



APS X2: Review of Actuarial Work



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This guide imposes no obligations upon Members over and above those embodied in APS X2. The guide does not constitute legal advice, nor does it necessarily provide a defence to allegations of misconduct. While care has been taken to ensure that it is accurate, up to date and useful, the IFoA will not accept any legal liability in relation to its contents. The defined terms used in APS X2 apply to this guide.

Introduction

- 1.1 Review of work, in a variety of forms, is one of a number of means that professionals use to maintain the quality of the work that they perform. Actuaries have developed a practice of making significant use of review of their work. This serves to provide reassurance to actuaries and the users of actuarial work that the work has been performed to relevant technical and ethical standards, and in so doing, to reduce the risk that users of actuarial work make poor decisions as a consequence of the actuarial work.
- 1.2 The nature of actuarial work is such that users of the work will often need to place a high degree of reliance on it. Frequently the circumstances will permit the actuary to take an approach and make assumptions that can give rise to a wide spectrum of results. Applying a review process can help the actuary to provide assurance about the quality of the work and about the reliability of the resulting advice and information and continue to provide output that meets the Financial Reporting Council's (FRC) Reliability Objective.¹ Review may also assist in mitigating risk to the Member, their firm and the client.
- 1.3 The Institute and Faculty of Actuaries (IFoA) places requirements on Members in terms of Actuarial Profession Standards (APSs), APS X2: Review of Actuarial Work (APS X2) which call for the exercise of judgement in relation to the review of actuarial work. The provisions of APS X2 are of general application and build on the existing principles set out in the Actuaries' Code.
- 1.4 This guide addresses a number of issues that may assist Members when deciding whether review should be applied to a piece of work and what form that review should take.

¹ "Reliability Objective means the objective that the users for whom a piece of actuarial information was created should be able to place a high degree of reliance on the information's relevance, transparency of assumptions, completeness and comprehensibility, including the communication of any uncertainty inherent in the information." Financial Reporting Council; Scope & Authority of Technical Actuarial Standards; Version 4; August 2012.

- 1.5 This guide has been prepared by the Cross Practice Standards Working Party and issued by the Regulation Board of the IFoA for the use by and the benefit of Members. This is a high level guide which supports APS X2 and is intended to assist Members in deciding when and how to apply a review process by serving the following purposes:
- to standardise the terminology used relating to review of actuarial work;
 - to provide a means of communicating to external stakeholders how actuaries use review processes to enhance the quality of their work; and
 - to help identify the situations that can give rise to ambiguity regarding responsibility for the quality of actuarial work, and to indicate how they can be addressed.
- 1.6 The material in this guide may be helpful to firms in developing quality assurance arrangements for the purpose of meeting the requirements in APS QA1: Organisations and Employers of Actuaries.²
- 1.7 Members are encouraged to use this guide as a starting point for developing their own practice relating to review processes. The authors recognise that this is an area that requires the exercise of a significant degree of judgement. In addition, a number of possible forms of review are referred to in this guide; however, we do not explore all of them in depth.
- 1.8 This guide has taken significant inspiration from the discussion paper in the American Academy of Actuaries 2005 Professionalism Series No 1-A Peer Review – Concepts on Professionalism. It has been guided by the FRC's Actuarial Quality Framework and it has drawn on the experience of members practising in a wide variety of areas served by the profession.
- 1.9 The introduction of requirements in APS X2 is also intended to be substantially consistent with the provisions in the international model standard issued by the International Actuarial Association (IAA) known as 'International Standard of Practice 1' (ISAP 1) and the model standard issued by the Actuarial Association of Europe (AAE) known as 'European Standard of Practice 1' (ESAP 1³). In both of those model standards the term 'peer review' is used. In APS X2 the term 'independent peer review' has been used to describe the same form of review. The decision to use that phrase reflects that there are a variety of uses of the term 'peer review' often with a broader meaning that encompasses a wider range of different types of review, particularly in the UK. However, the substantive requirements remain substantially consistent with ISAP 1 and ESAP 1.

² Currently in draft and being considered in light of conclusion of a pilot scheme.

³ ESAP 1 largely replicates the contents of ISAP 1

2. Requirements of APS X2

- 2.1 APS X2 requires Members to consider whether it would be appropriate and proportionate to apply ‘work review’ to actuarial work for which they are responsible and to give particular consideration as to whether that review should take the form of independent peer review.
- 2.2 It further provides that, where they determine that to apply such a review would be appropriate and proportionate, they should apply that review (whether in the form of independent peer review or otherwise) to the work to the extent that it is appropriate and proportionate.
- 2.3 The term ‘actuarial work’ has a broad meaning in this context and the definition provided by APS X2 is “work undertaken by a Member in their capacity as a person with actuarial skills on which the intended recipient of that work is entitled to rely. This may include carrying out calculations, modelling or the rendering of advice, recommendations, findings or opinions.”
- 2.4 There is a range of different terms used to describe these different review processes (such as ‘technical review’, ‘peer review’, ‘compliance review’) and those terms or names are used in different ways by different people, often with different meanings. This is true not only in terms of their use in actuarial work and amongst different organisations but also amongst other professionals and in general use. The IFoA has decided to use the terms ‘work review’ and ‘independent peer review’ as broad terms that suit the particular purpose of APS X2, although the review processes might be known by other names in other contexts.

What is work review?

- 2.5 At its simplest, work review for the purposes of APS X2 is the use of a second pair of eyes to review and challenge some or all of a person's work. More generally, it provides a mechanism to test work and the decisions taken.
- 2.6 In APS X2 Review of Actuarial Work (APS X2), 'Work Review' is defined as a:
- "Process by which a piece of Actuarial Work (or one or more parts of a piece of Actuarial Work) for which a Member is responsible is considered by at least one other individual(s), having appropriate experience and expertise, for the purpose of providing assurance as to the quality of the work in question."*
- 2.7 This definition of 'work review' in the APS is a wide one, reflecting the broad range of contexts in which it may be applied, and requires judgement as to the form it should take in different circumstances.
- 2.8 Work review, for the purposes of APS X2, is intended to describe a spectrum of different types of review that might be applied. This might amount to independent peer review (as defined in APS X2) or it might involve a different type of review (for example a review by someone who is a 'peer', in the sense of being someone who would have the expertise and experience to take responsibility for the work but who is not fully independent of the work in question).

- 2.9 Work review may take a number of forms, including verifying that calculations have been checked, considering compliance with appropriate standards, evaluating the assumptions used and reviewing the clarity of communications.

What does independent peer review involve?

- 2.10 Independent peer review is defined in APS X2 as a particular form of work review with additional requirements relating to the independence, experience and expertise of the individual(s) reviewing the work. It is defined as:
- "Work Review undertaken by one or more individual(s) who is or are not otherwise involved in the work in question and who would have had the appropriate experience and expertise to take responsibility for the work themselves."*
- 2.11 Independent peer review is therefore a particular type or subset of work review which involves the person reviewing the piece of work as the second pair of eyes being independent from the work in question and being a 'peer' in the sense that they have the appropriate experience and expertise that would have meant they could take responsibility for the work themselves.
- 2.12 This guide discusses the variety of forms that review may take, for the purposes of APS X2.

3. Applying review to actuarial work

- 3.1 The decision as to whether a review process should be applied and, if so, whether that review should take the form of independent peer review will depend on a number of factors including the consequences and implications of the piece of work in question.
- 3.2 Often these factors will not be clear-cut and Members will have to exercise judgement about when and how a review process should be applied in the circumstances. The IFoA requires Members to consider applying work review and, if they decide that they should, to do so to the extent that it is appropriate and proportionate. It also specifically requires Members to consider whether that work review should take the form of independent peer review.
- 3.3 This requirement is of particular relevance to situations where risk management frameworks in respect of review and challenge are not already in place or where those existing frameworks are not sufficiently complete or adequate for situations involving significant pieces of work. It is not intended to place additional burdens on Members where there are sufficient, and appropriately sophisticated, systems in place.
- 3.4 Where review is applied to a piece of work in accordance with APS X2 and the Member responsible for the piece of work determines that the review should take the form of independent peer review, this requires the individual(s) carrying out the review to be independent of the work in question (which does not necessarily require them to be independent of the organisation carrying out the work) and to have the experience and expertise that would enable them to take responsibility for the work themselves. This is more likely to be appropriate and proportionate where the piece of work is particularly significant in terms of complexity, value and/or consequences.

- 3.5 APS X2 is applicable to all Members, including students. Members must be in a position to explain and justify the approach they have taken and therefore may wish to document their decisions (and the reasoning supporting those decisions) and the outcomes of review under APS X2 with reasons. This might include, for example, the reasons for deciding which form of review to apply to the work having decided that it is appropriate and proportionate to apply such a process. This might also include an explanation as to why it was not appropriate for the review to take the form of independent peer review.
- 3.6 APS X2 sets out factors for Members to take into account when deciding whether and what form of review should be carried out (including whether it should take the form of independent peer review). These factors will be relevant to considerations as to the appropriateness of the review and whether it is proportionate in terms of the circumstances of the work involved.
- 3.7 The greater the significance of a piece of work, the greater the potential impact of a shortcoming in the work on those who will rely upon the work. Greater significance will therefore imply a greater need for review.
- 3.8 Other quality assurance controls which may already be in place will provide further scrutiny of the work which would then not need to be duplicated by review or other additional quality assurance processes. Examples may include where the work is subject to effective challenge by the client or by third parties, such as auditors (and their reviewing actuaries). Other quality controls affecting the work may also be stipulated by other regulators, based on the regulatory context in which the deliverer or recipient of the work operates. For example, the firm may be subject to separate regulatory oversight because it provides other regulated financial services, e.g. investment advice.

4. Scope of review and clarity of roles for those involved

- 4.1 Where a review process is carried out, it is important that all of those involved in the process understand their particular role and what is expected of them. It is also important that this is addressed early on in the process.
- 4.2 The individual(s) taking part in the review will need to be provided with all the information regarding the work, and the context in which it is being undertaken, that is necessary to enable them to carry out the review in accordance with the agreed scope.
- 4.3 APS X2 specifically requires the Member responsible for the work to take reasonable steps to ensure that everybody involved in the review has a clear understanding of their relevant role.

The following non-exhaustive list includes some of the activities that might be carried out as part of the review process:

- verifying whether the accuracy of the calculations has been checked or, in some circumstances actually checking those calculations;
- a review of the methodology and assumptions underpinning the work;
- a review of the reasonableness of the results;
- a review of the extent to which the work has been carried out in accordance with the Actuaries' Code, Actuarial Profession Standards, the FRC's Technical Actuarial Standards (if/where applicable) and other applicable regulatory and/or legislative requirements;
- assistance with professional or ethical considerations (including scoping of a piece of work, identifying or managing conflicts of interest). The IFoA Guide for Actuaries on Conflicts of Interest ⁴ highlights the potential value of review in assisting a Member in evaluating and resolving conflicts of interest;
- a review of the clarity and/or quality of communication associated with the piece of work; and/or
- a review of the extent to which the work is suitable for the needs and reasonable expectations of the user of the work or of the user of the outputs to which it gives rise.

⁴ www.actuaries.org.uk/Conflicts_of_Interest_Guide_for_Actuaries_version_1.1

5. Timing of review

- 5.1 A review for the purposes of APS X2 should be undertaken at a time when it is capable of influencing the conclusions and outputs of the work. The review does not necessarily have to be undertaken at the end of a piece of work, but can form part of the ongoing process as the work is being carried out. Members should therefore incorporate adequate time for the review into their work plan so that it can be carried out before the work is finalised.
- 5.2 Some Members may also find it helpful to carry out a review after the work has been finalised or after it has been issued to the user as part of a control cycle. While such reviews do not meet the requirements of APS X2, they can still be helpful and may assist in identifying improvements in processes and procedures which can be put into practice for future pieces of work.
- 5.3 While the circumstances will often make the position obvious to the user, the Member may feel that it is helpful, if he or she judges that review would not be appropriate or proportionate having regard to all of the circumstances including the factors set out in 1.3 of the APS, to stress that the advice has not been subject to a review process (or alternatively that it has been subject to review but that this review has in some way been limited, for example it did not take the form of independent peer review) and that the user should therefore exercise caution when acting or taking decisions based on the advice.

6. Skills and experience of individual(s) taking part in the review

- 6.1 Different review roles require different skill sets. It will be up to the Member responsible for the work to determine the necessary mix of skills required. It is important in any type of review that the person has the necessary skills and experience to carry out that role. A particular factor that the Member responsible might wish to consider is whether the individual taking part in the review has been involved in actuarial work of a similar nature.
- 6.2 There may also be a number of individuals involved in the review process rather than one individual reviewer.
- 6.3 APS X2 does not specify that the individuals carrying out the review should be qualified actuaries, and recognises that, depending on the circumstances, many other individuals may be suitable. It is, however, important that the individuals identified have suitable skills and experience to undertake the review sought from them in order to provide reasonable assurance about the quality of the work.
- 6.4 APS X2 specifically requires Members to consider whether it is appropriate and proportionate for a review to take the form of independent peer review. For the purposes of APS X2, independent peer review will involve the individual carrying out the review being a 'peer' in the sense of being someone who would have had the appropriate experience and expertise to take responsibility for the work themselves.
- 6.5 Members are reminded of their obligations under principle 2.2 of the Actuaries' Code: "Members will not act unless they have an appropriate level of relevant knowledge and skill." Where the individuals taking part in the review are Members, they must be satisfied that they are competent to do so. The individual responsible for the piece of work should keep in mind that individuals who are not Members may be subject to different regulatory regimes and that the regulations and standards that apply to them might be less comprehensive than those applying to Members.



6.6 Some types of work may require specialist skills, for which the supply of available reviewers is limited. It may be the case that only a small group of individuals have the necessary skills and experience to carry out the review. The individual is expected to take reasonable steps in identifying a suitable person to be a reviewer. Where the Member is unable to identify a

suitable person (or persons), they might consider what alternative arrangements can be put in place to manage risks and assure quality. The Member might also ensure that the person commissioning the work is aware of these limitations as regards review of the work and is able to consider whether or not to modify his or her instructions to the Member.

7. Objectivity

- 7.1 APS X2 provides that the individual(s) undertaking the review should be in a position to take part in, and be seen to take part in, the review with appropriate objectivity. The person responsible for the work is also required to take reasonable steps to ensure that this requirement of objectivity is met.
- 7.2 Members should consider whether it is appropriate for the reviewer to be someone not otherwise involved in any aspect of the work. For the review to fall within the scope of ‘independent peer review’ as defined in APS X2, the review should be carried out by a person (or persons) who is (or are) not otherwise involved in the work in question. In some circumstances, it may be sufficient for the reviewer not to have been involved in the specific element of work being reviewed or, as noted in paragraph 7.4 below, it can in some circumstances be appropriate for the reviewer to have been already involved in carrying out the piece of work (i.e. someone who would not meet the independence criterion in the definition of ‘independent peer review’.)
- 7.3 If the individual carrying out the review has a conflict of interest then this may impact upon the objectivity requirements set out in paragraph 2.2 of APS X2. In such circumstances, Members can find guidance on identifying conflicts of interest in the IFoA’s Conflicts of Interest Guide for Actuaries.⁵ That guide also explains how the use of a review process might, in some cases, help to mitigate conflicts of interest.
- 7.4 There may be circumstances in which it may be appropriate for two or more individuals of suitable experience to carry out a piece of work together, but Members may consider that there are benefits in involving a fresh pair of eyes in the process. In some circumstances, reviewers involved in the review process might co-develop a solution with the individual responsible for the work. However, where the reviewer becomes a significant contributor to the piece of work it may then be appropriate to obtain further review of that part of the work.

⁵ www.actuaries.org.uk/conflicts_ofInterest_Guide_for_Actuaries_version_1.1

7.5 Where another Member takes over responsibility for the work, it will be important to consider whether the Member previously responsible will be capable of being sufficiently objective to perform a review in line with the objectivity requirements in APS X2. However, in some circumstances the insights provided by such an individual may actually provide a more effective form of review.

7.6 Principle 3 of the Actuaries' Code requires that: "Members will not allow bias, conflict of interest, or the undue influence of others to override their professional judgement." This is particularly relevant where there is an inequality of status between the person responsible for the piece of work and the individuals taking part in the review. An inequality in status could arise from material differences in position in an organisation's managerial hierarchy or simply arise from differences in professional standing.

7.7 The risk when material differences of this type arise is that the individual(s) taking part in the review exert too little or too much influence over the results of the analysis. Work review is a process applied for the purpose of providing assurance as to the quality of the work in question. As such, the Member responsible for the piece of work may wish to consider whether they are satisfied that they have had appropriate regard to the comments of the reviewer.

8. The role of challenge by the recipient or the Member responsible for the work

- 8.1 Some actuarial work will make use of the review and challenge by the recipient of the actuarial work. This is particularly the case for work undertaken by in-house actuaries or those in similar roles.
- 8.2 Review by the recipient of the work can represent a valuable form of quality assurance. However, the knowledge and experience of the particular recipient needs to be taken into account. Their role may be limited and there is a risk that the recipient may have particular objectives that introduce a bias into the process. Care should be taken where the inclusion of the recipient in the work review process introduces a significant risk of bias into the actuarial work.
- 8.3 In other circumstances, the Member responsible for the delivery of the actuarial work may not have been involved in the detailed performance of the work but will review the work that has been performed before signing it out. In such circumstances it is important that the team performing the work has sufficient skills and experience to carry out the required work.
- 8.4 When this approach is taken, it will be important that the Member responsible for the actuarial work takes particular care to ensure that, in circumstances of disagreement, suitable objectivity is maintained. This is likely to include giving proper consideration to the opinion provided and providing a reasoned explanation for the final position adopted. It is important to be mindful of the risks arising from inequality of status between the reviewer and person responsible for the work, and that where individuals involved in peer review are at different levels of seniority, this does not impact upon an individual's willingness or ability to express their views or to challenge the work of those who are more senior.



8.5 APS X2 requires Members to consider whether a review process should take the form of independent peer review with the person carrying out the review being independent of the work in question. Some of the forms of review described in this section 8 would not involve independence in the way that independent peer review (as defined in APS X2) provides. When a Member is considering which form of review

it is appropriate and proportionate to apply (if any) in accordance with APS X2, they may give attention to whether the form of review would provide sufficient assurance as to the quality of the work in question, or whether, in the circumstances, it is appropriate for the work in question to be subject to independent peer review (as defined in APS X2), in part or in whole.

9. Resolution of issues

9.1 Effective work review (including independent peer review) inevitably has the potential to involve robust challenge. Differences of opinion between the member responsible for the work and the individuals involved in the review may therefore arise.

9.2 Review can be an iterative process which can involve the reviewer passing comments back to the person responsible for the work and that person responding to those comments until they are satisfied that the work has been suitably reviewed. Where there are differences of opinion between the person responsible for the work and the reviewer, these can normally be resolved through discussion or further analysis. Throughout the process, it is important that both parties remember that the Member responsible for the piece of work is ultimately accountable.

9.3 It is acceptable for the person responsible for the work and the individual taking part in the review to disagree on a point. There can be different levels of disagreement. For example, it may be the case that the individual who is not responsible for the work will be happy for the person who is responsible to make the decision as to how to resolve the disparity.

Where the issue is material, it may be prudent to mitigate the risk to users of their advice by ensuring that the element of reasonable professional difference is given sufficient prominence in reports they provide to the user. In some circumstances the disagreement might be so significant that it is preferable to obtain a third opinion.

9.4 Where the actuarial work in question is being carried out by a Member in the capacity of reserved role holder (such as an Actuarial Function Holder or a Scheme Actuary), it is important for the Member to bear in mind they will remain legally responsible for the work in terms of their statutory duties. This means that they must be content with the opinion that they are providing even where that piece of work is subject to review by two other individuals who both take a different view to the Member carrying out the reserved role (even if there are two or more such reviewers who both or all take this different view). The fact that the reviewers have taken a different view should not mean that a reserved role holder is providing an opinion which goes against their own judgement.

10. Output of the review

10.1 There is a range of practice regarding the output of a review. The following is a non-exhaustive list of possible outputs:

- record of the review taking place;
- record of the review taking place and all issues having been resolved;
- record produced in the form of completed checklist of review issues considered; or
- detailed record of review feedback and resolutions arising.

10.2 APS X2 does not prescribe the format of review output; however, Members

may find that it is useful in terms of being able to demonstrate that review has taken place to keep a record of that fact along with the date and name of the individual(s) involved in the review.

10.3 While standard forms and checklists can ensure all relevant aspects of the review have been completed, a more superficial ‘tick box’ approach should be avoided. Recording of review can assist the Member responsible for the piece of work in the event that their work is challenged, and may also be useful when reviewing the effectiveness of review policies and processes.

11. Other sources of guidance

11.1 The IFoA offers a confidential Professional Support Service⁶ to assist Members with professional and ethical matters.

11.2 Members may also find the quality assurance sections of APS QA1: Organisations and Employers of Actuaries⁷ and the accompanying guide⁸ helpful.

⁶ www.actuaries.org.uk/regulation/pages/professional-support-service-0

⁷ www.actuaries.org.uk/research-and-resources/documents/revised-apsqa1

⁸ www.actuaries.org.uk/research-and-resources/documents/guide-apsqa1

Contact us

The content of this guide will be kept under review and for that reason we would be pleased to receive any comments you may wish to offer on it. Any comments should be directed to:

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