



**FINANCIAL REPORTING COUNCIL**

**PROMOTING ACTUARIAL QUALITY**

**SUMMARY OF RESPONSES TO CONSULTATION AND  
ACTUARIAL QUALITY FRAMEWORK**

**JANUARY 2009**



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## 1. INTRODUCTION

- 1.1 In May 2008, the Financial Reporting Council (FRC) issued a discussion paper *Promoting actuarial quality*, together with an accompanying paper from the Professional Oversight Board (an operating body of the FRC) on *Monitoring and scrutiny of actuarial work*.
- 1.2 Through these discussion papers, the FRC and its operating bodies - primarily the Oversight Board and the Board for Actuarial Standard (BAS) - sought to promote debate about actuarial quality among all its stakeholders: actuaries and their firms, their principal clients such as senior management and members of governing and review bodies, other professionals such as lawyers and accountants, end-users and their representatives, and policymakers and regulators, including the Faculty and Institute of Actuaries (the Profession).
- 1.3 *Promoting actuarial quality* described current actuarial practice, and sought views on the drivers, threats and indicators relating to quality in actuarial work, with a view to establishing a common framework for discussing actuarial quality with its stakeholders.
- 1.4 The six drivers put forward for discussion were:
  - Reliability and usefulness of actuarial methods
  - Technical skills of actuaries
  - Communication of actuarial information and advice
  - Ethics and professionalism of actuaries
  - Working environment for actuaries
  - Other factors outside the control of actuaries
- 1.5 Consultation on this FRC discussion paper ended on 30 September 2008. Public responses can be found at [http://www.frc.org.uk/about/response\\_discussion\\_paper.cfm](http://www.frc.org.uk/about/response_discussion_paper.cfm).
- 1.6 In addition to our formal consultation, we have received useful input and support from a large number of stakeholders including other regulators and industry representative bodies, as well as the FRC's actuarial stakeholder interests working group and contributors to the Oversight Board's discussion paper on monitoring and scrutiny (listed at Annex D of that paper).
- 1.7 This paper was discussed at the Birmingham Actuarial Society, and an Open Forum organised by the Profession in London, and many of the respondents to the Oversight Board's discussion paper also referred to the FRC paper, either by indicating they had no comments, or by providing a joint response to both papers.
- 1.8 There were 22 formal consultation responses (listed in Annex B) as follows:
  - 1 non-actuarial body
  - 5 actuarial bodies (including three international)
  - 2 insurers (1 life, 1 general)
  - 3 accountancy firms (all offering actuarial services)
  - 6 actuarial/consultancy/trustee firms (including one smaller firm)
  - 1 large pension scheme
  - 2 academics (non-actuaries)
  - 2 individual actuaries (one overseas).

- 1.9 We found the responses to be well considered and helpful, and we wish to thank all the organisations, firms and individuals concerned.
- 1.10 Most respondents offered comments on specific questions in the discussion paper, and we have picked these up in the sections that follow. The majority of respondents represented actuaries or their firms, although there were no significant differences from the views expressed by non-actuaries. Most respondents focused on pensions issues, but there were comments on life and general insurance as well as other sectors of actuarial work such as investment.
- 1.11 Other respondents made more general comments, as did many of those who responded to specific questions. As far as possible we have sought to summarise these comments in the context of the question or the topic to which they relate, including:
- The nature and scope of actuarial work (section 2); or
  - The proposed drivers of actuarial quality, and the specific features and threats in life insurance, general insurance and pensions (sections 4-7).
- 1.12 A number of respondents also commented, or offered suggestions, on the issue (or ‘challenge’) of actuarial quality more generally. These comments are summarised at section 3.
- 1.13 Overall, responses indicated that our approach was well received, and most of our stakeholders felt that the approach of trying to identify drivers of actuarial quality could be very helpful, for example:
- “This is an important topic as actuaries play an important role in so many areas of financial services. We congratulate the FRC on this well-written paper which covers so many of the main issues.”*  
(Standard Life)
- “Overall, the document is a welcome addition to the debate on actuarial quality and how improvements can, where appropriate, be furthered. The Open Forum at the Staple Inn on 16<sup>th</sup> September signalled overall agreement to the aims contained therein and the concurrent consultation on Monitoring and Scrutiny of Actuarial Work.”* (Association of Consulting Actuaries)
- 1.14 Our analysis of the responses also prompted us to reach the same conclusion in each of the three main sectors we looked at. Accordingly, we are proposing an actuarial quality framework, which is set out at Annex A. The framework is introduced at section 8.

## 2. NATURE AND SCOPE OF ACTUARIAL PRACTICE

Q2 (i) Do you agree that the use and interpretation of mathematical models to describe financial systems, portfolios and entities is an underlying feature of actuarial work?

Q2 (ii) What other features describe and distinguish the nature and scope of actuarial practice?

### Proposition

- 2.1 In section 2 of the discussion paper, we explained the difficulty of defining actuarial work. We put forward the proposition that actuarial work is characterised by the use and interpretation of mathematical models. In some cases the use of a model would be implied, for example by an actuary's insight or in simple cases by the use of a formula.
- 2.2 We recognised that actuaries are not the only professionals to use mathematical models, but suggested that they might be distinguished by the way they have developed a professional discipline about the development, use and interpretation of models.
- 2.3 We suggested that the inherent power and flexibility of actuarial models meant that the scope of actuarial practice, if defined by the possible uses of such models, might cover advice to a wide range of clients, in relation to:
- *Customer transactions* – for example pricing investments and risks, developing insurance products, premium rates, bonuses and surrender values, as well as pension scheme design, contribution rates, transfer values, illustrations, and risk warnings and analyses;
  - *Financial management* – of the client's business, for example, investment strategy, reinsurance and risk management, planning and budgeting, analysing business;
  - *Reporting* – to stakeholders on aspects of the financial performance, prospects and condition of entities such as corporate, regulatory and listing requirements, and taxation returns;
  - *Ancillary matters* – for example providing expert evidence to a court or to a regulator on a business transfer or insolvency or in a forensic investigation or assessment involving an insurer, pension scheme or other investment vehicle.
- 2.4 We sought views on this approach, and on any other features that describe and distinguish the nature and scope of actuarial work.

### Summary of responses

	Agree	Mainly agree	Mainly disagree	Disagree
Q2(i)	10	6	0	1

- 2.5 There was general agreement that modelling is a significant underlying feature of actuarial work, although many actuarial respondents were anxious to emphasise that there is more to actuarial work than modelling alone.
- 2.6 Additional aspects suggested - which we might regard as part of the professional discipline about the use and interpretation of models - include:
- Clients have problems and issues on which they require actuarial advice and guidance;
  - Actuaries need to be able to understand the business and the decision-making process, including the needs of stakeholders;
  - Actuaries need to be able to analyse the issues;
  - Actuaries need to be able to communicate the results of their work, and either give advice themselves or refer to another professional; and
  - The term 'model' (as used for example in Solvency II) can itself cause confusion.
- 2.7 Another feature that was commented on was the extent to which actuarial models could be distinguished from other models:
- "The description could perhaps be tailored more to the traditional actuarial field by incorporating some reference to biometric and/or investment risks and uncertainty." (Watson Wyatt)*
- 2.8 There was broad agreement with our description of the main activities which make use of actuarial models, although many respondents felt that specific aspects - such as risk management, asset-liability matching and cash-flow projections - could be treated as a separate category rather than as part of financial management. One respondent felt that regulatory and corporate reporting should be regarded as a subset of capital management.
- 2.9 A number of respondents also singled out review and audit work, which we would probably include as part of ancillary activities.
- 2.10 One respondent suggested that many actuaries also have delegated decision-making functions, which could presumably apply in any of the types of activity we identified. Other suggestions such as drafting policy wording and report writing might relate to customer transactions or to any type of actuarial work.
- 2.11 It was suggested that some of these activities might not involve models at all. We had proposed that the use of models might be implicit in the use of an actuary's insight or the use of a formula. We accept that in some of these examples, such as legal drafting, actuaries may cease to rely on their understanding of the underlying models. However, in such cases, actuaries are perhaps close to not doing actuarial work at all.
- 2.12 One respondent expressed concern that if we take a narrow view, and adopt a one-size-fits-all approach to actuarial work, then there is a risk of over-regulation, particularly in non-statutory actuarial roles where actuaries are competing with non-actuaries.
- 2.13 By contrast, there was also encouragement for us to seek to adopt a common approach across all areas of actuarial work:
- "We believe that there is a great deal of consistency in the skills and techniques used by actuaries, particularly in the traditional fields. Differentiating between these fields, where the differences are not material, could lead to inconsistent standards, which is exactly one of the weaknesses the profession was criticised for in the Morris review." (Mercer)*



## Outcome

- 2.14 We have found this discussion helpful in identifying the features that will need to be addressed in any discussion of actuarial quality. We have taken the points made into account in developing our framework for assessing actuarial quality (see section 8). Overall we have concluded that it is helpful to describe actuarial methods by reference to models, provided we take a broad view of what models involve and of the disciplines which apply to their development, use and interpretation.
- 2.15 A number of features of models and their uses, as described in the discussion paper and by respondents, are common but not necessarily unique to actuaries and actuarial work. The question of whether the work is regarded as actuarial or not depends on how the work is described and perceived, which may involve an element of discretion for the adviser or the client, as well as the degree of reliance on the professional qualifications and status of the adviser.
- 2.16 We are alert to the frequently made argument that actuaries should not be put at a disadvantage when competing with non-actuaries for work which is not reserved to actuaries. On the other hand, actuaries enjoy a significant advantage from their professional status and reputation, which is dependent on continuing confidence in the quality of actuarial work. So far as possible we have defined actuarial quality by reference to the qualities of the actuarial work undertaken and of the originator of that work, whom we have described as an 'actuary'.
- 2.17 In order to meet the FRC's strategic outcome that users can rely on actuarial information, the Oversight Board will work with the Profession to ensure that a description of such work as 'actuarial' can be associated with high quality.
- 2.18 The BAS will also take the points made into account, for example in its development of a generic modelling standard.

### 3. THE CHALLENGE OF ACTUARIAL QUALITY

#### Proposition

- 3.1 In section 3 of the discussion paper, we put forward the proposition that the long-term and contingent nature of actuarial work meant that its quality could not easily be assessed directly. This led to the proposal (in section 4) that we should seek to identify the factors (or drivers) which determine quality.
- 3.2 We did not ask any specific question on this, but have included here some of the general comments made by respondents that have not been picked up elsewhere.

#### Summary of responses

- 3.3 There was broad support for our approach. Comments included:

*“In my opinion, one of the chief insights of the paper is that actuarial work is not just ‘product’ but more ‘process’. This understanding is important not only for promoting actuarial quality, but also for restoring trust in the profession, and improving our chances of survival.” (Mickey Lowther)*

*“We share the wide view of quality the FRC appears to have - that goes beyond the narrow definition of merely “not being wrong” - and, with this view in mind, we believe the drivers of quality identified in the paper are the right ones to focus on.” (PricewaterhouseCoopers)*

*“This leads on to a general point that the document does not make clear what is meant by ‘high quality’; we suggest that a possible definition could incorporate “giving the end-user an adequate understanding of likely outcomes and of risk, and enabling informed decisions to be taken based on that understanding.” (Watson Wyatt)*

- 3.4 Other points included the differences between actuarial work and audit or accountancy work, and the drivers of that work. One respondent felt that it was odd that the threats in pensions had been presented differently from those in life and general insurance, when many of them were common.

- 3.5 Several respondents echoed the point we had made in the discussion paper that regulation was not necessarily the only or indeed the best way of achieving high quality, for example:

*“Although consulting firms may not be regulated, competitive pressures, reputational risk and the acceptance of (limited) liability through contract terms with clients all provide a powerful incentive for quality control.” (Deloitte)*

*“We would caution against any increase in the level of regulation that leads to a suppression of innovative advice, which may occur if the providers of actuarial services operate in accordance with stricter internal guidelines which limit the scope to provide advice that is tailored to individual pension schemes.” (Royal Mail Pension Plan)*

- 3.6 We were pleased to receive several international responses. It was pointed out that the International Actuarial Association (IAA) and overseas associations are keen to identify drivers of actuarial quality, particularly in the context of education. There are numerous mutual recognition agreements enabling actuaries to work in other countries, so it is important to have a common approach.

## Outcome

- 3.7 The positive response to the paper and the demand for greater clarity about actuarial quality have reinforced the analysis in the discussion paper, and encouraged us to develop and propose a framework, based on the drivers of actuarial quality, as a means of helping actuaries and non-actuaries to recognise high quality actuarial work.
- 3.8 We have taken the points made into account in developing our actuarial quality framework (see section 8). In particular, we have sought to identify broad indicators which can be interpreted in context, and tailored to the needs of users rather than applied on the basis of a one-size-fits-all approach. This formulation should support new developments in actuarial methods and skills.

## 4. DRIVERS OF ACTUARIAL QUALITY

Q4 (i) Have we identified the key drivers of actuarial quality? How can they be added to, re-defined or re-structured?

Q4 (ii) Do other drivers apply in sectors apart from life insurance, general insurance and pensions?

### Proposition

4.1 In section 4 of the discussion paper, we proposed six factors (or drivers) which help determine the quality of actuarial work:

- Reliability and usefulness of actuarial methods
- Technical skills of actuaries
- Communication of actuarial information and advice
- Ethics and professionalism of actuaries
- Working environment for actuaries
- Other factors outside the control of actuaries.

4.2 We sought views on these and any other drivers, including in sectors apart from life insurance, general insurance and pensions.

### Summary of responses

	Agree	Mainly agree	Mainly disagree	Disagree
Q4(i)	6	9	3	0
Q4(ii)	0	0	2	6

4.3 Most respondents welcomed our approach and generally agreed that we had identified the main drivers.

4.4 Respondents to Question 4(ii) did not consider that different drivers applied in sectors outside of pensions and insurance. This is evidenced by the number of those disagreeing or mainly disagreeing with the proposition that other drivers apply.

4.5 As requested, respondents made a number of helpful suggestions for adding to, re-defining or re-structuring the drivers we had proposed:

- **Reliability and usefulness of actuarial methods** – the importance of links with non-actuaries and universities was stressed for this and other drivers. Other aspects included:
  - The need for reasonableness checks
  - Consistency, documentation and evidence to support the assumptions and data used
  - Aggregation of results
  - Relevance to the needs of the underlying business.

- **Technical skills of actuaries** – one respondent felt it was not enough for actuaries to have the technical skills required; they needed to be willing to use them to the full extent and to innovate as required. Another suggested that, if communication is treated as a driver in its own right rather than as part of this driver, then consideration might also be given to other important aspects such as understanding the requirements and circumstances of the client, and the skills of organisation and time management.
- **Communication of actuarial information and advice** – one respondent pointed out that this referred to communication in one direction only, whereas good communication is a two-way process between actuaries and users, and suggested that this driver should be expanded to include this.
- **Ethics and professionalism of actuaries** – one respondent suggested that this represents the key driver for delivering actuarial quality. Indeed the risk of damage to the reputation of an actuary or actuarial practice was itself seen as a driver of actuarial quality, since it encourages many actuaries to focus on actuarial quality.
- **Working environment for actuaries** – some respondents questioned the inclusion of this driver, since it depended on outside factors as well as the way actuaries organise themselves. However, many others felt this was the main driver of quality through the operation of competitive pressures.
- **Other factors outside the control of actuaries** – some respondents questioned the inclusion of a driver which is outside the control of actuaries. However, others felt that users could not be ignored. Other respondents stressed the importance of the way actuaries interact with other professionals, such as accountants and lawyers, and the need to meet regulatory and industry reporting requirements.

4.6 Some felt that the differences in working environment between in-house actuaries, where the employer controls the quality of internal actuarial input, and those in consultancy, where the external client relies on this from the firm, were fundamental enough to justify separating into two drivers.

4.7 Several respondents referred to other lists of drivers that had been produced by other professions, and suggested alternative structures. For example, one respondent suggested that instead of our analytical approach, we should adopt a hierarchical structure: environment, actuaries, tools, communication.

4.8 One respondent warned us not to be too prescriptive:

*“In general, we are supportive of the consultation although we caution against being too prescriptive about what are the key drivers of actuarial quality: as the methods and the working environment of actuaries change, the drivers of quality will also change. We believe that a significant opportunity to improve the quality of our work is to encourage actuaries to see themselves as people who help to solve business problems. Actuaries will be more effective if they have a mindset of wanting to engage with the businesses in which they work (or which they advise) and of aiming to help solve problems, as opposed to doing complex calculations.” (Deloitte)*

4.9 Several respondents questioned the interpretation given of the so-called Tiner principle. An alternative interpretation would involve the need for actuarial information to contain sufficient detail that a reader of the information, armed with the same data (and possessing the relevant actuarial skills), could replicate the calculations and arrive at substantially the same results.

Application to other areas:

- 4.10 Eight respondents agreed that the same drivers applied to other areas of actuarial work as well as to life insurance, general insurance and pensions, and none felt that the drivers would be significantly different. However, opinions differed as to whether their use should be confined to the three main sectors:

*“All the comments regarding data, assumptions, sensitivity of assumptions used etc. apply equally to the investment actuary. A particular angle from the investment perspective relates to the focus on identifying downside risk. While sensitivity analysis is done, this does not typically include the effect of returns not being “normally” distributed. Our concern is whether the industry/profession will in hindsight be judged to have materially underestimated some of the risks being run. The point about keeping up to date is of particular relevance given the ever changing investment horizon. The move to greater liability matching and the use of derivatives poses particular challenges. We suspect that actuaries who have been qualified for some time may have had limited formal training in these areas, which could potentially limit their ability to review/challenge work undertaken on their behalf.”*  
(Deloitte)

*“We recognise that the definition of actuarial quality for the purposes of the Discussion Paper will necessarily cover broader cross section of actuarial work than that covered by the definition of “actuarial information” in the BAS’s Conceptual Framework and the actuarial work to which the new individual BAS standards will apply. However, we believe that producing a definitive list of the drivers of generic actuarial work will be challenging if not confusing for the reader. We therefore recommend that the FRC defines the drivers of actuarial quality by reference to the three main regulated areas only, namely: life insurance, general insurance and pensions. If additional areas of actuarial work become particularly important in the future, the FRC may consider issuing supplementary documentation.”* (Ernst & Young)

*“It seems to us that the drivers of actuarial quality should be independent of the area in which the actuarial expertise is being applied. Why should actuarial quality in, say, life insurance be any different from actuarial quality in pensions?”* (Barnett Waddingham)

## Outcome

- 4.11 Overall, the responses in this section have encouraged us to seek to develop a set of drivers of actuarial quality which applies independently of the activity being undertaken. We note the misgivings of some respondents about this, and it is for this reason that we sought to analyse and obtain feedback on the application of the drivers in each of the main sectors, as well as in other areas. Generally, we have found that the drivers can be applied meaningfully in all areas, and we have therefore developed a general framework in section 8.
- 4.12 We have noted the observation made that communication is a two-way process and have recognised, in the communications driver, the importance of testing the understanding of users. However, we have continued to treat communication by actuaries and other factors (such as the role of other stakeholders) separately.
- 4.13 We also note the suggestions made about the structure of the drivers, as well as those responses that have urged us not to be too prescriptive.

- 4.14 No structure is perfect and many of the drivers will be overlapping, so we agree that we should not spend too long trying to perfect the structure of drivers at this stage. We believe the most useful structure for our purposes will therefore be one which enables us to develop a practical and helpful framework within which our stakeholders can discuss and assess the quality of actuarial work, and which accommodates the suggestions which have been made by way of consultation responses.
- 4.15 On balance, we have decided to alter the structure slightly, recognising that two of the drivers relate to the personal qualities of actuaries (technical skills, and ethics and professionalism), and two of the drivers are environmental (working environment for actuaries, and other factors outside the control of actuaries).
- 4.16 In recognising these links, however, we do not intend to blur the distinction between the drivers we have identified, which we shall continue to treat separately and as having as much importance as the other drivers.
- 4.17 In particular, we have retained the working environment for actuaries as a separate driver which covers actuaries who provide advice to clients as external consultants, and actuaries who provide advice to their employers as part of an internal team or function. Although the organisations in which actuaries work, and the pressures to which actuaries are subjected, can vary widely, there are common indicators of quality which we believe apply across all working environments.
- 4.18 We remain open to suggestions for ways in which this treatment can be improved.

## 5. LIFE INSURANCE

In life insurance:

Q5 (i) Have we described the main features of actuarial work?

Q5 (ii) Have we identified the main drivers?

Q5 (iii) Have we identified the main threats to these drivers?

Q5 (iv) Have we identified the main indicators that these factors are helping to promote actuarial quality?

Q5 (v) Are there further steps that the FRC could take to promote actuarial quality?

### Proposition

- 5.1 In section 5 of the discussion paper, we described the drivers and threats in life insurance, and sought views on the indicators of quality in this sector.
- 5.2 We highlighted the widespread use of actuaries in advising life insurers, in relation to policyholder transactions, financial management, reporting and related matters, including the regulated actuarial function and with-profits actuary roles. We also highlighted the sensitivity of models to small changes in long-term assumptions, the treatment of investments, finance and reinsurance, and operational risks such as mis-selling.
- 5.3 We noted some of the pressures on actuaries working in this sector, including conflicts involving owners, managers and policyholders, which can lead to unreasonable pressure to produce a particular result, the role of the FSA, and the enhanced responsibilities of senior management and external auditors.

### Summary of responses

	Agree	Mainly agree	Mainly disagree	Disagree
Q5(i)	4	0	0	0
Q5(ii)	1	2	0	0
Q5(iii)	2	1	0	0
Q5(iv)	1	1	1	0
Q 5(v)	2	1	0	1

- 5.4 Relatively few respondents expressed a formal view on actuarial quality in life insurance. However, respondents generally agreed that we had described the main features of actuarial work and identified the main drivers and threats.



5.5 The suggestions made by respondents have therefore been grouped under each driver as follows:

- **Reliability and usefulness of actuarial methods** - several respondents mentioned the demand for and development of new, more sophisticated, modelling techniques in life insurance and the need for actuaries to use these pragmatically. There was also reference to the increasing importance of risk management as a significant activity in its own right, particularly in response to international initiatives such as Solvency II.
- **Technical skills of actuaries** – there was again reference to the complexity of the tasks required of life actuaries and the sophistication of the techniques applied.
- **Communication of actuarial information and advice** – there was a reference to the isolation of some actuaries within insurers which can result in a lack of disclosure of information either to or by actuaries.
- **Ethics and professionalism of actuaries** – one respondent observed that the actuarial function holder still faced significant conflicts as a member of the governing body. It was suggested that consultants could be as vulnerable to pressure as in-house actuaries (see also working environment below), including pressure on budgets limiting the scope of work done.
- **Working environment for actuaries** – one accountancy firm highlighted increased competition and a limited resource base in some life insurers and consultancies, which may constrain the way that an actuary performs his or her work. There was concern about adequacy of controls on actuarial processes, and checks on those controls, including a lack of review and challenge of an actuary's work by his or her client or employer or through independent challenge and review. The topic is discussed in the Oversight Board's discussion paper *Monitoring and scrutiny of actuarial work*.
- **Other factors outside actuaries' control** – there was reference to the need for regulators to focus on the actuarial skills of non-actuaries, including users, the responsibility of management, and the need for a well-defined legal or regulatory framework. Finally, there might be a need for transitional arrangements in the event of significant regulatory change.

## Outcome

5.6 Overall, we have concluded that the proposed drivers can be used to stimulate a meaningful dialogue about quality and the threats to quality in life insurance.

5.7 We have taken account of the specific points made in relation to life insurance in developing the actuarial quality framework.

5.8 In addition, we have taken or will take the points made into account:

- In developing questions arising from current market conditions that users might consider as they make decisions based on actuarial information;
- In the Oversight Board's monitoring of the Profession's regulatory activities and its review of monitoring and scrutiny of actuarial work;
- In the BAS's development of generic technical standards and specific technical standards in life insurance; and
- In considering the FRC's wider international role in promoting actuarial quality

## 6. GENERAL INSURANCE

In general insurance:

Q6 (i) Have we described the main features of actuarial work?

Q6 (ii) Have we identified the main drivers?

Q6 (iii) Have we identified the main threats to these drivers?

Q6 (iv) Have we identified the main indicators that these factors are helping to promote actuarial quality?

Q6 (v) Are there further steps that the FRC could take to promote actuarial quality?

### Proposition

- 6.1 In section 6 of the discussion paper, we described the drivers and threats in general insurance, and sought views on the indicators of quality in this sector.
- 6.2 We highlighted the role of actuaries in modelling claims experience, and the difficulties in handling and communicating uncertainty, limitations in the data, and other influences such as management actions, reinsurance, product mix and the underwriting and reserving cycles.
- 6.3 We noted some of the pressures on actuaries working in this sector, the need for a good understanding of the business, and the roles of the FSA and Lloyd's, as well as senior management and external auditors.

### Summary of responses

	Agree	Mainly agree	Mainly disagree	Disagree
Q6(i)	2	1	0	0
Q6(ii)	0	2	0	0
Q6(iii)	1	0	0	1
Q6(iv)	0	0	2	0
Q 6(v)	2	1	0	0

- 6.4 There were only a few formal responses specifically referring to general insurance. However there was general agreement from these and other stakeholders that we had described the main features of actuarial work and that our proposed drivers could be helpfully applied in this sector.

6.5 The suggestions made by respondents have therefore been grouped under each driver as follows:

- **Reliability and usefulness of actuarial methods** – one respondent referred to the particular need for and use of statistical (or mathematical) models in general insurance. Many of the more modern statistical methods associated with such modelling involve the use of computer intensive methods such as bootstrapping, simulation, and other Bayesian techniques. Many of these are unproven. The assessment of credibility of data was seen as key:

*“The blind use of available data to parameterise models, without a clear understanding of the credibility of that data in the context to which it is being applied, represents a major threat to the quality of actuarial work. I believe this problem to be commonplace in general insurance. Regarding understanding the underlying business, this is briefly mentioned in paragraph 4.11 under the heading “Technical skills of actuaries”, but is not really picked up in the subsequent paragraphs. I believe this is a significant issue in general insurance, where commercial lines classes are often extremely heterogeneous within and between time periods. Quality is jeopardised by inappropriate parameterisation and application of models due to a lack of understanding of the underlying business.” (Mark Graham)*

- **Technical skills of actuaries** – reference was made to the difficulty of assessing these skills through the traditional exam process of written exams. The new university accreditation process introduced by the Profession was welcomed in that it addresses this issue in recognising the value of continuous assessment.
- **Communication of actuarial information and advice** - the need was expressed, by one respondent, for all actuaries, but particularly those in general insurance, to be well trained in communicating aspects of extreme events (leading to large claims and claim numbers); and the need to describe actuarial models and their outputs at the right level of granularity so as to encourage understanding and challenge by users.
- **Ethics and professionalism of actuaries** - several respondents highlighted the pressures on actuaries in general insurance, especially in a soft market where actuaries can come under pressure to reduce estimates, for example by the client emphasising various pieces of positive information. External actuaries are under pressure on fees (which can be used to limit the work done), and exposed to opinion shopping.
- **Working environment for actuaries** – several of the above pressures could be expressed at the level of the actuary’s working environment. Sometimes competition in these terms can be a threat to quality.
- **Other factors outside the control of actuaries** – there were comments on the implications of Solvency II, and the need for further safeguards outside Lloyd’s.

## Outcome

- 6.6 Overall, we have concluded that the proposed drivers can be used to stimulate a meaningful dialogue about quality and the threats to quality in general insurance.
- 6.7 We have taken account of the specific points made in relation to general insurance in developing the actuarial quality framework.

6.8 In addition, we have taken or will take the points made into account:

- In developing questions arising from current market conditions that users might consider as they make decisions based on actuarial information;
- In the Oversight Board's monitoring of the Profession's regulatory activities and its review of monitoring and scrutiny of actuarial work;
- In the BAS's development of generic technical standards and specific technical standards in general insurance; and
- In considering the FRC's wider international role in promoting actuarial quality.

## 7. PENSIONS

In pensions:

Q7 (i) Have we described the main features of actuarial work?

Q7 (ii) Have we identified the main drivers?

Q7 (iii) Have we identified the main threats to these drivers?

Q7 (iv) Have we identified the main indicators that these factors are helping to promote actuarial quality?

Q7 (v) Are there further steps that the FRC could take to promote actuarial quality?

### Proposition

7.1 In section 7 of the discussion paper, we described the drivers and threats in pensions, and sought views on the indicators of quality in this sector.

7.2 We highlighted the role of the scheme actuary in advising trustees on funding issues in defined benefit pension schemes. We highlighted the difficulties in modelling mortality, verifying data and allowing for economic assumptions and the covenant from the scheme sponsor, as well as the many other areas of work which actuaries undertake, including for defined contribution schemes.

7.3 We noted some of the pressures on actuaries, arising from the conflicts involving trustees, beneficiaries and sponsors, the inherent uncertainty and sensitivity of outputs to the assumptions used and the actuary's role as a mediator, as well as the roles and interests of trustees, actuaries' own firms, external auditors, the Pensions Regulator and other public bodies.

### Summary of responses

	Agree	Mainly agree	Mainly disagree	Disagree
Q7(i)	5	6	1	0
Q7(ii)	6	3	2	0
Q7(iii)	3	6	0	2
Q7(iv)	7	3	1	0
Q 7(v)	6	2	1	3

7.4 At least half the respondents answered these specific questions, and again there was general agreement that we had described the main features of actuarial work and identified the main drivers and threats in pensions.

7.5 As well as suggestions of additional activities undertaken by actuaries in pensions, the suggestions made by respondents have been grouped under each driver as follows:

- **Reliability and usefulness of actuarial methods** - there was general support for the FRC to promote and encourage further innovation in actuarial methods. Several respondents agreed that most consultancies use sophisticated models, but that a significant amount of work is done using spreadsheets, which may not be subject to the same rigour and control.
- **Technical skills of actuaries** - particularly difficult topics included allowing for the strength of the sponsor covenant, which many felt was not within actuarial expertise, including the risk of withdrawal of future service benefits. The FRC was urged by one respondent to consider the extent to which practising actuaries should be required to sit an examination to demonstrate at least a basic knowledge of the principles involved in new subjects as they emerge.
- **Communication of actuarial information and advice** – the FRC was urged to continue to pursue a principles-based approach to reporting – one respondent agreed that quality should manifest itself in clear and useful advice but in addition needs to allow actuaries to make recommendations;
- **Ethics and professionalism of actuaries** – individual responsibilities were contrasted by more than one respondent with responsibilities of the firm (see below), as well as the position of the actuary when the actuarial assumptions are subject to negotiation between trustees and scheme sponsors.
- **Working environment for actuaries** – several referred to the strengths and weaknesses of the quality assurance arrangements and ‘house view’ established by actuaries’ employers – which are discussed in greater detail in the Oversight Board’s discussion paper *Monitoring and scrutiny of actuarial work*.
- **Other factors outside the control of actuaries** – as well as the role of regulation (which is discussed in greater detail in the Oversight Board’s discussion paper *Monitoring and scrutiny of actuarial work*) and trustees, one respondent pointed to benefit uncertainties arising from problems in interpreting scheme documents and legislation.

## Outcome

7.6 Overall, we have concluded that the proposed drivers can be used to stimulate a meaningful dialogue about quality and the threats to quality in pensions.

7.7 We have taken account of the specific points made in relation to pensions in developing the actuarial quality framework.

7.8 In addition, we have taken or will take the points made into account:

- In developing questions arising from current market conditions that users might consider as they make decisions based on actuarial information;
- In the Oversight Board’s monitoring of the Profession’s regulatory activities and its review of monitoring and scrutiny of actuarial work;
- In the BAS’s development of generic technical standards and specific technical standards in pensions; and
- In considering the FRC’s wider international role in promoting actuarial quality.

## 8. A FRAMEWORK FOR ACTUARIAL QUALITY

- 8.1 Based on the analysis in the discussion paper and consultation responses, together with proposals in specific FRC initiatives such as BAS standards and proposals for monitoring and scrutiny of actuarial work, we have developed an actuarial quality framework, which is set out at Annex A.
- 8.2 The publication of this framework does not mean that the FRC has ambitions to regulate all the matters that are covered by it. The FRC is a market-led regulator, and we are keen to support market-led outcomes which do not require the imposition of technical standards or other regulation. As explained in the introduction to Annex A, the aim of the framework is to support effective communication between all those with an interest in the quality of actuarial work, and as an aid in its evaluation.
- 8.3 Other complementary initiatives that we will take forward separately include:
- The BAS will consider which of the indicators of quality for *Reliability and usefulness of actuarial methods*, and *Communication of actuarial information and advice*, need to be reflected in its standards, including a forthcoming consultation paper on its proposed generic modelling standard;
  - The Oversight Board will consider the indicators of quality for *Technical skills of actuaries* in overseeing the Profession's education and CPD processes, and for *Ethics and professionalism of actuaries* in assessing the Profession's proposed new Actuaries' Code and other standards;
  - The Oversight Board will also consider relevant aspects of the framework, including *Working environment for actuaries* and *Other factors outside the control of actuaries*, as part of any proposals arising from its discussion paper on monitoring and scrutiny of actuarial work;
  - The FRC has developed a list of questions for users of actuarial work to ask in the light of current market conditions: <http://www.frc.org.uk/press/pub1800.html>
- 8.4 We welcome comments on this actuarial quality framework, and on any other initiatives that the FRC might pursue in order to promote actuarial quality.

## Actuarial Quality Framework

### One - Introduction

This Actuarial Quality Framework is designed to support effective communication between actuaries, their principal clients and employers such as senior management and members of governing and review bodies, other professionals such as lawyers and accountants, end-users and their representatives, policymakers and regulators.

The Framework has been prepared following consultation on the FRC's discussion paper, *Promoting actuarial quality*, issued in May 2008. The Framework is intended to be complementary to professional and other regulation affecting actuaries and those who rely on their work. It aims to promote the following drivers of actuarial quality:

- Methods: Reliability and usefulness of actuarial methods
- Communication: Communication of actuarial information and advice
- Actuaries: Technical skills of actuaries and  
Ethics and professionalism of actuaries
- Environment: Working environment for actuaries and  
Other factors outside the control of actuaries

The FRC hopes that the Framework will assist:

- Actuaries – in seeking to provide high quality actuarial work for the benefit of users;
- Direct clients and employers, as well as their representatives and advisers – in evaluating the quality of actuarial information and advice and making appropriate decisions based on it;
- All stakeholders including end-users and their representatives – in evaluating the effectiveness with which actuarial quality is being promoted and achieved on their behalf; and
- Regulators, including professional bodies – in undertaking and reporting on their regulation of actuaries and the entities they inform and advise.

The users of actuarial work potentially include all these groups, including consumers (or end-users) who are affected by actuarial advice, such as investors, policyholders and pension scheme members, employees and beneficiaries, and rely on others to assess the quality of actuarial information and advice on their behalf.



For convenience, the Framework adopts the term 'user' to refer to the generality of these groups, and more specific descriptions such as 'client' (external) or 'employer' (internal) refer to a narrower class of user.

Actuaries advise and assist their clients or employers in relation to:

- Customer transactions - between clients or employers and their customers, such as pricing investments and risks, benefits and product development;
- Financial management of clients' or employers' operations - investment strategy, risk management, planning and analysing performance;
- Reporting - to other users including regulators on aspects of the financial performance, prospects and condition of entities; and
- Ancillary matters relating to these activities – such as audit, expert witness and insolvency work, and where the main financial institution is a third party.

References to 'actuaries' include all individuals who provide such advice, whether to clients or employers, including qualified members of the professional actuarial bodies (the Faculty and Institute of Actuaries) and others who hold out themselves out as providing actuarial services.

The drivers need to be considered together and in context, since it is the application of actuarial judgment in respect of aspects of an assignment, and the assignment as a whole, which will impact decisively on the quality of the end-product. Equally, the overall quality of actuarial judgment is difficult to evaluate directly, so that the drivers provide a framework for identifying specific indicators of actuarial quality.

The FRC recognises that actuarial quality is a dynamic concept and that the drivers and indicators of actuarial quality may change over time. It will therefore update this Framework periodically in the light of comments received. The first such review will take place in spring 2010.

The actuarial quality framework is supported by other publications, including statements, standards, guidance and discussion papers issued by the FRC and its operating bodies. These are available on its website at [www.frc.org.uk](http://www.frc.org.uk).

We welcome comments on the actuarial quality framework.

## Two – Actuarial Quality Framework

METHODS	
Driver	Indicators
<p>The reliability and usefulness of actuarial methods</p>	<p>Actuarial methods provide a positive contribution to actuarial quality where:</p> <ul style="list-style-type: none"> <li>• They make effective use of models, with due recognition of the power and limitations of the models used.</li> <li>• They are directed to the needs of users, and measures taken to ensure their reliability and usefulness are proportionate to the benefit they provide to the user, and are not unduly constrained by financial and other restrictions.</li> <li>• They incorporate checks on the reliability and usefulness of data, and full and clear model documentation so as to be capable of being checked and reproduced by other actuaries.</li> <li>• They incorporate robust criteria for: <ul style="list-style-type: none"> <li>○ selecting assumptions which incorporate findings from theoretical and empirical research based on past experience and current market structures;</li> <li>○ ensuring consistent treatment in the model of different measures such as assets and liabilities;</li> <li>○ recognising and exploring risk and uncertainty; and</li> <li>○ analysing model outputs against expectations.</li> </ul> </li> <li>• There is effective and continuing review within and outside the profession of the methods used, so as to encourage innovative, transparent and consistent approaches.</li> <li>• They meet technical standards which are principles-based and promote the reliability and usefulness of actuarial methods.</li> </ul>

**COMMUNICATION**

<b>Driver</b>	<b>Indicators</b>
<p>Communication of actuarial information and advice</p>	<p>The communication of actuarial information and advice provides a positive contribution to actuarial quality where:</p> <ul style="list-style-type: none"> <li>• It is clear and unambiguous, using plain language where possible, with a view to addressing the needs of users for actuarial information and advice.</li> <li>• It includes sufficient information to enable the reader to judge the appropriateness and implications of any recommendations, without being obscured by immaterial or irrelevant information.</li> <li>• It includes an indication of inherent uncertainty, including an assessment of the key risks which the entity faces.</li> <li>• It includes discussions with clients or employers to establish a common understanding about:               <ul style="list-style-type: none"> <li>○ their needs and the scope of the actuary's work;</li> <li>○ limitations on the reliability of the actuary's work;</li> <li>○ the key risks identified and judgments made; and</li> <li>○ the quality of their data, systems and documentation.</li> </ul> </li> </ul>

<b>ACTUARIES</b>	
<b>Driver</b>	<b>Indicators</b>
Technical skills of actuaries	<p>The technical skills of actuaries make a positive contribution to actuarial quality where:</p> <ul style="list-style-type: none"> <li>• Actuaries are selected from a wide range of high quality applicants.</li> <li>• Actuaries have a comprehensive training in financial, economic and statistical theory and practice.</li> <li>• Actuaries are adept at using and interpreting the latest actuarial and related methods in their area of expertise.</li> <li>• Actuaries understand relevant aspects of their clients' or employers' business or operations, and are exposed to the wider business and economic environment in order to support the development of good judgment.</li> <li>• Actuaries are exposed in their work and training to a variety of actuarial methods and applications of those methods to a variety of business models.</li> <li>• Actuaries are committed to lifelong learning and development in actuarial and industry specialist issues from a range of academic and commercial disciplines.</li> </ul>
Ethics and professionalism of actuaries	<p>The ethics and professionalism of actuaries make a positive contribution to actuarial quality where:</p> <ul style="list-style-type: none"> <li>• Actuaries aspire to the highest standards of professional conduct, and to 'doing the right thing' in the public interest, and see this as enhancing their reputation and that of the organisations with which they are associated.</li> <li>• Actuaries exhibit objectivity, and are robust in identifying and resisting pressures to act against their professional judgment or against the legitimate interests of users or potential users of their work.</li> <li>• Actuaries have relevant training and guidance to help them address the ethical issues which are likely to arise in their work.</li> <li>• Actuaries speak up when they have reasonable concerns about actuarial work or the way it is used.</li> </ul>

<b>ENVIRONMENT</b>	
<b>Driver</b>	<b>Indicators</b>
Working environment for actuaries	<p>The working environment for actuaries covers actuaries who provide advice to clients as external consultants, and actuaries who provide advice to their employers as part of an internal team or function. Although the organisations in which actuaries work, and the pressures to which actuaries are subjected, can vary widely, there are common indicators of quality which apply across all working environments.</p> <p>The working environment for actuaries makes a positive contribution to actuarial quality in organisations where:</p> <ul style="list-style-type: none"> <li>• There is professional leadership, and a culture of openness and learning from mistakes in which actuaries have people to turn to for professional counselling and advice.</li> <li>• Actuarial quality is valued, invested in and rewarded, and appraisal and reward systems promote ethics and professionalism.</li> <li>• Commercial considerations do not encourage actions and decisions that have a negative effect on actuarial quality, and actuaries are given sufficient time and resources to deal with difficult issues as they arise.</li> <li>• There are effective arrangements for controlling and monitoring actuarial quality and dealing with shortcomings.</li> <li>• Procedures are in place for managing conflicts of interest and avoiding unreasonable pressures being placed on individuals.</li> </ul>
Other factors outside the control of actuaries	<p>Factors outside the control of actuaries which make a positive contribution to actuarial quality include:</p> <ul style="list-style-type: none"> <li>• An approach to corporate governance within the entities being advised that recognises their responsibility for taking decisions and reporting on the basis of actuarial information and advice.</li> <li>• External review mechanisms which are active, professional and robust in dealing with actuarial issues (including, but not limited to, audit).</li> <li>• Stakeholders who support and recognise the use of actuarial expertise, where appropriate, thereby increasing the likelihood that governing bodies and management will comply with their obligations in relation to actuarial matters.</li> <li>• Effective and transparent arrangements for dealing with professional shortcomings.</li> <li>• A regulatory environment for actuaries and their clients that focuses on the drivers of actuarial quality.</li> </ul>

### Three – Contact details

The FRC recognises that actuarial quality is a dynamic concept and that the drivers and indicators of actuarial quality may change over time. It will therefore update this Framework periodically in the light of comments received. The first such review will take place in spring 2010, based on comments received by 31 December 2009.

We welcome comments on this Framework. Although we are not carrying out a formal consultation, these will be regarded as being on the public record unless confidentiality is expressly requested.

Comments should be sent to:

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## List of non-confidential respondents

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Association of Consulting Actuaries

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Foresight Trustees

Mark Graham

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Jardine Lloyd Thompson

Mickey Lowther

Dr Alan Mayer

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Pensions Management Institute

PricewaterhouseCoopers

Royal Mail Pension Plan

Standard Life

Watson Wyatt

**None of those responding asked for their response to be treated as confidential**

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