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Project	<b>Insurance Contracts</b>
Topic	<b>Draft application guidance on cash flows</b>

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### **Purpose of this paper**

1. This paper discusses the draft application guidance on estimating future cash flows for the forthcoming exposure draft on insurance contracts. This draft application guidance is included in the appendix to this paper.
2. This paper asks the boards for high-level comments on that guidance. More detailed comments will be part of drafting.

### **Structure of the paper**

3. This paper is divided into the following sections:
  - (a) Overall principle (paragraphs 4-6)
  - (b) Which costs? (paragraphs 7-16)
  - (c) Draft guidance (paragraph 17)

### **Overall principle**

4. The first building block of the proposed insurance model includes future cash flows arising from the fulfilment of an insurance contract. The application guidance provides further guidance on estimating those future cash flows.
5. Because the objective is to estimate the fulfilment cash flows, the guidance explains that the cash flows shall reflect the insurer's estimates of its cost to

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fulfil the contract and a search for market inputs is not required, except for market variables such as interest rates.

6. The guidance also emphasises that the relevant cash flows relate to existing contracts, ie contracts that fall within the contract boundaries.

### **Which costs?**

7. An important aspect of the guidance is to provide a basis for determining which costs are arising from the fulfilment of the contract. For example, which types of expenses are part of the fulfilment and to what extent are overheads included?
8. For this purpose, staff proposes that the cash outflows arising as the insurer fulfils the contract are those (cash flows associated with) costs that relate directly to that contract, notably:
  - (a) direct costs; and
  - (b) systematic allocations of costs that relate directly to the contract or contract activities.
9. Staff believes this approach is similar to the guidance being developed as part of the boards' proposed model on revenue recognition. The proposed revenue recognition model also looks at fulfilment of a contract and fulfilment costs are identified as costs that relate directly to a contract. Although the insurance contracts project and the revenue recognition project have different measurement approaches, the differences between those measurement models are in our view not relevant to identifying fulfilment costs from a contract.
10. The draft guidance in the appendix refers to, for example, payments to policyholders, claim handling costs and policy administration and maintenance costs as fulfilment costs of an insurance contract. Payments to policyholders are a direct consequence of the coverage under the contract and clearly relate directly to the fulfilment of the contract. Such payments are typically incremental costs (incremental costs are those costs that the insurer will incur because of a particular contract and that it would have avoided if it did not have that contract).

11. But also the other costs mentioned in paragraph 10 arguably relate to activities to fulfil the contract. For example investigating and then paying out claims to policyholders give rise to claims handling costs. And policy maintenance costs, such as the costs of modifications and various changes, are necessary to keep the contract in force over time. Some of those costs may be incremental, but other costs may involve systematic allocations of costs that are incurred in fulfilling the contract.
12. However, the relevant fulfilment cash flows should not conclude allocations of general overhead that do not contribute to the fulfilment of the contract. This is consistent with the approach to the determining the cost of inventories
13. In addition, we note that omitting any fulfilment cash flows from the measurement of the insurance liability would increase the residual margin or composite margin. The release of those margins arguably is to a degree inherently arbitrary. Including all the fulfilment cash flows in the measurement reduces the amount of margin subject to a possibly arbitrary pattern of release.

***Is the inclusion of policy maintenance costs consistent with the measurement of financial instruments?***

14. The measurement of financial instruments does not typically include an explicit estimate of future costs to service an instrument. However, those servicing costs are generally included elsewhere in the model, most likely implicitly through the selection of the discount rate.
15. For example, consider a bank that lends to both retail customers at, say, base rate plus 3% and to large corporates at base rate plus 1%. Of course, part of the reason for the difference in interest rates is a difference in the bank's perceptions of credit risk. But part of the difference is because of differences in servicing costs. At initial recognition, the measurement of the lines can be thought of as made of the contractually specified cash flows (with no deduction for servicing costs), but discounted at a rate that implicitly includes the servicing costs.
16. In contrast, the discount rate we have specified for insurance contracts is, simplifying slightly, a risk-free rate with no consideration of the costs of

servicing. Thus, to be consistent with the approach to financial instruments, if the servicing cost is not in the discount rate, we need to consider it somewhere else in the model: the cash flows.

### **Draft guidance**

17. Paragraph A24 of the draft application guidance in the appendix lists the cash flows that we identified as arising from the fulfilment cash flows. Paragraph A25 lists the cash flows that are not relevant to the fulfilment of the contract. Trying to describe those items in significantly more detail would probably not be feasible.

#### **Question for the boards**

Do you have any comments on the draft application guidance on cash flows included in the appendix to this paper?

## APPENDIX DRAFT APPLICATION GUIDANCE

### Estimates of future cash flows

#### *Overall principle*

- A1. Current estimates of the future cash flows that will arise as the insurer fulfils an insurance contract shall:
- (a) **be explicit.**
  - (b) **be from the perspective of the entity, but when available, be as consistent as possible with observable market prices.**
  - (c) **incorporate, in an unbiased way, all available information about the amount, timing and uncertainty of all cash flows that will arise as the insurer fulfils the insurance contract.**
  - (d) **be current, in other words, they shall correspond to conditions at the end of the reporting period.**
- A2. The rest of this guidance on estimates of future cash flows deals with:
- (a) Uncertainty and the expected present value approach (paragraphs A3-A4)
  - (b) Consistency with current market prices (paragraphs A5-A15)
  - (c) Source of estimates (paragraph A16)
  - (d) Using current estimates (paragraphs A17-A19)
  - (e) Future events (paragraphs A20-A24)
  - (f) Which cash flows? (paragraphs A25-A26)
  - (g) Level of Measurement (paragraphs A27-A28)

#### *Uncertainty and the expected present value approach*

- A3. The starting point for an estimate of cash flows is a range of scenarios that reflects the full range of possible outcomes. Each scenario specifies the amount and timing of the cash flows for a particular outcome, and the estimated probability of that outcome. The cash flows from each scenario are discounted and weighted by the estimated probability of that outcome, to derive an expected present value. Thus, the aim is not to develop a single ‘best’ estimate of future cash flows, but, in principle, to identify all possible scenarios and make unbiased estimates of the probability of each scenario.
- A4. In some cases, an entity has access to considerable data and may be able to develop those cash flow scenarios. But in other cases, an entity may not be able to develop more than general statements about the variability of cash flows without incurring considerable cost. However, when determining all possible scenarios, the intent is not necessarily to create scenarios to satisfy every possible scenario but rather to incorporate all relevant information and not simply ignore data or information that is difficult to obtain. And in practice, it is not always necessary to develop explicit scenarios. For example, if an entity estimates that the probability distribution of outcomes is broadly consistent with a statistical distribution that can be described completely with a small number of parameters, it will suffice to estimate those parameters. Similarly, in some

cases, relatively simple modelling may give an answer within a tolerable range of precision, without the need for a large number of detailed simulations. However, in some cases, the cash flows may be driven by complex underlying factors and respond in a highly non-linear fashion to changes in economic conditions, for example if the cash flows reflect a series of inter-related implicit or explicit options. In such cases, more sophisticated stochastic modelling is likely to be needed.

#### *Consistency with current market prices*

- A5. The cash flows shall reflect the insurer's estimates of its cost to fulfil the contract and a search for market inputs is not required, except for market variables such as interest rates. This guidance therefore distinguishes two types of variable:
- (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*

- A6. Estimates of market variables shall be consistent with the observable market prices at the end of the reporting period. An insurer shall not substitute its own estimate for the observed market prices because it is very unlikely that for those variables entity-specific evidence will be more relevant than that market evidence.
- A7. 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'.
- A8. 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 exists for some of the cash flows arising from an insurance contract. The fair value of that asset reflects the expected present value of those particular cash flows, and it also reflects the risk associated with those cash flows. Therefore, the insurer can simply include that fair value in the present value of the fulfilment costs, instead of explicitly estimating the expected present value of those particular cash flows, and associated risk adjustment.
- A9. 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 not 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 replicated cash flows produces a measurement equal to the fair value of the replicating portfolio.
- A10. As an example of a replicating portfolio technique, suppose an insurance contract contains an embedded option to put a basket of traded assets. The replicating portfolio for those cash flows would be an 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 techniques other than a replicating portfolio if they would, in principle, 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 that embedded option and other features of the contract. Judgment is required to determine which approach best meets the objective in practice in particular circumstances.

*Non-market variables*

- A11. Estimates of non-market variables shall reflect all available evidence, both external and internal.
- A12. Non-market external data (eg national mortality statistics) may have more or less weight 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 instance:
- (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.
- A13. Estimated probabilities for non-market variables shall not contradict observable market variables. For example, estimated probabilities for future inflation rate scenarios shall be consistent with probabilities implied by market interest rates. Paragraphs A6 and A7 discuss this notion further.
- A14. 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.
- A15. 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 be evidence that claim levels for house or car insurance are correlated with economic cycles and hence with interest rates and expense levels. 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 the observed market prices of instruments affected by those market variables.

### *Source of estimates*

- A16. An insurer estimates the probabilities associated with future payments under existing contracts on the basis of:
- (a) information about claims already reported by policyholders
  - (b) other information about the known or estimated characteristics of the book of insurance contracts
  - (c) historical data about the insurer's own experience, supplemented where necessary by historical data from other sources. Historical data are adjusted if, for example:
    - (i) the characteristics of the book differ (or will differ, because of anti-selection) from that of the population used as a basis for the historical data.
    - (ii) there is evidence that historical trends will not continue, that new trends will emerge or that economic, demographic and other changes may affect the cash flows arising from the existing contracts.
    - (iii) there have been changes in items such as underwriting procedures and claims management procedures that may affect the comparability of historical data.
  - (d) if available, current price information for reinsurance contracts and other instruments (if any) covering similar risks, such as catastrophe bonds and weather derivatives, and recent market prices for transfers of books of insurance contracts. This information is adjusted for differences between the cash flows arising under those reinsurance contracts or other instruments, and the cash flows arising under the insurance contracts being measured.

### *Using current estimates*

- A17. In estimating the probability of each cash flow scenario relating to non-market variables, an insurer shall use all available current information about conditions at the end of the reporting period. An insurer shall review its estimates of probabilities at the end of the reporting period and update them if evidence indicates that previous estimates are no longer valid. In doing so, an insurer shall consider both:
- (a) whether the updated estimates represent faithfully conditions at the reporting date, and
  - (b) whether changes in estimates represent faithfully changes in conditions during the period. For example, suppose that estimates were at one end of a reasonable range at the beginning of the period. If conditions have not changed, moving the estimates to the other end of the range at the end of the period would not faithfully represent what has happened during the period. If an insurer's most recent estimates are, initially, out of line with previous estimates, but conditions have not changed, the insurer shall assess carefully whether the probabilities assigned to each scenario have changed since the beginning of the period. In updating its estimates of those probabilities, the insurer shall consider both the evidence that supported its previous estimates and all available new evidence, giving more weight to evidence that is more persuasive.



- A18. Current estimates of expected cash flows are not necessarily identical to the most recent actual experience. For example, suppose that mortality experience last year was 20 per cent worse than previous experience and previous expectations. A current estimate of expected death benefits does not typically change immediately by as much as 20 per cent. Several factors could have caused the sudden change in experience, including:
- (a) lasting changes in mortality
  - (b) changes in the characteristics of the insured population (eg changes in underwriting or distribution, or selective lapses by policyholders in unusually good or bad health)
  - (c) flaws in the estimation model, or mis-calibration of parameters, such as mortality and lapse rates, used in the model
  - (d) random fluctuations
  - (e) identifiable non-recurring causes
- A19. An insurer shall investigate the reasons for the change in experience and develop new probability estimates for the possible outcomes, in the light of the most recent experience, earlier experience and other information. Typically, the result for this example would be that the expected present value of death benefits increases, but not by as much as 20 per cent. Actuaries have developed various ‘credibility’ techniques that an insurer could use in assessing how new evidence affects the probability of different outcomes. In this example, if mortality continues to run significantly above previous estimates, the estimated probability assigned to high-mortality scenarios will increase gradually as new evidence becomes available.

#### *Future events*

- A20. If future events may affect the net cash flows arising from an existing insurance contract, the insurer shall develop cash flow scenarios that reflect those future events, as well as unbiased estimates of the probability weightings for each scenario. However, the insurer shall not develop cash flow scenarios reflecting future events—such as a change in legislation—that would change or discharge the rights and obligations or create new rights and obligations.
- A21. Estimates of non-market variables consider not just current information about the current level of insured events, but also information about trends. For example, mortality rates have declined consistently over long periods in many countries. In developing cash flow scenarios, an insurer shall assign probabilities to each possible trend scenario in the light of all available evidence.
- A22. Similarly, if contractual cash flows are sensitive to inflation, cash flow scenarios shall reflect possible future inflation rates. Because inflation rates are likely to be correlated with interest rates, an insurer shall calibrate the probabilities for each inflation scenario so that they are consistent with probabilities implied by market interest rates.
- A23. Probability weightings shall reflect conditions at the end of the reporting period. For example, there may be a 20 per cent probability at the balance sheet date that a major storm will strike during the remaining six months of an insurance contract. After the balance sheet date and before the financial statements are authorised for issue, a storm may actually strike. The measurement of the liability under that contract does not reflect the storm that, with hindsight, is

known to have occurred. Instead, the measurement reflects the 20 per cent probability that was apparent at the balance sheet date (with an appropriate risk adjustment that reflects conditions at the end of the reporting period, and appropriate disclosure that a non-adjusting event occurred after the end of the reporting period<sup>1</sup>).

- A24. The scenarios developed shall include unbiased estimates of the probability of catastrophic losses under existing contracts. For example, if there is a 5 per cent probability that an earthquake during the remaining term of an existing contract will cause losses with a present value of CU1,000,000, the expected present value of the cash outflows includes CU50,000 (1,000,000 @ 5 per cent) for those catastrophe losses (with an appropriate risk adjustment for the possibility that existing contracts may generate greater losses). However, the scenarios exclude possible claims under possible future contracts.

*Which cash flows?*

- A25. Estimates of cash flows in a scenario shall include all cash flows that will arise in that scenario as the insurer fulfils the existing insurance contract (ie cash flows that fall within the boundary of an existing contract, see paragraphs [XX-XX] of this [draft] [IFRS] [Standard]), and no others. The cash outflows that arise as the insurer fulfils the contract are those that directly relate to the contract and include the direct costs and systematic allocations of costs that relate directly to the contract or contract activities Accordingly, the relevant cash flows are:
- (a) payments to (or on behalf of) policyholders, including claims that have already been reported but not yet paid (reported claims), claims that have already been incurred but not yet reported (IBNR), and all future claims and other benefits under the existing contract.
  - (b) claim handling costs (costs that the insurer will incur in processing and resolving claims under existing contracts, including legal and adjuster's fees and internal costs of processing claim payments).
  - (c) the costs that the insurer will incur in providing contractual benefits that are paid in kind.
  - (d) cash inflows (eg premium adjustments and instalment premiums) from policyholders falling within the boundaries of the existing contract, and additional cash flows that will result from those cash flows, including claims and benefits, claim handling costs, policy administration costs and any recurring commissions expected to be paid to intermediaries as a result of those cash flows.
  - (e) cash flows that will result in the scenario from options and guarantees embedded in the contract, to the extent those options and guarantees are not unbundled. When contracts contain embedded options or guarantees, it is particularly important to consider the full range of scenarios.
  - (f) policy administration and maintenance costs.

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<sup>1</sup> See IAS 10 *Events After the Balance Sheet Date*.

- (g) transaction-based taxes (such as premium taxes, value added taxes and goods and services taxes) and levies (such as fire service levies and guarantee fund assessments) that arise directly from existing insurance contracts, or can be attributed to them on a reasonable and consistent basis.
- (h) potential recoveries (such as salvage and subrogation) on future claims covered by existing insurance contracts and, to the extent they do not qualify for recognition as separate assets, potential recoveries on past claims.
- (i) [IASB] payments to policyholders as a result of a contractual participation term (including related regulatory or legal requirement) that enables policyholders to participate in the performance of a portfolio of contracts or pool of assets. [FASB: to the extent those payments are the result of legal or constructive obligation].
- (j) interest that the insurer expects to credit to policyholder accounts as a result of a condition in the contract.<sup>2</sup>

A26. The following cash flows are not relevant in estimating the cash flows that will arise as the insurer fulfils an existing insurance contract:

- (a) investment returns. The investments are recognised, measured and presented separately. However, the measurement of the insurance liability is affected by liability cash flows, if any, that depend on the investment returns.
- (b) payments to and from reinsurers. Reinsurance assets are recognised, measured and presented separately.
- (c) cash flows that may arise from future insurance contracts (ie cash flows that fall outside the boundary of existing contracts, see paragraphs [XX-XX] of this [draft] [IFRS] [Standard]) or from options, forwards, and guarantees that do not relate to the existing insurance contract coverage. Nevertheless, estimates of cash flows from existing contracts are not performed on a run-off basis. In other words, those estimates do not incorporate the changes that could occur to cash flows from existing contracts if the insurer stopped issuing new contracts.
- (d) cash flows arising from abnormal amounts of wasted labor or abnormal amounts of other resources used to fulfill the contract.
- (e) income tax payments and receipts (recognised, measured and presented separately under IAS 12 *Income Taxes* And ASC Topic 740 *Income Taxes*).
- (f) cash flows between different components of the reporting entity, such as between policyholder funds and shareholder funds. An example of such cash flows is when a policyholder fund owns an office building that is

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<sup>2</sup> This element may be redundant because the boards decided tentatively to require unbundling of a policyholder account balance. Thus, it would not be part of the cash flows for the remaining insurance component. Staff will investigate whether this element might have relevance to any other type of contract. If we conclude that this element is no longer relevant, we will transfer it to the list of cash flows that are not relevant in estimating the fulfilment cash flows.

rented to the insurer at an arms' length rent for use in the insurer's own operations.

*Level of measurement*

- A27. In principle, the expected (probability-weighted) cash flows from a portfolio equal the sum of the expected cash flows of the individual contracts. Therefore, the level of aggregation for the measurement does not affect the expected present values of future cash flows.
- A28. But from a practical point of view, it is easier to perform some types of estimate in aggregate for a portfolio, rather than for individual contracts. For example, IBNR (incurred but not reported) estimates are typically made in aggregate. Similarly, if expenses relate directly to activities under the contract but are not incremental at a contract level, it may be easier to determine them at an aggregate level. However, in substance, this is no different from making expected value estimates for individual contracts and aggregating the results.