Project **Insurance contracts**

Topic **Discount Rate for non-participating contracts**

What is this paper about?

1. The purpose of this paper is to provide the boards with an analysis of alternative constructs for the discount rate applied to determine the carrying value of non-participating insurance contract liabilities.

2. This paper does not discuss:

   (a) participating contracts in which the amount, timing, and uncertainty of the cash flows arising from the insurance contract are dependent partly or wholly on the performance of specific assets. The staff plans to ask the boards to discuss this topic at the March joint meeting.

   (b) presentation approaches suggested by respondents as a solution to concerns raised about unlocking the discount rate from period to period. This topic will be discussed at a later meeting.

   (c) *locking in* the discount rate as a possible solution to the comments received. This topic will be discussed in Agenda papers 3C.

   (d) whether there are particular situations in which discounting would not be appropriate. This topic is discussed in Agenda paper 3E.

Staff recommendation

3. The staff recommend that the boards:

   (a) confirm the objective of the discount rate is to adjust the future cash flows for the time value of money.

   (b) do not prescribe a method for determining the discount rate.

   (c) provide guidance on determining the discount rate, adjusted to reflect risks that are not otherwise included in the measurement of the liability.

Structure of this paper

4. This paper provides:

   (a) Background, including:

      (i) a summary of the IASB's proposals and the FASB's preliminary views;

      (ii) a summary of the relevant comments received from respondents to the IASB's exposure draft *Insurance Contracts* (the ED) and the FASB's discussion paper *Preliminary Views on Insurance Contracts* (the DP) about the discount rate, including the alternative solutions provided in the comment letters.

   (b) An analysis of the following alternatives provided by respondents about the discount rate, including the practical and theoretical problems with each:

      (i) Risk-free rates;

      (ii) Asset-based rates;

      (iii) Prescribed rates.

   (c) staff recommendations on how the boards should specify the discount rate for non-participating contracts. Because the commentators find it hard to determine the adjustment for illiquidity in a so-called "bottom-

up" approach there are various proposals to achieve the same objective through a "top-down" methodology. While no methodology is clearly superior to all others, most accomplish the objective of reflecting the time value of money of the expected cash flows.

(d) consideration of the potential implications of any decisions made by the boards about the discount rate on other parts of the project.

Background

Summary of the IASB's proposals and the FASB's preliminary views[1]

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.**
>
> **(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...**

7. In developing the ED, the boards considered arguments that the discount rate should be determined using an asset based technique because:

[1] The views expressed in the ED and DP are consistent with respect to the discount rate.

> **(a) it is consistent with some pricing practices;**
>
> **(b) it prevents large losses at inception for some contracts that are expected to be profitable and so reflects the most likely outcome of the insurance activity as a whole, considering the underwriting and investment functions together; and**
>
> **(c) it avoids the volatility that would arise if short-term fluctuations in asset spreads affect the measurement of the assets, but not the measurement of the liabilities. Because an insurer holds those assets for the long term to enable it to fulfil its obligations under the insurance contracts it has issued, some believe that those fluctuations make it more difficult for users of an insurer's financial statements to assess the insurer's long-term performance. (paragraph BC95)**

8. Similar arguments were made by respondents as discussed in paragraphs 13 – 17 below.

Liquidity premium – The rationale for its inclusion

9. The ED requires insurers to adjust the risk-free discount rate for the effects of liquidity, in order to capture in the measurement of the liability the inherent differences in liquidity between holding an insurance contract and simply investing in risk free assets that are easily tradable at any time. In the Basis for Conclusions the IASB noted that the holder of a government bond essentially pays an implicit premium, in the form of lower returns, for the ability to sell the investment readily at any time. The policyholder of an insurance contract does not have, or cannot exercise, this same right without significant costs, and would thus be expected to demand a higher return from the contract, if all other things are equal. This optionality implicit in the government bond and the lack of that optionality in the insurance contract create a difference that should be reflected in the measurement of the liability.

10. At the time of the ED the board acknowledged that there was no common or standardized methodology for calculating an illiquidity premium. However,

the board stated in paragraph BC101 that it would not be appropriate, in a principles-based approach:

> **(a) to provide detailed guidance on how to estimate liquidity adjustments.**
>
> **(b) to prescribe a discount rate that ignores the liquidity characteristics of the item being measured or uses an arbitrary benchmark (eg high quality corporate bonds) as an attempt to develop a practical proxy for measuring the specific liquidity characteristics of the item being measured.**

Relevant questions in the ED/ DP

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

(a)	Do you agree that the discount rate used by the insurer for non-participating contracts should reflect the characteristics of the insurance contract liability and not those of the assets backing that liability? Why or why not?
(b)	Do you agree with the proposal to consider the effect of liquidity, and with the guidance on liquidity (see paragraphs 30(a), 31 and 34)? Why or why not?
(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?

12. 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

13. Many of the respondents to the ED and the DP considered the selection of the discount rate as the most significant issue in the proposed measurement

model. Many respondents provided the boards with alternative approaches for selecting the discount rate. We summarize the main arguments here and provide a more detailed analysis of the comments by region and respondent type in Appendix B.

14. The response to the ED/DP tended to vary slightly depending on the type of respondent. Opposition to the discount rate proposed in the ED/DP arose for the following reasons:

(a) It results in volatility in profit or loss that, in the view of some, does not represent the nature of the insurance business (Paragraphs 15-17).

(b) There is a potential for day one losses for long duration contracts (Paragraphs 18 -19).

(c) There is insufficient explanation of how to determine the liquidity premium and no standard methodology exists for its calculation (Paragraphs 20- 21).

Nature of the insurance business

15. A common issue raised during the comment and outreach period was that, when insurers apply the model with the discount rate proposed, there is an expected increase in volatility to the financial statements which insurers see as not representing the economics of their business. Volatility may arise through either an economic or accounting mismatch, defined in the ED[2] as follows:

(a) An 'economic mismatch' arises if the values of, or cash flows from, assets and liabilities respond differently to changes in economic conditions. For example, an economic mismatch arises if the duration of insurance liabilities is longer than the duration of fixed interest assets backing those liabilities.

(b) An 'accounting mismatch' arises if changes in economic conditions affect assets and liabilities to the same extent, but the carrying amounts of those

[2] The definitions are taken from paragraph BC172 of the *Basis for Conclusion* of the ED.

assets and liabilities do not respond equally to those economic changes because different measurement attributes are applied.

16. In general, the boards seek to minimise accounting mismatches and report economic mismatches. However, some argue that an economic mismatch should not always be recognised in profit or loss, in particular:

(a) Some believe that short-term market movements should not be overemphasised, because these movements are not representative of the long-term nature of the business (a view common to most insurers).

(b) Some believe that the measurement does not faithfully represent the economic mismatch because some proposals in the ED are prone to error. In particular:

(i) extrapolating the risk-free interest rate to longer durations becomes less accurate as the duration increases.

(ii) the determination of the liquidity premium is subject to significant judgement.

17. Life insurers believe that the discount rate proposed creates an accounting mismatch because the short-term fluctuations in discount rates for the liabilities (risk-free rate plus illiquidity) do not reflect the change in the credit spread of the assets backing those liabilities. Those with this view do not believe that such an accounting mismatch results in a faithful representation of the economics of the underlying transactions or the financial position of the insurer. However, most respondents agree that an entity's own credit risk should not be considered in determining the discount rate as a potential solution to this problem.

Day one losses

18. In addition to accounting mismatches, insurers are concerned about the recognition of losses on day one (a view common to life insurers). Life insurers framed the discussion of day one losses in the context of how their products are priced. They noted that the pricing of their products contemplates

investment income that will be earned over time to off-set the cost of the benefits provided. They stated that the model would not faithfully represent the financial position of the entity or its business model if the discount rate selected does not also reflect this income. The selection of the discount rate has a significant effect on the measurement of contract liabilities because of the terms of 20, 30, or sometimes 50 years.

19. Additionally life insurers commented that, for the reasons discussed above, they may be forced to increase prices on particular products to cover these anticipated new losses. These price increases could make offering the products uneconomic.

Lack of a standard methodology for determining a liquidity premium

20. Many respondents also expressed concern that there is currently no standard approach for determining an illiquidity premium and that the lack of guidance in the ED on how to do so would reduce comparability between entities (a view common to many respondents). They believe that lack of comparability would result in information that is not useful and, because of complexity, less understandable and therefore difficult to explain to investors. Some, particularly actuaries, commented that the final standard should provide more guidance on the determination of the liquidity premium and the risk-free rate in emerging economies or in periods of financial crisis when 'instruments that expose the holder to no or negligible credit risk' do not exist.

21. Some respondents commented that they view an illiquidity premium as conceptually inconsistent with a fulfilment value model because they believe that the policyholders' ability to liquidate a particular contract does not have a demonstrated impact on the insurers' liability. They argue that the liquidity of an insurance contract remains constant over time and is typically not influenced by market participant's perception of the liquidity of financial instruments.

Alternatives proposed

22. A minority of respondents to the DP and many of the respondents to the ED agreed with the proposal that the discount rate should be derived starting from a risk-free rate plus liquidity premium (also referred to as a *bottom - up approach)*. However, many respondents to both documents suggested alternative approaches, which we have summarised as follows:

(a) Some respondents suggested an asset-based or pricing approach (also known as a *top-down approach*) to constructing the discount rate. During the 19 January board meeting guest speakers presented three variations on the *top-down approach* (see Appendix B). Additionally, guest speakers presented at a FASB meeting on 3 February. In a top-down approach, the insurer would start with an asset-based rate and subtract those elements of the discount rate that are not characteristics of the liability. They suggested the following rates as starting points:

(i) Portfolio rates, either:

(a) based on the assets the entity currently invests or expects to invest

(b) or a reference portfolio;

(ii) Pricing rates (based on the expected returns contemplated in the pricing of the insurance contract);

(b) Some respondents suggested that, as a short-term practical solution, the boards should use a high-quality corporate bond rate similar to *FASB Accounting Standards Codification*® Topic 715 on retirement benefits or IAS 19 *Employee Benefits*. This rate could be replaced after the boards undertake a project that focuses solely on the discount rate for liabilities in general.

(c) Finally, some respondents suggested using a combination of discount rates that would measure the liability at one rate while using a different rate to determine amounts presented in profit or loss, with the difference presented in other comprehensive income. Thus, the amounts presented in

profit or loss would exclude some of the effects of the perceived volatility that some respondents seek to eliminate. This paper does not consider this approach further because the same considerations apply to each of the discount rates required in this approach as to the selection of the discount rate more generally. We will consider this approach further in the papers on presentation.

Staff analysis and recommendation

Risk Free Alternatives ("bottom-up" approaches):

23. In a bottom-up approach, the insurer would start with the risk-free rate. This section analyses the theoretical background and the practical problems that arise in reflecting the time value of money using a *bottom-up approach*, as follows:

    (a) How do you determine what the risk-free rate is (Paragraphs 24 - 27)?

    (b) Can risk-free rates be determined for very long durations (Paragraphs 28-31)?

    (c) Which other characteristics of the liability should be added to the risk-free interest rate (Paragraphs 32- 37)?

A risk-free rate does not exist

24. The risk-free interest rate is the theoretical rate of return of an investment with zero risk. However, a risk-free asset does not exist. As a practical expedient, most approximate a risk-free interest rate by reference to government bonds within the same currency and with the same duration as the cash flow. These instruments are conventionally described as risk-free because the likelihood that the government will default is perceived to be very low.

25. However, it could be argued that an investor would include in the interest on a government bond the risk that the country issuing the bond might increase the

volume of currency in preference to default, and thus dilute the value of money. If investors' expectations of governmental behavior match the government's actions, the government bond rate would continue to reflect the time value of money. If that is not the case, this would mean that the government bond rate is not risk-free. This could be an issue in developing and emerging countries.

26. For US dollar investments the risk-free rate would typically be the yield on US treasury bills. The question becomes more complicated in the Eurozone, where a credit spread recently developed for some countries. Arguably only governments with no significant credit spread on their public debt would be viewed as risk-free investments.

27. Some that generally support the risk-free rate as a starting point have argued that a risk-free interest rate would be better derived by the interest rate swap curve. However, those with this view acknowledge that the swap curve bears some credit risks related to the counterparty of the swap. The typical and most liquid swap is based on 3 month or 6 month inter-bank rates. On the other hand, the notional amount is never at risk for a swap and there are typically collateralization agreements in place to mitigate the counterparty risk. Consequently some view the swap curve as a suitable candidate to determine the risk-free interest rate. In addition, this rate could be used in environments like the Eurozone, for which it is difficult to determine the risk-free rate.

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 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 .

31. Because of the issues identified in this section the staff observes that the expression "risk-free instrument" can only refer to the best possible approximation of a rate determined by reference to observable financial instruments, especially for the very long durations.

Which other characteristics of the liability should be considered in adding to the risk-free interest rate?

32. Besides basic characteristics of an insurance liability, such as timing/duration and currency, which can be reflected in a discount rate as discussed in the section above, the liability might have additional characteristics that need to be taken into account when determining the discount rate. These might include non-performance risk as described in paragraph 33 or liquidity as described in paragraphs 34 - 35.

Insurers' own non-performance

33. In developing the ED and the DP, the boards decided that the discount rate should not reflect one particular characteristic of an insurance liability: changes in the risk of non-performance by the insurer. The majority of the comment letter responses agreed that changes in the insurer's own non-performance risk should be excluded from the measurement of the liability because of concerns about the counterintuitive effects of changes in own-credit standing.

Illiquidity

34. Illiquidity impacts the measurement of the insurance contracts in two ways:

(a) Many insurance contracts can only be surrendered or lapsed on conditions that are potentially unfavourable to the policyholder. The premium (cash inflow for the insurer) that the policyholder is willing to pay will be lower compared to a similar instrument that is highly liquid. This has no further influence to the measurement other than this reduced premium.

(b) The cash flows are adjusted downwards for the scenarios of surrender/lapse of the contract and consequently the expected risk of early payout is explicitly included in the measurement. Consequently the characteristics of the cash flows in the first building block of the model

are fully illiquid (except for the risk that the actual surrenders deviate from expected, which is reflected in the risk adjustment).

35. The ability of the policyholder to sell the contract on secondary markets (which have recently developed) might have an impact on surrender ratios and lapse rates included in the measurement of the cash flows in the first building block and also impact the pricing, but this is not relevant to the discount rate for the fulfilment cash flows (except that it may have an indirect effect if it affects the probability of lapse).

36. Insurers issuing contracts like long-term annuities can invest in relatively illiquid assets with a higher return than that achievable with more liquid assets. As a result, those insurers are often willing to price such contracts in a way that provides a higher return to the policyholder through lower premium rates or higher credited rates than for contracts in which early surrender is possible. If such liabilities are measured using a discount rate that reflects returns on highly liquid government bonds, the discount rate would not reflect the characteristic of the liability of being highly illiquid.

37. The staff views illiquidity as a characteristic of the liability that ought to be reflected in the discount rate. However, the staff acknowledges that there is no established methodology to determine this illiquidity component of the discount rate and it is unclear whether the proposed approaches to determine the liquidity premium reflect the characteristic of the liability and provide reliable results. Many comment letters express concerns that, at least as of now, the illiquidity adjustment would be hard to determine and could lead to significant diversity. The academic and actuarial technical research on this topic has only started recently and was more in the light of identifying the components in spreads of debt instruments during the financial market crisis.

Conclusion on the bottom-up approach

38. In theory a bottom up approach will lead to the right answer: a discount rate that reflects the characteristics of the liability. However, the overall objective

of the discount rate should not be lost. In other words: if the cash flows to be discounted take into consideration all risks and uncertainties of the insurance contract, the time value of money would be appropriately reflected by discounting these cash flows at the risk free rate. However, in some circumstances, it may be possible to provide a more faithful representation of uncertainty in insurance contracts by adjusting the discount rate, rather than by reflecting the uncertainty in risk-adjusted cash flows. As in the case of the fair value measurement guidance, the boards may consider an approach that is similar to paragraph 84 of the IASB Expert Advisory Panel's report "Measuring and disclosing fair value of financial instruments in markets no longer active" that describes a discounted cash flow methodology (see Appendix A). As laid out in Paragraph 33 of the ED, there should neither be double counting nor omissions of risks and uncertainties as a result of the building block approach.

39. Despite the problems discussed in this section, it remains the theoretically correct answer to address the risks and uncertainties directly in the other building blocks to the extent possible and discount these with a risk free interest rate adjusted for illiquidity and other risks not addressed to incorporate the time value of money. However, because of the practical problems with this approach, we consider *top-down approaches* in paragraphs 40-65.

Asset-Based Alternatives ("top-down" approaches)

40. Although the ED and DP concluded that the discount rate for insurance liabilities should reflect the characteristics of the liability, many respondents argued that the economics of the insurance business are best reflected using discount rates based on expected asset returns: either on the assets actually held, a reference portfolio, or assets returns contemplated in pricing. Some noted that existing accounting models use asset-based discount rates, for example the accounting model for long-duration insurance contracts in the

Financial Services – Insurance Topic (944) of the FASB Accounting Standards Codification, previously in FAS 60 *Accounting and Reporting by Insurance Enterprises*. Some insurers price their contracts using asset-based rates that are a function of (a) expected returns by the entity based upon an historical percentage above market or (b) what the entity expects to earn above market.

41. Asset-based rates are higher than (credit) risk-free interest rates, because they include a credit spread on top of the risk-free rate. Historically, the deliberations on the discount rate have concluded that it is conceptually difficult to justify valuing a liability using an asset-based rate as a starting point. However, theoretically, one should be able to start from a top-down approach and obtain the same answer as a bottom-up approach if all the same elements of asset risk are either removed or excluded in the construct of the rate. Therefore the question must be asked, if the ending result is the same and conceptually defensible, does it matter where we start?

42. Any consideration of starting from an asset-based rate must determine whether the overall methodology is grounded in sound conceptual principles. Said differently, can the derivation of a discount rate starting with an asset-based reference result in a rate that reflects only the characteristics of the liability? We stated earlier that whether an entity performs a top-down approach or a bottom-up approach, theoretically the resulting derivation should be the same, if the assumptions used are kept current.

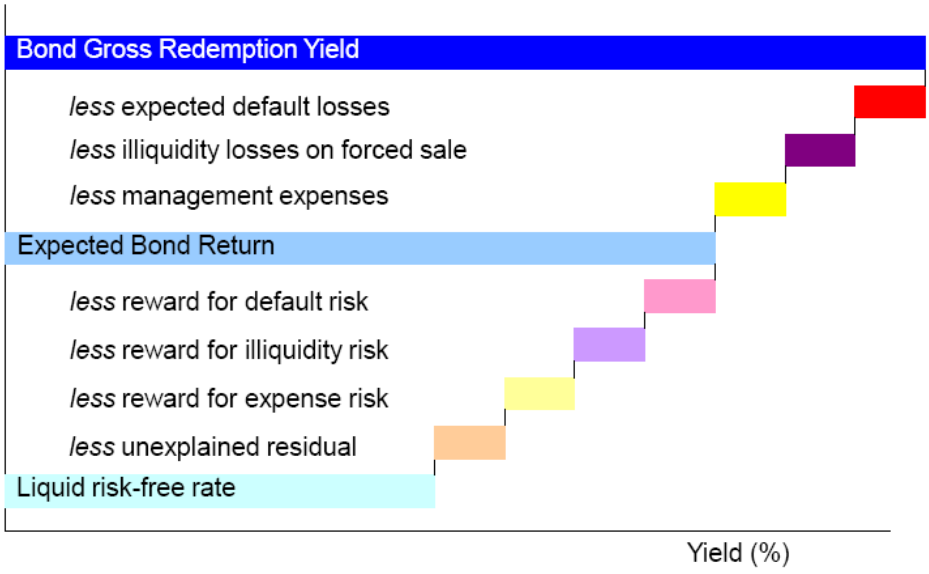
43. When a policyholder purchases an insurance contract, the policyholder provides a sum of cash for an expected (uncertain) return. Sometimes this return involves explicit guarantees (for example annuities), other times the return is implicit, and sometimes both. Sometimes the return is to the policyholder that paid their premium and other times it may be to a policyholder within a pool. If we assume that the basic elements of a discount rate are comprised of a risk free component, a premium for the liquidity of a particular investment, the credit risk of the counterparty to the investment, the

expected rate of default, other possible unknown risks and an unidentified residual; we can start to put together a construct that can be analyzed.

44. When the policyholder purchases an insurance contract, that holder is exposed to elements of the construct described in paragraph 43: (a) the risk that the insurance company will not pay (credit) and (b) the loss of readily available funds (liquidity).

45. Conversely if we think of an investment held by an entity, that investment is comprised of all the elements described above. The key question becomes which of the elements described above are not characteristics of the liability? We have attempted to depict this determination for a corporate bond through the following table[3] which reflects what was presented to the boards during the educational session on 19 January 2011:

Elements of Corporate Bond Yields: Illustrative



46. As can be seen with the above table it should not necessarily matter where the calculation is begun as long as all elements of risk related to the asset have

[3] The staff note that we can provide the boards with worked mathematical examples to better illustrate the point being made.

been removed so that the measurement accurately reflects the characteristics of the liability.

47. Nonetheless, there remain practical difficulties with an asset-based approach and some would argue that starting with a top-down approach may not eliminate the issues with calculating the discount rate any more than starting with a bottom-up approach. The elements of a discount rate aside from timing/duration and currency that would need to be eliminated from any asset-based rate would be default risk, the risk that actual defaults may exceed the expected defaults, and potentially other risks that are priced for in the asset-based rate and are unknown (for example, the extent to which investment risk has been passed on or retained by the insurance entity). For example, the expected return of an asset portfolio includes a premium for the illiquidity inherent in that portfolio. If an entity were to begin with that expected return, a calculation would need to be performed to determine what portion of the liquidity premium would be applicable to the measurement of the insurance contract.

48. For these reasons, some would argue that a top-down approach would be perceived as being as arbitrary or subjective as a bottom-up approach. Although the anchor point for beginning the calculation would be observable[4], and therefore might be better defined than in a bottom-up approach, the fact remains the calculation would be equally subjective and difficult. Others argue that, regardless of the difficulties in calculating the discount rate, anchoring the discount rate at the expected asset return would be more understandable in general.

49. Paragraphs 50-58 consider discount rates based on a portfolio of assets held or a reference portfolio. We consider a discount rate based on pricing further in paragraphs 59-65.

[4] Some have questioned what is meant by a risk-free rate and what should be done in jurisdictions where is risk free rate does not exist.

Portfolio Rates in General

50. Theoretically, the only difference between the alternatives suggested for an actual asset portfolio or a reference portfolio is the consideration of assets to build the portfolio:

    (a) For an actual asset portfolio, the entity would consider the actual assets currently invested in or that need to be purchased in order to match the expected cash outflows of the insurance contracts liabilities.

    (b) For a reference portfolio, the entity would consider an *ideal* portfolio that would match as close as possible the cash outflows of the insurance liabilities without regard to the assets the entity currently invests in. The staff notes the reference portfolio discussed here is not the same as the replicating portfolio detailed in the ED which requires the cash flows of the portfolio to exactly match those of the contract liability in all scenarios. In contrast, the reference portfolio only requires that the cash flows are matched as closely as possible.

51. As long as the insurers' actual investment strategy is based upon matching the insurance liabilities cash flows, there is not a significant difference between an actual asset portfolio and a reference portfolio as they should have similar duration matching. The difference becomes significant when the investment strategy is not built to match the cash flows. A significant difference in investment strategy could invalidate the actual asset portfolio method. The remainder of the analysis assumes the investment strategy is to match the cash flows.

52. Once the assets that constitute the portfolio are determined in either method, the expected return of those assets is calculated at each reporting period. The entity would calculate the expected return of the assets at the time that the portfolio is constructed (ie each reporting date) based on observable inputs in the market for that portfolio. The return is updated each reporting period to reflect the current matching of cash inflows to cash outflows to achieve a

duration match between assets and liabilities and adjusted for elements that are not representative of the liability.

Reference portfolio

53. For a reference portfolio, the determination of the portfolio of assets is arguably the most difficult and complex part of the methodology. For many long duration insurance contracts, there are simply no assets with the same duration available for an entity to invest in. Therefore, the methodology suffers from some of the same issues as discussed as part of the risk-free alternatives discussed in paragraphs (23-39). In particular, the yield curve for any number of assets selected may have to be extrapolated to match the duration of the liability to be satisfied. This adds complexity to the methodology and makes it more prone to error.

54. Those opposed to the use of a reference portfolio argue that for a diverse global insurer, this method adds an enormous amount of complexity because the entity may need to determine a significant number of portfolios by geography, product type, and duration that will need to be updated each reporting period to meet the requirement.

Actual (current or future) asset portfolio

55. Those in favor of using a portfolio based upon the assets the entity is currently invested in or plans to invest in claim this method aligns the financial reporting of insurance entities with the business strategy of the entity to manage asset and liability mismatches. Furthermore it eliminates many of the complexities of deriving a reference portfolio.

56. Others argue that although it may be the business strategy to match asset durations with those of the liabilities that will ultimately be fulfilled, to consider only the assets the entity is currently invested in or plans to invest in could misrepresent the measurement of the liability. If the cash flows of the assets are not matched (or closely matched) to the cash flows of the liabilities, the subtractions from the starting expected return are not likely to achieve a

result that faithfully represents the characteristics of the liability that will ultimately be fulfilled because the expected rate would not likely capture the appropriate premium charged for duration. An adjustment for the reinvestment risk is likely needed, as there needs to be assumptions for the long duration liabilities where no assets exist. The difficulties here are similar to the actual difficulties of expanding other discount rates.

57. Furthermore, having as a starting point the actual asset portfolio becomes difficult and adds complexity to the methodology for those entities that are not insurance entities but issue contracts that may fall into the scope of the insurance contract standard. These entities may not have specific assets set aside to satisfy the long term liabilities thus making the determination of the liability that much more difficult and prone to error.

Conclusion on reference or actual portfolio based rates

58. In the staff's view a portfolio rate based on the actual invested assets can only achieve the objective of the discount rate to adjust the cash flows for the time value of money if the cash flows of the actual portfolio closely match the insurance contracts' liabilities cash flows. A reference portfolio could achieve the objective. In both cases, an adjustment should be made for credit risk, ie expected losses (ie the expected value) and unexpected losses (ie the risk of losses exceeding expected value).

Pricing Portfolios

59. Some argue the derivation of the discount rate should consider the pricing strategy that is employed by the entity when providing products. In general, when pricing long term products such as life insurance, the insurer begins by estimating the expected cash outflows of the potential product. The insurer derives the expected return of the assets invested in based upon the insurer's individual investment strategy. This expected return contemplates an assumed level of risk free rates, credit spreads by asset category, and expected default

charges by asset category. From this point, the insurer determines through modeling various scenarios the premium that needs to be charged to earn a specific return for the particular product offered. The liability would then be discounted at the expected return rate less expected defaults and perhaps also less an allowance for the risk that actual defaults may exceed expected defaults.

60. Those in favor of using a pricing strategy to determine the discount rate argue that the expected returns of the assets invested in are critical to determining the price of their products sold. They believe the expected returns are inherently linked to the liability because the premium charged to satisfy the liability contemplates the investment earnings and the ability to reinvest future cash flows to increase earnings over the long term. For example, if the expected investment earnings are higher the premium charged for the product would be lower. If the investment department does not achieve those returns priced for in the product the insurer will have a loss.

61. Furthermore, they argue that, if the boards do not continue to allow insurers to employ a discount rate that contemplated the expected return on assets invested, current long-tail liabilities would be remeasured utilizing a rate below that which the original pricing contemplated.

62. Others argue that the pricing of products should in no way impact the measurement of the liability. They argue that the return an entity expects to earn over the long term on any particular product is irrelevant to the obligation owed to the policyholder and should have no bearing on the time value of money of an insurance liability. Although the return is linked to the premium charged, they see no linkage to the liability that ultimately needs to be satisfied. There is no guarantee on the returns that will be earned and the assets invested in are not legally bound to be used to satisfy the liability.

63. Furthermore, those opposed to a pricing strategy question whether the expected return used is correlated to pricing subsequent to the initial recognition. They question whether the rate would be based upon current

pricing or past pricing which calls into question whether this approach is reflective of a current measurement.

64. Those opposed to a pricing rate argue it would be likely the boards would have to establish parameters to evaluate the expected return to prevent over-reliance on what has been referred to as *reversion to the mean* that is sometimes used to justify overly inflated expected returns from period to period. Reversion to the mean would suggest that over the long term all returns tends to revert back to the statistical mean and therefore short-term volatility should not be weighted heavily when calculating the expected return.

Conclusion on pricing rates

65. The staff did not view the pricing rate as a rate that reflects the characteristics of the liability because a long-term expectation does not reflect a current measurement. A pricing rate could only be considered appropriate if pricing includes the current market assumptions and eliminates factors that are not reflective of the characteristics of the liability.

Prescribed Rate Alternatives (requiring the same rate for all insurance contracts)

66. Some suggest that the boards permit or require insurers to approximate the discount rate by prescribing a particular observable market rate or a set of observable market rates. There are two motivations for this approach:

(a) Some suggested that an approach based on the alternatives set out above might theoretically result in an appropriate discount rate, but that a practical expedient is needed until the boards can examine discounting of all liabilities comprehensively. However, the staff do not see it as viable option to include a short term solution into a new standard that fundamentally revises the accounting for insurance contracts. To do so would call into question the validity of finalising a standard at this point. However, this does not preclude a practical expedient for other reasons.

(b) Some suggest that the complexity inherent in determining the discount rate could be reduced if the boards include a default solution for insurers that is easier to determine than the proposal in the ED and DP and still achieves the objectives. This would address the criticisms about the difficulty of determining the discount rate proposed in the ED and DP. For this reason, we consider below whether a prescribed discount rate could be a practical expedient to determine the discount rate in some circumstances.

67. If the board were to prescribe a discount rate as a practical expedient for determining the discount rate in other ways, options include:

(a) high-quality corporate bonds (applied in for example IAS 19 *Employee benefits.*). According to the basis for conclusions, the IASB's predecessor, the IASC, set that rate to reflect the time value of money, without considering the expected return on the plan assets and to avoid reflecting the entity's own credit rating (paragraph BC31).

(b) high-quality fixed-income debt instruments (applied in for example the *Compensation – Retirement Benefits Topic* (715) of the FASB Accounting Standards Codification, first introduced to US GAAP by FAS 87 *Employers' Accounting for Pensions* and FAS 106 *Employers' Accounting for Postretirement Benefits Other Than Pensions.*) The FASB chose that rate based on the relationship between rates inherent in the prices of annuity contracts and rates available in investment markets because of the ability to reinvest future cash flows from the initial investment during the period until benefits are payable.

68. Some argue that an approach based on a specific discount rate would be inconsistent with a principles based approach because any choice might be somewhat arbitrary and could result in a discount rate that does not fully reflect the nature of the liability. However, pension liabilities and some insurance liabilities have similarities. Therefore some would argue that it is a natural question why these should be discounted using different discount

rates. Consequently they believe that the boards should consider whether these or a similar rate (ie a high quality corporate borrowing rate for countries that do not have a deep liquid market of corporate bond rates)[5] could be a practical solution and how this would reflect the characteristics of the liability.

69. Some believe that this rate should also be adjusted for expected losses and/or other credit risk typically reflected in the spread of these instruments. This already leads to one part of the use of a high quality corporate bond rate that can be viewed as problematic: this rate includes expected losses and unexpected credit risk for the instrument(s) used to determine the discount rate. Similar to the top-down approaches, there are different views about whether to adjust for the expected losses only or for both expected and unexpected losses. The debate is rather driven by practicability than by the theoretical concepts. In theory, it is hard to argue that this credit spread reflects the characteristics of the insurance contract liability.

70. However, as noted in paragraphs 23-39 on the risk free discount rate, the credit spread could be an approximation of one characteristic of the liability that has been excluded because of the counterintuitive impact on the measurement: the insurers' own non-performance risk. But rather than including this risk, the credit spread on high quality corporate bonds would be a reflection of the non-performance risk of the portfolio of companies with good credit characteristics that contributed to the determination of the high-quality corporate bond rate. This would preclude a reduction in the carrying amount of the liability as a reaction to a decline in the perceived creditworthiness of the insurer.

71. Compared to a risk-free discount rate adjusted for illiquidity, an unadjusted high quality corporate bond rate would likely result in lower volatility in the financial statements of insurers if insurers account for their financial assets at

[5] For the remainder of this section, for the ease of reading, this rate will be referred to as corporate bond rate

fair value (based on the assumption that the changes in the corporate bond rate used to discount the liability and the changes of the market value of the bond portfolio based on interest rate movements would tend to offset).

72. In theory, the removal of both the expected losses and the other credit risk would lead to a rate that removed most of the characteristics of the bond rate that do not reflect the characteristics of the insurance contract liability. It faces almost the same practical problems as identifying the liquidity adjustment if one was to increase the risk-free interest rate by this, but may be still easier to achieve in some markets.

73. In the staff's view, a high quality corporate bond rate adjusted for expected losses could be a candidate for a practical expedient only for entities that do not have a more sophisticated method in place. Using a rate that is not adjusted for expected losses would include risk components into the measurement that should not be there. However, some believe that it would defeat the purpose of providing a practical expedient to require the corporate bond rate to be adjusted for more than the expected loss, because of the costs of doing so. If the boards would decide that a practical expedient should be allowed, the staff would prepare an additional analysis that could include other alternatives.

Staff recommendation

74. In practice different methodologies and rates may be used to achieve the measurement objective of a final standard. The staff does not recommend prescribing a discount rate methodology because this analysis has shown that entities can come to very similar results by beginning at different starting points and adding or subtracting the applicable risks. Rather the staff propose to define the objective of discounting and the characteristics of the liability that should be included in the measurement of an insurance contract.

75. The objective of the discount rate in the building block model is to adjust the cash flows for the time value of money. However, if particular characteristics

of the cash flows are not reflected in any other building block, the discount rate should reflect these characteristics and disregard factors that are not a characteristic of the cash flows or the liability. Risks retained by the insurer should increase the measurement (through a reduction in the discount rate) while risks transferred to the policyholder should reduce the measurement (through an increase in the discount rate). Because of the flexibility provided in methodologies to derive the discount rate, the staff will assess the disclosure requirements against the current ED and DP and readdress in the papers on disclosure.

76. A practical expedient could be considered by the boards to allow companies with less sophisticated methods an alternative if there is not a more faithful representation. The staff would provide a more detailed analysis of candidates and the requirements for that expedient at a future meeting.

77. Consequently, the staff recommend that the boards:

(a) confirm the objective of the discount rate is to adjust the future cash flows for the time value of money.

(b) do not prescribe a method for determining the discount rate.

(c) provide guidance that the discount rate should:

(i) be consistent with observable current market prices for instruments with cash flows whose characteristics reflect those of the insurance contract liability, including in terms of timing, currency and liquidity, but excluding the effect of the insurer's non-performance risk.

(ii) 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, such as any investment risk taken by the entity that cannot be passed to the policyholder).

(iii) exclude the effect of risks and uncertainties that are reflected elsewhere in the measurement of the insurance contract liability.

Questions for the boards
1) Do the boards agree with the staff recommendation (a-c)?
2) Do the boards want to allow a practical expedient for insurers that cannot determine a rate that generates a more faithful representation?

Potential Implications of Discount Rate Decisions for the Rest of the Model

78. Any discount rate that differs from the rate described in the ED and DP would have implications for most portions of the model. For example differences in the discount rate would affect:

(a) the size of the residual/composite margin as the contract liability would be lower.

(b) the difference between the measurement result of the building blocks and measurement at fair value. Using a risk free discount rate adjusted for liquidity increases the difference between the measurement result of the building blocks and fair value, and would have implications for:

(i) *unbundling*: when the measurement of the liability is not close to fair value, entities will likely want to unbundle those pieces of the contract that may not be closely related to minimize accounting mismatches. The same is true for the question of embedded derivatives, such as minimum interest guarantees and others, especially if the risks from these embedded derivatives are hedged through purchased financial derivatives.

(ii) *risk adjustment*: a higher discount rate would result in a lower liability and therefore a higher residual margin. This may decrease the significance of the risk adjustment, relative to the residual margin.

(iii) *scope*: some may be reluctant to apply the building block approach to contracts that have similarities to financial instruments (eg investment contracts with discretionary participation features) if the differences in measurement are increased.

Appendix A: Extract from the IASB Expert Advisory Panel "Measuring and disclosing fair value of financial instruments in markets no longer active"

Indices

47 A common method of pricing financial instruments is to price against an observable index. Observable prices might be available for indices that share similar risks to those of the instruments being valued and hence demonstrate similar responses to movements in market factors.

48 When using an index to provide input into a valuation model for an instrument or a portfolio of instruments, an entity assesses to what extent the index reflects the instrument or the portfolio of instruments being valued, and makes appropriate adjustments for any differences in their characteristics. For example, it might not be appropriate to use an index that reflects price movements on a portfolio of underlying instruments as a valuation input for a holding in a single instrument.

49 An entity also assesses the extent to which the index reflects actual transactions and therefore provides insight about the quality of the index as an input into a valuation model or as a source of calibration data. For some unobservable inputs, such as some volatility estimates for valuing equity options, few indices are available and the equities underlying the index might be quite different from the equity that underlies the derivative instrument.

50 Indices might not directly represent the prices of the underlying instruments and, as a result, might not reflect the current market conditions for the instrument being valued. An entity uses judgement to assess whether an index represents the prices of the underlying instruments and therefore whether it represents an appropriate input into a valuation model or should be relied upon as a source of calibration.

Discounted cash flow methodologies

84 A commonly used valuation technique is a discounted cash flow model. There are differing discounted cash flow methodologies. In simple terms, some use contractual (or most likely) cash flows and a market rate of return to arrive at fair value. Others use probability-weighted cash flows and a risk free rate of return to arrive at fair value. Regardless of the methodology used, the objective is the same: to arrive at the price at which an orderly transaction would take place between market participants at the measurement date. When applying a discounted cash flow methodology, an entity primarily uses management's internal assumptions about future cash flows and an appropriate market rate of return.

85 Factors that might affect the market rate of return or probability-weighted cash flows to be used are:

(a) the timing of cash flows for the instrument.

(b) any uncertainty about the amount and timing of the cash flows.

(c) the risk that payments will not be made when due (credit risk).

(d) the liquidity of the instrument.

(e) the currency in which payments are to be made.

86 Estimating an appropriate market rate of return or probability-weighted cash flows can be difficult and requires judgement. If there are observable prices for similar instruments, these can be used as evidence of the market rate of return to be used.

Appendix B: Supplemental Comment Letter Discussion

1. The objective of this Appendix is to provide a more detailed analysis of the issues regarding the discount rate raised in the comment letters received on the IASB's exposure draft *Insurance Contracts* (the ED) or the FASB's Discussion Paper *Preliminary Views on Insurance Contracts* to supplement the summary included in Agenda paper 3E/ 58E. This Appendix will analyse the responses based on the following topics:

   (a) Characteristics of the liability

   (b) Liquidity premium

   (c) Day one loss

   (d) Non-performance risk

Characteristics of the liability – Responses and proposals

2. Most respondents to the ED have concurred with the boards' proposal that the discount rate should reflect the characteristics of the liability. The view amongst respondents on the selection of the discount rate is split based on the region where the response comes from. The main opposition to this proposal is in Canada and the U.S. which both favour an asset based discount rate, for different reasons. However, these respondents do not propose an asset-based rate without any adjustment to reflect asset risks that will be borne by the insurer to discount the liability.

3. In both Canada and the U.S., the markets have a significant amount of long-duration insurance contracts which are categorised as non-participating. These insurance contracts are subject to higher discount rate sensitivity than shorter duration insurance contracts. Additionally both countries have established insurance accounting which uses different discount rates than what is proposed in the ED. The responses to the FASB discussion paper echo this feedback received by the respondents to the ED out of North America.

4. The Canadian Insurance industry has established a methodology of deriving the discount rate based on the matching of the cash flows of the liabilities with the existing asset portfolio and the expected cash flows from this portfolio. In a second step, a discount rate is derived from this matched portfolio. Users, standard setters, actuaries and the regulator in Canada support the view taken and state that the 'current Canadian valuation approach has served Canada well for almost 20 years' (Canadian Institute of Actuaries Comment Letter). The Canadian Asset Liability matching approach was presented to the boards in the 19 January 2011 joint board meeting.

5. U.S. respondents argue that the assets backing the liability represent a characteristic of the liability because the insurer uses the proceeds to invest in assets. In their view the measurement of the assets should not be 'delinked from the assets supporting the liability' (Group of North American Insurance Enterprises Comment Letter). Consequently, they propose a rate which is based on pricing or the earned rate of the asset portfolio. These rates would incorporate the expectation of default and reduce the asset risk. The proposal of some of the U.S. industry was presented in the 3 February 2011 FASB Board meeting.

6. The National Association of Insurance Commissionors (NAIC) proposed an approach called Economic Default Adjusted Rate (EDAR). EDAR is a top-down approach to discount rates that begins with current expected asset earnings and then eliminates risk factors that are not related to (are irrelevant to) the underlying insurance contract liability. EDAR was presented to the boards in the 19 January 2011 joint board meeting.

7. Outside North America there is widespread theoretical consensus that the discount rate should reflect the characteristics of the liability. However, there are concerns on some aspects of the ED and DP that are addressed in the following sections. Consequently some respondents asked for a more practical solution to approximate the characteristics of the liability. Their proposals included a reference portfolio of assets that matches the liabilities adjusted for expected losses on this asset portfolio. Deloitte LLP presented this approach to the boards in

the 19 January 2011 joint board meeting. Some respondents asked for a practical expedient such as the use of a high quality corporate bond rate.

8. There is strong opposition outside North America to the use of asset-based rates expressed in the view that only the characteristics of the insurance contract and not the characteristics of the insurer should be relevant to measure the insurance contracts liability. Proponents of this view agree with the proposals of the exposure draft. These respondents include users, preparers, actuaries, regulators and standard setters.

Liquidity premium

9. There are diverging views among the respondents about including an illiquidity premium in the discount rate used for the measurement of the contracts within the scope of the ED and DP. Many respondents understand the conceptual merit of including a premium for the illiquidity into the discount rate. Others do not think that an illiquidity premium is conceptually sound.

10. The views on the illiquidity premium can best be clustered in the following way:

    (a) Respondents which are more familiar with the concept of the inclusion of the liquidity premium, for example because it is already incorporated in Solvency II, tend to agree with the concept. Some ask the boards for more guidance while others expect that academic and professional research will further improve the theoretical foundation with methods and believe that the boards should not prescribe a methodology.

    (b) Some respondents – particularly users– put a higher emphasis on comparability over theory. These respondents are concerned that the ED and DP gives insurers very wide discretion as to how the illiquidity premium is calculated and applied in practice. They argue that in order to ensure consistency between insurers, it is important that any insurance accounting standard provides clear and precise guidance as to the basis of calculation and size of illiquidity premium, as well as how this would change in different market circumstances.

(c) Other respondents disagree with the inclusion of the liquidity premium because of the difficulty to determine it. Some of these respondents base their alternative proposal as described in paragraphs 2- 8.

Day one losses

11. The concern on potential day one losses is more articulated in countries which sell longer duration insurance contracts without policyholder participation features. Excluding policyholders from participating in asset returns triggers a demand for higher guaranteed amounts which are reflected in the pricing of the products.

12. Consequently, respondents from countries and regions where there is a market for long-term non-participating insurance contracts anticipate a risk of day-one losses which results from pricing the contracts with a discount rate which is significantly higher than the discount rate that would result from the proposals in the exposure draft.

13. Some are concerned that long-term discount rates are not appropriately determinable and believe that the ED and DP are too deterministic regarding the longer tail of the yield curve. Some actuaries, European standard setters and preparers have explicitly expressed their agreement that the ED has provided a sufficient principle and not provided a methodology to extrapolate the long tail of the yield curve. Some expressed the view that the liquidity adjustment will provide stabilisation for the highly illiquid long duration liabilities.

Own non-performance risk

14. Most respondents to the ED and DP have expressed agreement with excluding the insurers own non-performance risk. There is no differentiation identifiable between different regions or type of respondent. Some respondents rationalise this agreement by specifically referencing the counterintuitive effects of a decrease of the insurer's rating, ie the fact that an increase in non-performance risk would decrease the measurement of the liability. Consequently many of the answers

seemed to focus more on the change in own-non performance risk, rather than its absolute level.

15. Some respondents have argued that including own non-performance risk is not consistent with the fulfilment approach taken by the ED and DP.