flows move closer to a period for which there is an observable rate

40. The following graph illustrates the two approaches and their impact on the change in other comprehensive income. In this example, the last observable data point is in year 40, the initial rate in this year is 4.5% (dotted line). The observable part of the yield curve subsequently moves up 0.25% and the extended part of the yield becomes steeper. The 'spread approach' would be represented by the upper part of the change of the curve, the 'full approach' would include both parts of the change.

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41. Because of the ‘cliff’ effects and the fact that an amount would remain in other comprehensive income once the discount rate becomes observable under the ‘change approach’, the staff recommends using the ‘Spread approach’.

**Question 2 to the boards**

Do the boards agree with the staff recommendation to report changes in measurement attributable to changes in the the difference between the observable and unobservable part of the yield curve (**‘Spread approach’**)?

***Potential Implications of this Decisions for the Rest of the Model***

42. In the staff’s view, following our recommendation could reduce the concerns about volatility for insurers with these types of contracts which were raised during the Comment letter period, the field tests and the outreach.
43. If the boards follow the staff recommendation and decide to not re-measure the residual margin, the only alternative appears to include the effects in other comprehensive income.

**Appendix A: Extract from Agenda Paper 3D / 58 D IASB/FASB Meeting  
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*Risk-free rates for very long durations*

28. It is very difficult to determine rates for very long durations (ie expanding the yield curve) because:
- (a) Observed market information is rare.
  - (b) Extrapolating market information to long durations cannot be assumed to reflect properly any substance of knowledge about the time value of money because of a lack of transactions.
  - (c) Some of the market information available is influenced by the fact that insurers are very often the largest, or even only, investors in very long duration government bonds because of their asset liability management strategy. Some argue that the resulting market prices (and yields) are less representative of the time value of money and more a reflection of market constraints for these long-term investments.
29. The longer the duration, the closer the risk-free time value of money becomes to a theoretical long-term rate. It can be argued that for very long duration (beyond market cycles) and risk-free (and illiquid) cash flows market participants would not solely consider current market conditions but apply some conceptual overall return expectations. One way to derive this theoretical long-term rate could be to enhance the information from currently observed market transactions with the long term observations.
30. For long durations, determining a risk-free discount rate based on the observed market prices for governmental bonds requires the insurer to establish the yield curve beyond observable prices in active, liquid markets. This requires the use of one or more statistical techniques. In the staff's view, selecting the statistical technique, the insurer should consider the characteristics of the cash flows arising from the liability. In addition, the

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staff believe that there are similarities to determining fair value when in the absence of an active market. Therefore, the staff thinks insurers should apply guidance similar to that in paragraph 50 of the IASB Expert Advisory Panel's report "Measuring and disclosing fair value of financial instruments in markets no longer active" (reproduced in Appendix A) or paragraphs 820-10-35-51A through 51H of Topic 820 Fair Value Measurement and Disclosures of the Accounting Standards Codification .

**Appendix B: Example illustrating both ‘spread’ and ‘change’ approach to record the ultra-long duration impacts in other comprehensive income**

There is one cash flow of CU 10,000 in 50 years to be discounted. The last observable rate is in year 40. At the beginning of the contract this yield curve slopes from 4.5% (year 40) through 5.0% (year 50). After 2 years the extended yield curve moves and becomes steeper and now slopes from 5.0% to 6.5%.

Period	Yield 1	Yield 2	Point in yield curve	Liability	Balance sheet 'OCI Spread'			Balance sheet 'OCI Change'		
					P&L	Change OCI	P&L	Change OCI		
1	5.00%	6.00%	50	8,720	-2,351			0		
2	4.95%	5.90%	49	9,373	-2,197	-498	154	0	652	
3	4.90%	5.80%	48	6,679	-2,936	1,955	-739	-3,385	692	-3,385
4	4.85%	5.70%	47	7,387	-2,708	-481	228	-3,409	732	-24
5	4.80%	5.60%	46	8,156	-2,444	-505	264	-3,416	775	-6
6	4.75%	5.50%	45	8,988	-2,142	-530	302	-3,402	819	13
7	4.70%	5.40%	44	9,886	-1,800	-556	342	-3,368	864	34
8	4.65%	5.30%	43	10,854	-1,417	-584	384	-3,311	911	57
9	4.60%	5.20%	42	11,894	-990	-614	427	-3,230	959	81
10	4.55%	5.10%	41	13,010	-518	-644	472	-3,123	1,009	107
11	4.50%	5.00%	40	14,205	0	-676	518	0	-1,928	3,123