

Statutory Actuarial Involvement in Non-Life Reserving

- everything you ever wanted to know but were afraid to ask

Working Group Members: Derek Newton (Chairman), Richard Bulmer, Kendra Felisky, David Hindley and David Theaker

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Preamble

The topic of statutory actuarial involvement in non-life reserving in the UK has been around for ages. It has recently been referred to in an FSA Consultation Paper (CP04/7), and the FSA is seeking views from interested parties. The UK actuarial profession is clearly one such interested party. However, before the profession propounds any particular position on the topic, it wishes to canvass the views of its members, in particular general insurance practitioners. It also wishes to discuss the topic with other stakeholders, such as the ABI. This paper has been commissioned by the General Insurance Board with these aims in mind. It takes no stance in favour of any specific option, but is intended to promote debate – starting at GIRO 2004 – which will help the profession to formulate its position on this important topic.

The paper identifies various issues that might be associated with a formal actuarial role within non-life reserving. It then sets out some ways in which these issues could be used to argue both for and against the introduction of such a role. The authors are not schizophrenic – this format is merely to provoke thought about the various arguments amongst the readers. Therefore, there are some arguments or viewpoints put forward in this paper that none of the authors would support, but which they recognise that “some might say.”

Whatever the arguments, the authors do not believe that this is a “take it or leave it” matter. They feel that a formal role for actuaries within non-life reserving could take many different forms, and that these should be considered before statutory actuarial involvement is either promoted or rejected. Some of these forms are also discussed briefly in the paper.

Nothing in this paper should be taken to represent the views of the Institute or Faculty of Actuaries, the General Insurance Board, or the employers of the Working Group Members.

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1. Background

- 1.1 Actuaries are considered experts in assessing uncertainty, in making financial sense of the future. The business of insurance is the transfer to insurers of the financial effect of future uncertainty. Regulators of insurers need to be confident that insurers are making proper assessments and quantification of the uncertainties that they are assuming on behalf of their insureds. Should, therefore, the regulators require insurers to use actuaries as part of their assessment and quantification of those uncertainties? In other words, should there be a statutory actuarial role in non-life reserving?
- 1.2 In their joint role as manager, or overseer, of the actuarial profession in the UK, the Faculty and Institute of Actuaries seek to serve the public interest by contributing insights and balanced arguments to debates about issues such as the need, or otherwise, for a statutory reserving function. Whilst they might conclude that the interests of the public would be best served by a particular course of action, and would therefore promote that conclusion, they would not wish to act, or to be perceived to be acting, principally as a lobby group for actuaries' interests.
- 1.3 The profession last considered the need for formal actuarial involvement in non-life reserving several years ago, culminating in a booklet published in May 2000¹. The booklet recommended that every UK company which transacts non-life insurance should be required to have an Appointed Actuary, who would have defined responsibilities for reporting on the financial condition of that business. It became apparent after the paper's publication that many members of the profession felt that they had been insufficiently consulted, and that several were unhappy with the conclusions of the paper. As a result, the profession took the matter no further.

¹ *Actuarial Opinions For Companies Transacting General Insurance*, issued by the Faculty of Actuaries and Institute of Actuaries, May 2000

- 1.4 However, the issue has not gone away. Since the May 2000 paper was prepared there have been significant developments in the UK regulation of insurance business. Further developments are likely as the EC works on its Solvency II initiative, as International Financial Reporting Standards (“IFRS”) are transformed, and as actuarial thinking and techniques advance. Moreover, industry events such as the failure of the Independent in the UK and other corporate failures in the US and mainland Europe have focused attention on the integrity of financial reporting. At the same time, the actuarial profession in the UK has been criticised in the Penrose Report, and is now subject to an external review led by Sir Derek Morris. Whilst the Penrose Report dealt with the circumstances of the collapse of Equitable Life and therefore did not refer specifically to general insurance, the Morris Review will range across the whole profession. As a result, the profession will be, for the immediate future, under an unusually high degree of public scrutiny, and the value that it really adds will be examined closely.
- 1.5 Therefore, the General Insurance Board thought it appropriate to re-open the debate, and commissioned this paper with that in mind. The paper is designed to stimulate an open discussion, both of the issues and of the options. No one should draw any conclusion from its content or phrasing as to the views of the Working Group members or of their employers, let alone of the profession. It is intended purely to highlight some – we hope most – of the considerations to be taken into account when debating this topic.
- 1.6 During the drafting of the paper, there has been some discussion regarding the use of words such as “adequacy”, “appropriate” and “reasonableness”. It has become clear to the authors that there are subtle differences in the meaning that different people (actuaries in particular) attach to these words. We have not addressed these subtleties, rather have used such words in what we think is their generally accepted sense. We ask that you read them in the same way.

1.7 It should be noted that work on this paper started before the FSA published CP04/7. In CP04/7 the FSA highlighted the apparently anomalous situation where Lloyd's syndicates are required to obtain annual Statements of Actuarial Opinion ("SAOs") in respect of their reserves, whereas most other UK non-life insurers are not. While the FSA indicates in CP04/7 that it is minded to continue with the existing situation for the immediate future, it has explicitly asked, as part of the consultation exercise, for feedback on whether actuarial opinions should be required and, if so, in respect of whom? The profession has responded to the FSA by noting some of the considerations set out in this paper, and explaining that it would prefer not to express a formal view one way or the other until the members of the profession and other stakeholder have had adequate opportunity to express their views.

1.8 The paper is structured as follows:

Section 2: in which we discuss non-life reserves in general, and consider what a statutory actuarial role might look like.

Section 3: in which we review the relevant requirements around the world. More detail is provided on this in Appendix A. In Appendix B we discuss in detail the requirements in four different countries, and how they work in practice.

Section 4: in which we identify a range of conceptual issues, and then proceed to discuss each in turn. We have tried to put two sides (and occasionally more) to each argument. We appreciate that, in places, we appear to have been self-contradictory. Please bear with us – we feel that this approach is the easiest way to tease out the relevant points.

Section 5: in which we start to identify some – but by no means all – of the practical considerations regarding a formal actuarial role in non-life reserving.

Section 6: in which we set out some of the options for introducing a formal reserving role for actuaries.

Section 7: in which we provide a very brief summary what has gone before.

2. Statutory actuarial involvement in non-life reserving – what are we talking about?

2.1 By non-life reserves we are referring to the provisions that an insurance operation holds at a particular point in time in respect of its outstanding insurance liabilities. They could comprise one or more of the following:

- case estimates for claims that have already been notified to the insurer but as yet have not been fully settled;
- amounts for claims that have already been incurred but about which the insurer has yet to be notified (“IBNR” claims);
- adjustments (positive or negative) to allow for any degree of over- or under-estimation by the insurer of its case estimates (“IBNER”);
- amounts for claims that will be, but which have not yet been, incurred and for which the insurer will be liable under policies already in force (“UPR” and “URR”); and
- amounts to cover the costs that the insurer will incur whilst managing and eventually settling the claims.

2.2 These amounts might be offset by the following:

- the portion of premiums under in-force contracts that will be earned or received in the future, net of operating expenses (N.B. some insurance regulations restrict the amount of future earned premiums that can be taken into account against the cost of future claims, so that no profit is taken before it has been earned); and
- amounts expected to be recovered against the insurer’s existing and historic reinsurance programme, bearing in mind the amounts provided against both known claims (case estimates and IBNER amounts) and IBNR claims.

2.3 These offsets themselves might be offset by allowances for:

- bad debts on premiums;
- bad debts on reinsurance recoveries not yet collected (or subject to dispute);
- amounts owed to other creditors; and
- claims equalisation reserves.

- 2.4 All of these elements are uncertain². The degree of uncertainty varies significantly according to circumstances. Factors affecting the uncertainty include the class of business, the degree of homogeneity within the class of business, the relative maturity of the portfolio, the quality of the data, legal disputes, historic changes in claims handling and in claims management, external effects on claims settlement patterns such as judicial rulings, etc.
- 2.5 For many insurers, actuaries are, and have been for many years, closely involved in the process of estimating appropriate technical reserves. This is because those insurers have recognised that the skills set of the actuary is well positioned to help the insurer manage the uncertainty within reserve estimates, using statistically based methods underpinned by the actuary's judgement and understanding of the business. However, the extent of this actuarial involvement varies from insurer to insurer. Indeed, for some small and/or specialist insurers, it might not exist at all.
- 2.6 The recent debate about insurance regulation in the UK, and also within the EC, has tended to focus on the issue of capital adequacy. However, it is also important to have a firm view on insurers' technical reserves, and thus reserve adequacy and reserving uncertainty, to ensure that the resulting capital adequacy opinions are realistic.
- 2.7 The adequacy – or rather, the historic inadequacy – of US insurers' reserves was highlighted in a recent report by Standard & Poor's. This in part reflected some obvious facts, such as:
- Reserves are uncertain, however they are set and whoever is involved in the process. At whatever level of confidence reserves are set, there is a probability that the reserves will prove to be, to some extent, inadequate.
 - Reserves for particular classes of business might prove inadequate because of unforeseen and largely unforeseeable changes in external circumstances, such as retrospective changes in the legal environment.

However, the S&P report also indicates some other problems in reserving, such as the reserving cycle, which was also highlighted by the GIRO Working Party on that subject in 2003.

² Technically speaking, the case estimates are factual, in that they are set by the insurer and it is the extent to which they need to be augmented by IBNER provisions that is uncertain. But let's not quibble over detail. Instead, let's concentrate on the bigger picture.

- 2.8 For many people, a statutory role for actuaries in non-life reserving immediately conjures up images of some sort of stamp of approval, provided by an eminent experienced actuary, into the adequacy (a one-way assurance) or reasonableness (a two-way assurance) of the reserves that the insurer is booking. Indeed, that might be one of the proposals that we eventually consider. However, we would prefer, in this paper, not to limit the debate to this narrow vision, but to consider the rather broader issue of whether there should be a requirement for insurers to have a *de minimis* level of appropriate professional involvement in their setting of their technical reserves, and, if so, at what level(s) should the *de minimis* be. We should consider whether “appropriate professional involvement” means actuarial involvement, or the involvement of other specialists in addition to, or instead of, actuaries. We should also think whether the *de minimis* requirement should apply to all insurers, just to those writing certain lines of business, or just to those with certain volumes of business.
- 2.9 Further considerations include whether actuaries should be formally involved in non-life reserving gross of reinsurance, as well as net of reinsurance, whether that involvement should be annual or more or less frequently, whether it should apply to an insurer’s global liabilities, to those written in the UK, or just to those applying to UK policyholders, and whether it should apply just to reserves in respect of incurred claims or to all non-life insurance liabilities. We should also consider whether the actuary in this role should act purely for the insurer (who would be the actuary’s employer or client) or if there would be a requirement for the actuary to act as whistleblower, reporting to the regulator anything considered questionable. Finally, we should reflect on the level of qualifications commensurate with whatever role we are considering.
- 2.10 In all of this, our primary concern must be to ensure that the actuarial profession and its members add value in a clearly demonstrable and understandable way. If the Faculty and Institute, via the General Insurance Board, is to lobby for change it must be done, and be clearly seen to be done, as fulfilling our professional requirements to act in the public interest, rather than behaving as a trade body acting primarily in our members’ interests.

3. What is happening around the world?

- 3.1 The regulators in various countries (e.g. the USA, Ireland and Canada – see Appendix A for a more complete list, and Appendix B for further details of particular cases) already require insurers operating there to have their non-life technical reserves certified by an actuary. There are also a number of countries with well-developed insurance markets where there are no such requirements. Some of these are also highlighted in Appendix A.
- 3.2 In the UK this requirement exists in particular circumstances:
- Each syndicate at Lloyd's is required to obtain an annual SAO that the reserves it holds in respect of its open and closing years are at least as big as the signing actuary's best estimate of the reserves. This is both gross and net of reinsurance and for each open and closing year of account separately. The provision includes allowance for reinsurance bad debts and for unallocated claims handling expenses, although they do not need to be opined upon separately.
 - UK Friendly Societies rules establish the requirement for each Society to appoint an "Appropriate Actuary". The Society then needs to produce, at least once every three years, a certificate from the Appropriate Actuary confirming the appropriateness of the Society's reserves.
 - UK insurance operations, including Lloyd's syndicates, which have written US business are required to provide SAOs to the National Association of Insurance Commissioners ("NAIC") and also, where appropriate, to the relevant state insurance commissioners.
- 3.3 In Ireland, a stimulus for the introduction of statutory SAOs for non-life insurers was an IMF/World Bank review that took place in 2000. The review programme covered the whole of the financial sector. In its final report the IMF/World Bank expressed surprise that there was no compulsion for actuarial involvement in the reserving of long tailed non-life insurance. We do not know whether this view is consistent with the opinions that the IMF/World Bank have expressed in other assessments, nor whether the IMF/World Bank is planning similar reviews elsewhere.

- 3.4 While other parts of the world seem to be moving, or to have moved, towards a statutory role for actuaries in non-life insurance reserving, the FSA, as the UK regulator, has made no clear move in this regard. In its recent regulatory proposals, the FSA has emphasised that the financial management of all members of the financial service industry, including for insurers the setting of appropriate reserves, is wholly the responsibility of the Board of Directors of each member. Indeed, in the field of life assurance, the FSA intends splitting the role of the Appointed Actuary into two parts, comprising (a) an actuarial function holder and (b) a with-profits actuary. Neither will be considered accountable for life reserves, which remain entirely the Directors' responsibility. However, the FSA has reinforced the importance of actuaries in life assurance by making it clear that the Boards of Directors of life assurers must obtain actuarial advice (for example, on the reserving bases) from the actuarial function holder. It is then up to them as responsible directors how they act upon that advice.
- 3.5 The FSA further requires auditors of life company accounts to obtain actuarial advice that the audited provisions are adequate.

4. Conceptual issues

As set out in the Preamble, the Working Group has identified various issues that might be associated with the question of statutory actuarial involvement within non-life reserving. These are listed below. The Working Group then thought of some ways in which these issues could be used to argue both for and against the introduction of a formal reserving role for actuaries in respect of UK non-life insurance companies. We have set these out in this section of the paper. Some of the arguments expressed are quite “black and white” and omit the various “shades of grey” in between. They are intended both to stimulate thought and to provide a helpful framework for discussion and hence for weighing up the issues.

The list of identified issues is as follows:

- Market discipline: reserving standards.
- Potential duplication with audit.
- Confidence in the market.
- Better reserving would reduce failures.
- Better reserving would not reduce failures.
- Early warning system of pricing inadequacy.
- Would facilitate less direct regulation.
- Formalises existing processes.
- Brings the rest of the market into line with Lloyd’s.
- Brings UK into line with rest of global market.
- Helps prevent capital reserve charge “understatement”.
- Takes responsibility away from the Board of Directors.
- Reserving doesn’t need to be done by actuaries.
- Some classes of business don’t need actuarial techniques, let alone actuarial sign-off.
- Litigation risk too great.
- Overplays actuarial abilities.
- Actuaries always get it wrong.

- Risk of commoditisation.
- Adverse cost impact.
- Shortage of GI actuaries.
- No value to most companies.
- No value to the regulator.
- Reputation risk.
- Presentation of the case.
- Would be supported by the International Association of Insurance Supervisors.
- Doesn't fit with Solvency II.
- Has it worked elsewhere?

The paper now considers each of these issues in turn.

4.1 **Market discipline: reserving standards**

ON THE ONE HAND: Although most medium to large non-life companies already use actuaries or statisticians as part of the reserving process, some companies do not. The processes currently in place to prevent companies – deliberately or accidentally – from setting unrealistic reserves are limited in scope and impact. The existing safeguards are via the audit process or via the FSA monitoring data provided in the annual regulatory returns. Under the current UK audit standards, auditors are not required to perform the sort of detailed independent assessment of the reserves that would often be completed by an actuary. The information received by the FSA is also in insufficient detail for the FSA to be able, with any certainty and without further enquiry, to pick up all examples of inappropriate reserves.

ON THE OTHER HAND: The reserves are usually one of the most important items on a non-life insurer's balance sheet and reserve movements are a major component within the Profit & Loss account. When providing audit sign-offs the auditors consciously review all material items, including the reserves. There is no real evidence to suggest that the auditing of non-life reserves is flawed. If, however, we were to believe that there should be a widening of the scope of the audit of non-life reserves, then that issue should be tackled through auditing standards and the Auditing Standards Board, not by adding another layer of review outside of the audit, with its attendant cost and bureaucracy. This is not to say that there should not be more actuarial involvement in the audit process.

4.2 **Potential duplication with audit**

ON THE ONE HAND: Auditors are already required to opine on the appropriateness of the financial statements of insurance companies. As the reserves are often the biggest item on an insurer's balance sheet, clearly they are expected to take a view on the overall adequacy of provisions in the context of the totality of the company. Why would a statutory role for actuaries in non-life reserving, such as a requirement for an SAO regarding the adequacy of the reserves, add any value to the existing audit process?

ON THE OTHER HAND: There are questions raised in 4.1 regarding in what detail auditors exercise this responsibility. Also, in practice, most auditors will already seek input from actuaries in relation to the reserves. These actuaries will be internal actuaries and/or independent external actuaries and/or the auditors' actuaries. Perhaps a statutory role, integrated in some way with the audit, would make that process of gathering actuarial input more efficient, and hence maybe even more cost effective. It might also avoid the possibility that exists in a non-statutory framework of actuarial input being limited in some way to specific elements, and perhaps therefore excluding difficult areas, of the reserves.

4.3 **Confidence in the market**

ON THE ONE HAND: Having reserves formally reviewed and signed-off by professionals instils confidence in:

- consumers regarding their insurer's ability to meet claims; and
- external bodies regarding the reliability of financial information (for example, we understand that this is the view of rating agencies regarding Lloyd's SAOs).

Promoting (justifiable) confidence in the financial services market is one of the objectives of the FSA.

ON THE OTHER HAND: This confidence could be misplaced. For example, an actuarial sign-off of claims reserves would not consider the adequacy of premiums and hence of the insurer's on-going ability to meet claims. Failures are often triggered by cash flow problems. Moreover, it is clear from Standard & Poor's recent report (referred to in 2.7 above) that their confidence in the reliability of actuarially approved reserves for non-life insurers has waned in recent years.

4.4 **Better reserving would reduce failures**

ON THE ONE HAND: The introduction of a genuinely prudential standard for reserving (e.g. 75th percentile reserves) in the context of a statutory reserving framework would help reduce the potential for the failure of non-life insurers. This is already being considered as part of Solvency II³. It is also similar to the relatively new general insurance actuarial requirements that exist in Australia. Actuaries, through their expertise in statistics, would be ideally positioned to opine on what constitutes reserves at, say, a 75th percentile level.

ON THE OTHER HAND: Such a standard might reduce the likelihood of failures, but would certainly not eliminate them. It is questionable whether actuaries, with their current understanding of claims distribution patterns and of claims development, are necessarily able to opine with any confidence on what constitutes reserves at, say, a 75th percentile level.

4.5 **Better reserving would not reduce failures**

ON THE ONE HAND: As part of the Solvency II exercise, the insurance supervisors of the EU members investigated the causes of recent insurance company failures and near failures in their countries. Their report⁴ indicated that the root cause in nearly every case was inappropriate management action, driven by, for example, incompetence, over-ambition or arrogance. Bad reserving in itself has not historically caused insurers to fail, and better reserving would not therefore reduce the number of failures.

³ See MARKT/2543/03-EN, published by the European Commission on 11 February 2004

⁴ *Prudential Supervision of Insurance Undertakings: Report of the London Working Group On Solvency II. Conference of the Insurance Supervisory Services of the Member States of the European Union* – published December 2002. Fortunately, this is often referred to by the more manageable titles of the “London Report” or the “Sharma Report”.

ON THE OTHER HAND: Whilst reserving itself might not be the underlying cause of insurance company failures, research also shows that, in over half the recent cases of insurance insolvency, the discovery of reserve inadequacy was the trigger. In many cases it can be seen – possibly with the benefit of hindsight – that the reserves had been inadequate, albeit less so, for some time. Had these inadequacies been uncovered earlier then it might have been possible either to restore the reserves to appropriate levels and to correct the causal operational deficiencies or, if that were not possible, to close the operation with smaller resulting losses, to shareholders, to policyholders and, via the Financial Services Compensation Scheme (“FSCS”) and its predecessor, to the industry as a whole.

4.6 Early warning system of pricing inadequacy

ON THE ONE HAND: If a company is under-pricing, then a compulsory SAO framework is more likely to give the company (and the regulator) early warning that this is happening, enabling timely corrective action. Such a framework will never be perfect at providing such warnings, but the consumer would be better protected with it than without it.

ON THE OTHER HAND: This is only true if one believes that auditors – and current audit standards – are unable to pick-up material under-reserving, whereas actuaries and actuarial guidance/standards are able to identify such under-reserving. In which case, as with 4.1, it would appear that the thrust should be to widen the scope of the audit, rather than to add another set of reporting requirements. Anyway, if eliminating under-pricing is the concern, why approach it via the very indirect (and far from fool-proof) direction of the reserving, as opposed to more direct pricing regulation?

4.7 Would facilitate less direct regulation

ON THE ONE HAND: A statutory SAO regarding a non-life insurer’s reserves, provided by a responsible actuary, would act as an additional front-line control mechanism. This would allow the FSA to reduce the degree of direct supervisory oversight, replacing it at least in part with oversight of the fitness and propriety of the responsible actuary, of the applicable guidance/standards to provide such opinion, and of how well the actuary fulfils the role.

ON THE OTHER HAND: Is this a desirable outcome? In effect the regulator would be delegating regulatory responsibility to the responsible actuary, who would become *de facto* a quasi-regulator. The regulator would then be regulating the quasi-regulator. Moreover, this would restrict the relationship between the FSA and the insurer. The FSA would lose out and the insurer would scarcely benefit as it would now have to deal with both the regulator and the responsible actuary.

4.8 **Formalises existing processes**

ON THE ONE HAND: There are likely to be few companies whose reserves are not already reviewed in some way or other by an actuary (e.g. internally, externally or as part of the audit process). A statutory framework would formalise the process and could prevent actuaries being asked to exclude the difficult classes of business (e.g. due to data problems), which may be the ones that need close attention.

ON THE OTHER HAND: So what? This on its own does not justify changing the existing regulations.

4.9 **Brings the rest of the market into line with Lloyd's**

ON THE ONE HAND: Bringing in a framework for the UK company market would provide a more consistent regulatory framework across the whole of the UK non-life insurance market. This would ensure a "level playing field" throughout the UK market.

ON THE OTHER HAND: It would not ensure a "level playing field". Even with the development of corporate capital at Lloyd's and the move to annual accounting, there are still very major differences between Lloyd's and the rest of the UK insurance market, in terms of the capital structure and, to a large extent, the underwriting profile. Eliminating the difference in actuarial requirements would hence have little levelling impact.

There is also a danger that, in equalising the requirements between Lloyd's and the company market, one inadvertently and unnecessarily makes more onerous the reserving requirements for one side or the other.

Finally, is there any evidence that anyone, either at Lloyd's or in the company market, is being advantaged or disadvantaged by this apparent anomaly?

4.10 **Brings UK into line with rest of global market**

ON THE ONE HAND: As indicated in Appendix A, most developed insurance markets, and many developing markets, have a statutory SAO framework. The UK market is out of line with the global trend in this area. This would ensure a “level playing field” throughout the global market.

Should a UK non-life insurance company fail, and it be shown that it had limited or no formal actuarial input to its reserving process, then it is entirely conceivable that the FSA (or government) could be publicly criticised for not requiring a formal actuarial review of reserves, especially bearing in mind that the UK has a well-developed and experienced actuarial profession. However ill-informed such criticism might be, it would damage both the reputation of the FSA and the public’s confidence in the FSA.

ON THE OTHER HAND: As with Lloyd’s and the UK company market, there are other, often more significant, differences between the UK and other insurance markets. Introducing an SAO regime across the whole of the UK market would eliminate one of those differences but the global playing field would remain far from level. Indeed, there is a possibility that the UK currently benefits, through regulatory arbitrage, from the current differences.

Clearly the FSA needs to retain public confidence in its ability to regulate effectively the UK financial services market and therefore would wish to avoid unnecessary damage to its reputation. However, its reputation would be enhanced by ensuring that any changes that it makes to the regulatory environment best balance the interests of the various stakeholders. This should be the driver of its decision whether or not to require actuaries to take an official role in non-life reserving in the UK.

4.11 **Helps prevent capital reserve charge “understatement”**

ON THE ONE HAND: The FSA’s policy statement on capital requirements for insurance companies, PS04/16, includes a capital charge expressed as a percentage of reserves. This will form part of the Enhanced Capital Requirement (“ECR”) and will, in effect, provide a new minimum capital requirement. There will, thus, be an incentive for companies to under-reserve, so as both to reduce their ECR and to increase the capital available to meet it. A statutory SAO framework would help mitigate this potential problem.

ON THE OTHER HAND: The FSA has decided that, for the time being, the ECR will serve as a “soft” measure. It will be more interested in the Internal Capital Assessments (“ICAs”) which should consider all aspects of each insurer’s future capital requirements, including any degree of under-reserving. In addition, the FSA will be providing Individual Capital Guidelines (“ICGs”) which should ensure that there is no deliberate under-capitalisation. If there are still concerns that this system will not eliminate such deliberate under-capitalisation then perhaps the system itself needs further revision, not one indirect feed into the process.

4.12 **Takes responsibility away from the Board of Directors**

ON THE ONE HAND: The FSA (and the DTI) has made it clear that company directors are wholly responsible for the prudential management and financial presentation of their companies. For Life companies, the FSA has altered the role of the Appointed Actuary role, to make it clear that the directors are responsible for decisions on reserve levels. Introducing a statutory SAO regime across the general insurance company market would appear to run counter to this and it might be considered naïve of the profession even to put this forward. Instead, the profession should be making more effort to show how it can add value, so that insurers willingly and voluntarily increase their use of actuaries.

ON THE OTHER HAND: This is not the full story. The FSA recognises the expertise of actuaries in the field of life assurance and therefore requires the directors of life insurers to take actuarial advice before setting reserves. Currently, there is no such requirement for non-life insurers; indeed there is no formal recognition in the UK company market of the expertise of actuaries in that field. It would be more in keeping with the developments on the life side for the setting of non-life reserves to remain the directors’ responsibility but for the directors to be required to obtain actuarial advice (which is currently not the case).

Moreover, many of the existing SAO regimes require the responsible actuary to sign-off on the adequacy of the reserves set by the directors, not to set the reserves themselves. Thus it is clear that it is for the directors to determine the reserves to be held, and the actuary merely comments on whether or not they have cleared the hurdle of “adequacy”. Indeed, this is similar to the Lloyd’s SAO requirements.

4.13 **Reserving doesn't need to be done by actuaries**

ON THE ONE HAND: Many companies currently use statisticians and/or part-qualified actuaries to do their reserving and find that they do a perfectly good job. Therefore, it would seem unnecessary (and expensive) for there to be a requirement for the reserves to be signed off by qualified actuaries. Indeed, in some circumstances, e.g. reinsurance disputes, other experts are better placed to opine on aspects of the reserves.

ON THE OTHER HAND: Reserving requires competence in general insurance, in finance, in probability and statistical analysis and in projecting and forecasting. The actuarial profession is the only profession that trains its members in all of these skills. Although some non-actuaries have undoubtedly picked up all of these skills as well, it is only actuaries, as a discrete and identifiable group of people, that one can be confident have all of the necessary reserving skills. Confidence should be further increased by the knowledge that the profession would regulate those who could fulfil such as statutory role (as it already does with Lloyd's actuaries and with actuaries acting statutory roles within other fields) through the issuance of Practising Certificates only to those who had the requisite experience and who could demonstrate that they had kept up-to-date with relevant actuarial skills.

4.14 **Some classes of business don't need actuarial techniques, let alone actuarial sign-off**

ON THE ONE HAND: For very short tail lines or for small books of business, there is probably little that sophisticated actuarial methods can add over and above simple "rules of thumb" which have been used successfully for many years, especially when applied by people who are well acquainted with the type of business.

ON THE OTHER HAND: The majority of business lines do lend themselves to statistical approaches and the regulatory approach should be designed primarily with these in mind. There will be classes or blocks of business that could be treated as exceptions – which ones they are will require some thought. However, it would be preferable to keep these to a minimum, to avoid any rules becoming unwieldy, or to run the risk of classes that are excluded from actuarial review actually turning out to be the ones that need investigation. In addition, if a class of business can be assessed relatively easily using simple rules of thumb, then it will not take the actuary very long to look at those classes.

4.15 **Litigation risk too great**

ON THE ONE HAND: This will increase actuaries' potential for exposure to litigation. Professional Indemnity ("PI") cover is currently expensive for actuaries, and this would further increase the cost, perhaps at the same time reducing still further the availability of PI cover. This would be more likely to affect the smaller players in the market.

ON THE OTHER HAND: PI cover is currently expensive for actuaries due partially to the current stage of the underwriting cycle and partially to the recent claims record (worldwide) of the profession. As such, this situation is likely to vary over time.

Increasing the role of the actuary is likely to increase the potential for adverse litigation. But actuaries are supposed to be able to manage risk and that risk can be managed through:

- a) defining the role of the actuary so that it is clearly understood by all parties;
- b) ensuring that there is suitable guidance for the actuary;
- c) ensuring that the work is only undertaken by suitably qualified and experienced actuaries;
and
- d) using appropriate quality control and risk management procedures, such as peer review.

4.16 **Overplays actuarial abilities**

ON THE ONE HAND: To be successful in a formal reserving role, e.g. in providing an SAO, an actuary will need qualities beyond purely technical abilities, such as commercial understanding, strength of character, etc. Currently the profession does not consider explicitly these qualities either in its training (other than very briefly within the Professionalism Course) or in its issuance of Signing/Practicing Certificates.

ON THE OTHER HAND: The profession recognises the need for actuaries in positions of responsibility to demonstrate qualities beyond purely technical abilities and it provides professional guidance to that end. That professional guidance is continuously under review, to ensure that it remains relevant, focused and unambiguous. Further guidance is developed as the need becomes apparent.

4.17 **Actuaries always get it wrong**

ON THE ONE HAND: This is an accepted fact. Indeed, most actuaries recognise this and include in their reserve reports remarks along the lines that "actual results will differ from those projected, possibly materially so". So, in practice, an actuarial opinion would provide a negligible degree of comfort.

ON THE OTHER HAND: Actuarial opinions have never been intended to guarantee the reserves – that would require actuaries to have a perfect knowledge of the future. Instead, an SAO framework ensures that the reserves have been reviewed in a methodical and professional manner, and are appropriate based on the available information at that time.

4.18 **Risk of commoditisation**

ON THE ONE HAND: There is a view that, where SAOs are required, they have become commodity products and that suppliers are undercutting one another in order to obtain/maintain business. Actuaries then have to manage their work within very tight budgets. It must be a concern that the same would happen were opinions required for the company market.

ON THE OTHER HAND: There is a thin but very important line between cutting out unnecessary cost, thus improving efficiency, and cutting corners, thus reducing the quality of the work product, perhaps to the extent of invalidating it. One is professional (providing better value to the client) and the other is not. The profession's guidance/professional conduct standards should prevent corner-cutting. If they don't, then either they need tightening up or the profession needs to take further steps to ensure that members abide by these standards.

4.19 **Adverse cost impact**

ON THE ONE HAND: Any suggestion of a statutory actuarial role is likely to provoke concerns of additional costs to the industry. Even if it were demonstrated that the overall cost impact would be limited, it is unlikely that the additional cost would be spread evenly – for some insurers this could be a heavy burden.

ON THE OTHER HAND: As already noted, in practice there are likely to be few companies whose non-life reserves are not reviewed in some way or other by an actuary (internally, externally or as part of the audit process). Hence, the additional cost to the industry should not be significant overall. Any additional cost should be weighed against the potential savings generated by the change: if the change does reduce the chance that a rogue company sets woefully insufficient reserves and subsequently gets into serious difficulty, then there will be savings to the industry in FSCS payments and in reputation costs.

Even if the cost impact is small, this is unlikely to be the perception. We would need to produce some empirical evidence to eliminate any erroneous perceptions.

4.20 **Shortage of GI actuaries**

ON THE ONE HAND: The non-life aspect of the UK actuarial profession is small. This additional role could both exhaust the existing supply of suitably experienced non-life reserving actuaries, and take actuaries away from doing things that might be more beneficial to the industry and to its members.

ON THE OTHER HAND: The non-life aspect of the UK actuarial profession used to be small but has grown significantly in recent years. Hard statistics on general insurance actuaries are not easily obtained but it is reasonable to believe that their number has grown faster than the number of UK actuaries as a whole. The number of Fellows of the Faculty and Institute of Actuaries now stands at over 7,000. Five years ago it was about 5,600; ten years ago it was about 4,700⁵.

It is believed that most non-life insurers already use actuaries in some way as part of their reserving. Therefore, the extra demands on the profession will be small.

4.21 **No value to most companies**

ON THE ONE HAND: For a well-managed company an actuarial sign-off will add no value.

ON THE OTHER HAND: Most well-managed non-life insurance companies already have actuarial involvement in their reserving, and so, whilst a formal process might add little additional value, it would add little or no additional cost. And it is the rogue insurers, who are unlikely to have much actuarial involvement, which this is intended to affect most.

4.22 **No value to the regulator**

ON THE ONE HAND: the FSA already receives much information regarding insurers' reserves, which the FSA's actuarial team reviews. The FSA also has the comfort of the audit opinion. There would be little value added by any further statutory actuarial involvement.

ON THE OTHER HAND: Actuarial sign-off would be at worst a "belt and braces" approach to regulation. However, it would also allow the FSA, and its actuarial team, to concentrate on other aspects of its responsibility, more secure in the knowledge that non-life insurers' statutory reserves have all been subject to actuarial scrutiny and have been deemed appropriate.

⁵ NB: not all of those Fellows are actively working as actuaries or UK-based. Currently some 85% are active, and 72% of those are based in the UK. Of the active UK based Fellows, 8% work primarily within the general insurance field.

4.23 **Reputation risk**

ON THE ONE HAND: A statutory role increases the likelihood that the actuarial profession would attract public attention, but only when things go wrong – which, inevitably, they will at some time and to some extent. There is only downside risk in this. Bad publicity can be disproportionate and could severely damage public confidence in the profession. There is usually a public backlash against professionals who are seen to fall down on their professional duties, even if they were not wholly at fault. The public had confidence because of what they thought the professional was doing. If it is then seen, rightly or wrongly, that the professional was not doing what was expected of it, the public gets angry.

ON THE OTHER HAND: It would be crass to say that “all publicity is good publicity” But if we believe that a statutory role for actuaries in non-life reserving is worthwhile to the industry and to society, i.e. that it is in the public interest, then we should not be afraid of the potential for negative publicity if we don’t get things right all of the time.

4.24 **Presentation of the case**

ON THE ONE HAND: Does the profession wish to be seen to promote further regulation/straitjacketing of industry? Maybe we should accept our role – whatever that is – as imposed by others. If the profession promotes a statutory role for actuaries then it might easily be perceived as being motivated primarily out of a desire to create (or at least consolidate) jobs for actuaries. Also, is this a good time to be raising the issue of a statutory role for the profession? The Penrose Report was publicly critical of the profession, and that followed widespread criticism of the profession regarding the problems within final salary pension funds (and earlier mis-selling scandals). Although these are different arms of the profession, in the public perception there is just one actuarial profession. Would promoting a further statutory role for the profession be credible at this point?

ON THE OTHER HAND: This paper is intended to tease out, through debate, the issues for and against a statutory actuarial role in non-life reserving. From that the profession will take a balanced view of what it believes, overall, would be best in the best interests of the various stakeholders. It can then promote this view. “How” and “when” it will promote this view is another matter and it should take into account the remarks in the above paragraph when deciding. However, if not “now” then who is to say that a later time would be more propitious?

4.25 **Would be supported by the International Association of Insurance Supervisors (“IAIS”)**

ON THE ONE HAND: in a paper released last year⁶ the IAIS said that “the role of the actuary, both within the insurance companies and in the position of supervisor, is critical to the maintenance of financially sound insurance companies.” It noted that the statutory use of actuaries in supervising non-life business had been increasing of late and proposed that this trend should continue. In a separate paper⁷ the IAIS stated that reinsurers should provide various financial statements “supplemented by an opinion by a qualified actuary or other competent person on, at least, the adequacy of the technical provisions.”

ON THE OTHER HAND: The IAIS also noted that “the term ‘actuary’ in this context does not necessarily relate to membership of certain professional associations. What is essential is to ensure that the insurance undertakings possess the competence and qualifications required for risk identification and control. Mathematicians and economists with insight into, and experience of, the insurance business may play this role as well as ‘actuaries’ in the narrow sense of the word.” Hence, the IAIS is encouraging greater technical analysis rather than specifically actuarial involvement. Moreover, it is talking about the non-life market in general, including those countries where there is currently little or no actuarial involvement in reserving. Therefore, the IAIS’s remarks should not be taken to mean that it feels that the UK’s current regulatory system would be enhanced by more actuarial involvement.

The reference to “other competent person” in the reinsurance paper seems to support the interpretation that the IAIS is pushing for greater technical analysis, rather than specifically for actuarial involvement.

4.26 **Doesn’t fit with Solvency II**

ON THE ONE HAND: It is interesting that the various Solvency II documents make no recommendation for a formal actuarial role in non-life insurance reserving. It is unlikely that this matter has simply been overlooked. Therefore, one concludes that the European Commission sees no need for statutory actuarial involvement of non-life reserving.

⁶ Guidance Paper 7, *The Use Of Actuaries As Part Of A Supervisory Model Guidance Paper*, prepared by the Solvency Subcommittee of the IAIS in consultation with members and observers, and published in October 2003

⁷ Supervisory Standard 8, *Standard on Supervision of Reinsurers*, prepared by the Reinsurance Subcommittee of the IAIS in consultation with members and observers, and published in October 2003

ON THE OTHER HAND: In practice, the different levels of development of the actuarial profession in the various European Union member states would make it difficult to introduce, let alone impose, a blanket requirement for actuarial involvement. However, one would question the ability of insurers to set reserves that meet the various requirements that the European Commission is considering without the involvement, statutory or otherwise, of experienced actuaries or insurance statisticians. The underlying objective of the European Commission for harmonisation across member states is likely to force consideration of this issue at some point, since the current practice regarding certification of reserves varies across the relevant countries.

4.27 **Has it worked elsewhere?**

ON THE ONE HAND: Appendix A lists 24 countries where there is a statutory requirement for actuarial involvement in non-life reserving. It includes many, if not most, of the world's principal insurance markets. We are unaware that any of these countries are considering dismantling this system, so we presume that the relevant regulators consider it to be a success.

ON THE OTHER HAND: Although the regulators consider formal actuarial involvement to be a success, we do not know the views of other stakeholders, such as insurers, consumers, non-life actuaries, etc. The statutory role that actuaries assume in non-life reserving varies from country to country, partially driven by the very significant differences between the nations in terms of both the nature of the insurance market and also the local actuarial population. It would be foolhardy to assume that because a particular system has worked in one country it would therefore work in another.

5. Practical issues

In this section we have identified some – but by no means all – of the practical considerations regarding a formal actuarial role in non-life reserving. Most of the considerations we have raised are generic, in that they would apply however a statutory actuarial reserving role were structured.

5.1 Internal or external?

ON THE ONE HAND: An internal actuary is likely to have less independence than an external actuary. This level of independence might be more perception than reality, but that does not change the situation from the position of those stakeholders looking from the outside at insurance companies. An external actuary is likely to have seen the claims experience of many similar books of business elsewhere in the market, the knowledge of which can be used constructively in reserving. Therefore, it is desirable to have an external actuary involved in the reserving, e.g. through providing an SAO.

ON THE OTHER HAND: An internal actuary is likely to have a greater understanding of the insurer's own business than an external actuary can have, and can allow for this appropriately in his/her reserving. It is also a fallacy that external actuaries are likely to be wholly independent. They rely on their clients' fees for cash-flow and hence profit. When dealing with uncertainty it is unrealistic to expect that the possibility of upsetting and hence losing the client and the accompanying revenue stream does not enter the mind of the actuary and form part of the deliberations.

ON ANOTHER HAND: A possible option would be to allow internal sign-off and/or advice, but with external peer review. Thus the insurer and regulator would benefit from deep internal knowledge of the insurer's business, as well as the external peer reviewer's broad external market knowledge, and independence. But this would be a higher cost option.

5.2 Inwards reinsurance

Would any such requirements apply to inwards reinsurance as well as to direct insurance? The multi-national nature of some covers would not fit easily with any UK-centric legislation. Reinsurance has tended to operate in more relaxed regulatory environments than has direct insurance, the argument being that a reinsurance contract is an arrangement between two experienced and knowledgeable entities and that, as such, they do not need the same degree of protection as do private consumers of insurance.

Would a formal actuarial role in reinsurance reserving make the UK a more attractive reinsurance market for international consumers? Would they regard actuarial opinion as some form of quality kitemark? Alternatively, would reinsurers consider a more regulated UK market a less attractive place from which to sell reinsurance?

5.3 **Ranges**

Point estimates are open to misinterpretation (and are always wrong!). The uncertainty in the assumptions underlying reserve estimates means that there is always a reasonable range of possible outcomes. Should the profession be pushing more for disclosure of reserve ranges or, better still, distributions? If so, then do actuaries (or anyone else for that matter) currently have the level of science and consistency of practice to achieve credible and comparable ranges/confidence intervals?

5.4 **Peer review**

Do we need a peer review process, in order to ensure adherence to professional standards and appropriate guidance? If so then what structure should it take?

5.5 **For all insurers or just a subset?**

Should whatever approach chosen apply to all insurers, just to those writing certain lines of business, or just to those with certain volumes of business? As noted in 4.14, if particular lines or insurers are to be excluded then it would be preferable to keep these to a minimum, to avoid any rules becoming unwieldy, or to run the risk of classes that are excluded from actuarial review turning out to be the ones that actually need examination.

5.6 **Other requirements**

A statutory role would almost certainly result in other, secondary requirements, such as a formal obligation for data reconciliation and/or validation of soft information. Both these points are very important as the basic information is provided by the insurers' management, who have a vested interest in the results and hence might try to influence the actuary's understanding and perception of the data (for example, they might provide the truth and nothing but the truth, but might not provide the whole truth).

What other areas should be covered? How would these best be covered? For example, should they be dealt with through statutory regulation or through professional guidance?

5.7 Other questions

There are a number of questions for which the answers are not important to the debate about the concept of a statutory actuarial role, but which would need to be resolved were such a role ever to be introduced. These include:

- The definition of the required level of prudence in the reserves. For example, if the reserves are to be at least as great as the actuary's "best estimate" then what is "best estimate"?
- How often would a review need to take place? Annually, as per Lloyd's, or more or less frequently?
- What level of granularity is required? Whilst clearly the requirement is for the reserves in total to be adequate, would there be value in insisting upon the reserves at certain class levels being adequate too? Clearly this is relevant from a pricing perspective but from a reserving point of view might introduce more margin than is really necessary.
- Should any SAO regime apply to reserves gross of reinsurance, as well as net of reinsurance?
- Should any SAO regime apply to an insurer's global liabilities, to those written in the UK, or just to those applying to UK policyholders?
- Should any SAO regime apply just to reserves in respect of incurred claims or to all non-life insurance liabilities?
- Does the actuary purely act for the insurer (who would be the actuary's employer or client) or is there a requirement for the actuary to act as whistleblower, reporting to the regulator anything relating to the reserves that he/she considers questionable?
- What level of qualification is commensurate with whatever role we are considering?

6. Possible options

The Working Group does not believe that this is a “all or nothing” matter, rather that there are various ways in which actuaries could assume a more formal role in non-life reserving. In this section we discuss some of these options. The options are not necessarily mutually exclusive.

- 6.1 **Do nothing:** in other words, maintain the existing structure. This should be a conscious decision, rather than the path of least resistance. It would not mean that there would be no developments. As has already been said, the profession is continually seeking to improve the standards of its work, through research and through professional guidance. This can be seen in general by the development of the Actuarial Standards Board and, in the case of non-life reserving specifically, by the recent launch of the **General Insurance Reserving Issues Taskforce** (“GRIT”).
- 6.2 **Require a Statement of Actuarial Opinion:** would this be for all insurers, or for just those over a certain size or writing certain classes of business? How tight would the business definitions need to be? What would the actuary be opining on? What form would the SAO take (e.g. “adequacy” or “reasonableness”)?
- 6.3 **Require directors to obtain actuarial advice:** again, would this apply for all insurers, or for just those over a certain size or writing certain classes of business? How would they demonstrate to the Regulator that they had obtained actuarial advice? What should that advice consist of?

There is a view that the key value added by actuaries during the reserving role is not in recommending the level of reserves, or even in providing possible ranges of eventual outcomes, but in the insight they offer into the underlying progress of the business against the expectations set in the business planning process. There are considerable delays before reported revenue accounts reveal the actual underlying profitability (or otherwise) of the business, and in the meantime insurers continue to trade on an uncertain footing. The real value added is in the advancing of some greater knowledge and certainty to eventual outcomes, and in the early identification of those areas of an account that are under or over performing.

- 6.4 **Augment/beef-up the role of the auditor:** whatever action is taken, it should be done in conjunction with the audit profession. One option might be for the Auditing Standards Board to insist on a minimum level of actuarial involvement in the audit of insurers' reserves. Alternatively, if someone other than the auditor is signing off on the reserves, then should the auditor be entitled to place formal reliance on that review (rather than having to repeat the work – hence cutting out unnecessary duplication)? This might be a problem if the sign-off is provided internally (although could be overcome by peer review).
- 6.5 **Augment/beef-up the regulator's actuarial capability:** in effect this would amount to an SAO regime, with the SAO provided by the regulator. A downside would be the cost; an upside would be the independence of the actuarial review.
- 6.6 **Data issues:** any role must include consideration of the data, as the actuary's work can only be as good as the data he/she receives. Enhancing the auditor's role in the validation of actuarial data might be worth considering.
- 6.7 **Looking at pricing would be more valuable:** when things have gone wrong, reserving is akin to counting the horses that have bolted and indicating to the regulators whether or not it is time for the stable door to be closed. In other words, it is too late. What might be of more use would be sign-off on the adequacy of the pricing/underwriting. Would the industry be better served if actuaries had a formal role in pricing, rather than reserving? Again, does the profession have the necessary skills?
- This might run counter to the current free market philosophy. Indeed, some insurers deliberately set, at least temporarily, premium rates at uneconomic levels for certain risk segments or classes of business for sound commercial reasons. Would this approach inhibit that practice?
- 6.8 **Actuarial sign-off of the Individual Capital Assessment:** this would allow for any degree of over- or under-reserving in the technical reserves. Hence, in promoting solvency and sound business management it could be perceived as more valuable than simply commenting on the technical reserves. On the other hand, there are many aspects of an ICA that could be considered non-actuarial.
- 6.9 **International Financial Reporting Standards:** the development of these also represents a significant imposition on insurers, which actuaries could be well placed to respond to and add value.

6.10 **Financial Condition Reporting:** this was the subject of a sessional paper in 2001⁸. Again, this is something that the Boards of many well-run insurers already insist on. Formalising the process will further encourage good business practice. The scope of Financial Condition Reporting extends beyond the core competences or knowledge areas of the actuary, but actuaries would still play a key role, not least in the areas of pricing and reserving.

The detail of the sessional paper has been partially overtaken by events, not least by the FSA's capital proposals in CP190 and CP04/7. However, many of the issues that the paper raises, and comments made in the subsequent discussion, are still relevant and readers are referred back to that text.

⁸ *Financial Condition Assessment* by J P Ryan, P R Archer-Lock, A J Czernuszewicz, N R Gillott, P H Hinton, S A Malde, D Paul and N Shah, presented to the Institute of Actuaries on 26 March 2001: BAJ 7, IV, 519-603

7. Summary

- 7.1 The desirability, or otherwise, of statutory actuarial involvement within non-life reserving is a current topic in the UK. The subject is far more complex than it might appear initially and it is important that it is debated openly and thoroughly, in order that the most appropriate course of action is pursued.
- 7.2 The General Insurance Board intends this paper to kick off the debate, without prejudicing in any way the outcome. As a result, Section 4 of this paper lists a series of points – or challenges that might be made – for and against a statutory role for actuaries in non-life reserving, and then sets out arguments and counter-arguments. This is a long list and the Working Group wants to understand which issues the members of the profession regard as important and where the balance of the arguments lies.
- 7.3 In Section 5 the paper notes other issues that might need debate further down the track (but not now, at least not at the expense of discussion of the issues in Section 4), and in Section 6 it expands upon various possible outcomes of the debate, it being clear that the choice is not between a stark “actuarial sign-off” and “no actuarial sign-off”.
- 7.4 The Working Group is keen to hear the views of the membership regarding this topic, and will be starting that listening process at GIRO 2004. The Working Group will also be seeking input from other stakeholders, in particular the FSA and the ABI.

Appendix A What happens elsewhere?

- A.1 We are aware that the insurance regulators in the following countries require some degree of actuarial involvement in the setting of reserves for non-life insurance operations.
 - A.1.1 USA: for details see Appendix B.1
 - A.1.2 Australia: introduced in 2002
 - A.1.3 Belgium
 - A.1.4 Bermuda: follows a similar approach to that of the US
 - A.1.5 Brazil
 - A.1.6 Canada: for details see Appendix B.4
 - A.1.7 Channel Islands: a biennial actuarial sign-off is required for mortgage indemnity business. There is not statutory requirement for actuarial involvement for any other class of business
 - A.1.8 China: in the process of being introduced
 - A.1.9 Czech Republic: introduced in 2000
 - A.1.10 Estonia: introduced in 2000
 - A.1.11 Finland
 - A.1.12 Hong Kong: there is a requirement for actuarial sign-off for reserves for certain classes, in particular motor insurance and employers liability, and also for the reserves of insurers above a certain threshold
 - A.1.13 Hungary: under legislation introduced in 1996 all non-life insurers have to have their annual reports signed off by an actuary. The report covers all technical provisions
 - A.1.14 Ireland: for details see Appendix B.3
 - A.1.15 Italy: reserves must be signed off by an actuary for audit purposes. From 2003 there is an additional requirement for an appointed actuary for all books of third party motor liability business
 - A.1.16 Jamaica: for the last couple of years or so all non-life insurers have been required to have their reserves certified by an actuary

- A.1.17 Japan: sign-off here is in respect of whether reserves have been maintained on the basis of sound actuarial principles
- A.1.18 Mexico: annual signed statement for all lines of business, now including a comment on the sufficiency of the reserves
- A.1.19 Netherlands: there is no compulsion on insurers but they are encouraged to obtain a voluntary annual actuarial certificate that their reserves are sufficient
- A.1.20 Norway
- A.1.21 Portugal: actuarial report dealing with specific issues to be made available to the regulator
- A.1.22 Singapore: similar to Australia
- A.1.23 Slovenia
- A.1.24 Spain: actuarial review of methodology underlying technical reserves
- A.1.25 UK (Lloyd's syndicates only – for details see Appendix B.2.)
- A.2 We understand that the regulators in the following countries have not so far required any actuarial involvement in the setting of reserves for non-life insurance operations.
 - A.2.1 Austria
 - A.2.2 Denmark
 - A.2.3 Egypt
 - A.2.4 France
 - A.2.5 Germany: there have been some discussions on the subject between the German actuarial profession and the Ministry of Finance and BaFin. Currently there is a requirement for actuarial opinion of liability annuities, and the German actuarial profession is keen for this to be extended to all non-life reserves. The Ministry and BaFin are slow-peddalling, so that nothing is decided too far ahead, and hence possibly in contradiction, of Solvency II and IFRS. Meanwhile, the Association of German Insurers and the audit profession are firmly against the idea
 - A.2.6 Malaysia
 - A.2.7 Pakistan

Appendix B Statutory actuarial roles in practice

B.1 US Loss Reserve Opinions

B.1.1 **Background:** In the mid-1970's several US property/casualty insurance companies became insolvent, many due to inadequate reserves for loss and loss adjustment expenses. As a result, the NAIC recommended that a statement of actuarial opinion on loss and loss adjustment expense reserves, signed by a qualified loss reserves specialist, be submitted with the statutory annual statement to the domiciliary commissioner. In 1984, seven states had instigated a requirement for loss reserve opinions. By 1990, the NAIC had changed the Instructions to the Annual Statement to require a statement of opinion by a qualified actuary. Since then, the number of specific aspects upon which the signer is instructed to comment has continually grown and currently includes items such as discount for time value of money, anticipated salvage and subrogation, loss portfolio transfers, etc.

B.1.2 **Working:** Each state has its own requirements although most follow the NAIC requirements. The NAIC project on Codification of Statutory Accounting Principles, which was implemented in 2001, caused several significant changes in statutory accounting. Some states have not adopted the Codification in whole or part. The actuarial opinions apply to all companies except ones that are extremely small (less than \$1m premium and less than \$1m reserves). The signing actuary can be either internal or external. The auditor can rely on the actuarial opinion under the outside expert criteria after satisfying themselves that the signing actuary has sufficient knowledge and experience.

B.1.3 **Basis:** The actuary signs off the carried loss and loss adjustment reserves on a "reasonability" standard, i.e. that they are within a reasonable range of reserve estimates. But see below about future changes.

B.1.4 **General Qualification Standard:** The American Academy of Actuaries has issued a Standard on the qualifications required in order to sign an actuarial opinion.

Basic Education: Successful completion of exams or, at a minimum, successful completion of exams on the following topics:

- General actuarial mathematics.

- Applicable principles of economics and finance.
- The identification, evaluation, and management of risk.

Alternative Basic Education:

- University education accepted if full member of IAA organisation.
- Work and/or self-study – must get signed statement from another actuary who is qualified to issue opinion.

Experience Requirement: must have experience involving significant responsibility in practice area.

Continuing Education: Sufficient continuing education to maintain current knowledge of applicable standards and principles of practice.

Credentials: the appointed actuary must be:

- a member in good standing of the Casualty Actuarial Society; or
- an member in good standing of the American Academy of Actuaries who has been approved as qualified for signing Property & Casualty loss reserve opinions by the Casualty Practice Council of the American Academy of Actuaries; or
- a loss reserve specialist approved by the insurance regulator.

B.1.5 **Future changes** – There are significant changes for the year-end 2004 and 2005 Statements of Actuarial Opinions. The 2004 changes require the actuary to:

- State “whether or not he or she reasonably believes that there are significant risks of material adverse deviation”;
- Disclose the standard of materiality used in judging material adverse deviation;
- Identify the person at the company responsible for the data used in the actuarial opinion;
- Include either a point estimate or a range of reasonable estimates for gross and net reserves in the Actuarial Report supporting the Statement of Actuarial Opinion (but these estimates are not required to be included in the opinion itself);
- Include an exhibit in the report that ties to the annual statement and compares the actuary’s conclusions to the carried amount; and

- Make extended comments on factors that led to unusual Insurance Regulatory Information System (“IRIS”) ratios and how these factors were addressed in prior and current analyses.

The 2004 changes also require the independent auditor to consult with the actuary to understand what data is significant so that it may be tested.

The 2005 changes include the submission of a confidential document, the Actuarial Opinion Summary (“AOS”), by March 15 to a domiciliary state that requires it. The AOS should include at least:

- the actuary’s range, both gross and net; and/or
- the actuary’s point estimate, both gross and net; and
- the company’s recorded reserves, both gross and net; and
- the difference between the carried reserves and the actuary’s point estimate or range, both gross and net; and
- where there has been one year adverse development greater than 5% of surplus in at least 3 of the last 5 calendar years, explicit discussion of the reserve elements or management decisions that were the major considerations.

B.2 Lloyd’s Statements of Actuarial Opinion

B.2.1 **Background:** under the old Lloyd’s reserving rules, syndicates had to hold reserves that were at least as great as certain percentages (by class of risk) of written premiums. Those minimum percentages were signed off by the then regulator, the Department of Trade and Industry (“DTI”). Syndicates could hold reserves less than those indicated by the minimum percentages, but only if they obtained a supporting actuarial report.

B.2.2 In practice the minimum percentages were not overly taxing – Lloyd’s made it clear to the DTI when the DTI was reviewing the percentages that they were not meant to represent averages, rather, because the ranges of lines that they covered were wide, they had to cover all extremes. As a result few syndicates sought an actuarial report. It is now clear, with the benefit of hindsight, that many syndicates that set their reserves in line with the minimum percentages were in fact under-reserving.

- B.2.3 The extent of under-reserving at Lloyd's became obvious in the early 1990s, when the problems were compounded by the emergence of a mass of asbestos claims. Lloyd's had to be restructured.
- B.2.4 The pre-1993 underwriting year business was taken into the newly created Equitas. As regards the post-1992 underwriting year basis, it required a more rigorous safeguard than had been provided by the now discredited minimum percentages. The DTI agreed that a suitable way forward would be that the reserves of each syndicate should be approved annually (via a statement of actuarial opinion) by a suitably qualified actuary.
- B.2.5 The SAO had to be seen to be robust – hence the requirement that the reserves opined upon had to be no less than the actuary's best estimate.
- B.2.6 In that the SAOs were to satisfy the DTI that Lloyd's problems were now either behind it or could be spotted quickly, the situation could be considered similar to troubled insurance companies that the DTI (and latterly the Treasury and then the FSA) have “put on report” and on which have required periodic actuarial reports. In which case, maybe one should consider whether Lloyd's syndicates still warrant SAOs, or whether it should be brought into line with the rest of the company market.
- B.2.7 **How well is it working?** Opinions differ.
- B.2.7.1 There are certainly those (mostly syndicates) who feel that it is mere bureaucracy and adds nothing.
- B.2.7.2 There are other syndicates who clearly relish the opportunity to gain insight from their actuary and regard the process as valuable. But they would, in all likelihood, have used actuaries even had there been no statutory requirement.
- B.2.7.3 Lloyd's itself has not commented publicly on the effectiveness of the SAO regime. Unofficially, it appears to find them useful as a source of broadly consistent information and as a supporting tool when talking with rating agencies. Lloyd's also appears interested in developing the system further, to provide it with more wide-ranging management information, particularly regarding the strength and reliability of the reserves.

- B.2.7.4 The FSA has also not commented publicly on the SAO regime. However, if it were to alter it or indeed to abandon it, then now, with the recent release of the consultation paper regarding regulation of Lloyd's (CP04/7), would seem an ideal time. However, based on what was written in CP04/7, the FSA appears minded to continue the SAO regime in its current form.
- B.2.7.5 We have seen no independent research that indicates the consumer view (if any) of statutory non-life reserve opinions.

B.3 Ireland

B.3.1 Introduction

- B.3.1.1 In July 2000, the Monetary and Exchange Affairs Department of the International Monetary Fund ("IMF"), in conjunction with the World Bank, completed an assessment of the regulation of the financial sector in Ireland. In relation to the insurance sector, the assessment was carried out by reference to standards and guidelines laid down by the International Association of Insurance Supervisors ("IAIS").
- B.3.1.2 The IMF/World Bank team expressed surprise that an actuarial approach was not mandatory for long tail compensation classes of insurance.
- B.3.1.3 Arising from these comments, and having first obtained the preliminary reviews of the main industry and professional bodies, the regulator (then the DETE, now IFSRA) decided to introduce a requirement for SAOs on the reserves of non-life insurance companies it supervised.
- B.3.1.4 The requirement applied to the 2001 Annual Returns, but the first year was treated as a familiarisation period.

B.3.2 Companies affected and criteria for exemption

- B.3.2.1 The requirement for an annual actuarial opinion applies in principle to all non-life insurance undertakings supervised by IFSRA.
- B.3.2.2 However, IFSRA is willing to consider requests for exemption from the requirement from companies that meet the following criteria:
- No third party business.

- No motor, liability or financial guarantee business.

B.3.2.3 Several 'pure' captive insurers qualify for exemption based on these criteria.

B.3.3 Opinion on Technical Reserves

B.3.3.1 The SAO is provided as part of the company's Annual Return to the Supervisor. The SAO:

- Encompasses all classes of business written by the company.
- Applies to the company's technical reserves, both gross and net of reinsurance.
- Covers the following components of the technical reserves:
 - outstanding claim reserves;
 - unearned premium reserves;
 - additional amounts to cover unexpired risks;
 - future claims-handling expense reserves;
 - Motor Insurance Bureau of Ireland ("MIBI") reserve and any equivalent reserve in other jurisdictions.

The SAO **excludes**:

- future reinsurance bad debt reserves; and
- claims equalisation reserves.

B.3.3.2 Guidance to actuaries signing the opinions has been provided by the Society of Actuaries in Ireland.

B.3.4 Actuarial report to Board

B.3.4.1 The SAO provided to the Supervisor must be supplemented by a comprehensive actuarial report to the Board of the Company. This report is available, on request, to the Supervisor. If a copy of the actuarial report is requested by the Supervisor, the Supervisor will treat the report as a commercially sensitive document provided on a confidential basis.

B.3.4.2 Guidance on the preparation of the actuarial report to the Board has been provided by the Society of Actuaries in Ireland.

B.3.5 Qualifications of actuary

B.3.5.1 The signing actuary must be in possession of a Practising Certificate issued by the Society of Actuaries in Ireland. The actuary can be an employee of the company (including of its parent or of another Group company) or an external consulting actuary.

B.3.6 Duties of actuary (including 'whistle-blowing')

B.3.6.1 The Actuary is required to act independently of the company in providing the Opinion on the technical reserves, in accordance with professional guidance. While the Actuary is not required to check the data on which the Opinion is based, s/he should disclose any material concerns in respect of data accuracy, integrity and sufficiency in the context of the work undertaken.

B.3.6.2 If, for whatever exceptional reason, the Actuary is unable to give an unqualified Opinion to the Supervisor, s/he should inform the Supervisor (and the external Auditor) as soon as possible.

B.3.7 Duties of Board of Directors

B.3.7.1 The company is required to provide the actuary with the data and information required for the preparation of the Opinion. As part of the annual Directors Compliance Certificate, the Directors are required to certify that:

- No relevant information that would materially affect the Company's reserves has been knowingly withheld from the certifying actuary.
- The data provided to the certifying actuary and underlying the reserves are accurate and complete and have been reconciled to the data used to in preparing the company accounts and supervisory returns for the period.
- The certifying actuary has been advised of all known changes in internal methods or procedures which would materially affect the determination of reserves.

- Claims development data provided to the certifying actuary has been reconciled to the accounting information underlying the company law accounts.

B.4 Canada

B.4.1 **Background:** all federally-regulated insurers are required at each year-end to provide both of the following:

- A statement of actuarial opinion regarding the insurer's total policy liabilities (i.e. its claims reserves, plus UPR, plus URR, plus any other liabilities such as swing rate commissions).
- A Financial Condition Report, based on the Canadian Dynamic Capital Adequacy Testing ("DCat") rules. These are in effect stress tests, with a maximum 1% tolerance of failure.

B.4.2 These are presented to the insurers' Boards, although the Board can delegate responsibility to its Audit Committee. The actuary has an obligation to write to the Superintendent of Insurance if there is a gap in opinion regarding the ongoing viability of the insurer (i.e. if the insurer insists on holding reserves that the actuary believes are inadequate).

B.4.3 These rules were introduced in the early 1990s via an Insurance Companies Act. The Act followed lobbying from the Canadian Institute of Actuaries, backed by regulator. The argument was that it was in the public interest to protect insurers from insolvency (of which there had been a recent spate). Predictably there was resistance from insurers on grounds that it would impose an unnecessary additional cost on them.

B.4.4 It should be noted that these SAO requirements do not necessarily apply to regional insurers, who are accountable to the Provincial regulators, some of whom do not operate an actuarial opinion regime.

- B.4.5 It should also be noted that the only classes of business that require actuarial opinion of premium rates are those that are compulsory, which is essentially automobile insurance. In theory, just the third party liability component is compulsory and hence requires sign-off. In practice, as so much of the third party liability business is sold as part of a wider automobile package, e.g. comprehensive cover, all automobile cover premium rates are certified.
- B.4.6 **Practical considerations:** under the Act actuaries have a lot of responsibilities. To balance this they also have “qualified protection” in that they are immune from civil litigation providing that they can demonstrate that they adhered to professional standards. One issue with this is how one allows for professional judgement. Tight standards – which are desirable from a personal risk management viewpoint – limit the scope for professional judgement.
- B.4.7 **How well is it working?** Again, opinions differ but in general it is thought that the standards of reserving have been improved by the involvement of actuaries. It should be remembered in this context that the Canadian market comprises many smaller insurers than is the case in the UK, and that few of these previously used actuaries in their reserve setting.
- B.4.8 A few insurers have gone out of business since these rules were first introduced. It is thought that the implementation of the rules hastened their demise, at a smaller cost to the industry and to policyholders than would otherwise have been the case.
- B.4.9 One side effect of the new rules was that they highlighted a wide range of reserving practice. As a result, a formal peer review has been introduced. Insurers are now expected to have their reserves reviewed at least once every three years by an external actuary (or, if their reserves are already certified by an external actuary, by another independent external actuary).