

## ANSWERS TO FAQs FOR PRACTITIONERS

October 2012

### INTRODUCTION

These answers to Frequently Asked Questions (FAQs) have been developed in response to issues raised by practitioners in relation to TASs. The answers given are based on materials already provided in our *Scope & Authority of Technical Standards, Conceptual Framework for Technical Actuarial Standards*, the TASs, our consultations, our analyses of responses to our consultations, and the *Significant Considerations* documents issued alongside our TASs.

No responsibility for loss occasioned to any persons acting or refraining from action as a result of any material contained in the answers to these FAQs can be accepted by the Financial Reporting Council.

### 1. GENERAL

#### 1.1 To what extent can practitioners take account of the expertise of users?

Our standards require reports for work in scope to be prepared according to the needs of their users. The underlying modelling and data work should not vary according to the user, but the extent and level of detail of reporting on the modelling and data should.

This requirement is in paragraph C.6.1 of TAS R which states that “The style, structure and content of **reports** shall be suited to the skills, understanding and levels of relevant technical knowledge of their **users**.” The expertise of users has a key impact on the reporting that is required. If it is not taken into account, there is potential for the aggregate and component reports produced to include information which is not material but which obscures other information which is material (see paragraph C.6.6 of TAS R). Confidence in the expertise of users should reflect the level of contact with them. Greater reliance can be placed on known expertise than on presumed expertise but the contact might reveal a lack of knowledge or understanding requiring more detailed explanation.

As an example, a pricing report for an experienced underwriter is likely to focus on the uncertainties relevant to that particular piece of work, with relatively little information on the issues relating to pricing generally: by contrast a report for a newly appointed non-executive director with limited experience in the sector will need to include significantly more information about the generic uncertainties of this type of work.

Q1.1, version 1, 21 October 2010

#### 1.2 If complying with a TAS would involve a disproportionate amount of work, is this work necessary?

If the work is within the scope of a TAS, it must comply with that TAS. Immaterial departures from a TAS are permitted, so if there are particular principles that have an immaterial effect on the decisions that the work supports, departures from those principles are permitted.

Complying with a TAS should not involve disproportionate work; indeed disproportionate work might constitute a departure from the TAS. The TASs have been drafted to facilitate proportionate compliance: the levels of detail of analysis and reporting are usually matters for judgement, having regard to the purpose of the work.

The circumstances under which departures are permitted are described in paragraphs 21 to 24 of the *Scope & Authority*. Proportionality is required by all TASs (for example, paragraphs B.1.3 of TAS R and B.1.4 of TAS M).

It is in the nature of outcome-focused standards, such as the TASs, that judgement is required in their application. However, such judgements are expected to be exercised in a reasoned and justifiable manner. We have taken care to ensure that it is not necessary to perform work that is disproportionate to the needs of users in order to comply with the TASs. We use words such as “indicate” and “explain” in order to avoid being prescriptive about the type of analysis or level of detail that is required. (see, for example, paragraphs 3.8, 4.5 and 4.6 of *The development of TAS R* and paragraphs 3.5 to 3.6 of *TAS M: Significant considerations*).

As an example, stating the purpose of a report – in a proportionate manner – may require no more than giving a title or heading. It might even be possible to ignore many principles altogether on grounds that the information that has to be provided to comply with those principles is immaterial, but it is inconceivable that every principle of the TAS can be dismissed entirely as requiring immaterial or disproportionate information to be produced if the work overall is material. However, proportionality may mean compliance with the TAS requires relatively little work.

Q1.2, version 1, 21 October 2010

### 1.3 What is actuarial work?

What constitutes actuarial work is a matter of perception and common sense, based on the nature of the work, the way it is presented and the expectations of users. The key test is whether it is reasonable for any of the intended users to expect the work to involve the application of actuarial techniques.

The Specific TASs and the accompanying *Significant Considerations* give some additional criteria for judging whether work is actuarial (for example in paragraph B.1.4 of the Pensions TAS and paragraphs 4.7 to 4.10 of the accompanying *Significant Considerations*):

- If users are relying on the fact that the work requires actuarial skills – for example modelling work which involves mortality or discounting, or aspects of a role which is reserved to actuaries – and the work is therefore commonly performed by actuaries (see paragraph 11 of the *Scope & Authority*), it is actuarial work.
- If the work is presented (for example in a report) as actuarial, or as involving the use of actuarial techniques, other than through an incidental reference, it is actuarial work.
- If users understand that work has been done by an actuary acting in a professional actuarial capacity, it is actuarial work. However, in other cases, it may be clear that the actuary’s qualification is only incidental to the work.

Inevitably there will be some pieces of work which do not precisely fit these criteria and about which judgement or additional clarification will be required. Although a disclaimer may be used to resolve borderline cases, it will not be effective for work which is clearly actuarial, or if it has not been adequately communicated to all users. In many such cases, little additional work is required to comply with the TASs in any event, and the benefits of compliance to users are significant.

As an example of work which is not normally actuarial, the presentation of new business projections which require no actuarial input is unlikely to be within the scope of a Specific TAS, regardless of who delivers the information.

Q1.3, version 1, 21 October 2010

#### **1.4 What is the difference between a measure and a method?**

A measure is the approach that is used to define how an uncertain amount is quantified, while a method is the mechanism that is used to implement the approach.

These definitions are in part B of TAS R. There is a discussion of the difference between measures and methods in paragraphs 6.8 to 6.10 of our consultation paper *Towards a Conceptual Framework*, issued in November 2007.

As an illustration, barefoot height and height including shoes are two different measures of a person. Two different methods of measuring height are to stand the person against a wall which has horizontal lines at known heights, and to use a tape measure.

Q1.4, version 1, 21 October 2010

#### **1.5 Why do users need to know whether an exercise is a valuation exercise, a planning exercise or some other type of exercise?**

The important thing is that users are aware of the purpose of the exercise. A valuation exercise is one that crystallises an amount for the purposes of a transaction or a formal document, whereas a planning exercise comes up with a provisional amount for targeting or budgeting purposes.

This is explained in Appendix A of the *Conceptual Framework*. The definitions are in part B of TAS R. The point here is that the term “valuation” has different meanings in different contexts. Our concern is to ensure that users understand which meaning is being used in the actuarial work. As planning and valuation exercises have such different purposes, the assumptions that are used and the limitations of the results may be very different, so it’s important that users are aware of the context (see paragraphs C.3.7 to C.3.10 of TAS R and Appendix A of the *Conceptual Framework*). There is no requirement to use the terms “planning” or “valuation” (see paragraphs 5.12 and 5.13 of *The Development of TAS R*).

Some actuarial work is a combination of valuation and planning exercises. For example, this is true of a piece of work that includes the assessment of a liability value, such as the cost of buying out pension scheme benefits, together with a funding or distribution plan based on the results of the valuation. In cases such as these, it is important that users understand the difference between the two parts of the work (see paragraph A.10 of the *Conceptual Framework*).

Finally, some actuarial work does not fit neatly into either category, so that an alternative description will have to be used in order that the user can understand the implications of the work.

Q1.5, version 1, 21 October 2010

#### **1.6 How will a practitioner know that a piece of work complies with the TASs at the time it is delivered?**

It is in the nature of any piece of legislation or required standard that compliance can only be confirmed definitively by a court (or equivalent, such as the Actuarial Profession’s disciplinary scheme). This is no different from the previous regime in terms of compliance with the Guidance Notes.

Many of the principles in the TASs are supplemented by examples of how they can be met. In addition, the spirit and reasoning behind the TASs provides important guidance on their application (paragraph 20 of the *Scope & Authority*). All TASs are accompanied by a *Significant Considerations* document which describes the rationale for their principles.

### 1.7 Which regulatory body decides whether work complies with the TASs?

According to the Memorandum of Understanding between the Financial Reporting Council (FRC) and the Actuarial Profession (AP)<sup>1</sup>:

- the Board of Actuarial Standards (BAS) sets the technical actuarial standards; and
- the AP has the primary responsibility for the regulation of its members acting in their professional capacity.

The regulation by the AP consists primarily of:

- setting ethical standards;
- administering the education system and continuing professional development scheme;
- administering disciplinary procedures; and
- such monitoring of compliance with professional standards as is undertaken by it.

The Actuaries' Code requires that members of the AP comply with all relevant legal, regulatory and professional requirements which include TASs. The AP has made express provision within the rules of its Disciplinary Scheme that failure by its members to comply with TASs may be taken into account for the purpose of disciplinary proceedings instigated under the terms of the Scheme.

It is up to individual practitioners to exercise their judgement, in a reasoned and justifiable manner, about how the TASs should be applied in the particular circumstances of the work they are asked to perform.

To the extent that compliance with TASs is required by bodies other than the Actuarial Profession (for example, HMRC requires compliance with TASs for estimates of general insurance liabilities for the purposes of tax assessment), those bodies are responsible for interpretation and monitoring compliance.

Q1.7, version 1, 21 October 2010

### 1.8 Who is responsible for complying with TASs?

Responsibility for compliance rests primarily with any practitioner who asserts that any work, or aggregate report, complies with the TASs, but it can extend to others.

The Actuaries' Code requires members of the Actuarial Profession to comply with all relevant legal, regulatory and professional requirements, including the TASs, and to challenge non-compliance by others. They must also take steps to ensure that any communication with which they are associated is accurate and not misleading, and contains sufficient information to enable its subject matter to be put in proper context.

Paragraph C.3.11 of TAS R requires all aggregate reports to state whether or not they comply with the applicable TASs. However, since the aggregate report may well include a number of component reports which were prepared by other practitioners, all practitioners should consider to what extent the work they have done contributes to compliance.

For a piece of work which involves contributions from a number of practitioners – whether or not they are all actuaries – there may be merit in agreeing at the outset who

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<sup>1</sup> [http://www.actuaries.org.uk/\\_\\_data/assets/pdf\\_file/0003/19407/MoU\\_FRC.pdf](http://www.actuaries.org.uk/__data/assets/pdf_file/0003/19407/MoU_FRC.pdf)

will have responsibility for ensuring compliance and what each individual will be expected to contribute to compliance by way of documentation and reporting.

Sometimes a piece of work relies on an earlier report which may not comply with the relevant TASs, either because it was produced before the implementation of the TASs, or because it was not within their scope at the time. The answer to Question 3.1 explains how this information can be treated as data.

Q1.8, version 1, 21 October 2010

**1.9 What counts as a decision by users? What about conditional decisions? What happens if the decision has already been taken (e.g. reports of record and certificates)?**

Any actuarial work within the scope of the TASs, together with any relevant reports, can normally be regarded as intended to assist and influence users in making a decision. In particular, this applies to reports of record, and certificates which are provided in order to meet regulatory requirements or which support an action already proposed. The work relating to the production of these documents is therefore subject to the requirements of the appropriate TASs.

The same principle applies to actuarial work which has been undertaken by decision-makers themselves, for example in their capacity as an expert or umpire, and any reports they produce to record, support or justify their decision.

The TASs define users as those people whose decisions a report is intended to assist (part B of each TAS). Paragraph C.2.4 of TAS R states that component reports issued after a decision has been made cannot contribute to compliance unless that report represents confirmation of material previously given orally. In the case of a certificate issued after a decision is made, that decision must have been based on an expectation that the certificate would be provided, so there will be a requirement to provide material information relating to the certificate in a report (TAS R paragraph C.2.6).

If a report of record is issued to pull together the actuarial information on which the decision was based, that information must have been issued as one or more component reports in order for the decision to have been made. The report of record is not therefore an additional aggregate report for that decision. It may, however, be a component report or an aggregate report for the piece of work that it describes. In practice we expect that such reports are likely to meet the requirements of TAS R, except that they are issued after the date of the decision. Practitioners may wish to state this explicitly.

It is also likely to be intended that a report of record will be relied on by users in the event that the decisions it records are revisited or revised, or for decisions that follow on from the decisions it records. It would then form a component report for those later decisions or pieces of work.

Q1.9, version 1, 21 October 2010

**1.10 How can practitioners comply with the TASs when some assumptions or results on which they rely have been produced by a third party and are not subject to the TASs?**

If the assumptions or results on which practitioners rely are material to the purpose of the report, it might be appropriate to treat them as data (as explained in the answer to Question 3.1), in which case the associated uncertainties will need to be reported. Otherwise, the practitioner asserting compliance with a TAS is responsible for ensuring that the inputs have been produced in a compliant manner.

Data is defined in part B of many of the TASs, and is not limited to membership or policyholder data.

If the practitioner does not want to revisit the work behind the inputs to ensure that they are compliant, the key question is whether they are material to the purpose of the report. Paragraph 23 of the *Scope & Authority* explains that immaterial departures do not constitute a failure to comply.

If the inputs are material, practitioners may treat such inputs as data. Paragraph C.4.1 of TAS R requires that they describe any data and its source. They would then need to carry out sufficient checks to determine their accuracy and reliability (see paragraph C.5.6 of TAS D). The uncertainties introduced by this data will need to be explained to users (paragraph C.5.2 of TAS R).

Q1.10, version 1, 21 October 2010

**1.11 Am I required to include information that I consider should not influence users' decisions, if I suspect that a user might consider it relevant and might in fact be influenced by it?**

Yes, if users ask for information you should provide it, as it is likely that they consider it to be material or helpful to them in making a decision. You might however consider it appropriate to explain why you believe this information should not influence their decision.

A belief that users should not, rather than would not, be influenced by certain information does not render information immaterial or unhelpful. Actuaries have obligations under the Actuaries' Code to ensure that any communication is not misleading, to establish a proper context for the information, and to speak up if they have a concern that a course of action is unlawful, unethical or improper. Therefore, if you believe that users should not be influenced by certain information then you should say so.

Decisions about materiality are a matter of judgement. If a user might reasonably take actuarial information into account when making a decision then that information is likely to be material. However, practitioners cannot be expected to second guess what apparently unconnected information users might bring into account as relevant.

Paragraphs 5.7 and 5.8 of *The Development of TAS R* comment on what constitutes relevant information, noting that importance and usefulness should be taken into account as well as connection to the decision. In particular paragraph 5.7 explains that we consider that actuarial information that is connected, but unreliable or misleading, is not necessarily relevant.

Q1.11, version 1, 7 September 2011

## **2. REPORTING**

**2.1 Is it necessary to produce lots of formal reports in order to comply with TAS R?**

No. The requirements of TAS R primarily concern aggregate reports, which consist of one or more component reports.

TAS R specifies no particular format for reports (paragraph B.1.8), and component reports need not be formal reports (paragraph 4.9 of *The Development of TAS R*), although they must be in permanent form. The definition of component report (part B of

TAS R) gives some examples of the different forms component reports may take, which include draft reports, emails and presentation handouts.

Q2.1, version 1, 21 October 2010

## 2.2 Must an aggregate report be a single document?

No. An aggregate report may consist of one or more component reports (paragraph C.2.2 of TAS R). The definition of aggregate report explains that an aggregate report is the collection of all the separate documents containing information that is material to the piece of work in question (part B of TAS R).

Q2.2, version 1, 21 October 2010

## 2.3 Does an aggregate report have to list the component reports that make it up?

An aggregate report has to specify its component reports clearly, so that users are aware of which information is relevant to their decisions (paragraph C.2.3 of TAS R and paragraph 4.10 of *The Development of TAS R*) but that could be done in some way other than listing them individually, such as by referring to the documents tabled at a meeting.

Q2.3, version 1, 21 October 2010

## 2.4 Users are likely to find the term “aggregate report” confusing. Is it necessary to use this term?

No. Although aggregate reports need to specify their component reports clearly, so that users are aware of which information is relevant to their decisions, there is no requirement to use the terms “aggregate report” or “component report” when doing so (paragraph C.2.3 of TAS R and paragraph 4.10 of *The Development of TAS R*).

Q2.4, version 1, 21 October 2010

## 2.5 Can a minute of a meeting be a component or aggregate report?

Yes. The TASs define a component report as a document given to a user in permanent form containing material information which relates to work within the scope of the standard. The definition does not specify who has to give the document to the user, or any particular format for the document. Meeting minutes may be an effective way of recording information that has been provided orally, and may address important facets of the issue on which a decision will ultimately be made.

The practitioner will of course want to ensure that the minute accurately represents the material information provided in the discussion which it records, and may judge that supplementary information is required to ensure it contributes fully to compliance with TAS R. However, if the minute adequately covers the information which will contribute to compliance of the aggregate report, there might be no need to repeat it in a separate report.

An aggregate report may consist of one or more component reports (TAS R paragraph C.2.2), so if the minute adequately covers all the information needed by the users, it might be usable as an aggregate report.

Q2.5, version 1, 21 October 2010

**2.6 If users make a decision on a matter, and subsequently request more information because they wish to revise the decision, does the revised decision need to be preceded by an aggregate report?**

The aggregate report for a decision is defined as the set of all component reports received by the user containing information material to that decision (part B of TAS R). This means that all decisions are automatically preceded by an aggregate report (see also paragraph 4.13 of *The Development of TAS R*). The need for that aggregate report to comply with TAS R is independent of whether the decision being made is a revision of an earlier decision.

The aggregate report for a given decision may well include a number of component reports that were relevant to earlier decisions (see the definition of component report in part B of TAS R). Indeed some decisions may go through a number of iterations, and at each point, the aggregate report is likely to comprise the previous aggregate report plus a more recent e-mail or presentation explaining why the previous decision needs to be revisited.

Q2.6, version 1, 21 October 2010

**2.7 Why should practitioners have to define “prudent”, when it’s not defined in legislation or regulation?**

Because the term “prudent” has no unique definition, there may be differences of opinion about its underlying meaning and so it is important that those producing and using actuarial information have the same understanding of the sense in which it is used. The users of the information need to be confident that the meaning is appropriate for their purposes. This meaning is likely to depend on the particular context in which it is being used.

TAS R therefore requires a statement of the intended meaning of any material description that is not uniquely defined in the context in which it is being used (see paragraph 5.42 of *The Development of TAS R*), and includes “prudent” as an example (paragraphs C.6.8 to C.6.9). Other terms that fall into the same category include “best estimate” and “optimistic”.

Q2.7, version 1, 21 October 2010

**2.8 If a table of lapse rates or other decrements is based on past scheme experience does this count as a set of probabilities (which therefore need to be explained under TAS R) or as data?**

The requirement to explain the intended meaning of the probability arises from the use of shorthand in stating probabilities. For example, phrases such as “a 1 in 20 likelihood” might refer to an event expected to occur once in 20 years on average, or in one in 20 possible scenarios during the next year. It is important that this is explained clearly to the user.

If withdrawal rates have been adopted entirely from another source as assumptions for input into calculations there is no requirement to provide explanations of the probabilities or underlying statistics (paragraph C.5.16 of TAS R). If they are a material assumption, however, they will need to be disclosed as such and a rationale for their selection given (paragraph 5.32 of *The Development of TAS R*.)

Q2.8, version 1, 21 October 2010



### 3. DATA

#### 3.1 What counts as data?

Data is defined very broadly in the TASs (for example, in part B of TAS D). It covers a wide range of items including information about individuals such as date of birth, definitions of benefits in pension schemes, and financial and economic information (paragraph 3.4 of the Analysis of Responses in *Exposure Draft: Data*). The term is intended to cover any information that is obtained from elsewhere, as opposed to information resulting from the work being performed.

In particular, previous reports, or reports produced by other people, can be treated as data. If they are, the principles regarding data in TAS D and TAS R apply to them: in particular, aggregate reports should describe them and state their source, and describe any uncertainty in the information they contain (paragraphs C.4.1 to C.4.3 of TAS R).

Q3.1, version 1, 21 October 2010

### 4. MODELLING

#### 4.1 What does “neutral” mean?

A neutral estimate is one that is neither optimistic nor prudent. Both optimism and prudence involve a deliberate and subjective adjustment in one direction in the context of a desired outcome. A neutral estimate is one that is “straight down the line”, and which an independent practitioner, with technical knowledge but no interest in the answer, might consider reasonable and unbiased. There might be many possible neutral estimates: based, for instance, on median, probability weighted average or the practitioner’s informed opinion. One option for communicating neutrality might be to indicate a range of outcomes, with prudent and optimistic estimates at the opposite ends of the range, and a neutral estimate or estimates indicated between these extremes.

Best estimates should be neutral estimates, but not all neutral estimates are necessarily best estimates (see paragraphs 4.25 to 4.26 of *TAS M: Significant Considerations*). Because terms such as “prudent” and “best estimate” are not uniquely defined, their intended meaning, in the context of the particular piece of work, will need to be explained (paragraphs C.6.8 and C.6.9 of TAS R).

Q4.1, version 1, 21 October 2010

#### 4.2. Is it always necessary to produce a neutral estimate?

TAS M requires that any estimates that are not neutral should be accompanied by an indication of their relationship to neutral estimates (paragraphs C.5.5 to C.5.7). The non-neutral estimates might be optimistic, pessimistic, prudent or dependent in some other way on the context (including the desired outcomes) in which they are presented. This indication is intended to assist users’ understanding of the degree of prudence, optimism or other bias that is incorporated in the estimates. The indication of the relationship need not take the form of comparing the estimate in question with a neutral estimate – in other words, TAS M does not require the production of a neutral estimate (see paragraphs 5.46 to 5.50 of *TAS M: Significant Considerations*). However, Specific TASs require the production of neutral estimates in some contexts (see paragraphs E.2.10 to E.2.12 of the Pensions TAS).

Q4.2, version 1, 21 October 2010

#### **4.3 Is it necessary to go back and document and test all existing models?**

The objective of documenting and testing models is to ensure that the model is fit for purpose (see paragraphs C.3.5 to C.3.9 of TAS M). The amount of detail required is a matter of judgement, which should be exercised in a reasoned and justifiable manner, having regard to the context. For example, a model produced in a short timeframe is likely to be documented and checked to the minimum level necessary to satisfy the practitioner that it does what was expected.

TAS M does not require that all possible checks are performed every time a model is used. A model that has been used many times over a long period is likely to require less checking than one that has not been used before. Similarly, TAS M does not require all checks that have ever been performed on a model to be documented. It requires only those checks that are performed in compliance with TAS M to be documented (paragraph 5.20 of *TAS M: Significant Considerations*).

The limitations of models need to be explained to users (paragraphs C.5.8 to C.5.12 of TAS M). The amount of testing that has been performed, or the level of documentation, might constitute a significant limitation of a model, if there is more uncertainty in its outputs as a result (see paragraph C.5.9 of TAS M).

Q4.3, version 1, 21 October 2010

#### **4.4 What are the requirements for models that I use which are developed by someone else?**

If you are actually running the model, you will need to comply with TAS M. If you are solely using the outputs from a model, these can be treated as data.

It will be important for you to consider how the models are used in your actuarial work. If the models are being run by you as part of a larger model, the requirements of TAS M apply, regardless of their origin. Paragraph C.2.2 of TAS M notes that the extent and nature of the documentation and checks on externally developed models is a matter of judgement. Factors to take into account might include the extent of checking and technical review carried out when the model was acquired, and the extent of documentation that came with it.

Part of the BAS's Reliability Objective is that users of actuarial information should have a clear understanding of the risks, uncertainties and limitations of that information (see paragraph 8 of the *Scope & Authority of Technical Standards*).

In terms of reporting, TAS M requires the limitations of models to be explained (paragraphs C.5.8 to C.5.12). TAS R requires reporting of any uncertainty, whether this arises from the results of calculations, assumptions or other aspects (TAS R paragraph C.5.3). TAS M requires data and assumptions to be documented (paragraphs C.4.1 to C.4.26), but does not specify the level of detail.

If the outputs of a model, over whose operation the practitioner has no control, are used as assumptions, those assumptions might be treated as data. In this event, practitioners will want reassurance about the reliability of the data. TAS D requires that checks are performed to determine how relevant, accurate and complete the data is (paragraphs C.5.6 to C.5.10). TAS R requires aggregate reports to state the source of the data that has been used (paragraph C.4.1 b)) and indicate the nature and extent of any material uncertainty resulting from its use (paragraph C.5.2). TAS D requires the definitions of data items to be documented (paragraphs C.5.3 to C.5.5).

In both cases, the limitations of the process used to derive the assumptions therefore need to be understood and explained. This can be done either by ensuring that any model used to produce them follows the principles in TAS M, or by ensuring that the

actuarial information which is produced by using those assumptions as data meets the requirements of TAS R and TAS D for data.

Q4.4, version 1, 7 September 2011

#### 4.5 What is meant by the requirements regarding suitability of models?

Paragraph C.3.1 of TAS M requires that models are a satisfactory representation of some aspect of the world relevant to the purpose for which they are being used and an explanation of this must be documented (but there is no requirement for this explanation to be reported to users). Paragraph C.3.5 requires checks to determine a model's fitness for purpose. Paragraph C.5.8 requires aggregate reports which use the outputs of a model to explain how the model meets users' needs. These requirements apply whether a particular piece of work is a model or some part of a model. For example, the use of a model valuation tool to assess insurance provisions is a realisation of a model, which requires validation.

##### Satisfactory representation

Documentation of how a model represents some aspect of the world might include a note of the aspects that have been modelled, such as mortality, investment returns, proportions married at death. These should be relevant to the context of the model. Notes in a spreadsheet showing the formula for each column and the parameters used might be considered as documentation.

In order for a model to be a satisfactory representation, it should incorporate the key factors which might influence the outputs. This will require judgement about what the key factors are and decisions about the level of detail in the model. For example, in view of the purpose of the information being produced is it necessary or appropriate to include some factors as assumptions or parameters, or can they be approximated by other factors or by constants?

Practitioners who regularly use an established model (such as a pension scheme valuation system or a proprietary reserve calculation model) may well be able to document how that is a satisfactory representation of the world by reference to in-house documentation of that model. An executive summary of that documentation might form the basis for the report to users.

##### Fitness for purpose

Paragraph C.3.9 of TAS M sets out examples of how you might assess the fitness for purpose of a model. You might also check that the assumptions used in models and the way they are applied are consistent with the purpose for which the models are being used. Another useful indicator of fitness for purpose would be that the models generate the information required without the need for significant further adjustment.

##### Meeting users' needs

Determining how a model meets the needs of users involves ensuring that the model provides the information required, that the extent of detail reflects the users' needs for precision or approximation, and that the results are correct. In explaining this to users it might be helpful to set out any limits to the purposes for which the model would be used, and the degree of precision of the information it produces. If the same model is used often, it might be possible to refer to earlier descriptions.

Our Reliability Objective requires that users understand the extent of uncertainty inherent in information they are given. An explanation of how the model used meets users' needs which refers to the nature of the checks carried out and the degree of detail or simplification will help users appreciate the suitability of the model, its limitations, and the degree of reliance they can place upon it.

## 5. PENSIONS WORK

### 5.1 Is the projected unit credit method a measure of pension liabilities, or a method?

The projected unit credit method is a measure of pension liabilities which takes prospective future salary increases into account, while the current unit method is a measure which ignores them (see paragraphs A.2 and A.3 of the *Conceptual Framework*, and the answer to Q1.4).

Some practitioners have commented that both projected unit credit and attained age methods produce the same measure of past service liabilities. For this purpose, the two are not different measures. Nevertheless, they provide different measures of the cost of future accruals.

Q5.1, version 1, 21 October 2010

### 5.2 Won't it confuse people to be told that a pension scheme valuation exercise is really a planning exercise, not a valuation exercise?

The answer to Question 1.5 explains why it is important for the user to understand the purpose of the exercise.

The term "valuation" has historically been used by actuaries, and is currently used in regulation, to describe the process of developing a funding plan for a pension scheme. Outside the actuarial environment the term "valuation" is typically used to describe an exercise in which an amount is crystallised for the purposes of a transaction or a formal document, rather than one which is intended to come up with a provisional amount for targeting or budgeting purposes (which is what a funding plan is). Users are therefore likely to assume that a process that is described as a valuation has the usual characteristics of such exercises, rather than the characteristics of a planning exercise (see Appendix A of the *Conceptual Framework*).

Given the potential for confusion, it's important that users understand that a major part of the exercise is not actually a valuation in the sense in which that term is usually used, but that it is a planning exercise. TAS R therefore requires that the context of calculations should be made plain to the user (in paragraphs C.3.7 to C.3.10). There is no requirement to use the terms "planning" or "valuation" (see paragraphs 5.12 and 5.13 of *The Development of TAS R*).

Q5.2, version 1, 21 October 2010

### 5.3 The final report to the trustees on a Scheme Funding exercise is available to pension scheme members. Do they count as users of that report?

According to the definitions in the TASs, the users of a report are those people whose decisions the report is intended (at the time of writing) to assist (see the definitions in Part B of TAS R and the Pensions TAS). The users do not necessarily include everybody to whom the report is available (see paragraph 4.21 of *The Development of TAS R*). Factors that might be taken into account in judgements of who the users of a report are include the addressees of the report and the terms of reference of the piece of work that results in the report. In most cases, scheme members are unlikely to be among the users of the Scheme Funding report, but they might be informed readers, who – with some advice – can appreciate the financial issues involved in a particular pension scheme.

The Pensions TAS requires that the Scheme Funding report is written so that an informed reader can understand the financial position of the pension scheme (see paragraph E.3.3 of the Pensions TAS and paragraphs 7.25 to 7.28 of the accompanying *Significant Considerations*). The definition of informed reader notes that such a member is not necessarily a user as defined in the TAS.

Q5.3, version 1, 21 October 2010

#### **5.4 Does actuarial work that supports compliance with FRS17 constitute Reserved Work?**

Reserved Work is defined in paragraphs 15 to 19 of the *Scope & Authority*, which states that, in order to be Reserved Work, there should be a requirement to commission the work from somebody who holds a prescribed qualification from an Actuarial Professional Body – which is the Institute and Faculty of Actuaries.

FRS17 does not require calculations to be carried out by an actuary (although they usually are). It requires the actuarial assumptions used to be set by the employer, upon advice given by “an actuary”. It does not specify what is meant by “an actuary”, or specify any qualification that should be held by such a person. Work supporting compliance with FRS17 is thus not Reserved Work (see also paragraphs 4.30 and 4.31 of our *Consultation Paper: Pensions*).

However, this work is within the scope of the Pensions TAS, which means that it must comply with the Generic TASs (after the commencement date of the Pensions TAS).

Q5.4, version 1, 21 October 2010

#### **5.5 Does the provision of deficit reduction certificates constitute Reserved Work?**

Reserved Work is defined in paragraphs 15 to 19 of the *Scope & Authority*, which states that, if regulations or some other legal obligation make certain outcomes for the entity commissioning the work conditional on the work having been carried out, and if the work must be carried out by an individual who holds a prescribed professional qualification, it is Reserved Work. Trustees are required to obtain deficit reduction certificates from actuaries if they want the PPF to take account of certain recent contributions when determining the PPF levy (see paragraphs A.29 to A.31 of the *Consultation Paper: Pensions*). This means that the production of these certificates is Reserved Work.

Q5.5, version 1, 21 October 2010

#### **5.6 What are an actuary’s obligations when undertaking actuarial work concerning statutory money purchase illustrations for pension scheme members?**

Actuaries are required to comply with the substantive requirements of any relevant legislation or rules, and subject to these requirements to take reasonable steps to ensure that any illustrations with which they are associated are accurate and not misleading, in accordance with their obligations under the *Actuaries’ Code*. Such requirements may be imposed, for example, in FSA rules under the *Financial Services and Markets Act 2000*, and by *TM1: Statutory Money Purchase Illustrations*. There may also be obligations on actuaries to report breaches of the requirements.

Some actuarial work concerning defined contribution benefit projections, such as advice on the selection of assumptions, is within the scope of the *Pensions TAS* and *Generic TASs* by virtue of paragraph C1.22 of the *Pensions TAS*. This covers defined contribution projections which have been performed using assumptions other than those specified in legislation or other rules, such as TM1 and FSA rules.

However, both TM1 and FSA rules require the exercise of judgement in recommending and setting the accumulation assumption to be used (even where a maximum or default assumption such as 7% pa is specified in legislation or rules). This requires an assessment of the future investment returns on the anticipated investments and is a key assumption and material to the decisions to be made both by providers and recipients of projections. Recommending and setting the accumulation assumption is therefore within the scope of the *Pensions TAS*.

Q5.6, version 1, 22 December 2011

**5.7 When producing Statutory Money Purchase Illustrations in line with version 2.0 of TM1, how should the male and female mortality assumptions be blended?**

There are different ways to blend mortality tables to derive gender-neutral rates although the resulting annuity rates should not differ significantly.

Version 2.0 of Actuarial Standard TM1 states:

*C.3.7 The mortality of the member and the member's spouse or civil partner must be derived from 50% of each of the tables PCFA00 and PCMA00 (as published by the Actuarial Profession).*

*C.3.8 For statutory illustrations produced with illustration dates in the range 6 April 20YY to 5 April (20YY+1), mortality improvements must be derived from a blend of 50% of each of the CMI mortality projection models CMI\_(20YY-1)\_F[1.25%] and CMI\_(20YY-1)\_M[1.25%].*

One approach which has been adopted by some providers is to add 50% of the rates derived from table PCFA00 and 50% of the rates derived from table PCMA00 and then include mortality improvements derived from 50% of CMI\_(20YY-1)\_F[1.25%] plus 50% of CMI\_(20YY-1)\_M[1.25%].

Another approach which has been adopted is to add 50% of the rate derived from table PCFA00 and including mortality improvements based on CMI\_(20YY-1)\_F[1.25%] and 50% of the rate derived from tables PCMA00 and including mortality improvements based on CMI\_(20YY-1)\_M[1.25%]. The CMI have produced a set of blended mortality factors using this approach. These factors can be found at <http://www.actuaries.org.uk/research-and-resources/documents/cmi-unisex-rates-statutory-money-purchase-illustrations>.

It is also possible to use a pivot age approach where the populations underlying the mortality tables are rebalanced so there are 50% males and 50% females at a fixed pivot age such as 65 or the retirement age.

Other approaches might be possible.

Q5.7, version 1, 10 May 2012

**6. INSURANCE WORK**

**6.1 From 1 December 2010 it's possible to comply with GN12 by complying with the TASs. What does this mean if the work is outside the scope of the TASs?**

GN12 version 5.0 states that it is possible to comply with GN12 either by complying with sections 1 to 8 of GN12 or by performing the work and providing information in compliance with TAS D, TAS M, TAS R and the Insurance TAS. This change to GN12, which is effective from 1 December 2010, has been introduced to give practitioners greater flexibility about compliance during the transition period until the Insurance TAS takes effect on 1 October 2011.

If work is within the scope of GN12, and compliance is to be achieved by meeting the requirements of the relevant TASs, then it must comply with those TASs, regardless of the commencement date of the TASs or whether the work is within their mandatory scope.

GN12 will be withdrawn with effect from 1 October 2011, the commencement date of the Insurance TAS. From that date, compliance with the Insurance TAS and the Generic TASs will be required only for work that is within the mandatory scope of the TASs. However, wider adoption is encouraged. Early adoption is also encouraged whether or not the work is within the scope of GN12.

Q6.1, version 1, 19 November 2010

**6.2 Do I have to provide an estimate of the technical provisions at the end of the following year when I'm calculating them at the year-end?**

No. TAS R requires that for regularly performed calculations, you provide an indication of the projected results from future corresponding calculations (TAS R paragraph C.5.20), but this does not have to be an estimate. In some cases, a purely textual description of the expected evolution of results might be most helpful to users.

TAS R requires aggregate reports to include a comparison with a previous aggregate report (if any) which was provided for a similar purpose, including a reconciliation of the two sets of results (TAS R paragraph C.5.17). The Insurance TAS requires that aggregate reports explain any changes in the measures, methods and assumptions between two similar and related exercises and quantify the overall effect of the changes (Insurance TAS paragraph D.3.1).

In imposing these requirements, our intention was to provide a useful benchmark for the next set of calculations and to aid users' understanding. We also had the specific objective of helping pension scheme trustees understand the numerical effect of the unwinding of discount rates. In the case of general insurance provisions, if the information being projected can be explained in terms of the impact on loss ratios this might be a proportionate alternative. A key consideration will be whether it helps users to understand the impact of experience proving different from what is assumed.

There is no specific obligation to provide information regarding the effect of anticipated new business. Its effect may be relevant, however, for example when considering the level of future expenses to be assumed in projecting life business mathematical reserves.

TAS R does not specify the timeframe to be used for future calculations. If for example, you are doing quarterly reporting, users might find an indication of the next year-end technical provisions more informative than an indication of the next quarter's. In addition, users may find it useful to understand the expected evolution of the technical provisions over a period of time.

Q6.2, version 1, 7 September 2011

**6.3 Does validation work on an internal model used to calculate the Solvency Capital Requirement (SCR) in accordance with Solvency II fall within the scope of the TASs?**

Yes, normally.

The Insurance TAS (and therefore the Generic TASs on Data, Modelling and Reporting of Actuarial Information) applies to actuarial work performed to enable an insurer to fulfil its regulatory obligations (by virtue of paragraph C.1.7).

Insurers that choose to use an internal model to calculate the SCR will be subject to a regulatory obligation to validate the model on a regular basis (by virtue of article 124 of the Solvency II Directive). So the answer to this question depends on whether this validation constitutes actuarial work.

Paragraph B.1.4 of the Insurance TAS explains that what constitutes actuarial work depends on matters such as whether users would reasonably expect the work to be performed using actuarial techniques, and whether the work involves risk, uncertainty or modelling. Paragraphs 4.8 - 4.12 of the Insurance TAS: Significant Considerations provide additional information that should be considered when making a judgement as to whether work is actuarial work or not.

Testing and validation of internal models are the responsibility of the risk function (Directive article 44(5)). The work need not be performed by an actuary, and need not be limited to matters which rely solely on actuarial considerations. Furthermore, the implementing measures for the work have not yet been finalised. Whether validation work is in scope is therefore a matter for judgement and might depend on factors such as the extent of the actuarial work involved in the validation exercise, the reliance placed upon any actuarial work by the risk function, and the expectations of the insurer's management and governing body and the FSA (and where relevant the Corporation of Lloyd's).

Nevertheless, it would normally be reasonable, for users of the internal model and the associated validation work, to expect much of the validation to be performed using actuarial techniques, and for the work to be concerned with risk, uncertainty and modelling, given:

- the methods used to calculate the probability distribution forecast shall be based on adequate, applicable and relevant actuarial and statistical techniques and shall be consistent with the methods used to calculate technical provisions (Directive article 121(2));
- the actuarial function is required to contribute to the effective implementation of the risk-management system....in particular with respect to the risk modelling underlying the calculation of the SCR and the ORSA (Directive article 48(1)(i)); and
- the validation work of the actuarial and statistical techniques used should be based on a detailed understanding of the theory and assumptions underlying them (draft implementing measures article 230); and
- the validation tools described in the draft implementing measures.

More generally, the FRC encourages wider adoption of the TASs, and this encouragement would extend both to non-actuaries who are asked to validate internal models and to insurers in specifying their expectations for the independent validation of their internal models.

Q6.3, version 1, 11 October 2012



## 7. TRANSFORMATIONS

### 7.1 Does a review of pension scheme factors fall within scope of the Transformations TAS?

It depends on the circumstances including the purpose of the review and the nature of the scheme documentation.

Paragraph C.1.6 of the Transformations TAS states that the standard shall apply to actuarial work for the governing body of a pension scheme concerning the modification of the accrued benefits of some or all members of a pension scheme without the consents of those members.

The term **accrued benefits** is not uniquely defined in the Transformations TAS or in UK pensions legislation. Judgement will be needed in determining whether a factor review might lead to a modification of accrued benefits, and whether the actuarial work therefore falls within the scope of the Transformations TAS. For example, we would typically expect reviews of cash commutation factors which involve changes to the formal scheme documentation to comply with the Transformations TAS. By contrast we would not expect a regular review of factors requiring no changes to the formal scheme documents to fall within the scope of the Transformation TAS, if the review was solely to reflect changes in market conditions or longevity since the previous review.

It should be noted that actuarial work in relation to recommending and setting actuarial factors is in the scope of the Pensions TAS (paragraph C.1.18).

Q7.1, version 1, 10 May 2012