

## Staff Paper

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Topic	<b>Reporting back on the discount rate</b>
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1. This paper provides:
  - (a) A feedback statement on the board's tentative decisions on the discount rate to date, including an outline of significant matters raised with us and how we responded.
  - (b) A description of how we propose to implement the boards' tentative decisions on the discount rate. The drafting in this paper is indicative only and has not been reviewed by the boards.
2. Appendix A provides an extract from the ED on market and non-market variables.

### Next steps

3. Board members noted that the lack of a uniform methodology for determining the discount rate would probably lead to some variation in practice. In view of the likely variation, they indicated that they favour including a requirement to disclose the yield curve used for each major relevant currency. We will consider draft wording for that disclosure when we finalise the disclosure requirements.
4. We also plan to consider at a future meeting whether to place any restrictions on changes in methodology for determining the discount rate, in addition to requirements that would follow from applying IAS 8 *Accounting Policies, Changes in Accounting Estimates and Errors* to such changes

This paper has been prepared by the technical staff of the IFRS Foundation for discussion at a public meeting of the IASB working group identified in the header of this paper.

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 IASB.

The meeting at which this paper is discussed is a public meeting but it is not a decision-making meeting of the Board.

Official pronouncements of the IASB are published only after the Board has completed its full due process, including appropriate public consultation and formal voting procedures.

## Feedback on the Discount Rate decisions

Many respondents to the ED considered the selection of the discount rate as the most significant issue in the proposed measurement model. In particular, there were significant concerns about the volatility in profit or loss that would result from the discount rate proposed in the exposure draft.

- Some insurers state that this volatility results from a failure to reflect the asset-liability management inherent to the insurance business model.
- Some users question whether volatility might mask important information.
- Most believe that this volatility would result in financial statements that will be difficult to explain, lack relevance and not represent faithfully an insurer's financial performance.

The exposure draft proposed that an insurer should adjust the future cash flows for the time value of money using discount rates that are consistent with observable current market data and reflect only the characteristics of the liability.

In selecting the discount rate used to measure insurance contracts, we sought an approach that would be consistent with the following principles:

- An ideal measurement model would report all economic mismatches that exist and would not cause any accounting mismatches.
- An ideal accounting model should reflect both the intrinsic value and time value of options and guarantees embedded in insurance contracts.

An economic mismatch arises if the values of, or cash flows from, assets and liabilities respond differently to changes in economic conditions.

An accounting mismatch arises if changes in economic conditions affect assets and liabilities to the same extent, but the carrying amounts of those assets and liabilities do not respond equally to those economic changes because different measurement attributes are applied.

In the pages that follow we outline the more significant matters raised with us and how we responded.

## Market-based discount rates

### Proposal in the ED

The ED proposed to account for insurance contracts from the perspective of the insurer, using inputs that are consistent with observable market data, where available.

In addition, the ED proposed that the discount rate should reflect the illiquidity characteristics of the insurance contract. This would reflect the fact that many insurance contracts can be surrendered or lapse only on conditions that are unfavourable to the policyholder. Most have interpreted the proposals as requiring insurers to derive the discount rate starting from a risk-free rate and adding on a liquidity premium (a 'bottom-up' approach).

The ED does not provide guidance for extrapolating market data to periods for which there is no observable information. Those difficulties are similar to those in determining fair value that rely on significant 'Level 3' inputs.

### Respondents' comments

#### Determining the discount rate

A number of concerns relate to the use of a market-based discount rate.

Many are concerned that the calculation of an unobservable illiquidity premium would be complex and difficult to explain to investors.

Many suggest that illiquidity should be captured by basing the discount rate on expected asset returns, either on the assets held by the insurer, a reference portfolio, or those contemplated in pricing the contract (a 'top-down' approach).

### Our response

We confirmed that the objective is to use a discount rate that reflects the time value of money and reflects the characteristics of the liability.

#### Determining the discount rate

We confirmed that we would not prescribe a single method for determining the discount rate. Thus an insurer could use any approach that meets the objective. This would include:

- 'Top-down' approaches starting from expected asset returns, either on the assets held by the insurer, or on a reference portfolio, or starting from returns contemplated in pricing the contract.
- 'Bottom-up' approaches based on risk-free rates, adjusted to add an illiquidity premium. We acknowledge that many had interpreted the ED as permitting only the bottom-up approach, but that was not our intention.

We clarified that in a 'top-down' approach, the insurer should adjust that starting point to remove an estimate of the returns that market

## Market-based discount rates (continued)

### Losses on day 1

Some insurers believe that the discount rate should reflect the investment income that they earn over time to off-set the cost of the benefits provided. They are concerned that measuring insurance contracts at a risk-free rate plus illiquidity premium could generate significant losses at the inception of contracts expected to be profitable.

### Practical expedient

Some suggest that the boards should permit or require an observable market rate as a practical proxy to counteract the difficulties that arise when there is a lack of observable market data.

participants require for bearing risks associated only with the assets and not associated with the insurance liability.

We acknowledge that estimates of adjustments for those risks will not generally be based on directly observable market evidence. Any remaining difference between the adjusted rate and the risk-free rate would be regarded as part of the illiquidity premium.

### Losses on day 1

Concerns about day one losses arose partly because respondents had feared that the adjustment for illiquidity in a 'bottom up' approach would significantly understate the degree of illiquidity present in the insurance contracts liability. We believe that using a 'top-down' approach will reduce these concerns. However, we believe that the measurement of a liability should not reflect in advance the returns that the insurer expects to earn from its assets.

### Practical expedient

We decided not to permit use of an observable market rate as a practical proxy because we could not identify a suitable proxy that would be easier to determine than the required discount rate while still accomplishing the objective of reflecting the characteristics of the liability.

## Current discount rates

### Proposal in the ED

The ED proposed that the measurement of insurance contracts should use current inputs, including current discount rates.

This means that the estimates made at contract inception would not be carried forward (ie the model does not lock-in any estimate).

### Respondents' comments

Most insurers and users support a current measurement approach because they think it will give them a clearer picture of gains and losses in the reporting period.

Some respondents favour locking in discount rates for some or all insurance contracts. If the discount rate is locked in, an insurer could avoid reporting volatility by carrying loans and bonds backing those liabilities at amortised cost (when so permitted by IFRS 9 *Financial Instruments*).

Respondents who favoured locking in discount rates typically also suggested that:

- A liability adequacy test should be applied to insurance liabilities. The test would increase the measurement of the liability if the expected yield from the related investments is lower than the locked in rate for the liability.
- Derivatives embedded in such contracts should be accounted for separately, when existing standards would require this.

### Our response

We think that locking in the discount rate would omit information about changes in estimates. This would make the accounting for insurance contracts more complex and less understandable.

A liability adequacy test of the kind suggested by some respondents would be a new approach, not used elsewhere in IFRS. Any such test would need us to consider many details, including when the test is triggered and the level of aggregation for the test (eg per contract, per cohort, per portfolio, per entity, per group).

Existing requirements for embedded derivatives do not require insurers to separate some significant exposures, such as many guarantees of a minimum interest rate.

We believe it is essential for insurers to report transparently their duration mismatches and the intrinsic value and time value of their exposures under options and guarantees embedded in insurance contracts.

We confirmed that discount rates used to measure the insurance contracts liability should not be locked in. However, we will consider whether the difference between a current and a locked-in discount rate could be presented in other comprehensive income.

## Own credit risk

### Proposal in the ED

We proposed that an insurer's own credit risk should not be considered in determining the discount rate.

The proposal to exclude the insurer's own credit risk is consistent with the deeply held views expressed over many years by most commentators on this project. However, we did acknowledge that its exclusion could lead to an accounting mismatch. This is because the fair value of the assets backing insurance contracts includes changes in credit spreads on those assets, but the measurement model for insurance liabilities does not include changes in credit spreads on those liabilities.

### Respondents' comments

Almost all agree that an insurer's own credit risk should not be considered in determining the discount rate. They note its inclusion would result in a gain when there is a decline in the insurer's credit standing. They believe that result is counterintuitive.

Many view the volatility that arises from credit spreads as relatively unimportant for assets that are typically held to collect principal and interest.

### Our response

We confirmed that an entity's own credit risk should not be considered in determining the discount rate.

We acknowledge that many see credit spread volatility on assets as relatively unimportant if these assets are held to collect principal and interest, and we are exploring whether there are useful, informative and implementable ways to segregate any volatility arising from credit spread volatility on the assets. We are also considering whether the following treatments could remove disincentives to the use of cost options that already exist in other standards, notably IFRS 9 and IAS 40 *Investment Property*, and these treatments might reduce the effect of credit spread volatility:

- Using other comprehensive income to report how changes in discount rate affect the measurement of insurance contract liabilities.
- Adjusting the measurement of participating contracts if the assets underlying the participation mechanism are not measured at fair value.

## A coherent framework, consistently applied

### Proposal in the ED

The ED proposed to improve consistency in the reporting of insurance contracts. In particular, the ED proposed a unified approach for accounting for all insurance contracts

### Respondents' comments

Many insurers asked the board to consider whether additional considerations should apply to some types of contracts.

#### Participating contracts

The ED stated that the measurement of an insurance contract should reflect any dependence of the liability on the performance of specific assets held by the insurer. Some interpreted that guidance as implying two different approaches for determining the discount rate:

- An asset-based discount rate for participating contracts.
- A risk-free rate, adjusted for illiquidity, for non-participating contracts.

#### Short duration contracts

Many insurers that write mainly non-life contracts believe that discounting for non-life claims liabilities adds complexity for little or no added value because most claims are paid relatively shortly after the incurred date.

Some are concerned that it can be difficult to estimate the timing of expected cash out flows which have greater variability in amount and timing than most other insurance contracts.

### Our response

We confirmed that that the objective of the discount rate used to measure participating insurance contracts should be consistent with the discount rate used to measure non-participating insurance contracts. As a consequence, the discount rate for participating contracts should reflect the extent to which the amount, timing or uncertainty of the cash flows arising from those contracts depends wholly or partly on the performance of specific assets.

We confirmed that discounting of insurance liabilities would be required unless the effect of discounting would be immaterial. We intend to assess whether additional guidance is needed on when discounting a contract with a short-tail claim would be considered immaterial.

## Proposed drafting

### Standard

A working draft of the wording for the standard is as follows (changes from the ED are marked):

#### Time value of money

- 30 An insurer shall adjust the future cash flows for the time value of money, using discount rates that reflect the characteristics of the insurance contract liability. Such rates:
- (a) ~~are~~ shall be 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).
- 31 ~~This IFRS does not prescribe the methodology used to apply the principle in paragraph 30. However, as~~ As a result of the principle in paragraph 30:
- (a) 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 (see paragraph 34). The illiquidity of the cash flows is relevant for the insurance contract liability.~~
  - (b) ~~32~~ to the extent that ~~If~~ the amount, timing or uncertainty of the cash flows arising from an insurance contract depend wholly or partly on the performance of specific assets, the measurement of the insurance contract shall reflect that dependence. ~~In some circumstances, the most appropriate way to reflect that linkage might be to use a replicating portfolio technique (see paragraphs B45–B47).~~
  - (c) the discount rate shall reflect the illiquidity characteristics of the cash flows.
- 32 Estimates of cash flows and discount rates shall be internally consistent to avoid double-counting or omissions. For example, nominal cash flows (ie those that include the effect of inflation) shall be discounted at rates that include the effect of inflation. Real cash flows (ie those that exclude the effect of inflation) shall be discounted at rates that exclude the effect of inflation. Furthermore, the discount rate should reflect only risks and uncertainties that are not reflected elsewhere in the measurement of the insurance contract liability.
- ~~34~~ ~~Many insurance liabilities do not have the same liquidity characteristics as assets traded in financial markets. For example, some government bonds are traded in deep and liquid markets and the holder can typically sell them readily at any time without incurring significant costs. In contrast, policyholders cannot liquidate their investment in some insurance contract liabilities without incurring significant costs, and in some cases they have no contractual right to liquidate their holding at all. Thus, in estimating discount rates for an insurance contract, an insurer shall take~~



~~account of any differences between the liquidity characteristics of the instruments underlying the rates observed in the market and the liquidity characteristics of the insurance contract.~~

## Application guidance

*We propose to add application guidance on determining the discount rate. This section would be inserted between paragraphs B66 and B67 of the ED.*

### Time value of money (paragraphs 30-34)

- B66A Discount rates that reflect the characteristics of the insurance contract liability may not be directly observable in the market. An insurer adjusts observable market prices of similar instruments to reflect the characteristics of the insurance contract liability. This [Draft] IFRS does not prescribe the methodology for making those adjustments.
- B66B In making the adjustments described in paragraph B66A, an insurer includes only those factors that are relevant for the liability:
- (a) In some cases, the insurer determines the yield curve for the insurance contract liability based on a yield curve that reflects current market rates of returns for either the actual portfolio of assets the insurer holds, or for a reference portfolio of assets with characteristics similar to those of the insurance contract liability as a starting point. In doing so, the insurer excludes from those rates of return factors that are not relevant to the insurance contract liability (a ‘top-down’ approach). In a ‘top down’ approach an insurer
    - a. adjusts for factors that are not relevant to the insurance contract liability such as market risk premiums for the assets included in the portfolio used as a starting point in applying a top-down approach. Those market risk premiums includes those for credit risk and other investment risks taken by the insurer (unless those risks can reduce the cash flows passed to the policyholder).
    - b. adjusts for the differences between the timing of the cash flows of the assets in the portfolio (actual or reference) and the timing of the liability cash flows. This ensures the duration of the assets is matched to the duration of the liability.
    - c. needs not adjust for any remaining differences between the liquidity characteristics of the insurance contract and the liquidity characteristics of the assets in the portfolio.
  - (b) In other cases, an insurer adjusts a risk-free yield curve to include factors that are relevant to the insurance contract liability (a ‘bottom-up’ approach). Factors that are relevant to the insurance contract liability include differences between the liquidity characteristics of the instruments underlying the rates observed in the market and the liquidity characteristics of the insurance contract.
- B66C Differences in liquidity characteristics arise when insurance liabilities do not have the same liquidity characteristics as assets traded in financial markets. For example, some government bonds are traded in deep and liquid markets and the holder can typically sell them readily at any time without incurring significant costs.

In contrast, policyholders cannot liquidate their investment in some insurance contract liabilities without incurring significant costs, and in some cases they have no contractual right to liquidate their holding at all.

- B66D When observable market variables are not available, an insurer uses estimation techniques to determine the appropriate discount rate. For example, the discount rate applied to cash flows that are expected beyond the period for which observable market data is available would be extrapolated from the current market yield curve. Another example would be the estimate of the credit risk premium included in the spread of a debt instrument. Market prices for credit derivatives can include other factors that are not relevant to determine the credit risk component of the market rate of return. This means that the insurer will likely need to establish its own methodology to determine the credit risk component of the overall asset spread.
- B66E In principle the discount rates used for non-participating insurance contracts will result in the same yield curve for all cash-flows discounted.<sup>1</sup>
- B66F Paragraph 31(b) requires that, to the extent that the amount, timing or uncertainty of the cash flows arising from an insurance contract depend wholly or partly on the performance of specific assets, the measurement of the insurance contract shall reflect that dependence. Techniques for capturing any such dependence include:
- (a) replicating portfolio techniques as described in paragraph B45.
  - (b) for those cash flows dependent on the performance of those assets, using discount rates consistent with the measurement of those assets, adjusted for any asymmetry between the insurer and policyholders in the sharing of those risks associated with those assets.

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<sup>1</sup> The boards have indicated that the staff should assess the need for additional disclosure requirements (eg the method to determine the discount rate, the yield curve)

## Appendix A: Extract from ED – paragraphs B42-B66

### Market variables and non-market variables

- B42 The cash flows shall reflect the manner in which the insurer expects to fulfil the contract. A search for market inputs is not required, except for market variables such as interest rates. Therefore, this application guidance distinguishes between two types of variables:
- (a) market variables—variables that can be observed in, or derived directly from, markets (eg prices of publicly traded securities and interest rates).
  - (b) non-market variables—all other variables (eg the frequency and severity of insurance claims and mortality).

#### *Market variables*

- B43 Estimates of market variables shall be consistent with observable market prices at the end of the reporting period. An insurer shall not substitute its own estimates for observed market prices.
- B44 Market prices blend a range of views about possible future outcomes and also reflect the risk preferences of market participants. Therefore, they are not a single point forecast of the future outcome. If the actual outcome differs from the previous market price, this does not mean that the market price was ‘wrong’.
- B45 An important application of market variables is the notion of a replicating asset, or a replicating portfolio of assets. A replicating asset is one whose cash flows exactly match those contractual cash flows in amount, timing and uncertainty. In some cases, a replicating asset may exist for some of the cash flows arising from an insurance contract. The fair value of that asset reflects the expected present value of the cash flows from the asset, and it also reflects the risk associated with those cash flows. If a replicating portfolio of assets exists for some or all of the cash flows arising from an insurance contract liability, the insurer can for those contractual cash flows simply include the fair value of those assets in the present value of the fulfilment cash flows, instead of explicitly estimating the expected present value of those particular cash flows and the associated risk adjustment. For cash flows not measured by a replicating portfolio of assets, an insurer estimates explicitly the expected present value of those particular cash flows and the associated risk adjustment.
- B46 This [draft] IFRS does not require an insurer to use a replicating portfolio technique. However, if a replicating asset exists and an insurer uses a different technique, the insurer shall satisfy itself that a replicating portfolio technique would be unlikely to lead to a materially different answer. One way to assess whether that is the case is to verify that applying the other technique to the cash flows generated by the replicating portfolio produces a measurement that is not materially different from the fair value of the replicating portfolio.
- B47 As an example of a replicating portfolio technique, suppose an insurance contract contains a feature that generates cash flows equal to the cash flows from a put option on a basket of traded assets. The replicating portfolio for those cash flows would be a put option with the same features. The insurer would observe or estimate the fair value of that option and include that amount in the measurement of the entire insurance contract. However, the insurer could use a technique other

than a replicating portfolio if that technique, in principle, is expected to achieve the same measurement of the contract as a whole. For example, other techniques may be more robust or easier to implement if there are significant interdependencies between the embedded option and other features of the contract. Judgement is required to determine which approach best meets the objective in practice in particular circumstances.

#### *Non-market variables*

- B48 Estimates of non-market variables shall reflect all available evidence, both external and internal.
- B49 Non-market external data (eg national mortality statistics) may have more or less relevance than internal data (eg internal mortality statistics), depending on the circumstances. For example, a life insurer shall not rely solely on national mortality statistics, but shall consider all other available internal and external sources of information in developing unbiased estimates of probabilities for mortality scenarios. In developing those probabilities, an insurer shall consider all evidence available, giving more weight to evidence that is more persuasive. For example:
- (a) internal mortality statistics may be more persuasive than national mortality data if the internal statistics are derived from a large population, the demographic characteristics of the insured population differ significantly from those of the national population and the national statistics are out of date; in that case, an insurer would place more weight on the internal data and less weight on the national statistics.
  - (b) conversely, if the internal statistics are derived from a small population with characteristics believed to be close to those of the national population, and the national statistics are current, an insurer would place more weight on the national statistics.
- B50 Estimated probabilities for non-market variables shall not contradict observable market variables. For example, estimated probabilities for future inflation rate scenarios shall be as consistent as possible with probabilities implied by market interest rates. Paragraphs B51 and B52 discuss this further.
- B51 In some cases, an insurer concludes that market variables vary independently of non-market variables. If so, the insurer shall prepare scenarios that reflect the range of outcomes for the non-market variables and each scenario shall use the same observed value of the market variable.
- B52 In other cases, market variables and non-market variables may be correlated. For example, there may sometimes be evidence that lapse rates are correlated with interest rates. Similarly, there may sometimes be evidence that claim levels for house or car insurance are correlated with economic cycles and hence with interest rates and expense amounts. In such cases, an insurer shall develop scenarios for different outcomes of the variables. The insurer shall calibrate the probabilities for the scenarios, and risk adjustments relating to the market variables, so that they are consistent with observed market prices that depend on those market variables.