December 2016

# Feedback Statement

Consultation: Revised Specific TASs

Analysis of responses to the May 2016 consultation

Annex 1: TAS 200: Insurance

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#### Introduction 1

- In May 2016, the Financial Reporting Council published a consultation package on revisions to its Technical Actuarial Standards (TASs) for areas of specified work in insurance, pensions and funeral plan trusts on matters where there is a high degree of risk to the public interest.
- Annex 1 of the consultation package covered technical actuarial work concerning insurance. The Annex included an exposure draft of TAS 200: Insurance together with a paper setting out the rationale for the proposed scope and provisions of TAS 200, an impact assessment and a list of questions upon which we were seeking views. The consultation period ended on 5 August 2016.

# Responses

- We received 16 responses to Annex 1 on TAS 200: Insurance. The respondents included the Institute and Faculty of Actuaries, the Association of Consulting Actuaries, Lloyd's, eight consultancy firms, two insurers, the Government Actuary's Department and two individual actuaries. The list of respondents is included in Appendix A. Their responses can be found here.
- After the formal consultation, both users and practitioners have had the opportunity to provide further informal input. We thank all those who contributed.

# Summary

- In finalising the text of TAS 200 we have taken account of comments we received in 1.5 response to the consultation questions in Annex 1. We have also considered the responses to the other annexes in the consultation package.
- Respondents supported the proposed scope of TAS 200 although a minority raised concerns about the retention of work concerning the development and application of pricing frameworks. We were not persuaded that the risk to the public interest in respect of technical actuarial work concerning pricing frameworks was insufficient to justify removing it from the scope of TAS 200 and leaving that work subject only to the principles and provisions of TAS 100: Principles for technical actuarial work. We have therefore left the scope broadly unchanged although we have made some changes to define work in scope more precisely.
- We have changed the order of the descriptions of technical actuarial work in scope moving work concerning with-profits discretion to the end of the list. We agree with feedback that the provisions applying to this specific work have wider application to all the other areas of technical actuarial work in scope of TAS 200 when considering withprofits life insurance policies. We have added a preamble to the provisions relevant to with-profits discretion to make this clear.
- There was also general support for the provisions proposed in the exposure draft although some suggested that the core provisions were already covered by the principles of TAS 100. We accept that at a high principles-based level, TAS 100 does provide a substantial degree of assurance that technical actuarial work is of good quality. However, we consider that, for certain specified work supporting decisions on matters where there is a high risk to the public interest, it is necessary to build on the high-level principles in TAS 100 and provide specific provisions.

- 1.9 We have moved provision 12 (which requires that communications state the regulations applying to the work and confirm compliance with them) from the specific provisions to the core provisions (paragraph 11) reflecting feedback that it had wider applicability. It will therefore apply to all technical actuarial work within the scope of TAS 200.
- 1.10 The provisions in the final version of TAS 200 are broadly the same as those that appeared in the exposure draft. However, the text has been amended in places to reflect the feedback received and provide clarity.
- 1.11 Section 2 summarises the comments that we received in answer to the specific questions that were posed in Annex 1 of the consultation paper on Scope. Section 3 considers the comments on the provisions we proposed. Section 4 considers comments on our impact assessment and Section 5 considers the further comments we received. Section 6 explains the changes that we have made to the exposure draft of TAS 200.
- 1.12 We have published the final version of <u>TAS 200</u> along with a <u>marked up version</u> to show changes from the exposure draft.

# 2 Analysis of responses – scope of TAS 200

2.1 The questions in Annex 1 of the consultation paper concerning the scope of TAS 200 are repeated below with a summary of points made in the responses and our reactions to those responses.

# Regulatory balance sheets

- I.1.1. Do you agree that technical actuarial work to support the preparation of the balance sheet for regulatory purposes, (other than technical actuarial work preparing information on an insurer's pension schemes), should be in the scope of TAS 200?
- 2.2 All but one of the respondents to question I.1.1 agreed that technical actuarial work concerning the regulatory balance sheet should be in scope.
- 2.3 One respondent suggested that the scope of the work for Solvency II regulatory purposes should be limited to technical provisions only. Its argument for this narrower scope is that Solvency II regulation only places an obligation on the Actuarial Function with respect to estimating technical provisions, whereas the respondent considered that estimating values for other parts of the balance sheet, for example marking to model the value of illiquid assets, may be done by non-actuaries and therefore is not technical actuarial work.
- 2.4 We do not support the view that because work may be done by non-actuaries that precludes it from being technical actuarial work and therefore outside the scope of the TAS regime. Our definition of technical actuarial work is deliberately drawn so as to be broadly applicable. We accept that the use of the principles and/or techniques of actuarial science are not exclusive to actuaries but some or all of them may be used from time to time by other experts, including economists, demographers and statisticians. However, it is recognised by those commissioning work that, through their training and experience, actuaries are particularly qualified to carry out work that requires the use of those principles and/or techniques.
- 2.5 Groups of insurers are also subject to prudential regulatory supervision and are required to demonstrate that they have sufficient own funds to meet group capital requirements. We have therefore amended the definition of an insurer in the Glossary of defined terms used in FRC technical actuarial standards to clarify our intention that the scope includes technical actuarial work supporting the preparation of the prudential regulatory balance sheet of a group of insurers.
- 2.6 We therefore confirm that all technical actuarial work supporting the preparation of an insurer's and a group of insurers' prudential regulatory balance sheet is within the scope of TAS 200.

# **General Insurance Business written by Lloyd's Syndicates**

- I.1.2 Do you agree that technical actuarial work to support the provision of an opinion for a Lloyd's syndicate regarding the claims provisions should be in the scope of TAS 200?
- 2.7 All of the respondents to question I.1.2 agreed that the provision of a Syndicate Actuary's Opinion should be in scope.

- 2.8 We therefore confirm that this work is within the scope of TAS 200.
- 2.9 Lloyd's suggested that we consider future-proofing the wording should it decide that it wishes to amend its requirements and we have amended the wording to reflect this suggestion.
- 2.10 Another respondent suggested that there is the potential for the scope to be read more broadly to include other work giving assurance to other third parties such as US regulators. Our standards apply within the FRC's geographic scope as outlined in paragraph 5.5 of our *Framework for FRC technical actuarial standards* which would exclude work providing assurance for overseas market regulators. We have amended the preamble to the definition of the scope of TAS 200 to make this explicit. We also intend that the scope should be restricted to any opinions required by Lloyd's and we have amended the wording to make this clear.

# **Financial statements**

- I.1.3 Do you agree that technical actuarial work to support the preparation of financial statements that are intended to give a true and fair view of their financial position and profit and loss (or income and expenditure) for insurers (other than technical actuarial work preparing information on an insurer's pension schemes) should be in the scope of TAS 200?
- 2.11 All but one of the respondents to question I.1.3 agreed that technical actuarial work concerning an insurer's financial statements should be in scope.
- 2.12 One respondent repeated their suggestion that the scope of the work should be limited to technical provisions and reinsurance assets using the same argument as it used for work supporting the preparation of prudential regulatory balance sheets. As discussed in paragraph 2.4, we do not support this view.
- 2.13 We therefore confirm that this work is within the scope of TAS 200.
- 2.14 It was observed that if an insurer is part of a non-insurance financial conglomerate, its parent company may include items in its financial statements placing a value on its insurance business. These items may be based on the results of technical actuarial work. Such work is currently in scope of the Insurance TAS and it was not our intention that it should now be excluded. We have therefore amended the wording to confirm that this work will be in scope of TAS 200.
- 2.15 One respondent noted that they also provide advice on the valuation of provisions and contingent liabilities to assist non-insurance public bodies in preparing their financial statements. We expect that such work would be covered by TAS 100. While there is a risk to the public interest if such provisions are misstated, we do not consider that the impact is sufficiently high to currently merit expanding the scope of TAS 200 beyond work for the financial statements of an insurer and its parent company. However, we encourage wider application of our specific actuarial standards in areas of actuarial work where practitioners consider it is proportionate.

#### **General Insurance Tax**

- I.1.4 Do you agree that technical actuarial work to express an opinion on the insurance liabilities appearing in tax returns for general insurance business under the General Insurers' Technical Provisions Regulations 2009, should be in the scope of TAS 200?
- 2.16 All of the nine respondents to question I.1.4 agreed that this work should be in scope.
- 2.17 We confirm that this work is within the scope of TAS 200.

Risk modelling underlying the calculation of the prudential regulatory capital requirements and the Own Risk and Solvency Assessment (ORSA)

- I.1.5 Do you agree that technical actuarial work to estimate regulatory capital requirements should be in the scope of TAS 200?
- I.1.6 Do you agree that technical actuarial work undertaken as part of the Solvency II Own Risk and Solvency Assessment (ORSA) should be in the scope of TAS 200?
- 2.18 All but one of the respondents to question I.1.5 which asked about the calculation of regulatory capital requirements, agreed.
- 2.19 One respondent disagreed because they believed that existing prudential regulation was sufficient and that as much of the work was performed by non-actuaries it was inappropriate that standards should just be applied by actuaries or just to the actuarial component of the work.
- 2.20 We accept that there is much prudential regulation surrounding the determination of an insurer's regulatory capital requirements. However, we consider that there is still substantial judgement required not only when developing and applying internal models but also when applying the standard formula approach.
- 2.21 As discussed in paragraph 2.4, we do not consider that just because the work is not reserved to actuaries it is not technical actuarial work. Finally, we agree that our standards have wider applicability beyond actuaries and we therefore encourage wider application.
- 2.22 Two respondents noted that the wording might suggest a narrow application to just work on the calculation of regulatory capital requirements. This is not our intention and we have amended the wording accordingly.
- 2.23 Most of the respondents to question I.1.6 which asked about the ORSA, agreed.
- 2.24 Again one respondent disagreed on the grounds that much of the material work may be carried out by non-actuarial functions. A second respondent also suggested that the work could be carried out by non-actuaries; thus the TAS imposed a material regulatory burden on actuaries which it suggested would increase the cost of actuarial work unnecessarily with no benefit to users.
- 2.25 Another respondent, while agreeing that it was appropriate to include the work in scope, suggested that there may be practical difficulties in complying with the TAS, given the likelihood of involvement from a number of other disciplines.

- 2.26 We accept that in developing its ORSA, an insurer will look to different people to bring their skills to bear. However, we consider that there is likely to be a significant component of technical actuarial work within the ORSA process.
- 2.27 We therefore confirm that this work is within the scope of TAS 200.
- 2.28 Two respondents questioned whether the scope was sufficiently clear and, in particular, whether the scope of the work included the validation or review of the ORSA. A third respondent asked if the scope covered model design, build and parameterisation.
- 2.29 A group of insurers is also required to calculate prudential regulatory capital requirements and prepare a group ORSA.
- 2.30 We intend all technical actuarial work concerning the calculation of prudential regulatory capital requirements and in developing an ORSA to be in scope.

#### **Insurance Transformations**

- I.1.7 Do you agree that technical actuarial work to support:
  - schemes of arrangement;
  - Part VII transfers; and
  - other transformations

should be in the scope of TAS 200?

- 2.31 All but one of the respondents to question I.1.7 agreed that insurance transformations should be in scope. The respondent who disagreed considered the regulation surrounding transformations, the need for Court approval and the Independent Expert review were sufficient risk mitigants.
- 2.32 We recognise that there is regulatory guidance on insurance transformations but there still remains a substantial place for judgement. The Courts and regulators will rely on the Independent Expert's opinion which is often provided by actuaries.
- 2.33 We therefore confirm that this work is within the scope of TAS 200.
- 2.34 One respondent, while supporting the inclusion of the work in scope was concerned that property & casualty (P&C) actuaries might be at a disadvantage in respect of P&C transformations given the additional regulatory burden imposed by TAS 200. We understand that regulation requires actuaries to take a prominent role in respect of life insurance transformations whereas this is not a requirement for P&C transformations. However, actuaries are very often involved in these P&C transformations and reliance will be placed on the results of their work.
- 2.35 One respondent indicated that it provided advice on policy issues concerning transformations and proposed tightening up the wording to eliminate possible ambiguity. We have amended the wording to include such work.

# With-profits discretion

- I.1.8 Do you agree that technical actuarial work to support the exercise of discretion concerning with-profits life insurance policies should be in the scope of TAS 200?
- 2.36 All but one of the eleven respondents to question I.1.8 agreed that this work should be in scope.
- 2.37 The only respondent who did not agree considered that the existence of the With-Profits Actuary and the With-Profits Committee were a sufficient risk mitigant. We consider that the work of the With-Profits Actuary should be in scope as the With-Profits Committee when advising and reporting on the exercise of discretion, and management when exercising discretion, both rely on information and advice from the With-Profits Actuary concerning the fair treatment of with-profits policyholders.
- 2.38 One respondent raised the issue of increases in charges on unit-linked business. Work concerning post-sale changes in charges for unit-linked business is in the scope of the current Insurance TAS. Technical actuarial work concerning changes to unit-linked charges will be in the scope of TAS 100. We note that the FCA has investigated the governance of unit-linked business which indicated some poor practices by individual insurers. The FCA's conclusions on its review indicated to us that the risk of poor policyholder outcomes arising from insufficient or inadequate technical actuarial work was limited.
- 2.39 We therefore confirm that we are retaining actuarial work concerning the application of discretion in with-profits business within the scope of TAS 200. However, we have moved the description of technical actuarial work concerning with-profits discretion to the end of the list of work in scope of TAS 200. We consider that the provisions applying to this specific work have wider application to all the other areas of technical actuarial work in scope of TAS 200 when considering with-profits life insurance policies. We have added a preamble to the provisions relevant to with-profits discretion to make this clear.

# **Audit and assurance**

- I.1.9 Do you agree that technical actuarial work to support the provision of an audit opinion on an insurer's financial statements should be in the scope of TAS 200?
- I.1.10 Do you agree that technical actuarial work to support the provision of an auditor's assurance opinion for regulatory reporting should be in the scope of TAS 200?
- 2.40 All respondents to question I.1.9 agreed that this work should be in scope. One of the respondents, an audit firm, indicated that they understood that the user of the work in scope under this particular item is the audit engagement leader and not the insurer being audited. We confirm that this is our intention. Work for the preparer of the financial statements and prudential regulatory reports is separately in scope of TAS 200.

# **Pricing frameworks**

- I.1.11 Do you agree that technical actuarial work to support the development and application of pricing frameworks for products provided by an insurer should be in the scope of TAS 200?
- I.1.12 Do you agree that technical actuarial work to support individual pricing decisions should not be in the scope of TAS 200?
- 2.41 The majority of the respondents to question I.1.11 supported including the work in scope; one consulting firm indicated that while it might be appropriate for work concerning life insurance to be in scope, the nature of pricing work in P&C insurance was sufficiently different as to make it inappropriate.
- 2.42 All the respondents to question I.1.12 agreed that individual pricing decisions should not be in the scope of TAS 200 although one insurer suggested that the pricing of large risks, such as block annuity business, would benefit from the additional rigour imposed by TAS 200 over TAS 100. We consider that an insurer which has a bulk annuity product line is likely to have an overarching pricing framework for this line of business which would be within scope of TAS 200, with any bespoke pricing for individual transactions covered by TAS 100.
- 2.43 Of those respondents who did not agree with the inclusion of pricing frameworks, two respondents questioned whether there was sufficient risk to the public interest arising from decisions about the frameworks used by insurers to price their products to justify the inclusion of this work in scope.
- 2.44 We consider there is a high risk to the public interest if actuarial work supporting pricing frameworks is of poor quality. The risk of poor quality actuarial work is that products are mispriced. This could result in, for example, customers being treated unfairly and risk to the profitability of the business resulting in solvency risk.
- 2.45 Significant pricing errors may therefore have a significant impact on an insurer's performance. It can also lead to under-reserving which has a consequential impact on financial reporting.
- 2.46 We do not accept that TASs will restrict product innovation. We accept that there will be more risk attached to new products but we consider it is important that when considering the introduction of new products, management should be fully appraised of the risks they might be taking on.
- 2.47 Solvency II requires the Chief Actuary to provide an annual opinion on underwriting policy. Lloyd's, requires its Managing Agents to have a demonstrable and transparent written pricing policy which provides a clear expectation of pricing levels and explanation on how pricing will deliver the projected results within a Syndicate Business Plan and how pricing will be managed over the relevant underwriting cycle. Managing Agents should also ensure that pricing models are reviewed at least annually and re-calibrated as appropriate by personnel with relevant experience (such as actuaries) in line with planned loss ratios.
- 2.48 More generally, in order to monitor and control underwriting risk against risk appetite, we would expect the Risk Function to be considering pricing frameworks.
- 2.49 We also note that the FCA was sufficiently concerned about the renewal pricing practices in general insurance that they carried out a review and a consultation. While

- this largely relates to the commercial decision-making process which we do not consider is technical actuarial work, we would expect that pricing models using actuarial techniques will often underpin pricing work in this area.
- 2.50 The emphasis on underwriting policy described in the preceding paragraphs indicates that both Lloyd's and the FCA consider there is a significant risk to their objectives if pricing is inadequate or inappropriate.
- 2.51 Some respondents were concerned that the work was not exclusive to actuaries, with other experts such as data analysts and statisticians being involved. We agree that other experts may be used to develop insurance pricing frameworks. However, we consider that the principles and techniques of actuarial science will be central to the development of pricing frameworks in insurance and that actuaries will often play a significant role.
- 2.52 There was also a concern about the boundary between work on developing and implementing pricing frameworks and work on individual risk pricing that we want to exclude. A number of respondents suggested it would be helpful if there is a definition of pricing framework in the Glossary pointing out that we have provided one in the consultation paper. We agree and have included the following definition in the Glossary.

The set of product pricing principles and the **measures**, **methods**, assumptions and **models** implementing those pricing principles that support an **insurer's** premium rates or product charges.

- 2.53 We have therefore decided to retain technical actuarial work concerning pricing frameworks in the scope of TAS 200.
- 2.54 We consider that for individual risk pricing the requirements of TAS 100 are sufficient.

# Areas of technical actuarial work not in the proposed scope of TAS 200

- I.1.13 Do you agree that the other areas of technical actuarial work described in paragraphs 1.35 to 1.42 should not be in the scope of TAS 200?
- 2.55 Most respondents to this question agreed that sales and purchase of blocks of insurance business, reinsurance to close and embedded values which are currently in scope of the Insurance TAS should not be in scope of the TAS 200.
- 2.56 Lloyd's agreed that there was limited risk to the public interest in reinsurance to close but stated that it regarded the application of TAS 200 as good practice in this area.
- 2.57 One respondent suggested that embedded value work might warrant inclusion in scope. To the extent that components of an embedded value are included in an insurer's or its parent company's financial statements then this work will fall in scope. Where the work is for internal management purposes then we consider that there is insufficient risk to the public interest to justify its inclusion in scope of TAS 200.
- 2.58 One respondent questioned why the actuarial opinions required by Solvency II were not in the scope of TAS 200. We consider that these opinions are controls and that aspects of the work which underpin these opinions are likely to be in the scope of TAS 200; work such as the assessment of liabilities, minimum capital requirements, the ORSA, and pricing frameworks. Therefore, we consider that the provision of the opinions is adequately covered by TAS 100.

2.59	We therefore confirm our risk assessment in respect of the technical actuarial work described in paragraphs 1.35 to 1.42 of the consultation shown in Appendix A of consultation paper: <i>Revised Specific TASs</i> . This work will just be subject to TAS 100.

# 3 Analysis of responses – provisions of TAS 200

3.1 The questions in Annex 1 of the consultation paper concerning the provisions of TAS 200 are repeated below with a summary of points made in the responses and our reactions to those responses. The numbering of the provisions refers to the numbering of the provisions in the exposure draft.

# I.2.1 Do you have any comments on the proposed core provisions?

# Overlap between TAS 100 and TAS 200

- 3.2 Some respondents questioned whether the TAS 200 core provisions add materially to the requirements of TAS 100 pointing to the granularity of the provisions and noting some duplication.
- 3.3 We accept that at a principles-based level, TAS 100 does provide a substantial degree of assurance that technical actuarial work is good quality. However, we consider that, for certain specified work supporting decisions in matters where there is a high risk to the public interest, it is necessary to build on the high-level principles in TAS 100 and provide specific requirements that need to be followed to ensure users are reliably-informed.
- 3.4 In response to the feedback, we have set out how we have built on the TAS 100 principles and provisions for each of the core provisions along with any other changes in response to feedback.

#### **Provision 1**

#### **Exposure draft text**

Judgements shall reflect the nature of the insurance and reinsurance obligations, the risks faced by the entity relevant to the **technical actuarial work** and the purpose of that work.

- 3.5 Principle 1 of TAS 100 requires that judgement:
  - ".....shall be exercised in a reasoned and justifiable manner;..."
- 3.6 We consider that TAS 200 core provision 1 builds on this by requiring that the reasoning underpinning the judgements made should explicitly take account of, inter alia, three specific matters:
  - the nature of the insurance obligations;
  - the risks faced by the entity relevant to the work; and
  - the purpose of the work.
- 3.7 One respondent pointed out that paragraph 2.5 of Annex 1 requires the actuary to take account of "...all risks faced by the entity..." and suggested this may be onerous. We agree, noting that the consultation document goes further than required by provision 1 itself. In order to clarify the interpretation of this provision we propose to limit the risks to be considered to the material risks. This is consistent with provision 5.5(2) of TAS 100 provision 5.5 which provides that:

- "Communications shall: ... state the nature and significance of each material risk or uncertainty faced by the entity in relation to the technical actuarial work and explain the approach taken to the risk."
- 3.8 One respondent pointed out that the only reference to reinsurance in TAS 100 and TAS 200 is in this provision. As a reinsurance contract is a specific type of insurance contract we agree that there is no need to explicitly refer to reinsurance. We have amended the definition of both insurance business and insurer in the Glossary to include the effecting or carrying out of reinsurance contracts as well as insurance contracts. This change has enabled us to remove from the Glossary the separate definitions on reinsurance business and reinsurance.
- 3.9 We have therefore revised provision 1 as follows:

Judgements shall reflect the nature of the insurance obligations, the **material** risks faced by the **insurer** relevant to the **technical actuarial work** and the purpose of that work.

#### **Provision 2**

# **Exposure draft text**

**Communications** shall describe the sensitivity of results to **material** judgements or a combination of judgements.

- 3.10 Principle 1 of TAS 100 also requires that:
  - "....**material** judgements shall be communicated to **users** so that they are able to make informed decisions understanding the matters relevant to the **actuarial information**."
- 3.11 Provision 2 builds on TAS 100 by requiring communications to include a description of the sensitivity of the results to the material judgements. We consider this will support understanding and informed decision-making concerning the work in scope of TAS 200.
- 3.12 One respondent suggested a clarification of the wording to make it clear that judgements may be material in themselves or when taken in combination. We have therefore revised provision 2 as follows:
  - "Communications shall describe the sensitivity of results to judgements that are material either individually or in combination."

#### **Provision 3**

#### **Exposure draft text**

**Communications** shall explain any reasonably foreseeable circumstances under which the **technical actuarial work** would no longer be valid.

- 3.13 Two respondents were concerned that explaining "any reasonably foreseeable circumstances" is potentially onerous and may lead to "boiler plate" caveats which may not be in users' interests.
- 3.14 We consider users' understanding will be enhanced if they are provided with information concerning possible changes in circumstances that might invalidate the results of the work to ensure that users use actuarial information in an appropriate manner.

- 3.15 We have considered the feedback alongside the intention behind the provision. We agree that the provision could be over-interpreted and considered whether appropriate application of other provisions could achieve the same outcome.
- 3.16 The Communications principle (principle 5) and related provisions in TAS 100 set requirements for ensuring that the user understands the actuarial information communicated to them.
- 3.17 In particular, we consider that a robust articulation of scope, purpose and user as required by provision 5.1 of TAS 100, should mitigate the risk of inappropriate use of the actuarial information. We also consider that the provisions requiring the communication of the limitations in the actuarial information resulting from data (provision 2.5) and models (4.5) should also ensure that users understand when use of the actuarial information is appropriate.
- 3.18 Additionally, paragraph 5.3 of the Actuaries Code is a further mitigant as it states:
  - "Members will take such steps as are sufficient and available to them 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."
- 3.19 We have therefore concluded that the risk of users using actuarial information inappropriately is mitigated by other provisions and have removed provision 3.

# **Exposure draft text**

The **documentation** of **data** used in the **technical actuarial work** shall include **data** definitions, **data** sources, **data** checks and controls, and the source and justification of any **data** proxies.

- 3.20 Provision 2.3 of TAS 100 requires that:
  - "Data used in technical actuarial work, the checks and controls that have been applied to that data and any actions taken to improve insufficient or unreliable data shall be documented."
- 3.21 Provision 4 of TAS 200 builds on this by a requirement to document explicitly data definitions; data sources; and the source and justification of any data proxies.
- 3.22 TAS 100 does not deal specifically with data definitions nor with data proxies. Paragraph C.5.3 of TAS D requires the documentation of data definitions. Paragraphs C.5.11 to C.5.15 of TAS D deal with the approach to incomplete or inadequate data including the use and documentation of data proxies.
- 3.23 We acknowledge there is duplication of the requirement to document data checks and controls. However, we consider it is useful to include all data documentation requirements in one provision.
- 3.24 We have made no change to this provision (now provision 3 in TAS 200).

# **Exposure draft text**

The **documentation** of the **data** used in the **technical actuarial work** shall include the rationale for grouping **data**, the criteria used to determine the groups and the resultant groupings; and the **data** points removed and the rationale for their removal.

- 3.25 This provision carries forward paragraphs C.4.9 and C.4.13 of TAS M. They are not explicitly included in TAS 100.
- 3.26 One respondent suggested that sometimes groupings are prescribed. In that case, it is important that the user understands that this is the case.
- 3.27 Another respondent suggested that this may lead to significant documentation for P&C pricing work. However, we consider that the impact of grouping in pricing work is likely to be material and therefore it is important that it is appropriately documented.
- 3.28 We have made no change to this provision (now provision 4 in TAS 200).

#### **Provision 6**

# **Exposure draft text**

A set of checks shall be constructed and performed in order to determine the extent to which, taken overall, the **data** is sufficiently accurate, complete and appropriate for **users** to rely on the resulting **actuarial information**.

- 3.29 This provision carries forward TAS D.C.5.
- 3.30 TAS 100 principle 2 only requires that data:
  - "....shall be appropriate for the purpose of [the **technical actuarial work**] so that **users** can rely on the resulting **actuarial information**."
- 3.31 This provision builds on this principle by making an explicit requirement to construct and perform checks on the data for the purpose of enabling a judgement to be made on both the accuracy and the completeness of the data.
- 3.32 We have made no change to this provision (now provision 5 in TAS 200).

#### **Provision 7**

# **Exposure draft text**

**Communications** shall explain any **data** proxies used in the **technical actuarial work** and their rationale.

3.33 Provision 2.3 of TAS 100 and core provisions 4 and 5 of TAS 200 describe the data documentation required for work in scope of TAS 200 including the requirement to document the source and justification of any data proxies.

- 3.34 Provision 2.4 of TAS 100 prescribes what needs to be communicated to users concerning the data.
  - "Communications shall describe the data used in the technical actuarial work, the source of the data, the rationale for the selection of the data, whether checks and controls have been applied, any material uncertainty in the data, and the approach taken to deal with that uncertainty."
- 3.35 If data proxies are used to allow for insufficient or unreliable data, we consider that their use should be explicitly explained to users. This will enhance users' understanding of the judgements made.
- 3.36 We have made no change to this provision (now provision 6 in TAS 200).

# **Exposure draft text**

**Communications** shall include the derivations of **material** assumptions used in the **technical actuarial work**.

- 3.37 This provision was seen as potentially onerous by three respondents. They consider this suggests a requirement to include detailed and potentially complex technical derivations in communications. An example quoted was an assumption on mortality improvements the derivation of which can be "very complex and highly judgemental".
- 3.38 TAS 100 requires a description of the rationale underlying the selection of material assumptions. We consider this provision adds the additional requirement that, when an understanding of the derivation of an assumption may have a material effect on the decisions of users, then this derivation should be provided. For the work in scope of TAS 200, we consider an understanding of the methods used and judgements made in developing material assumptions is likely to have such a material effect.
- 3.39 We have made no change to this provision (now provision 7 in TAS 200).

# **Provision 9**

#### **Exposure draft text**

Best estimate **measures**, assumptions and judgements shall be used to derive any estimates described as "best estimate", "central estimate" or other similar terms.

- 3.40 A number of respondents did not understand the purpose of this provision. They pointed out its circularity, the fact that best estimates and central estimates may mean different things to different people and be used in different contexts. It was suggested that the scope of the provision should be extended to all measures used not just "best estimates", "central estimates" or other similar measures.
- 3.41 The communications principle in TAS 100 requires that:

"Communications shall be clear, comprehensive and comprehensible so that users are able to make informed decisions understanding the matters relevant to the actuarial information."

- 3.42 Provision 4.3 of TAS 100 requires that:
  - "Communications shall explain the methods and measures used..."
- 3.43 TAS 100 is therefore not explicit about communicating the basis of any estimate e.g. whether it is a pessimistic, prudent, best, neutral or optimistic estimate.
- 3.44 The proposed provision is based on paragraph C.3.10 of TAS M.
  - "Neutral measures, assumptions and judgements shall be used to derive any estimates described as "best estimate". "central estimate" or other similar terms."
- 3.45 It builds on the lack of precision in TAS 100 provision 4.3 when considering estimates in which there is supposed to be no bias, such as a best estimate. Our intention was to ensure an absence of bias. Therefore, we have retained this provision, with amendments.
- 3.46 We have considered the feedback on the wording of the provision and agree that the wording is circular. We have amended the wording of the provision to include the text in the TAS M definition of "neutral".
- 3.47 We have therefore revised the provision as follows (now provision 8 in TAS 200):
  - "Measures, assumptions and judgements used to derive any estimates described as "best estimate", "central estimate" or other similar terms shall be neither optimistic nor pessimistic and shall not contain adjustments to reflect a desired outcome."

# **Exposure draft text**

Implementations and realisations of models shall be reproducible.

- 3.48 This provision carries forward the existing requirement of paragraph C.3.17 of TAS M. The only comment was that there was no definition of reproducible in the Glossary.
- 3.49 While not strictly a definition paragraph C.3.18 of TAS M states that:
  - "A reproducible **implementation** is one that produces the same outputs from identical inputs. A reproducible **realisation** is one that produces the same outputs each time it is run."
- 3.50 We have amended the definitions of implementation and realisation in the Glossary to include these definitions and have not emboldened reproducible in this provision. Thus the definition of implementation in the Glossary has been amended as follows:
  - "The formulae and algorithms of a **model** in a form that will perform the calculations required by the **specification**.

A reproducible **implementation** is one that produces the same outputs from identical inputs.

In many cases an **implementation** is a computer program, but other types of **implementation** are possible. For example, manual calculations are often used for the **implementation** of simple **models**."

3.51 The definition of a realisation in the Glossary has been amended as follows:

"An **implementation** together with a set of inputs and the corresponding outputs."

A reproducible **realisation** is one that produces the same outputs each time it is run.

For an **implementation** that is a conventional computer program, a **realisation** is a run of the program, together with the inputs used and the outputs produced. Runs with different **data** or parameters are different **realisations** even if the program itself has not changed."

3.52 We have made no change to the wording of this provision (now provision 9 in TAS 200).

#### **Provision 11**

# **Exposure draft text**

**Communications** shall describe the nature of any cash flows that are quantified including their timing.

- 3.53 One respondent considered that this might be onerous as it might not always be possible to specify a run-off, which might take many years, succinctly. A second respondent suggested that this provision would not be relevant to some of the work in scope of TAS 200. A third respondent suggested that the wording was not clear and should be clarified.
- 3.54 This provision carries forward the paragraph C.5.10 of TAS R.
- 3.55 Much actuarial work in insurance involves the projection of insurance cash flows sometimes over extended periods. For example, in estimating the value of insurance contract liabilities it is necessary to project both future premium income (life business) and claim payments (both life and P&C) business. Similarly, pricing frameworks for personal lines insurances may take account of multiple renewals.
- 3.56 We consider that it is important for users, in understanding the judgements made and the risks and uncertainty associated with the work, that they understand both the nature of the cash flows being projected and the timing of those cash flows.
- 3.57 In determining the extent of any description provided to meet this provision, practitioners may, taking account of materiality, consider the effect that the description might have on the users' decision.
- 3.58 We have made no change to this provision (now provision 10 in TAS 200).

# I.2.2 Do you consider it necessary for the term "best estimate" to be defined?

3.59 Most of those responding to this question said it was unnecessary to define the term "best estimate". A number of respondents said that the basis of any estimate should be defined in communications. As one respondent pointed out, provision 4.3 of TAS 100 requires communications to include an explanation of the measures used and provision 5.2 requires that those communications be suited to the understanding and levels of relevant technical knowledge of the user. This should mean that where a best estimate is material to the work, then the actuary should communicate what is meant by the term and the significance of it to the purpose of the work.

- 3.60 Provision 9 requires that any estimate described as a "best estimate" uses measures, assumptions and judgements that are unbiased.
- 3.61 We therefore have not provided a definition of best estimate in the Glossary.

# I.2.3 Do you have any comments on the proposals relating to pricing frameworks?

- 3.62 Some of the respondents to this question repeated that they did not consider this work should be in scope. Others suggested including a definition of pricing frameworks in the Glossary.
- 3.63 We are retaining technical actuarial work concerning pricing frameworks in scope for the reasons outlined in paragraphs 2.41 to 2.54 and have included a definition of a pricing framework in the Glossary which is reproduced in paragraph 2.52.

# **Provisions for specified work**

- I.2.4 Do you have any comments on the proposed provisions for regulatory balance sheets?
- I.2.5 Do you have any comments on the proposed provisions for financial statements?
- 3.64 Respondents to these questions generally provided some particular feedback to individual questions.

#### **Provision 12**

- 3.65 Some respondents suggested that provision 12 requiring disclosure of compliance with relevant regulations had wider applicability. One therefore suggested that it be a core provision applying to all work within the scope of TAS 200. Others suggested that this requirement is adequately covered by TAS 100 referring, in particular, to provision 5.1. They were also concerned that asserting compliance with regulation is a legal judgement or may be subject to caveats if interpretation of how the regulations apply requires judgement.
- 3.66 We agree that provision 12 has wider applicability. We consider that this provision gives rise to a specific disclosure requirement to be included in communications which is not explicit in TAS 100. We also consider that if there is judgement applied in interpreting regulation, it is important that users are made aware of this as the users are usually ultimately responsible for compliance.
- 3.67 We have therefore made this provision a core provision applicable to all technical actuarial work in the scope of TAS 200 as follows (provision 11 in TAS 200):
  - "If **technical actuarial work** is performed in order that the **insurer** or any other party commissioning the work complies with regulations, **communications** shall state the regulations applying to the work and confirm compliance with them."

# **Provision 13**

3.68 One respondent suggested that we extend provision 13 to include explanations of how any observed differences had been taken into account in the current exercise. We consider that provision 8 (now provision 7 in TAS 200) which requires a derivation of

- material assumptions should include an explanation of how any such difference has been taken into account.
- 3.69 Another respondent suggested that we needed to clarify what we intended by this provision. We have amended the provision to make it clearer as follows (now provision 12 in TAS 200):
  - "Communications shall explain any material difference between the actual experience emerging over the period since the previous exercise carried out for the same purpose (if one exists) with that assumed in that previous exercise."

3.70 Some respondents indicated that they understood this to refer only to the Solvency II risk margin. We understand this confusion as the consultation document used the Solvency II risk margin as an illustrative example. Our intention was not to limit the application of this provision but that it should have wide application. We have amended the wording to make this clear (now provision 13 in TAS 200):

# "Communications shall explain:

- (a) the relationship between any estimate of the value of an asset or liability resulting from the **technical actuarial work** and a best estimate of the value of that asset or liability;
- (b) the derivation of any adjustment for risk included in the estimate; and
- (c) any **material** change in the relationship between the estimate and a best estimate, and the adjustment for risk compared with the previous exercise carried out for the same purpose (if one exists)."
- I.2.6 Do you consider that TAS 200 should require communications to explain what the term "best estimate" is meant to represent?
- 3.71 The majority of the respondents to this question agreed.
- 3.72 There is no generally accepted definition of a "best estimate". We consider that how a best estimate is determined will depend on the context of the work. For example, Solvency II defines what a best estimate should represent in its particular context.
- 3.73 We have considered that by having clarified the wording of provision 8 (which was provision 9 in the exposure draft) in TAS 200 (see paragraphs 3.40 to 3.47), together with provision 4.3 of TAS 100, there is sufficient communication to explain what the term "best estimate" is meant to represent. Provision 4.3 of TAS 100 requires that communications explain the measures used in the technical actuarial work and we expect that when a best estimate is used as a measure in technical actuarial work in the scope of TAS 200 its meaning should be made clear. The revised provision in TAS 200 then provides a constraint on the characteristics of a best estimate in the context of technical actuarial work in the scope of TAS 200.
- 3.74 We therefore do not consider it is necessary to provide any additional requirements in TAS 200 to require an explanation of what the term "best estimate" is meant to represent.

# I.2.7 Do you have any comments on the proposed provisions for risk modelling?

# **Provisions 15 and 16**

- 3.75 Two respondents considered the proposed provisions to be narrowly focussed and of insufficient value to users. Two other respondents suggested that as technical actuarial work may only play a small part in the overall work concerning assessment of regulatory capital and the ORSA, the provisions would also have limited value in ensuring the quality of the final product.
- 3.76 Other responses suggested that the wording of provision 15 suggested that there should always be differences between a stressed balance sheet and the regulatory balance sheet and that assumptions about co-dependencies should change.
- 3.77 We acknowledge that technical actuarial work may only play a supporting role in the determination of regulatory capital requirements and in the ORSA; however there will be substantial reliance on the quality of that work.
- 3.78 While the specific provisions may be limited in scope they address areas of particular concern when looking at the impact of stressed scenarios and the need to consider multiple projections. As well as these specific provisions, the core provisions of TAS 200 will also apply to this work.
- 3.79 We have made some small amendments to provision 15 to reflect the comments made as follows (now provision 14 in TAS 200):
  - "Communications for technical actuarial work that include stressed scenarios and use assumptions about the dependencies of risks shall:
  - (a) explain any differences between the balance sheet being stressed and that prepared for prudential regulatory purposes;
  - (b) describe any changes to the management actions assumed in the stressed scenarios from those assumed in preparing the balance sheet for prudential regulatory purposes; and
  - (c) describe any changes between assumptions about the dependencies used in the stressed scenarios and those used for prudential regulatory purposes and if there are no changes explain why."
- 3.80 We have made no change to provision 16 (now provision 15 in TAS 200).

# I.2.8 Do you have any comments on the proposed provisions for insurance transformations?

#### **Provisions 17 and 18**

- 3.81 Most of the respondents to this question indicated that they considered the provisions appropriate. One respondent suggested that the requirements might require more work to be done than strictly necessary. Another respondent made a suggestion to clarify the wording.
- 3.82 In terms of setting assumptions, in provision 17 (now provision 16 in TAS 200), proper emphasis may mean little or no emphasis. As for provision 18, we consider it is important that decision-makers are fully appraised of the impact on policyholders who may be affected by the transformation.

- 3.83 We have made a small change in provision 18 (now provision 17 in TAS 200) replacing the words "a decision-making entity" with the defined term "users".
- I.2.9 Do you have any comments on the proposed provisions for with-profits discretion?

#### **Provisions 19 to 21**

- 3.84 Consistent with moving the description of the technical actuarial work concerning with-profits discretion to the end of the list of work in scope of TAS 200 we have moved the provisions concerning with-profits discretion to the end of the list of provisions. Thus, provisions 19 to 21 in the exposure draft have become provisions 21 to 23 in TAS 200. We consider that these provisions have wider application to all the other areas of technical actuarial work in scope of TAS 200 when considering with-profits life insurance policies. We have added a preamble to make this clear.
- 3.85 There were only a few responses to this question of which two indicated that the provisions were sensible and one suggested that provision 20 might be quite narrowly interpreted.
- 3.86 One of these respondents also suggested that changes to investment strategy which are likely to affect policyholder benefits should be taken into account when considering the application of provision 20 on communicating the effects of the exercise of discretion on policyholder benefits. We consider that provision 20 is broadly drawn to include all work advising on the exercise of discretion. In particular, the investment strategy will often be defined in the Principles of Financial Management of a with-profit fund and changes to those principles are one of the discretions that may be exercised.
- 3.87 Another respondent suggested that provision 20 be extended to include reporting the effects on amounts becoming due to shareholders in a proprietary insurer. We agree that shareholders may have an interest in the exercise of discretion and that sometimes this interest can conflict with the interests of policyholders. It is important that users are aware of all the issues involved when making decisions on the exercise of discretion. We have therefore amended provision 20 (now provision 22 in TAS 200) to make explicit reference to shareholders' interests.
  - "Communications advising or reporting on the exercise of discretion shall indicate the effects of the exercise of discretion proposed or taken on policyholders' benefits, on amounts allocated to shareholders, if any, and on any with-profits estate affected."
- I.2.10 Do you have any comments on the proposed provisions for technical actuarial work to support the provision of an auditing opinion?
- I.2.11 Do you have any comments on the proposed provisions for technical actuarial work to support the provision of an assurance opinion for regulatory purposes?

#### **Provisions 22 to 24**

- 3.88 Most of the six responses to these questions were supportive. Two respondents considered that the provisions had wider applicability suggesting that they be included as core provisions. One respondent was concerned about a potential increase in cost.
- 3.89 We agree that the prudential regulatory requirements applying under Solvency II for the provision of an assurance opinion may result in an increase in the amount of technical

- actuarial work performed. However, we consider this increase is not due to the requirements of TAS 200.
- 3.90 We agree that it will often be useful that any changes to the scope of an assignment are documented and that any reliance on data prepared by third parties should be disclosed. We also agree that when an actuary is reviewing the work of others then a degree of professional scepticism is useful. However, we consider that these provisions have particular applicability to work supporting an audit.
- 3.91 We therefore have made no change to these provisions (now provisions 18 to 20 in TAS 200 other than adding "prudential" to provision 23 (provision 19 in TAS 200) for clarity.

# 4 Impact assessment

- I.3.1 Do you agree that the replacement of the Insurance TAS with TAS 200 will not lead to disproportionate costs?
- I.3.2 Do you have any comments on our analysis of the impact of the changes set out in section 3?
- 4.1 Most of the responses to I.3.1 agreed with our assessment that replacement of the Insurance TAS by TAS 200 would not lead to disproportionate costs.
- 4.2 Of those commenting on the impact of the changes a number commented that the proposals represented a simplification of the current regime, with one respondent adding that compliance would not be an issue and another responding indicating that costs might reduce.
- 4.3 However, four respondents were concerned that TAS 200 might lead to additional work being performed if the provisions were not implemented proportionately. One of these respondents was concerned about costs arising due to inclusion of technical actuarial work on internal model validation for prudential regulatory capital assessment if the TAS requirements conflict with the Solvency II requirements. They were also concerned about the inclusion of technical actuarial work supporting the ORSA given that the actuarial involvement might only be tangential. Another respondent was concerned that some P&C insurers might be deterred from using actuaries because of the regulatory burden imposed by TAS 200.
- 4.4 We consider that validation work on an internal model used to calculate the Solvency Capital Requirement (SCR) in accordance with Solvency II would normally fall within the scope of the Insurance TAS as described in our answer to Frequently Asked Questions from Practitioners no. 6.3¹ published in October 2012. Given that the preparation of the ORSA is a regulatory requirement, we consider that technical actuarial work to support its preparation already falls within the scope of paragraph C.1.7 of the Insurance TAS².
- 4.5 We expect practitioners to implement TAS 200 proportionately taking account of the nature, scale and complexity of the assignment and the benefit that users would be expected to obtain from the work.

https://www.frc.org.uk/Our-Work/Publications/BAS/FAQ-Question-6-3.pdf

Insurance TAS C.1.7 This standard shall apply to actuarial work concerning insurance business performed to enable an insurer or its parent undertakings to fulfil their obligations to their regulators and to the tax authorities.

# 5 Further comments

- I.4.1 Do you have any comments on the text of exposure draft of TAS 200?
- I.4.2 Do you have any further comments on the proposals in this consultation?
- 5.1 There was only one additional comment on the text of the exposure draft over and above those discussed in Sections 2 and 3 in which the respondent expressed some concern that a lay reader might get the impression from the stated purpose of TAS 200 that the actuarial work itself was of high risk to the public interest.
- 5.2 We consider that the purpose clearly states that the technical actuarial work which is subject to TAS 200 concerns matters where there is a high degree of risk to the public interest. This is brought out in the headings for each area of work in scope.
- 5.3 There were two further comments on the proposals both indicating that the respondents considered the proposals represented an improvement on the current FRC standards.

# 6 Changes to TAS 200: Insurance

#### Introduction

6.1 As a result of the responses we received to the consultation we have made changes to the text in the exposure draft of the TAS 200: *Insurance*. The material changes made are described in this section. The numbering of the provisions refers to the numbering of the provisions in the exposure draft.

# Scope of application

- 6.2 In line with amendments made to the other specific TASs, we have added text to clarify the geographic scope of TAS 200.
- 6.3 We have clarified the scope of the work on financial statements to confirm that it includes the reporting of an insurer's performance in the financial statements of an insurer's parent company and that work concerning the insurer's own pension schemes for its employees and ex-employees is excluded.
- 6.4 We have amended the wording under General Insurance Business written by Lloyd's Syndicates to clarify the opinion to which it applies.
- 6.5 We have amended the wording under General Insurance Tax to make it consistent with other descriptions of work in scope of TAS 200.
- 6.6 We have amended the heading defining the work on Risk modelling underlying the calculation of the prudential regulatory capital requirements and the ORSA to make it clear that the work in scope extends beyond risk modelling.
- 6.7 We have amended the scope of Insurance transformations to make it clear that it covers all work concerning insurance transformations.
- 6.8 We have moved the description of the work concerning the exercise of discretion for with-profits discretion to the end of the section on Scope. We have not changed the work in scope.
- 6.9 Consistent with the clarification that work concerning financial statements that is in scope includes work for an insurer's parent company's financial statements, we have also made it clear that work supporting an audit opinion on the parents company's balance sheet as far as it relates to its interest in an insurance subsidiary is included in scope.
- 6.10 Consistent with the clarification of work concerning regulatory balance sheets, we have clarified that work supporting the provision of an assurance opinion concerns an insurer's prudential regulatory balance sheet.

# Compliance

- 6.11 We have clarified the text on departures to include specific reference to TAS 200.
- 6.12 We have removed the sub-headings "materiality", "proportionality" and "disclosure".

#### **Core Provisions**

#### **Provision 1**

6.13 As a result of redefining the definition of insurance business and insurer in the *Glossary* we have deleted the reference to reinsurance obligations. We have also amended the provision to make it clear that it is the material risks to the insurer that need to reflected in any judgements made.

#### **Provision 2**

6.14 We have amended the wording to make it clear that communications should also describe the sensitivity to results when a number of judgements, which by themselves might be immaterial, when combined together may have a material impact.

#### **Provision 3**

6.15 We have deleted this provision.

#### **Provision 9**

6.16 We have amended the wording to make it clear that estimates described as a best estimate, a central estimate or other similar terms should be derived using measures, assumptions and judgements that are unbiased.

#### **Provision 12**

6.17 We have made this a core provision and clarified when it is to apply.

# **Provisions for specified work**

6.18 We have added a preamble to confirm that the following provisions apply to the relevant area of work as specified in the scope of TAS 200.

#### **Provision 13**

6.19 We have amended this provision to make it clear that it may be applied proportionately.

#### **Provision 14**

6.20 We have amended the wording to clarify our intent.

# **Provision 15**

6.21 We have amended the wording recognising that there may or may not be differences in balance sheets and changes in dependencies between risks in stressed scenarios.

# **Provision 18**

6.22 We have amended the wording to make it clear that users must be provided with sufficient information.

# Provisions 19, 20 and 21

- 6.23 We have moved the provisions concerning with-profits discretion to the end of this section. We have introduced them with a preamble that requires them to be considered for all work within the scope of TAS 200 concerning with-profits life insurance policies.
- 6.24 We have extended provision 20 to require that communications also indicate the effects of the exercise of discretion on amounts allocated to shareholders. Provisions 19 and 21 remain unchanged.

#### **Provision 23**

6.25 We have clarified that it is prudential regulatory information that may be materially misstated. This is consistent with other amendments to clarify that it is prudential regulatory reporting that is in scope of TAS 200.

# Glossary of defined terms used in FRC technical actuarial standards

- 6.26 We have amended the definition of an implementation to include a definition of a reproducible implementation.
- 6.27 We have amended the definition of insurance business to include effecting or carrying out reinsurance contracts. As a consequence we have deleted the definitions of reinsurance business and a reinsurer.
- 6.28 We have amended the definition of an insurer to include groups of insurers and to include effecting or carrying out reinsurance contracts.
- 6.29 We have included a definition of a pricing framework.
- 6.30 We have amended the definition of a realisation to include a definition of a reproducible realisation.

# Appendix A: List of respondents to the May 2016 consultation on TAS 200: *Insurance*

# Professional and trade bodies

Institute and Faculty of Actuaries Association of Consulting Actuaries Lloyd's

# Insurers, consultants and actuaries

Aviva plc
Barnett Waddingham LLP
Crystal Risk Consulting Ltd
Ernst & Young LLP
Government Actuary's Department
David Hare
Lane Clark & Peacock LLP
Mazars
Christopher O'Brien
PricewaterhouseCoopers LLP
Willis Towers Watson

**UMACS** Limited

XL Catlin