THE LLOYD'S REINSURANCE TO CLOSE PROCESS

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ABSTRACT

General Insurance syndicates at Lloyd's are required to obtain a Statement of Actuarial Opinion (SAO) in relation to their solvency reserves. This paper focuses on the reinsurance to close (RITC) process at Lloyd's, which is not currently subject to such opinions, although some Lloyd's syndicates choose to obtain informal opinions from actuaries in relation to RITC. The paper analyses the current RITC process and suggests two types of opinion that actuaries could provide in relation to RITC. We also consider briefly financial condition opinions for Lloyd's syndicates. The International Accounting Standards Committee (IASC) published their Issues paper on insurance accounting during the drafting of this paper, and we include some consideration of the application of the IASC's fair value concept to the future claim liabilities of Lloyd's syndicates. Lloyd's may be subject to unprecedented changes in the next few years, and we therefore consider the effect of these potential changes both on the existing actuarial solvency opinions and on our suggested opinions in relation to RITC. Our aim is to carry out an objective analysis of this unique reserving process and to offer suggestions as to how actuaries might add value to the process, taking into account how Lloyd's might change in future. Because of these changes, much of the paper has direct application to non-Lloyd's insurance companies.

KEYWORDS

Reinsurance To Close, RITC, Statement of Actuarial Opinion (SAO), Reserving, Lloyd's, Reinsurance, Commercial premium, Transfer of liabilities, Fair value accounting, Financial condition reporting

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1. INTRODUCTION

1.1 *Background*

1.1.1 Lloyd's is a unique market for insurance, established over three hundred years ago. It is a major force in world insurance and reinsurance markets, being one of the largest global business insurers, with 13% of the world's marine market and 23% of the aviation market (Source: April 1999 data taken from Lloyd's website in December 1999). Despite its long history, actuarial involvement with Lloyd's only began about twenty five years ago, when actuaries were first used by syndicates to assist them with their reserving for the closing years of account. This reserving role has been formalised since then, with the scope of involvement changing significantly in the last five years. Substantial use was made of actuaries as part of the Equitas reserving project in 1995, and shortly after this, the U.S. regulators introduced the requirement for Lloyd's syndicates to obtain actuarial opinions on the reserves in their U.S. situs Trust Funds. Finally, with effect from 31 December 1997, every Lloyd's general insurance syndicate was required to obtain a Statement of Actuarial Opinion (SAO) on its reserves for solvency purposes. We refer to these existing regulatory roles as "statutory" roles in the remainder of this paper.

1.1.2 We are not going to dwell on the detail of the existing statutory role, because this is dealt with adequately by the relevant professional guidance notes (GN20 and GN33) and the associated Advisory Notes (See the two General Insurance Board (1999) references). Rather, this paper will address actuarial and other issues in relation to Reinsurance To Close (RITC) for general insurance syndicates at Lloyd's, where there is currently no formal actuarial role. We have not considered Life syndicates in this paper, as different issues arise in relation to these syndicates.

1.1.3 We have assumed that the reader has a basic grasp of Lloyd's terminology. Consequently, we have not sought to explain all the terms that we have used in relation to Lloyd's. We do, however, provide a full definition of RITC in Section 2, since we believe there are a number of misconceptions regarding the meaning of RITC. Readers who are very familiar with RITC could perhaps skip the factual parts of that section. Several publications (e.g. Lloyd's Training Centre (1999)) provide the necessary background on Lloyd's. It is worth noting, however, that there are four types of capital providers or "Names" at Lloyd's - Corporate Dedicated, Corporate Spread, Private Limited and Private Unlimited. We refer to all of these collectively as "Lloyd's Members" in the remainder of this paper.

1.1.4 Finally, by way of background, the reader should note that in practice the RITC has traditionally been the preserve of the Active Underwriter for a syndicate, together with the Board of the managing agent. Over the last few years, it has become increasingly common for there to be actuarial as well as underwriting input into the assessment of RITC. Indeed, the Lloyd’s published Code for Managing Agents: Management of Reserving Risk (see paragraph 2.3.9 and Appendix 2) suggests that whilst there should be an underwriting view of RITC, the Managing Agent should take independent advice, possibly from an actuary, to help it form an opinion on the RITC suggested by the Active Underwriter. This paper does not address the manner in which managing agents or underwriters might establish the RITC. Instead, it concentrates on what an actuary would have to do in order to provide an opinion on the RITC agreed by the Board of the managing agent, and whether such an opinion would be of value.

1.2 *Historical perspective*

1.2.1 Lloyd’s origin dates back to a coffee house in London in the late seventeenth-century where financiers and merchants met to underwrite marine adventures. These original insurance contracts covered the duration of the voyage. By the end of the nineteenth-century an underwriter would have typically accepted risks on behalf of three or four financiers and by then the scope of risks had expanded to incorporate non-marine business. Risks had become more complicated and consequently it became recognised that profit might not be determinable until the end of three or four years. Each underwriting year was treated separately and managing agents took a prudent stance in their determination of the amount of profits to be released to Lloyd's Members. The San Francisco earthquake of 1906 and the resulting turmoil in the market helped bring about the requirement for an annual audit in 1908. The 1908 “Instructions for the guidance of auditors” described a method of determining a value to be placed upon each year of account's liabilities which can be described as a simple average chain ladder method. These instructions also stated that all claims from the pre 1907 accounts are to be placed against the 1907 account. This is the earliest reference that we have found describing the three-year accounting system, and the concept of RITC.

1.2.2 The twentieth century has seen the introduction of new long tailed types of insurance where the period between payment of the premium and final settlement of the claims can run into many years. Another feature of this business is the increase in uncertainty surrounding the amounts to be paid. These features make it more difficult to determine profits at the end of a three-year period for syndicates whose business contains a large percentage of these long tailed-risks. The extreme difficulty of recognising and reserving adequately for latent claims (e.g. those arising from Asbestos, Environmental Pollution and Health Hazards) on some of these longer-tailed policies contributed to Lloyd's troubles in the late 1980s and early 1990s when it became evident that the reserves held for some policies written many years before were inadequate. Under rules specified by Lloyd's, the accounts of a syndicate have to remain open until the reserves can be determined with the required degree of accuracy/confidence. Actuaries used to have an involvement in confirming that there was sufficient uncertainty to justify leaving a year open, but have never had a role in determining whether there is sufficient certainty to permit closure, and this is an area where actuaries could perhaps add value. In the early 1990's many syndicates left years of account open and more recently two syndicates could not close their 1996 year of account because of uncertainty surrounding US and Canadian automobile extended warranty policies. It is possible to envisage situations where an event or development leaves considerable uncertainty surrounding the final outcome of the profits of a large number of syndicates at the end of the three-year period. In this situation, the managing agents for the syndicates involved would have to consider whether to leave the relevant years of account open. Lloyd's will have to accept that, with the existing structure, this could happen in the future, or they should perhaps consider an alternative to RITC.

1.3 *Why this paper now?*

1.3.1 Our motivation for writing this paper arises from a number of sources. First, as we outlined above, the actuarial role at Lloyd's has developed considerably in recent years. Although Lloyd's have indicated to us that they have no immediate intention of asking actuaries to undertake a formal role in relation to RITC, it is possible that this will change. It seemed desirable to explore the complex issues surrounding RITC in a paper to be discussed at a sessional meeting, in order to put the actuarial profession in a sufficient state of preparedness should such a role be introduced in future.

1.3.2 The second reason for writing this paper is that, regardless of whether Lloyd's decides to introduce a formal statutory role in relation to RITC, an increasing number of actuaries are being asked by managing agents to provide some form of opinion in relation to RITC, as opposed to solvency. This trend is in part driven by the increased pressure that is being put on managing agents by the Corporation of Lloyd's and by Lloyd's Members to justify their reserving decisions. These opinions are clearly not statutory opinions, but in fact can have a more public profile than the existing SAOs. They are often not in relation to the RITC itself, but rather in relation to "the reserves backing or underlying the RITC". They can take the form of either a letter or report to the managing agent or, in at least one case, a more formal opinion that is reproduced in the syndicate's report and accounts. Given the existing statutory opinions at Lloyd's, we think it is important that the relationship between these opinions and any such RITC opinions be explored fully. This is particularly relevant since some market participants already think that the existing solvency opinions can be used directly to infer an opinion in relation to RITC, which is not the case. We also think it is sensible for there to be an open discussion about exactly what form these "informal" RITC opinions might take, and we aim to stimulate such discussion through this paper.

1.3.3 Anyone who is involved with the Lloyd's market will be well aware that, starting with Reconstruction and Renewal (which started in the early 1990s, and was completed in 1996), the market has changed significantly in recent years. Perhaps the most significant change has been the increase in the amount of corporate capital in the market, which has risen from 23% of the total stamp capacity in 1995 to 73% in 1999, and is projected to reach 80% in 2000. Other changes include the introduction of the auction system for trading capacity, the establishment of Lloyd's captives, the use of risk-based capital to set members' Funds at Lloyd's requirements, the purchase of a reinsurance contract to protect the Central Fund and the increasing trend towards merging syndicates. Changes on the horizon include reforming the distribution system and the new regulatory regime to be introduced by the Financial Services Authority. None of these past and future changes, with the possible exception of Equitas, is, though, as fundamental as removing the annual venture system. It might be thought that the RITC system will not last for much longer. However, although not necessarily a pre-requisite, the removal of the annual venture system is likely to precede the removal of the RITC. Although we think that eventually the annual venture system will be removed, we do not see this happening in less than three years, given that the system is so fundamental to the structure of Lloyd's. Owing to the three-year accounting system, RITC would still need consideration for a further two years after removal of the annual venture system (and longer than this if a syndicate could not close at the normal time). For example, if 2002 was the last year under the current annual venture system, then RITC would need assessing on this year in 2004, assuming the three year accounting system was also retained for the 2002 year of account. At the very least, RITC will need considering up until the 2000 year of account closes at the end of 2002.

1.3.4 Even if RITC were to be abolished at some time in future, there is still likely to be demand, either from market participants, or perhaps from regulators, for some form of "fairness" or "reasonableness" opinion in relation to the reserves of Lloyd's syndicates. Most of the analysis that we have carried out in this paper would still apply to such opinions at Lloyd's, as well as to non-Lloyd's reserve opinions. Hence, our contention is that much of this paper applies to Lloyd's both pre- and post-any removal of the RITC system, and to the company market as well. Some of the groundwork that we have done here will also be of direct application to the possible future role that actuaries may have with regard to assessing the financial condition, or soundness, of general insurance companies. The relevance of this paper to other areas of actuarial work in general insurance, including financial condition reporting, is addressed further in Section 8. For readers who do not have an interest in the Lloyd’s market, we suggest they read Section 8 first, which will help them to identify other parts of the paper that might have application outside Lloyd’s.

1.4 *Reserving Issues at Lloyd’s*

1.4.1 In order to understand the reserving context in which the RITC is calculated it is necessary to appreciate some of the complexities associated with reserving at Lloyd’s. These include, but are certainly not limited to:

— the fact that much of the business written at Lloyd’s is done on a subscription basis, so that participants often take less than a 100% share of individual risks. This can mean that even syndicates with small premium volumes can write a very wide range of risks; changes in the shares taken over time can also affect development patterns;
— the exceptionally diverse nature of the risks written at Lloyd’s. This can mean that for some classes of business, the underlying “loss process” is uncertain and that groups that are sufficiently homogenous for reserving purposes are sometimes very small;
— the often extensive and complex outwards reinsurance arrangements, which can make reserving at a net level difficult;
— significant volumes of overseas business, including large volumes of U.S. exposures. This can mean that, for example, overseas legal systems can lead to uncertain future loss development and that reserving needs to be carried out in a number of currencies;

— the fact that underwriting years (i.e. years of account in Lloyd's parlance) can have long exposure periods, caused for example, by the use of binders and lineslips and by contracts with long exposure periods attaching to a single year of account; and
— the highly competitive market, with pressure in recent years not only on rates themselves but also on contract terms. This can make extrapolation from past loss ratios difficult.

1.4.2 Many of these issues are also relevant to companies operating outside Lloyd's, particularly London Market companies. Some of the issues are referred to in other papers (e.g.Maher, 1995) but we still think there is scope for further analysis in this area, particularly with regard to the allowance for outwards reinsurance when estimating net reserves. In addition, we believe that the overall process of reserves at Lloyd's could be improved by the following:
— the use of more centralised reserving for major market lineslips/contracts. At present, although the lead underwriter(s) will recommend case reserves, there is little centralised estimation of ultimate claims, resulting in duplication of effort; and
— improved analysis by individual syndicates or at market level, possibly with assistance from actuaries, of premium rate movements across years of account allowing for changes in contract terms, etc. This could assist with adjusting historical loss ratios to derive prior loss ratio assumptions in the Bornhuetter-Ferguson reserving method, and is also a vital management tool, facilitating planning and strategic underwriting decisions.

1.5 *Other actuarial papers on RITC*

1.5.1 There have been two previous actuarial papers on the subject of RITC – both presented at the general insurance actuarial convention in 1990 (Rice *et al* (1990) and Larner (1990)). The first of these provides a good introduction to the subject of Lloyd's and to RITC, although there is a clear need to bring things up to date as so much has changed at Lloyd's since this paper was written. The second contrasted different reserving methods rather than considering particular issues associated with the derivation of RITC itself. Neither of these papers addressed the issue of actuarial opinions in relation to RITC, probably because at the time they were produced no-one predicted that actuaries would have any formal statutory role at Lloyd's.

1.6 *Remaining Sections of the paper*

1.6.1 The next three sections of this paper follow a logical progression from;
— consideration and critique of the existing RITC system used at Lloyd's (Section 2)
to
— consideration of actuarial opinions in relation to a "theoretical" actuarial approach to the estimation of RITC (Section 3)
to
— consideration of actuarial opinions in relation to the reserves underlying the RITC (Section 4)

1.6.2. In Section 5 we consider the relative advantages and disadvantages of the two approaches to actuarial opinions outlined in Sections 3 and 4, and provide our conclusions regarding our preferred approach. We then consider some taxation issues (Section 6), look at the effect of possible future changes at Lloyd's on the provision of actuarial opinions (Section 7) and address related issues concerning other actuarial roles in general insurance (Section 8). Finally, we draw out some overall conclusions in Section 9.

2. DEFINING RITC

2.1 *Introduction*

2.1.1 The Lloyd's annual venture system means that any Lloyd's Member provides capital for one underwriting year of account at a time. After having underwritten one year of account, each Lloyd's member can decide whether to continue underwriting for the next year of account. Each individual year of account therefore begins its life as a separate annual venture or "economic entity", independent of all other years of account.

2.1.2 The Lloyd's Members for any given year of account cannot take their profits at the end of the year of account. They must instead wait a period, typically until the end of three years from the beginning of the year of account, before they receive a profit (or are asked to make good their losses) from that year of account. If, however, a particular Lloyd's Member had a solvency deficit (across all their syndicate participations) at the end of years one or two, then the Lloyd's Member would be asked to make good this deficit at that time, which he must do if he wishes to continue to underwrite.

2.2 *The RITC Concept*

2.2.1 RITC can be thought of as a 100% quota share reinsurance of a year of account. To extend this slightly, RITC is the payment of a reinsurance premium in respect of one year of account (the "closing" year), by the Lloyd's Members for that year of account (the "transferring" or "ceding" Lloyd's Members), to a reinsurance vehicle. This is normally carried out at a valuation date three years after the year of account begins, and the reinsurance vehicle is typically the subsequent ("open") year of account (the "accepting" or "reinsuring" year) of the same syndicate, although it does not have to be.

2.2.2 This means that in the normal course of events, a year of account remains open for a period of three years and it is then reinsured into the next year of account of the same syndicate. This process can perhaps be best understood by means of a simple diagram:

Calendar Year 1	U/w Year 1				
Calendar Year 2	U/w Year 1	U/w Year 2			
Calendar Year 3	U/w Year 1	U/w Year 2	U/w Year 3		
Calendar Year 4		U/w Year 2 and Prior	U/w year 3	U/w Year 4	
Calendar Year 5			U/w Year 3 and Prior	U/w Year 4	U/w Year 5

2.2.3 From this diagram, it can be seen that at any one time, only three years of account are typically open and that all closed or “prior” years of account are typically reinsured into the oldest of the open years of account. To avoid confusion between an open year of account on its own and the same open year of account including any closed years reinsured into it, the phrase “pure year” is often used to refer to the former.

2.2.4 The liabilities of the closing year are accepted by the new Lloyd’s Members (the “accepting “ or “reinsuring” Lloyd’s Members) to, in effect, draw a line under the liabilities of the closing year of account. RITC can therefore be thought of as an unlimited run-off reinsurance policy provided by the Lloyd’s Members of one year of account (the "accepting" year) to the Lloyd’s Members of another year of account (the "ceding" year).

2.3 *RITC and Legislation*

2.3.1 Legislation surrounding the conduct of insurance business at Lloyd’s includes the Insurance Companies Act 1982, the Lloyd’s Act 1982, related Regulations, the Lloyd’s Byelaws and various Regulatory Bulletins and Codes of Practice published by Lloyd’s. We have examined the relevant parts of these documents that make reference to RITC. Whilst it is clear from these documents that the concept of RITC is well defined, we have not been able to find an unambiguous description of all the constituent parts of RITC and the basis on which they should be established. Instead, one is left to infer such components and bases from a variety of documents. Those having an effect on RITC include the Reinsurance To Close Byelaw (a one page technical document), the Solvency and Reporting Byelaw, the Valuation of Liabilities rules and the Valuation of Assets rules (the latter two both being published annually). The specific documents that are most important include:

- The Core Principles Byelaw
- The Agency Agreements Byelaw
- The Syndicate Accounting Byelaw
- The Code for Managing Agents: Management of Reserving Risk, and
- The Code for Managing Agents: Managing Underwriting Risk

2.3.2 In addition to the above, Lloyd’s List Publishing issues the Lloyd’s Market Handbook, which provides guidance on the interpretation of the Byelaws. Part 8, Underwriting Agents: Syndicate Accounting, and in particular Section 8.9 on reserving, is of relevance to the RITC.

2.3.3 Where appropriate, we have included extracts from some of these documents in

Appendix 2, and have referred to these extracts below to summarise the key points.

2.3.4 *The Core Principles Byelaw*, schedule 2, clause 4, includes the words: "An agent should conduct the affairs of each of the members for whom it acts in a manner which does not unfairly prejudice the interest of any such member". From this one can infer a general obligation to strive for equity between the treatment of different cohorts of Lloyd's Members, and by extension, for equity between transferring and receiving Lloyd's Members in an RITC.

2.3.5 *The Agency Agreements Byelaw* gives the managing agent authority to effect an RITC. The relevant extracts are in Appendix 2. One could perhaps précis this as: "the managing agent is authorised, by each Lloyd's member for which it acts, to calculate an RITC premium for, and effect an RITC from, the closing year of account to a subsequent year of account, provided that such RITC is equitable between both ceding and reinsuring Lloyd's Members".

2.3.6 *The Syndicate Accounting Byelaw* expands on these principles. The relevant extracts are in Appendix 2. This Byelaw requires the syndicate auditor to opine that the profit and loss, as shown in the underwriting account of a closed year of account, is "true and fair". It additionally requires that the reinsurance to close premium is equitable between the ceding Lloyd's Members and the accepting Lloyd's Members, provided the latter are members of a subsequent year of account of the same syndicate. If for any reason these conditions are not met, then this should be identified in the annual report, which should show the effect of the deviation from the principles of the Syndicate Accounting Byelaw.

2.3.7 In the event that the RITC is paid to an independent third party reinsurer (which, for all practical purposes will currently be another Lloyd's syndicate), then the duties of the managing agent appear to depend on whether or not the reinsurer is a Lloyd's syndicate under his management. If not, then the managing agent for the ceding syndicate no longer has a duty to the reinsuring Lloyd's Members. In this case, the RITC becomes a commercial transaction and the managing agent should aim to get the best possible terms for the ceding Lloyd's Members. By the same token, the syndicate accepting the RITC will most likely wish to load the premium it quotes for profit and other contingencies.

2.3.8 If, however, the receiving syndicate is also under his management, then, the references above to the Core Principles Byelaw and the Agency Agreements Byelaw appear to imply that his duties are effectively the same as those in the normal situation of a transfer within a syndicate; that is he should act in such a way as to be fair to both the ceding and accepting Lloyd's Members. The interpretation of "fairness" might, however, be different from the normal situation. With the continuing consolidation of syndicates within agencies, there are likely to be several instances of RITCs being effected between syndicates within the same managing agency, and Lloyd's should perhaps consider making clear precisely what managing agents' duties are in these circumstances, where it has not already done so.

2.3.9 *The Code for Managing Agents: Management of Reserving Risk*, was first published by Lloyd's on October 28th, 1998, pursuant to paragraph 2A of the Core Principles Byelaw, after consultation with interested parties (including the General Insurance Board). It considers primarily the role and responsibilities of the managing agent in the reserve setting process, whilst recognising the integral role of the active underwriter and his staff and of actuaries. The relevant extracts are given in Appendix 2. In summary, the Code:

- is not mandatory, although compliance with it is strongly recommended;
- attempts to encourage a professional, consistent and rigorous approach to reserve setting;
- clearly acknowledges the fact that reserves for RITC and reserves for solvency need not be the same; and

— recognises the role of the actuary in the reserve setting process at Lloyd's.

2.3.10 *The Code for Managing Agents: Managing Underwriting Risk*, was originally published by Lloyd's on March 13th, 1997, pursuant to Core Principle No 9, after consultation with interested parties. A subsequent consultative document was published on November 5th, 1998, although the 1997 document remains the current version at the time of writing.

2.3.11 The Code states that: "The methodology used in determining the RITC and open year reserves should be subject to an independent assessment carried out by an actuary, by an expert reviewer, or by other individuals with the appropriate skills and experience".

2.3.12 *Lloyd's Market Handbook*, part 8, Underwriting Agents: Syndicate Accounting, Section 8.9, Guidance for Reserving. Part 8 is guidance for the interpretation of the Syndicate Accounting Byelaw.

2.3.13 Section 8.9 is intended as guidance for all reserving needs, but makes particular reference to RITC. It is not prescriptive, but instead aims to "provide a framework outlining the procedures to be adopted and the various aspects of the process to be considered in deriving an appropriate level of RITC". In many respects, it covers very similar ground to the newer *Code for Managing Agents: Management of Reserving Risk* referred to above.

2.3.14 Paragraph 8.9.1.4 refers to two recommendations made in the January 1992 Lloyd's Task Force report, that have a direct bearing on the reserving guidelines. First, "the recommendation to endorse the principle of a risk premium as part of the RITC" and, second, "the proposal to permit explicit discounting". Neither of these is dealt with by the Handbook, but their existence does demonstrate that Lloyd's considered this issue a number of years ago.

2.3.15 Section 8.9.2, "Byelaw provisions relating to the reinsurance to close", emphasises that equity between ceding and reinsuring Lloyd's Members arises only when the RITC is made between different years of account of the same syndicate and that it arises because the Managing Agent is then acting for both sets of capital providers. It also reiterates the requirement for the annual report to give a true and fair view of the profitability or otherwise of a closing year, after deduction of the RITC premium, hence the importance of determining a "fair" RITC premium.

2.3.16 Section 8.9.3, "Factors relevant in determining reserves", deals with some of the constituent parts of the RITC premium. These include "the known outstanding claims and the claims incurred but not yet reported (IBNR), together with the costs and risks associated with them". It also refers to the need for the RITC premium to be fair to both ceding and reinsuring Lloyd's Members.

2.3.17 Subsequent sections offer an incomplete list of items to be considered when estimating the RITC premium, although it is interesting to note that levels of claims inflation, borrowing costs, future investment income and currency fluctuations all merit a mention. In fact, Section 8.9.9, "Future investment income", states that "The effect of future investment income, or the lack of it, should be carefully considered. Future investment income is, in some circumstances, regarded as a cushion against future reserve deterioration and future expenses. Whilst it is true that long-tail liabilities have most potential to deteriorate but also have high investment returns, it is not always safe to assume that investment income will provide sufficient margin". However, the section finishes with the words "Paragraphs 8.9.9.1 and 8.9.9.2 should not be taken as requiring that the value of future investment income be deducted in determining RITC".

2.3.18 Finally, Section 8.9.16 sets out the way in which the RITC should be reported from which it is clear that the gross, ceded and net known outstanding should be shown separately, as should the IBNR.

2.3.19 It is clear that, like any reinsurance contract, RITC is not a novation or commutation of liabilities. For any syndicate, within each year of account, every contract of insurance written is between the insured and ultimately, the Lloyd's Members for that syndicate year of account. The existence of a reinsurance between the original insurer (in this case the Lloyd's Members) and a third party does not affect this contract. However, Lloyd's unique Chain of Security means that the position is different from that which applies to other reinsurance contracts in that if the reinsuring Lloyd's Members cannot meet their financial obligations arising from accepting the liabilities associated with the RITC, then the burden would fall first upon Lloyd's Central Fund. Only if the Central Fund were exhausted (after allowing for the callable layers of the Central Fund and the recently effected Central Fund reinsurance protection) would the Lloyd's Members for the ceding year be required to meet these obligations. For all practical (if not strictly legal) purposes, therefore, the RITC has a similar effect to a transfer of liabilities from one group of Lloyd's Members to another.

2.4 *The Components of RITC*

2.4.1 Having reviewed some of the legislation and other Lloyd's documents relating to RITC in Section 2.3, we concluded in paragraph 2.3.1 that, whilst the concept of RITC is clearly defined, its components, and the basis for their calculation are not so well-defined. It might therefore be useful to provide our interpretation of the components, which we do in this section. Subsequent sections consider the basis for their calculation.

2.4.2 The typical components of an RITC are shown in the following table:

<u>Components of the RITC Premium</u>

		Closed Year (1)	..	Closed Year (n)	Closing Year	RITC Years
	Net notified outstanding claims					
Plus	Net IBNR claims					
Equals	Net future claims reserve					
Less	Net future premiums					
Equals	Net reserve					
Plus	Claims handling expense provision					
Plus	Reinsurance bad debt provision					
Plus	Any other additional provision					
Equals	**Net RITC premium**					

Note: Figures are for the whole account in Sterling, US Dollars, Canadian Dollars and all converted to Sterling and must be shown both gross and net of reinsurance.

2.4.3 Brief notes on the elements of the RITC premium follow.

2.4.4 *Notified outstanding ("o/s") claims*, or case reserves are generally estimated by attorneys appointed by Lloyd's Claims Office ("LCO") and/or the leading underwriter(s) or syndicate claims department on a case by case basis. As a distinct item on their own, they fall outside the scope of all the current SAOs provided by actuaries in the UK. However they form a central element of the RITC premium.

2.4.5 *Incurred But Not Reported claims ("IBNR"),* within which we include future development on known o/s claims, ie Incurred But Not Enough Reported ("IBNER") claims as well as incurred claims yet to be notified. This is typically calculated as the difference between estimated ultimate claims and claims incurred to date. It must be estimated both gross and net of ceded reinsurance recoveries and, at least for longer-tailed syndicates, generally comprises the major element of current SAOs. This is also likely to be the case for such syndicates with an SAO in relation to the RITC.

2.4.6 *Future premiums*, are generally deducted from the above two items when calculating the reserves for which the actuary provides the current SAOs and any SAO for RITC would be no different. However, as it would be given at the end of three years from the start of the year of account, the amount of any future premiums would be small in most cases.

2.4.7 *Claims Handling Expenses ("CHE")*, both direct and indirect (or allocated and unallocated loss adjustment expenses, "ALAE" and "ULAE" respectively, in US parlance) form part of the RITC premium, so would be included in any SAO for RITC. CHE are included within the SAOs for Lloyd's solvency, so again, this is nothing new for UK actuaries.

2.4.8 *Reinsurance Bad Debt*, or more correctly, provision for future non-collectible reinsurance recoveries, forms a part of current SAOs and would also be included in any SAO for RITC.

2.4.9 *Any Other Additional Provision*, typically for particular problem contracts. To the extent that these are reserves in respect of future claims, then current SAOs already cover them. This heading might also cover, for example, risk margins for uncertainty. These cannot be considered in isolation, but must be part of a larger discussion, which includes the assets held and future investment income and the volatility of the ultimate claims, with reference to number, size and timing of payments. These aspects are discussed in Section 3.

2.4.10 The Lloyd's Valuation of Liabilities Rules, published annually, prohibit the discounting of claims reserves for solvency purposes, but are silent on the subject of claims reserves for RITC. They specify only that the reserves for solvency cannot be smaller than those for RITC. This means that it is possible to set an RITC premium using claims reserves that have been discounted to take account of future investment income to be earned on those claims reserves.

2.4.11 Historically, RITC premiums have not been discounted and future investment income may have been assumed to be a margin to allow for, variously, CHE, reinsurance bad debts and uncertainty in the estimation of future claims payments, be it due to size, number or incidence of future claims. More recently, Lloyd's has required that CHE are explicitly provided for, but clearly future investment income still may not necessarily make good all of the things it is implicitly being used for (or could of course more than compensate for these things). One alternative would be to set the RITC premium on the basis of discounted claims reserves, with an explicit risk margin to allow for the uncertainty of the future claims reserves. This is discussed in more detail in Section 3.

2.4.12 Having considered the constituent parts of the RITC premium, it is instructive to consider the additional items that go to make up the underwriting account for the closing year of account. The underwriting account shows the profit (or loss) due to (or from) Lloyd's Members arising from the closing year.

2.4.13 Closing Year Underwriting Account

		RITC Years
	Net signed premiums	
Plus	Net RITC premiums received	
Less	Net paid claims	
Less	**Net RITC premium (see above)**	
Plus	Profit or loss on exchange	

Less	Syndicate expenses	
Plus	Exceptional income	
Equals	Balance on technical account	
Plus	Investment return[Note 1]	
Equals	Result before Names' expenses	
Less	Profit Commission	
Less	Other Names' expenses	
Equals	Result after Names' expenses	
Less	Members' agent's fees	
Equals	Result before tax	

Notes:
(1) = Investment income + Realised investment gains + Unrealised investment gains - Investment expenses; (2) figures are for the whole account in Sterling, US Dollars, Canadian Dollars and all converted to Sterling and must be shown both gross and net of reinsurance.

2.4.14 We would argue that the only item above that might be subject to an actuarial opinion (voluntary or statutory) would be the net RITC premium, and that the other items should be outside the scope of any SAO. The exclusion of these other items should perhaps be made clear in an SAO relating to the RITC.

2.5 *Why has RITC survived for so long?*

2.5.1 To some observers, it might seem surprising that the concept of RITC within a three year accounting system has survived for so long, especially given some of the classes of business that are written now, which were not prevalent during the early years of RITC. For example, there are classes of business written now that have an exposure period in excess of three years or where the period from incidence of a claim to reporting and ultimate settlement can be significantly in excess of three years. Further, the uncertainty attaching to the estimate after three years of future liabilities for such classes is often significantly greater than the uncertainty surrounding the estimates of future liabilities for business typically written in the early part of the twentieth century when RITC was first introduced. However, whilst the annual venture system remains and Lloyd’s Members provide capital for only one year of account at a time, then there is a need for a mechanism to allow those Lloyd’s Members to receive their profits/pay their losses and, if they wish, leave Lloyd’s. An extreme case of the latter is the need to settle the estate of a deceased Lloyd’s Member.

2.5.2 There is also nothing unusual in leaving a year of underwriting open for a period before declaring a profit; this is simply a form of funded accounting. This is still used commonly in the company market for classes of business that are deemed too volatile to be capable of accurate determination of reserves, and hence of profits at the end of one year.

2.5.3 What is different about the Lloyd's RITC system is that, because of the annual venture, the RITC determines the profit or loss that accrues to a particular group of Lloyd’s Members. When groups of years of account are reinsured into the subsequent underwriting year, the Lloyd’s Members backing the accepting year of account take on the risk of future adverse development (or potential favourable development) of the years of account that are reinsured into their year of account. Thus, it is primarily the annual venture system that has resulted in the concept of RITC remaining at Lloyd's.

2.6 *Impact of RITC on peer comparisons*

2.6.1 The advent of actuarial opinions has resulted in greater emphasis being placed on the ultimate loss ratios for the open years than has hitherto been the case. It might be argued that this should allow the Lloyd's market to take corrective action on inadequate premium rates sooner than would otherwise be the case. Conversely, it could also lead to earlier weakening of the rates if it became evident that a certain line, or the market as a whole, were extremely profitable. The extent to which this is true will be influenced by the ability of Lloyd's underwriters to charge different rates from those of the rest of the insurance market.

2.6.2 The requirement for the RITC premium to be equitable should, in theory, cause the results for any year of account to reflect more closely the rating adequacy and claims experience of the underlying risks than in the company market where it might be thought easier to smooth results across years.

2.6.3 Indeed, some market commentators have suggested that profits at Lloyd's are more volatile than in the company market and that this has played a part in Lloyd's receiving a lower security rating than an equivalent entity in the company market. We think these comments may stem partly from a misunderstanding of the different accounting regimes that apply to Lloyd's and to the company market. We are not convinced that profits at Lloyd's are more volatile than in the company market, but believe rather that the way in which they are accounted may make them appear to be more volatile. However the fact that the misunderstanding can arise in the first place is a cause for concern.

2.6.4 On the other hand, insurance regulators in the U.S. have recently commented that they would prefer the returns from insurance companies to give a more true-and-fair view of each year's performance. If this were to be introduced, it might be expected to lead to the results of the U.S. company market coming more into line with those of Lloyd's. This would counter the observation in paragraph 2.6.3 above.

2.6.5 What is certain is that the different accounting practices at Lloyd's compared to its company market peers make a like-for-like market-level comparison of performance very difficult.

2.7 *Possible Change to the Existing RITC System*

2.7.1 Overall, we would argue that a system that monitors the underwriting performance of each year of account separately, using best estimates of the reserves, has a lot of merit. Given that Lloyd's currently operates such a system, we would see little reason to suggest wholesale changes. However, there are certain areas where we perceive the system to be inadequate for the nature of much of the business currently underwritten at Lloyd's. What remains to be answered therefore is how the RITC system as currently formulated might be amended to ensure its continued relevance to Lloyd's Members.

2.7.2 As mentioned in paragraph 1.2.2**,** it is not hard to envisage a situation where the level of uncertainty in the estimate of future claims is such that syndicates might once more have to consider leaving years of account open. This will particularly be the case if the modern trend to a "blame and compensation culture" and ever increasing litigation continues. Even where it has been possible to close a year of account, it is possible that a large claim, or claims, can subsequently emerge causing a material change in the results for a later year of account. It might be argued therefore that each closing year should pass on a risk premium to cover such eventualities. We believe this can best be done by including in the calculation of the RITC premium an explicit risk margin over and above the discounted claims reserve, rather than simply relying on the undiscounted claims reserve to do this. Indeed, as mentioned in paragraph 2.3.14, this has been raised by Lloyd's in the past. This approach to RITC is considered further in Section 3.

2.7.3 The following table shows the market capacity for years of account 1997 to 1999. This clearly shows that the percentage of capital that is provided by corporate entities has been increasing and this is expected to continue. The current estimate for the percentage of corporate capital in 2000 is 80%.

Year of Account	1997	1998	1999
	£m	£m	£m
Individual Names	5,824	4,105	2,700
%	44%	40%	27%
Corporate Names	4,500	6,064	7,170
%	56%	60%	73%
Total	10,324	10,169	9,870

2.7.4 Whilst the RITC premium does provide a means for the non-corporate Lloyd's Members to extract their profits after a reasonable period of time, it is less useful for corporate Lloyd's Members, many of whom are used to company style accounting for insurance profits, (e.g. on a US GAAP basis). It is conceivable therefore that a change to the annual venture and to the current RITC system will be driven by the needs of corporate capital.

2.7.5 Possible changes at Lloyd's are considered further in Section 7.

2.8 A*ctuarial opinions in relation to RITC*

2.8.1 We have identified two possible "items" on which an actuarial opinion could be given in relation to RITC (either statutory or otherwise). First, the opinion could be provided on a theoretical RITC itself, which allows appropriately for all the elements, including risk margins and investment income. We refer to this item as the "actuarial RITC". Alternatively, the opinion could be provided on the undiscounted reserves backing the RITC, which we refer to as the "RITC reserves". These are considered in Sections 3 and 4 respectively. In Section 5, we then look at the relative advantages and disadvantages of each approach, together with our conclusions regarding our preferred approach.

3. THE "ACTUARIAL RITC"

3.1 *The actuary's role in the RITC process*

3.1.1 Although there is currently no statutory actuarial role in relation to RITC, actuaries may, however, be involved in the process for establishing the RITC in one or more different ways. For example,

— an in-house actuary may liaise directly with the underwriter and may assist the underwriter in setting the RITC premium;
— an external actuary may be commissioned specifically to assist in setting the RITC (or to provide "quasi-RITC" opinions on the RITC reserves);
— the actuary's opinion as to the adequacy of the reserves established for solvency purposes may be something that the underwriter takes into account in setting the RITC (which in the majority of cases is equal to the reserves established for solvency purposes); and
— actuaries may become involved in providing input to an auditor in relation to the RITC.

3.2 *Investment income and risk margins*

3.2.1 In all of the above situations, the opinions and views formed by actuaries are almost universally limited to opinions and views being given on the adequacy of undiscounted reserve amounts. This corresponds with the general practice within Lloyd's whereby underwriters responsible for establishing the RITC premium either:

— do not consider future investment income at all in setting an RITC;

or, perhaps alternatively,

— do consider future investment income but consider the value of that future investment income to be an implicit offset against the risks borne by the accepting Lloyd's Members in receiving the RITC in relation to one or more of
- the uncertainty in the undiscounted reserve estimate;
- the uncertainty in the future payment pattern;
- the uncertainty in future investment yields;
- reinsurance irrecoverability not covered by the bad debt reserve;
- mismatching between assets and liabilities; and
- unallocated claims handling expenses (although this offset was effectively removed when these expenses were covered by the solvency SAOs with effect from 31 December 1998).

3.2.2 We believe that most practitioners in the Lloyd's market accept this practice at the current time. We are not aware of any syndicates that explicitly allow for investment income and risk margins. Our view is that an actuarial opinion in relation to the RITC itself should ideally go beyond consideration of just the RITC reserves. In particular, it may be considered that recognition should be given to the situation where undiscounted reserves might be deemed to be reasonable in themselves, but where such reserves might be materially different (higher or lower) from an amount that would make proper allowance for the transfer of liability and risk to which the RITC relates.

3.2.3 This approach would give recognition to the theoretically appropriate level of an RITC from an actuarial standpoint, reflecting the fact that the RITC is a premium between two parties (two groups of Lloyd's Members) for the transfer of liability and risk between those two parties. This would involve the consideration of future investment income, by discounting the undiscounted reserve amount. In addition, it would be necessary to make some allowance for the risks outlined in 3.2.1 (possibly by quantification in some way of the appropriate risk margins). This allowance for risk would represent the diminution of economic value associated with the uncertainties named above. This type of RITC is the "actuarial RITC" referred to at the end of Section 2.

3.2.4 Our view is that at present, there are no syndicates that set their RITC on this basis. If they were to do so in future, then it will be necessary to consider several issues in relation to quantification of risk margins. In particular,

- there are a range of modelling techniques that can be used to quantify the risk margins. We have identified a number of possible approaches to this in Section 3.4 below;
- there is currently no specific UK professional actuarial guidance in relation to the identification of risk margins in general insurance;
- the calculation of the risk margin should reflect the degree of "risk" within the transaction. In order to try to find what an acceptable level of risk margin might be, the risk profile of the accepting/ceding Lloyd's Members needs to be considered, together with the marginal effect of the transaction on the risk profile;
- thought needs to be given as to whether the risk margin should only allow for so-called systematic or non-diversifiable risk (sometimes referred to as market risk). It can be argued using economic theory that when viewed from a shareholder perspective (i.e. in the case of Lloyd's, the Lloyd's Members), the risk margin should only compensate for systematic or market risk; the diversifiable non-systematic risk (sometimes referred to as specific risk) should not be allowed for in the risk margin. On the other hand, the unique characteristics of Lloyd's RITC, which could be regarded as a form of "closed market" might justify a different approach. Even if much of the contribution to risk margin could be demonstrated to be diversifiable, it could be argued that current market practice is not to accept a transfer of liabilities without a risk margin; and
- the issue is complicated by the different considerations that might apply when the RITC is being transferred to the same syndicate, to a different syndicate in the same managing agency, to a different syndicate in a different managing agency, or indeed to a non-Lloyd's company. The price for risk might be different in each case.

3.2.5 The subject of risk margins (in both a Lloyd's or non-Lloyd's context) would merit a paper in itself, and until further detailed thought has been given to these and other issues, we do not feel able to offer a consensus view on its treatment in a Lloyd's RITC context. However, as mentioned above, we do suggest a number of actuarial models in Section 3.4 that can be used to quantify risk margins.

3.2.6 In addition, of course, use of an actuarial RITC would require a discount rate to be set. We do not favour the approach of reducing the discount rate to compensate for uncertainty in the cash flows. Rather, we think that the discount rate should be on the basis of a risk-free matched rate with the risk margin being used to allow for all sources of uncertainty.

3.2.7 It may be that in some cases, the undiscounted reserves would be broadly equivalent to the actuarial RITC. This means that the implicit offset between future investment income and risk margins that underlies current practice within Lloyd's will be broadly appropriate in these situations. There will, however, almost certainly be cases where the theoretically appropriate level of an RITC will be materially different (higher or lower) from an RITC based on undiscounted claim amounts.

For example, in the current relatively low interest rate environment in the UK, it is possible that for some classes of business, the investment income offset will be lower than an appropriate margin for risk.

3.2.8 In the case of a dedicated corporate member, where there is common capital across different years of account, the concept of a transfer of risk does not really apply, and hence, an undiscounted best estimate reserve might be appropriate when calculating the RITC. Our preferred approach, however, would be still to use the actuarial RITC concept. This is partly because it is consistent with a "fair value" approach outlined below.

3.3 *"Fair Value" accounting*

3.3.1 During the drafting of this paper, the International Accounting Standards Committee (IASC) Issues paper on insurance accounting was published. The IASC paper puts forward the concept of "fair value" accounting. Fair value of insurance liabilities has not yet been defined, and its calculation basis has not been stipulated. However, the general concept of fair value can be defined as the value at which two knowledgeable, willing, arms length parties would conduct a transaction. The Faculty and Institute of Actuaries have endorsed the concept of fair value accounting in a press release in December 1999.

3.3.2 For assets this concept is relatively straightforward, so that, for example, the fair value of traded securities, where there is a deep liquid market, is effectively the market value. The "arms length" part of the concept is designed to eliminate effects that do not affect the "real" market value (e.g. trading as a result of some previous contract, such as an option). The "willing" part is designed to eliminate distress selling for liquidity purposes. Finally, "knowledgeable" is designed to eliminate uninformed transactions.

3.3.3 For insurance liabilities, the situation is less clear cut, since there is no deep liquid public market from which we can observe market prices. There is an increasingly active mergers and acquisitions ("M&A") market and there is a fairly active reinsurance market in which insurance contracts are exchanged. However, there is little public information available as to what drives the transaction prices (although many active in the M&A or reinsurance fields do have enough knowledge to indicate the current range of factors driving the markets, and quoted equity prices might provide some information). We understand that the IASC, with assistance from the International Actuarial Association, may therefore suggest "benchmark" type approaches to the estimation of fair value of insurance liabilities. These may not produce fair liability values at a given moment, but will be intended to produce consistent and coherent accounts across different territories that write insurance business.

3.3.4 For general insurance liabilities, one possible interpretation of fair value would be something similar to our actuarial RITC defined above (i.e. effectively discounted reserves plus risk margin). In fact, we understand that the General Insurance Board interprets fair value as requiring outstanding claims provisions to be set equal to an amount equivalent to our actuarial RITC. (as evidenced by the comments of the Chairman, reproduced on pages 342 and 343 of BAJ Volume 5, Part II, in the discussion of the paper "International Measures of Profit for Life Assurance Companies").

3.3.5 The use of a risk margin, as in the actuarial RITC, would be consistent with the "knowledgeable" and "willing" parts of the fair value concept. This is because we assume that a willing buyer would want reserves in excess of the expected values in order to assume the relevant liabilities (ignoring any potential offset from goodwill arising from future business). The amount in excess of the expected value would reflect the risks and costs associated with assuming the liabilities. Without a deep liquid public market for general insurance liabilities there will, however, always be a considerable degree of judgement involved in assessing the risk margin, and hence fair value. This is an area, therefore, where the professional judgement of an insurance specialist, such as an actuary, could be used. We believe that this judgement should be an integral part of a rational process for estimating the actuarial RITC, rather than as a substitute for such a process. We discuss possible models for estimating the actuarial RITC in the next Section.

3.4 *Actuarial models*

3.4.1 In order to investigate the effect of future investment income and risk margins on the liabilities of an individual syndicate, the actuary would need to model the future performance of the syndicate (in relation only to liabilities covered by the RITC). This is likely to be a complex process and, as well as the points made in Section 3.2 regarding the quantification of risk margins, the actuary's task would be made more difficult, because:

(a) The process will be time consuming and will probably not be practical within the normal Lloyd's reporting cycle (although this could be overcome by requiring the work to be done during the second or third quarter of each year, with minimal updating needed as at the valuation date for the SAO); and

(b) The reserving complexities mentioned in Section 1 will make the process more difficult than might be the case, for example, with an insurance company writing large volumes of a small number of lines of business on a 100% direct basis. In fact, these complexities should mean that the actuary can add more value by developing such a model. The model should enable the relationship between risk and return to be explored; the complexities often lead to greater uncertainty, which should be allowed for in the quantification of risk, and should be compensated for by higher returns. In this way, managing agents will become better informed about the business that they are writing on behalf of Lloyd's Members.

3.4.2 A first step in constructing such a model will usually be to identify and then interrogate the distribution of possible claims outcomes to which the RITC relates. This may be achieved by the use of simulation models that build up distributions of possible future claim outcomes in a stochastic manner. In a general insurance context, these are normally referred to as Dynamic Financial Analysis ("DFA") models. Several papers have been written on DFA *(*e.g. Cumberworth et al, 1999*)* but none that specifically focus on its application to Lloyd's or to the RITC process.

3.4.3 DFA models can be relatively straightforward or can be much more complex according to the level of sophistication deemed to be necessary. An appropriate model will need to allow for the risk profile of the accepting Lloyd's Members and the correlation between their existing business and the business being assumed. In an ideal situation, a model will be able to show the effects of:

— variations in the frequency and severity of future claim and expense payments (by currency);
— variations in the claims payment pattern (and hence reserving risk);
— variations in the recoverability from outwards reinsurance programmes;
— variations in investment returns ; and
— dependency between different asset and liability cash flows.

3.4.4 Once a simulation model of the above type has been established for a given syndicate, the margin required for the uncertainties described above can be defined as the amount in excess of the discounted best estimate required to reduce a defined risk measure to an acceptable level. We consider three such risk measures in this section, but there are of course others. In each case, we are assuming that the RITC is being transferred to a group of Lloyd's members on the same syndicate.

3.5 *From models to margins (1) – probability of ultimate sufficiency*

3.5.1 One approach would be to identify the margin required to ensure that the RITC will ultimately be sufficient with a specified probability. In order to identify this probability, benchmarks might be taken from other situations where risk is transferred.

3.5.2 Benchmarks of the above type might be taken from actuaries' experience of commutation transactions or from approaches used, for example, in Australia where the identification of risk margins has a longer history in terms of insurers' accounts.

3.6 *From models to margins (2) -expected return on notional capital employed*

3.6.1 An alternative approach would be to assess the margin required to give the minimum acceptable expected return to accepting Lloyd's Members in recompense for the risk assumed. This approach would need to allow for the notional identification of the capital that needs to be held to support the run-off of the business. This would, in turn, need to refer to the risk profile of an average Lloyd's Member, recognising that different Lloyd's Members have different risk profiles and that the notional capital identified in each case would differ between Lloyd's Members.

3.6.2 An alternative way of considering the return on notional capital would be to look at the required marginal change in capital of the accepting Lloyd's members, taking into account the capital already held to support their existing business.

3.6.3 In this approach, as for the approach of identifying a probability of ultimate sufficiency, the definition of the acceptable return to accepting Members should reflect the reward for taking on additional risk without necessarily including an additional commercial margin for profit. Some form of benchmarking could perhaps be used to establish the level of return, taking into account returns available elsewhere in the insurance industry.

3.6.4. Although this approach may have some theoretical appeal, there are some practical difficulties in implementing it in a Lloyd's context.

3.7 *From models to margins (3) - expected reserve deficiency*

3.7.1 A further alternative is one which measures the risk exposure via the expected reserve deficiency, rather than just the probability of a particular reserve level being sufficient. This is a similar concept to expected policyholder deficit used in capital setting analyses. In this case, both the frequency and severity of any potential shortfall is implicitly taken into account rather than just the frequency approach inherent in the previous method.

3.7.2 An acceptable expected loss would then have to be determined. Benchmarks may again be taken from similar sources, as for the probability of ultimate sufficiency calculations.

3.8 *Simplified approaches to calculation of actuarial RITC*

3.8.1 We are aware of a number of simplified approaches which actuaries might try to use in order to derive an actuarial RITC. These might include:

a) To identify some general conditions when the RITC reserves are or are not likely to be broadly equivalent to the actuarial RITC; or

b) To derive a prudent estimate of the RITC reserves using a deterministic approach, which is then discounted for investment income.

3.8.2 We think, though, that these approaches have some serious limitations. With option (a), aside from establishing what the relevant conditions should be, there will still be a problem in deciding what to do when the above approach suggests that the RITC reserve is materially different from an actuarial RITC.

3.8.3 With option (b) there is the obvious problem of deciding what deterministic approach to use. In addition, this approach may lead to a very wide range of different views amongst actuaries regarding what is prudent and what is not.

3.8.4 Wherever possible, therefore, we believe that the actuarial RITC should make appropriate allowance for risk using approaches other than these simplified approaches.

3.9 *Application of financial economic theory to actuarial RITC*

3.9.1 Another alternative approach might be to make use of financial theory, such as the Capital Asset Pricing Model (CAPM). Although these theories were designed to be used in relating market prices of assets to their cash flows, in principle, they could also be applied to liability cash flows. It is possible that they could provide a systematic and economically coherent framework for estimating fair value liability cash flows, and we therefore suggest further research is done by actuaries in this area. Such research would also have application outside the Lloyd's RITC process.

3.10 *SAOs on the RITC*

3.10.1 The use of the actuarial RITC would enable the actuary to provide a formal opinion on the RITC itself. If SAOs were to be provided by actuaries on the RITC, then clearly we would need an appropriate form of words for the opinion element of the SAO. Further work would be needed on the methodology used to derive the actuarial RITC, building upon the brief introduction above, before actuaries would be in a position to provide such opinions. However, one possible form of words for the opinion is as follows:

"In my opinion, subject to the above comments [and except for the qualifications stated below], the Reinsurance To Close shown above represents a reasonable premium to be paid by the Lloyd's Members representing the [closing year of account] to the Lloyd's Members representing the [accepting year of account] so as to reinsure the future cost, net of reinsurance recoveries, of the claims and claims handling expenses net of anticipated future premiums in relation to [closing year of account] of Syndicate KLM as at 31 December XXXX."

3.10.2 An alternative wording might be:

"In my opinion, subject to the above comments [and except for the qualifications stated below], the Reinsurance To Close premium shown above represents a reasonable estimate of the actuarial RITC, as defined above, in relation to Year of Account YYYY for Syndicate KLM as at 31 December XXXX."

3.10.3 In effect, both of these imply that the RITC is reasonably close to (i.e. it is neither too far above nor too far below) the actuary's best estimate of the actuarial RITC. Unlike the existing solvency SAOs, the first of these, and probably also the second, also imply that it is reasonable to close the relevant year of account. The SAOs would need to contain comments regarding variability etc. similar to those in the existing solvency SAOs.

3.10.4 It is worth noting that the volume of work involved in providing this type of SAO is likely to be greater than that involved in providing the current solvency SAOs. We have obviously only covered the approaches that could be used to derive the actual RITC in superficial detail here, and we would welcome readers' comments on our suggested approaches, and further research into this area.

4. THE "RITC RESERVES"

4.1 *A practical alternative to the "actuarial RITC" sign-off*

4.1.1 A simple and practical alternative to the type of sign-off referred to in Section 3, would be that, in the "normal" situation (where the same syndicate is ceding and accepting the RITC), the actuarial opinion would be given on the RITC reserves, rather than on the actuarial RITC.. This would be a "two-sided" reasonableness opinion, so that unlike the existing solvency opinions, an excessively high reserve would not necessarily allow an unqualified opinion to be provided. It is probably very similar to the sort of informal opinions that actuaries are already giving in relation to RITC. It is worth noting that excessively high RITC reserves would not be consistent with the duty of the managing agent to set the RITC, which should be fair and equitable between the two years of account, nor with the duty of the auditor to opine that the RITC is true and fair.

4.1.2 One possible form of words for the opinion section of an SAO with this type of sign-off would be as follows:

> *"In my opinion, subject to the above comments [and except for the qualifications stated below], the Reinsurance To Close premium shown above represents a reasonable estimate of the undiscounted expected future cost, net of reinsurance recoveries, of the claims and claims handling expenses net of anticipated future premiums in relation to Year of Account YYYY for Syndicate KLM as at 31 December XXXX."*

4.1.3 An alternative wording might be:

> *"In my opinion, subject to the above comments [and except for the qualifications stated below], the RITC reserves, as defined above, make reasonable provision for the unpaid claims and claims handling expenses, net of anticipated future premiums, for which Syndicate XYZ was liable as at 31 December XXXX."*

4.1.4 In effect, the first of these implies that the RITC is reasonably close to (ie it is neither too far above nor too far below) the actuary's best estimate of the undiscounted reserves. The second also implies this, if the syndicate were to set its RITC equal to the RITC reserves, as defined in paragraph 2.8.1.

4.1.5 In either case, the SAO should state dearly that it does not comment on the RITC itself (and, as commented in paragraph 2.4.14, possibly mention the elements of RITC, such as risk margin and allowance for future investment return, that are specifically excluded from the SAO), and does not comment on whether the underwriting year of account should be closed or not. They would also need to contain comments regarding variability etc. similar to those in the existing solvency SAOs.

4.1.6 In the next section we contrast this type of opinion with that on the actuarial RITC and refer to a wider type of opinion on the financial condition of a syndicate.

5. ACTUARIAL OPINIONS AND RITC

5.1 *On what should actuaries opine?*

5.1.1 We have put forward two very different alternatives for actuarial opinions in relation to RITC. Unless a statutory role is introduced, it is quite possible for actuaries to be asked to provide opinions that are similar to either approach. In contrasting these two approaches, unless otherwise stated, we do not distinguish between the role being statutory (i.e. compulsory for all general insurance syndicates) or voluntary.

5.1.2 It should be obvious that an opinion on the actuarial RITC provides a more theoretically sound basis for an opinion on the RITC. It is intended to allow for issues such as the risk profile of the accepting Lloyd's Members and the impact of discounting, and we believe more accurately follows the Lloyd's rules governing RITC. This is backed up by the references to the treatment of investment income in the Lloyd’s Market Handbook, referred to in 2.3.17 above. An opinion on the reasonableness of the RITC reserves would not of course make any allowance for the risk inherent in the liabilities being transferred. Therefore, in individual cases, and on a voluntary basis, we think there is a clear advantage in actuaries' providing opinions on the actuarial RITC.

5.1.3 As discussed in Section 3, we consider that the actuarial RITC has a number of similarities with the “fair value” concept put forward in the IASC Issues paper on Insurance Accounting. We had originally concluded that opinions on the actuarial RITC would have a relatively short life and would be of limited relevance to corporate Lloyd’s Members, and hence had begun to favour opinions on the RITC reserves. However, if the IASC's tentative proposals regarding fair value are carried through, then an actuarial opinion on an equivalent item to the actuarial RITC will be a very effective means of ensuring that this potentially difficult concept is applied as consistently as possible across insurance enterprises (be they Lloyd's syndicates or otherwise).

5.1.4 Hence, we strongly favour actuarial opinions on the actuarial RITC. As mentioned in Section 3, we do believe, however, that further research is needed in relation to the methodology to be used in deriving an actuarial RITC before a statutory role could be introduced. This is entirely consistent with the conclusions of the IASC who acknowledge in their issues paper that more work is needed on the measurement of fair value, particularly with regard to liabilities. Actuaries who are active in the Lloyd’s market and who are willing to consider further the concept of an actuarial RITC can therefore play a useful role in contributing to the IASC’s debate on fair value accounting.

5.1.5 Longer term, when the majority of Lloyd's syndicates will, in effect, be very similar to "normal" insurance companies, then financial condition opinions, rather than simply reserve opinions, would add more value than actuarial opinions on the reserves (whether they are on a fair value basis or not). This is because we believe that they provide a more complete opinion on the overall insurance enterprise, taking into account both the asset and liability related risks to which that enterprise is exposed. Many of the issues referred to in Section 3 in relation to the actuarial RITC need to be considered when giving an opinion on the financial condition of an insurance entity. Financial condition reporting is considered further in Section 8.

5.1.6 In the interim, pending:

— further work on the methodology to be used in calculating an actuarial RITC, including consideration of the quantification of risk margins;
— further discussion of the concept of fair value accounting, particularly with regard to its application to Lloyd's; and/or
— further work in relation to financial condition reporting (see Section 8),

a simple and practical interim approach would be for actuaries to provide "two-sided" opinions on the RITC reserves (i.e. the undiscounted reserves).

5.1.7 This would have the advantage that:

— we believe that RITC is calculated as the undiscounted reserves for the relevant underwriting years by most syndicates anyway (except perhaps where the RITC is being paid to an entity other than a year of account of the same syndicate);
— it would provide a link with the existing solvency SAOs which are also in relation to the undiscounted reserves (but see Section 5.3 for some complications of this);
— it provides a two-sided reasonableness opinion that is missing from the current statutory solvency role;
— there would be minimal additional cost imposed on the market, as much of the work required is already done by the actuary in relation to the statutory solvency opinions; and
— it is already done in a number of cases.

5.1.8 An additional point concerning the nature of the actuarial opinion relates to whether the opinion wordings suggested in Sections 3 and 4 need to change if the RITC is not being transferred to another year of account of the same syndicate. Our views on this are:

— *For the actuarial RITC opinions*, if the actuary were effectively acting for both parties to the transaction (e.g. as might be the case when the RITC is being transferred to a different syndicate in the same managing agency) then the opinion wording could remain unchanged. If he/she were not acting for both parties, then the opinion wording would obviously need to change to reflect this. In both cases, the definition of "reasonable" in the opinion wording might need to be clarified.
— *For the RITC reserve opinions*, the existing wordings could still be used, except that the definition of "reasonable" might need to be clarified.

5.2 *Stakeholder perspectives*

5.2.2 The current statutory actuarial role in relation to solvency has evolved over time, but its purpose has always been to provide increased security from the policyholders' perspective. Consideration of other stakeholders, such as Lloyd's Members, is not part of the current role.

5.2.3 If actuarial opinions in either of the two forms outlined above, or on the financial condition of a Lloyd's "insurance company", are to add value beyond the existing solvency opinions, then they should preferably enable the perspective of other stakeholders to be considered. The stakeholders who have an interest in the reserves held by syndicates, and in the wider financial condition of a Lloyd's syndicate, include:

Customers	Policyholders
Investors/Lloyd's Members	Individual Lloyd's Members Corporate Lloyd's Members Shareholders in corporate Lloyd's Members Reinsurers Investment analysts Managing agents Members' agents
Regulators	The FSA Non-UK insurance and financial regulators The Stock Exchange Lloyd's Corporation The Government Actuary's Department
Others	Rating agencies The Inland Revenue Auditors The Faculty and Institute of Actuaries Brokers

5.2.4 The prime requirements of the main stakeholders can be summarised as follows:

Customers will want "fair" pricing and claim agreement, efficient service and high security.

Investors will want high returns (capital and/or income) at acceptable levels of risk, reported on a "fair" basis.

Regulators will focus mainly on policyholder security, but will also be interested in "fairness" or "equity" between Lloyd's Members. In some territories (e.g. USA), the regulator also seeks to ensure "fairness" to consumers by regulating insurers' prices.

Inland Revenue will want reserves that affect tax calculations to be calculated on a "fair" basis consistent with the relevant taxation legislation.

5.2.5 The existing statutory actuarial solvency opinions at Lloyd's clearly are "one-sided" and therefore address only the security requirements of these different stakeholders. They certainly do not reflect any concept of fairness referred to in several places above. This is not surprising since they were designed to meet the requirements of the particular stakeholder who asked for the solvency opinions to be introduced in the first place (effectively the DTI at the time).

5.2.6 Arguably, a two-sided reasonableness opinion, on either the actuarial RITC or the RITC reserves, would better serve the collective interest of the various stakeholders in the RITC process. This leads one to consider whether the basis of the solvency opinions should be amended to be of this form, and we think that this should be explored with the interested parties, with the overall objective of developing single purpose financial statements for tax, regulatory and syndicate/company accounts purposes. In the absence of this amendment, actuaries would need to provide two-sided reasonableness opinions as well as meeting the current statutory role of a one-sided opinion. Sections 5.3 and 5.4 below consider how these two types of opinion would inter-relate.

5.2.7 The advantages and disadvantages of the three types of actuarial opinion (on RITC reserves, actuarial RITC and financial condition) when viewed from the perspective of the different stakeholders are summarised in Appendix 1. On balance, we feel that for each type of opinion, the advantages outweigh the disadvantages.

5.3 *Implications of actuarial opinions in relation to the RITC reserves*

5.3.1 If an actuary provides an opinion on the RITC reserves, as defined in paragraph 2.8.1, then the overall level of RITC's in the market could remain the same, reduce or increase. Our view is that if anything, they are likely to reduce slightly, compared to what they would be if there were no actuarial opinions in relation to RITC. This is because, although there are some cases where RITC is less than the solvency reserves,

- the RITC for most syndicates is set equal to the solvency reserves; and
- the actuarial opinion on the solvency reserves is a "one-sided" opinion that is designed to prevent the reserves from being too low, but does not prevent them from being too high.

5.3.2 If we concentrate for the moment on the majority of syndicates that currently set their RITC equal to their solvency reserves, then it can be seen that these syndicates already have an implicit actuarial opinion that the reserves underlying the RITC are at least as large as a best estimate. The introduction of an RITC opinion would not change this, but would be designed to ensure that the RITC is also not materially higher than this best estimate. Therefore, amongst those syndicates that currently set their RITC equal to the Solvency reserves, the only ones that an actuarial opinion on the reserves underlying the RITC would affect would be those who typically hold reserves that are materially higher than the actuary's best estimate. In these cases, the effect of an opinion on the RITC reserves would be to reduce the RITC to a level that was sufficiently close to the best estimate to enable the actuary to provide the two-sided opinion. So, for those syndicates that continue to set their RITC equal to the solvency reserves, unless the solvency opinions could be changed to be two-sided, the effect of providing an actuarial opinion on the RITC reserves would be to ensure that the RITC was above, but not materially above, the actuary's best estimate. We do not have any data available that would indicate the extent of reserving at levels that are materially higher than the best estimate, and hence the materiality of the effect on reserving levels of providing these RITC opinions is unclear. The effect also depends on the prospective reserving stance taken by Lloyd’s syndicates.

5.3.3 For the small minority of syndicates that do not set their RITC equal to their solvency reserves, the RITC can only be less than the solvency reserves. For these syndicates, the impact of an opinion on the RITC reserves would therefore depend on how the existing RITC compares to the actuary’s best estimate. In theory, the solvency reserves could still remain above the RITC, possibly by a material amount, but the accepting year would need to fund the implied solvency deficit.

5.3.4 The wording of the opinions given in paragraph 4.1.2 could perhaps be amended in the cases where the RITC reserves were definitely greater than the actuary's best estimate, but not materially so. This would distinguish it from the current generalised wording, which implies "reasonably close to the actuary's best estimate" as opposed to the more restrictive "greater than, but reasonably close to the actuary's best estimate".

5.3.5 If large numbers of syndicates decided to seek voluntary opinions on the RITC reserves, or if a statutory role were introduced, then syndicates' results might become slightly more volatile and hence there could be a marginal effect on the ability of syndicates to smooth underwriting results. However, this would be in line with the IASC's concept of fair value accounting, and in any case could be catered for by the use of "performance reporting" (that is, by dividing reported profit into a smoothed operating profit and a variable component, caused by use of fair values).

5.4 *Implications of actuarial opinions in relation to the actuarial RITC*

5.4.1 The issues raised in Section 5.3 would also apply here, but in addition, the use of an actuarial RITC would also have an effect. Hence, factors such as the size of the risk margin and the offset for investment income would be relevant. Arguably, in the current relatively low interest rate environment, an allowance for risk margin could exceed the discount for investment income, and hence the level of future RITC's could be higher if an actuarial RITC opinion were utilised.

5.5 *Professional Liability issues*

5.5.1 Additional professional liability exposures may arise from the provision of opinions on either the actuarial RITC or the RITC reserves. The potential additional issues introduced by these opinions over and above the existing statutory solvency opinions can be summarised as "fairness/two-sided", and "commerciality". The first of these arises because both types of opinion effectively imply a degree of fairness in relation to the reserves, which is absent from the existing statutory "one-sided" opinion. Hence, the actuary is effectively acting for both the accepting and ceding groups of Lloyd's Members. With the existing solvency opinions, the actuary is acting only for the managing agent, who by obtaining a solvency opinion is simply complying with Lloyd's Valuation of Liabilities Rules. The second issue, commerciality, arises only in relation to the actuarial RITC, and does so because the RITC represents a commercial transaction between the ceding and accepting Lloyd's Members. Neither of these two issues, however, represents entirely new areas of professional liability exposures for actuaries. For example, with some commutations, actuaries provide an opinion that takes into account both sides of the transaction, although we believe this is relatively rare. More commonly, actuaries provide opinions that are used to assist companies making commercial decisions, such as in relation to the purchase and sale of companies.

5.5.2 An additional issue, closely related to these two issues, concerns "closure" of years of account. The work needed for the existing statutory opinions usually, but not always, includes the actuary making an independent estimate of the liabilities. However, this does not necessarily imply that the year of account should be closed, and hence the actuary is not providing an opinion on whether the year of account should close or not. An unqualified opinion in relation to the actuarial RITC, along the lines of the wording given in 3.10.1, would however, imply that it is reasonable to close the relevant year of account. This, therefore, might represent an additional area of professional liability exposure for the actuary. An unqualified opinion in relation to the RITC reserves, along the lines of the suggested wordings in 4.1.2 and 4.1.3, would not, however, necessarily imply that the year of account should be closed.

5.5.3 Financial condition opinions could clearly introduce additional professional liability exposures. However, until the precise nature of these opinions is defined, we cannot comment on what these exposures might be.

5.5.4 It would not be appropriate for us to provide advice in this paper with regard to what action, if any, actuaries should take in relation to any additional professional liability exposures discussed above. All we can say is that actuaries should not be put off by the additional exposures that might arise, as this is an inevitable consequence of an expanding role; they should of course obtain legal advice where necessary.

5.6 *Overlap with auditors*

5.6.1 The audit report in the syndicate accounts states that "the accounts are prepared in accordance with Lloyd's Syndicate Accounting Rules".

5.6.2 In arriving at a true and fair opinion on the closed year, the auditors will wish to establish that the result is unlikely to be materially misstated. Hence, given that one of the most significant figures in the underwriting account is the RITC, they will be ensuring that this is a reasonable assessment of the liabilities attaching to the year of account closing. It does not imply that they are opining on the RITC itself.

5.6.3 It is likely that auditors would rely quite heavily on opinions provided by actuaries in relation to RITC. Currently, a reliance on an expert opinion would not reduce the responsibility of the auditors in performing their work. However, it does potentially place the actuary between the auditor and any aggrieved stakeholders.

5.6.4 In connection with the auditors' responsibility, it is interesting to note that the Auditing Practices Board Practice Note 20, page 99, Section 53, states:

> *" The Lloyd's Valuation of Liabilities Rules 1998 allow the syndicate auditor to rely upon the Statement of Actuarial Opinion given in respect of general business solvency technical provisions. In light of this, the auditors' duty is restricted to ensuring that this statement is properly reflected in the return."*

5.6.5 Based on the above, we do not believe that the provision of opinions by actuaries on either the actuarial RITC or the RITC reserves will cause an overlap with auditors. At present, auditors tend to seek some information from actuaries in relation to the reserving work that they have done, and usually want more than just the signed SAO. However, in our experience, these requirements vary between auditors, and it is therefore likely that there is a wide range of practices regarding exactly what is provided by actuaries to auditors. In addition, some auditors are thought to believe that actuaries already sign-off on RITC. Although some may do so on a voluntary basis, there is obviously no statutory role at present.

5.6.6 If the provision of either type of opinion in relation to RITC can meet the auditors' requirements, then this should help to remove any possible differences in practice, and hence we believe that auditors would welcome such opinions.

6. TAXATION ISSUES

6.1 *Taxation rules in relation to RITC*

6.1.1 Taxation rules in relation to the RITC premium differ from those that pertain to the UK company market. This is because general tax law relating to reserves and provisions does not apply to what is, in fact and law, a reinsurance transaction. Instead, Section 177 of the Finance Act 1993 (whose origins date back to 1987) relates to RITC and is reproduced below.

"(1) This section applies where

(a) in accordance with the rules or practice of Lloyd's and in consideration of the payment of a premium, one member agrees with another to meet liabilities arising from the latter’s underwriting business for an underwriting year so that the accounts of the business for that year may be closed; and

(b) the member by whom the premium is payable is a continuing member, that is, a member not only of the syndicate as a member of which he is liable to pay the premium (“the reinsured syndicate”) but also of the syndicate as a member of which the other member is entitled to receive it (“the reinsurer syndicate”).

2) In computing for the purposes of income tax the profits of the continuing member’s underwriting business as a member of the reinsured syndicate, the amount of premium shall be deductible as an expense of his only to the extent that it is shown not to exceed a fair and reasonable assessment of the value of the liabilities in respect of which it is payable.
3) In computing for those purposes the profits of the continuing member’s underwriting business as a member of the reinsurer syndicate, those profits shall be reduced by an amount equal to any part of a premium which, by virtue of subsection (2) above, is not deductible as an expense of his as a member of the reinsured syndicate.
4) The assessment referred to in subsection (2) above shall be taken to be fair and reasonable only if it is arrived at with a view to producing the result that a profit does not accrue to the member to whom the premium is payable but that he does not suffer a loss.
5) This section also applies in any case where the member to whom the premium is payable is a corporate member within the meaning of Chapter V of Part IV of the Finance Act 1994."

6.2 *Interpretation of the rules*

6.2.1 We need to focus on subsections (2) and (4). It is important to note that we are focusing here only on continuing members of the syndicates concerned (as made clear by (1) (b) above).

6.2.2 Subsection (2) states that an RITC is “deductible as an expense … only to the extent that it is shown not to exceed a fair and reasonable assessment of the value of the liabilities”. This may be taken to mean that:

— any RITC assessment should be made on a basis that can be reproduced consistently;
— any assumptions underlying the assessment of the RITC should be set, individually and in aggregate, with a view to producing a fair and reasonable result.

6.2.3 It is, however, difficult to be prescriptive in identifying a set of assumptions for setting the RITC and a range of RITCs will almost certainly be considered to be fair and reasonable. An opinion on the actuarial RITC, the RITC reserves or a financial condition report might help to satisfy the above Inland Revenue requirements.

6.3 *A recent Inland Revenue dispute*

6.3.1 Subsection (4) states that an RITC “shall be taken to be fair and reasonable only if it is arrived at with a view to producing the result that a profit does not accrue to the member to whom the premium is payable but that he does not suffer a loss”. This subsection (together with subsection (2)) was the main focus of a recent dispute between a Lloyd’s syndicate and the Inland Revenue. That case was taken to an independent tax tribunal (the General Commissioners for the purposes of Income Tax) as a test case on “discounting” on behalf of the Lloyd’s market. In this case, the Inland Revenue sought to disallow some portion of the RITC claimed as a deduction for tax because no allowance had been made for the time value of money in calculating the RITC. The Inland Revenue also argued, on facts specific to that syndicate, that a tax disallowance was also due because the underwriter had included a margin for caution above the actuarial best estimate.

6.3.2 The case was heard by the General Commissioners. During the course of the hearing, the Inland Revenue dropped the claim that the underwriter had included a margin for caution having been satisfied that it had been shown that the syndicate's approach to establishing RITC was well documented and robust in the light of the requirement in subsection (2) for it to be "fair and reasonable". The Inland Revenue was also satisfied that there was no demonstrable evidence to indicate that significant margins had been included for the syndicate in question.

6.3.3 The General Commissioners ruled on the discounting issue in favour of the syndicate and against the Inland Revenue. They found that the proper test of tax deductibility was whether any profit could be said to accrue at the time the RITC premium was paid, and that this assessment was a matter of underwriting judgement, properly informed by actuarial expertise. The RITC paid, which was based on undiscounted best estimates, was acceptable for tax purposes. The syndicate and the Inland Revenue had until 9 November 1999 to make comments on the draft decision. Both sides then had a further 28 days to comment on the other side's representations.

6.3.4 At the time of writing, the General Commissioners had yet to produce a final version of their decision. This final version will be produced by the General Commissioners as soon as possible, taking account of the submissions made, if they wish. Once it receives the final decision, the Inland Revenue will have 30 days to decide whether to appeal to the High Court. More will hopefully be known before this paper is presented at the Institute meeting on 27 March 2000, and if so, an update will be provided at that time.

7. POSSIBLE FUTURE CHANGES AT LLOYD'S

7.1 *Introduction*

7.1.1 Most of the earlier sections have assumed that the existing system at Lloyd's continues in its present form. In fact, this is unlikely to be the case. In this section, we consider the major structural changes that might be made at Lloyd's in future, and explore the implications for actuarial opinions of such changes.

7.2 *What might change?*

7.2.1 In time, we may see both the annual venture system and the RITC system being removed, if not for the whole market, then at least for a substantial part of it. The individual Lloyd's Members may wish to continue with something akin to the existing system, and a dual approach might emerge which can accommodate both types of Lloyd's Members. For dedicated corporate members, the annual venture and RITC system is already largely irrelevant. With 45% of the capital being supplied by such members for the 1999 year of account, a new approach is needed for a substantial part of Lloyd's capital base.

7.2.2 The new approach would not need to involve either an annual venture or an RITC system. There would be no need for individual years of account to be treated separately as there would, in effect, be only one economic entity for each syndicate and equity would thus not be an issue between years of account. The requirement to delay release of profits for a given period would fall away, and would be replaced by a system where each entity would declare profits and distribute them by way of dividends to shareholders, in exactly the same way as non-Lloyd's insurance companies already do.

7.2.3 A large proportion of the capital supporting Lloyd's originates from US companies and for this capital there is an additional requirement to produce figures on a US GAAP basis. The pressure to keep accounting and reporting costs down to a minimum would be a strong argument for the Lloyd's market to move to an accident year basis. In addition, many non-Lloyd's insurers report on an accident year basis and such a move would make comparisons easier and would probably thus be supported by regulators and analysts.

7.2.4 Clearly, a lot of detailed thinking needs to be done before Lloyd's can implement the above changes, and we assume that the Lloyd's Act would need amending. However, we believe that at some point in the future, probably within five years, the annual venture and RITC system will be dispensed with, at least for some categories of Lloyd's Members. In effect, the Lloyd's market will include a number of insurance companies, probably reporting on an accident year basis.

7.3 *The effect on existing statutory actuarial opinions*

7.3.1 If we assume that the above changes take place, at least for some categories of Lloyd's Members, then the existing solvency opinions will need to be amended. In particular, there will no longer be a need to obtain separate opinions for each economic entity. The current requirement to have an opinion for each of the open years forces the managing agent to give some consideration to the outcome of these years at an earlier stage than might otherwise be the case. It could be argued that this in itself is a good discipline in that encourages managing agents to take early corrective action in times of poor underwriting results. This is not a sufficient reason, though, to maintain the current requirement for managing agents to obtain a separate opinion on the reserves for each open year of account, because more detailed pricing work is needed to target those areas where rating action is needed.

7.3.2 Hence, the solvency opinions could simply relate to the reserves in aggregate across all years of account, rather than to individual years of account. This would not remove the need to continue to monitor reserves by relevant cohort (e.g. underwriting year or accident year) as this would still be very important from a management control and regulatory viewpoint.

7.3.3 They might also need to change to be on an accident year basis, which obviously places additional data requirements on the syndicates. These requirements could be very time consuming, and quite difficult for some syndicates.

7.3.4 We also believe that there would be an argument for amending the solvency basis to be a "reasonableness" or "two-sided" basis, rather than the "one-sided" basis as at present. This is because the new Lloyd's syndicates would be no different from existing UK insurance companies. These companies need to compete in an increasingly global insurance marketplace, and this marketplace includes territories such as the U.S.A, where the requirements for actuarial opinions are on a reasonableness basis.

7.4 *The effect on opinions on the actuarial RITC and RITC reserves*

7.4.1 Again, if we assume that these changes take place, then the actuarial RITC and RITC reserve opinions discussed in Sections 3 to 5 would need to be amended. Either opinion, could in theory, still be used, but both would need to be changed to refer to the "reserves shown in the accounts of Syndicate XYZ as at…" rather than the RITC for a particular year of account.

7.4.2 The concept of an actuarial RITC would still apply, but would relate to the reserves across all years combined, and would be on an accident year basis. Under the IASC proposals, the unexpired risk reserve is also on a fair value basis. Presumably, any actuarial opinion would also cover unexpired risks. In line with our conclusions of Section 5, if reserve opinions were introduced, rather than financial condition opinions, then our preference would be for them to follow the actuarial RITC approach rather than the RITC reserves approach. This type of opinion could also form the "two-sided" opinion referred to in 7.3.4 above, and it would then better serve the collective interests of the various stakeholders in a new style Lloyd's insurance company. We would support further actuarial analysis on the actuarial RITC approach being done as soon as possible.

7.5 *The effect on Financial Condition Opinions*

7.5.1 If the changes referred to above were to come into effect, then, as concluded in Section 5, opinions on the financial condition of the new Lloyd's insurance companies would add more value than actuarial opinions on the reserves alone. The changes would mean that such opinions would become feasible, whereas for many existing Lloyd's syndicates their complex structures make such opinions very difficult to implement. We would envisage that these opinions would include consideration of reserves on a basis equivalent to the actuarial RITC, and hence the additional analysis referred to in 7.4.2 would be of relevance to financial condition opinions.

8. RELATED ISSUES CONCERNING OTHER ACTUARIAL ROLES IN GENERAL INSURANCE

8.1 *Introduction*

8.1.1 Although this paper focuses on Lloyd's, our view is that many of the principles set out here can be applied, with varying degrees of adaptation, to situations other than RITC at Lloyd's. This would be less so if the changes referred to in Section 7 were not taking place. These changes mean that, at least from an accounting and actuarial perspective, if not necessarily from a marketing perspective, Lloyd's syndicates are becoming more like "normal" insurance companies.

8.2 *Non-Lloyd's reserving applications*

8.2.1 The RITC reserves clearly translate directly to non-Lloyd's situations, since they simply represent the undiscounted reserves (or "technical provisions" as they are referred to in UK company market). Except for funded business, the reserve opinions would, however, obviously relate to all years combined, rather than just the closing years, and may be on an accident year basis (but might also include consideration of the unexpired risk reserve).

8.2.2 The actuarial RITC described in Section 3 essentially involves calculating a best estimate figure (allowing for investment income) and then taking account of the distribution around this best estimate. This can obviously be applied directly to any reserving situation. In particular, it can be applied to any situation where there is a commercial transaction involving risk transfer, as this would normally have a premium associated with the uncertainty. In addition, if our interpretation of fair value accounting outlined in Section 3 is correct, then the actuarial RITC approach will be directly relevant to establishment of fair value general insurance technical provisions..

8.2.3 A significant part of actuaries' work in general insurance outside of Lloyd's involves giving reserve opinions. These include formal (though not statutory) opinions that are published in companies' reports and accounts and less public opinions that appear in confidential actuarial reports provided to management. The use of either an actuarial RITC basis or an RITC reserve basis would be equally relevant to these situations.

8.2.4 Reserving work in situations such as mergers and acquisitions (M&A), commutations and portfolio transfers usually involve a transfer of risk between two parties. Consequently, the concept of actuarial RITC has direct relevance here, although the degree of analysis of the distribution of outcomes (and hence quantification of risk margin) varies according to the importance of the transaction to the entities concerned. In practice, of course, there may not be time, particularly in M&A situations, to carry out the necessary detailed work in order to quantify the risk margin other than very approximately. In addition, in most of these situations, the actuary is acting for one party to the transaction rather than for both, unlike the RITC situation. Hence, unless specifically asked to do so, he or she is not seeking to establish equity between the two parties, but rather is only taking into account the risk considerations of the party for whom he or she is acting. This does not alter the overall approach that the actuary is adopting, but simply affects the quantification of the risk margins. Therefore the actuarial RITC is still a valid concept in these situations.

8.3 *Statutory Actuarial role in the UK company market*

8.3.1 With regard to the requirement for statutory actuarial opinions in relation to general insurance companies, Lloyd's is ahead of the company market in the United Kingdom, since, at the time of writing, there are no statutory actuarial opinions required in relation to insurance companies operating outside Lloyd's. With the increased use of corporate capital at Lloyd's, much of which is provided by insurance or reinsurance organisations, companies operating within Lloyd's are becoming structurally similar to conventional insurance companies. One wonders, therefore, how long this anomaly of different actuarial requirements between Lloyd's and non-Lloyd's companies can continue. If this anomaly remains, then, at least in theory, it is possible that a form of "market arbitrage" might emerge, whereby companies who do not wish their reserves to be subject to the scrutiny of an actuary would not choose Lloyd's.

8.4 C*ontrasting Lloyd’s RITC process with other situations*

8.4.1 In theory, estimation of the RITC would normally include consideration of the risk associated only with the business written by the syndicate to which the RITC relates. As such, if the business mix remains reasonably stable, the risk profile of the “seller” and “buyer” may be regarded as being very similar. For a large number of the alternative situations, the buyer and seller may, however, have significantly different risk profiles. Not only does this make the calculation of perceived risk different, but it may also enable a transaction to occur to the benefit of all parties concerned including allowance for commercial profit margins. In the case of RITC, our interpretation of the Lloyd’s rules (discussed in Section 2), is that the duties imposed on Managing Agents are such that the willing buyer/willing seller principle will apply to Lloyd’s RITC.

8.4.2 When estimating an RITC, it is desirable to establish a consistent treatment over time of the risk element of the RITC premium. In other situations, such as a stand-alone commercial transaction, this obviously need not be the case as by definition, it is a one-off event and the amount at which the transaction occurs may be influenced by prevailing market conditions.

8.4.3 For an increasing number of Lloyd’s syndicates, the same cohort of Lloyd's Members provides the capital for successive years of account. In this case, the RITC process becomes solely a method of profit recognition rather than risk transfer. In these cases, the Lloyd’s syndicate is closer to a “normal” insurance company, and hence the consideration of financial condition becomes more relevant, rather than the more traditional view of RITC being a form of portfolio transfer.

8.5 *Financial Condition Reporting*

8.5.1 This involves expanding the professional role from simply reporting on the adequacy of the technical provisions, to consideration of both the asset and liability risk to which an insurance company (Lloyd's or otherwise) is exposed, and includes quantification of the range of uncertainty in these risk elements. It also embodies the idea of projecting forward the assets and liabilities to assess the financial condition of the company in the future. The case for introducing Appointed Actuaries in general insurance in the UK, with responsibility for reporting on the financial condition of insurance companies has already been put in a position paper prepared by the General Insurance Board, so we are not going to repeat that case here (see General Insurance Board (1998)).

8.5.2 We would comment, though, that our collective experience, drawn from consultants, actuaries employed by managing agents, and actuaries employed by the Corporation of Lloyd's has led us to conclude that financial condition reporting would be of genuine use to the market, as long as it can be provided at a reasonable cost. We do not, however, feel that it would be fair to impose this requirement on Lloyd's in isolation, particularly since Lloyd's is becoming more like the rest of the insurance market anyway. If it were introduced at Lloyd's at some point in the future, then we think it would be reasonable to remove the "greater than best estimate" solvency requirement for the reserves, and replace it with a two-sided "reasonableness" opinion on the financial condition. In addition, the existing asset rules at Lloyd's, which impose restrictions, for example, on the way in which the Premium Trust Funds can be invested, might be relaxed if financial condition reporting were introduced.

8.5.3 In order to provide a professional opinion on the financial condition of an insurer, it is likely to be necessary for an actuary to construct a DFA model, along the lines of that referred to in Section 3 when discussing the actuarial RITC. We understand that the General Insurance Board of the Faculty and Institute of Actuaries has established a working party to consider financial condition reporting in detail. We look forward to this paper, and in particular to its application to companies operating in the Lloyd's market. The reserving complexities that exist at Lloyd's and in the London market (referred to in Section1) will need to be considered if this paper is to be of benefit to actuaries who are considering financial condition reporting at Lloyd's.

8.5.4 The position paper on financial condition reporting published by the Faculty and Institute of Actuaries suggests that a possible initial step towards full financial condition reporting might be for the actuary to opine only on the technical provisions of an insurance operation. At a later date this could be extended to full financial condition reporting. For Lloyd's, the initial step is in some senses already fulfilled; for companies it is not. For both, we would support further work being carried out with a view to establishing whether financial condition reporting could be introduced at a cost that is acceptable to the insurance industry. We anticipate that the basis for the estimation of liabilities under such financial condition reporting would be "fair value", as discussed in Section 3.

9. CONCLUSIONS

9.1 This section provides a summary of the views that we have expressed in this paper.

9.2 *Reserving at Lloyd's*: The process of reserving at Lloyd's can be improved by a number of initiatives and research. We have made some suggestions in Section 1.4.

9.3 *Current RITC system at Lloyd's*: Clearer guidance is needed on the components of RITC and the basis for their calculation. We would suggest that a single document be created dealing specifically with RITC.

9.4 *Actuarial opinions in relation to RITC*: The actuarial RITC concept is our preferred approach to the estimation of RITC. This is because it includes consideration of risk, allows appropriately for discounting, and is consistent with the IASC's definition of "fair value" of insurance liabilities. Actuarial opinions in relation to the RITC itself (statutory or otherwise), as opposed to opinions on the reserves underlying the RITC, should only be provided on the basis of the actuarial RITC.

9.5 *Statutory opinions in relation to RITC*: Before these can be considered, further research is needed with regard to the actuarial RITC. We encourage actuaries to explore the use of Dynamic Financial Analysis (DFA) in a Lloyd's context, and to estimate the actuarial RITC. Suggested wordings for SAOs are given in Section 3.

9.6 *RITC reserves*: Prior to the use of the actuarial RITC, we suggest use of the "RITC reserves" in actuarial opinions in relation to RITC, and provide suggested wordings for SAOs in Section 4.

9.7 *Reasonableness opinions*: Opinions in relation to the actuarial RITC or the RITC reserves should be two-sided reasonableness opinions. This would be in the collective interest of a larger proportion of the stakeholders in Lloyd's syndicates than the existing statutory opinions, which are on a "greater than best estimate" basis.

9.8 *Existing statutory actuarial role at Lloyd's*: This is of benefit to the market, but consideration should be given to amending the basis to two-sided reasonableness. This would help achieve harmonisation of fiscal, company and regulatory reporting, which is in the public interest.

9.9 *Changes at Lloyd's*: Recent and likely future changes at Lloyd's mean that many companies operating at Lloyd's are very similar to "normal" UK insurance companies. The annual venture and RITC system are of decreasing relevance to a large proportion of capital provided by Lloyd's Members, and a new system needs to be considered.

9.10 *Financial condition reporting*: Longer-term, this type of actuarial reporting is of greater benefit to both Lloyd's and non-Lloyd's companies than just reporting on reserves. Use of fair value accounting and of DFA methods should be an integral part of the approach used for financial condition reporting.

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APPENDIX 1 : STAKEHOLDER PERSPECTIVES

TABLE 1 : PRIME CONCERNS OF STAKEHOLDERS AND ADVANTAGES OF ACTUARIAL OPINIONS FOR DIFFERENT STAKEHOLDERS

STAKEHOLDER	PRIME CONCERNS	ADVANTAGES OF OPINIONS ON 1. RITC RESERVES	ADVANTAGES OF OPINIONS ON 2. ACTUARIAL RITC	ADVANTAGES OF OPINIONS ON 3. FINANCIAL CONDITION
Customers	Efficiency of processing, "fair" pricing, good service and high security	May help stop insurers keeping prices up, but only if applied to all worldwide Lloyd's and non-Lloyd's insurers.	As 1, plus enhanced security due to situation being covered where actuarial RITC exceeds undiscounted reserves.	Enhanced security over 1 and 2, as opinion is on overall enterprise, not just reserves.
Investors	High returns at acceptable levels of risk, reported on a "fair" basis	Helps to ensure a fairer allocation of profits as reduces scope of syndicates to book excessively high reserves. Possibly some short term gains if these reserves are released. Better informed investors.	As 1, with enhanced fairness. Close to IASC's concept of fair value accounting.	As 1, but with additional benefit that all key sources of risk to investor are subject to independent scrutiny.
Regulators	Policyholder security, and "fairness" or "equity" between Lloyd's Members.	As Investors (without short term gains!) and Customers.	As Investors and Customers.	As Investors and Customers.
Inland Revenue	Tax deduction for RITC premiums derived in accordance with tax legislation.	May reduce their workload on scrutinising consistency of RITC calculation with IR rules, as subject to independent opinion. If reserves are released, then tax revenues may be brought forward.	As 1.	As 1.
Other	Various	Makes it easier for Managing Agents to demonstrate that they are complying with Lloyd's guidelines on reserving. Auditors would have greater support for their audit work in relation to RITC.	As 1.	As 1, except that overlap with audit function would need consideration.

NOTES:

1. Solvency opinions are assumed to remain - and hence the benefits are the additional ones that apply as a result of introducing the additional opinions of types 1, 2 & 3.
2. Financial condition opinions are assumed to include consideration of reserves on the actuarial RITC basis (or fair value basis).

APPENDIX 1 : STAKEHOLDER PERSPECTIVES (CONT'D)

TABLE 2 : DISADVANTAGES OF ACTUARIAL OPINIONS TO DIFFERENT STAKEHOLDERS

STAKEHOLDER	DISADVANTAGES OF OPINIONS ON 1. RITC RESERVES	DISADVANTAGES OF OPINIONS ON 2. ACTUARIAL RITC	DISADVANTAGES OF OPINIONS ON 3. FINANCIAL CONDITION
Customers	Possibly very slightly lower overall level of reserves. Any increase in volatility might have slight increase in risk that individual syndicate can't meet its obligations.	None, except possibly very marginal increase in premiums due to additional costs.	None, except possibly very marginal increase in premiums due to higher costs.
Investors	Published results possibly more volatile.	As 1 plus additional work might increase costs slightly.	As 2.
Regulators	As Customers.	As 1.	As 1, without any increase in risk of syndicate meeting its obligations, as consideration of wider issues should more than compensate for this.
Inland Revenue	None, except may find it more difficult to challenge tax deductions claimed for RITC.	As 1.	As 1.
Others	None	None	None.

Appendix 2: extracts from various Lloyd's documents that refer to RITC

This appendix contains extracts from various Lloyd's documents that are relevant to the estimation of RITC. Only those extracts that are not already included in section 2.3 of the paper are included here.

A2.1 Core Principles Byelaw

A2.5.1 See Section 2.3 for discussion of this document.

A2.2 Agency Agreements Byelaw

A2.2.1 Schedule 3, clause 3f, includes the words: "An Agent shall … determine the premium for, and effect, the reinsurance to close for the Managed Syndicate in respect of each year of account".

A2.2.1 Schedule 3, clause 5, includes the words: "The Name hereby authorises the Agent on his behalf … (without limitation) the power … (d) on behalf of the members of the Managed Syndicate for a year of account … and on behalf of the members of the Managed Syndicate for the next succeeding or any later year of account … to effect in accordance with clause 9 a contract of reinsurance to close … and to debit the reinsured members and credit the reinsuring members with such reinsurance premium in respect of the reinsurance to close as the Agent, subject to any requirements of the Council, thinks fair".

A2.3 Syndicate Accounting Byelaw

A2.3.1 Part C, clause 10(1) includes the words: "Every underwriting account prepared in respect of a closed year of account under paragraph 8(2)(a) shall give a true and fair view of the profit or loss for the year of account of the underwriting member or members for whom it is prepared".

A2.3.2 Clause 10(7) includes the words: "Where a managing agent preparing an annual report departs under sub paragraph (5) or (6) from any principal or requirement specified in the Lloyd's syndicate accounting rules, particulars of the departure the reasons for it and its effect shall be fully stated in the annual report".

A2.3.3 Clause 14 (which covers the audit), paragraph (3) includes the words: "The report shall state whether in the opinion of the syndicate auditor ... in the case of any annual report which includes an underwriting account in respect of a closed year of account, whether a true and fair view is given of the profit and loss for that year of account of the underwriting member or members for whom it has been prepared".

A2.3.4 Schedule 3, part C, paragraph 1 includes the words: "Items which affect more than one year of account shall be accounted for so as to ensure a treatment which is equitable as between the members of the syndicate affected; and in particular the amount charged by way of premium in respect of reinsurance to close shall, where the reinsuring members and the reinsured members are members of the same syndicate for different years of account, be equitable as between them, having regard to the nature and amount of the liabilities reinsured".

A2.4 The Code for Managing Agents: Management Of Reserving Risk

A2.4.1 Paragraph 2.2, "Methodology: The managing agent needs to be satisfied as to the methodology and data used and assumptions made in relation to the reserve setting process across all its managed syndicates, and is further responsible for ensuring that a consistent high level approach is adopted from one year to the next and between syndicates, except where change can be justified according to circumstances or on the grounds of refinement".

A2.4.2 Paragraph 3.2, "The board of the managing agent has the ultimate responsibility for the reserving".

A2.4.3 Paragraph 3.18, "Managing agents should maintain appropriate controls and procedures to ensure that reserves for claims outstanding are sufficient to cover any reasonably foreseeable liabilities".

A2.4.4 Paragraph 3.20, "A key aspect of the reserving process is to track the performance of reserves against actual outcomes so as to correct any deficiencies. Accordingly, the following controls should be in place:

- the accuracy of past RITC and other reserves should be evaluated on at least a quarterly basis and every effort made to isolate the reasons for any discrepancies; …
- any material surplus or deficiency arising during the year attributable to previous year reserving should be explained in the Underwriter's Report, as required by the Syndicate Accounting Byelaw; and … ".

A2.4.5 Paragraph 4.2, "The objective of a claims reserve is to recognise the extent of future claims liabilities which are expected to arise, in relation to business already contracted, at a single point in time, in order to present a best estimate of a syndicate's solvency/profitability position".

A2.4.6 Paragraph 4.4, "The level of claims reserve should be assessed having regard to the range of uncertainty as to the eventual outcome for each class/category of business".

A2.4.7 Paragraph 5.1, "Lloyd's regulations currently impose two separate requirements in relation to the reserve figure. There is the requirement, set out in the Code on Managing Underwriting Risk, for an independent review of RITC and open year reserves to be carried out by a person with the appropriate skills and experience, and there is a requirement in the Valuation of Liabilities Rules to obtain an actuarial opinion on the adequacy of the reserve determined for solvency purposes. It may be sensible for the managing agent to arrange for these two reviews to be carried out concurrently by the reporting actuary ... ".

A2.4.8 Paragraph 5.6, "The managing agent may conclude that, in view of the board having an active role in the reserve setting process, this independent review is already implicit in their procedures, in which case, their conclusions should be documented. Where there is no other suitable independent person to carry out this function, the managing agent may conclude that it is sufficient to rely on the work of the reporting actuary. If this is the case, however, the managing agent should ensure that the scope of the actuary's review is sufficiently wide to cover the matters considered above".

A2.5 The Code for Managing Agents: Managing Underwriting Risk

A2.5.1 See Section 2.3 for discussion of this document.

A2.6 Lloyd's Market Handbook

A2.6.1 See Section 2.3 for discussion of this document.