Board for Actuarial Standards

Conceptual Framework for Technical Actuarial Standards

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1 INTRODUCTION

STATUS AND PURPOSE OF THE CONCEPTUAL FRAMEWORK

1.1 The Financial Reporting Council (FRC) has as one of its strategic goals that:

> Users of actuarial information can place a high degree of reliance on the information's relevance, transparency of assumptions, completeness and comprehensibility.[1]

The Financial Reporting Council is the UK's independent regulator responsible for promoting confidence in corporate reporting and governance. The BAS is an operating body of the FRC.

1.2 BAS standards are a key component in the achievement of this goal. This *Conceptual Framework for Technical Actuarial Standards* is designed to give coherence and consistency to BAS standards, by setting out the objectives and characteristics which will be common to BAS standards, including the basic principles and concepts that will be applied in each standard.

1.3 As such, the *Conceptual Framework* is a public statement of intent by the BAS to its stakeholders. That is not to say that the *Conceptual Framework* is set in stone. This is the first time that an actuarial framework has attempted to cover the ground that this document covers and there may need to be changes along the way. But, by publishing this statement of intent, the BAS is imposing a discipline on itself to comply with this document or publicly amend it.

1.4 The *Conceptual Framework* is not a standard, nor does it have the status of a standard. ***The* Conceptual Framework *does not, of itself, create or impose any requirements on actuarial work.*** It is only when material appears in a BAS standard that it becomes a requirement. (Section 5 addresses the status and enforceability of BAS standards.)

TECHNICAL ACTUARIAL STANDARDS ("TASs")

1.5 The *Conceptual Framework* applies only to technical standards, which will be called Technical Actuarial Standards ("TASs"). Ethical standards are a separate matter. The Actuarial Profession[2] has the initial responsibility for setting ethical standards, with POB[3] having oversight of this process. The BAS has a reserve role to set ethical standards if asked to do so by POB or if it otherwise considers this appropriate. But it is not the role of the BAS to set out objectives or characteristics for ethical standards ahead of the Profession.

1.6 The Profession's standards which were adopted by the BAS at its inception (known as Guidance Notes or GNs) contain some ethical material which will need to be deleted, to reappear, if appropriate, in the Profession's ethical standards. This exercise will take place in due course.

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[1] The FRC's *Strategic Framework*, April 2007, Strategic Outcome Four.

[2] The Actuarial Profession is the name by which the Institute of Actuaries and the Faculty of Actuaries are known when working together. At the time of writing this document, the Councils of the Institute and the Faculty have recommended to their members a merger of the two bodies. Pending any revisions to this document to reflect such a merger, references in this document to "The Actuarial Profession" include any successor body.

[3] The Professional Oversight Board, another operating body of the FRC.

2 OBJECTIVES AND CHARACTERISTICS OF STANDARDS

OBJECTIVES OF TECHNICAL ACTUARIAL STANDARDS

2.1 At the highest level, all standards must contribute to the FRC's strategic goal that users can place a high degree of reliance on actuarial information. In pursuit of that goal, TASs will set out concepts, principles, rules and terminology from which those complying with standards will be able to determine the appropriate techniques, methodologies and assumptions to be applied to their work and the means of communicating the output.

2.2 As set out in paragraph 1.1, the FRC's strategic goal for actuarial practice lists four aspects of reliance: relevance; transparency of assumptions; completeness; and comprehensibility. It is the BAS's view that actuarial information cannot be regarded as "complete" unless it includes an indication of any uncertainty inherent in the information. This aspect of uncertainty, and the appropriate communication of that uncertainty, will be a key feature of TASs.

2.3 TASs are intended for the benefit of the public, rather than for the protection of actuaries. Actuaries may gain an indirect benefit from the enhanced reputation that may be expected to flow from the development of TASs, but the existence of standards is not a substitute for professional judgement, or consideration for the needs of the user(s), when delivering an individual piece of work.

CHARACTERISTICS OF TECHNICAL ACTUARIAL STANDARDS

2.4 Individual TASs will be:

a) limited to a specific, defined context ("specific TAS"); or

b) generic to all work falling within the range specified in a Schedule to the *Scope & Authority of Technical Standards* ("generic TAS").

2.5 The BAS wishes to avoid a "tick-box" approach to standard-setting. As noted in paragraph 2.3 above, professional judgement and consideration for the needs of the users is paramount. With that in mind, TASs will be written in a manner which favours principles over prescriptive rules.

2.6 This approach does not exclude specific rules, where appropriate, as a means to convey the requirements of the standard. But neither does it exclude a standard (or a part of a standard) stating only the principle(s) to be followed. Standards will be articulated at a level of detail sufficient to enable those carrying out work to have a clear understanding of what is required in order to comply with the standard. Standards will not be so rigid that they prevent the continuing development of actuarial methodology.

2.7 The more generic the scope of a standard the more likely it is that the standard can be completely (or predominantly) defined by principles without spelling out detailed rules. The *Scope & Authority of Technical Standards* explains that compliance with a TAS depends critically on applying the spirit and the reasoning behind the standard, as well as following any detailed rules.

FORM AND CONTENT OF A TAS

2.8 Each TAS will have its own specific objectives. Those objectives will be identified, standard by standard, and clearly stated in the standard, in the form of an opening statement setting out the purpose of the TAS, its scope of application and any legal and regulatory authority that underlies the standard.

2.9 Each TAS will provide a clear rationale for the principles underlying the standard. The principles will follow from this *Conceptual Framework* (see, in particular, Section 3) and will be explained and justified in a way which enables the reader of a standard to follow the reasoning from the underlying concepts through to the requirements of the standard. The objective, across all TASs, will be that the standard should not only be intelligible to lay readers, but also be intelligible to readers (whether lay or actuarial) who are new to the issues addressed in the standard.

2.10 In addition to the explanatory material contained within the TAS itself, the process of developing standards will include a consultation process during which discussion, including other options, will be exposed for comment. The reasons for the rejection of the options that were not selected will typically be explained in the commentary accompanying the exposure draft of the TAS.

2.11 Some of the material in TASs will address the *outputs* of actuarial work (or *processes* leading to outputs). Other material may address the *responsibilities* of actuaries. In this context, the *outputs* of actuarial work are, for example, the results of a calculation and the *processes* are the calculation itself, together with all the elements that go to making up the calculation. The *responsibilities* of actuaries are the duties they are under, typically (in the context of standards) as a result of regulations.

PROPORTIONALITY

2.12 The BAS will always bear in mind the cost of implementing standards and the question of proportionality. In particular, when considering the costs of carrying out an additional step in a piece of work, the BAS will consider not only the potential cost from the perspective of those who incur the cost, but also the potential benefits when viewed from the perspective of the beneficiaries.

2.13 Exemption from part or all of a standard when working for small entities is one possible mechanism for achieving proportionality, which the BAS will consider. But it is not the only way to achieve proportionality and the BAS notes that exemption for small entities was not found necessary in relation to Guidance Notes developed by the Actuarial Profession.

3 CONCEPTS TO BE ADOPTED IN TECHNICAL ACTUARIAL STANDARDS

THE STARTING POINT

3.1 The BAS will apply the following four precepts in the development of TASs:

1 *Liabilities:* The range of actuarial liability calculations is too diverse to fit within one single approach.

2 *Assets*: Existing assets are to be taken at market value (or an estimate of the value in exchange in the absence of a market), and future assets by reference to the discounted value of future cash flows, unless specifically required otherwise.

3 *Uncertainty*: Actuarial information cannot be regarded as complete unless it includes an indication of any uncertainty inherent in the information.

4 *Consistency:* The quantification of liabilities and assets should be carried out using methods and assumptions that are consistent with each other and consistent with the identified risks.

Liabilities (Precept 1)

3.2 The first precept is that the range of actuarial calculations of liabilities is too diverse to fit within one single approach. TASs will recognise different approaches in different contexts.

3.3 In particular, TASs will recognise that calculating an actuarial liability for *planning purposes* may require different considerations from the calculation of a liability for a *valuation* and that, within each of those two objectives, further differentiation of approaches is desirable.

3.4 This distinction between the process of *valuation* and the process of *planning* is more than just a matter of semantics. The aim of a *valuation* is to crystallise an amount which can be applied to a transaction or recorded in a formal document, whereas the aim of *planning* is to arrive at a provisional amount for *budgeting* or *target-setting purposes*. The actuarial assumptions appropriate to a *planning* exercise may well be (and typically are) different from the assumptions appropriate to a *valuation*. See Appendix A for more details.

3.5 It is not unusual for actuarial work to be a combination of both a *valuation* and a *planning* exercise. This occurs when the work includes an assessment of a liability *value* coupled with a funding or distribution *plan* based on the results of the valuation. This combination of work does not negate or diminish the distinction between a valuation and a plan; it highlights the need to draw the distinction, particularly in cases where different assumptions are used for the two parts of the exercise.

3.6 The recognition of a range of valuation (and planning) approaches does not place actuarial work in a special position. Multiple valuation approaches and philosophies arise in other disciplines. Economics, accountancy and finance between them recognise, for example, value in use, value in exchange, fair value, net realisable value and other measures.

3.7 TASs will also distinguish, where appropriate, between *methods of valuation* and *measures of liability*. The actuarial literature has often used the term "valuation method" to characterise different *measures* of the liability being quantified, rather than different mechanisms by which the valuer seeks to quantify the same (uncertain) amount of liability. Again, see Appendix A for more details.

3.8 The BAS recognises that the word "method" appears in legislation and "valuation" appears in many pension scheme trust deeds and other legal documents, none of which can realistically be changed at this juncture. Accordingly, in the interests of clarity of understanding, the BAS will write standards in a manner which reflects the relevant legislation and other relevant legal documentation, but the BAS will also seek to explain the true meaning of the terms identified above, so that those using a TAS can better understand the calculations being referred to.

Assets (Precept 2)

3.9 The general approach to the treatment of assets in TASs will be that existing assets are to be taken at market value (or an estimate of the value in exchange in the absence of a market) and future assets by reference to the discounted value of future cash flows.

3.10 In those cases where it is part of the actuarial calculation to take into account assets which the entity is not due to receive until some *future* date (for example future premiums), the quantification should follow the principles set out in this section, from paragraph 3.20 onwards.

3.11 In some actuarial contexts, there are assets which are not owned by the entity, but which have been contingently assigned to the entity. These contingent assets may be in existence at the time of the calculation, in which case they should be taken at market value (or value in exchange), or they may arise in future, in which case they should be calculated as future assets using the quantification principles below. The determining factor is by reference to existence, not ownership.

3.12 Specific TASs may set out alternative principles where necessary, for example where it is appropriate to take into account significant changes in the value of the assets after the valuation date (and even extreme changes *on* the valuation date). For some planning purposes, it may be appropriate to focus on the future cash flows from the assets, rather than their current market value.

Uncertainty (Precept 3)

3.13 As discussed in paragraph 2.2 above, the BAS takes the view that actuarial information cannot be regarded as complete unless it includes an indication of any uncertainty inherent in the information. TASs will set out principles on how to inform the users of actuarial information of uncertainty, what to inform them of and, potentially, when or how often to inform them.

3.14 Some economists and actuaries draw a distinction between different types of *uncertainty* and *risk*, using the following (or similar) classifications: [4]

[4] The origin of this classification is usually attributed to *Risk, Uncertainty, and Profit*, by Frank H Knight, originally published in 1921.

1 *A priori (or mathematically derivable) probabilities*: these include, for example, the chances of a particular outcome from tossing an unbiased coin, or selecting particular cards from a pack of playing cards. These results can be calculated without needing to observe coin-tossing or card-dealing.

2 *Statistical (or empirically derivable) probabilities*: these cover outcomes for which the probabilities can be derived from observing past experience and drawing statistical inferences. Obvious examples include human features, such as the chance that a randomly selected male will be above a certain height or have eyes of a particular colour.

3 *Estimates for which there is no basis on which to assign probabilities*: these cover outcomes for which there is no past experience or for which past experience is not a plausible guide to the future. So, for example, the chances of finding life on Mars has no prior statistics to guide us. The chance that a new invention will need to be recalled from sale on safety grounds could be estimated by collecting statistics from past inventions, but if the product is unprecedented (the first mobile phone, for example) statistics from previous inventions would not provide a meaningful guide.

3.15 All three categories are relevant to the presentation of actuarial information. The third category (no basis on which to assign probabilities) is sometimes called *uncertainty* to distinguish it from the first two categories (mathematically and empirically derived probabilities) which are called *risks*. This linguistic distinction between *risk* and *uncertainty* tends to appear more in academic literature than in day-to-day business terminology and the BAS does not expect to adopt it in TASs. But the distinction between quantifiable and unquantifiable risk/uncertainty does have a significance for actuarial work and, in particular, the presentation of actuarial information, which will be addressed, where appropriate, in TASs.

3.16 It is outside the scope of the BAS to set standards for managing risk. Management of risk is for managers of the entity.

Consistency (Precept 4)

3.17 The fourth precept is that quantification of liabilities and assets should be carried out using methods and assumptions that are consistent with each other and consistent with the identified risks. Where different methods are used in combination with each other (eg deterministic and stochastic projections), they too should be consistent with each other.

3.18 This approach does *not* mean that the assets and liabilities should always be quantified in an *identical* manner or using identical assumptions. In a typical actuarial exercise which tests whether the assets are (expected to be) sufficient to pay off the liabilities as they fall due, the future sales proceeds of the assets (ie their market value) will need to be estimated. The process of projecting forward the market value of the existing assets at their assumed growth rate is appropriate for this exercise and mathematically equivalent to discounting the liabilities at the same assumed rate.

3.19 The precept of consistency does not, therefore, call for the liabilities to be quantified at the current market value whenever the assets are valued in that way. To do so would ignore (expected) future market conditions and would not always meet the objectives of the calculation.

CONCEPTS AND PRINCIPLES OF ACTUARIAL QUANTIFICATION

3.20 The calculations that arise in actuarial work comprise, and are defined by, the following ingredients:

- the *nature and objective* of the calculation;
- the *data* provided
- the *assumptions* made;
- the *cash flows* allowed for; and
- the *risks* taken into consideration.

3.21 Each of these ingredients is described in more detail in the paragraphs below.

Nature and objective

3.22 For calculations which are specified in regulations or other legal obligations (defined more formally in Section 4 as "Required Work"), the nature or the objective of the calculations is often specified in the regulations or legal instrument which gives rise to the work in the first place. Alternatively, the regulator's statements might simply say that the entity is to follow TASs and/or recognised actuarial practice. Where required, TASs will set out how to implement the rules contained in those statements.

3.23 For all calculations which are the subject of a TAS (whether or not the calculations are the subject of regulations), the nature or objective of the calculations will be set out in the TAS, usually in the definition or description used by the BAS to identify the class of work the TAS relates to.

3.24 There may be more than one calculation *method* which can be used to achieve a given objective. For example, the valuation of a conventional business might be assessed using price/earnings ratios or by discounting future expected cash flows.

3.25 Likewise, there may also be more than one calculation *measure* which can be used to achieve a given objective. For example, the Pensions Act 2004 permits the calculation of the technical provisions of a pension scheme to use a variety of different liability measures, for example measures which include or exclude allowance for future expected salary increases.

3.26 Where appropriate, having regard to all the relevant circumstances, including the prevailing regulatory environment, TASs may specify one or more permitted methods of calculation and/or permitted measures of liability for the purposes of a particular class of calculations and a particular calculation objective.

Data

3.27 In an ideal world, the data underpinning actuarial work would always be available in precisely the form needed for the intended calculations and would be complete and accurate. In practice, that is not always the case. Sometimes, it may be necessary to form a view whether the data is suitable for the proposed calculations and, on occasion, to adjust the quantification methodology to allow for limitations in the available data.

3.28 Alternatively, or in addition, a (positive or negative) compensating adjustment may need to be incorporated within the quantification process, within the results, or within the range of possible results to avoid a misleading presentation of the entity's financial position.

3.29 TASs may specify tests to be carried out on the data used for specific calculations and/or adjustments to be made to compensate for uncertainty in, or inappropriateness of, the data.

Assumptions

3.30 Actuarial calculations almost invariably depend on one or more assumptions about the course of future events. Commonly encountered examples relate to the longevity of beneficiaries, the return earned on investments, expenses and several other economic, financial and demographic factors.

3.31 TASs may potentially address the selection of an individual assumption by way of:

a) *qualitative aspirations*, for example that the assumption should reflect recognised and authoritative views and not merely the personal views of the individual carrying out the work (or vice versa, in circumstances where it is the case-specific judgement of the individual that is paramount);

b) *qualitative prescription*, for example that the assumption should be determined by reference to a stated criterion;

c) the *mechanism* (or *link*) by which particular types of assumptions should be used to address specified risks; or

d) *quantitative limits*, for example that the assumption should be set within specified numerical boundaries.

3.32 In the case of (d) above (quantitative limits on the range of assumptions), limits may be expressed in terms of a formula or yardstick by which the assumption range automatically alters with changing circumstances, or by expressing limits in absolute numerical amounts. The BAS has no current plans to set numerical boundaries on assumptions. But this *Conceptual Framework* does not preclude the BAS from imposing limits where, after due consultation, this is determined to be appropriate in the light of all relevant circumstances.

3.33 For some calculations, the entity's own regulator may impose specific constraints or limits on the permitted range of assumptions. These constraints may be expressed qualitatively, for example a requirement for prudence, or quantitatively, for example a best estimate. Alternatively, the constraints may be expressed according to a rule or formula (for example imposing a maximum or minimum on the permitted assumption).

3.34 The constraints imposed by the entity's regulator may be sufficient and without any need for qualification or amplification. But there may be circumstances in which the regulatory objective would be well served by additional input from the BAS, either at the regulator's request or at the suggestion of the BAS. This will only be determined after discussion between the BAS and the regulator (and after public consultation, as is the case for all BAS standards).

Cash flows

3.35 The cash flows adopted in actuarial calculations are typically derived from a combination of underlying facts and assumptions about those facts. The facts consist of matters such as data relating to beneficiaries and scheme or policy documents which specify rules to determine the level of payments made to the beneficiaries. The assumptions relate to the possible future courses of events relating to those beneficiaries and the payments they will receive.

3.36 But where an entity has a practice, for example, of making payments in excess of the contractual minimum, the decision whether to estimate the cash flows by reference to the contract or the established practice is one which depends on the objectives of the calculation, not facts or assumptions.

3.37 In some such circumstances, the entity's regulator may impose a principle to be applied. Where the regulatory objective would be well served by additional input by the BAS, and in other appropriate circumstances, TASs will specify (further) principles to be applied.

3.38 For some purposes, actuaries disclose the cash flows underlying a quantification exercise. But, often, actuaries disclose only the discounted value, ie the (reduced) amount, at the valuation date, which equates to the future cash flows, after allowing for investment returns at the assumed rate. TASs may identify information relating to the undiscounted liability cash flows to be disclosed in addition to the discounted values.

Risks

3.39 The entities with which actuarial work is concerned typically face a range of risks. By definition, every risk relates to something which cannot be known with certainty. Not all the risks that an entity is faced with are reflected in actuarial calculations, but for every (material) risk which might affect the outcome of the actuarial calculation, there needs to be an assumption to address that risk.

3.40 The major risks associated with typical areas of actuarial work are, by nature, economic, demographic or (in the case of general insurance) liability-driven. TASs may need to address other types of risk also. For some calculations, the entity's regulator may identify a number of risks, or risk categories, which must be taken into consideration.

3.41 Where mitigating actions have been taken by management, it may be appropriate for the actuarial calculation to reflect that action. But where such mitigating action is reversible and no allowance has been made in the calculations for the possibility of such a reversal, this amounts to an (implicit) assumption that the mitigating actions will be kept in place.

3.42 TASs may specify types or classes of risk which must be taken into account for the purposes of actuarial calculations and, as noted in paragraph 3.31 above, the mechanism (or link) by which particular types of assumptions should be used to address specified risks. TASs may also specify the extent to which it is appropriate that steps taken by management to mitigate risks should be allowed for in actuarial calculations, together with requirements for explicit disclosure of any implied assumptions.

4 THE SCOPE OF TECHNICAL ACTUARIAL STANDARDS

INTRODUCTION

4.1 This section addresses the scope of work for which Technical Actuarial Standards will be developed, in terms of both the type of work and its geographical scope. The enforcement of TASs is described in Section 5 and set out more formally in the *Scope & Authority of Technical Standards*.

TERMINOLOGY

4.2 For the purposes of this section of the *Conceptual Framework*, the following terms are required. Formal definitions of these terms will be set out in the *Scope & Authority*:

Required Work: Work carried out in order that the entity commissioning the work complies with regulations, or with some other legal obligation, that require the entity to have the work carried out (or make certain outcomes conditional on the work having been carried out).[5]

Reserved Work: A particular category of Required Work for which the regulations or other legal obligation require the entity in question to commission the work from an individual who holds a prescribed actuarial qualification (usually Fellowship).

For the purposes of this definition, Reserved Work does not include – and the BAS does not intend to develop TASs for – work assigned by regulations only to the holder of a unique post, such as the Government Actuary, or Lloyd's Actuary.

Required But Not Reserved: This term refers to work which falls within the class of Required Work, but which is not Reserved Work.

Reliability Objective: This is the objective that users of actuarial information 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.

4.3 In addition to the formal definitions of these terms set out in the *Scope & Authority*, the terms *regulation* and *legal obligation* used above are also defined there. In brief, a regulation is a rule or an order issued by an appropriate authority and a legal obligation is any obligation enforceable at law (eg a contract, trust deed, court order etc).

AREAS OF WORK TO BE COVERED BY TECHNICAL ACTUARIAL STANDARDS

4.4 The BAS has concluded that the actuarial work which should be the subject of technical standards can be described as follows, with more details set out in the paragraphs that follow:

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[5] By way of example, the requirement for a pre-paid funeral plan to obtain an actuarial report applies only if the plan wishes to be exempt from certain other regulatory requirements. That is sufficient to bring the work within the definition of Required Work.

- *Reserved Work:* Work that is reserved to actuaries by regulation is a likely candidate for a TAS (see paragraphs 4.6-4.7 below).

- *Work that is Required But Not Reserved:* Other work that is required, but not reserved to actuaries, will be considered as a candidate for a TAS if the work is sufficiently frequently carried out by actuaries (see paragraphs 4.8-4.11 below).

- *Monitoring the work of another actuary:* This work falls outside the scope of the BAS. The general proposition is that the BAS sets standards for original actuarial work. Any monitoring of that work should have regard to the TASs relevant to the work, but the BAS will not develop technical standards on the process of monitoring (see paragraphs 4.12-4.14 below).

- *Other work:* The BAS would not routinely expect to write TASs for work that is not Required Work, but there may be specific areas that the BAS decides should be the subject of a TAS. The BAS will identify these areas of work from time to time and will consult publicly before a decision is made (see paragraphs 4.15-4.18 below).

4.5 The BAS recognises that a commissioning entity may make it a contractual term that a piece of work must comply with a TAS of the entity's choosing. The entity and the person carrying out the work (whether or not they are an actuary) should first agree that the TAS is applicable to the work. This is most likely to be the case in respect of a generic TAS, but there may be circumstances in which a specific TAS can be applied beyond its formal scope.

Reserved Work

4.6 Work that is reserved to actuaries has typically been the subject of standards in the past. More recently, other regulators such as the FSA have written regulations for entities which effectively cover the ground that might otherwise have been the subject of standards. Whether those regulators continue to set regulations in that way or rely on a general regulation requiring compliance with BAS standards will depend on the evolving division of responsibilities between the BAS and other regulators.

4.7 For the purposes of this *Conceptual Framework*, the position is that the BAS will work in a relationship of mutual co-operation with the relevant regulators so that regulations and TASs, taken together, cover the required ground.

Work that is Required But Not Reserved

4.8 The decision that the BAS will also develop TASs in relation to work that is Required But Not Reserved is the result of a balanced analysis. On the one hand, the potential benefits to be gained from the creation of actuarial standards do not vanish simply because the regulators do not compel the use of an actuary.

4.9 On the other hand, the fact that the work in question does not, by definition, have to be commissioned from an actuary means that the BAS has no standing to insist that the entity should commission work which complies with BAS standards.

4.10 The BAS is mindful of the practical risk that, if a TAS restricts the output from work done by actuaries, but not the equivalent work done by others,

entities may, on occasion, be deterred from choosing an actuary for the work, particularly if the result of following actuarial standards is expected to be adverse to the entity's own interests. The BAS has no brief to encourage entities to use actuaries in preference to any other service provider, but there might be risks to beneficiaries, and perhaps to the entities themselves, if those who commission work were deterred from using actuaries just at a point in time when the training of the actuary and the ethical code of the profession, were most needed.

4.11 The BAS will address this by stipulating that, where the objectives for which a piece of work was commissioned would be better met by departing from some of the requirements of a relevant TAS, an actuary may depart from the requirements so long as the departure is identified, the reasons for the departure are given and the result is not in conflict with the Reliability Objective set out in paragraph 4.2 above. The details relating to permitted departures from TASs will be set out in full in the *Scope & Authority* document.

Monitoring the work of another actuary

4.12 The decision that the BAS will not develop technical standards on monitoring activity follows from the fact that this is a responsibility which is discharged by others. This is true for all aspects of "monitoring" including audit and peer review.

4.13 An individual commissioned by an auditor to review actuarial information is working as part of the audit function. The reviewer (whether an actuary or not) will need to take into consideration any TASs applicable to the entity's work, but it is for other standard-setting bodies, not the BAS, to develop standards that apply to the audit function.

4.14 In relation to other forms of compliance monitoring (the term which has replaced "peer review" in actuarial literature), the responsibility for developing standards was assigned to the Actuarial Profession, overseen by the POB, when the BAS was created.

Other work

4.15 The key feature of work which is not Required Work is that the entity commissions the work at its own discretion, to meet a need that it determines for itself and with terms of reference which the entity is free to choose.

4.16 This work has a far wider range and diversity than the work hitherto covered by standards written by the Actuarial Profession. To develop standards for this work, in general, would constitute a very significant increase in regulation, an increase which could only be justified if there was substantial evidence that regulation on this scale was now required.

4.17 This does not rule out entirely the prospect that some areas of non-Required Work will be the subject of a TAS. Individual proposals will be considered on a case-by-case basis.

4.18 Moreover, an entity commissioning work for which there is no specific TAS is at liberty to make it a contractual term that the work must comply with one or more TASs of the entity's choosing, selected most likely from the range of generic TASs.

THE ROLE OF IMPACT ASSESSMENTS

4.19 Whilst Required Work (both *reserved* and *not reserved*) is within the scope of standard-setting, that is not to say that every piece of Required Work commissioned from an actuary will be the subject of a standard. Judgement will be exercised by the BAS on a case-by-case basis, taking into account the results of an *Impact Assessment*. Likewise, any proposal to develop a TAS in relation to non-Required Work will be the subject of an *Impact Assessment*.

GEOGRAPHIC SCOPE

4.20 The BAS will develop TASs in the context of UK legislation and regulation. The geographic scope of TASs will be limited to work done in relation to the UK operations of entities and any overseas operations which report into the UK within the context of UK legislation or regulation. This definition of scope, which is set out formally in the *Scope & Authority* document, applies regardless of the location or domicile of the person carrying out the work.

4.21 If an overseas regulator or an overseas entity elects to have a TAS applied in relation to work which falls outside the geographic scope described in paragraph 4.20, those making the decision to apply the TAS must take responsibility for ensuring that the TAS is appropriate in the local conditions.

5 THE ENFORCEABILITY OF TECHNICAL ACTUARIAL STANDARDS

OVERARCHING AIM

5.1 It is the intention that TASs published by the BAS will be complied with by actuaries: TASs are more than just recommendations. The extent to which TASs are to be treated as compulsory requirements is set out in this section. In brief, and subject to the more detailed requirements set out below:

- In the case of *Reserved Work*, TASs will be compulsory subject to required exceptions which will apply only in very rare cases.
- In the case of work that is *Required But Not Reserved*, an actuary may depart from the requirements of a TAS in limited circumstances, so long as the result is not in conflict with the Reliability Objective.
- In all other cases (ie *non-Required Work*), those responsible for commissioning work may instruct those carrying it out to depart from (specified) TASs.

5.2 Material departures will be subject to strict disclosure requirements. Immaterial departures from a TAS need not be considered as departures and need not be disclosed.

HISTORICAL CONTEXT

5.3 Previously, when the Actuarial Profession was responsible for issuing technical standards, some of the standards, classified as *Recommended Practice*, were in the nature of (short) manuals of good practice with little or no compulsion attaching to them. The Actuarial Profession has indicated that it intends to continue issuing helpful material with the intention that the material will provide background information and educational content, including a balanced digest of conflicting views on actuarial techniques.

5.4 In the context of the long term goal of the BAS to pursue continuous improvement in actuarial standards, reflecting evolving commercial practices, economic developments and expanding actuarial know-how, the professional body has a key role to play (along with other organisations) as a source of new ideas and a means for conducting and co-ordinating research. The BAS wishes to encourage that role.

5.5 The BAS is likely to carry out research of its own, in the context of its standard-setting role, and will publish the results as and when appropriate. But the BAS will not develop "good practice manuals", or the equivalent by another name.

AUTHORITY OF BAS PRONOUNCEMENTS

5.6 The authority for BAS standards derives from the powers of those bodies which decide to recognise BAS standards and adopt any or all of them as a requirement imposed on individuals or entities which the body in question has power over. Specifically:

- The disciplinary schemes of the Actuarial Professional Bodies and the Accountancy & Actuarial Discipline Board recognise the authority of BAS

standards by providing that any departure from a BAS standard may amount to misconduct, rendering the actuary liable to disciplinary action.

- The regulatory regimes for pensions and for insurance have recognised certain BAS standards for the purposes of requirements imposed on the entities they regulate.

- Compliance with BAS standards is likely to be taken into account when the adequacy of the work of actuaries is being considered in a court of law or in other contested situations.

COMPLIANCE WITH TECHNICAL ACTUARIAL STANDARDS

5.7 The requirements to comply with TASs will be set out in the prevailing *Scope & Authority* document published by the BAS. The *Scope & Authority* will set out the formal position in relation to the following issues.

5.8 TASs will be intended to assist in the achievement of the Reliability Objective defined in paragraph 4.2 above. In applying TASs, it will be important to be guided by the spirit and reasoning behind them, as well as following any detailed rules. The spirit and reasoning (as well as any rules) will be set out in the individual TASs.

5.9 Compliance with all relevant TASs will be compulsory for actuaries, except to the extent of any departures permitted or required by the *Scope & Authority*, in pursuit of the principles set out briefly in paragraphs 5.10-11.

5.10 Immaterial departures from a TAS need not be considered as departures and need not be disclosed. Departures would normally be considered material if, at the time the work is performed, the combined effect of the departures could influence the decisions to be taken on the basis of the work in question.

5.11 Further departures from a TAS will be permitted or required as follows:

a) Reserved Work

Departure will be required if, in extremely rare circumstances, compliance with a TAS would be so wrong or misleading that it would conflict with the Reliability Objective. Departure should be restricted to the minimum extent necessary to remove the conflict with the Reliability Objective.

b) Work that is Required But Not Reserved

In addition to departures required in rare circumstances described in sub-paragraph (a), if the objectives for which a piece of work was commissioned would be better met by departing from some of the requirements of a TAS, departure will be permitted, so long as the departure is not in conflict with the Reliability Objective.

c) All other work

In addition to departures required in rare circumstances by (a) above, and permitted by (b) above, those commissioning work may instruct those carrying it out to depart from the requirements of a TAS.

5.12 The *Scope & Authority* will set out compulsory disclosure requirements to apply in conjunction with any material departure from a TAS permitted or required as above.

ACTUARIES WORKING IN A SUBORDINATE ROLE

5.13 Where an actuary carries out non-reserved work, acting as a subordinate to a non-actuary, the actuary will not be required to apply TASs if doing so would be contrary to the instructions of the more senior person and the entity itself is not required to comply with the relevant TAS. The *Scope & Authority* will set out the formal rules for giving effect to this principle.

VOLUNTARY COMPLIANCE WITH TECHNICAL ACTUARIAL STANDARDS

5.14 Even though an entity, a firm or an individual who is not an actuary may not be obliged to apply BAS standards, the BAS recognises that:

- employers or clients of actuaries may agree to make it a contractual condition that a particular piece of work be carried out in compliance with one or more stated TASs, so long as the standard is relevant to the work;
- other regulators may make it a requirement of their regulatory regime that an entity or an individual adopts appropriate TASs; and/or
- entities or individuals who are not actuaries may apply TASs voluntarily and, if they do so, may assert that the information they have produced complies with TASs published by the BAS.

A MATTERS RELATING TO THE CONCEPTS OF VALUATION AND PLANNING

PURPOSE OF THIS APPENDIX

A.1 This appendix explains the thinking behind the BAS's decisions set out in paragraphs 3.2-3.8.

METHODS OF VALUATION vs MEASURES OF A LIABILITY

A.2 In actuarial literature relating to the assessment of liabilities,[6] the term "valuation method" is often used to refer to a *measure* of the liabilities, not the method of quantifying them. When the language is used in this way, given the same data and the same assumptions, two different valuation "methods" will (deliberately) arrive at different outcomes. For example, in the context of pension schemes, the method of valuation known as "projected unit" takes into account prospective future salary increases which the method known as "current unit" ignores (by design).

A.3 This use of the word "method" is quite different from normal business parlance, in which two different "methods" of valuation would normally be intended to produce similar results. For example, when an unquoted business is valued for sale, the valuer often uses more than one method of valuation so as to provide a cross-check of one calculation against the other. If the two results differ widely, the valuer will look for an explanation in order to narrow the gap.

VALUATION vs PLANNING

A.4 Many actuarial calculations have a particular feature in common: they derive a single monetary amount which, at the effective date of the calculation ("the valuation date"), equates to a stream of cash flows payable on other dates.

A.5 The underlying real-world principle by which a single monetary amount can be linked or equated to a stream of cash flows is the economic activity of *investment* (and *disinvestment*) in which a sum of money is exchanged on a given date for a series of cash flows at later dates (and vice versa). In financial terminology, the calculation which converts (a stream of) cash flows at one or more date(s) to an equivalent figure at another (earlier) date is known as *discounting*.

A.6 Readers familiar with mathematical terminology will recognise *discounting* as an *operator* applied to a series of cash flows and to the dates associated with those cash flows to arrive at a single sum of money associated with another date. Mathematically speaking, the date to which the cash flows are discounted can be earlier than, later than, or during the time span of the other cash flows, although it is usual to talk about *accumulation*, rather than *discounting*, when the specified date is after the cash flows.

[6] The most prominent example is perhaps the actuarial standard known as GN 26, *Pension Fund Terminology*, which the Profession first issued in 1996 and retained until handing over responsibilities for standards to the BAS.

A.7 Discounting calculations may arise in two different contexts:

a) The first type of calculation is performed in circumstances where the goal is to arrive at a result which will be applied to a transaction or in a formal document such as accounts or a regulatory return. Examples of this type of calculation include:

- liability values for regulatory returns
- accounting values for statutory accounts
- transfer or surrender values paid to individuals
- appraisal values for the purchase or sale of a business.

b) The second type of calculation is performed in circumstances where the goal is to arrive at a provisional amount for planning or target-setting purposes – typically to calculate the quantum of assets that an entity needs to hold in order to pay off specified liabilities when they fall due. Examples of this type of calculation include:

- funding assessments for pension schemes
- developing a bonus distribution strategy in a with-profit life fund (or, in traditional actuarial terminology, a control method for the release of surplus)
- reviewing the adequacy of general insurance premiums.

A.8 In purely *mathematical* terms, there is no difference between the first and second type of calculation. But in practical terms, there are subtly different real-world interpretations of the two calculation types which may, therefore, require different inputs, even though the mathematics is identical.

A.9 The end result of the process in the first class of calculations is the adoption of an amount for the purposes of a transaction or a formal document. In ordinary English, this process is known as a *valuation*. In the second class of calculations, the end result is a provisional amount for the purposes of *planning*, *budgeting* or *target-setting*. Outside the actuarial environment, the processes of planning, targeting and budgeting are not typically known as *valuations*. Several commentators have, over a period of years, criticised the unusual way that actuaries have used the word.[7]

A.10 It is not unusual for actuarial work to be a combination of both a valuation and a planning (or similar) exercise. This arises when the work includes an assessment of a liability *value* (such as the *technical provisions* of a pension scheme or a life company), coupled with a funding or distribution *plan* based on the results of the *valuation*. This combination of work does not negate or diminish the distinction between a *valuation* and a *plan*; it highlights the need to draw a distinction, particularly in cases where different assumptions are used for the two parts of the exercise.

[7] The first was probably Professor John Kay, an eminent economist, addressing the Institute of Actuaries' discussion of *The Comparative Value of Pensions*, in October 1981.

FINANCIAL MANAGEMENT IN INSURANCE AND PENSIONS

A.11 Historically, legislators and policymakers have deemed that life insurance companies should not become insolvent. Regulations have been created which require life insurers to operate in a manner which is demonstrably solvent, with safety margins built in on top – all designed to reduce the risk of insolvency to a level which society (or the regulator on society's behalf) deems acceptable. If the safety margins are breached, the regulators take action. In extreme cases, the life insurer will be forced to stop writing business, along with various other consequences. The safety margins vary over time, but the basic principle that safety margins exist and should not be breached has been in place for many decades.

A.12 The position for pension solvency is fundamentally different. The story is changing over time and the current position has been in place only since the coming into force of the Pensions Act 2004. But as matters stand at the moment, and in the past, there has never been a solvency level or safety margin below which schemes were not permitted to fall and still be allowed to remain in existence. The current legislation defines "solvency" at a level that very few schemes meet or aspire to (known as the *buy-out* cost).

A.13 But the legislation allows schemes to continue to operate well below that "solvency" level. A lower, scheme-specific target level of funding is set (known as the *technical provisions*), but schemes are permitted to continue operating even with assets less than the *technical provisions*, so long as there is a *recovery plan* to eliminate the shortfall over time. The *recovery plan* must be acceptable to the statutory regulator who (in keeping with the legislation) will typically allow several years to make good a deficit.

A.14 This distinction has been crucial in the financial management of life insurance and pension schemes. So long as life insurance managers are necessarily preoccupied with not allowing the assets to fall below a target level (essentially, solvency plus a safety margin), whilst the managers of pension schemes are free to let the assets fluctuate above and below the target level, or (as in the past) are not set any target level at all, the management of these two financial entities is bound to be different.

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