



Financial Reporting Council

Technical Actuarial Standard: Guidance

Technical Actuarial Work and Geographic Scope

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1 Introduction

Purpose

- 1.1 The FRC issues guidance for a number of specific purposes, for example to support compliance with requirements, or for interpretive, explanatory, contextual or educational purposes to support the use of judgement in applying principles-based standards. The overall purpose of this guidance is to improve the quality of technical actuarial work. The guidance is persuasive not prescriptive, and compliance is encouraged.
- 1.2 Where a practitioner perceives a need to determine whether a piece of work is in scope of Technical Actuarial Standard 100 (TAS 100), this guidance is intended to assist the practitioner in making that determination and, in particular:
 - a) whether the piece of work should be classified as ‘technical actuarial work’;
 - b) and, if so, whether the piece of work falls within the geographic scope of the FRC’s Technical Actuarial Standards.

Intended Audience

- 1.3 A ‘practitioner’ is a person carrying out work that is or potentially could be classified as ‘technical actuarial work’ as defined in TAS 100 and described within this guidance.
- 1.4 This guidance is aimed at practitioners who require guidance in determining whether their work is within scope of TAS 100. Intended users of actuarial work may also find it informative.
- 1.5 An ‘intended user’ is defined in TAS 100 as a “person or group of persons whose decisions **communications** are intended (at the time they are provided) to assist”.

Context

- 1.6 Paragraph 1.3 of TAS 100 states the following:

TASs promote high quality **technical actuarial work**, supporting the **reliability objective**:

To allow the **intended user** to place a high degree of reliance on **actuarial information**, practitioners must ensure the **actuarial information**, including the **communication** of any inherent uncertainty, is relevant, based on transparent assumptions, complete and comprehensible.

- 1.7 Therefore, practitioners may wish to adopt a default position of compliance with TAS 100 whenever carrying out work that could potentially fall within its scope.

1.8 Further, all members of the IFoA are required (by paragraph 2.1 of APS X1) to ensure that their work is substantially consistent with ISAP1¹. The framework of standards applying to members of the IFoA, including TAS 100, are substantially consistent with ISAP1, meaning that adopting a default position of compliance with TAS 100 will support compliance with the requirement of paragraph 2.1 of APS X1.

1.9 Paragraph 1.6 of TAS 100 sets out the conditions under which TAS 100 must be applied:

TAS 100 must be applied by all IFoA members carrying out **technical actuarial work** within the **geographic scope**. Wider adoption is encouraged and other relevant regulators and contracting parties may require **entities** and individuals who are not members of the IFoA to comply with TAS 100.

1.10 Determining whether a piece of work falls within the scope of TAS 100 involves assessing:

- a) whether the piece of work should be classified as 'technical actuarial work';
- b) and, if so, whether the piece of work falls within the geographic scope of the FRC's Technical Actuarial Standards.

1.11 If the work is 'technical actuarial work' and falls within the geographic scope, then TAS 100 applies.

1.12 Practitioners will, in some cases, have to exercise judgement to determine whether a piece of work falls within the scope of TAS 100. Practitioners may wish to do this prior to the work or assignment being carried out to avoid issues or inefficiencies associated with doing it retrospectively.

1.13 Practitioners may also wish to consider documenting and evidencing the basis for their assessment of whether the work falls within scope.

1.14 In the context of deciding whether or not the work falls within the scope of TAS 100, we consider the concept of 'responsibility' for the work.

1.15 The defined terms used in TAS 100 apply to this guidance.

¹ https://www.actuaries.org/IAA/Documents/CTTEES_ASC/Final_ISAPs_Posted/ISAP1_Review_adopted_1Dec2018_V2_16April2019.pdf

2 Responsibility

Responsible practitioner

- 2.1 This section considers the term 'responsible practitioner' for use within this guidance. In this context 'responsibility' relates to responsibility for TAS compliance in relation to a piece of work which falls or potentially could fall within the scope of TAS 100.
- 2.2 The degree to which an individual or entity is responsible for compliance in relation to a piece of work which falls or potentially could fall within the scope of TAS 100 will depend on the circumstances of the assignment, including the relevant legal, regulatory and professional framework.
- 2.3 For this purpose, a practitioner will be treated as 'responsible' for a piece of work, if they have the authority to determine, or to veto, the content of the actuarial information. The piece of work for which the practitioner is responsible may be a component part of a larger exercise.
- 2.4 When more than one practitioner is involved in a piece of technical actuarial work, it will normally be apparent which of them is 'responsible' for the actuarial information (and therefore for TAS 100 compliance). However, there may be cases where two or more practitioners have an equivalent authority, or power of veto, over the work. In such cases, it is good practice for the practitioners to discuss responsibility for the work and for compliance with TAS 100 at an early stage.
- 2.5 Being a signatory or a joint signatory of the work would normally be strong prima facie evidence that the signatory or joint signatory is 'responsible' for that work. However, it may be that a practitioner prepares a piece of work for signature by another party. For example, an actuary at an insurance company might be asked to prepare a report for a regulator but the final report might carry the signature of the CEO, who may or may not be subject to the same professional standards. The fact that the practitioner is not also the signatory would not, in itself, absolve the practitioner of the responsibility to ensure compliance with TASs. In such a case the practitioner may wish to agree with the signatory who has responsibility for TAS compliance. If it is agreed that the practitioner is responsible, they may wish to ensure that they have sight of subsequent and final versions of the actuarial information to ensure that the work remains compliant.
- 2.6 In the event of an allegation of misconduct or negligence, responsibility for compliance may ultimately have to be determined by the appropriate tribunal.
- 2.7 It is for the responsible practitioner to determine whether a piece of work should be (or is required to be) prepared in compliance with the TASs. If the responsible practitioner has concluded that compliance is required for the work, then, although the responsible practitioner is ultimately responsible for compliance in relation to that piece of work, they may require practitioners supporting that piece of work to provide evidence of compliance in relation to their supporting work.

2.8 Practitioners who support a responsible practitioner may therefore wish to ensure that they are aware of the requirements of the TASs when providing such support.

Multi-disciplinary teams

2.9 Often, practitioners will work in multi-disciplinary teams alongside colleagues from different disciplines who are involved in the same work but are not necessarily subject to the same professional standards. These teams might sometimes be led by an actuary but in other cases might be led by other professionals or specialists, for example underwriters, accountants, investment managers, etc. In many cases a piece of work being carried out by a practitioner will be signed off by a non-actuary.

2.10 Practitioners working in multi-disciplinary teams may wish to discuss compliance with TAS 100 at an early stage in order to determine what work or parts of work are within scope, who will have responsibility for ensuring compliance with TAS 100 where applicable and what each individual will be expected to contribute to such compliance by way of documentation and reporting.

2.11 Where the practitioner working in a multi-disciplinary team considers that they do not have authority to determine the final work product (and therefore ensure TAS compliance), then the practitioner may regard the person who does have that authority as the 'intended user' and ensure that the input they have provided to that person complies appropriately with TAS 100.

2.12 P7.4 of TAS 100 requires the following:

Practitioners' **communications must** state the **intended user**, the standpoint from which the practitioner is acting, the scope and purpose of the relevant **technical actuarial work** and who commissioned it.

2.13 Where the actuarial information sits alongside or informs information that is not the result of technical actuarial work but was produced by individuals working for the same employer, the responsible practitioner may wish to ensure the scope of their work is included within the TAS compliance statement so that there is complete clarity on which part of the work is technical actuarial work.

2.14 Where the actuarial information relies upon or includes information that is not the result of technical actuarial work, the responsible practitioner may wish to make this clear within the actuarial information, explaining any judgement exercised, including the basis for deeming the non-actuarial information suitable for inclusion / use in the actuarial information. This would be so that the intended user is fully informed of any judgement exercised and understands the extent to which any uncertainty or risk related to the non-actuarial work has been allowed for within the actuarial information.

3 Technical Actuarial Work

Definition

3.1 The TAS 100 Glossary gives the following definition:

Technical actuarial work:

Work performed for the **intended user**:

- (i) where the use of principles and/or techniques of actuarial science is central to the work and which involves the exercise of judgement; or
- (ii) which the **intended user** could reasonably regard as **technical actuarial work** by virtue of the manner of its **communication**.

Interpretation

3.2 In most cases it will be clear whether or not a piece of work is technical actuarial work.

3.3 However, for certain types of work it may be unclear whether TAS 100 applies, for example where a practitioner (either individually or as part of a team) is carrying out an exercise that involves application of a mixture of actuarial and non-actuarial principles and/or techniques.

3.4 To aid the practitioner in judging whether or not a piece of work falls within scope, we consider below the components of the definition of technical actuarial work.

Definition of 'intended user'

3.5 'Technical actuarial work' is work performed for an 'intended user'.

3.6 The TAS 100 Glossary gives the following definition:

Intended user:

A person or group of persons whose decisions **communications** are intended (at the time they are provided) to assist.

3.7 Although the definition refers to 'a person', the intended user may, in practice, be a body of individuals (e.g. a trustee body or the board of an insurance company).

3.8 Practitioners will need to determine whose decision a piece of work is specifically intended to assist. This will be particularly important in situations where the instruction to the practitioner has been delegated, meaning those instructing the practitioner will not necessarily be the ones making the decision(s) that the practitioner's work is intended to assist.

3.9 Furthermore, the users of actuarial work may potentially extend to several parties. For example, use of a Scheme Actuary's valuation report might extend to include trustees, the scheme sponsor and scheme members. Those to whom communications are addressed

(including clients and employers), regulators and third parties for whose benefit communications are provided (such as investors and policyholders) are all examples of possible users. However, it is only those whom the communications are *intended* to assist who are 'intended users' for TAS purposes, so policyholders, scheme members and regulators (for example) would not be 'intended users' if the communications were not intended to assist their decisions when they were provided.

- 3.10 Whilst it is only those users whom the communications are intended to assist (at the time they are provided) who are 'intended users' for TAS purposes, it is good practice for the practitioner to anticipate other likely uses of their communications and, where applicable, note any relevant limitations. For example, the regulator, the independent validation team and the pricing function may be likely to make use of a report to an insurer's Board on the determination of regulatory capital.
- 3.11 There will, of course, be situations where it is not possible to anticipate some uses of a piece of technical actuarial work. For example, the results of a solvency assessment of an insurer may subsequently be used by other practitioners as part of the due diligence carried out in relation to a possible acquisition of the insurer and the practitioner who prepared the solvency assessment would not have anticipated this use of the assessment at the time the work was performed.
- 3.12 TAS 100 does not apply in situations where there is no intended user, for example where a practitioner is involved in preparing articles or training materials for magazines, newsletters or books (provided that the work is of general application and is not recommending or promoting a course of action).
- 3.13 TAS 100 does apply in certain situations where the identity of an individual intended user is not known to the practitioner. For example, the intended user may make decisions based on output from an actuarial model produced and published by the practitioner specifically for use by a wide group of potential intended users. Examples of such models include:
- i) the CMI model;
 - ii) open-source software specifically targeting the actuarial community which is presented as actuarial and could reasonably be regarded as being technical actuarial work; and
 - iii) 'self-service' actuarial models developed for direct use by pension scheme trustees, management or members of a pension scheme.
- 3.14 In such cases where the practitioner is developing a model for use by third parties (on a basis which permits third parties to rely on the model or actuarial information output from it) then the practitioner will need to consider the boundary of the technical actuarial work that may fall within the scope of TAS 100. The actuarial information resulting from the technical actuarial work may be the model itself, in which case the application of TAS 100 will be to ensure that the model meets the reliability objective so that the intended user (i.e. the user of the model) can place a high degree of reliance on the model. The subsequent use and communication of the model output by the intended user would not normally fall within the scope of the practitioner's technical actuarial work, unless the practitioner has been

specifically engaged to provide advice, support or assurance in that respect. It would be the responsibility of the intended user to ensure that the subsequent use of the model and communication of its outputs is appropriate for the purpose and time of its use.

Work falling under the first part of the definition of 'technical actuarial work'

- 3.15 The first part of the definition of 'technical actuarial work' is "Work performed for the **intended user** where the use of principles and/or techniques of actuarial science is central to the work and which involves the exercise of judgement".
- 3.16 The term 'actuarial science' is not defined in TAS 100 but may include such matters as financial modelling, projections of contingent events, consideration of the time value of money, probabilities, demographic tables, analysis of risk and statistical techniques. These examples are non-exhaustive and accordingly practitioners will need to exercise professional judgement in deciding whether a particular piece of work involves the use of principles and/or techniques of actuarial science.
- 3.17 Where a practitioner determines that the work does involve the use of principles and/or techniques of actuarial science, they will then need to assess whether the use of those principles and or/techniques is "central" to the work. Where they are not needed to perform the work, or are an incidental component of the work, they are unlikely to be deemed to be "central". Factors which practitioners may consider when assessing whether the use of actuarial principles and/or techniques is "central" to the work include the amount of actuarial work involved, whether actuarial involvement is necessary and what proportion of the whole work is dependent upon the use of actuarial principles and/or techniques.
- 3.18 In order to satisfy the second limb of the first part of the definition of 'technical actuarial work', the work must involve the exercise of judgement. For the purposes of TAS 100, 'judgement' is intended to be interpreted widely, recognising that it is a key aspect of actuarial work (hence the 'judgement' principle within TAS 100). Examples of activities which require the exercise of judgement include scrutinising data, setting assumptions, constructing and using models, expressing opinions and communicating information to users.
- 3.19 Taken at its simplest, 'judgement' is involved in work requiring the practitioner to take a decision without following prescribed rules. If judgement is not involved, such as for purely administrative work, and the work is not presented as actuarial (meaning it would fall under the second part of the definition of 'technical actuarial work'), then the work will not fall within the scope of TAS 100.
- 3.20 Examples of work which might fall within the scope of TAS 100 and work which might not are provided in Appendix 1 of this guidance.

Work falling under the second part of the definition of 'technical actuarial work'

- 3.21 The second part of the definition of '**technical actuarial work**' is "Work performed for the **intended user** which the **intended user** could reasonably regard as technical actuarial work by virtue of the manner of its **communication**."
- 3.22 This means that in some situations a piece of work might still be deemed to be 'technical actuarial work', even where it does not involve the use of principles and/or techniques of actuarial science.
- 3.23 Work may be presented as technical actuarial work not only if it is explicitly labelled as such but also if there is an implication that it is technical actuarial work. Where work is presented in this way it will fall within the scope of TAS 100, even where its content is more ambiguous and does not necessarily feature actuarial principles or judgement. An example might be work with "actuarial report" in the title of the document provided to the intended user.
- 3.24 The use of the term 'reasonably regard' enables practitioners to assess what the intended user might consider to be technical actuarial work by the manner of its communication. In doing so, the practitioner should bear in mind the nature of the instruction and the context in which the work is being carried out. Where a practitioner determines that the intended user is unlikely to regard the work as technical actuarial work then they may find it helpful, where appropriate, to make clear to the intended user that they do not regard the work as technical actuarial work and may wish to document their reasoning in reaching that conclusion.
- 3.25 Where work is presented as a response to a request for actuarial work, or as reflecting generally accepted actuarial practice, or as having been performed by an actuary or an actuarial firm acting in an actuarial capacity, a user will normally be entitled to regard that work as technical actuarial work.

4 Geographic Scope

Definition

The intended geographic scope of the TASs is limited to technical actuarial work done in relation to the UK operations of entities, as well as to any overseas operations which report into the UK, within the context of UK law or regulation. This definition of scope applies regardless of the location or domicile of the person carrying out the work.

Interpretation

- 4.1 In the majority of cases, it will be clear whether or not a piece of work falls within the geographic scope.
- 4.2 Work falling within this definition includes technical actuarial work carried out either for UK statutory or regulatory reporting purposes or which is required in order to allow entities to conduct their activities within the UK legal and regulatory framework.
- 4.3 For some work or assignments, there may be some uncertainty on whether TAS 100 applies. Below are a few non-exhaustive examples to aid in determining whether a piece of technical actuarial work is in or out of geographic scope of TAS 100.

Example 1: Overseas subsidiary of a UK insurance company

- 4.4 Technical actuarial work for the subsidiary falling within geographic scope:
 - Work carried out for the purpose of preparing the accounts or regulatory disclosures of the consolidated UK entity.
 - Work carried out in relation to the pricing of insurance policies to be sold to UK customers.
 - Work for the UK parent company relating to existing or prospective reinsurance transactions between the subsidiary and any other party.
- 4.5 Technical actuarial work for the subsidiary falling outside geographic scope:
 - Work carried out for the purpose of overseas regulatory or statutory reporting.
 - Work carried out in relation to the pricing of insurance policies to be sold by the overseas subsidiary to non-UK customers.

Example 2: UK subsidiary of an overseas insurance company

- 4.6 Technical actuarial work for the subsidiary falling within geographic scope:
 - Work carried out for the purpose of preparing the UK accounts or UK regulatory disclosures.

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- Work carried out in relation to the pricing of insurance policies to be sold from the subsidiary to UK and/or non-UK customers.
 - Work underlying existing or prospective reinsurance transactions between the subsidiary and any other party.
 - Work carried out to support the Board in meeting its regulatory obligations under UK law to provide statutory or regulatory accounting information that complies with the law applying to the overseas parent.

4.7 Technical actuarial work for the subsidiary falling outside geographic scope:

- Work carried out purely for the purpose of overseas regulatory or statutory reporting (where the UK Board (a) is not obliged to provide such information under UK law and (b) will not be relying on the information to inform decisions relating to the UK operations).

Example 3: Pension scheme of a UK subsidiary of an overseas company

4.8 Pension scheme technical actuarial work falling within geographic scope:

- Work carried out for the purpose of preparing UK regulatory disclosures.
- Work carried out for the purpose of the UK subsidiary's accounts.
- Work underlying existing or prospective transactions between the pension scheme and any other party.

4.9 Pension scheme technical actuarial work falling outside geographic scope:

- Work carried out for the purpose of preparing the parent company's overseas accounts and not otherwise in scope.

Example 4: Overseas pension scheme of an overseas subsidiary of a UK company

4.10 Pension scheme technical actuarial work inside geographic scope:

- Work carried out for the purpose of preparing the UK parent company's accounts where the UK parent, its Board or some individual responsible for preparing those accounts is an intended user.
- Work underlying existing or prospective transactions between the pension scheme and the UK parent company or its UK pension scheme (e.g. a transfer of risk to the parent company or its pension scheme, a parental guarantee or direct funding from the UK company).

4.11 Pension scheme technical actuarial work outside geographic scope:

- Work carried out for the purpose of preparing the subsidiary company's overseas accounts.

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- Work underlying existing or prospective transactions between the pension scheme and any non-UK party.

5 Appendix 1: Examples of work in and out of scope of TAS 100

Work out of scope

- 5.1 Below are some non-exhaustive examples of work out of scope of TAS 100:
- 5.2 Arithmetic calculations where no judgement is needed such as pension scheme transfer value calculations which use predetermined actuarial factors and follow instructions. The production of the underlying factors would however be technical actuarial work as actuarial techniques are used and judgement is needed when setting the assumptions.
- 5.3 IFoA members undertaking other roles, for example:
- IFoA member acting as a pension scheme trustee. Here the member's routine work in their capacity as trustee will not normally fall within the scope of TAS 100. While the work underlying the actuarial information used by the trustee might be technical actuarial work the use of the actuarial information for trustee decisions will not normally be treated as technical actuarial work as the use of principles and/or techniques of actuarial science is not a central requirement of the decision making.
 - IFoA member acting as a non-executive director of an insurance company. In this scenario, the member might use actuarial information provided to them to assist them in making decisions. While the work underlying the actuarial information would be classed as technical actuarial work, the use of the actuarial information for director/board decisions will not be technical actuarial work as the use of principles and/or techniques of actuarial science is not a central requirement to make the decision.
 - IFoA member acting as the Chief Risk Officer (CRO) of an insurance company. Whereas some of the work carried out by the CRO could be deemed to be technical actuarial work and would fall within the scope of TAS 100, there will be aspects of the work of the CRO that would not normally be deemed to be technical actuarial work as the techniques and principles of actuarial science are not central to the work. Therefore, the member will need to exercise judgement in determining which activities meet the relevant definition, taking into account the nature of the work and the context of the CRO's involvement in the work.
 - Internal review (for example peer review) of work carried out which is performed as part of the exercise. The internal review on its own will not be technical actuarial work as it is not a discrete exercise but part of the exercise as a whole, the final product of which, as technical actuarial work, is in scope of TAS 100. Review work performed as a separate exercise will under normal circumstances fall within the scope of TAS 100.

Work in scope

- 5.4 Below are some non-exhaustive examples of work within the scope of TAS 100.

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- 5.5 Determining the methods or assumptions to be followed for a specific piece of work. This might include using bespoke calculations which might be simple but need actuarial expertise. It will also involve judgement.
- 5.6 Complex calculations using actuarial factors which are to be determined using techniques of actuarial science and which require judgement on matters such as setting assumptions. It is likely that for this type of work some judgement will be needed even when the assumptions are prescribed, for example in dealing with incomplete data.
- 5.7 Asset/liability modelling work which uses techniques of actuarial science together with judgement to project and value asset and/or liability cash flows, which might be carried out by practitioners and other investment professionals.
- 5.8 The development of software for actuarial work in-house or by specialist software houses e.g., longevity models, systems for Solvency II internal models, for pricing general insurance products, and for pension scheme valuations. The development of these models requires actuarial expertise, principles of actuarial science are central to the work and judgement will be required throughout the development of the model. While this work is technical actuarial work, components of the overall exercise, for example programming, might not be technical actuarial work.
- 5.9 Modelling using financial models such as those used in pricing equity release mortgages, longevity swaps, catastrophe bonds, or other insurance or pension risk hedging instruments which use techniques of actuarial science and judgement at various points. Whilst the majority of modelling work in investment banks is not generally in the scope of the TASs, some of this modelling work may fall within the scope because of the use of techniques of actuarial science and exercise of judgement.
- 5.10 Review work which is performed as an exercise separate from an original piece of work, for example, a second actuarial opinion or part of the audit of an insurer's or a pension scheme's sponsor's financial statements. This type of work is likely to be presented as actuarial to the user: the receiver of the second opinion or the auditor providing the audit opinion on the financial statements. It is also expected that the practitioner would have performed some independent validation of the work being reviewed which would use the principles and/or techniques of actuarial science, together with judgement.
- 5.11 Advice or opinions which are presented as actuarial and are based on or relating to the work of other practitioners. Examples include the independent expert report provided to the court in relation to a proposed transfer of insurance business, the opinions of the Actuarial Function provided in line with requirements under Solvency II, expert actuarial advice in litigation cases, the provision of expert advice in actuarial disciplinary cases or expert actuarial advice provided to a scheme sponsor on how best to respond to a trustee proposal in relation to the review of actuarial factors. This type of work will typically be presented as actuarial to the intended user and it is expected that the practitioner would have performed some independent validation of the underlying work using the principles and/or techniques of actuarial science and exercised judgement.

6 Appendix 2: Illustrative scenarios

6.1 This section contains several illustrative examples in the form of hypothetical scenarios. The intention is not for these scenarios to act as working templates for active use by practitioners as many plausible variants to the depictions are possible. Instead, the intention of the scenarios is to provide a logical, principles-based guide for practitioners on the scope of application of TASs in different areas of work. Also, whilst the scenarios are set in the context of a particular actuarial specialism, the considerations conveyed via the guidance may be applicable across specialisms. Practitioners are invited to consider all the scenarios to form their own judgements dependent on their specific circumstances.

Scenario 1: Definition of Technical Actuarial Work

6.2 A newly qualified actuary is tasked with determining benefit values for a substantial number of individual beneficiaries. Examples of this situation could be transfer values from a pension scheme or surrender values of life assurance policies. This determination is a discrete piece of work which does not form part of a larger valuation exercise. The methodology to be followed has been determined beforehand (with appropriately presented actuarial advice) and the actuary has comprehensive proformas and instructions to follow.

6.3 The actuary wonders if the work they have been asked to do is 'technical actuarial work' for the purpose of TAS 100. The actuary is aware that in general, the greater the complexity of a calculation the greater the likelihood that an element of judgement will be involved in the work, rendering it 'technical actuarial work'. In the actuary's experience, however, there might also be some judgement involved in carrying out even a relatively simple calculation, and conversely the carrying out of a very complex calculation might in some limited cases be entirely mechanistic and judgement-free.

6.4 On reflection, and having consulted with more experienced colleagues, the actuary concludes that in relation to the benefit value calculations they have been asked to carry out:

- They are simply a number cruncher and are not using principles and techniques of actuarial science – the work is capable of being done by any numerate person;
- They are not being asked to make any judgements in relation to the piece of work; and
- The work will not be presented as 'technical actuarial work' and the user is likely to regard the work as an administrative rather than actuarial exercise.

6.5 Based on these conclusions and in consultation with their more senior colleagues, the actuary decides that the work that they have been tasked with is not 'technical actuarial work' and therefore does not fall within the scope of TAS 100.

Scenario 2: Multi-disciplinary teams

- 6.6 An actuary works in a consulting firm which is advising a UK insurance client on the potential acquisition of a UK insurance company. The actuary does not lead the overall project but is providing a view on both the technical provisions and the capital requirements of the target. The actuary will be responsible for providing commentary that will go into the overall report but responsibility for the final work product (including signing) falls to a non-actuarial colleague.
- 6.7 The actuary wonders to what extent they are responsible for compliance with TAS 100. It is clear to the actuary that the work they are involved in is very likely to be within the definition of 'technical actuarial work' and they will need to comply with TAS 100. The requirement for compliance with TAS 100 applies where a practitioner is 'responsible' for a piece of technical actuarial work or for 'part of' a piece of such work. Therefore, the actuary must ensure compliance with TAS 100 for the part(s) of the work for which they are responsible. They will first need to determine who the 'intended user' of the work is – this might be the end-client or the colleague who has overall responsibility for the project. Regardless of who is determined to be the 'intended user', they will need to ensure that the work for which they are personally responsible complies with TAS 100.
- 6.8 As for the communications requirements, there are likely to be three potential ways in which the actuary can carry out their work in a way that complies with TAS 100 and they will normally want to discuss this with the overall signatory to determine the most appropriate approach:
- They can work with their colleague to make the overall report compliant with the communication requirements of TAS 100;
 - They can draft specific sections of the overall report, ensuring that those sections are compliant with the communications requirements of TAS 100. This option might require a compliance statement to be included in the overall report explaining which sections have been prepared by the actuary and comply with TAS 100; or
 - They can provide their commentary in a separate document, again ensuring that this information complies with the communications requirements of TAS 100. Their colleague can then determine how to incorporate the relevant information into the overall report, although the actuary should also use their professional judgement to determine to what extent they should make specific recommendations in this regard to the colleague.
- 6.9 Although the first option might be considered the ideal approach, in practice the actuary may well not be in a position to ensure this for a large piece of work into which they are just one of several different people providing input.
- 6.10 The second option may therefore be a more practicable one, with the actuary's (TAS compliant) part of the report being specifically identified – following this approach (or one close to it) would normally be appropriate if the actuary is to regard the end-client as their intended user. However, if the actuary is unable sufficiently to influence what is ultimately

delivered to the client, they are likely to conclude that they should regard the colleague who has overall responsibility for the final report as being the 'intended user' of the work, and consequently to follow the third option.

Scenario 3: Investment management

- 6.11 An actuary works for an investment management company within a team of mainly non-actuaries that manages investments for a range of clients. The work carried out by the team involves research into equities, bonds and collective investment funds, as well as input to specific trading decisions. For certain investments the actuary develops spreadsheet models to assist in the assessment of value to determine how attractive the asset will be. The actuary uses the firm's models to calculate portfolio risk to ensure that portfolios remain within defined risk budgets. The actuary also participates in discussions on the relative attractiveness of different asset classes, including assessing prospective return expectations and developing various investment scenarios to be used as input to stress tests. Generally, the actuary's work is not client facing but involves providing internal written and verbal contributions to support the firm's investment management process.
- 6.12 The actuary decides that where the work focusses primarily on the research of specific investments to support asset management decisions, the principles and/or techniques of actuarial science are not central to the work and the actuary's colleagues (the intended users of the work) would not regard it as technical actuarial work. In work involving the calculation of portfolio risk and investment scenarios the actuary is normally following the firm's existing procedures and methodologies and is not using actuarial techniques or applying any judgement (beyond the initial assessment undertaken to be satisfied that the underlying models are suitable and appropriate and can be relied upon for the particular piece of work that they are carrying out). In these cases, the actuary concludes that the work is not within the scope of TAS 100.
- 6.13 However, the actuary recognises that if the work were extended to require the use of judgement and the application of actuarial principles and/or techniques, then it may fall within the scope of TAS 100. The actuary recognises that, as there is considerable variety in the types of work they are involved in, they will need to regularly consider whether each piece of work is within scope of TAS 100.

Scenario 4: Client relationship role

- 6.14 An actuary works in a client relationship role for an investment consultant and is part of a team of actuaries and non-actuaries that supports a range of clients. In the actuary's role as a client relationship manager the actuary attends each quarterly trustee meeting and presents a quarterly investment report. The quarterly report pulls together material produced elsewhere in the consultancy. It contains investment market updates, including a house view on the attractiveness of various markets, a report on fund performance, including how the fund is performing against a liability proxy, monitoring against various ALM investment triggers and an assessment of each fund manager used by the client.

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- 6.15 The actuary isn't responsible for the production of the underlying information in the report, but will review it before it is issued to clients. The actuary considers whether the work falls within the scope of TAS 100. They are careful to identify which elements of the reports are generic and which could be a major influence on each client's decision on whether to remain invested in existing funds or to make changes. The actuary also considers the extent to which the work uses principles and/or techniques of actuarial science and requires judgement. The investment report typically consists of management information that has been prepared following standard methods and procedures and does not involve the exercise of judgement. The report doesn't include recommendations for changes in investment strategy although the management information may trigger requests for further work or more in-depth investigation of options. The report also includes house views on markets, funds and investment managers. These views are prepared by a specialist team in the actuary's firm. They include significant judgement but these judgements are not actuarial in nature, being driven by economists and other investment professionals and not involving actuarial calculations.
- 6.16 The actuary considers whether there is anything in the manner of the presentation of the report that might suggest that it is technical actuarial work and concludes that there is nothing that would lead users to this conclusion. The actuary is mindful that there may be occasions when the work delivered to clients will be technical actuarial work, or may be regarded as such by virtue of the manner of its communication, and that on these occasions the actuary will need to ensure the work complies with TAS 100. If, for example, the actuary were providing recommendations for investment de-risking triggers to the client or advising on the methodologies for approximate asset / liability roll forwards between valuations, this could be technical actuarial work and might require compliance with TAS 100.

Scenario 5: Research presentations

- 6.17 An actuary working for an investment management company is presenting at a pensions conference. The audience includes a wide range of participants from the pensions industry including actuaries, consultants, scheme managers and trustees. The actuary's presentation includes the results of modelling the assets and liabilities of a typical pension scheme under a variety of different investment strategies; illustrating the impact of these strategies on returns, risk and scheme funding levels on a number of different bases. The actuary decides that because this work is not being presented to any specific user and is not intended to prompt any specific action or be relied upon by the audience to make any decisions, it does not fall within the definition of technical actuarial work and need not comply with TAS 100. The actuary makes clear the generic nature of the work in the presentation and includes appropriate caveats and disclaimers.
- 6.18 A week later the actuary attends the Trustee Meeting of ABC Pension Scheme. At the end of the meeting the actuary mentions the recent research and shares a copy of a 'glossy' pre-printed paper that summarises the key points from the presentation at the conference. As the paper is clearly generic in nature and not specific to the scheme, nor intended to provoke any action by the scheme, the actuary continues to conclude that the work is outside the scope of TAS 100.

6.19 The Trustees are planning a strategic review of the scheme's investment strategy and, having read the paper, the Chair of the Trustee Board asks the actuary to do a presentation on the topic to the Board at its next meeting. Whilst the actuary does no new modelling for the scheme presentation, the actuary realises that the information contained within the presentation is likely to influence the direction and scope of the strategic review. The actuary recognises that the modelling is likely to fall within the definition of technical actuarial work. The Trustees are aware of the actuary's professional status and the actuary decides that the trustees might view the presentation as actuarial work and therefore concludes that the work is required to comply with TAS 100.

Scenario 6: Overseas parent company and a UK pension scheme

6.20 The management of an overseas company is considering whether it wants to buy out the pension scheme of its UK subsidiary. They ask the finance director of the UK subsidiary to approach an actuary in the UK for help. The finance director explains to the actuary that the overseas management team know very little about UK pensions and they are aware that this is an area where they will need actuarial input. The finance director says that, at this stage, the overseas company is seeking a broad understanding of the key issues involved, and is not expecting the actuary to look at the scheme membership or asset data in any detail, nor to carry out any detailed calculations.

6.21 The actuary is experienced in advising on risk transactions in the UK pensions market and asks for some information on the UK pension scheme. In response to this request, a copy of the trust deed and rules and a copy of the most recent actuarial valuation report is provided.

6.22 The actuary prepares a paper which describes a buyout in general terms and explains the implications for security for the members' benefits and the discharge of the employer's and trustees' obligations. The paper also sets out a number of key issues to consider, including the role of the trustees, the quality of the membership data, the types of assets which might be attractive to an insurer and the complexity of the benefit structure. In the paper, the actuary provides comments on the current capacity in the market for buying out UK pension schemes of comparable size and complexity to that of the UK subsidiary.

6.23 It is clear from the last actuarial valuation report, without the need for further analysis, that the assets of the pension scheme will fall significantly short of the cost of buyout. The actuary explains in the paper that the employer would have to provide additional funding for a buyout to be affordable.

6.24 Using an approximate roll forward approach, the actuary determines a high level indication of the current cost of buyout and compares this with an estimate of the current value of the scheme's assets. The actuary is unsure whether to include this analysis in the paper, as they have been asked to explain the key issues and not to carry out detailed calculations. However, the actuary feels that it may be helpful to the overseas company to have an indication of what a buyout would cost and decide to include the estimate.

6.25 In the paper, the actuary emphasises that no decision should be taken on the basis of its contents. The actuary states in the paper that, before a decision to buy out the UK pension

scheme could credibly be made, a much fuller assessment of whether this would be an attractive option would be needed, which would require significant additional analysis across a range of areas, including those referred to in their paper.

- 6.26 The actuary is concerned that, as they know very little about UK pensions, the client might attach fuller significance to the information in the paper than is justified by the limited amount of work performed. Whilst it is clearly stated that no transaction decision should be made on the contents of the paper, the actuary is worried that the client might, even if only tentatively, start making a decision on whether to buy out. The actuary stresses the approximate nature of the buyout cost calculation, over which the actuary has brought the principle of proportionality to bear and reiterates the need for a full analysis before a decision on buyout is taken.
- 6.27 The actuary considers whether the paper is within the scope of TAS 100. The actuary is clear that, although instructed by the UK company's finance director, the intended user would be the management team of the overseas company.
- 6.28 The actuary feels that the paper is generic in nature and much of it could have been written by a non-actuary with a good understanding of UK pensions. However, the client made clear that they wanted advice from an actuary. Given this, the actuary considers it to be very possible that the client will regard the paper, and the approximate calculations within it, as technical actuarial work.
- 6.29 The actuary also considers whether the work falls within the geographic scope of TAS 100. The actuary notes that it relates to the pension scheme of a UK subsidiary of an overseas company and that it concerns, at least in abstract, a potential transaction between the scheme and another party, i.e. an insurer, although they have done no work on a specific actual transaction.
- 6.30 The actuary concludes that there are areas of uncertainty and that there is some room for doubt as to whether the work falls within the scope of TAS 100. However, taking account of all the circumstances, the actuary decides to err on the side of caution and treat the paper as technical actuarial work under the scope of TAS 100.

Scenario 7: Self-service model

- 6.31 A firm providing actuarial consulting services to defined benefit pension schemes has developed a software tool for the use of trustees, corporate sponsors and investment managers of UK defined benefit pension schemes.
- 6.32 The model allows users to project the scheme funding position under various scenarios, by varying key assumptions such as contribution levels, asset returns, inflation and liability discount rates. The output from the model is intended to facilitate discussions between scheme trustees, corporate sponsors and investment managers and support decisions on asset allocations and contribution levels.

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- 6.33 The tool is intended to be used autonomously without ongoing support from the consulting firm. The inputs include asset and liability information from the most recent actuarial valuation, asset allocation data, investment index data and assumed contribution levels, as well as demographic, inflation and asset return assumptions. In practice, some parameters such as demographic assumptions, might not be actively varied by the users (e.g., using those from the last valuation) and the users will make an implicit decision that will require judgement and communication.
- 6.34 The actuary responsible for development of the model at the consulting firm considers the extent to which its specification, construction and use falls within the scope of TAS 100.
- 6.35 The actuary considers that the specification of the tool involved the application of the techniques of actuarial science to define the roll-forward of the assets and liabilities and that the application of those techniques was central to the work. In addition, judgement was required to choose an appropriate methodology as a number of different approaches could have been applied.
- 6.36 The actuary considers who are the intended users of the tool. As the tool will be made available for general sale, the actuary does not know the identity of individual users, but still considers the trustees, sponsors and investment managers who will purchase the tool to be intended users for the purpose of TAS 100 as it is their decisions that the tool is aiming to assist.
- 6.37 The actuary considers that the model and its outputs (for any valid set of input assumptions), together with any associated communication materials provided to the intended users, constitute the 'actuarial information'. The actuary deliberates whether the subsequent use of the tool by the intended users, including their choice of parameters and interpretation of model output, is within the scope of their work.
- 6.38 The actuary concludes that the setting of input assumptions by the intended users is outside scope but the direct model output, given those input assumptions, is within scope. Additionally, the actuary considers whether the communications accompanying the model give sufficient clarity on the model assumptions underlying the model (including any constraints surrounding the input assumptions) and any inherent limitations or uncertainty.
- 6.39 The actuary therefore concludes that the specification and construction of the tool and the associated communication material do fall within the scope of TAS 100 to the extent of ensuring that the intended users can place a high degree of reliance on the model and the model outputs for any valid set of input assumptions.

Scenario 8: Geographic scope

- 6.40 An actuary working for a UK company has been requested to carry out work on behalf of an overseas subsidiary to derive the technical price for a non-life insurance product to be offered to UK customers.

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- 6.41 The actuary considers whether the technical actuarial work that they will perform will fall within the geographic scope of TAS 100.
- 6.42 The actuary notes that, although they are based in the UK, that is not relevant to the determination of geographic scope, since the definition states that the scope applies regardless of the location or domicile of the person carrying out the work.
- 6.43 Although the actuary is employed by the UK parent company, they do not consider that to be relevant as the work is in respect of the overseas subsidiary's operations and not those of the UK company itself.
- 6.44 They note further that the pricing work is in respect of a product to be offered in the UK and that marketing and distribution of the product will be subject to UK market regulations. Consequently, the actuary concludes that the work is within the geographic scope as it is in relation to the UK operations of the overseas entity within the context of UK law and regulation.



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