



Appendix 1

Draft guidance on cash flows

The purpose of this table is to illustrate at a high level what cash flows guidance would be applicable for the models currently considered by the boards in their Insurance project, namely:

- an updated IAS 37 model as tentatively selected by the **IASB** or
- a current fulfilment value as tentatively selected by the **FASB**.

The table in this Appendix reproduces most of the draft guidance from Appendix E of the Discussion Paper (DP). It also summarises the staff's view of how that guidance might be amended for a measurement approach based on an updated IAS 37 model or a current fulfilment value. The sections of the draft guidance from the DP that are expected to be amended are marked (blue). The staff have not yet considered whether specific changes are needed to the guidance and how to change the drafting for those changes, nor have the staff considered detailed comments received on this material from respondents to the DP.

The staff emphasise that most aspects of the draft guidance included in Appendix E of the DP would not require a change merely because of a decision to adopt the updated IAS 37 model or a current fulfilment value as opposed to a current exit value. The staff has not yet analysed whether or how the material in this Appendix might differ between the updated IAS 37 model and the current fulfilment value. [For the purposes of the questionnaire on margins at inception, staff does not expect that such differences (if any) will have a significant impact].

INSURANCE CONTRACTS: DRAFT GUIDANCE ON CASH FLOWS

Topic	Possible guidance on cash flows for an exit notion (extracted from Appendix E of the DP)	Possible guidance on cash flows for a measurement based on the updated IAS 37 model or a current fulfilment value.
Uncertainty and the expected present value approach	<p>The aim is not to develop a single ‘best’ estimate of future cash flows, but to identify all possible scenarios and make unbiased estimates of the probability of each scenario.</p> <p>The starting point for an estimate of current exit value 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.</p> <p>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.</p>	No reason to adopt a different approach for a measurement based on the updated IAS 37 model or a current fulfilment value.
Consistency with current market prices	<p><i>Market variables:</i></p> <p>Estimates of market variables should be consistent with the market prices at the end of the reporting period. An insurer should not substitute its own estimate for the observed market prices, even if other evidence causes the insurer to believe that those prices are unrepresentative of conditions at the end of the period.</p>	No reason to adopt a different approach for a measurement based on the updated IAS 37 model or a current fulfilment value.

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	<p>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’.</p> <p>Non-market variables: Estimates of non-market variables should reflect all available evidence, both external and internal.</p> <p>Market prices over-rule all other forms of evidence. However, non-price 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 should not rely solely on national mortality statistics, but should 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 should consider all evidence available, giving more weight to evidence that is more persuasive. For instance, 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. 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</p>	<p>Many market variables would be level 1 or level 2 inputs if used in a fair value measurement.</p> <p>No reason to adopt a different approach for measurement based on the updated IAS 37 model or a current fulfilment value.</p> <p>Non-price external data may be useful as a reasonableness test for a measurement based on the updated IAS 37 model or a current fulfilment value</p> <p>Many non- market variables would be level 3 inputs if used in a fair value measurement.</p> <p>Market prices typically will not be available for non-market variables; the statement that market prices over-rule all other forms of evidence is therefore unlikely to be relevant to this type of variables.</p>

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	<p>statistics are current, an insurer would place more weight on the national statistics.</p> <p>Estimated probabilities for non-market variables should not contradict observable market variables. For example, estimated probabilities for future inflation rate scenarios should be consistent with probabilities implied by market interest rates.</p> <p>In some cases, an insurer concludes that market variables vary independently of non-market variables. If so, the insurer should prepare scenarios that reflect the range of outcomes for the non-market variables and each scenario should use the same observed value of the market variable.</p> <p>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 should develop scenarios for each outcome of the variables. The insurer should calibrate the probabilities for the scenarios, and the margins relating to the market variables, so that they are consistent with market prices.</p>	
Source of estimates	<p>An insurer estimates the probabilities associated with future payments under existing contracts on the basis of:</p> <ul style="list-style-type: none"> a) information about claims already reported by policyholders b) other information about the known or estimated characteristics of 	<p>Items (a)-(c) reflect the characteristics of the portfolio and would also be relevant to a measurement based on the updated IAS 37 model or a current</p>

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	<p>the book of insurance contracts</p> <p>c) historical data about the insurer's own experience, supplemented where necessary by historical data from other sources if</p> <ul style="list-style-type: none"> 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. <p>d) if available, recent market prices for transfers of books of insurance contracts, adjusted for</p> <ul style="list-style-type: none"> i. known differences between those books and the book being measured. ii. implicit or explicit amounts embedded in those prices that are attributable to future benefits from the relationship with policyholders. <p>e) if available, current reinsurance prices, adjusted for factors that may cause the reinsurance price to differ from the price for a true transfer. Reinsurance prices are not generally true exit prices because reinsurance transactions do not typically extinguish the cedant's obligation to the policyholder. Also, reinsurance often covers only part of the cedant's liability. In addition, the price for reinsurance may be affected by the relationship between the cedant and the reinsurer</p>	<p>fulfilment value.</p> <p>Evidence (if any) from items (d)-(f) may be useful as a reasonableness test for a measurement based on the updated IAS 37 model or a current fulfilment value.</p>

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	<p>f) if available, current prices for instruments (if any) covering similar risks such as catastrophe bonds and weather derivatives, adjusted for differences between the risk covered by these instruments and the risk covered by the insurance contracts.</p>	
Using current estimates	<p>In estimating the probability of each cash flow scenario relating to non-market variables, an insurer should use all available current information about conditions at the end of the reporting period. An insurer should 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 should consider both:</p> <ul style="list-style-type: none"> (a) whether the updated estimates represent faithfully conditions at the reporting date. (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 should 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 should consider both the evidence that supported its previous estimates and all available new evidence, giving more weight to evidence 	<p>No reason to adopt a different approach for a measurement based on the updated IAS 37 model or a current fulfilment value.</p>

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	<p>that is more persuasive.</p> <p>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:</p> <ul style="list-style-type: none"> (c) lasting changes in mortality (d) 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) (e) flaws in the estimation model, or mis-calibration of parameters used in the model (f) random fluctuations (g) identifiable non-recurring causes <p>An insurer should investigate the reasons for the change in experience and develop new probability estimates for each possible outcome, 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</p>	

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	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	<p>If future events may affect the net cash flows arising from an existing insurance liability, the insurer should develop cash flow scenarios that reflect those future events, as well as unbiased estimates of the probability weightings for each scenario. In contrast, the insurer should not develop cash flow scenarios reflecting future events that create new obligations (or change or discharge existing obligations). For example, an insurer should not develop scenarios reflecting possible new legislation that would create, change or discharge the obligation itself.</p> <p>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 should assign probabilities to each possible trend scenario in the light of all available evidence.</p> <p>Similarly, if contractual cash flows are sensitive to inflation, cash flow scenarios should reflect possible future inflation rates. Because inflation rates are likely to be correlated with interest rates, an insurer should calibrate the probabilities for each inflation scenario so that they are consistent with probabilities implied by market interest rates.</p> <p>Probability weightings should reflect conditions at the end of the</p>	No reason to adopt a different approach for a measurement based on the updated IAS 37 model or a current fulfilment value.

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	<p>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 margin 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).</p> <p>The scenarios developed should 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 margin for the possibility that existing contracts may generate greater losses). However, the scenarios exclude possible claims under possible future contracts.</p>	
Which cash flows?	<p>Estimates of cash flows in a scenario should include all cash flows arising in that scenario from the contractual rights and contractual obligations associated with the existing insurance contracts, and no others. The relevant cash flows include:</p> <ul style="list-style-type: none"> a) payments to (or on behalf of) policyholders under existing contracts, including claims that have already been reported but not yet paid (reported claims), claims that have already been 	<p>Most items would probably not be different for a measurement based on the updated IAS 37 model or a current fulfilment value because they would not depend on whether the insurer or a market participant holds the liability.</p>

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	<p>incurred but not yet reported (IBNR), and all future claims and other benefits under existing contracts.</p> <ul style="list-style-type: none"> b) claim handling expenses (expenses 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 direct and indirect costs that market participants would incur in providing contractual benefits that are paid in kind. d) net cash outflows resulting from policyholder behaviour that is unfavourable to the insurer (for example, selective lapsation by policyholders who present lower risks). e) enforceable cash inflows (eg enforceable premium adjustments and enforceable instalment premiums) from policyholders under existing contracts. f) premiums that the policyholder must pay to retain guaranteed insurability, and additional policyholder benefits resulting from those premiums. Guaranteed insurability is a right that permits continued coverage without reconfirmation of the policyholder's risk profile, at a price that is contractually constrained. g) cash flows that will result in the scenario from options and guarantees embedded in the contract. When contracts contain embedded options or guarantees, it is particularly important to consider the full range of scenarios. h) policy administration and maintenance costs, including all direct and indirect costs that market participants would consider in assessing the acceptability of a price for taking over the contractual rights and contractual obligations. i) transaction-based taxes (such as premium taxes, value added 	<p>However, items (b), (c) and (h) would refer to costs that the insurer would incur rather than the costs a market participant would incur.</p> <p>We intend to ask the boards to discuss some items on this list at future meetings.</p> <p>(f) refers to future benefits from the relationship with policyholders. The IASB decided tentatively that that the measurement of insurance contracts should include the expected (ie probability-weighted) cash flows resulting from those contracts, including the expected value of those cash flows whose amount or timing depends on whether policyholders exercise options in existing contracts (policyholder behaviour). [The FASB still has to discuss this issue.]</p>

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	<p>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</p> <ul style="list-style-type: none"> j) 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. k) payments to policyholders to satisfy existing obligations to pay participating benefits, to the extent those obligations qualify for recognition as a liability l) interest that the insurer expects to credit to policyholder accounts to satisfy a legal or constructive obligation in a universal life contract 	
	<p>The following cash flows are not relevant in estimating the current exit value of existing insurance liabilities:</p> <ul style="list-style-type: none"> a) investment returns. The investments are recognised, measured and presented separately, unless the liability cash flows depend on the investment returns. b) payments to and from reinsurers. Reinsurance assets are recognised, measured and presented separately c) net cash inflows resulting from policyholder behaviour other than the payment of premiums to retain guaranteed insurability d) cash flows that may arise from future insurance contracts. 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 	<p>Most items would probably not be different for a fulfilment notion because they would not depend on whether the insurer or a market participant holds the liability.</p> <p>However, a measurement based on the updated IAS 37 model or a current fulfilment value would not exclude entity-specific cash flows (item (h)).</p> <p>We intend to ask the boards to</p>

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	<p>from existing contracts if the insurer stopped issuing new contracts</p> <ul style="list-style-type: none"> e) income tax payments and receipts (recognised, measured and presented separately under IAS 12 <i>Income Taxes</i>) 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 rented to the insurer at an arms' length rent for use in the insurer's own operations g) transaction costs that the insurer would incur in negotiating and implementing a transfer of its contractual rights and obligations to a third party. These costs are not relevant until the insurer is obliged to incur them h) cash flows that would not arise for other market participants if they held the current insurer's rights and obligations under the insurance contract (entity-specific cash flows) <p>No pricing or measurement model can guarantee to identify in advance all events that might cause insured losses. In determining an acceptable price for taking over insurance liabilities, market participants would consider the possibility of such unidentified events. Because insurance contracts provide asymmetric pay-offs, such unidentified events tend to result in more large losses than large gains. Therefore, they tend to increase the expected present value of future net cash outflows. However, to deal with the possibility of unidentified events insured by existing contracts, it may sometimes be more practical to increase the risk margin, rather than include additional scenarios.</p>	<p>discuss some items on this list at future meetings.</p> <p>Although for a measurement based on the updated IAS 37 model or a current fulfilment value would look at this from the perspective of the insurer fulfilling the obligations over time, the basic principle would probably be the same. Unidentified events may lead to a higher required risk margin for the insurer [we come back at risk margins at a future meeting].</p>

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Entity-specific cash flows	<p>The objective is to estimate the current exit value of the rights and obligations associated with the insurance contracts themselves, without considering cash flows attributable to other assets and liabilities or to goodwill. It follows that cash flow scenarios exclude cash flows that other market participants would not generate (or suffer) if they held the contracts. Examples might include:</p> <ul style="list-style-type: none"> a) the presence of superior claims management skills, managerial skills or distribution network, an unusually effective system for detecting fraud, actions that limit lapse rates, a monopolistic market position, special tax circumstances that affect only the insurer and would not affect other market participants, or synergies with the insurer's other assets or liabilities b) an intention to settle insurance liabilities differently from the way that other market participants would settle them. For example, an insurer may decide to use its own garages to service motor claims, whereas other market participants might prefer to pay third parties and so incur the costs incurred by those third parties. However, if the insurance contract requires the insurer to settle the liability in a particular way, the measurement of the liability must reflect that requirement, because the objective is to measure the liability that exists in fact, rather than a hypothetical liability with different terms c) unusually efficient, or unusually inefficient, administration systems. Estimates of servicing costs need to reflect the characteristics of the contracts being measured, including the level of service provided to policyholders and the approach to 	<p>In contrast, a measurement based on the updated IAS 37 model or a current fulfilment value may capture entity-specific cash flows.</p>

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	<p>claims management. Those characteristics affect the future cash flows that market participants would consider. For example, aggressive, but expensive, claims management will lead to low claims but high expenses. Similarly, the level and type of service might affect the degree of adverse selection. That would occur if the level and type of service affect lapse rates more for some classes of policyholders than for others. If other insurers incur higher or lower servicing costs, an insurer would need to assess whether the difference arises from the characteristics of the contracts or from differences in efficiency.</p> <p>Estimates of non-market variables should reflect the characteristics of the existing insurance contracts, not a hypothetical portfolio of standardised liabilities. For example, unbiased mortality estimates should reflect, as far as possible, the demographics of the portfolio being measured. Although these estimates are portfolio-specific, they are not necessarily entity-specific. In other words, they are not necessarily inconsistent with estimates that other knowledgeable market participants would make about that portfolio. Moreover, there will rarely be persuasive evidence that the insurer's estimates differ from estimates that other market participants would make.</p>	<p>Estimates of non-market variables that reflect the characteristics of the existing insurance contracts are portfolio-specific rather than entity-specific; as a result, any guidance on these variables is relevant also for a measurement based on the updated IAS 37 model or a current fulfilment value.</p>