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DEMUTUALISATION OF A UNITED KINGDOM MUTUAL LIFE INSURANCE COMPANY

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ABSTRACT

The paper firstly examines the way in which U.K. mutuals operate and the forces which are leading mutuals to consider demutualisation. Demutualisation is normally accomplished by a Scheme of Transfer under Section 49 of the Insurance Companies Act 1982. The role of the directors and actuaries is discussed, including the impact of the Institute's latest Guidance Note (GN15).

The protection of policyholders' reasonable expectations, the value of membership rights and the basis of dealing with any orphan surplus are the central problems. The paper examines them in the context of both the open fund and closed fund situation and shows how they may be resolved.

A simple model is used to project the financial position of both an open and closed fund in a demutualised company. The relative advantages and disadvantages of each indicate that different courses of action may be appropriate for mutuals in differing financial positions.

KEYWORDS

Mutual; Transfers; Mergers and Aquisitions; Surplus

1. INTRODUCTION

1.1 The fact that there has been no paper presented to the Institute on demutualisation, and only one to the Staple Inn Society[1], is, perhaps, an indication of the lack of interest in the subject, lack of interest, that is, until the last few years. The history of the industry had been more the other way, with several proprietary companies becoming mutuals. Mutualisation was carried out for both protective and competitive reasons, and, in some cases, because it was thought that shareholders were not needed—their capital was low compared with the free assets of the company.

1.2 There have been three recent demutualisations of life assurance companies in the U.K.:

—National Mutual Life of Australasia's U.K. Branch,

—FS Assurance, and

—Pioneer Mutual.

At the time of writing this paper, a further demutualisation was in progress. Federation Mutual Insurance was proposing to transfer its business to Equico International Limited, a new insurance company owned by The Equitable of the United States.

The industry has also seen two mergers (London Life with AMP and Boots Life with Tunbridge Wells Equitable Friendly Society) which, whilst not demutualisations, have some features in common with those examined in this paper. In addition, Time Assurance has changed its status from a Friendly Society to a proprietary life company, Templeton Life, and has been acquired by Templeton International Group.

This indicates that the position has changed. It is an indication that the directors of these companies felt that the company and its policyholders would be better off following the demutualisation. Why should the last few years have seen the reversal of the previous 200 years?

1.3 First and pre-eminently amongst the contributory factors must be the Financial Services Act. This Act upset well-established patterns of distribution and concentrated the minds of Independent Financial Advisers (IFAs) on 'best advice'. Together with the move from IFA status to tied agent by many IFAs, this resulted in falls in the level of new business for some companies. It also resulted in most major Building Societies becoming tied agents, so that new business became more concentrated and dependent upon a few producers. This dependence may lead to an examination of the relationship between producer and provider. One way out of the problem is to demutualise and become owned by the major distributor. This was the motive for the FS Assurance demutualisation.

1.4 Secondly, there has been a dramatic shift in the pattern of new business. The important lines are now mortgage endowments, individual pensions, funds management, and unit-linked. Of these, only individual pensions plan holders may be in the mould of traditional mutual policyholders. Thus many mutuals will have a majority of members and policyholders for whom mutuality of the company is not relevant.

1.5 Thirdly, the Europe wide market may demand bigger companies. Some mutuals may feel that they do not have the capital resources to enable them to be able to compete successfully. It is difficult, if not impossible, for a mutual to obtain additional capital other than by retention of surplus, which is usually a slow process, or by selling off parts of its business. Demutualisation enables a company to raise capital.

1.6 The increase in activity and interest in the subject of demutualisation has been reflected by a corresponding surge in the level of professional research and discussion in the U.K. A Faculty meeting on Demutualisation[(2)] in April 1990 provided some valuable insights into the subject, and a paper has also been written by a Faculty Working Group[(3)], which focuses on the modelling of a mutual with-profits fund. The subject of Section 49 Transfers has also been discussed by a Joint Working Party, leading to the development of additional guidance notes for independent actuaries (GN15), and, more recently, a paper on this subject by Pell[(4)] has been presented to the Staple Inn Actuarial Society.

1.7 In this paper we have attempted to address the practical aspects of the process and the decisions which must be taken if a demutualisation is being considered, and we have commented on some of the difficult actuarial issues which are relevant to a demutualisation.

In Section 2 we consider the way in which mutuals have operated in the past, the forces which are pushing them to consider demutualisation, and the alternatives to demutualisation. We also consider the methods and types of demutualisation which are available and the responsibilities of the directors and actuaries.

In Section 3 we discuss the formulation of a Scheme, including the interests of the various parties involved, the factors influencing the choice of structure, the treatment of with-profits and other lines of business, and the impact of structure on the value of the company.

In Section 4 we consider in more detail the key issues of policyholders' reasonable expectations and the value of membership rights. The basis of compensation for policyholders and members is analysed, and the problems of placing a value on a demutualising company are discussed. We also discuss the likely impact of GN15 and the particular requirement to consider the alternative of a closed fund.

Section 5 looks in detail at the operation of a closed fund, including some simple fund projections which we use to illustrate some of the earlier comments, and in Section 6 we review the operation of an open fund.

1.8 We would like to thank our colleagues who have assisted in the preparation of this paper, in particular Ian Farr who assisted with the research, Graham Powell and Tony O'Riordan for their work on the projections, and Dorothy Bruce for typing numerous drafts. We would also like to thank others who have been kind enough to provide their views on the matters discussed in the paper; we would add that the opinions expressed in this paper are entirely our own.

2. BACKGROUND TO DEMUTUALISATION

2.1 *Principles of Mutual Operation*

2.1.1 The question 'what is a mutual life assurance company?' may seem strange to generations of actuaries brought up on examination questions which begin 'You are the actuary of a mutual life assurance company...'. Nevertheless it is a serious question which does not appear to have been debated at the Institute.

2.1.2 Mutuals have various forms of legal constitution which are often complex. However, they all have in common the absence of outside shareholders. Policyholders are the members of the company, although different companies have different classes of policyholders as members, and it is not unknown for non-policyholders to retain membership rights (for example in the case of assignments). The major difference occurs in the treatment of non-profit policyholders with regard to voting rights, and their rights to surplus of the on-going company or in a winding up. Franklin & Lee[1] examined this question and the position has not changed substantially since then. At the present time two-thirds of U.K. mutuals extend membership rights to non-profit policies, although over 50% of these specifically limit the distribution of surplus to with-profits policies.

2.1.3 It may be argued that demutualisation is equivalent to a winding-up of the company, and that, accordingly, the winding-up provisions should apply in the determination of rights and benefits. However, if demutualisation could be achieved by a reconstruction of the company, this, by definition, is not a winding-up. If it is achieved by Section 49 of the Insurance Companies Act 1982, then this provision was specifically introduced to avoid winding-up. The legal position is that a demutualisation is not a winding-up.

2.1.4 It is not in the legal framework that the lack of clarity is found, but in the way in which mutuals operate and in their objectives. In the United States of America the usual justification for mutuals is that they provide insurance at cost. In the U.K. this is not the position, because the industry has been driven by saving and investment rather than by life assurance protection. In addition, the free surplus position of U.S. mutuals is dramatically different from that of most U.K. mutuals—being of the order of approximately 5% of total assets.

2.1.5 There are two common theories of mutual operation referred to as the 'entity' theory and the 'revolving' theory. The discussion on the revolving and entity theory of mutuals has been covered by Franklin & Lee. In the discussion on these two alternative theories of mutual operations it could be argued that the revolvers are providing the equivalent of insurance at cost, and are extending the concept to the return of investment benefits to the current generation of policyholders. A similar claim may now be made by the entity companies, but this cannot always have been the case. Since the overwhelming majority of U.K. mutuals are proponents of the entity theory, assurance at cost cannot be the rationale.

2.1.6 Inherent in the operation of a company operating according to the entity theory is the concept, and the actuality, of transfers of resources in the shape of capital (or more strictly orphan surplus) from one generation to another. We define orphan surplus to be total assets less assets required to meet policyholders' reasonable benefit expectations. Because the amounts of these transfers have become large, it is the attitude of the company towards the orphan surplus and how it is used that largely answers the question posed in this section.

2.1.7 The uses of the orphan surplus are similar in most entity theory mutuals. A common feature which can be implied is the belief that the orphan surplus does not belong to the current generation of policyholders. If this be the case, then, by extension, it cannot belong to any policyholders. A short move is required to reach the point where the orphan surplus belongs to the 'company'—without clearly defining what the company is. This was the contention put forward by Leckie[5] to the Society of Actuaries, although he took the argument further than many members of the Society and, we suspect, many members of the Institute would like.

2.1.8 Thus we have the current position, which may be summarised as:

—the company is a mutual,

—the company has orphan surplus,

—the company will decide what to do with the orphan surplus—in general terms it will be held as a form of trust to benefit successive generations of policyholders, and

—this is the basis policyholders accept when they take out policies and become members.

The current method of operation is relevant in dealing with the problem of policyholders' expectations. In the later sections dealing with the mechanics, policyholders' expectations will be a major factor.

2.1.9 If the argument for the way in which mutuals operate is that policyholders and members join the company as an ongoing entity, and can gain an idea of the company's philosophy by looking at what has happened in the past—in particular that orphan surplus will be passed on from one generation to another—then the continued operation of the mutual must be seen as being in accord with both their understanding and expectations, and no one should object. Much of this is, of course, implicit, because the company does not state it, and there is strong suspicion that most policyholders either do not know that they have a policy with a mutual life assurance company, or if they do, what this means. This position is being modified by the requirement to publish a 'with-profits' guide.

2.1.10 What, however, is the position if there is a fundamental shift in the basis of operation, such as the demutualisation of the company? The answer to this question goes to the heart of the major problem in a demutualisation, and can be along a range of possibilities:

—One extreme is that it is of no concern to the policyholders or members providing that their financial position is not changed, that is they can expect to receive the same level of benefits and financial security. Under this alternative they would not be entitled to the orphan surplus, and policyholder benefits would be no different before and after the fundamental change. This is the position expressed by Leckie.

—It may be felt that policyholders and members will need some compensation, which may be different for with and without profits policies.

—The other extreme is that all of the orphan surplus should now be given to the current generation of members and policyholders. In this case the discussion will be limited to the method used to distribute the surplus.

Because the constitutions of companies do not say what will happen on demutualisation and there are no statutory provisions, the position is unclear. It is apparent, however, that the current position will come to an end because the company will no longer be a mutual. Accordingly, it will not be unreasonable to take the view that a continuation of policyholders' expected benefits is impossible and that they will need some compensation for the change.

2.1.11 In considering the question of compensation, it clarifies the issues to differentiate between:

—benefit expectations arising from being a policyholder, and

—membership rights.

The reason for this is apparent in those circumstances where the members include different types of policyholders, with widely differing contractual benefit expectations.

Policyholder benefit expectations and membership rights are separate, but have frequently been taken together resulting in a confused situation. These rights are considered in Sections 4.1 and 4.2.

2.2 *Forces for Demutualisation*

2.2.1 The forces for demutualisation fall into three categories:

—the need to raise capital,

—the need to find distribution,

—strategic opportunities, and

—different categories of mutuals will be subject to different forces.

2.2.2 It is worth noting that there are many forces in the opposite direction to stay a mutual. Mutuality has several distinct advantages, including:

—a competitive edge because there are no dividends payable to shareholders,
—the ability to take a longer term view, and
—freedom from the threat of takeover.

Although there is a body of opinion which believes that this leads to a comfortable existence, with resulting disadvantages to policyholders, we do not subscribe to this view. Obviously mutuals are not all the same, but an examination of the past twenty-five years shows that mutuals, as a group, have performed well and that there have been some outstanding success stories which have carried several mutuals into the position of major financial institutions. To achieve this they have exhibited skills in finance, investment, administration, marketing and sales. Mutuality will not be given up lightly.

2.2.3 Mutuals have been able to develop rapidly without recourse to outside capital because of the high level of investment returns over the last twenty-five years. The theory that mutuals can only expand as fast as the rate of return they earn on their capital is well documented in papers by Smart(6) and Bunch(7). Long-term growth in excess of net investment returns can only be achieved if the rate of return on capital invested in new business strain exceeds the rate of growth. In other words, each generation must make a positive contribution to the estate. If investment conditions prove to have been exceptional over this period, mutuals will find it more difficult, in the future, to fund expansion from their own internal resources.

2.2.4 Capital is required to meet statutory solvency requirements, to finance new business, and to enable the company to invest in equities and property, and hence obtain expected improved investment performance. The need for capital in the future will be greater, because of competitive pressures which are pushing in the direction of maintaining reversionary bonuses at the expense of terminal bonuses, and the continuation of a high equity backing ratio to generate competitive long-term returns. Both of these features require the establishment of higher reserves on a statutory basis, with the consequent requirement for capital.

2.2.5 A decision to demutualise to raise capital will arise, either because the company feels that it does not have sufficient resources to compete, or because there are opportunities which cannot be realised with the available resources. In the first of these cases there must be a serious question as to whether capital is the real problem. If it is not, then demutualisation will not resolve the real issue and the problem will persist unless operational measures are taken. For example, if products are unprofitable, or expenses are out of control, a capital injection alone will not remove the problem.

2.2.6 Capital requirements for the benefit of taking advantage of opportunities may be considered by even the strongest mutuals. In order for them to be contenders on the wider European, or world stage, whilst at the same time maintaining the financial strength to compete in the U.K., it would be expected that additional capital will be required. Whilst recognising this as a legitimate corporate objective, there may be alternatives to the drastic step of demutualisation, such as strategic alliances, joint ventures or mergers.

2.2.7 In most cases in the U.K. we expect the motivating force for a demutualisation to be distribution. The Financial Services Act has been discussed in great detail throughout the financial services industry, and this is not the place to go over old ground. However, one of the major consequences for life assurance has been that previous distribution relationships have been disturbed, and a much reduced independent distribution sector is concentrating new business with fewer companies than in the past. As a result, some mutuals are coming under pressure because of falling new business. Although a mutual has the advantage that it can take a longer view because it is not under dividend pressure, the longer-term view must encompass a viable organisation within a reasonable time horizon. If it cannot, or it feels that the future is too uncertain, then one alternative is to seek a partner which has distribution or can give access to distribution. If this be the case, the relationship may encompass demutualisation and consequent loss of control.

2.2.8 A Board of Directors could come to the conclusion that the change in status from a mutual to a stock company would, in itself, be beneficial or desirable. This was the case in the most notable recent demutualisation in the U.S.A. The Union Mutual was not motivated by either lack of capital or distribution, although the directors and management can hardly have been totally happy with the position—otherwise nothing would have changed. The demutualisation was undertaken because it was felt that a stock company fitted better with the corporate objectives. Thus far, the results seem to have justified the change, as the company has re-positioned itself effectively and increased in size. It changed its distribution from tied agents to independent intermediaries, and moved to concentrate on risk products especially disability insurance. Whether demutualisation was necessary to do this cannot be known, but it was part of a major move forward for the company.

2.3 *Alternatives to Demutualisation*

2.3.1 Any alternative must satisfy one of the three major drivers for demutualisation, that is it must raise capital, help with distribution or provide strategic opportunities.

2.3.2 The current position is that it is not possible for a mutual to raise capital directly. Merger with a stronger mutual may be a way of meeting the objectives. If the business is basically sound, in that new business is being written on a profitable basis, then merger with a mutual that has a strong free asset position will enable the fund to take a more robust view on investment freedom. Of course merger with another mutual will, in many cases, be the prelude to the end of the company, because it will be absorbed.

2.3.3 An alternative method of attracting capital is to sell off parts of the business. If a viable business can be established in a downstream subsidiary, it may be possible to attract capital from a third party by selling a proportion of the shares of the subsidiary. The business which is sold may be a particular line of business (e.g. unit-linked), an insurance function (such as a management services company) or a geographic entity (e.g. an overseas branch). However there are often difficulties in establishing a subsidiary which is an attractive proposition without giving up control of some key function or entity.

2.3.4 If the objective is to tie in distribution, then a joint venture may be a possible solution, via a jointly owned subsidiary company. The mutual provides administration services and possibly investment management. The partner provides distribution and a proportion of the capital. The difficulty with such joint ventures is their long-term lack of stability. The mutual does not, in fact, gain control over the distribution, and the distribution partner may ultimately walk away.

2.3.5 An alternative is to form a strategic alliance by way of some kind of operational merger. The exact nature of this can vary from a tied agent relationship to a full scale integration of the two companies' operations. At the present time, the most likely partner for such an arrangement is an organisation with a clientbase, such as a bank or building society. The advantage for the partner is an influence over the insurance manufacturing capability at no cost. Except for the loosest of arrangements, it is expected that negotiations would be difficult, since the scheme is unlikely to produce any extra benefits for each party over a tied agency position. There may also be problems with the respective regulating agencies, which will be confronted with a hybrid which does not conform to their usual experience. A more permanent arrangement would be for one party to acquire the other—this would normally involve the mutual demutualising. We understand that a hybrid structure, such as that used by National Mutual and ANZ Bank in Australia, involving a company limited by guarantee and having a share capital, would not be possible in the U.K.

2.3.6 Alternatives to demutualisation require the ability to attract capital or distribution from a third party, without giving up control. This may be feasible for a large mutual, which may itself be an attractive partner, and may have significant operations which it can share. However, for smaller mutuals we doubt that these alternatives will be achievable in practice.

2.3.7 A more feasible solution may be to accept the constraints and operate efficiently within these—'niche player' is the popular phrase at the moment for this. If it cannot do this, or demutualise, there is always the option of ceasing to trade. Although this will create its own problems, there is no reason why mutuals should consider themselves immortal or immune from pressures which affect companies in life assurance or other parts of the economy.

2.4 *Methods of Demutualisation*

2.4.1 No specific legislation exists to enable a mutual insurance company to convert directly to a proprietary form. It is not possible to convert a mutual company incorporated under the Companies Act as a company limited by guarantee, into a company limited by shares. In any event there would be no provision for the protection of policyholders' interests. In the case of a company which has been established by Act of Parliament, then a further Act will be required for any change to its constitution, unless the constitution allows it to register under the Companies Act.

2.4.2 In practice, a demutualisation can be effected by the transfer of the business to a new company using Section 49 of the Insurance Companies Act. The mechanics of a Section 49 transfer are explained in detail in Pell. Whilst Section 49 was never intended to be used for the purpose of a demutualisation and, as we shall discuss in later sections, is not completely satisfactory, it does have a number of virtues. In particular, the legal process is well defined, it provides for the protection of policyholders' interests, and the sanction of the Court, once granted, is binding on all parties. The use of Section 49 has also been made easier by the provisions of the 1990 Finance Act which confirm certain extra-statutory tax concessions regarding roll-over relief on unrealised capital gains and, in addition, allow for the carry-over of certain tax losses on the transfer of business.

We assume that most, if not all, life company demutualisations will take this course. In addition, it is almost certain that an Extraordinary General Meeting of members will be held, even if the Articles of Association do not strictly require it. A significant majority (usually 75% of those who vote) will normally be required in favour of any proposed scheme, for the directors to feel that they have a mandate for such a radical change.

2.4.3 The method of demutualisation will depend upon the ultimate form of the company. If the company is to be taken over by another company, the most straightforward way of effecting the demutualisation is to transfer all of the assets and liabilities to a life assurance company owned by the acquirer. The acquirer may not own a life assurance company, in which case there will be a need to acquire a proprietary company, or to apply for authorisation for a new company. Some mutuals do have subsidiary life assurance companies, so one of these could be sold to the acquirer in a separate transaction to act as the receiving company. If a start up is being used, the normal authorisation procedures must be complied with, but the DTI are usually co-operative by giving conditional authorisation, dependent upon the Section 49 transfer itself receiving approval.

2.4.4 A flotation on the Stock Exchange would require a different approach. No mutual has demutualised and applied for a quotation in the U.K., although we have the example of Union Mutual in the U.S.A. In the U.K. there are examples of a building society, Abbey National, and a mutual bank, TSB. There will still need to be an authorised insurer for the transfer to take place and for this, or a holding company, to become the quoted company. The co-operation of the Stock Exchange will be needed as well as all of the procedures for a normal company flotation. Even if no capital is required by the mutual, sufficient shares must be made available for a market to be made and satisfy the Stock Exchange. If capital is required, then there will be an offer of shares to the public, as well as the allocation to members and policyholders. Thus, if a Stock Exchange quotation is required, it will necessitate a valuation of the company because some shares will be for sale. The end result will be an independent publicly quoted company.

2.5 *Responsibilities of the Directors and Actuaries*

2.5.1 The directors have a duty to the company and its members and are responsible for the operation of the company and its general well-being. In an ongoing company this does not create severe conflicts, although it may call for judgement on the determination of bonus rates which may:

—increase the financial benefits for the current generation of policyholders,

—weaken the financial resources of the company, and

—increase new business.

2.5.2 The position of the directors on the takeover of a proprietary company is not so clear. One body of opinion holds that the directors' responsibilities are still to the company, whilst another is that the primary responsibility shifts to the shareholders. If demutualisation can be exchanged for takeover and member for shareholder, then the divergence of opinion on directors' duties may apply in a demutualisation. Whilst the legal opinion may be unclear, it is inconceivable that directors could ignore members in the pursuit of the good of the company—especially as independent observers will most probably be standing by to comment on the Scheme.

2.5.3 It is clear, that the directors are responsible for commercial decisions and, whilst they will look to advisers, especially actuaries, they remain the decision makers. The judgement in the London Life case, for example, confirmed that the choice between alternative schemes is a matter for the directors, not the Court, and that the role of the Court is to consider 'whether the Scheme as a whole is fair as between the interests of the different classes of person affected'. The Court does not have to be satisfied that no better Scheme could have been devised.

2.5.4 If demutualisation is being undertaken, the directors must decide upon a Scheme which they can recommend to their members. To be in a position firmly to recommend the Scheme, they will need to satisfy themselves as to:

—the expected effects of the Scheme on the existing policyholders of each class of business, including security for their guaranteed benefits and expectations in respect of non guaranteed benefits,

—the adequacy of the overall level of compensation being offered to members for the loss of their membership rights, and the methods of allocating the compensation,

—the fairness of the allocation of compensation between different classes of member,

—the possible benefits available from alternative Schemes (including other strategies which do not involve demutualisation) compared with the Scheme under consideration, and

—the impact of the Scheme on the organisation as a whole, and management and staff in particular.

2.5.5 The actuaries involved in a demutualisation will include:

—the Appointed Actuary,

—the independent actuary, and

—the Government Actuary.

In addition, the directors have generally sought external actuarial advice.

2.5.6 The Appointed Actuary, as Appointed Actuary, would seem to have no specific additional responsibilities during a demutualisation because, in defining the position, neither statutory provisions nor Institute Guidelines address this specific issue. This may be an area where Appointed Actuaries feel they need some guidelines. The Appointed Actuary is concerned with solvency, financial strength and policyholders' reasonable expectations. Provided none of these is impaired, he will have discharged this duty. However, he is also an important member of the management team and possibly the Board. In this role he will obviously have an important and expert contribution to make. In addition, the independent actuary may rely on the Appointed Actuary for a considerable amount of information and actuarial analysis. Many will consider that the Appointed Actuary should have a central role to play, but the current rules do not formally provide for this. It has become the custom for the Appointed Actuary to prepare a separate report on the Scheme, but the contents of this report are not specified, and neither is its purpose.

2.5.7 An independent actuary will be required for a Section 49 transfer. His role is clear, but limited. Section 49 requires a report from the independent actuary 'on the terms of the Scheme' and specifically, 'sufficient to indicate the opinion of the Actuary on the likely effects of the Scheme on the long term policyholders of the companies concerned'. There is no specific mention of membership rights, or the need to consider alternative schemes. As we have stated, the Court itself does not see its role as deciding between alternative schemes. The recent Institute Guidelines in GNI5 seem to have extended the role of the independent actuary in cases which involve a dilution or loss of membership rights, with the recommendation that he should address:

> "in the case of any mutual company involved in the scheme, the effect of the scheme on the proprietary rights of the members of that company and, in particular, the significance of any loss or dilution of the rights of those members to secure or prevent further constitutional changes which could affect their expectations as policyholders (for example, conversion to a closed fund)".

The Joint Working Party on Reasonable Expectations[(8)] adopted a similar position with the conclusion that:

> "in the circumstances of a major change in a life office (such as a demutualisation) policyholders may reasonably expect that the proposed new arrangements do not disadvantage them as compared with the option of a closed fund. Our profession therefore should make the advantages and disadvantages of each option clear and recommend a closed fund if it is in the interest of the existing policyholders".

2.5.8 This indicates that the independent actuary must consider membership rights and, in particular, attempt to evaluate such rights in the context of alternative schemes, for example, the closed fund. We are uncomfortable with this extension of the independent actuary's role for a number of reasons. Firstly, the significance of the loss of membership rights is primarily a commercial rather than an actuarial issue. Secondly, it could be questioned as to whether it is appropriate in all cases to make a comparison against the closed fund, or, indeed, any other alternative to the Scheme which has not been considered by the directors. We doubt if it is universally accepted that "policyholders may reasonably expect that the proposed new arrangements do not disadvantage them as compared to the option of a closed fund". Thirdly, it would appear that the independent actuary is being placed in the role of adviser to the policyholders and members, in deciding whether to cast their vote in favour of a particular scheme.

2.5.9 It is only more recently that Section 49 transfers have taken place involving a dilution or loss of membership rights. In the London Life case the independent actuary commented briefly on the dilution of voting rights and concluded there was no material loss. In the National Mutual case, the independent actuary deferred to the legal advice received by the directors as to the U.K. policyholders' rights to the (orphan) surplus. In both cases the effects of the Scheme were compared only with the position if there had been no transfer. In the FS and Pioneer Mutual cases the independent actuaries did comment on the value of membership rights. These were stated to be of no tangible value for non-profit policyholders (although no explanation of how his conclusion was arrived at is given) and were deemed to be appropriately compensated by the improved security offered by the Scheme. The position for with-profits policyholders was compared with the closed fund alternative, as well as the current position, and it was possible to show that prospects were likely to be better under the Scheme. In these two cases, however, the alternative of a closed fund was considered to be the most likely, if not the only, alternative if the Scheme did not go ahead, and was considered by the directors themselves.

2.5.10 If the independent actuary is to consider schemes which are not put forward by the directors, such as the alternative of a closed fund where this is not considered to be a reasonable alternative, this would place the independent actuary in the position of 'second guessing' the directors and effectively making commercial recommendations. The real purpose of the independent actuary's report is to advise the Court and, presumably, it would be difficult for the Court to ignore expert evidence to the effect that there were better schemes than that suggested. Thus, the independent actuary would be effectively deciding on the Scheme. It may be desirable for the independent actuary to state what compensation, if any, the Scheme provides for loss of membership rights. However, it is not clear whether the independent actuary is qualified to comment on whether this represents 'fair value' for the loss of those rights, since we believe that this is primarily a commercial matter. Moreover, there is no established actuarial or scientific basis for quantifying this value. The resolution of this question will vary, depending on the individual circumstances. It is a matter for the directors and their advisors, for the DTI, and for the members themselves to decide, and, ultimately, for the Courts.

2.5.11 The Government Actuary's Department's role is to advise the DTI and, as adviser, it can have considerable influence. The DTI's attitude seems to have been evolving, and the DTI have shown that their primary concern is the protection of policyholders' interests. Their interpretation of policyholders' interests appears to go beyond benefit expectations. In the National Mutual case, Counsel for the DTI expressed the view that policyholders could reasonably expect that they would be treated fairly, having regard to all competing interests. Thus, consideration of reasonable expectations would include proper account being taken of the interests of policyholders in the relevant surplus (or estate) of the office.

3. FORMULATING THE SCHEME

3.1 *Parties Involved*

3.1.1 The process of demutualisation will involve or affect a number of different parties whose interests will need to be considered, and may need to be separately represented:

—policyholders—with-profits and others,

—members,

—future shareholders,

—management and staff, and

—agents (appointed representatives or independent financial advisors).

The process and outcome of the demutualisation must fulfil the expectations of each of these parties if it is to be successful.

3.1.2 The policyholders have an interest in the financial security of the company, which itself depends on the financial strength and levels of free surplus. In most cases a demutualisation will involve an injection of capital, and financial strength will often be increased. However, even in cases where there is a reduction in free surplus, this may not necessarily imply a material diminution of financial security. With-profits policyholders will have an interest in their future benefits, and the protection of their reasonable expectations is an important issue in any demutualisation. This is dealt with in Section 4.1.

Policyholders' interests are protected in a number of ways if the Scheme is effected by means of a transfer of engagements under Section 49 of the Insurance Companies Act. An independent actuary is required to report on the terms of the Scheme and its effect on policyholders, and policyholders may be heard directly by the Court, if they wish to object. The Secretary of State has the right to be heard by the Court, and is likely to intervene if the DTI is not satisfied as to the terms of the Scheme.

3.1.3 Membership rights are defined in the constitution—the exact class of policyholders who are members varies from company to company. In contrast to the position of policyholders, as policyholders, there are no specific provisions in the Insurance Acts to deal with membership rights in the circumstances of a demutualisation. The issues relating to membership rights are discussed in Section 4.2.

3.1.4 Future shareholders will be concerned that the structure of the Scheme is such as to result in a viable on-going life assurance operation, and one which is a suitable vehicle to fulfil their business objectives. Moreover, they will wish to ensure that the price paid for the business is such as to provide the prospects of a reasonable return on their investment. The future shareholders may have little familiarity with the complexities of life insurance business—particularly in the case of a non-insurance company acquiring a mutual—and will almost certainly have no experience of the process of a demutualisation. They will, no doubt, have considered alternative means of achieving their own objectives and alternative investment opportunities, and will only proceed if they are satisfied that there are significant advantages in the proposed Scheme compared with other alternatives they have considered. Any Scheme which is too biased in favour of the existing policyholders, and thereby imposes excessive constraints or potential future liabilities on the new shareholders, is unlikely to succeed.

3.1.5 Management and staff have an interest by virtue of their employment prospects. Management are also likely to be heavily involved in the demutualisation process and in framing the structure and terms of any deal with a third party. Whilst management will undoubtedly be concerned to ensure that the demutualisation is in the best interests of the existing policyholders, they will also wish to ensure the on-going viability of the organisation and consider both the short and long-term impact on management and staff. There is clearly a potential conflict here which the directors must ultimately resolve.

3.1.6 Appointed representatives of the company and IFAs who have previously supported the company will be concerned as to the impact of the Scheme on their existing clients, and also to the future prospects of the company after demutualisation. The company may wish to ensure the continuing support of its agents and will need to persuade them that its future prospects are generally improved by the demutualisation, or at least not diminished.

3.2 *Factors Influencing Choice of Structure*

3.2.1 A Scheme of demutualisation will specify the proposed structure of the reconstructed or new company—in particular:

—the number of funds to be established and types of business to be written in each,

—the shareholders' share of the surplus in each fund,

—the assets to be allocated initially to each fund, including any compensation paid by the acquirer, and

—the method of future operation of each of the funds, including any specific methodology for determining future bonuses for with-profits policyholders.

The most appropriate structure will depend on the individual circumstance of the company and the objectives of the acquirer, and is unlikely to be the same in any two cases. Nevertheless, it is helpful to consider alternatives which cover a range of possibilities.

3.2.2 The starting point must be to consider the business objectives for the new company, and to ensure that it is structured so as best to meet those objectives. There will be a range of alternative structures for the new company, but it must be recognised that the future operation will be constrained by the Scheme, and may be difficult to change subsequently. The actuarial issues, questions of reasonable expectations, compensation for loss of membership rights, consideration of alternative structures, etc., will be determined in the light of this initial decision.

3.2.3 In order to analyse the appropriate structure in the light of the business objectives, a business plan should be prepared. As with any such plan the key factors to consider are:

—*Future volumes and mix of business*: the extent to which the company continues to write with-profits business, and whether this is conventional or unitised, will be particularly important; business volumes will depend on the current distribution capabilities and the impact of the demutualisation on these, any additional distribution provided by an acquirer, and any plans to develop new channels.

—*Pricing and competitive requirements*: this will depend, to a large extent, on the type of distribution and the existing market position of the company. In particular, there may be a need to continue to offer competitive with-profits bonuses in the future, notwithstanding the impact of the shareholders share of profits on the future bonus paying potential of the company. The extent to which this is important will influence the required level of free reserves of the with-profits fund.

—*Expenses*: a projection of expenses analysed by line of business is required, reflecting the projected volumes of business. The allocation between lines of business is critical if the shareholders' share of profits varies by type of business.

—*Tax*: the projected tax position may be affected by the structure adopted, and will be relevant to the terms of the Scheme.

—*Capital needs*: there are several aspects to consider. Firstly, the level of shareholders' capital required to finance new business written in a 100%

shareholders fund must be determined. Secondly, if the with-profits fund is to remain open to new business, the impact of writing varying volumes of new with-profits business must be assessed. The fund should have sufficient financial resources to support the financing strains of the projected volumes of new business and the necessary free asset position to be strong enough to attract business.

—*Price and financial returns for shareholders*: the company can be structured so as to produce a range of prices payable by the new shareholder, and to provide an appropriate dividend paying capacity and stability in the level of future dividends. These considerations may be important for a new shareholder, and can help increase the attractiveness of the company. A 'low price' does not necessarily mean that members are not receiving a fair price—it may merely reflect a structure where the shareholders' share of profits is relatively low—i.e. the company is structured more like a mutual, with only a low shareholders' interest in some lines of business.

3.3 *With-Profits Business*

3.3.1 The treatment of with-profits business is crucial in a demutualisation. Two approaches are possible. The first is to leave the with-profits fund open to new business, and structure the fund so that shareholders have a share in future surplus. The second approach is to establish a closed fund for the existing with-profits business and write new with-profits business (if any) in a separate fund established for this purpose. In the latter case the shareholders' share in surplus in the two funds may be different.

3.3.2 The open fund approach has been used in both the FS Assurance and Pioneer Mutual cases and is, perhaps, the simplest, if least transparent approach. The with-profits fund is structured so that shareholders receive a percentage, usually 10%, of the total distributed surplus—i.e. one ninth of the cost of bonuses. In past examples there has been only one fund, so all business—both existing and new with-profits, non-profit and unit-linked business—is written in this fund, and all the assets are transferred to it. This results in a lower value to shareholders, since the shareholders' share of profits in unit-linked and other non-profit business is only 10%. There is no reason why the unit-linked and other non-profit business could not be split out into a separate 100% shareholder fund, if desired, as described in Section 3.4.

3.3.3 The concept of establishing a closed fund for existing with-profits business has been used in a number of previous demutualisations and reconstructions. The demutualisation of National Mutual of Australia's U.K. branch, the Southern Life demutualisation which is examined by Franklin & Lee, and the Irish Life reconstruction are just some examples. In the U.S.A. it has been used in many demutualisations and is seen as the best means of protecting policyholders' reasonable expectations. We discuss this further in Section 4.1.

3.3.4 The concept is to wall-off the existing with-profits policyholders with their own pre-defined block of assets, which should be at least sufficient to meet their reasonable benefit expectations. The future operation of the closed fund will be laid down in the

Scheme. The future benefits received by the policyholders in the closed fund then depend (solely) on the performance of their own fund. It may be that certain guarantees of support from outside the closed fund are provided in some circumstances—for example, in the London Life merger with AMP, support was to be made available in adverse circumstances deemed to be of a temporary nature.

3.3.5 The concept of a closed fund in fact encompasses a wide range of possibilities. At one extreme the company may be closed to new business—all existing business remains in one 'closed' fund and no new business (with-profits or other) is written. At the other extreme, the existing with-profits policies may be segregated in a 'notional' closed fund for accounting purposes only, and their future benefits determined in relation to a notional pool of assets in the notionally separate fund. The latter approach is similar to the 'open fund' approach, where the benefits for existing policyholders are determined from asset share calculations. In effect the notional 'closed fund' represents the aggregate asset shares for all the existing with-profits policyholders.

3.4 *Unit-Linked and Other Non-Profit Business*

3.4.1 Unit-linked and non-profit business can be transferred to a 100% shareholder fund or retained in the with-profits fund. Similar choices apply to new business. If new business is written in a separate shareholder fund, it may be more appropriate to transfer the existing business to this fund—especially in the case of unit-linked business, where it may not be practical to separate existing and new unit funds.

3.4.2 The decision on where to place non-profit business will depend upon:

—the attraction of the various options to new shareholders,

—the relative importance of this business, and

—administrative and accounting considerations.

The chosen structure will affect the future requirements for shareholder capital, the dividend paying capacity and the value placed on the new company.

3.4.3 A common structure, which reflects the position of many proprietary companies, is to write unit-linked business in a proprietors' fund and the rest in the with-profits funds. This structure is likely to increase the value of the company to shareholders.

3.4.4 In the event that any non-profit business is transferred to the proprietors' fund, the assets allocated to this fund would normally be just sufficient to meet the current statutory liabilities.

3.5 *Form of Compensation*

3.5.1 Compensation is likely to be in one of three principal forms:

—cash,

—shares in the demutualised insurer, a holding company, or acquirer, and

—enhanced benefits.

The Scheme will normally specify the amount and form of compensation and the level of any special reversionary or other bonuses to be declared contingent upon the Scheme.

3.5.2 The payment of cash compensation may be highly desirable to the recipients, but depletes the assets of the company, and may have adverse tax consequences.

3.5.3 The issue of shares may be appropriate in certain circumstances. For example, if the aim is merely to convert to proprietary form, then the members can be issued with shares, at nil cost. It will then be necessary to establish a market in the shares, so that the members can realise the value of their holdings. If, however, the requirement is to raise more capital, then some form of flotation of the shares will be required. Members may be given pre-emptive subscription rights to some or all of the shares, but they will need to subscribe a certain amount of capital if they wish to exercise those rights. Compensation might take the form of a limited number of free shares or a preferential price for any shares, but, to maintain their full equity interest in the company, members would have to commit further capital.

3.5.4 If a quoted company were to purchase a mutual, it may wish to do so by use of its own shares. It is unlikely that a purchase can be made entirely of shares, and some cash will be needed. The compensation for loss of membership rights could be dealt with by an offer of shares in the acquiring company, but a cash injection into the company will be needed for other compensation. The end result would be a life assurance subsidiary of a publicly quoted company, the members having shares in this quoted company.

3.5.5 The third method of compensation is to provide enhanced benefits to existing policyholders. This method has generally been used in the U.K. to provide compensation to with-profits policyholders. The payment is normally made into the with-profits fund and used to enhance the policyholder benefits, often by means of a special reversionary bonus. However, if enhanced benefits are provided by way of future reversionary bonus or enhanced terminal bonuses, rather than a one-off special reversionary bonus, the compensation can be used as financing for the fund and will improve the financial strength of the company.

3.5.6 In both the FS and Pioneer Mutual cases, compensation for the shareholders' share of surplus on existing business was paid into the fund and will ultimately be used to meet the cost of future shareholder transfers, so that bonuses are unaffected. This increases the short-term capital resources of the fund, and the compensation can be used to finance new business until such time as it is required to meet terminal bonus payments for existing policyholders. This approach has proved a considerable benefit, since neither fund was in a strong position prior to demutualisation. A small proportion of the total compensation was used to declare a special reversionary bonus at the time of the demutualisation.

3.5.7 The position for a stronger mutual will be very different. A substantial payment may be made to acquire the company, and the treatment of this will need to be carefully considered. Depending on the proposed structure, it may be appropriate that all of the compensation paid by the acquirer be used to enhance benefits to the existing with-profits policyholders or members. This might typically be the case if the fund is to be closed, and no future with-profits business is to be written.

3.5.8 Alternatively, the basis of an acquisition might be that a proportion of the compensation be given to the existing policyholders or members and the balance used to provide additional capital to support new with-profits business. If a proportion of the compensation is used to provide additional capital, then this will enhance the value of the company, and should be reflected in the value paid by the shareholders. For example, capital paid into a 90/10 fund would, effectively, increase the future shareholder value by approximately 10% of the amount injected.

3.5.9 The tax position of the policyholders and the company is also an important consideration in determining the form of compensation. A payment of cash or shares received in exchange for the giving up of membership rights may be subject to capital gains tax. In the case of shares, it may be possible to defer the tax charge until the shares are sold. Any compensation which is used to enhance policy benefits would not normally be taxable.

3.6 *Allocation of Assets and Compensation to Fund(s)*

3.6.1 The cash paid by an acquirer, or the capital raised by a flotation, together with the existing assets of the company in excess of those required to meet the non-profit liabilities will be apportioned, under the terms of the Scheme, between the following areas:

(1) amounts required to maintain reasonable expectations of with-profits policyholders,

(2) additional compensation to members and policyholders,

(3) amounts allocated to the (new) with-profits fund to support new business, and

(4) any amounts allocated to a non-profit (100% shareholder) fund to capitalise this fund.

3.6.2 The amounts required to meet policyholders' reasonable benefit expecta-tions effectively form a first charge on the available assets. The reasonable expectations, as discussed in Section 4.1, need to be quantified and appropriate assets set aside—either in a separate fund, or notionally within the with-profits fund, to provide the appropriate future benefits. The balance of available assets will be apportioned between (2), (3) and (4). Any change in the apportionment will affect the value. The appropriate level of additional compensation is discussed in Section 4.2. The balance of assets will be allocated as appropriate between the different funds and will be available to support new business.

3.6.3 The level of capital required in each fund will depend on the projected levels of new business. If the with-profits fund is over-capitalised and the company switches rapidly from with-profits to unit-linked business, then the surplus assets in the with-profits fund would be substantial, but shareholders would be unable to utilise them without a further reconstruction. At the same time, the shareholders might need to inject significant levels of capital to support the rapidly growing linked business. On the other hand, if the with-profits fund is under-capitalised, then it may be difficult to sell new with-profits business on competitive terms. Given that assets allocated to a 90/10 with-profits fund will be worth only 10% of their value compared with those allocated to a 100% shareholder fund, the allocation of any residual assets is an important question.

3.7 *Impact of Structure on Value*

3.7.1 The value of the demutualised company is dependent on the shareholders' share of surplus in different lines of business, and the initial surplus allocated to each fund.

The following hypothetical example is used to illustrate the impact on value of various different structures. We assume the following position:

Admissible Assets	Liabilities
£1,000m	Investment Reserves = £200m
	Statutory Reserves With-Profits = £600m Unit-Linked = £200m

3.7.2 The asset shares for with-profits business have been estimated to be £700 million in total, and this is assumed to be adequate to meet policyholders' reasonable expectations. The orphan surplus is thus £100 million. The cost of a 10% shareholders' share in the surplus from existing with-profits business is assumed to be £100 million, at the net earned rate. At a risk discount rate the value to shareholders is £90 million.

3.7.3 On the assumption that shareholders have a 10% share of surplus from with-profits business and 100% of profits from unit-linked business, we can place a value on the various components of the business. (Other non-profit business is assumed to be written in the 90/10 fund and is of negligible value). If this value can be realised, it would be available to provide compensation to members and policyholders, and/or could be used to support future with-profits business as described in Section 3.6.

Value of In-Force Business

	Premiums £m	Reserves £m	Value £m
With-Profits	120	600	90
Unit-Linked	60	200	50
	180	800	140

Value of New Business

	Premiums £m	Value Added £m	Goodwill Value £m
With-Profits	10	4	40
Unit-Linked	15	3	30
	25	7	70

3.7.4 Using this example, we can examine the impact of various structures on shareholder value. We consider the following cases:

1.(a) a closed mutual fund for existing with-profits business; a new 90/10 with-profits fund is established for new with-profits business and all unit-linked business. All orphan surplus is allocated to the new with-profits fund.

1.(b) as in 1(a), except all unit-linked business is written in a 100% shareholder fund.

2.(a) a 90/10 fund is established for all existing and new business, including unit-linked.

2.(b) as in 2(a), except all unit-linked business is written in a 100% shareholder fund.

3. a closed mutual fund for existing with-profits business; no new with-profits business. All unit-linked business is written in a 100% shareholder fund. Orphan surplus is retained for the existing policyholders in the closed fund.

For simplicity, we have assumed that the shareholders' interest in the investment reserves, and in the unit-linked business, if this is written in a 90/10 fund, is exactly 10%.

	Examples				
Value of In-Force	1(a)	1(b)	2(a)	2(b)	3
— With-profits business	10	10	90	90	—
— Unit-linked business	5	50	5	50	50
Total	15	60	95	140	50
Goodwill Value					
— With-profits business	40	40	40	40	—
— Unit-linked business	3	30	3	30	40*
Total	43	70	43	70	40
Total Value	58	130	138	210	90

*Assuming replacement of 50% of with-profits new business by unit-linked business.

The results are illustrated in Figure 1.

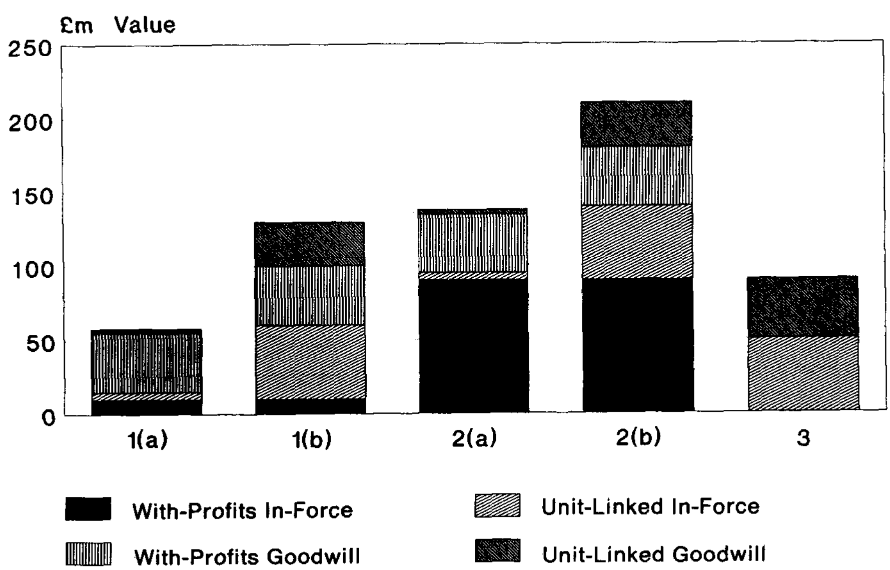

Figure 1. Impact of alternative structures on value.

3.7.5 In example 1 the orphan surplus is retained within the with-profits fund where it can be used to support new business. It is, therefore, worth only 10% to shareholders. In example 1(a) profits from the unit-linked business accrue 90% to with-profits policyholders and 10%, indirectly, to shareholders, whereas in 1(b) unit-linked profits accrue directly to shareholders.

In example 2 the orphan surplus is used to meet the cost of shareholders' transfers on the existing with-profits business. Initially it can be used to finance new business.

In example 3 the shareholder value is only £90 million, but, in addition, the policyholders in the closed fund receive the orphan surplus of £100 million. Alternatively, if the £100 million orphan surplus were allocated to the shareholder fund, this would increase the value of the company to £190 million. In the first case the orphan surplus accrues as a windfall to the existing policyholders in the closed fund; in the later case it increases the value available as compensation to members who will not always be the same group as with-profits policyholders. If shareholders are not to receive any windfall, then the shareholder value must be fully distributed to the existing policyholders.

4. KEY ISSUES

4.1 *Policyholders' Reasonable Expectations*

4.1.1 The findings of the Working Party on Policyholders' Reasonable Expectations indicated how difficult it is to agree any simple definitions. This has been made more difficult in the past because companies have not disclosed the principles on which their with-profits bonuses were based. This has now changed with the emergence of With-Profits Guides.

4.1.2 In a discussion of policyholders' reasonable expectations, we are concerned only with their benefit expectations dependent upon the policy, and not with membership rights. The working party did not appear to make this distinction clear. We take the point made by the working party, that it is not sufficient to limit consideration to the majority of policyholders who may have little understanding of life assurance, but should base the concept upon policyholders who do understand, informed advisers and the press. We are concerned both with the definition of policyholders' reasonable expectations and how the Scheme may best ensure their realisation.

4.1.3 Reasonable expectations result from the totality of the information available on the company, together with environmental factors which influence policy proceeds. Many companies are now using asset shares as a means of determining bonuses. However, it is clear that asset shares have no unique definition, and there are a wide range of techniques and approaches used in determining them. This applies not only to the calculation of the 'pure' asset shares, but, more particularly, in the extent to which miscellaneous surplus is included, the level of surplus charges, if any, deducted from the asset shares, and the methods of smoothing. Pure asset shares would remove the smoothing benefits of with-profits and lead to an equivalence to unit-linked policies. Smoothed asset shares have the disadvantage that they may be arbitrary. Whatever the disadvantages, the move towards a larger proportion of policy proceeds being paid in the form of terminal bonuses makes asset shares more appropriate. High terminal bonuses, which fluctuate with the market value of assets (albeit on a smoothed basis), are consistent with asset shares.

4.1.4 Although the Scheme will be concerned with the mechanics of meeting policyholders' reasonable expectations, these expectations are realised by the bonuses allocated to policies. The directors and their advisers must make the choice as to whether the open fund or the closed fund can expect to provide the level of bonuses required. The closed fund does this by 'walling off' assets, and the open fund by defining the basis of operation.

4.1.5 The question of policyholders' reasonable expectations has been studied in the U.S.A. by the Society of Actuaries. The Task Force on Mutual Life Insurance Company Conversion[9] recommended that policyholders' reasonable expectations could be best achieved by establishing a 'closed' accounting fund for bonus purposes. The assets to be allocated to this closed branch should be sufficient, together with future premiums, to pay the (then) current scale of bonuses if the (then) current experience continued. This suggests a prospective rather than retrospective approach to policyholders' reasonable expectations, but it can be difficult to interpret in U.K. circumstances. For example, current bonuses reflect the high investment returns achieved over the last two decades. A bonus reserve valuation with current bonus levels would, therefore, require an assumption of a high future interest rate to be totally consistent with this definition. The inherent difficulty with such a prospective valuation is its sensitivity to future bonus and interest rate assumptions. One approach would be to assume a gradual fall in bonus rates from current levels, to the levels supportable by new policies on the chosen long-term growth assumptions.

4.1.6 Clearly, with the increasing importance of asset shares, the use of a prospective basis on its own would be unsatisfactory. Any results from a bonus reserve valuation would need to be compared with those obtained from a retrospective approach. There may be other considerations peculiar to the U.K. For example, the importance of mortgage endowments may lead actuaries to believe that the policyholders' reasonable expectations are to repay the mortgage—accordingly, a bonus reserve valuation with assumed future bonus rates sufficient to repay the mortgages, would be a minimum.

4.1.7 Any extra payment to with-profits policyholders in excess of the amount required to meet their reasonable expectations will be made on the basis of a commercial decision, or may reflect a desire to err in favour of caution, because of the uncertainty in quantifying policyholders' reasonable expectations. Policyholders could object to the Scheme, and an extra payment may inhibit objections, or make the Scheme more secure from attack. It may be felt that with-profits policyholders are entitled to all of the current surplus, because it is policyholders' funds which have been used to reach the current financial position. However, there should be no reasonable expectation, as policyholders to any additional payment, or to all of the current surplus being paid out to them.

4.1.8 Other aspects of reasonable expectations relate to the financial strengths and security of the office. In general, a demutualisation should improve the position, and this should not be an issue. Security is the only significant area of concern for policyholders of conventional non-profit policies, but unit-linked policyholders may also have expectations as to the future level of their discretionary charges (mortality charges, expense deductions and fund charges, for example). If the demutualisation is to improve the future prospects of the company and the potential for growth, this should enable the company to control its future costs, and hence limit future increases in charges. However, there may be a possibility that the future shareholders will take a more aggressive approach to increasing these charges than the current mutual management. It is difficult to place any firm restrictions on increasing these charges in the future, otherwise stronger actuarial reserves and higher solvency margins will be required. Some indication of future intentions should be given, and where this is different from past practice, some form of compensation may be appropriate to protect 'reasonable expectations'.

4.2 *Membership Rights and Compensation*

4.2.1 The category of persons who comprise the membership varies between companies. The biggest difference between companies is those where membership is limited only to with-profits policies and those in which all policies qualify for membership. There is a further sub-group of companies whose non-profit policyholders are members, but cannot participate in surplus.

4.2.2 The primary right of members is that they can vote for directors, and that certain resolutions that require a general meeting—such as a change to the company's Articles—must be approved by them. Thus, in the final resort, the members can decide upon the way in which the company operates. The fact that they usually take no action is some evidence that they approve of the current on-going basis of operation for mutuals. It also reflects the difficulty of members organising to take concerted action.

4.2.3 Although members have many of the rights of shareholders in a proprietary company, they are not the shareholders in the mutual. We feel that many of the arguments put forth on members' entitlement (or sometimes, with even more confusion, policyholders' rights have been quoted), arise because they are being considered as shareholders. Two important differences are:

- —membership is only temporary and dependent upon the existence of a policy, and
- —there is no clear entitlement to the assets of the company in law, except in circumstances where the Articles explicitly provide otherwise.

Thus, compensation for the loss of membership rights is not like the sale of a share in a company, or the payment to a shareholder in the takeover of a company. Compensation should be based upon the loss of the temporary right to vote on certain issues. If this is so, then compensation can be uniform across all members per vote, because it is the ability to vote which is being compensated for; or the compensation should increase with the expected unexpired duration of the policy, because it is both the removal of the vote and the potential time for which it could be exercised which are important. An argument that with-profits policyholders should receive more for their membership rights would be based upon the fact that they have most to lose by a removal of the vote, or on the grounds of 'fairness'.

4.2.4 We have no solution to the problem posed by the valuation of membership rights, but we do have some observations. The limit on the total of the value of membership rights must lie between zero and the total of all current surplus, the value of in-force non-profit business and any value which can be obtained for goodwill. The arguments for zero are either that the value of the company is zero after compensating participating policyholders or that the chance of members exercising their rights is so remote that the rights have no value. Arguments in favour of the value being the total value of the company rely on the ability of members to insist on this if they are able to organise effectively. It was particularly interesting to note, in the demutualisation of National Mutual's U.K. branch, that little value was placed on the membership rights of the U.K. policyholders, because they formed such a small proportion of the total membership of National Mutual.

4.2.5 Since the argument in Section 2.1 reached the conclusion that it is implicit in the way in which mutuals operate that the surplus does not belong to the current generation of policyholders, it is reasonable to extend the principle to members, i.e. the current members are not entitled to the surplus either. The conclusion we reach is that the value of membership rights is determined by what the directors feel the members are entitled to, increased by any amount which they feel will need to be given to persuade the members to agree to the demutualisation. This means that it is a commercial decision depending upon individual circumstances. As such it is not capable of determination by actuarial techniques.

4.2.6 We consider the ill-defined position of membership rights in a mutual to be unsatisfactory. Although mutual life companies have carried on business successfully for over 200 years, this is not sufficient justification for no change. Mutual Life companies are amongst the largest financial institutions in the U.K., and, on most measures, at least five of the top ten life assurance companies are mutuals, so their constitution must be of importance.

Many of the problems associated with demutualisation are centred upon the entitlements of the various parties. In framing a Scheme a large volume of the work is concerned with this question, and with how the various interested parties will react. Whilst nothing can be certain, it would help if members knew their position, and if their rights and entitlements were clarified, if necessary through legislation. This could, perhaps, be achieved by companies proposing appropriate alterations to their Articles.

4.3 *Valuing Policyholders' Compensation*

4.3.1 If shareholders are to share in the surplus arising from existing with-profits business, policyholders will need to be compensated for the loss of future surplus, so that their benefit expectations are not diminished. There is a perceived difficulty in selecting an appropriate rate of interest to discount the future earnings stream. Shareholders would use a risk discount rate, whereas the net rate earned on the underlying investments may be considered more appropriate for determining the compensation paid to policyholders.

4.3.2 We believe that there are strong arguments for valuing profits from non-profit business at a risk discount rate for the purpose of policyholder compensation, rather than at an 'earned' rate, if the non-profit business is being transferred to the shareholders' fund. The value of the future profits will be crystallised and the risk as to whether such profits will ultimately be realised will be passed to the new shareholders. Policyholders can only expect to achieve a market rate for this transaction—typically 12% to 15% net, rather than a lower rate of, say, 10% net.

4.3.3 The position regarding the with-profits fund is less clear. Shareholders will use a risk discount rate, perhaps 1% to 3% higher than the net investment returns earned on the assets of the fund, to value their profits stream. If policyholders are to receive compensation sufficient to replace the shareholder transfers in the future, so that their ultimate benefits are not adversely affected, the compensation payment should, in theory, be determined at a net earned rate.

4.3.4 In practice, the transaction can be viewed as a loan to the fund, to enable it to meet shareholder transfers. However, the injection of a substantial cash amount into the fund will bring additional benefits to policyholders—particularly if the mutual's existing financial resources are limited. The shareholders are, in effect, providing additional capital, and a higher rate of return may thus be appropriate. Without this capital the investment policy will be less flexible, and the company may have to close or severely limit new business, with all the resulting implications for expenses.

4.3.5 If the compensation payment is invested in new business strain, then the rate of interest earned on this investment may be higher, or lower, than the net rate earned on assets. This has implications for the pricing of new business. The figures arrived at in any particular example, and the methodology employed must, in any event, be considered in the context of the whole Scheme. The examples shown in Section 5.7 show the impact of using a risk discount rate to value shareholders' transfers.

4.4 *Valuation of the Company*

4.4.1 A valuation of the company in its reconstructed form is likely to be required for a number of reasons:

—To provide the directors, and their financial advisers, with an indication of the economic worth of the company. This would be used in their negotiations with an acquirer to assist in the determination of an appropriate price to be paid by a new shareholder, or might be used by the financial advisers to help determine an appropriate flotation price.

—To ascertain the impact of alternative structures on the overall value of the company, and hence determine the optimum structure. This would require a full analysis of the components of the company's value.

—To give the directors assistance in considering the potential value of membership rights, and the extent of compensation which the members should receive.

4.4.2 Appraisal value techniques are a well-accepted approach for valuing proprietary companies, and have been discussed in various professional papers, most recently in one by Burrows & Whitehead[10]. These techniques apply equally to determining the economic or appraisal value of a mutual office in its demutualised form, although certain complications arise, primarily because the company has not been operating, in the past, as a proprietary company.

4.4.3 Before any valuation of the Company can be attempted, a clear definition of the proposed structure, and the terms of the Scheme in respect of the future operation of the business is required. Particular areas of importance are:

—the structure of the funds, and the business to be written in each,
—the shareholders' share of surplus in each fund,
—the apportionment of existing assets between the funds,
—the apportionment of the value realised for the company,
—the level and form of policyholder/member compensation, and
—the method of allocation of investment returns, expenses and tax between funds.

The terms of the Scheme and compensation levels may depend on the values realised for the company, therefore an iterative approach is often required to estimate certain components of value.

4.4.4 Any amount paid by an acquirer, or raised in a flotation which is not paid out to members, or used to enhance policyholder benefits, will itself increase the value of the company—by anything between 0% and 100%, depending on whether the excess is paid into a mutual policyholder fund, a 90/10 fund, or into a 100% shareholder fund.

4.4.5 The determination of the goodwill of a life office is the most difficult element of any appraisal, and necessarily an area where considerable judgement must be exercised. In the case of a demutualisation the valuation of goodwill is even more difficult. Management will be operating in a completely different environment, and past performance may not be a guide to the future prospects of the company. In some cases, it may be argued that the company's goodwill depends, to a large extent, upon its mutual status. In other cases this may be largely irrelevant.

The profitability of new business can be assessed on the basis of the proposed operating environment and the shareholders' interests in the profits of different lines of business. What is more difficult is the assessment of future new business and growth prospects. Consideration needs to be given to the impact, if any, which the demutualisation process may have on future new business volumes or mix of business. The changed structure may improve future prospects (e.g. because of enhanced financial strength) or diminish prospects (e.g. for with-profits business). To what extent, if any, should these considerations be built into the valuation of goodwill? Goodwill will, in many cases, have a different value before and after demutualisation.

4.4.6 The particular problems of assessing the value of a mutual can be mitigated, to some extent, by appropriate sensitivity analysis, but this does not help directors focus on a reasonable central value. If the company is to be floated and shares are to be allocated, in the first instance, to policyholders, then the market will determine an appropriate value for the company. Within certain limits the issue price of the shares can be determined largely by the capital needs of the company—if no additional capital is required, the shares could be given to members at no cost. In practice this is unlikely to be the case, since some recapitalisation is likely to be necessary. If capital raising is the primary objective, then a high price may be demanded, and shares not acquired by members (who might have pre-emptive rights) would be offered to the public. In this case the issue price will need to be set below the expected market price, to ensure a successful flotation, and some clear assessment of the likely market value will need to be ascertained in advance of the flotation.

4.4.7 If the mutual is to be offered for sale to a number of potential purchasers, then it will be sufficient to provide an appraisal of the components of value—the net worth and value of business in-force, together with sufficient information on the value of new business, to enable a third party to arrive at their own assessment of value. In this case the directors will, it is hoped, have a number of potential offers to compare and can choose the most appropriate. The difficulty in this situation is that different parties may propose different structures for the demutualised company, and it may be difficult to make comparisons between different alternatives.

4.4.8 The valuation of the company will also be affected by its ability to generate a steady and stable stream of profits. If shareholders have no interest in the existing with-profits business, then the company may have no value, or very little value, arising from its in-force business. It is unlikely to be able to support a dividend for a number of years and, in this respect, will be like a new company, albeit with a mature distribution system and potentially high goodwill. It may be that the company is well capitalised and it has a significant level of net worth which will itself generate some earnings. However earnings are likely to be volatile and the fixing of an appropriate price may be particularly difficult.

4.5 *Allocation of Compensation*

4.5.1 In determining how compensation is allocated between policyholders, it is important to distinguish between amounts allocated to maintain reasonable benefit expectations, and amounts allocated to policyholders in respect of loss of membership rights. The former will be determined in aggregate for all with-profits policyholders, and should be allocated according to normal actuarial principles, to ensure that no group of with-profits policyholders is disadvantaged. We consider below the additional compensation over and above the amounts required to meet reasonable benefit expectations.

4.5.2 We have discussed, in Section 4.2, the overall value of membership rights and the level of compensation which might be appropriate in aggregate. How should this compensation be allocated between different members? In particular:

—the split of compensation between with-profits and non-profit policyholders,

—the factors used to determine compensation—for example, policy benefits, voting powers, or some other method, and

—the determination of cut-off provisions.

4.5.3 The split of compensation between with-profits and non-profit policies will only be relevant to those companies with both classes as members—this applies to approximately two-thirds of U.K. mutuals. If non-profit policies confer membership rights but no entitlement to participate in surplus, this can, presumably, be changed by a change to the Articles of Association. Some compensation, or inducement, to non-profit policies may be desirable, in the need for a 75% vote of members in favour of the Scheme, so that directors may proceed with confidence.

4.5.4 The basis of allocation of compensation will be influenced by the directors' view as to the nature and value of membership rights and, in particular, the extent to which the aggregate compensation includes some or all of the surplus of the company. Compensation may be allocated in a variety of ways, including:

—a level amount per vote,

—differential payments to with-profits and non-profit policies,

—an amount dependent upon policy benefits, and

—a mixture of one or more of these.

4.5.5 A level amount per vote term would reflect the view that membership rights are solely the right to vote. Any compensation, therefore, would be for this loss, and all votes have equal value. An extension of this argument would be an amount per vote weighted by unexpired term. This would reflect the period for which the vote was available. Policies with greater unexpired term would have the vote for longer, hence its value would be greater.

4.5.6 It may be felt that the loss of voting rights has a greater impact on with-profits policies, because of the discretionary nature of their benefits. Accordingly, membership rights are more valuable to with-profits policies, and should, therefore, merit greater compensation. This view would also apply if it were felt that membership rights included the rights to some or all the surplus of the company. In this case, the allocation of compensation would be heavily or entirely, weighted to with-profits policyholders.

4.5.7 An amount dependent upon policy benefits would reflect the view that members should be compensated in proportion to their contribution to surplus. The method proposed by the U.S. Task Force was that compensation should be allocated to policyholders in proportion to their relative contribution to the surplus of the company— the latter being defined as the accumulated asset shares, less the amount set aside in the closed fund on their behalf. Whilst the theory seems reasonable, we agree with Franklin & Lee that the application of this approach has many practical difficulties and inconsistencies. In particular, many with-profits policies currently in-force will not have provided a positive contribution to surplus.

4.5.8 Logic would appear to dictate that the membership compensation should be as a level amount per vote, and that differential payments to with-profits policyholders or compensation related to policy benefits are dealt with in policyholders' expectations. However, from a practical point of view, we do not consider this to be satisfactory. Since the payments are amounts which the directors feel are necessary to promote the Scheme, they can, in practice, take any form. There will, no doubt, be arguments of fairness which will have to be met, and the Scheme, including compensation, must satisfy policyholders and the Court. We therefore feel that a combination of a fixed amount per vote plus an amount to with-profits policies in proportion to existing policy benefits, will be appropriate in most circumstances.

4.5.9 The relative amounts distributed on a per policy basis, and those distributed in proportion to policy benefits, will depend upon the history of the company and the balance of views expressed above. Examples would be:

—if the current surplus and other components of value have been built up largely from the funds of current policyholders, then a reversionary bonus proportionate to existing bonuses would be appropriate,

—if the current generation of policyholders had contributed nothing to the current surplus, then a payment per vote only would be appropriate, and

—if a situation is not clear cut, then a mixture of bonus on bonus and bonus on sum assured may be appropriate.

In the demutualisation of both Union Mutual and Maccabees in the U.S.A. the formulae used gave a fixed amount of surplus to each policy (including non-profit policies) and the balance, representing 95% and 75% of the total payout respectively, was allocated in proportion to contribution to surplus.

4.5.10 A further area of potential difficulty is the cut-off provisions. Legislation in certain U.S. states (e.g. Maine) requires benefits to be given to policies which have been in-force at any time in the 3 years preceding the Scheme. The provisions attempt to avoid inequities for policies which have matured prior to the Scheme being effected. Given the nature of the policyholders' membership rights, which, in general, go hand-in-hand with the contractual ownership of a policy, we can see no logic for such an arbitrary look-back provision. Consideration may be given to including all policies still in force at the announcement date, but the effective date is the most appropriate.

4.5.11 Similar consideration must be given to treatment of new applications between the date of announcement of the scheme and the effective date, which could be an extended period. There is a serious risk of a flood of applications for small policies which might dilute the compensation to members. The cut-off for any special benefits should, therefore, be the date of announcement of the scheme. Applications after this date would be in the full knowledge of the proposed demutualisation.

4.5.12 The situation for unit-linked policies is less clear than for other non-profit policies. Generally no special provisions need be made—if all non-profit policyholders are members then unit-linked policyholders will receive some compensation as members. If only with-profits policyholders are members, then only unitised with-profits policies will receive compensation, and others will receive none. In this case the cut-off provisions would have to apply to switches into the unitised with-profits fund after the announcement date.

Given the discretionary nature of certain of the charges, it may, however, be felt appropriate to provide some small additional benefits (perhaps a one-off allocation of additional units) to existing unit-linked policyholders.

4.6 *The Implications of GN15*

4.6.1 The Institute Guidance Note (GN15) includes a specific requirement for the independent actuary to consider "the effect of the scheme on the proprietary rights of the members ... to secure or prevent future constitutional changes which could affect their expectations as policyholders (for example, conversion to a closed fund)". We have commented, in §2.5.8, on the potential dangers we perceive in attempting to extend actuarial judgement into these areas. Nevertheless, given the current wording of GN15, consideration will need to be given as to whether a closed fund is likely to provide greater benefits to existing policyholders. Even if this appears to be the case, the directors will, no doubt, weigh up their responsibilities in general, not just to existing policyholders, before deciding whether or not to recommend any scheme which offers potentially lower benefits to existing policyholders.

4.6.2 We have considered the 'closed fund' to mean a closed with-profits fund, not necessarily complete closure to new business. The latter may be inevitable, however, unless a company is already writing substantial volumes of non-profit or unit-linked business. In the demutualisation of National Mutual of Australasia's U.K. branch business, a closed with-profits fund was established and the new company—NM Schroder—wrote only unit-linked business in a 100% shareholder fund. The issue was how to split the orphan surplus of the U.K. branch between the closed U.K. fund and the 100% shareholder fund. The latter was ultimately owned by National Mutual's Australian business, which had funded the U.K. operation.

4.6.3 In the FS and Pioneer demutualisations the companies concerned were not in a strong financial position. The alternative of a closed fund was a probable, if not the only, alternative if the proposed scheme did not go ahead. In both cases, the alternatives were compared with the current position and the alternative of a closed fund, and it was possible to demonstrate that the proposed schemes offered better prospects to existing policyholders than the closed fund alternative. In the case of Pioneer Mutual, a large proportion of new business was unit-linked, and presumably closing the with-profits fund and establishing a separate unit-linked fund was a viable, although perhaps less attractive, alternative to the acquirer.

4.6.4 In the case of a much stronger office, writing substantial volumes of with-profits business, it is less clear whether such a comparison would stand up to scrutiny—existing with-profits policyholders could well be substantially better off within a closed fund which included all of the orphan surplus. Whether existing policyholders have rights to the free surplus or estate is, we believe, more of a legal question than an actuarial one.

4.6.5 Few would accept that directors should act to close their companies to new business simply to ensure existing policyholders receive the maximum possible benefits—no mutual in recent times has taken this course of action—even though, for many, it could result in higher benefits. If this be the case, why should it become an automatic option if the directors are proposing a demutualisation? The rationale is that members are losing their voting powers, which could, in theory, be used to elect directors to do just that—close the company and pay out any surplus. In practice, however, the possibility of achieving this is remote, and we doubt if this is a realistic alternative, except for an office in difficulties, in which case it will be of little benefit to existing policyholders.

4.6.6 One of the problems of the closed fund approach, for a strong office, is that it destroys goodwill. Alternative Schemes may crystallise a higher value for the company, including goodwill, but this will not necessarily accrue to existing policyholders. Some of the value must be retained as surplus in the company to enable future with-profits business to be written. Unless the amount of surplus retained in the company is less than the goodwill value it generates, then an open fund approach will not provide comparable, or better benefits for existing policyholders, when compared with the closed fund.

4.6.7 This leads us to a more fundamental question, as to the economic value of with-profits business in relation to the capital it consumes. In current conditions, it is impossible to start a competitive with-profits fund and achieve an economic return on the capital employed. The problem is less severe for existing funds, since capital is effectively loaned from one generation of policyholders to another, on a basis which, perhaps, provides an inadequate return. The capital intensive nature of with-profits business, and recent rapid growth in business, has led to changes in product design and bonus structures, and a shift to unit-linked business. It may well be that mutuals must learn to use their capital resources more effectively, or else face the position where they withdraw from the with-profits market.

5. OPERATION OF A CLOSED FUND

5.1 *Business to be Included in the Closed Fund*

5.1.1 The purpose of establishing a closed fund is to protect the benefit expectations of existing with-profits policyholders. The U.S. Task Force considered that the mechanism of a closed fund would only be appropriate for certain lines of business, and the criteria it established are, we believe, equally appropriate in the U.K.:

—Any class of business where the company has significant discretion as to the level of future bonuses declared should normally be included.

—Any class of business which is not expected to diminish over time should probably not be included in the closed fund.

—Any class of business which is, to a large extent, experience rated should not be included.

5.1.2 Certain types of 'chargeable rate' with-profits group deferred annuity contracts, where rates vary depending on current interest rates would, typically, not be included in the closed fund.

5.1.3 There are likely to be existing with-profits policies with options to effect further policies. If no new with-profits business is to be written, then it may be necessary to allow option policies to be written in the closed fund. Similarly, for group pensions business, increments and benefits for new members in existing schemes may have to be written in the closed fund.

5.2 *Hypothetication of Assets to the Closed Fund*

5.2.1 It is possible to operate the closed fund without identification and allocation of specific assets to the closed fund. Such an approach entails apportionment of investment income and gains between the closed fund and the continuing business in an appropriate manner. This may weaken the protection offered to the closed fund, but the approach can have significant advantages in avoiding many of the problems of operating a declining fund. Providing the assets for the company as a whole are growing, the problems of dealing with a negative cashflow can be avoided. Similarly, the closed fund can continue to invest in certain types of assets such as property, and achieve diversification which it would not be able to achieve on its own.

5.3 *Shareholders' Interest in the Closed Fund*

5.3.1 A closed fund, entirely walled off for existing with-profits policyholders, retains the 'mutual' status within the closed fund for existing policyholders. It also minimises the policyholders' compensation which must be paid by an acquirer. However, one of the perceived disadvantages of a closed fund is that future shareholders have no interest in the surplus of that fund and, therefore, no financial incentive to manage the fund effectively for policyholders.

5.3.2 If a 'pooled' investment approach is adopted, without segregation of assets, then this avoids the problem, and a zero shareholder interest in the closed fund should be perfectly acceptable. If it is not, then the closed fund can be established on the basis that shareholders share in future surplus. This share can be a proportion of the total distributed surplus or a fixed annual management fee. In either case the assets allocated to the closed fund must be increased to allow for this participation. The disadvantage of this approach, as mentioned in Section 4, is that the value placed on the future stream of shareholder transfers may well be less than the additional amount of assets that should be set aside in the closed fund to compensate policyholders for the shareholders' share of future surplus. However, this may be more than offset by the increase in the free assets resulting from the payment of compensation into the fund.

5.4 *Future Support for the Closed Fund*

5.4.1 If a closed fund is to be established in an on-going company, then rules for future operation of the fund must be clear as to exactly what level of separation is required between the closed fund and the continuing business. At one extreme the closed fund could be operated with sufficient free assets to support its own mismatch and solvency requirements. The continuing business would also be required to be self supporting. This approach does not, of course, reflect the legal position, since all of the assets of the company are available, in the last resort, to meet any of the liabilities. It is also inefficient, and would result in more shareholder capital being required to support the continuing business than might otherwise be the case. At the other extreme, the Scheme might provide for surplus in one fund to be made available to support losses in the other and vice versa, and the situation, in reality, is no different from the open fund approach.

5.4.2 In practice, it is likely that the closed fund will be in a strong financial position initially, and may be in a position to provide support to the continuing fund in the short term, while the latter is small. Ultimately the tables will turn and the continuing fund should be in a position to provide support to the closed fund, if required. An example of this 'support' is that solvency and mismatch reserves would only need to be covered on a company-wide basis. Such mutual support between the funds is no more than the normal operation of a with-profits fund.

5.4.3 The Scheme may specifically provide for certain guarantees as to future bonus levels or for shareholders to provide specific financial support to the closed fund in adverse circumstances, on appropriate commercial terms. Generally, any bonus guarantees would be limited—not only because of the potential cost, but also because any such guarantees will weaken the financial position of the whole company and potentially limit future investment freedom. The operation of the closed fund should itself be adequate to ensure fair treatment of existing policyholders. Such guarantees are more appropriate to an open-fund approach, where there is no specific mechanism for protecting policyholders' interests.

5.5 *Future Operation of the Business*

5.5.1 The Scheme will need to specify the future basis of operation of the company with respect to the funds established by the Scheme. This will deal with allocation of premium income, investment income and gains to each fund, and the payment of claims, tax and expenses from the fund. Rules regarding closure or amalgamation of any of the funds will also be included.

5.5.2 The Scheme will deal explicitly with the basis of allocation of expenses between the funds. This is particularly important where a closed fund is being operated, or if there are funds where the shareholders' share of surplus is different. The rules may be explicit—such as providing for maintenance expenses to be allocated to the closed fund on the basis of £x per policy in force, where x is specified at outset and cannot increase by more than the rate of inflation. Alternatively, a more general provision may be incorporated, providing for expenses to be apportioned in a fair and equitable manner, but leaving a degree of discretion to the actuary.

5.5.3 Rules may be necessary for the apportionment of investment income and gains, if separate assets are not held. Similarly, tax will need to be apportioned. There is normally a provision to ensure that the fund bears no more tax than if it had continued as part of a mutual company.

5.5.4 The Scheme would normally provide for the closed fund to be wound up when the number of policies diminishes to less than a few thousand policies. At that time, the remaining surplus in the fund is allocated to the remaining policies, which are converted to non-participating policies and merged with the continuing business.

5.6 *Advantages and Disadvantages of the Closed Fund*

5.6.1 The essence of the closed fund approach is to set aside a (notional) block of assets in a separate fund for the existing policyholders, so that the future bonuses for existing policyholders can be determined solely in relation to the performance of the closed fund. The future rules of operation of the closed fund are clearly defined at outset.

5.6.2 The advantages are therefore:

—it protects existing policyholders by clearly defined rules,

—the terms for new with-profit business cannot affect existing business (cross-subsidies between generations is limited),

—the initial surplus allocated to the existing policyholders is established at outset, and

—it can be operated on a mutual fund basis.

The closed fund can remove much of the discretion and flexibility available to the actuary in running an open fund. This is designed to protect the existing policyholders, but can obviously have adverse effects.

5.6.3 The disadvantages are:

—the impact of a declining fund and increasing guarantees on investment freedom,

—the escalation of expenses, and

—the difficulty of avoiding a tontine effect.

5.6.4 The impact on investment returns can be mitigated if a pooled asset approach is used, and if support from the continuing fund is available for mismatch reserves and solvency. Even without this, the working capital provided by distributing a high proportion of surplus by way of terminal bonuses can enable a less restricted investment policy to be pursued. Any limitations will need to be quantified in individual circumstances.

5.6.5 The problem of expenses can be material for a company which is closed to new business completely. The short-term expenses in respect of closure costs, and the impact of a declining block of business on the on-going costs, can both be substantial. The only realistic option is ultimately to merge the closed fund into another company, as in the case of UKPI. For a company which is continuing in business, the impact of expenses on a closed fund will be no different from that in an open fund—and will, to a large extent, depend on the fortunes of the office as a whole.

5.6.6 A tontine effect can be avoided, in part, by winding up the fund before it gets too small. The tontine effect can be reduced by an aggressive distribution policy in the earlier years, but this risks leaving insufficient for the later maturing policies. Achieving the right balance between different generations is, perhaps, the most difficult aspect of running a closed fund. The use of asset shares is helpful in this respect, but the extent to which asset shares can be smoothed will diminish.

5.7 *Examples of a Closed Fund*

5.7.1 We have developed a simple model of a mutual life company fund, writing entirely with-profits endowment business. The model is described in Appendix B and the results are shown in Appendix C.

5.7.2 Model A represents a closed fund with a continuation of current levels of reversionary bonus. Model B assumes a fall in reversionary bonus rates to approximately 75% of their current levels in 5 years time. In both cases terminal bonuses are adjusted to pay out asset shares. The reduction in reversionary bonuses in Model B is intended to ensure that a significant proportion of total maturity benefits are payable as terminal bonus. The resulting levels of terminal bonus for business written in the last five years are shown in Table 5.1.

Table 5.1 *Terminal Bonus as a Percentage of Sum Assured and Reversionary Bonus*

Term	Model A	Model B
10	11%	16%
15	15%	28%
20	20%	42%
25	25%	60%

The free asset ratio (defined as investment reserves less solvency margin as a percentage of total assets) is shown in Table 5.2. No allowance has been made for mismatch reserves. In practice these might amount to some 3% of assets.

Table 5.2 *Free Asset Ratio*

Year	Model A	Model
1989	19%	19%
1994	19%	20%
1999	19%	26%
2004	16%	28%
2009	13%	31%
2013	15%	37%

5.7.3 These examples are for a closed fund with no orphan surplus, yet the free asset position, even with existing reversionary bonuses (Model A) stays at its current levels for nearly 15 years. This is a surprising result, and goes against the common misconception that the free asset position in a closed fund will quickly diminish. The results will obviously be sensitive to actual investment performances and fluctuations in asset values from year to year, and the ability to smooth maturity values will be limited. By reducing reversionary bonuses (Model B) the free asset position can be gradually improved, so as to leave considerable scope for mismatching and equity-type investments.

5.7.4 We have considered the impact on bonuses and the free asset position if shareholders have a 10% interest in surplus. Compensation for this share of future surplus has been calculated by discounting projected shareholders' transfers at 12½% p.a. The resulting value is injected into the fund. We have determined the rate of investment return required to support the same level of bonuses to policyholders as assumed in Model B. The required rate was 10.6% net, an increase of only 0.2% over the rate previously assumed. This also allows for the impact of any additional tax arising as a result of the shareholder transfers. The injection of compensation also substantially improves the free asset position, as shown in Table 5.3.

Table 5.3 *Free Asset Ratio—Model B*

Year	Mutual Closed Fund	Proprietary Interest in Closed fund
1989	19%	26%
1994	20%	25%
1999	26%	30%
2004	28%	31%
2009	31%	34%
2013	37%	39%

For a fund with a low free asset ratio, the potential advantages of granting shareholders a share of surplus from existing business are significant. Whether shareholders are prepared to pay for this interest is a separate question.

6. OPERATION OF AN OPEN FUND

6.1 *Protection of Reasonable Expectations*

6.1.1 As discussed in Section 4.1, protection of reasonable expectations is, perhaps, the most difficult aspect of running an open fund. The principles by which future bonuses are to be determined for existing policyholders will normally be covered in the Scheme, but the mechanics are unlikely to be stipulated in detail, thus leaving considerable discretion in the hands of the Appointed Actuary.

6.1.2 In both the FS and Pioneer Mutual examples, future bonuses are to be determined using asset share techniques, where the asset shares are to be calculated ignoring the shareholders' share of surplus. The Schemes are not explicit about how asset shares are to be determined, and particular problem areas are likely to be the treatment of tax, expenses, and investment returns in the asset share calculations, and the treatment of miscellaneous sources of surplus. In the case of Pioneer Mutual, any additional tax payable as a result of the new company's proprietary status is specifically to be excluded from the asset shares.

6.1.3 The method of smoothing asset shares will also be an area of concern, in particular smoothing between existing and new policyholders. Unless a highly volatile terminal bonus policy is adopted, a suitable smoothing formula must be defined in advance and the process followed mechanically thereafter. The problems of equity are, in fact, little different from those faced in operating a closed fund.

6.1.4 In a company where the fund is well capitalised, the problems of ensuring existing policyholders' reasonable expectations are met in full may not be so great, since the Appointed Actuary can afford to err on the side of caution in this respect. This will not be the case for less well capitalised funds.

6.2 *New Business*

6.2.1 If capital resources are limited, then the volumes of new business will need to be closely controlled, to ensure that new business has no impact on the bonuses on existing business. If new business expands too rapidly, then the free asset position of the fund will be impaired, leading to restrictions on investment policy. There may also be pressure to keep reversionary bonuses as low as possible to maximise the amount of working capital. However, competitive pressures will be operating in the opposite direction.

6.2.2 Premium rates for new business may need to be revised to reflect the terms on which business can be written after the demutualisation. Expenses may have changed, the tax position is likely to be different, and consideration must be given to the extent that the shareholders' share of surplus is allowed for in the premium rates. The alternative is to allow for all these factors to emerge in the future reversionary bonus rates. This will affect existing and new business if the same bonus series applies to both. This is the situation in both the FS and Pioneer Mutual cases; terminal bonuses will be used to ensure total payouts to existing policyholders are maintained at the appropriate levels.

6.2.3 The impact of the shareholders' share of surplus on future prospects will depend on the strength of the fund after the demutualisation and, in particular, the extent to which the value paid for the company, including goodwill, is retained to meet the cost of future transfers. In a well capitalised fund the prospects may be as good, if not better, than previously, notwithstanding the need to meet shareholders' transfers. A strong free asset position and resulting investment freedom may help offset the cost of shareholders' transfers. The amount of new with-profits business will have a significant impact. This is illustrated in Section 6.4.

6.3 *Advantages and Disadvantages of an Open Fund*

6.3.1 The open fund avoids the complexity of running separate funds—in particular the need to apportion such items as tax and expenses, and, if separate assets are not held, investment income and gains. Nevertheless, these same issues must be addressed in determining the asset shares for the existing business. The shareholders' share of surplus from existing business, as well as new business, provides a steady and immediate stream of transfers, and gives an incentive to manage the existing business effectively.

6.3.2 An open fund will give a marketing advantage to the new company because it will have a bonus record, which may be used. However, the extent to which the bonus performance for existing business will be appropriate for new business in the changed circumstances is open to question.

6.3.3 These are important advantages—the main disadvantages of an open fund arise from the need to protect policyholders' reasonable expectations. There is no visible mechanism for doing this, and much is left to the discretion of the Appointed Actuary. There is a real risk that expectations may be affected by the volumes of new business and the terms on which it is written.

6.3.4 A further disadvantage may be the increased cost of acquiring a company which is structured with an open 90/10 fund, since this may substantially increase the value of the company compared with a closed mutual fund structure for existing with-profits business.

6.4 *Example of an Open Fund*

6.4.1 In this example, we have assumed the same bonus pattern as in Model B for the closed fund. In addition, new business in 1990 has been assumed at broadly the same level as in 1989 (£140,000 new annual premiums), increasing by 7% p.a. thereafter. We also show the impact of doubling new business volumes in 1990 and thereafter.

Table 6.1 shows the free asset ratio for the company operating as a mutual, with normal and double new business. Examples 2 and 4 assume that there is some orphan surplus, which we have taken to be £500,000 at the end of 1989, or some 5% of assets.

Table 6.2 shows the position for the fund operating on a 90/10 basis which is comparable with examples 2 and 4. The company is valued at £1,500,000, which is paid into the fund. The derivation of this value is described in Appendix B and includes £500,000 of goodwill. The existing orphan surplus is £500,000. In examples 5 and 7 we assume the cost of special bonuses to members amount to £1,000,000. In examples 6 and 8 we assume the cost of special bonuses is only £500,000.

Table 6.1 *Free Asset Ratio—Mutual Company*

	Normal New Business		Double New Business	
Year	Example 1	Example 2	Example 3	Example 4
1990	18%	22%	17%	21%
1995	16%	20%	12%	16%
2000	17%	22%	11%	15%
2005	16%	22%	12%	16%
2010	18%	24%	16%	20%
2015	20%	27%	20%	24%

Table 6.2 *Free Asset Ratio—Proprietary Company*

Year	Normal New Business Example 5	Normal New Business Example 6	Double New Business Example 7	Double New Business Example 8
1990	25%	28%	24%	27%
1995	19%	23%	14%	18%
2000	16%	21%	9%	13%
2005	11%	17%	5%	10%
2010	6%	14%	4%	9%
2015	0%	12%	3%	9%

6.4.2 The figures in Table 6.2 show that in examples 5 and 7 the company cannot continue to support the same level of bonus on new business. Ultimately bonus rates on new business must fall, and the depletion of the free assets is initially accelerated when new business is higher. In examples 6 and 8, a higher proportion of the value paid for the company is used to recapitalise the with-profits fund and the level of compensation to members is only half that assumed in examples 5 and 7. This enables bonus rates on new business to be supported for a longer period before the financial strength is seriously impaired. In the extreme, if the whole of the purchase price is paid into the fund and no special bonuses allocated to existing policyholders, then 'mutual' bonuses should be supportable on new business, provided that new business volumes do not exceed the levels assumed in the calculation of goodwill.

6.4.3 It is interesting to compare example 2 directly with examples 5 and 6.

Table 6.3 *Free Asset Ratios—Mutual v Proprietary Company*

Year	Mutual Example 2	Proprietary—90/10 Company Example 5	Proprietary—90/10 Company Example 6	Proprietary—90/10 Company Example 9
1990	22%	25%	28%	25%
1995	20%	19%	23%	22%
2000	22%	16%	21%	22%
2005	22%	11%	17%	21%
2010	24%	6%	14%	22%
2015	27%	0%	12%	23%

In both examples 5 and 6, the free asset ratios are higher than in example 2 for the first few years, but ultimately fall off. To show the sensitivity of these results to investment performance, example 9 is the same as example 5, but with an additional ·06% net investment return. On this basis the free asset ratio can be maintained at broadly the levels achieved in example 2.

6.4.4 These examples show the impact of the treatment of the value realised for the company on a demutualisation, and any orphan surplus, on bonus prospects for new business. If the bulk of any payment is used to recapitalise the fund and support future shareholders' transfers, then there is every possibility of maintaining bonus levels on new business at the levels which would have applied in the mutual company. Relatively small differences in investment returns may also have a substantial impact on this.

7. CONCLUSIONS

7.1 The demutualisation of a U.K. mutual life insurance company is accomplished by means of a Section 49 Transfer. This has certain problems:

—Section 49 was not designed for demutualisations, so uncertainties are introduced.

—Membership rights and their value are not well defined.

—The relative roles of the directors and the independent actuary are in danger of overlapping.

These problems need to be resolved and the actuarial profession should help in their resolution. Ultimately the position will depend upon a clear statement from the Regulatory Authorities and the Courts or, failing this, further legislation.

7.2 The change in the structure of companies during a demutualisation highlights many of the actuarial issues which are usually implicit in the normal operation of the company. This forces the actuaries involved to articulate the basis of financial management. In doing this, there has been a greater understanding of the issues involved.

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APPENDIX A

SUMMARY OF RECENT TRANSACTIONS

A.1 NATIONAL MUTUAL LIFE OF AUSTRALASIA—U.K. BRANCH

A.1.1 *Background*

National Mutual Life Association of Australia (NMLA) had operated a U.K. branch since 1897, selling mainly conventional with-profits business. The company established a separate statutory fund for its U.K. and Republic of Ireland business in 1984, and maintained separate assets. In 1986 NMLA acquired Schroder Life Assurance Limited (NMSL) which transacted almost entirely unit-linked business. It was decided to rationalise the operations in the U.K. by transferring the assets and liabilities of NMLA's U.K. branch to the long-term fund of NMSL.

A.1.2 *Structure Adopted*

A closed fund was established for all with-profits policies in force at the date of announcement of the Scheme. Non-profit policies, except for unit-linked, were included in this fund. A separate with-profits fund was established for policies written after the announcement date and prior to the effective date of the Scheme, and option policies written after the effective date. Surplus in both these with-profits funds is distributable only to policyholders.

NMLA's unit-linked policies and all other policies issued by NMSL were included in a new non-profit fund (the 'other business fund') in which shareholders are entitled to all of the surplus.

A.1.3 *Allocation of Assets to Funds*

The assets transferred to NMSL were allocated between the various funds based on figures calculated at 1 October 1987, with appropriate adjustments to reflect the position as if the Scheme had been in operation since that date.

Assets allocated to the closed fund were based on the mathematical reserves plus £107 million, giving £321 million in total. The remaining net assets of £77 million (including £10 million in respect of unit-linked business) were transferred to the other business fund. The part representing the unit-linked liabilities was transferred directly to the long-term fund. The balance of £67 million was used to recapitalise NMSL by way of a capital contribution to the shareholders' funds, and was then transferred to the other business fund. Other than investment income or gains, no part of the assets representing the capital contribution can be transferred back to the shareholder funds for a period of 5 years.

No assets were allocated initially to the new with-profits fund.

A.1.4 *Future Bonuses and Guarantees*

A special reversionary bonus of 25% of attaching reversionary bonuses was allocated to NMLA with-profits policies and future rates of reversionary bonus were guaranteed to be the same as those at 30 September 1987, for the next 3 years, subject to there being no highly material adverse change in investment conditions. Certain bonus guarantees were also given to NMSL with-profits policies for 10 years.

The closed fund has its own separately identified assets. It will not be charged with any new business expenses, and other expenses cannot exceed certain maxima laid down in the Scheme.

A.1.5 *Policyholders' Reasonable Expectations*

The actuaries considered that the safe-guarding of reasonable expectations could best be achieved by the establishment of a closed fund, and, indeed, the terms of the Scheme were such that they would be enhanced.

The question as to how much should be put into the closed fund to meet reasonable expectations was, we understand, determined primarily on the basis of a prospective approach. Projections were carried out on various different bases to ensure that policyholders could expect to be at least as well off after the transfer as before.

A.1.6 *Rights to Surplus Assets*

A key aspect of the transaction was the extent of U.K. policyholders' rights to the surplus in the U.K. fund. The independent actuary mentions this in his report and refers to legal advice "that policy ownership does not of itself confer entitlement to this surplus". He, therefore, limits his role to ensuring that "the amount of the closed fund is at least sufficient to pay bonuses to the transferring NMLA with-profits policyholders at the levels which they could have expected if there had been no transfer."

A.2 PIONEER MUTUAL

A.2.1 *Background*

Pioneer Mutual (PM) was a U.K. mutual insurance company, with subsidiaries in general insurance broking, personal finance and estate agency. Its life assurance business was distributed primarily through a direct salesforce.

In 1989, the company's working capital was reduced to such a level that it found itself restricted as to the level of new business it could write. This situation was caused by a requirement to inject £7.5 million of capital into its finance company subsidiary during the year.

At 31 December 1989, the Company's returns to the DTI showed a deficit of £2.1 million in the OB fund, after setting up a mismatch reserve of £3.0 million. In order to demonstrate solvency at that date, £12.0 million credit was taken for the implicit value of future profits.

A.2.2 *Scheme Adopted*

The principal conditions of the Scheme were as follows:

—A new life insurance company, Swiss Pioneer Life (SPL) was set up as a wholly owned subsidiary of PM.

—Following approval from the DTI, Industrial Assurance Commissioners (IAC) and the policyholders, all of the assets and liabilities of PM were transferred to SPL via Section 49 of the Insurance Companies Act. Similar approval was obtained in respect of the Irish Business.

—Swiss Life purchased SPL from PM for a nominal amount and, at the same time, subscribed approximately £15 million for new equity in SPL.

—Of the £15 million, £3 million was retained as shareholders' funds, while the remaining £12 million was injected into the long-term fund of SPL.

—PM will be dissolved by order of the High Court.

Within SPL, the IB fund (which within PM had been closed to new business since 1982) remained closed. The OB fund, however, remained open to new business, both with-profits and unit-linked. The shareholders' interest in both funds was limited to a maximum of 10% of all surplus distributed, that is on both existing and new business. It was explicitly stated that there was no current intention to set up a separate 100% shareholder fund or sub-fund.

A.2.3 *Policyholder Compensation*

The report of PM's Appointed Actuary indicates that the £12 million injection into SPL's long-term fund represented "compensation to the with-profits policyholders of PM at the effective date of the Scheme for relinquishing a share in future distributed surplus and to the members of PM for their loss of their rights as members". £1.1 million of this will be used to provide a special reversionary bonus to with-profits policyholders, approximating to 25% of the reversionary bonus paid at 31 December 1990.

The £12 million was made up as follows:

	Paid into OB Fund	Paid into IB Fund	Total
Embedded Value	6·4	1·3	7·7
Goodwill	4·2	0·1	4·3
Total	10·6	1·4	12·0

The embedded value of £7.7 million was based on a projection of the in-force business under 'going concern' investment assumptions and bonus assumptions which resulted in the exhaustion of the long-term fund after making all future payments. As well as policy benefits, these payments included the cost of maximum shareholder transfers and the additional tax payable as a result of the company's proprietary status.

The projected shareholder transfers were then discounted at the net earned rate of interest assumed, and the resulting embedded value was then increased by one-ninth, to allow for the future benefit which would automatically accrue to shareholders from an injection into the fund. Finally, the value of the additional tax payable as a result of proprietary status was added, to give the figure of £7.7 million.

The goodwill element of £4.3 million represented the balancing item in the negotiated £12.0 million injection. It was considered primarily attributable to with-profits policyholders, recognising the value of the infrastructure of PM, deemed to have been built up from their contributions over the years. It was also considered to be compensation for the costs of the demutualisation, and to provide a source of working capital to cover new business strain.

The £4.3 million was to be utilised as follows:

	Paid into OB Fund	Paid into IB Fund	Total
Cost of special reversionary bonus	1·0	0·1	1·1
Expenses of demutualisation	1·0	—	1·0
Working capital	2·2	—	2·2
	4·2	0·1	4·3

It was commented that PM's non-profit policyholders would benefit from enhanced security within SPL, and that this provided compensation for the loss of their membership rights. No explicit compensation was offered.

A.2.4 *Policyholders' Reasonable Expectations*

The expectations of PM's with-profits policyholders are to be protected through the use of asset share calculations in determining future bonuses. However, because historic records did not enable the calculation of asset shares at the date of the Scheme's implementation, they were determined as follows:

—Policyholders' future bonus expectations were determined by performing a bonus reserve valuation on a 'closed fund' basis, with future bonus rates set to equate valuation liabilities with assets available. The closed fund basis allowed for expected closure costs, and an overall reduction in net investment return of around 0·25%, resulting from a gradual switch from equity to fixed interest investments.

—Aggregate asset shares were equated to the bonus reserve valuation liability, using the bonus expectations determined above, but with a going concern investment assumption.

The bonus reserve valuation was in fact performed at 31 December 1988 and the asset shares rolled forward to the Scheme implementation date.

After implementation of the Scheme, the asset shares of the transferring with-profits policyholders are to be rolled up without allowance for the cost of shareholders' transfers, nor of any additional tax payable as a result of the company's proprietary status.

It is intended that the same reversionary bonus scale be maintained for both transferring and new policyholders, and that the differences in the asset share methodology for the two categories be reflected in the terminal bonus scales.

A.3 FS ASSURANCE

A.3.1 *Background*

FS Assurance (FS) was a mutual insurance company, writing life and a small amount of general business, with subsidiaries in investment management and mortgage lending.

Prior to the Financial Services Act (FSA) its life business was distributed primarily through independent intermediaries.

Following the FSA, new business levels, (particularly on mortgage endowments), were falling in spite of an attempt to develop tied agent distribution in 1988. The need for distribution and for capital to fund expansion led the company to review its future options.

A.3.2 *Scheme Adopted*

The principal conditions of the Scheme were as follows:

—A new life insurance company, Britannia Life (BL) was set up as a wholly owned subsidiary of FS.

—Following DTI, Building Society Commission and membership approval, BL was sold to Britannia for a nominal amount.

—Britannia then subscribed approximately £14 million for new equity in BL, all of which was injected into the long-term fund.

—The long-term assets and liabilities of FS were finally transferred to BL.

Prior to these transactions, Britannia had purchased 49% of the equity of FS Investment Managers Limited from FS for £1m. The remaining 51% was transferred to BL as part of the long-term assets.

The general business assets and liabilities of FS were retained within FS. Its subsidiary, the Northern Mortgage Corporation, was sold prior to the Scheme being effected and the proceeds paid into the long-term fund. Within BL, the long-term fund was to remain open to new business. The shareholders' interest was limited to 10% of surplus distributed.

A.3.3 *Policyholder/Member Compensation*

Compensation consisted of a £14 million injection into the long-term fund of BL. The embedded value element of £12.25 million was based on a projection of the in-force business using going concern experience assumptions, the continuation of existing reversionary bonus rates and terminal bonuses set at a level so as to exhaust the long-term fund after allowing for maximum shareholder transfers.

The shareholder transfers in the projection were discounted at a risk discount rate of 12·5%, and the resulting embedded value was increased by one-ninth to allow for the future benefit which would automatically accrue to shareholders from an injection into the fund. This gave the final figure of £12.25 million.

In practice, the calculations were performed as at 31 December 1988 and adjusted up to the Scheme implementation date of 31 December 1989.

The goodwill element of £1.75 million represented the balancing item of the total injection. It was to be distributed immediately to with-profits policyholders by a special reversionary bonus of 5% of attaching bonuses. The cost of this was expected to match closely the amount of the payment. Shareholders were not entitled to a share of this distribution.

A.3.4 *Policyholders' Reasonable Expectations*

The expectations of FS's with-profits policyholders are to be protected through the use of asset share calculations in determining future bonuses. However, because historic records did not enable the calculation of asset shares at the date of the Scheme's implementation, they were set equal to the bonus reserve valuation liabilities implied by the projection described in Section A.3.3, but without any allowance for terminal bonuses. That projection had allowed for the continuation of existing reversionary bonus levels.

As for the embedded value the initial asset share calculations were carried out at 31 December 1988 and rolled forward to 31 December 1989 when the Scheme was implemented.

After implementation of the Scheme, the asset shares of the transferring with-profits policyholders are to be rolled-up without allowance for the cost of shareholder transfers.

It is intended that the same reversionary bonus scale be maintained for both transferring and new policyholders, and that the differences in the asset share methodology for the two categories be reflected in the terminal bonus scale.

APPENDIX B

DESCRIPTION OF COMPUTER MODEL

B.1 *General*

The computer model was developed to represent a typical mutual life assurance fund writing entirely with-profits endowment assurance business. For simplicity, with-profits pensions business and all non-profit business has been excluded.

The model was constructed by analysing past new business statistics and adopting a pattern of new business in each year consistent with that experienced by the industry as a whole for non-linked ordinary life business. The business was further split between terms of 10 years (20%), 15 years (10%), 20 years (10%) and 25 years (60%), and allowance was made for policies which would have matured or lapsed. The business in-force at 31 December 1989 was analysed by year of entry and quinquennial term. The premiums in-force at the end of 1989 were assumed to be:

Year of Entry	In-Force Premium £000s	Year of Entry	In-Force Premium £000s	Year of Entry	In-Force Premium £000s
1965	2	1975	9	1985	68
1966	2	1976	12	1986	111
1967	2	1977	16	1987	124
1968	3	1978	20	1988	163
1969	3	1979	23	1989	139
1970	3	1980	33		
1971	4	1981	39		
1972	5	1982	44		
1973	6	1983	87		
1974	7	1984	75		
				Total	1,000

The model calculates the accumulated surplus in respect of those policies currently in-force at the valuation date, including accumulated profits or losses on policies which have surrendered prior to the valuation date. The sum of the accumulated surplus plus the statutory reserves represents the accumulated asset shares for policies in-force, but excludes any contribution to (or from) the estate on policies which have previously matured. The asset shares include an allowance for surrender profits. The prospective projections accumulate the current surplus from the valuation date forward, and allow fully for profits or losses on contracts becoming claims after the valuation date.

The model makes no allowance for any residual assets in excess of the aggregate asset shares of the policies currently in-force. This is equivalent to a revolving fund model.

B.2 *Model Points*

The following model points were used:

Year of Entry	Term	Age	Premium	Sum Assured
65-69	25	30	72	1,630
70-74	25	30	96	2,174
70-74	20	35	96	1,705
75-79	25	30	204	4,620
75-79	20	35	204	3,623
75-79	15	40	204	2,679
80-84	25	30	360	8,153
80-84	20	35	360	6,393
80-84	15	40	360	4,727
80-84	10	45	360	3,197
85-89	25	30	480	10,871
85-89	20	35	480	8,524
85-89	15	40	480	6,303
85-89	10	45	480	4,262

B.3 *Assumptions*

			Interest	Inflation
Economic:		1965-1979	8·5% net	13%
		1980-1989	19·0% net	7%
		reducing to 1993+	10·4% net	6%

Mortality: 80%, A67/70 Select + AIDS Basis V

Lapses:	Year:	1	2	3	4	5	6+
		5%	8%	7%	6%	5%	4%

Expenses: LAUTRO indemnity commission rates plus the following acquisition costs as a % of premium:

Term:	10	15	20	25
% of Premium:	33%	50%	65%	79%

Renewal: £15 per policy in 1989
2½% commission

Investment: 0·1% of funds

Tax relief on expenses: 30% on initial expenses (pre 1990)
25% on renewal expenses

Statutory Reserves: 100% A67/70 Ult at 3%
Zillmer: 3% of Sum Assured

Cash Values: 100% A67/70 Ult at 5.5%
Zillmer: 3·5% of sum assured for terms 20,25
5% of sum assured for terms 10,15
No cash value for 12 months
Cash values include an allowance for up to 90% of terminal bonus

The historic investment returns represent typical average net yields achieved by life offices over the period shown. The future investment returns were derived as follows:

Asset Type	Income	Growth	Total Return	Assumed Proportion
Equity	5·0	7·0	12·35	80%
Fixed Interest	10·75	—	10·75	20%
Aggregate return:				
Gross	6·1	5·6	12·0%	
Net of Tax	4·6	5·5*	10·4%	

*allows for tax on capital gains in excess of 6.5% p.a.

B.4 *Bonus Rates*

Bonus Rates on:	Model A Sum Assured %	Model A Existing Bonuses %	Model B Sum Assured %	Model B Existing Bonuses %
Pre 1990	5	5	5	5
1990	4	6.5	4	6.5
1991	4	6.5	3.8	6.2
1992	4	6.5	3.6	5.9
1993	4	6.5	3.4	5.6
1994	4	6.5	3.2	5.3
1995	4	6.5	3.0	5.0

Model A assumes continuation of the 1990 level of bonus rates. Model B assumes a fall in reversionary bonuses to approximately 75% of their current levels, so as to maintain a significant proportion of maturity benefits in the form of terminal bonuses. Terminal bonuses have been determined so as to pay out the full asset shares at maturity.

Terminal bonuses
(as percentage of sum assured and existing bonuses)

Model A

Year of Entry	Term 25	20	15	10
1967	94%	—	—	—
1972	111%	97%	—	—
1977	103%	95%	86%	—
1982	51%	46%	43%	42%
1987	25%	20%	15%	11%

Model B

Year of Entry	Term 25	20	15	10
1967	96%	—	—	—
1972	119%	97%	—	—
1977	127%	104%	87%	—
1982	80%	64%	50%	42%
1987	60%	42%	28%	16%

The resulting bonuses at maturity per £1000 of sum assured were as follows:

		Bonuses per £1000 Sum Assured					
Year of			Model A			Model B	
Entry	Term	RB	TB	Total	RB	TB	Total
65–69	25	2432	3226	5658	2423	3287	5710
70–74	25	2526	3897	6423	2350	3983	6333
75–79	25	2580	3688	6268	2189	4050	6239
80–84	25	2572	1822	4394	1983	2384	4367
85–89	25	2474	869	3343	1720	1638	3358
70–74	20	1678	2584	4262	1671	2578	4249
75–79	20	1717	2575	4292	1585	2676	4261
80–84	20	1711	1247	2958	1424	1551	2975
85–89	20	1639	528	2167	1218	934	2152
75–79	15	1087	1806	2893	1082	1822	2904
80–84	15	1083	896	1979	986	993	1979
85–89	15	1030	305	1335	825	515	1340
80–84	10	624	682	1306	620	681	1301
85–89	10	586	170	756	516	243	759

B.5 *New Business*

The impact of new business was considered by assuming that £140,000 of new annual premiums are written in 1990, increasing by 7% p.a. thereafter. New business was split 75% term 25 years and 25% term 10 years.

Four examples were considered:

1. normal new business: no orphan surplus,
2. normal new business: £500,000 orphan surplus,
3. double new business: no orphan surplus, and
4. double new business: £500,000 orphan surplus.

In examples 2 and 4, we assume the investment reserve is increased by £500,000, representing orphan surplus of 5% of total assets. This example, therefore, represents a company operated on the entity theory.

Reversionary bonuses were taken as in Model B. Terminal bonuses were determined as follows:

Year of Entry	Term 10	Term 25
1992	20%	77·5%
1995+	22·5%	82·5%

B.6 *Impact of Shareholders' Transfers*

We consider the impact of shareholder transfers on Model B.

Additional tax of 10% of net shareholder transfers is assumed to be incurred as a result of the higher (35%) tax rate applicable on the shareholders' profits in excess of shareholders' franked investment income.

Model B—*Closed Fund*

We assume that there is a capital injection of £968,000 into the fund at the start of 1990. This represents the present value of future shareholder transfers discounted at 12½% per annum. The net rate of return on invested assets has to be increased from 10·4% to 10·6% (i.e. by 0·2%) to ensure that future bonuses are supportable at the same level as in the mutual fund.

Model B—*Open Fund*

We assume that shareholders value the company at £1,500,000 comprising:

	£000's
Value of in-force	
Shareholders transfers	970
Value of surplus, say	40
	1,010
Value of new business: £49,000	
Goodwill at 10 × new business value	490
Total value	1,500

£1,500,000 is injected into the long-term fund, which already has £500,000 of orphan surplus. The total available assets of £2,000,000 are used in part to provide capital in the fund, and in part to provide special bonuses to members.

Five examples are considered:

5. normal new business: £1,000,000 distributed to members,
6. normal new business: £500,000 distributed to members,
7. double new business: £1,000,000 distributed to members,
8. double new business: £500,000 distributed to members, and
9. as in 5, with an additional ·06% net investment return.

Examples 5 and 7 distribute an amount equal to the orphan surplus and the payment for goodwill and leave the on-going fund with an initial investment reserve of approximately £3,000,000. In examples 6 and 8 the amount distributed to members is only £500,000, leaving an initial investment reserve of £3,500,000.

The projections show the impact on the free asset position if bonuses are maintained at the levels applicable in a mutual company paying bonuses based on asset shares.

APPENDIX C

MODEL RESULTS

C.1 *1989 Valuation Reserves and Free Assets*

The model projected the following position at the end of 1989: (£000s)

Number of Contracts	Sum Assured+ Bonuses	Annual Premiums Office	Net	Value of Sums Assured+Bonuses	Value of Net Premiums	Reserves
3,200	24,789	1,000	694	15,731	8,271	7,460

The figures are shown after the declaration of bonuses at the end of 1989.

The free asset position is as follows:

	£000's
Total assets	9,490
less Mathematical Reserves	7,460
Investment reserves	2,030
Solvency margin	350

Assets are net of tax on capital gains. No allowance has been made for any mismatch reserves. In practice these might amount to 3-4% of reserves, on the assumed asset mix and valuation basis, or about 3% of total assets.

The ratio of free assets, in excess of solvency margins, to total assets, is 18%, or 15% after allowing for mismatch reserves.

C.2 *Long-Term Projections*

Closed fund projections are shown for Model A bonuses and Model B bonuses for the mutual fund, and Model B bonuses for the proprietary fund.

Projections with new business are shown for examples 1, 2, 3 and 4 for the mutual fund, and examples 5, 6, 7, 8 and 9 for the proprietary fund.

Closed Fund — Model A

		1990 £'000	1991 £'000	1992 £'000	1993 £'000	1994 £'000	1995 £'000	1996 £'000	1997 £'000	1998 £'000	1999 £'000	2000 £'000	2001 £'000	2002 £'000
Fund b/f		7,462	8,419	9,308	10,121	10,796	11,464	12,097	12,562	12,918	13,083	13,264	13,596	13,719
INCOME														
Premiums		969	906	849	793	740	692	643	593	539	488	449	417	384
Income and growth		1,270	1,260	1,199	1,207	1,284	1,358	1,422	1,470	1,499	1,518	1,547	1,575	1,580
Transfer from / (to) Investment Reserve		(174)	(56)	74	173	155	121	179	233	316	332	260	398	520
OUTGO														
Claims		892	1,003	1,096	1,285	1,289	1,307	1,541	1,697	1,945	1,912	1,677	2,018	2,278
Commission		12	17	20	20	18	17	16	15	13	12	11	10	10
Expenses		52	52	53	52	52	52	51	50	49	47	46	45	44
Tax		152	149	140	141	152	162	171	178	182	186	190	194	195
Shareholders' transfer		0	0	0	0	0	0	0	0	0	0	0	0	0
Fund c/f		8,419	9,308	10,121	10,796	11,464	12,097	12,562	12,918	13,083	13,264	13,596	13,719	13,676
Investment Reserve b/f		2,030	2,424	2,737	2,944	3,069	3,226	3,435	3,605	3,735	3,792	3,839	3,966	3,960
Net return on Investment Reserve		221	256	282	298	312	330	349	364	373	378	387	393	386
Transfer to / (from) Investment Reserve		174	56	(74)	(173)	(155)	(121)	(179)	(233)	(316)	(332)	(260)	(398)	(520)
Investment Reserve c/f	2,030	2,424	2,737	2,944	3,069	3,226	3,435	3,605	3,735	3,792	3,839	3,966	3,960	3,826
TOTAL assets to cover solvency		2,424	2,737	2,944	3,069	3,226	3,435	3,605	3,735	3,792	3,839	3,966	3,960	3,826
EEC solvency margin		384	416	445	469	492	515	531	542	546	551	562	565	561
(Inv Res—EEC SM) / (Fund + Inv Res)		19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%

Interest rate 10.4%

Closed Fund — model A

	2003 £'000	2004 £'000	2005 £'000	2006 £'000	2007 £'000	2008 £'000	2009 £'000	2010 £'000	2011 £'000	2012 £'000	2013 £'000	2014 £'000
Fund b/f	13,676	13,372	13,029	12,754	12,259	11,562	9,965	8,686	7,738	6,058	4,168	1,823
INCOME												
Premiums	349	314	284	256	228	194	159	132	105	75	42	12
Income and growth	1,559	1,522	1,488	1,443	1,380	1,245	1,078	953	803	600	353	105
Transfer from / (to) Investment Reserve	673	694	313	394	484	904	702	258	445	493	602	459
OUTGO												
Claims	2,641	2,636	2,130	2,366	2,577	3,749	3,053	2,147	2,910	2,967	3,289	2,384
Commission	9	8	7	6	6	5	4	3	3	2	1	0
Expenses	42	40	38	36	34	30	26	22	19	14	8	2
Tax	193	189	185	180	172	156	135	119	101	75	44	13
Shareholders' transfer	0	0	0	0	0	0	0	0	0	0	0	0
Fund c/f	13,372	13,029	12,754	12,259	11,562	9,965	8,686	7,738	6,058	4,168	1,823	0
Investment Reserve b/f	3,826	3,517	3,154	3,153	3,067	2,878	2,227	1,720	1,629	1,330	950	417
Net return on Investment Reserve	364	331	313	308	295	253	196	166	147	113	68	20
Transfer to / (from) Investment Reserve	(673)	(694)	(313)	(394)	(484)	(904)	(702)	(258)	(445)	(493)	(602)	(459)
Investment Reserve c/f	3,517	3,154	3,153	3,067	2,878	2,227	1,720	1,629	1,330	950	417	(23)
TOTAL assets to cover solvency	3,517	3,154	3,153	3,067	2,878	2,227	1,720	1,629	1,330	950	417	(23)
EEC solvency margin	547	532	519	497	468	403	350	311	243	167	73	0
(Inv Res — EEC SM) / (Fund + Inv Res)	18%	16%	17%	17%	17%	15%	13%	14%	15%	15%	15%	

Interest rate 10.4%

Closed Fund — model B

		1990 £'000	1991 £'000	1992 £'000	1993 £'000	1994 £'000	1995 £'000	1996 £'000	1997 £'000	1998 £'000	1999 £'000	2000 £'000	2001 £'000	2002 £'000
Fund b/f		7,459	8,406	9,269	10,032	10,621	11,167	11,660	11,964	12,143	12,128	12,125	12,289	12,258
INCOME														
Premiums		969	906	849	793	740	692	643	593	539	488	449	417	384
Income and growth		1,270	1,258	1,193	1,193	1,257	1,317	1,363	1,392	1,401	1,398	1,408	1,416	1,404
Transfer from / (to) Investment Reserve		(177)	(74)	36	107	64	17	67	118	211	241	206	373	519
OUTGO														
Claims		899	1,009	1,103	1,293	1,297	1,307	1,539	1,691	1,935	1,902	1,671	2,010	2,269
Commission		12	17	20	20	18	17	16	15	13	12	11	10	10
Expenses		52	52	53	52	52	52	51	50	48	46	45	44	42
Tax		152	149	139	139	148	157	163	168	170	170	172	173	172
Shareholders' transfer		0	0	0	0	0	0	0	0	0	0	0	0	0
Fund c/f		8,406	9,269	10,032	10,621	11,167	11,660	11,964	12,143	12,128	12,125	12,289	12,258	12,072
Investment Reserve b/f		2,030	2,427	2,759	3,009	3,210	3,477	3,822	4,151	4,459	4,702	4,939	5,237	5,391
Net return on Investment Reserve		221	257	286	308	331	362	395	427	454	478	504	527	535
Transfer to / (from) Investment Reserve		177	74	(36)	(107)	(64)	(17)	(67)	(118)	(211)	(241)	(206)	(373)	(519)
Investment Reserve c/f	2,030	2,427	2,759	3,009	3,210	3,477	3,822	4,151	4,459	4,702	4,939	5,237	5,391	5,407
TOTAL assets to cover solvency		2,427	2,759	3,009	3,210	3,477	3,822	4,151	4,459	4,702	4,939	5,237	5,391	5,407
EEC solvency margin		384	415	441	462	480	497	506	511	507	505	509	506	496
(Inv Res — EEC SM) / (Fund + Inv Res)		19%	19%	20%	20%	20%	21%	23%	24%	25%	26%	27%	28%	28%

Interest rate 10.4%

Closed Fund — model B

	2003 £'000	2004 £'000	2005 £'000	2006 £'000	2007 £'000	2008 £'000	2009 £'000	2010 £'000	2011 £'000	2012 £'000	2013 £'000	2014 £'000
Fund b/f	12,072	11,649	11,194	10,850	10,320	9,620	8,176	7,014	6,202	4,827	3,301	1,436
INCOME												
Premiums	349	314	284	256	228	194	159	132	105	75	42	12
Income and growth	1,370	1,318	1,273	1,222	1,155	1,030	879	768	642	477	280	83
Transfer from / (to) Investment Reserve	707	746	416	533	659	1,220	974	557	894	971	1,155	873
OUTGO												
Claims	2,632	2,625	2,117	2,350	2,561	3,727	3,037	2,150	2,916	2,975	3,299	2,392
Commission	9	8	7	6	6	5	4	3	3	2	1	0
Expenses	40	38	36	34	32	28	24	21	17	13	7	2
Tax	168	162	157	151	143	128	109	95	80	59	35	10
Shareholders' transfer	0	0	0	0	0	0	0	0	0	0	0	0
Fund c/f	11,649	11,194	10,850	10,320	9,620	8,176	7,014	6,202	4,827	3,301	1,436	0
Investment Reserve b/f	5,407	5,227	4,987	5,069	5,037	4,870	4,094	3,496	3,274	2,675	1,932	918
Net return on Investment Reserve	527	506	498	501	491	444	376	336	295	228	141	50
Transfer to / (from) Investment Reserve	(707)	(746)	(416)	(533)	(659)	(1,220)	(974)	(557)	(894)	(971)	(1,155)	(873)
Investment Reserve c/f	5,227	4,987	5,069	5,037	4,870	4,094	3,496	3,274	2,675	1,932	918	96
TOTAL assets to cover solvency	5,227	4,987	5,069	5,037	4,870	4,094	3,496	3,274	2,675	1,932	918	96
EEC solvency margin	477	457	442	419	390	331	283	250	194	132	58	0
(Inv Res — EEC SM) / (Fund + Inv Res)	28%	28%	29%	30%	31%	31%	31%	32%	33%	34%	37%	

Interest rate 10.4%

Closed Fund — model B with shareholders' transfers

		1990 £'000	1991 £'000	1992 £'000	1993 £'000	1994 £'000	1995 £'000	1996 £'000	1997 £'000	1998 £'000	1999 £'000	2000 £'000	2001 £'000	2002 £'000
Fund b/f		7,459	8,406	9,269	10,032	10,621	11,167	11,660	11,964	12,143	12,128	12,125	12,289	12,258
INCOME														
Premiums		969	906	849	793	740	692	643	593	539	488	449	417	384
Income and growth		1,292	1,281	1,214	1,214	1,280	1,340	1,388	1,416	1,426	1,423	1,433	1,441	1,429
Transfer from / (to) Investment Reserve		(79)	25	138	211	163	111	167	223	325	355	313	498	659
OUTGO														
Claims		899	1,009	1,103	1,293	1,297	1,307	1,539	1,691	1,935	1,902	1,671	2,010	2,269
Commission		12	17	20	20	18	17	16	15	13	12	11	10	10
Expenses		52	52	53	52	52	52	51	50	48	46	45	44	42
Tax		163	160	150	150	159	168	174	180	183	183	184	187	187
Shareholders' transfer		109	111	112	114	111	107	113	118	126	126	120	136	150
Fund c/f		8,406	9,269	10,032	10,621	11,167	11,660	11,964	12,143	12,128	12,125	12,289	12,258	12,072
Investment Reserve b/f	2,030	2,998	3,400	3,734	3,985	4,185	4,457	4,813	5,148	5,459	5,697	5,928	6,227	6,364
Net return on Investment Reserve		322	360	389	412	436	467	502	535	562	586	613	635	641
Transfer to / (from) Investment Reserve	968	79	(25)	(138)	(211)	(163)	(111)	(167)	(223)	(325)	(355)	(313)	(498)	(659)
Investment Reserve c/f	2,998	3,400	3,734	3,985	4,185	4,457	4,813	5,148	5,459	5,697	5,928	6,227	6,364	6,346
TOTAL assets to cover solvency		3,400	3,734	3,985	4,185	4,457	4,813	5,148	5,459	5,697	5,928	6,227	6,364	6,346
EEC solvency margin		384	415	441	462	480	497	506	511	507	505	509	506	496
(Inv Res ?B1?(EEC SM) / (Fund + Inv Res)		26%	26%	25%	25%	25%	26%	27%	28%	29%	30%	31%	31%	32%

Interest rate 10.6%

Closed Fund — model B with shareholders' transfers

	2003 £'000	2004 £'000	2005 £'000	2006 £'000	2007 £'000	2008 £'000	2009 £'000	2010 £'000	2011 £'000	2012 £'000	2013 £'000	2014 £'000
Fund b/f	12,072	11,649	11,194	10,850	10,320	9,620	8,176	7,014	6,202	4,827	3,301	1,436
INCOME												
Premiums	349	314	284	256	228	194	159	132	105	75	42	12
Income and growth	1,394	1,341	1,295	1,244	1,176	1,048	894	781	654	485	285	84
Transfer from / (to) Investment Reserve	866	905	531	658	793	1,416	1,133	659	1,030	1,109	1,308	983
OUTGO												
Claims	2,632	2,625	2,117	2,350	2,561	3,727	3,037	2,150	2,916	2,975	3,299	2,392
Commission	9	8	7	6	6	5	4	3	3	2	1	0
Expenses	40	38	36	34	32	28	24	21	17	13	7	2
Tax	185	179	170	164	157	148	125	106	93	72	49	20
Shareholders' transfer	166	166	125	133	141	195	158	105	134	133	143	101
Fund c/f	11,649	11,194	10,850	10,320	9,620	8,176	7,014	6,202	4,827	3,301	1,436	0
Investment Reserve b/f	6,346	6,107	5,802	5,859	5,788	5,567	4,667	3,970	3,697	3,005	2,156	1,008
Net return on Investment Reserve	628	600	588	587	572	516	435	386	338	260	159	55
Transfer to / (from) Investment Reserve	(866)	(905)	(531)	(658)	(793)	(1,416)	(1,133)	(659)	(1,030)	(1,109)	(1,308)	(983)
Investment Reserve c/f	6,107	5,802	5,859	5,788	5,567	4,667	3,970	3,697	3,005	2,156	1,008	80
TOTAL assets to cover solvency	6,107	5,802	5,859	5,788	5,567	4,667	3,970	3,697	3,005	2,156	1,008	80
EEC solvency margin	477	457	442	419	390	331	283	250	194	132	58	0
(Inv Res — EEC SM) / (Fund + Inv Res)	32%	31%	32%	33%	34%	34%	34%	35%	36%	37%	39%	

Interest rate 10.6%

Open Fund — model B *Example 1*

		1990 £'000	1991 £'000	1992 £'000	1993 £'000	1994 £'000	1995 £'000	1996 £'000	1997 £'000	1998 £'000	1999 £'000	2000 £'000	2001 £'000	2002 £'000
Fund b/f		7,459	8,439	9,441	10,475	11,461	12,538	13,697	14,807	15,944	17,051	18,322	19,706	21,051
INCOME														
Premiums		1,043	1,117	1,197	1,279	1,367	1,464	1,566	1,674	1,784	1,905	2,036	2,174	2,320
Income and growth		1,271	1,269	1,227	1,267	1,385	1,514	1,645	1,776	1,905	2,041	2,196	2,353	2,510
Transfer from / (to) Investment Reserve		(87)	(9)	100	157	98	25	37	50	103	90	52	176	274
OUTGO														
Claims		900	1,014	1,119	1,327	1,352	1,387	1,647	1,834	2,119	2,160	2,251	2,662	3,004
Commission		90	98	105	113	119	128	137	147	157	168	179	192	206
Expenses		149	160	174	185	199	214	229	245	262	280	300	322	343
Tax		108	103	92	92	103	115	125	137	147	157	170	182	194
Shareholders' transfer		0	0	0	0	0	0	0	0	0	0	0	0	0
Fund c/f		8,439	9,441	10,475	11,461	12,538	13,697	14,807	15,944	17,051	18,322	19,706	21,051	22,408
Investment Reserve b/f		2,030	2,333	2,585	2,750	2,871	3,067	3,360	3,672	4,002	4,311	4,666	5,097	5,444
Net return on Investment Reserve		216	244	264	279	294	319	349	380	412	445	484	522	554
Transfer to / (from) Investment Reserve		87	9	(100)	(157)	(98)	(25)	(37)	(50)	(103)	(90)	(52)	(176)	(274)
Investment Reserve c/f	2,030	2,333	2,585	2,750	2,871	3,067	3,360	3,672	4,002	4,311	4,666	5,097	5,444	5,723
TOTAL assets to cover solvency		2,333	2,585	2,750	2,871	3,067	3,360	3,672	4,002	4,311	4,666	5,097	5,444	5,723
EEC solvency margin		393	438	482	527	574	625	674	726	775	833	894	956	1,017
(Inv Res — EEC SM) / (Fund + Inv Res)		18%	18%	17%	16%	16%	16%	16%	16%	17%	17%	17%	17%	17%

Interest rate 10.4%

Open Fund — model *Example 1*

	2003 £'000	2004 £'000	2005 £'000	2006 £'000	2007 £'000	2008 £'000	2009 £'000	2010 £'000	2011 £'000	2012 £'000	2013 £'000	2014 £'000	2015 £'000
Fund b/f	22,408	23,705	25,157	26,926	28,723	30,579	31,935	33,832	36,358	38,617	41,042	43,464	46,532
INCOME													
Premiums	2,475	2,641	2,823	3,020	3,231	3,451	3,686	3,946	4,224	4,518	4,831	5,170	5,534
Income and growth	2,663	2,821	3,008	3,213	3,428	3,611	3,798	4,055	4,331	4,602	4,880	5,198	5,562
Transfer from / (to) Investment Reserve	408	389	9	64	123	617	302	(186)	77	86	198	(36)	280
OUTGO													
Claims	3,459	3,557	3,170	3,537	3,897	5,230	4,727	4,048	5,047	5,366	5,980	5,654	6,423
Commission	220	235	252	269	288	308	330	352	377	403	431	461	494
Expenses	366	392	420	450	481	514	550	589	629	674	720	771	825
Tax	204	215	229	244	260	271	282	300	320	338	356	378	405
Shareholders' transfer	0	0	0	0	0	0	0	0	0	0	0	0	0
Fund c/f	23,705	25,157	26,926	28,723	30,579	31,935	33,832	36,358	38,617	41,042	43,464	46,532	49,761
Investment Reserve b/f	5,723	5,891	6,096	6,722	7,356	7,994	8,178	8,712	9,817	10,759	11,792	12,813	14,188
Net return on Investment Reserve	576	594	635	698	761	802	837	918	1,020	1,118	1,220	1,338	1,465
Transfer to / (from) Investment Reserve	(408)	(389)	(9)	(64)	(123)	(617)	(302)	186	(77)	(86)	(198)	36	(280)
Investment Reserve c/f	5,891	6,096	6,722	7,356	7,994	8,178	8,712	9,817	10,759	11,792	12,813	14,188	15,373
TOTAL assets to cover solvency	5,891	6,096	6,722	7,356	7,994	8,178	8,712	9,817	10,759	11,792	12,813	14,188	15,373
EEC solvency margin	1,077	1,144	1,224	1,306	1,391	1,457	1,545	1,660	1,764	1,876	1,990	2,130	2,278
(Inv Res — EEC SM) / (Fund + Inv Res)	16%	16%	16%	17%	17%	17%	17%	18%	18%	19%	19%	20%	20%

Interest rate 10.4%

Open Fund — model B *Example 2*

		1990 £'000	1991 £'000	1992 £'000	1993 £'000	1994 £'000	1995 £'000	1996 £'000	1997 £'000	1998 £'000	1999 £'000	2000 £'000	2001 £'000	2002 £'000
Fund b/f		7,459	8,439	9,441	10,475	11,461	12,538	13,697	14,807	15,944	17,051	18,322	19,706	21,051
INCOME														
Premiums		1,043	1,117	1,197	1,279	1,367	1,464	1,566	1,674	1,784	1,905	2,036	2,174	2,320
Income and growth		1,271	1,269	1,227	1,267	1,385	1,514	1,645	1,776	1,905	2,041	2,196	2,353	2,510
Transfer from / (to) Investment Reserve		(87)	(9)	100	157	98	25	37	50	103	90	52	176	274
OUTGO														
Claims		900	1,014	1,119	1,327	1,352	1,387	1,647	1,834	2,119	2,160	2,251	2,662	3,004
Commission		90	98	105	113	119	128	137	147	157	168	179	192	206
Expenses		149	160	174	185	199	214	229	245	262	280	300	322	343
Tax		108	103	92	92	103	115	125	137	147	157	170	182	194
Shareholders' transfer		0	0	0	0	0	0	0	0	0	0	0	0	0
Fund c/f		8,439	9,441	10,475	11,461	12,538	13,697	14,807	15,944	17,051	18,322	19,706	21,051	22,408
Investment Reserve b/f	2,030	2,530	2,885	3,195	3,423	3,614	3,888	4,267	4,673	5,108	5,532	6,014	6,586	7,088
Net return on Investment Reserve		268	301	328	349	372	404	443	485	527	572	625	678	725
Transfer to / (from) Investment Reserve	500	87	9	(100)	(157)	(98)	(25)	(37)	(50)	(103)	(90)	(52)	(176)	(274)
Investment Reserve c/f	2,530	2,885	3,195	3,423	3,614	3,888	4,267	4,673	5,108	5,532	6,014	6,586	7,088	7,539
TOTAL assets to cover solvency		2,885	3,195	3,423	3,614	3,888	4,267	4,673	5,108	5,532	6,014	6,586	7,088	7,539
EEC solvency margin		393	438	482	527	574	625	674	726	775	833	894	956	1,017
(Inv Res— EEC SM) / (Fund + Inv Res)		22%	22%	21%	20%	20%	20%	21%	21%	21%	21%	22%	22%	22%

Interest rate 10.4%

Example 2

Open Fund — model B

	2003 £'000	2004 £'000	2005 £'000	2006 £'000	2007 £'000	2008 £'000	2009 £'000	2010 £'000	2011 £'000	2012 £'000	2013 £'000	2014 £'000	2015 £'000
Fund b/f	22,408	23,705	25,157	26,926	28,723	30,579	31,935	33,832	36,358	38,617	41,042	43,464	46,532
INCOME													
Premiums	2,475	2,641	2,823	3,020	3,231	3,451	3,686	3,946	4,224	4,518	4,831	5,170	5,534
Income and growth	2,663	2,821	3,008	3,213	3,428	3,611	3,798	4,055	4,331	4,602	4,880	5,198	5,562
Transfer from / (to) Investment Reserve	408	389	9	64	123	617	302	(186)	77	86	198	(36)	280
OUTGO													
Claims	3,459	3,557	3,170	3,537	3,897	5,230	4,727	4,048	5,047	5,366	5,980	5,654	6,423
Commission	220	235	252	269	288	308	330	352	377	403	431	461	494
Expenses	366	392	420	450	481	514	550	589	629	674	720	771	825
Tax	204	215	229	244	260	271	282	300	320	338	356	378	405
Shareholders' transfer	0	0	0	0	0	0	0	0	0	0	0	0	0
Fund c/f	23,705	25,157	26,926	28,723	30,579	31,935	33,832	36,358	38,617	41,042	43,464	46,532	49,761
Investment Reserve b/f	7,539	7,897	8,311	9,168	10,056	10,976	11,471	12,349	13,833	15,194	16,689	18,222	20,160
Net return on Investment Reserve	765	803	866	953	1,042	1,113	1,181	1,298	1,439	1,580	1,730	1,902	2,088
Transfer to / (from) Investment Reserve	(408)	(389)	(9)	(64)	(123)	(617)	(302)	186	(77)	(86)	(198)	36	(280)
Investment Reserve c/f	7,897	8,311	9,168	10,056	10,976	11,471	12,349	13,833	15,194	16,689	18,222	20,160	21,969
TOTAL assets to cover solvency	7,897	8,311	9,168	10,056	10,976	11,471	12,349	13,833	15,194	16,689	18,222	20,160	21,969
EEC solvency margin	1,077	1,144	1,224	1,306	1,391	1,457	1,545	1,660	1,764	1,876	1,990	2,130	2,278
(Inv Res — EEC SM) / (Fund + Inv Res)	22%	21%	22%	23%	23%	23%	23%	24%	25%	26%	26%	27%	27%

Interest rate 10.4%

Open Fund — model B with double new business *Example 3*

		1990 £'000	1991 £'000	1992 £'000	1993 £'000	1994 £'000	1995 £'000	1996 £'000	1997 £'000	1998 £'000	1999 £'000	2000 £'000	2001 £'000	2002 £'000
Fund b/f		7,459	8,472	9,613	10,918	12,301	13,909	15,734	17,650	19,745	21,974	24,519	27,123	29,844
INCOME														
Premiums		1,117	1,328	1,545	1,765	1,994	2,236	2,489	2,755	3,029	3,322	3,623	3,931	4,256
Income and growth		1,272	1,279	1,261	1,340	1,512	1,711	1,927	2,159	2,409	2,685	2,983	3,290	3,616
Transfer from / (to) Investment Reserve		3	57	164	208	133	33	7	(17)	(5)	(62)	(101)	(21)	29
OUTGO														
Claims		901	1,019	1,135	1,361	1,407	1,467	1,755	1,977	2,303	2,418	2,831	3,314	3,739
Commission		168	179	190	206	220	239	258	279	301	324	347	374	402
Expenses		246	268	295	318	346	376	407	440	476	514	555	600	644
Tax		64	57	45	45	58	73	87	106	124	144	168	191	216
Shareholders' transfer		0	0	0	0	0	0	0	0	0	0	0	0	0
Fund c/f		8,472	9,613	10,918	12,301	13,909	15,734	17,650	19,745	21,974	24,519	27,123	29,844	32,744
Investment Reserve b/f		2,030	2,238	2,411	2,491	2,532	2,656	2,898	3,193	3,544	3,919	4,392	4,957	5,497
Net return on Investment Reserve		212	230	243	249	257	275	302	334	370	412	463	518	572
Transfer to / (from) Investment Reserve		(3)	(57)	(164)	(208)	(133)	(33)	(7)	17	5	62	101	21	(29)
Investment Reserve c/f	2,030	2,238	2,411	2,491	2,532	2,656	2,898	3,193	3,544	3,919	4,392	4,957	5,497	6,039
TOTAL assets to cover solvency		2,238	2,411	2,491	2,532	2,656	2,898	3,193	3,544	3,919	4,392	4,957	5,497	6,039
EEC solvency margin		402	461	523	592	668	753	842	941	1,043	1,161	1,279	1,406	1,538
(Inv Res — EEC SM) / (Fund + Inv Res)		17%	16%	15%	13%	12%	12%	11%	11%	11%	11%	11%	12%	12%

Interest rate 10.4%

Open Fund — model B with double new business *Example 3*

	2003 £'000	2004 £'000	2005 £'000	2006 £'000	2007 £'000	2008 £'000	2009 £'000	2010 £'000	2011 £'000	2012 £'000	2013 £'000	2014 £'000	2015 £'000
Fund b/f	32,744	35,761	39,120	43,002	47,126	51,538	55,694	60,650	66,514	72,407	78,783	85,492	93,064
INCOME													
Premiums	4,601	4,968	5,362	5,784	6,234	6,708	7,213	7,760	8,343	8,961	9,620	10,328	11,068
Income and growth	3,957	4,324	4,743	5,203	5,700	6,191	6,716	7,343	8,019	8,728	9,481	10,314	11,124
Transfer from / (to) Investment Reserve	108	32	(398)	(404)	(412)	15	(369)	(930)	(739)	(800)	(760)	(946)	560
OUTGO													
Claims	4,286	4,489	4,223	4,724	5,233	6,733	6,417	5,946	7,178	7,757	8,661	8,916	12,846
Commission	431	462	497	532	570	611	656	701	751	804	861	922	988
Expenses	692	746	804	866	930	1,000	1,076	1,157	1,241	1,335	1,433	1,540	1,650
Tax	240	268	301	337	377	414	455	505	560	617	677	746	810
Shareholders' transfer	0	0	0	0	0	0	0	0	0	0	0	0	0
Fund c/f	35,761	39,120	43,002	47,126	51,538	55,694	60,650	66,514	72,407	78,783	85,492	93,064	99,522
Investment Reserve b/f	6,039	6,556	7,205	8,376	9,675	11,117	12,261	13,929	16,360	18,844	21,651	24,708	28,281
Net return on Investment Reserve	624	682	772	895	1,031	1,159	1,298	1,501	1,745	2,007	2,298	2,626	2,920
Transfer to / (from) Investment Reserve	(108)	(32)	398	404	412	(15)	369	930	739	800	760	946	(560)
Investment Reserve c/f	6,556	7,205	8,376	9,675	11,117	12,261	13,929	16,360	18,844	21,651	24,708	28,281	30,641
TOTAL assets to cover solvency	6,556	7,205	8,376	9,675	11,117	12,261	13,929	16,360	18,844	21,651	24,708	28,281	30,641
EEC solvency margin	1,677	1,831	2,006	2,193	2,392	2,583	2,807	3,070	3,334	3,620	3,922	4,260	4,556
(Inv Res — EEC SM) / (Fund + Inv Res)	12%	12%	12%	13%	14%	14%	15%	16%	17%	18%	19%	20%	20%

Interest rate 10.4%

Open Fund — model B with double new business

Example 4

		1990 £'000	1991 £'000	1992 £'000	1993 £'000	1994 £'000	1995 £'000	1996 £'000	1997 £'000	1998 £'000	1999 £'000	2000 £'000	2001 £'000	2002 £'000
Fund b/f		7,459	8,472	9,613	10,918	12,301	13,909	15,734	17,650	19,745	21,974	24,519	27,123	29,844
INCOME														
Premiums		1,117	1,328	1,545	1,765	1,994	2,236	2,489	2,755	3,029	3,322	3,623	3,931	4,256
Income and growth		1,272	1,279	1,261	1,340	1,512	1,711	1,927	2,159	2,409	2,685	2,983	3,290	3,616
Transfer from / (to) Investment Reserve		3	57	164	208	133	33	7	(17)	(5)	(62)	(101)	(21)	29
OUTGO														
Claims		901	1,019	1,135	1,361	1,407	1,467	1,755	1,977	2,303	2,418	2,831	3,314	3,739
Commission		168	179	190	206	220	239	258	279	301	324	347	374	402
Expenses		246	268	295	318	346	376	407	440	476	514	555	600	644
Tax		64	57	45	45	58	73	87	106	124	144	168	191	216
Shareholders' transfer		0	0	0	0	0	0	0	0	0	0	0	0	0
Fund c/f		8,472	9,613	10,918	12,301	13,909	15,734	17,650	19,745	21,974	24,519	27,123	29,844	32,744
Investment Reserve b/f	2,030	2,530	2,790	3,021	3,164	3,275	3,477	3,805	4,194	4,650	5,140	5,741	6,446	7,141
Net return on Investment Reserve		264	288	307	319	335	361	396	438	485	539	604	673	743
Transfer to / (from) Investment Reserve	500	(3)	(57)	(164)	(208)	(133)	(33)	(7)	17	5	62	101	21	(29)
Investment Reserve c/f	2,530	2,790	3,021	3,164	3,275	3,477	3,805	4,194	4,650	5,140	5,741	6,446	7,141	7,855
TOTAL assets to cover solvency		2,790	3,021	3,164	3,275	3,477	3,805	4,194	4,650	5,140	5,741	6,446	7,141	7,855
EEC solvency margin		402	461	523	592	668	753	842	941	1,043	1,161	1,279	1,406	1,538
(Inv Res — EEC SM) / (Fund + Inv Res)		21%	20%	19%	17%	16%	16%	15%	15%	15%	15%	15%	16%	16%

Interest rate 10.4%

Open Fund — model B with double new business *Example 4*

	2003 £'000	2004 £'000	2005 £'000	2006 £'000	2007 £'000	2008 £'000	2009 £'000	2010 £'000	2011 £'000	2012 £'000	2013 £'000	2014 £'000	2015 £'000
Fund b/f	32,744	35,761	39,120	43,002	47,126	51,538	55,694	60,650	66,514	72,407	78,783	85,492	93,064
INCOME													
Premiums	4,601	4,968	5,362	5,784	6,234	6,708	7,213	7,760	8,343	8,961	9,620	10,328	11,068
Income and growth	3,957	4,324	4,743	5,203	5,700	6,191	6,716	7,343	8,019	8,728	9,481	10,314	11,124
Transfer from / (to) Investment Reserve	108	32	(398)	(404)	(412)	15	(369)	(930)	(739)	(800)	(760)	(946)	560
OUTGO													
Claims	4,286	4,489	4,223	4,724	5,233	6,733	6,417	5,946	7,178	7,757	8,661	8,916	12,846
Commission	431	462	497	532	570	611	656	701	751	804	861	922	988
Expenses	692	746	804	866	930	1,000	1,076	1,157	1,241	1,335	1,433	1,540	1,650
Tax	240	268	301	337	377	414	455	505	560	617	677	746	810
Shareholders' transfer	0	0	0	0	0	0	0	0	0	0	0	0	0
Fund c/f	35,761	39,120	43,002	47,126	51,538	55,694	60,650	66,514	72,407	78,783	85,492	93,064	99,522
Investment Reserve b/f	7,855	8,561	9,420	10,821	12,375	14,100	15,555	17,566	20,376	23,279	26,548	30,117	34,253
Net return on Investment Reserve	814	891	1,003	1,150	1,312	1,470	1,642	1,881	2,164	2,470	2,809	3,190	3,543
Transfer to / (from) Investment Reserve	(108)	(32)	398	404	412	(15)	369	930	739	800	760	946	(560)
Investment Reserve c/f	8,561	9,420	10,821	12,375	14,100	15,555	17,566	20,376	23,279	26,548	30,117	34,253	37,236
TOTAL assets to cover solvency	8,561	9,420	10,821	12,375	14,100	15,555	17,566	20,376	23,279	26,548	30,117	34,253	37,236
EEC solvency margin	1,677	1,831	2,006	2,193	2,392	2,583	2,807	3,070	3,334	3,620	3,922	4,260	4,556
(Inv Res — EEC SM) / (Fund + Inv Res)	16%	16%	16%	17%	18%	18%	19%	20%	21%	22%	23%	24%	24%

Interest rate 10.4%

Open Fund — model B with shareholders' transfers *Example 5*

		1990 £'000	1991 £'000	1992 £'000	1993 £'000	1994 £'000	1995 £'000	1996 £'000	1997 £'000	1998 £'000	1999 £'000	2000 £'000	2001 £'000	2002 £'000
Fund b/f		7,459	8,439	9,441	10,475	11,461	12,538	13,697	14,807	15,944	17,051	18,322	19,706	21,051
INCOME														
Premiums		1,043	1,117	1,197	1,279	1,367	1,464	1,566	1,674	1,784	1,905	2,036	2,174	2,320
Income and growth		1,271	1,269	1,227	1,267	1,385	1,514	1,645	1,776	1,905	2,041	2,196	2,353	2,510
Transfer from / (to) Investment Reserve		37	123	238	305	249	179	204	231	302	300	272	424	551
OUTGO														
Claims		900	1,014	1,119	1,327	1,352	1,387	1,647	1,834	2,119	2,160	2,251	2,662	3,004
Commission		90	98	105	113	119	128	137	147	157	168	179	192	206
Expenses		149	160	174	185	199	214	229	245	262	280	300	322	343
Tax		119	115	105	105	117	129	140	153	165	176	190	205	219
Shareholders' transfer		112	120	126	134	137	140	152	164	181	191	200	226	252
Fund c/f		8,439	9,441	10,475	11,461	12,538	13,697	14,807	15,944	17,051	18,322	19,706	21,051	22,408
Investment Reserve b/f	2,030	3,030	3,307	3,523	3,639	3,698	3,821	4,032	4,238	4,437	4,581	4,744	4,952	5,022
Net return on Investment Reserve		314	339	355	364	373	389	410	430	447	462	481	494	495
Transfer to / (from) Investment Reserve	1,000	(37)	(123)	(238)	(305)	(249)	(179)	(204)	(231)	(302)	(300)	(272)	(424)	(551)
Investment Reserve c/f	3,030	3,307	3,523	3,639	3,698	3,821	4,032	4,238	4,437	4,581	4,744	4,952	5,022	4,965
TOTAL assets to cover solvency		3,307	3,523	3,639	3,698	3,821	4,032	4,238	4,437	4,581	4,744	4,952	5,022	4,965
EEC solvency margin		393	438	482	527	574	625	674	726	775	833	894	956	1,017
(Inv Res — EEC SM) / (Fund + Inv Res)		25%	24%	22%	21%	20%	19%	19%	18%	18%	17%	16%	16%	14%

Interest rate 10.4%

Open Fund — model B with shareholders' transfers *Example 5*

	2003 £'000	2004 £'000	2005 £'000	2006 £'000	2007 £'000	2008 £'000	2009 £'000	2010 £'000	2011 £'000	2012 £'000	2013 £'000	2014 £'000	2015 £'000
Fund b/f	22,408	23,705	25,157	26,926	28,723	30,579	31,935	33,832	36,358	38,617	41,042	43,464	46,532
INCOME													
Premiums	2,475	2,641	2,823	3,020	3,231	3,451	3,686	3,946	4,224	4,518	4,831	5,170	5,534
Income and growth	2,663	2,821	3,008	3,213	3,428	3,611	3,798	4,055	4,331	4,602	4,880	5,198	5,562
Transfer from / (to) Investment Reserve	716	713	305	387	474	1,049	716	193	515	552	706	474	865
OUTGO													
Claims	3,459	3,557	3,170	3,537	3,897	5,230	4,727	4,048	5,047	5,366	5,980	5,654	6,423
Commission	220	235	252	269	288	308	330	352	377	403	431	461	494
Expenses	366	392	420	450	481	514	550	589	629	674	720	771	825
Tax	232	244	256	273	292	310	320	335	360	380	402	424	458
Shareholders' transfer	280	294	269	293	319	392	376	345	398	424	462	464	532
Fund c/f	23,705	25,157	26,926	28,723	30,579	31,935	33,832	36,358	38,617	41,042	43,464	46,532	49,761
Investment Reserve b/f	4,965	4,730	4,474	4,619	4,694	4,685	4,071	3,742	3,929	3,796	3,612	3,245	3,085
Net return on Investment Reserve	481	456	451	462	465	434	387	380	383	367	340	314	277
Transfer to / (from) Investment Reserve	(716)	(713)	(305)	(387)	(474)	(1,049)	(716)	(193)	(515)	(552)	(706)	(474)	(865)
Investment Reserve c/f	4,730	4,474	4,619	4,694	4,685	4,071	3,742	3,929	3,796	3,612	3,245	3,085	2,497
TOTAL assets to cover solvency	4,730	4,474	4,619	4,694	4,685	4,071	3,742	3,929	3,796	3,612	3,245	3,085	2,497
EEC solvency margin	1,077	1,144	1,224	1,306	1,391	1,457	1,545	1,660	1,764	1,876	1,990	2,130	2,278
(Inv Res — EEC SM) / (Fund + Inv Res)	13%	11%	11%	10%	9%	7%	6%	6%	5%	4%	3%	2%	0%

Interest rate 10.4%

Open Fund — model B with shareholders' transfers *Example 6*

		1990 £'000	1991 £'000	1992 £'000	1993 £'000	1994 £'000	1995 £'000	1996 £'000	1997 £'000	1998 £'000	1999 £'000	2000 £'000	2001 £'000	2002 £'000
Fund b/f		7,459	8,439	9,441	10,475	11,461	12,538	13,697	14,807	15,944	17,051	18,322	19,706	21,051
INCOME														
Premiums		1,043	1,117	1,197	1,279	1,367	1,464	1,566	1,674	1,784	1,905	2,036	2,174	2,320
Income and growth		1,271	1,269	1,227	1,267	1,385	1,514	1,645	1,776	1,905	2,041	2,196	2,353	2,510
Transfer from / (to) Investment Reserve		37	123	238	305	249	179	204	231	302	300	272	424	551
OUTGO														
Claims		900	1,014	1,119	1,327	1,352	1,387	1,647	1,834	2,119	2,160	2,251	2,662	3,004
Commission		90	98	105	113	119	128	137	147	157	168	179	192	206
Expenses		149	160	174	185	199	214	229	245	262	280	300	322	343
Tax		119	115	105	105	117	129	140	153	165	176	190	205	219
Shareholders' transfer		112	120	126	134	137	140	152	164	181	191	200	226	252
Fund c/f		8,439	9,441	10,475	11,461	12,538	13,697	14,807	15,944	17,051	18,322	19,706	21,051	22,408
Investment Reserve b/f	2,030	3,530	3,860	4,132	4,312	4,441	4,643	4,938	5,239	5,542	5,802	6,092	6,441	6,666
Net return on Investment Reserve		366	396	419	434	450	475	504	534	562	590	621	650	667
Transfer to / (from) Investment Reserve	1,500	(37)	(123)	(238)	(305)	(249)	(179)	(204)	(231)	(302)	(300)	(272)	(424)	(551)
Investment Reserve c/f	3,530	3,860	4,132	4,312	4,441	4,643	4,938	5,239	5,542	5,802	6,092	6,441	6,666	6,781
TOTAL assets to cover solvency		3,860	4,132	4,312	4,441	4,643	4,938	5,239	5,542	5,802	6,092	6,441	6,666	6,781
EEC solvency margin		393	438	482	527	574	625	674	726	775	833	894	956	1,017
(Inv Res — EEC SM) / (Fund + Inv Res)		28%	27%	26%	25%	24%	23%	23%	22%	22%	22%	21%	21%	20%

Interest rate 10.4%

Open Fund — model B with shareholders' transfers *Example 6*

	2003 £'000	2004 £'000	2005 £'000	2006 £'000	2007 £'000	2008 £'000	2009 £'000	2010 £'000	2011 £'000	2012 £'000	2013 £'000	2014 £'000	2015 £'000
Fund b/f	22,408	23,705	25,157	26,926	28,723	30,579	31,935	33,832	36,358	38,617	41,042	43,464	46,532
INCOME													
Premiums	2,475	2,641	2,823	3,020	3,231	3,451	3,686	3,946	4,224	4,518	4,831	5,170	5,534
Income and growth	2,663	2,821	3,008	3,213	3,428	3,611	3,798	4,055	4,331	4,602	4,880	5,198	5,562
Transfer from / (to) Investment Reserve	716	713	305	387	474	1,049	716	193	515	552	706	474	865
OUTGO													
Claims	3,459	3,557	3,170	3,537	3,897	5,230	4,727	4,048	5,047	5,366	5,980	5,654	6,423
Commission	220	235	252	269	288	308	330	352	377	403	431	461	494
Expenses	366	392	420	450	481	514	550	589	629	674	720	771	825
Tax	232	244	256	273	292	310	320	335	360	380	402	424	458
Shareholders' transfer	280	294	269	293	319	392	376	345	398	424	462	464	532
Fund c/f	23,705	25,157	26,926	28,723	30,579	31,935	33,832	36,358	38,617	41,042	43,464	46,532	49,761
Investment Reserve b/f	6,781	6,736	6,688	7,065	7,395	7,667	7,364	7,379	7,945	8,231	8,509	8,654	9,058
Net return on Investment Reserve	670	665	682	717	747	745	731	759	802	830	851	878	900
Transfer to / (from) Investment Reserve	(716)	(713)	(305)	(387)	(474)	(1,049)	(716)	(193)	(515)	(552)	(706)	(474)	(865)
Investment Reserve c/f	6,736	6,688	7,065	7,395	7,667	7,364	7,379	7,945	8,231	8,509	8,654	9,058	9,092
TOTAL assets to cover solvency	6,736	6,688	7,065	7,395	7,667	7,364	7,379	7,945	8,231	8,509	8,654	9,058	9,092
EEC solvency margin	1,077	1,144	1,224	1,306	1,391	1,457	1,545	1,660	1,764	1,876	1,990	2,130	2,278
(Inv Res — EEC SM) / (Fund + Inv Res)	19%	17%	17%	17%	16%	15%	14%	14%	14%	13%	13%	12%	12%

Interest rate 10.4%

Open Fund — model B with shareholders' transfers and double new business *Example 7*

		1990 £'000	1991 £'000	1992 £'000	1993 £'000	1994 £'000	1995 £'000	1996 £'000	1997 £'000	1998 £'000	1999 £'000	2000 £'000	2001 £'000	2002 £'000
Fund b/f		7,459	8,472	9,613	10,918	12,301	13,909	15,734	17,650	19,745	21,974	24,519	27,123	29,844
INCOME														
Premiums		1,117	1,328	1,545	1,765	1,994	2,236	2,489	2,755	3,029	3,322	3,623	3,931	4,256
Income and growth		1,272	1,279	1,261	1,340	1,512	1,711	1,927	2,159	2,409	2,685	2,983	3,290	3,616
Transfer from / (to) **Investment Reserve**		130	199	318	377	312	223	217	214	255	220	207	326	419
OUTGO														
Claims		901	1,019	1,135	1,361	1,407	1,467	1,755	1,977	2,303	2,418	2,831	3,314	3,739
Commission		168	179	190	206	220	239	258	279	301	324	347	374	402
Expenses		246	268	295	3128	346	376	407	440	476	514	555	600	644
Tax		76	70	59	60	74	90	106	127	148	170	196	223	251
Shareholders' transfer		115	129	140	154	163	173	191	210	236	256	280	316	354
Fund c/f		8,472	9,613	10,918	12,301	13,909	15,734	17,650	19,745	21,974	24,519	27,123	29,844	32,744
Investment Reserve b/f	2,030	3,030	3,209	3,334	3,348	3,300	3,316	3,427	3,556	3,702	3,820	3,987	4,185	4,279
Net return on Investment Reserve		309	324	331	330	328	334	346	360	373	387	405	420	424
Transfer to / (from) Investment Reserve	1,000	(130)	(199)	(318)	(377)	(312)	(223)	(217)	(214)	(255)	(220)	(207)	(326)	(419)
Investment Reserve c/f	3,030	3,209	3,334	3,348	3,300	3,316	3,427	3,556	3,702	3,820	3,987	4,185	4,279	4,284
TOTAL assets to cover solvency		3,209	3,334	3,348	3,300	3,316	3,427	3,556	3,702	3,820	3,987	4,185	4,279	4,284
EEC solvency margin		402	461	523	592	668	753	842	941	1,043	1,161	1,279	1,406	1,538
(Inv Res — EEC SM) / (Fund + Inv Res)		24%	22%	20%	17%	15%	14%	13%	12%	11%	10%	9%	8%	7%

Interest rate 10.4%

Open Fund — model B with shareholders' transfers and double new business *Example 7*

	2003 £'000	2004 £'000	2005 £'000	2006 £'000	2007 £'000	2008 £'000	2009 £'000	2010 £'000	2011 £'000	2012 £'000	2013 £'000	2014 £'000	2015 £'000
Fund b/f	32,744	35,761	39,120	43,002	47,126	51,538	55,694	60,650	66,514	72,407	78,783	85,492	93,064
INCOME													
Premiums	4,601	4,968	5,362	5,784	6,234	6,708	7,213	7,760	8,343	8,961	9,620	10,328	11,068
Income and growth	3,957	4,324	4,743	5,203	5,700	6,191	6,716	7,343	8,019	8,728	9,481	10,314	11,124
Transfer from / (to) Investment Reserve	541	497	56	94	134	663	284	(286)	(11)	(14)	99	(36)	1,731
OUTGO													
Claims	4,286	4,489	4,223	4,724	5,233	6,733	6,417	5,946	7,178	7,757	8,661	8,916	12,846
Commission	431	462	497	532	570	611	656	701	751	804	861	922	988
Expenses	692	746	804	866	930	1,000	1,076	1,157	1,241	1,335	1,433	1,540	1,650
Tax	279	310	342	382	427	473	514	564	626	689	755	829	916
Shareholders' transfer	394	422	413	453	497	589	594	585	662	715	781	827	1,064
Fund c/f	35,761	39,120	43,002	47,126	51,538	55,694	60,650	66,514	72,407	78,783	85,492	93,064	99,522
Investment Reserve b/f	4,284	4,162	4,073	4,439	4,803	5,162	5,004	5,227	6,073	6,718	7,433	8,103	8,986
Net return on Investment Reserve	419	408	422	458	494	504	507	560	634	701	770	847	847
Transfer to / (from) Investment Reserve	(541)	(497)	(56)	(94)	(134)	(663)	(284)	286	11	14	(99)	36	(1,731)
Investment Reserve c/f	4,162	4,073	4,439	4,803	5,162	5,004	5,227	6,073	6,718	7,433	8,103	8,986	8,103
TOTAL assets to cover solvency	4,162	4,073	4,439	4,803	5,162	5,004	5,227	6,073	6,718	7,433	8,103	8,986	8,103
EEC solvency margin	1,677	1,831	2,006	2,193	2,392	2,583	2,807	3,070	3,334	3,620	3,922	4,260	4,556
(Inv Res — EEC SM) / Fund + Inv Res)	6%	5%	5%	5%	5%	4%	4%	4%	4%	4%	4%	5%	3%

Interest rate 10.4%

Open Fund — model B with shareholders' transfers and double new business *Example 8*

		1990 £'000	1991 £'000	1992 £'000	1993 £'000	1994 £'000	1995 £'000	1996 £'000	1997 £'000	1998 £'000	1999 £'000	2000 £'000	2001 £'000	2002 £'000
Fund b/f		7,459	8,472	9,613	10,918	12,301	13,909	15,734	17,650	19,745	21,974	24,519	27,123	29,844
INCOME														
Premiums		1,117	1,328	1,545	1,765	1,994	2,236	2,489	2,755	3,029	3,322	3,623	3,931	4,256
Income and growth		1,272	1,279	1,261	1,340	1,512	1,711	1,927	2,159	2,409	2,685	2,983	3,290	3,616
Transfer from / (to) Investment Reserve		130	199	318	377	312	223	217	214	255	220	207	326	419
OUTGO														
Claims		901	1,019	1,135	1,361	1,407	1,467	1,755	1,977	2,303	2,418	2,831	3,314	3,739
Commission		168	179	190	206	220	239	258	279	301	324	347	374	402
Expenses		246	268	295	318	346	376	407	440	476	514	555	600	644
Tax		76	70	59	60	74	90	106	127	148	170	196	223	251
Shareholders' transfer		115	129	140	154	163	173	191	210	236	256	280	316	354
Fund c/f		8,472	9,613	10,918	12,301	13,909	15,734	17,650	19,745	21,974	24,519	27,123	29,844	32,744
Investment Reserve b/f	2,030	3,530	3,761	3,944	4,021	4,044	4,137	4,334	4,557	4,808	5,041	5,335	5,674	5,923
Net return on Investment Reserve		361	382	395	400	405	420	441	464	488	514	546	575	596
Transfer to / (from) Investment Reserve	1,500	(130)	(199)	(318)	(377)	(312)	(223)	(217)	(214)	(255)	(220)	(207)	(326)	(419)
Investment Reserve c/f	3,530	3,761	3,944	4,021	4,044	4,137	4,334	4,557	4,808	5,041	5,335	5,674	5,923	6,100
TOTAL assets to cover solvency		3,761	3,944	4,021	4,044	4,137	4,334	4,557	4,808	5,041	5,335	5,674	5,923	6,100
EEC solvency margin		402	461	523	592	668	753	842	941	1,043	1,161	1,279	1,406	1,538
(Inv Res — EEC SM) / (Fund + Inv Res)		27%	26%	23%	21%	19%	18%	17%	16%	15%	14%	13%	13%	12%

Interest rate 10.4%

Open Fund — model B with shareholders' transfers and double new business *Example 8*

	2003 £'000	2004 £'000	2005 £'000	2006 £'000	2007 £'000	2008 £'000	2009 £'000	2010 £'000	2011 £'000	2012 £'000	2013 £'000	2014 £'000	2015 £'000
Fund b/f	32,744	35,761	39,120	43,002	47,126	51,538	55,694	60,650	66,514	72,407	78,783	85,492	93,064
INCOME													
Premiums	4,601	4,968	5,362	5,784	6,234	6,708	7,213	7,760	8,343	8,961	9,620	10,328	11,068
Income and growth	3,957	4,324	4,743	5,203	5,700	6,191	6,716	7,343	8,019	8,728	9,481	10,314	11,124
Transfer from / (to) Investment Reserve	541	497	56	94	134	663	284	(286)	(11)	(14)	99	(36)	1,731
OUTGO													
Claims	4,286	4,489	4,223	4,724	5,233	6,733	6,417	5,946	7,178	7,757	8,661	8,916	12,846
Commission	431	462	497	532	570	611	656	701	751	804	861	922	988
Expenses	692	746	804	866	930	1,000	1,076	1,157	1,241	1,335	1,433	1,540	1,650
Tax	279	310	342	382	427	473	514	564	626	689	755	829	916
Shareholders' transfer	394	422	413	453	497	589	594	585	662	715	781	827	1,064
Fund c/f	35,761	39,120	43,002	47,126	51,538	55,694	60,650	66,514	72,407	78,783	85,492	93,064	99,522
Investment Reserve b/f	6,100	6,167	6,288	6,884	7,503	8,145	8,297	8,863	10,089	11,152	12,330	13,511	14,959
Net return on Investment Reserve	608	617	653	713	776	815	851	939	1,053	1,164	1,281	1,411	1,470
Transfer to / (from) Investment Reserve	(541)	(497)	(56)	(94)	(134)	(663)	(284)	286	11	14	(99)	36	(1,731)
Investment Reserve c/f	6,167	6,288	6,884	7,503	8,145	8,297	8,863	10,089	11,152	12,330	13,511	14,959	14,698
TOTAL assets to cover solvency	6,167	6,288	6,884	7,503	8,145	8,297	8,863	10,089	11,152	12,330	13,511	14,959	14,698
EEC solvency margin	1,677	1,831	2,006	2,193	2,392	2,583	2,807	3,070	3,334	3,620	3,922	4,260	4,556
(Inv Res — EEC SM) / (Fund + Inv Res)	11%	10%	10%	10%	10%	9%	9%	9%	9%	10%	10%	10%	9%

Interest rate 10.4%

Open Fund — model B with shareholders' transfers *Example 9*

		1990 £'000	1991 £'000	1992 £'000	1993 £'000	1994 £'000	1995 £'000	1996 £'000	1997 £'000	1998 £'000	1999 £'000	2000 £'000	2001 £'000	2002 £'000
Fund b/f		7,459	8,439	9,441	10,475	11,461	12,538	13,697	14,807	15,944	17,051	18,322	19,706	21,051
INCOME														
Premiums		1,043	1,117	1,197	1,279	1,367	1,464	1,566	1,674	1,784	1,905	2,036	2,174	2,320
Income and growth		1,331	1,329	1,286	1,327	1,451	1,587	1,724	1,861	1,996	2,139	2,301	2,466	2,630
Transfer from / (to) Investment Reserve		(24)	63	180	244	183	106	125	146	211	202	167	312	431
OUTGO														
Claims		900	1,014	1,119	1,327	1,352	1,387	1,647	1,834	2,119	2,160	2,251	2,662	3,004
Commission		90	98	105	113	119	128	137	147	157	168	179	192	206
Expenses		149	160	174	185	199	214	229	245	262	280	300	322	343
Tax		119	115	105	105	117	129	140	153	165	176	190	205	219
Shareholders' transfer		112	120	126	134	137	140	152	164	181	191	200	226	252
Fund c/f		8,439	9,441	10,475	11,461	12,538	13,697	14,807	15,944	17,051	18,322	19,706	21,051	22,408
Investment Reserve b/f	2,030	3,030	3,389	3,695	3,912	4,085	4,341	4,707	5,093	5,499	5,881	6,315	6,833	7,256
Net return on Investment Reserve		335	369	397	417	439	472	511	552	593	636	685	735	774
Transfer to / (from) Investment Reserve	1,000	24	(63)	(180)	(244)	(183)	(106)	(125)	(146)	(211)	(202)	(167)	(312)	(431)
Investment Reserve c/f	3,030	3,389	3,695	3,912	4,085	4,341	4,707	5,093	5,499	5,881	6,315	6,833	7,256	7,599
TOTAL assets to cover solvency		3,389	3,695	3,912	4,085	4,341	4,707	5,093	5,499	5,881	6,315	6,833	7,256	7,599
EEC solvency margin		393	438	482	527	574	625	674	726	775	833	894	956	1,017
(Inv Res — EEC SM) / (Fund + Inv Res)		25%	25%	24%	23%	22%	22%	22%	22%	22%	22%	22%	22%	22%

Interest rate 11.0%

Open Fund — model B with shareholders' transfers *Example 9*

	2003 £'000	2004 £'000	2005 £'000	2006 £'000	2007 £'000	2008 £'000	2009 £'000	2010 £'000	2011 £'000	2012 £'000	2013 £'000	2014 £'000	2015 £'000
Fund b/f	22,408	23,705	25,157	26,926	28,723	30,579	31,935	33,832	36,358	38,617	41,042	43,464	46,532
INCOME													
Premiums	2,475	2,641	2,823	3,020	3,231	3,451	3,686	3,946	4,224	4,518	4,831	5,170	5,534
Income and growth	2,791	2,956	3,152	3,367	3,592	3,784	3,980	4,249	4,538	4,823	5,114	5,448	5,829
Transfer from / (to) Investment Reserve	588	577	161	233	310	875	534	(1)	307	331	472	225	599
OUTGO													
Claims	3,459	3,557	3,170	3,537	3,897	5,230	4,727	4,048	5,047	5,366	5,980	5,654	6,423
Commission	220	235	252	269	288	308	330	352	377	403	431	461	494
Expenses	366	392	420	450	481	514	550	589	629	674	720	771	825
Tax	232	244	256	273	292	310	320	335	360	380	402	424	458
Shareholders' transfer	280	294	269	293	319	392	376	345	398	424	462	464	532
Fund c/f	23,705	25,157	26,926	28,723	30,579	31,935	33,832	36,358	38,617	41,042	43,464	46,532	49,761
Investment Reserve b/f	7,599	7,815	8,066	8,783	9,503	10,221	10,422	11,005	12,217	13,237	14,344	15,424	16,883
Net return on Investment Reserve	804	828	878	953	1,028	1,076	1,117	1,210	1,327	1,438	1,555	1,684	1,824
Transfer to / (from) Investment Reserve	(588)	(577)	(161)	(233)	(310)	(875)	(534)	1	(307)	(331)	(472)	(225)	(599)
Investment Reserve c/f	7,815	8,066	8,783	9,503	10,221	10,422	11,005	12,217	13,237	14,344	15,424	16,883	18,108
TOTAL assets to cover solvency	7,815	8,066	8,783	9,503	10,221	10,422	11,005	12,217	13,237	14,344	15,424	16,883	18,108
EEC solvency margin	1,077	1,144	1,224	1,306	1,391	1,457	1,545	1,660	1,764	1,876	1,990	2,130	2,278
(Inv Res — EEC SM) / (Fund + Inv Res)	21%	21%	21%	21%	21%	21%	21%	22%	22%	22%	23%	23%	23%

Interest rate 11.0%

DISCUSSION

The President said:- I welcome all the guests and visitors who are present. In particular I would mention Hugh Scurfield, President of the Institute of Actuaries and Ian Percy, President of the Institute of Chartered Accountants of Scotland.

This meeting will be devoted to the discussion of two Papers "Restructuring Mutuals-Principles and Practice" by our own Bonus and Valuation Research Group and "Demutualisation of a UK Mutual Life Assurance Company" by Mr P D Needleman and Mr G Westall.

There has already been a preliminary meeting to discuss the modelling part of the first paper. We are treating this as one meeting discussing two papers rather than two discussions after each other.

Mr E F Smith introducing the first paper said:- The restructuring of mutuals is certainly a most controversial topic. The strength of the mutual culture is held in high esteem perhaps nowhere more so than here in Scotland. The members of the Research Group have certainly not wished to diminish this level of appreciation within our profession. However, there could be no doubt that the financial pressures currently being felt by mutuals are strong and likely to continue to be so over the next few years. We suspect that many mutuals will be forced to at least consider their financial options which may include the loss of their mutual status. Such considerations formed the remit of our paper.

The approach taken by the group was to go back to basics and follow through the thought processes we would reasonably expect the management of a mutual to go through when considering its financial alternatives. In this vein the paper was split into three main areas:-

1 The philosophy and principles on which management would base its strategy.

- What is the philosophy underlying a modern mutual?
- How is this philosophy linked to policyholders' expectations?
- At what point do reasonable expectations change?

These are all questions which must be broached. Their answers must form an integral part of the solution, not a retrospective justification of the solution actually adopted. The group found this to be the most difficult part of the paper to write.

2 An analysis of recent reconstructions both in the UK and overseas:-

- How have the different principles been applied in practice?
- What lessons can be learned?
- What are the technical procedures?

We are grateful to Mr MacKenzie, Mr McBride and others for answering these questions. We have tried not to get too involved in the technical procedures as this was well covered in the recent Faculty Seminar.

3 The modelling of the various financial alternatives. This formed the bulk of our work. The alternatives modelled were:-

- The continuation of the mutual in its current form. Results here were used as a base line for comparison purposes.
- The closure of the office to new business. Here we were interested to investigate the investment freedom following closure. Our results were somewhat surprising and perhaps question conventional wisdom.
- The demutualisation of the office. Here we tackled the problem of what would be a fair purchase price from the point of view of the parties involved: existing policyholders; new policyholders and shareholders. Shareholder returns will be affected should further capital injections be required in order to support the initial new business plans. We investigated the likelihood of the need for such a future capital injection. We have tried to quantify the benefits the new working capital brings to firstly existing policyholders and secondly future policyholders by way of investment freedom

and whether this is likely to compensate for the 10% distributions or declared surplus to shareholders.

- The final alternative was that of running off the existing with profits business as a closed block within a demutualised office. Here we were interested to see how these results compared with those in the closed mutual.

We firmly believe that modelling can play an important role in helping management assess the viability of each alternative. If the debate tonight is as lively and thought provoking as that within the Research Group itself, then we are in for an interesting evening.

Mr P D Needleman introducing the second paper said:- I last had the privilege to address a Faculty Meeting in April of last year on the topic of demutualisation. It was the interest generated by that meeting which convinced Mr Westall and myself to write a paper on this subject. I was unaware at the time that the Faculty Research Group were also thinking along the same lines. It is interesting that our efforts, whilst approaching the subject from different perspectives, have generally highlighted the same issues and similar conclusions.

We have attempted in our paper to identify the important issues arising in a demutualisation and to address them in a practical and realistic way. We see the central problem as the ownership of orphan surplus. This has not been a major issue in most of the demutualisations which have taken place to date, because with one exception the estate has appeared to be small or non existent. However, should a mutual attempt to demutualise from a position of strength then no doubt this issue will loom large.

The first problem which actuaries can resolve is to identify the size of the orphan surplus. While most companies are now using asset shares as a basis for determining payouts, this is often done on a sample policy basis. Only a few offices of which I am aware have the ability to determine the total asset shares and hence the orphan surplus or have sophisticated model office systems to enable them to carry out long term fund projections and evaluate the relative merits of alternative schemes. We must be realistic about the extent of financial investigations which are feasible for an office to carry out, particularly if confidentiality or time pressures apply.

Assuming we can identify the orphan surplus, actuaries will also have an important role to play in determining how it is used. However, they are not the sole arbiters. Legal, commercial and practical considerations will also apply. The Institute and Faculty Guidance Notes in their present form will also have a significant influence but are founded on a premise which is by no means uniformly accepted in the profession, nor is it solely a matter for actuaries to decide. The premise to which I refer is encapsulated in one of the conclusions of the Joint Working Party on Reasonable Expectations, namely, that "in the circumstances of a major change in a life office, such as a demutualisation, policyholders may reasonably expect that the proposed new arrangements do not disadvantage them as compared to the option of a closed fund. Our profession should make the advantages and disadvantages of each option clear and recommend the closed fund if it is in the interests of existing policyholders".

I have read this out in full because we think it is contentious.

If this is reasonable in the circumstances of a major change, why is it not reasonable at any time? Is a closed fund reasonable for non-profit policyholders who gain nothing and lose the security of an on-going and thriving life company? We should not forget that the majority of mutuals include non-profit policyholders as members. Mr Paul and his group have questioned this premise in their paper and we have made our views clear. We very much hope to hear your views tonight.

When a clear idea of the fundamental issues has been formed, it is then possible to determine an appropriate structure. We have discussed the relative merits of an open or closed fund for the existing business. Whereas the closed fund may be more appropriate to protect existing policyholders an open fund may be more practical if the company is to continue to write with-profits business and will, perhaps, maximise the value of the company.

We have also considered the impact of demutualisation on bonuses for new policyholders. If the appropriate compensation is retained in the fund, rather than distributed as a windfall, then this should be adequate to fund the shareholders' transfers in the future. Also, the additional investment freedom resulting from the capitalisation of the shareholders' share of future surplus can have a significant impact. In our open fund example an additional investment return of 0.6% was required to pay the same bonuses and keep the free asset ratio the same as in the continuing mutual. This figure would be lower if more of the compensation were retained in the fund. If we assume the difference between equity and fixed interest returns is about 3% net, then this increase in investment returns could perhaps be achieved by a 20% increase in the equity backing ratio of the office.

Finally, the basis of future operation of a demutualised company must be carefully considered and must be appropriately dealt with in the scheme. One factor which is often overlooked is that the company does have the ability to control the level of future bonuses and, in particular, the level of reversionary bonuses relative to terminal bonuses. So it can minimise the constraints on investment freedom. This is obviously easier to do in a closed fund than in an open fund but it is within the directors' control. The impact can be quite significant as illustrated by our two different bonus scenarios. We view these papers as the opening of a debate which may continue for some time, as there are many difficult issues involved.

Mr C G Thomson opening the discussion said:- Almost exactly five years ago tonight I had the privilege of opening a paper by Hunter and Jones called "Merging Life Funds". Many of the same issues were central then as with tonight's two papers. Firstly, the balance between actuarial calculations and the commercial compromises necessary in what is essentially a trading deal. Secondly, the policyholders' reasonable expectations and thirdly, the benefits of actuarial modelling. I am confident that everyone here will have forgotten my remarks even more completely than I had and will understand why I had a terrible temptation merely to update them - particularly since, to my amazement, I found that I still agreed with virtually everything which I said then. However, the subject has both widened and deepened in the past five years and these two papers show very clearly the enormous amount of work which has gone into the subject in recent times.

I thought that I might comment on each paper paragraph by paragraph, but I know how comfortable the chairs in the Faculty Hall are, so I am going to take the papers together and comment only on three main areas which they both cover and where I do not agree entirely with what is written. For the sake of brevity, I will refer to the Needleman and Westall paper as the 'Demutualisation Paper' and to the restructuring mutuals paper as the 'Research Group Paper'.

Firstly, the philosophy of mutuality and the reasons for demutualising.

Philosophy of Mutuality

Both papers refer to the forces which are leading mutuals to consider demutualisation:

- A lack of cash for diversifications;
- Changes in distribution channels;
- Contraction in the life assurance market.

However, both papers also consider the real examples of demutualisation and conclude that these reasons have in practice so far been incidental. Those of us with a cynical turn of mind might add two other reasons behind the current fashion of considering demutualisation: the wishes of merchant bankers and others to put together deals in order to earn fees; the possibilities for asset stripping offered by taking over even a weak mutual to administer its business for a healthy fee, or better still to merge the funds and release the estate.

But to return to the reasons which are quoted. Lack of capital for diversification is, I suspect, a red herring. Industrial companies have shown us how to diversify away from the core business in order to lose capital and then retrench back to the core business losing more capital. But, of course, diversification can be sound. The crucial points are that the diversification must be into another profitable enterprise and that the core business must be profitable. If the scale of the business is to be increased purely to boost egos then that is not sufficient reason.

Contraction in the life assurance market may be the result of the Financial Services Act and perhaps of the introduction of financial products such as TESSAS and deposit - based pensions. The result will be a jostling for market share and the appearance of more and more products with very fine margins and the occasional loss leader. This is an easy route to follow. The package holiday companies have shown us clearly how to do it. The resulting game does clean out the market quite effectively and corporate structure may be largely irrelevant at the end of the day. Even the resources of the strong can be dissipated alarmingly rapidly. What a declining market requires is ruthless cost cutting in order to offer products cheaply and still survive. Raising fresh capital may simply defer the day when this action is taken and squander capital in the meantime.

I would prefer to restate the forces for demutualisation. The first is the case of the asset stripper and the second is the case of the office which is running out of assets. As the papers observe these are the cases which we have seen so far. The interesting case which may arise in future is one touched on in the Research Group Paper where an office is concerned about critical mass and where a demutualisation is considered because what was an acceptable critical mass before the Financial Services Act has now become insufficient. Inevitably such a position is likely to take some years to show up.

From the models it can be seen that an injection of capital of 10% or 20% of the estate in various circumstances can take a mutual with a negative 20% additional estate back to the same freedom as a 0% mutual. However, towards the end of the modelling period, the freedom for the demutualised office tends to reduce. Is this a quirk of the model or is it an important result that the demutualisation only buys 20 years, all other things being equal, before the same critical mass problems reappear? If this is so, it may mean that demutualisation is only a temporary solution leading to later takeover.

At this point is is worth considering the effects of what the authors describe as arbitrary statutory regulations. Since their introduction these regulations have been widely criticised and deservedly so. They retain the very undesirable feature that a solvent office may be unable to pass the solvency standards. At least since the introduction of the working rule on resilience it is now unlikely that an insolvent office can pass the rules. It has been said that if the regulations had applied at the end of 1974 then half of the UK Life Assurance industry would have appeared insolvent. It has been suggested that this does not matter, firstly because the offices concerned were not insolvent and secondly if the regulations had been in force at that time they would simply have been changed for the end of that year before reverting the next year to their normal form. However such a comment merely fails to address the question since it leaves only the "all fall down" theory i.e. it is perfectly acceptable to be insolvent according to the regulations as long as a lot of other offices are also insolvent, but it is not acceptable to fail the regulations on your own. This does not seem a satisfactory argument and I think the time has come for us to press for regulations which are less open to misinterpretation.

On a minor point, the authors describe an asset/liability ratio of 1.15 as representing danger level, despite the fact that the liabilities include solvency margins and mismatching reserves. While the 1.15 figure is very valuable in interpreting the model it is indeed dangerous to suggest that it has any other value and this sort of comment should be left to unskilled writers of magazine articles on the subject.

The analogy between a mutual life office and a golf club is not exact but it can be useful. I have the advantage of being a member of two golf clubs. One is wealthy and owns two large tracts of land. If the club were sold each voting member could have at least 20 years free golf from another club. If capital is required for some reason, such as a collapse in the value of the assets, (in this case it was dry rot in the clubhouse), it can be raised very easily from the members. The analogy here is with a strong mutual with a large estate. No one in the management or membership of the club would contemplate demutualisation as it is irrelevant to the life of the club.

My second golf club is relatively poor. It owns its clubhouse but not its course. The land is rented but if it is wholly or partly rezoned for building the rental value may soar and subscriptions move ahead of other clubs. This would reduce member numbers and help subscriptions to spiral. Closedown would raise a very small amount of money, possibly enough to pay the entry fee to another club, but has no attraction. For the club to survive, increased capital to purchase the course and possibly also increased income are required. Suddenly demutualisation is an appealing proposition and purchase of the course coupled with a sale to the members and/or to outsiders looks like a possible solution. But it is a situation reached as a last resort.

The analogy has further value since even the weak club has no competition from a start-up operation. As stated in the Demutualisation Paper in 4.6.7 "It is impossible to start a competitive with-profits fund and achieve an economic return on the capital employed". If the mutual needs capital it has four routes, as does the golf club:

- It can raise capital as a loan from the members;
- It can raise it by enrolling new members (the analogy here is to sell contracts which have a new business release rather than a new business strain. These are not entirely fanciful);
- It can raise a loan from outsiders (again this needs to be a slightly peculiar loan to be of use to the mutual);
- It can sell to members or outsiders.

The Research Group Paper suggests that a mutual should periodically weigh up the benefits of closure since then the current policyholders may carve up the whole estate for themselves. I do not think that this is correct in the UK. Likewise I have little sympathy with the views expressed in some of the papers in the bibliographies to tonight's papers. By accident or by design, Sections 37 and 45 of the Insurance Companies Act 1982 specify that the Secretary of State has to be satisfied that the company can fulfil the reasonable expectations of policyholders or potential policyholders. The words "potential policyholders" do not appear in Section 49 (reasonable expectations do not appear there directly at all) nor do they appear in Finance Act 1989.

Unless the whole thing is bad drafting, which I doubt, the conclusions are that:

1 The financial value of potential policyholders' interests before entry is nil - which seems eminently reasonable, but;
2 Potential policyholders do have reasonable expectations, which I would take to be, firstly that, an insolvent company will not continue to trade so that their money is used to hide insolvency, and secondly, they have a reasonable expectation that a solvent company will continue to trade and to transact business.

A mutual should then be viewed as a continuing entity and therefore the analogy with a golf club is complete. Such a solid foundation for mutuality is anathema to the entrepreneur since it removes the possibility of asset stripping.

Policyholders' reasonable expectations (PRE)

While considering PRE I have another personal viewpoint which I find helpful in this area. We make mistakes when we talk of PRE. The words concentrate on the global expectations of the group of policyholders. Often we should consider instead the expectations of a reasonable policyholder. There are several advantages. Firstly it makes it clear that each expectation is distinctive to that policyholder. Secondly it makes it much more obvious that the expectation is something which varies with time and with all the information which is known about the individual office. In particular it makes it clear that the office can change the expectations of a reasonable policyholder, for example, by writing to him and explaining its bonus philosophy at a time of reducing interest rates and reducing bonus expectations. The reasonable policyholder will understand and accept such explanations although correspondingly he may not accept a decrease or even an increase in terminal bonus rates of 30% when market levels have not changed appreciably. One particular application of PRE is covered in the Demutualisation Paper in 4.1.6. Given the terms on which many of these mortgage policies have been sold I doubt if repayment of the mortgage is a completely reasonable expectation even at present. If interest rates fall and stay low it will be a completely unreasonable expectation and education of the reasonable policyholders will be needed. Perhaps this should be a job for the marketeers who created the unreasonable expectations in the first place.

Continuing in the theme of PRE, I wonder if a reasonable policyholder might not expect us, as a profession, to do more than the Demutualisation Paper suggests in 4.2.5. If we walk away from giving an opinion simply because the final answer must be a commercial compromise we cannot be surprised if the courts and the capital markets do things we would regard as unwise. Likewise in 4.5.7 it seems a pity to reject the 'Task Force' conclusion. I accept all the difficulties but it does seem to provide a truly actuarial starting point and if we are looking for improvements it must represent a better starting point than any of the empirical answers.

The Demutualisation Paper seems to start at the opposite end of the road from where I might start myself. There is an assumption that there is something strange about a mutual because it has no shareholders and because it has only to answer to its policyholders which in practice will never happen. I do not believe that this is a question about mutuality at all but rather one of corporate governance and indeed the answer a generation or more ago was probably better than it is now. It used to be normal to have a purely supervisory board rather in the German manner. The function of this board was to do very little except now and again to be prepared to fire the executive. While German Company Law still supports such a system UK Company Law has changed and the old structure is now untenable since real powers and responsibilities lie with the Board. The old system is also under attack as the nature of these boards is questioned as is happening in the building society movement. But is the corporate governance of a propriety life office in reality so much better? I have my doubts. The individual shareholder in a proprietary office exercises every bit as little power as the ordinary member of a mutual. Even institutional holders are unlikely to wield much power and some of the largest institutional holders would feel inhibited from taking action concerning the management of a competitor. One area which is genuinely different is the expectations of a reasonable policyholder who happens to be a with-profit policyholder in a proprietary company. While it is difficult to define reasonable expectations in a mutual context, in a proprietary context it is well-nigh impossible. Perhaps it can be safely assumed that such a policyholder has no reasonable expectations towards any surplus which is not generated by his own policy since, for example, non-profit business may be administered in a separate shareholders fund or if that is not so then the structure of the company may be changed to make it so. Likewise he can reasonably expect that a proportion of the surplus arising out of his own policy will not be paid to him but will go the shareholders. He can also reasonably expect that if the share price needs support then this proportion will increase.

It is then very difficult for such a policyholder to frame his reasonable expectations, and he must be prepared for them to change by factors which are completely outwith his control, and which cannot be explained in terms of investment performance, or expense performance, or any of the other variables to which a mutual would be prone. Perhaps the answer from the United States is correct - with profits means mutual, not proprietary. As a particular example of this, I was unhappy with the notion in the closing lines of 3.2.3 of the Demutualisation Paper that a low price meant that the company was structured more like a mutual. That might be the intention at the time of restructuring, but given the reality of power to change the shareholder's share, the truth may simply be that the price was low.

Actuarial Modelling

Finally I would like to turn to the topic of actuarial modelling. When we do actuarial calculations on the back of an envelope we make sweeping assumptions. We take short cuts and we arrive at an answer which seems intuitively reasonable - if not, we go through the cycle again. What we have as an answer is an order of magnitude, perhaps one significant figure, and it is clear that it has been produced as a consequence of the assumptions we have fed in. Both the strength and the weakness of actuarial modelling is that it refines this process. It makes many small assumptions, it does not cut the same corners and it produces answers which may appear to have 18 significant figures. However it becomes very difficult to identify the extent to which the answer is a function of the assumptions and the extent to which it is giving us new information. If it confirms the back of the envelope calculation or what we expect from general reasoning then we are comforted. If it does not we look for an error and failing that we believe that the model is telling us something. If the model gives us consistent answers as we try our sensitivity tests then we believe that the model is indeed making predictions.

I have to say that I do not find all of this particularly satisfying. There is no doubt that the results of the modelling show the effects which the Research Group describe. The bulge of mortgage business is acting as a flywheel and in many circumstances this flywheel acts to the benefit of the organisation over time. However the reason for this is the assumption that this business has been written at a profit. This was certainly true of mortgage business written in the 1970s where inflation afterwards meant that, almost regardless of the premium rate, the subsequent investment income would write-off the expenses losses and more than pay the benefits. It is not obvious that this will be true for the business written in the 1980s.

I had some trouble, in Appendix 6.3 of the Research Group Paper, with the reversionary bonus used in the model. There is no doubt that bonus rates of 2.5% on sum assured and 5% on attaching bonus are a sensible idea and the table in 5.4, where the rates of reversionary bonus are shown to have increased during the time of inflation up to 1978 and to have fallen thereafter, makes very interesting reading. This table is, of course, close to reality up to 1978 but some distance from reality thereafter. Perhaps this merely quantifies the effect of the absence of sales and marketing departments in the model office. Reality has of course been enormously different and I think the results from the models might be a good deal less relaxed if they were run showing the effect of actual bonus rates rather than the realistic ones in the table. In particular I think the flywheel effect of mortgage business written in the 1980s might assume a very different profile. It might well be seen to be a flywheel driving the organisation into the mire when things are difficult.

I am conscious that I have quibbled with quite a number of points in both papers but I would not like this to be taken in any way as a criticism of the quality of the work which has gone into them. It is quite clear that an enormous amount of research work has gone into the production of both papers. We owe our thanks to all of the authors for bringing us two state-of-the-art papers which so clearly summarise the present principles and practice of demutualisation.

Mr P Burdon, FIA said:- I found myself being in agreement with much of what was written, but there are various areas on which I wish to comment, starting with the Research Group Paper.

I believe paragraph 2.4 rather underplays the problem of a dominant partner where larger mutuals are concerned. Just how independent is a large mutual that obtains a third or more of its business from one source? Can that mutual satisfactorily overcome the danger of losing that business in the long term other than by use of a profit sharing arrangement? I think not, which leads me to believe that demutualisation will not only be a sensible route for the smaller mutual in future, but also the larger ones.

I found the discussion of a mutual's raison d'etre in 2.6 rather disappointing. It was implying that a mutual's mission was merely to offer financial services, without reference to profitability, efficiency, expansion or quality of service. I think any organisation whose objectives do not cover these areas is doomed to failure.

Like the authors of both papers, I was not convinced by the third conclusion reached by the Joint Working Party on PRE. I do not understand why a closed fund option needs to be specifically considered if the major change is one that is likely to *improve* the status quo as far as policyholders' benefits are concerned.

In 4.10 the authors set out the key points addressed by their model, and the results of the modelling are certainly fascinating, particularly those relating to the closed fund option. However, I do feel that one further key point needs analysis, and that is: "Would any expected expense savings from economies of scale following demutualisation help to offset transfers to shareholders?"

The answer will be "yes", but as with the other key points the impact will depend very much on the individual circumstances of each case. It will be particularly relevant for a company that expects to receive a substantial increase in new business as a result of a tie that is consequential on the demutualisation.

Moving on to 6.6, I was surprised to see that the models had ignored distribution of a sweetener, since all cases to date have involved such a payment.

The interest rate used for discounting future profits quite clearly presents a conflict between policyholders and shareholders. For example, Table 16 shows that the purchase price at a rate of 12% is about one third higher than that at a 15% net rate. This implies to me that the shareholder could well treat the final price as including quite a significant goodwill element, over and above that recognised by the policyholders.

One further complication of the calculation of price is that of tax, especially in respect of pensions business. The policyholders should definitely be compensated for any additional tax payable on future distributions as a result of the company becoming proprietory.

As to the goodwill element of the price, various aspects are set out in 6.6, but despite a mention in the summary in 7.11, I could not find any specific discussion on the problem of what price to put on the future new business that is likely to be written only if the scheme proceeds. This will be the subject of much debate in a demutualisation involving a bank or building society, particularly if the mutual life office has acknowledged distribution problems. The position becomes even more acute after an announcement has been made, since it may well be that the closed fund option is then deemed to be the only alternative.

One final point on the paper relates to the demutualisation of FS in Appendix 2. Running a closed fund within the demutualised company was not seriously considered in the case in question because the track record of the existing fund was deemed to be an important marketing advantage for the future. Additional capital to support new business would also have been necessary sooner rather than later, and such capital would not be expected to provide as good a return to the shareholder.

Many of my points are equally relevant to the paper presented by Mr Needleman and Mr Westall, but I would like to raise a couple of additional issues.

First, in discussing the effect of demutualisation on policyholders, the authors state in 2.1.10 that, for a demutualised company: "It will not be unreasonable to take the view that a continuation of policyholders' expected benefits is impossible". I must disagree. I think such a view is very unreasonable without undertaking a detailed study of each individual case.

Moving onto the forces for demutualisation, at the end of 2.2.3 the authors could perhaps be a little more contentious. The current debate on bonus rates indicates to me that investment conditions *are* going to deteriorate - at least comparatively - and therefore the ability to fund expansion will be restricted. Company results in 1990 seem to support this argument, with many offices reporting reductions in funds.

Later in 2.3.4 the lack of stability in joint ventures is highlighted. I agree, and contend that some form of demutualisation is quite likely to result as this provides influence and profits for the party providing the distribution outlets, and a secure long term source of business for the insurer. Both these benefits provide distinct advantages over a short term tie.

Later, in 2.5.8, the authors query why the independent actuary should be concerned with membership rights. So do I. As a profession we may have legitimate views on such commercial matters, but I fail to understand why we should believe those views have an overriding influence within the court process.

The form of compensation to policyholders is discussed in 3.5. Section 3.5.5 suggests that the sweetener can be deferred in some way, for example by promising to increase terminal bonus. This would indeed improve the company's financial strength, but I suspect it would not receive too many votes. Policyholders will be far more attracted to a specified benefit, even if it is in reversionary form rather than cash.

Finally, Table 6.3, on the subject of free asset ratios, is very instructive. The apparent long term disadvantages of a proprietary company in this respect can apparently be overcome by an increase in investment return of 0.6%. I am sure most investment managers would feel reasonably confident about achieving that, particularly with the extra flexibility allowed by the addition of the purchase price to the funds.

An improved return should also be achieved by reducing expense ratios - a subject which has received only passing comment. This is particularly relevant to companies that expect to achieve an increased level of business as a result of their tie with their new parent.

I would like to finish by congratulating both sets of authors on the production of very readable and interesting papers. They will certainly be of great benefit to what I think will be a growing number of mutuals seeking to fulfil their strategic aims by demutualising in future.

T W Hewitson said:- The two papers tonight are certainly topical and include the results of some research which would seem to have some general bearing on the operation of any with-profits office.

In particular, I am thinking of the calculation of the aggregate asset shares and hence the additional estate as defined in Section 4.4 of the Research Group Paper. This calculation is, I believe, undertaken by a number of large with-profits offices which can then monitor directly the development of the additional estate of the office.

It is open to debate whether the A/AS ratio should be published as an indication of the financial disposition of the office. It is certainly a valuable tool for internal purposes.

An adverse trend in this estate may indicate the need to control the level of growth of particular types of policy or to adjust the bonus policy or the investment policy so that they synchronise better with each other. In particular, it was very interesting to see from Table A6 that a modest change in reversionary bonus policy can remove many of the apparent constraints on investment policy.

Although not examined in the paper, it would be interesting to know whether after one of the investment shocks described in Section 6.4 a reduction in reversionary bonus would reduce the need for any immediate redistribution of assets.

Coming to the specific topic of demutualisation, an office needs to be quite sure of its ultimate objectives before proceeding down such a route. For example, a need for capital might be met by subordinated loan capital assuming that the current proposal in the Draft Life Framework Directive is adopted.

However, there may be other reasons, such as securing a distribution network, why a true demutualisation may be preferred. There is at present no specific route presented in legislation for this change in status. However, the three most recent demutualisations in the UK have all followed the route of a Section 49 transfer for which there are a number of precedents and some established case law, notably the London Life judgement.

This referred in particular to the need to ensure that the scheme is fair as between the interests of the different classes of persons affected, including policyholders and employees. Also, a comparison is to be made between the effect of the scheme and the position if there had been no scheme. However, alternative schemes do not need to be considered. Furthermore, a scheme would not necessarily be rejected simply because many of the employees would be made redundant.

In my view, this leaves a fairly wide door for the development of future schemes. However, it does not appear to require a comparison with a closed fund scenario, particularly if this is unlikely to be the outcome if there had been no scheme of transfer. In practice, of course, a closed fund was a probable option in the short term for the three recent demutualisations if their schemes had not been approved.

I should also add that the views expressed in Section 3.1 of the Research Group Paper are not necessarily those of the DTI or GAD who did not see any draft of those comments beforehand. They might well wish to place a different emphasis on those four points.

While the vote by members is not a formal requirement I believe that in the absence of any over-riding considerations a strong vote in favour, as occurred in the recent demutualisation cases, must be quite persuasive for the Court in coming to its conclusion, as was indeed indicated by Mr Justice Hoffman. Also, while the contents and length of any circular to members are a matter for the companies concerned, they must surely be seen to provide a balanced account of the proposed scheme.

On the wider issues raised tonight there is no clear solution at present to the issue of a large mutual office with a sizeable estate which wishes to demutualise. Ultimately, the question of ownership of the estate might have to be resolved in the Courts, should a Section 49 transfer and demutualisation of such an office be contemplated.

A suggestion is made in Section 2.9 of the Research Group Paper that a trust fund might be established for policyholder members. This is an interesting idea but would need further thought about how for example to allocate voting rights, how to set an appropriate dividend and bonuses each year, and the transferability or otherwise of any shares held by the trust fund.

Alternatively, some part of the company might be sold off as suggested in paragraph 2.3.3 of the Demutualisation Paper. If the staff and/or administrative systems were transferred to another company, then an appropriate financial consideration both at inception and for subsequent services would need to be negotiated. In addition, some binding agreements would be required for the provision of services to policyholders in the remaining mutual. Some difficult conflicts of interest could arise in this scenario, but the insurance company would of course still have to be run in a fit and proper manner.

Finally, on a selection of miscellaneous points:-

In paragraph 3.4.4 of the Demutualisation Paper, while the assets transferred might equal the statutory liabilities for non-profit business, consideration would also need to be given to the potential loss of profits for with-profit policyholders.

In conclusion 7.5 of the Research Group Paper, I presume that it is self-evident that an office with an estate deficit could not afford to pay full asset shares to policyholders. Even if new business were written, it would take some time to generate further surplus that could offset the existing deficit.

In paragraph 4.1.5 of the Demutualisation Paper, the American proposal on reasonable expectations has already surfaced in Europe where we hear calls from some quarters for a minimum reserving basis that takes account of future bonuses as illustrated to policyholders (remember in this context the illustrations made by many offices pre-LAUTRO). Meanwhile, I believe that the Groupe Consultatif of European Actuaries are keen to see an explicit reference in the EC Life Framework Directive to reserving for all future bonuses, including terminal bonuses, in line with the reasonable expectations of policyholders. This concept would then have to be interpreted in a European dimension, subject ultimately to the judgement of the European Court.

Mr Thomson mentioned difficulties with the statutory valuation of liabilities method in the regulations which exist at present. I do not know whether a bonus reserve valuation approach would be considered by the people here tonight as removing many of the perceived problems with the net premium method. Perhaps that risks widening the debate?

Also taking the golfing club analogy which he mentioned, in my view that is more akin to a friendly society than the commercial realities of the market place which apply more and more to insurance companies.

Clearly, there are then a number of important developments that can be expected in the life insurance environment over the next few years, including those highlighted by the two papers tonight.

Mr A Duval FIA said:- Both these papers point out that most demutualisations are made as part of the arrangements for a takeover, usually by another financial organisation such as a building society. Despite this, little attention appears to have been given in either paper to the price, in whatever form, the taking-over organisation will be prepared to pay. And yet this is the crucial factor in determining whether or not the arrangement goes through. What happens in practice is that a mutual office, possibly with insufficient new business and rising expenses, or for some other sufficient reason, decides that it is not in the interests of its policyholders to carry on trading as an independent organisation and that a takeover at an appropriate price would be better for its policyholders than a free-standing closed fund. It gets in touch with an organisation such as a building society which wishes to own an insurance company. Negotiations proceed.

In those circumstances it is the duty of the mutual company's directors to do their best for its policyholders. The minimum price which it can accept is that which places its policyholders in the same position as they would be in a free-standing closed fund. It may be higher than that if there are other possible buyers in the market, but in the absence of other possible buyers that is the minimum price.

The buying organisation is usually seeking to get the mutual insurance company after demutualisation at the lowest price it can, but the highest price that the buying organisation is normally prepared to pay is the price which equates with the cost to the buying organisation of getting a similar insurance company elsewhere, possibly a proprietory insurance company, or setting one up from scratch. So there are in fact minimum and maximum limits to the price which can be paid. I use prices in the general sense as covering all the costs involved to the buying organisation.

Between those two limits, whether we like or not, it is a matter of commercial negotiation and what result comes out of it will depend on the commercial strengths of the two organisations, the circumstances at the time, and what other things are going on at the same time. Not so long ago there were quite a number of building societies in the market wanting to buy insurance companies. I think now, having found out the commissions they can get from established insurance companies, there are rather fewer building societies in the market, whereas there may be rather more mutual insurance societies feeling that their future would be healthier if they were taken over rather than if they continued in their present form. It is a matter of commercial bargaining but I think the key point is this - if the position is reached where the mutual insurance company gets a bid from a sound organisation at a price which is the most favourable it can get, and more favourable to its policyholders than that mutual organisation continuing, either as a going concern or as a closed fund, then it is the duty of the directors of the mutual insurance society to recommend its policyholders to accept that offer. That is in fact what happens. This has nothing whatever to do with the expectations of policyholders, reasonable or otherwise. Whatever the policyholders may reasonably expect, what they will in fact get is what the directors, or other people charged with the duty of looking after the organisation, by exercising their best endeavours, get on the policyholders' behalf.

This is almost precisely what happened in a case with which I was concerned, which is mentioned briefly in the Demutualisation Paper. This was the Time Assurance Friendly Society being converted to a proprietary insurance company and taken over by Templeton. At the relevant time I happened to be Chairman of Time Assurance. A Friendly Society is necessarily a mutual life office, but its constitutional structure is slightly different from a mutual insurance company and therefore Section 49 cannot be used. But there is a procedure in the Friendly Societies Act where, by means of a members' meeting with a 75% vote in favour, either in person or by proxy, the friendly society can be converted to a proprietary insurance company. That is what happened in the case of Time Assurance. All the other considerations apart from the procedural ones are exactly the same as those in the demutualisation of a mutual insurance company.

What happened in this case was a bargaining session. Time Assurance could not continue as a free-standing organisation and had it converted to a closed fund, there would have been a great number of costs involved. Capital costs of converting into a closed fund are a lot higher than some people realise. Templeton wanted an insurance company and the bargain was struck. The basis of the bargain was the limitation of expenses; the whole of the Time Assurance assets and the whole of the Time Assurance business at the time of conversion was held as an internal closed fund but with the expenses of that closed fund limited to a lower level than the costs a free-standing closed fund would be expected to pay. Templeton got the whole of the organisation which would have cost them a great deal to set up from scratch. I was able to go to the members' meeting and recommend heartily the scheme as being much more in the interest of the policyholders than anything else available to them. The appointed actuary and the independent actuary said precisely the same and virtually every policyholder was in favour. They are all happy, Templeton are happy, the authorities are happy - and not a word about reasonable expectations from start to finish.

Mr P Turvey, FIA said:- The authors look at the rationale for life offices demutualising. There is one major cause of demutualisation which has been left out of the list which is worth including in because it does produce some useful precedents and some further insights into the process. That is life companies who are doing perfectly well but who wish to rationalise their structure for some reason. The most common source of this is domestication whereby e.g. the Irish Branch of Friends Provident decides for whatever corporate reason at Friends Provident that they would rather trade in future as a limited liability life company. They go through the procedure of domestication turning, in that particular case, the fund into a 90/10 fund.

There are a number of these: I have mentioned Friends Provident; Swiss Life domesticated the branch of their Swiss Company; National Mutual domesticated the branch of their Australian Company in the UK, and Irish Life did something much more complicated which is not worth going into at this stage. These transactions raise many of the same issues and it is helpful to bear in mind the possibility that a branch, once domesticated, might then be sold off.

I would like to move on to a really important question. "Who gets the orphan estate?" A good case can be made for saying that it should not all go to the existing policyholders. It is not their reasonable expectation. An even better case can be made for saying that it should not become a windfall for the new owners of the company. But we have a dilemma since somebody must get the benefit, just as the whole of the net value of TSB or Abbey National had to end up in somebody's hands. There is a fundamental equation that 'value in' equals 'value out', and it constrains all the important discussions that are in the papers. The contenders for taking this total value are:

- the existing with profits policyholders, by means of special bonuses;
- the existing non-profit policyholders, if they are members and it is thought necessary to give them something;
- future with profits policyholders, if we are prepared to subsidise the bonus for these people compared to what they would have reasonably expected from a proprietary office;
- the management and the staff;
- the new shareholders.

I don't suppose there would be a lot of sympathy amongst life office people for the new shareholders. We cannot wish this problem away. In a demutualisation we have got a cake and we have got to share it out in full. The most important exercise in a case of a demutualisation where there is a substantial orphan estate is to find the fairest and most acceptable way of sharing out that cake. If you cannot find something that is acceptable because it is thought to be too generous to everyone, then I put it to you so that you are doomed to carry on as a mutual.

Moving on to some technical issues of trying to put together an acceptable transaction, one issue is whether the existing business goes on to a 90/10 basis or stays on a 100/0 basis. This depends very much on the new partner. A new partner with capital which wants an instant business which is up and running and producing worthwhile dividends will point in the direction of a 90/10 arrangement. Another prospective partner may be short of capital and be unwilling to invest that working capital in buying the future income stream from the existing with profits business. It will be looking towards a 100/0 closed fund.

An issue of value which is not discussed in the paper is taxation. A closed fund which is 100% to policyholders and 0% to shareholders on the face of it might look like something in which the new shareholders can have no value at all. But many of us are aware of the problems of new life offices incurring unrelieved management expenses and having no way of getting relief.

Indeed there is an established market whereby unrelieved management expenses change hands for something like half the nominal value of tax relief. If you go through the mental arithmetic a closed fund of one hundred million pounds might have a tax relief value somewhere up to 10% of that total fund. This can produce some very large numbers in relation to all the other numbers that are around in a demutualisation.

In Section 5.4 of the Demutualisation Paper reference is made to "support being given by a closed fund to continuing business". I know this is acceptable for statutory purposes, but I am concerned about doing this when the closed fund policyholders have been told that their assets and their liabilities are ring-fenced. If the statutory surplus in the closed fund is used to cover the solvency margins on continuing non-profit linked business or to cover mismatching reserves or even, in the extreme case, new business strain, the closed fund must in those circumstances be exposed to some level of risk. Obviously the level of risk will depend to a large extent on particular circumstances of an office, but it is not difficult to envisage circumstances in which the closed fund could suffer a permanent financial loss. In such cases I think that the closed fund policyholders could have a legitimate cause for complaint.

I would like to turn to the question of professional guidance. It is too soon for the Institute and Faculty to publish professional guidance in this area; despite the addition of the domestication cases, there are too few precedents around. Since we have not explored many of the possible cases, I think we must wait and see. In the meanwhile please can we have more disclosure. With respect to Mr McBride,my colleagues and I were unable to understand the London Life AMP proposals from the published material,and if actuaries could not understand them, what hope is there for the man on the Clapham Omnibus?

Finally on Guidance Note 15 I would like to record my unhappiness with the implication in 4.4.13 that members of a mutual should contemplate conversion to a closed fund as a matter of course. We do need to protect mutuals against action by unscrupulous boards, or asset stripping, and we have to ensure that the legitimate expectations of current and future policyholders are protected. I do not think GN 15 as currently worded as the best way of doing it.

Mr D Ferguson, FIA said:- I would like to make three points about:-

(i) Reasons for considering demutualisation;

(ii) The closed fund option;

(iii) The orphan estate; and then end on a cautionary note.

My remarks draw heavily on the practical experience of a number of my partners.

I can think of several reasons in addition to the three cited in 1.1.6 to 1.3 of the Demutualisation Paper why life offices, including mutuals, might see the need for, or the advantages of, raising capital in the future. To relate to Europe: different from 1.5, and enlarging on the point made by Mr Hewitson. The proposal for the third life directive could be interpreted as a requirement to reserve for terminal bonuses, explicitly or implicitly. Yet the non-reserving of terminal bonuses has been a major, perhaps the major, source of capital for mutuals in the recent past. A further result of the move to a single market will be the ineluctable pressure to remove tax disadvantages such as the "I-E" tax in the UK and if, or rather when, this happens new business strains will increase and could create a further demand for capital. Europe might also provide a solution if the French and German legislation which allows mutuals to raise capital without creating a debt were adopted in the UK.

Turning now to the closed fund option, I agree with the view that whenever the closed fund is a realistic option for the office it should be considered. Whenever we have been advising in relation to a demutualisation we have always advised the board to consider this option. This was done before GN15 and I would argue that it is an ongoing requirement for management to keep this under review at all times and not just when faced with a third alternative to closing or carrying on.

In two of the three cases cited in Appendix A of the Demutualisation Paper, Pioneer and FS, the three options were assessed by the boards from the point of view of the policyholders and their reasonable expectations but also properly taking into account various other matters such as the interest of the staff. In both cases the managements had been through these options as part of their jobs and they had taken external advice. One aspect of that advice was to assess the bonus earning power in each alternative with assumptions as to the likely investment policy to be followed as the different scenarios unfolded. The Research Group Paper demonstrates that you can carry on for some time with a closed fund without having to change the investment philosophy. I have the greatest respect for their scholarship and for the excellence of their work but policyholders of one large UK mutual which has been operated as a closed fund by another mutual for a couple of years now will have noted the deferral of a decision on the 1990 reversionary bonus and the switch of investments to gilts. This episode will not enhance the cause of proponents of a closed fund.

For my third point I would like to extend the argument about closed funds by reference to a further case study in which one of my partners was involved. He was the appointed actuary of a mutual which was almost wholly with profits and in what he considered to be a strong financial position. That is to say the existing assets could support not just the accrued proportion of terminal bonuses at current rates but also the terminal bonuses on projected future reversionary bonuses. In the context of the two papers this situation gave rise to an additional or orphan estate.

In practice when an assessment of the alternative option was made we found that under the closed fund scenario, despite the strong financial position, the office would in the future have found it prudent to change its investment policy. It could not have maintained a high equity investment strategy without the risk that terminal bonuses would become much more volatile and thereby affect policyholder expectations. The effect of the resulting gradual shift away from equities did result in lower payouts than under the alternative ongoing scenario. This was after extensive modelling and extensive sensitivity analyses. In other words the "orphan estate" would have disappeared.

This leads us to wonder whether the orphan estate is an endearing child but no more than a theoretical concept; the progeny of a phantom pregnancy, which has no place in the real world of assessing what is best for policyholders when a real and practical alternative to closure or carrying on is being considered. Our work suggests that the situation in practice can be much more complex than the Demutualisation Paper suggests and this is indeed borne out by 7.13 in the Research Group Paper that in each particular case extensive modelling should be carried out. It is not as simple as Mr Turvey says that value in equals value out, and that something must be done to dispose of the orphan estate.

We operate as actuaries and advise offices which conduct long term business and have a noteworthy perennity. The effect on policyholders interest of a major change in the method of operation such as closure, or indeed winding up, is hard to predict and rarely beneficial in practice. Such changes bring surprises, difficulties and new problems of management and of conflict between different classes and generations of policyholders. Furthermore the new situation was not one anticipated at the time contracts were effected. When in doubt, therefore, I would always counsel breathing new life into an office and carrying on.

Mr C W McLean FIA said:- The results have been well worth waiting for. I say that because I like the conclusions. I am not sure that they are "somewhat surprising". The results are strongly intuitive and I think they will be enough to divert the profession from a path that could only lead to ridicule and draconian legislation. I believe that, if the profession is now diligent in following the conclusions of the evidence before us, it can ensure the success of future demutualisations.

Indeed, the Demutualisation Paper supports this point most clearly in sections 2.5.8 to 2.5.10. I share the lack of comfort of the authors in the extension of the Independent Actuary's role. It is simply not for an actuary - independent or otherwise - to tell someone that a right to vote is worth nothing when there is so much evidence, including stock market valuations, to say otherwise.

I agree with their 2.5.8; we must clearly separate the actuarial issues from the commercial.

Let's start with the commercial. The Research Group Paper, in 2.1, begins with reasons for failure. The opener and a number of other speakers tonight have added a few more. Yet the most obvious is omitted - plain bad management, writing business at a loss or allowing expenses to escalate imprudently. For authors whose careers began in a mutual life office, this may be an uncomfortable possibility, but I think it adds a useful perspective to the treatment of issues in all the later sections.

I think that if an office cannot write new business profitably then it is not an asset. This would be shown most clearly if someone was not prepared to pay goodwill for it.

For example, the value to society as a whole of maintaining an entity that can only offer what others already do - but rather less effectively and on a smaller scale - may be negligible. The relatively small goodwill values negotiated to date support this conclusion. Moreover, the rationale of mutuality has a qualitative aspect also. Most smaller and medium sized ailing mutuals lack even the uniqueness of a golf club, to follow Mr Thomson's analogy.

Section 2.6 of the Research Group Paper would, I think, benefit from being put within the rigour of modern management theory. Here, I endorse the earlier comments of Mr Burdon. The mission of some mutuals may well be identical with those of many proprietaries - none of the latter has purely financial objectives and no proprietary would pretend that shareholders are the only stakeholders in the business. Indeed their interests are not even the sole fiduciary responsibility of directors - the Companies Act makes this clear. Most businesses, whatever their ownership, exist to create and service customers - and the price and profit margins on such activities are set by the market place under competitive conditions. I can find no evidence that mutuals enjoy a flexibility with non-profit charging of the sort described in this section.

With these thoughts in mind, it is a lot easier to assess the value of a specific mutual continuing as an entity. For mutuals, as with proprietaries, it must ultimately depend on commercial ability. As the industry forces described under the Research Group Paper section 2 apply to most life offices - yet few have demutualised - it is difficult to escape the commercial judgement that the market is making when demutualisation is essential. Where an Independent Actuary suggests that the addition of more capital or new distribution - but not new management - can allow him to predict the security and long term bonus prospects for policyholders, it is a long way from actuarial theory.

I would therefore question whether the loss of an ailing office matters for future policyholders. And this is without regard to the ultimate destination of any additional estate or orphan surplus. As is practised in some continental countries and was recognised by the charitable trust fund set up by the TSB Group on its incorporation, there is a strong argument for ultimate community ownership of the estate. But as, with the open fund, it could be made available to current policyholders to allow similar investment freedom for a period. Perhaps when all policies have run off in a closed fund, the residual could go to a dedicated co-operative bank that could provide funds on a venture capital basis to other offices and add to market efficiency in allocating these scarce resources.

The heroic assumption underlying the Research Group's model of the continuing fund is that management can best use this estate to write new business. It is far from clear that this should be so. Their section 2.10 really just sums up the dilemma their assumptions lead to, rather than a conflict of interest. The capital can either speculate on new business or on the stock market, but not both at the same time.

What the Research Group Paper does show is just how much freedom may typically be available with the closed fund. I think it gives much stronger support academically for this than has been recognised in the past - even accepting (a) that for a closed fund, merger ultimately may be needed as the number of policies dwindle, (b) the estate should perhaps be returned to society and (c) a higher proportion must go to terminal bonus.

The result is also very sensitive to the actual additional estate present initially. We cannot assume away, actuarially, market movements. That is, if the estate is worth considerably more at the time of the vote or when payment is received than was calculated by projecting forward, actuarially, an out-of-date balance sheet, the calculations must be updated if the merits of the closed fund solution are to be properly measured.

I do not think that we can simply assume appreciation away by an adjustment of the liabilities for, as the Research Group Paper describes, changes of asset value can arise for all sorts of reasons. If this is not done, the closed fund option could be mistakenly dismissed.

Both papers give powerful conclusions on the closed fund option, although both make it clear just how sensitive viability is to initial capitalisation. Strength clearly matters and so it is necessary to know the initial position and not just have a projection as much as a year out of date. In The Research Group Paper Appendix 6.5 examines the possibility of higher renewal costs, but I wonder why sensitivity is not tested in the other direction. Why should we assume that the opportunity to take remedial action is more important than the motivation to take such action. There may be little pressure on directors of open mutual funds but we should not assume members would have no vote or be equally powerless in a closed fund. The ability to take remedial action may be more limited, but it would be quite possible for closed fund members to have the greater flexibility to vote on management and administration that being under contract affords - with the greater ease of removal that implies. Why, in this section, should we think the ability to sell new policies really can get this sort of company out of trouble? It seems unlikely it could sell new policies profitably. Who would buy from a company like that?

Both papers make it clear just what is a matter for negotiation and that is not actuarially derived. Indeed, Mr Duval has already described to us tonight just how much of a role actuarial calculation played in one actual demutualisation. Do policyholders really want to leave compensation to the negotiating ability of directors? Surely there should be a method of achieving rather more substantial sums for goodwill, although I accept that some goodwill may be buried within some compromise in the discount rate. As Mr Duval suggested, there are many forms of consideration the members may take. But, I do not believe that an upper limit is set by the cost of setting up a new operation. There are more advantages - of speed and skills - that an existing business can offer beyond that available with a greenfield approach and this should be part of the negotiations.

I think that to take these papers further, we need to examine all the elements of mutuality in more detail. These comprise administration/management, voting, profit participation and a pure investment element. There is no reason why these could not all be improved by closing the fund. Surprisingly, because the possibility is missed in both papers, cost reduction could be the greatest advantage of closure. Many commercial businesses view cost cutting as a sensible method of generating capital and life offices should be no different. The Research Group's summary does not describe the option of a more than 50% reduction in costs. The case study I presented to CIRIEC (Bibliography, 4) details one similarly-sized company where this percentage reduction was actually achieved under management contract of a closed fund. I think we would be surprised to find out just how much cost can be shed when an orientation to new business acquisition ceases. This potential dwarfs goodwill payments. But these sorts of commercial calculations go beyond the remit of the Independent Actuary and putting such an alternative to members may require disclosure of membership lists to others, to give equivalence to the rights of bidders for listed, non-mutual business.

The Demutualisation Paper, in section 7, produces remarkably concise and simple conclusions. Clearer guidelines or legislation will be necessary. It is undoubtedly unacceptable to the wider public that the question of who should vote can depend on the view taken by directors. Indeed, there are very few places where the UK's degree of laxity on the subject is permitted. I look forward to seeing the impact these papers make on the next restructuring.

Mr A K Gupta said:- During the last two years I have been involved in three situations which I think are relevent. Each of these has caused me some concern. I would like to relay these to you and draw some conclusions from them.

The first situation was where I was working with the Appointed Actuary of a proprietary company on the restructuring of its with-profit fund. This restructuring had some similarities to a demutualisation and for various reasons we decided to go through Section 49 procedures. In such situations it has become customary for the Appointed Actuary to produce a report. When we thought this through, we were not clear why and consequently had to ask ourselves several questions.

Who is the report to? The Directors, the Independent Actuary, the Courts, the Policyholders, the DTI? What should be in the report? Should it be limited to information relevant to policyholders or should it contain information on the finances of the company relevant to shareholders? What will the report be used for? Is it a public document or for the use of the Board? Is an extract of it to be circulated to policyholders?

We studied the precedents but no clear pattern emerged and they provided very little help in guiding us as to what was appropriate. In such a situation the Appointed Actuary can be in a conflict. On one hand he is advising the board and on the other hand he has an obligation to protect the policyholders. This conflict can increase if he is to be the Appointed Actuary of the reconstructed company, in which case the report may also be for the use of the Board of the new company.

There is currently no guidance on the role of the Appointed Actuary in this situation. The Appointed Actuary of the company concerned and I spent many hours agonising over his report. Guidance for the Appointed Actuary would be helpful in future situations and would strengthen his position.

The second situation arose during my membership of the committee which drafted GN15. When GN15 was presented to Council, it was mentioned that there was a dissenter. I am afraid I must now own up. I was the dissenter. My reasons for disagreeing with the rest of the committee are precisely those described by in Sections 2.5.8 to Sections 2.5.10 of the Demutualisation Paper. My particular concerns are that it is the Directors' responsibility to consider alternative schemes and not that of the Independent Actuary. Secondly, the valuation of membership rights is a commercial matter, and again not one for the Independent Actuary. I believe GN15 could be placing the Independent Actuary in an untenable position.

In retrospect, the brief of the Working Party set up to draft GN15 was probably too narrow, and it might have served the profession better if its brief had been widened to include consideration of the roles of the various parties involved in a Section 49 Transfer.

I was disappointed that GN15 was never discussed by the profession more widely and I am pleased that the papers tonight are providing an opportunity for its discussion.

The final situation was in reading Marion Pell's recent paper on Section 49 transfers to the Staple Inn Actuarial Society. Marion Pell is a lawyer who is highly knowledgeable in the area of Section 49 transfers and demutualisations and I was rather concerned to read some of her statements made in that paper. I was particularly concerned to read the following sentence:-

"It is considered that policyholders do not as policyholders have a legal right to have their reasonable expectations met, either in a mutual or proprietary company. If reasonable expectations are in danger of not being met, of course, the DTI may exercise its powers of intervention but this fact, on its own, does not necessarily imply a breach of the Directors fiduciary duties".

This came as a bit of a surprise to me. The profession's interpretation of PRE in these circumstances appears to be almost unilateral. I note that the Bonus and Valuation Research Group, in Section 2.9 of their paper, did not totally agree with the third conclusion of the PRE Working Party. I share their reservations.

As far as I am aware, PRE has never been tested in Court and a major demutualisation would certainly bring PRE under the microscope. I am concerned whether the actuarial profession should take too strong a stance on PRE with the current lack of legal backing and given the opinion expressed by at least one lawyer knowledgeable in this area.

These three incidences all draw me to one conclusion. The current framework for demutualisations is inadequate. The position of the Appointed Actuary is unclear and the Independent Actuary is being put in an untenable position. PRE and membership rights are being confused and this could be particularly significant where a mutual is being demutualised when non-profit policyholders have votes.

Furthermore, comparison with the closed fund option may not be relevant. To quote again from Marian Pell's paper, from the Section where she discusses GN15:-

"There is also an assumption that members can influence the activities of the board through the exercise of voting power - presumably by appointing new directors of a more sympathetic nature. It would after all be a decision of the board whether to close the fund, not the members. This is of course correct in theory, but in practice the voting power in a mutual is amongst so many people that it is far more difficult to wield that power effectively than it is in a company with a share capital".

In any demutualisation it is the responsibility of the directors to develop the scheme and the actuaries involved as actuaries are advisers and do not act with any executive authority. The commercial interests involved in a significant demutualisation are considerable and the position of the actuaries advising on the demutualisation should not be overstated. If the profession chooses to adopt a position which proves ultimately to be untenable in the courts, it could be to the long term detriment of the profession. In my view, we should lobby for the correct framework to be put in place and seek to work with lawyers and other interested parties to develop and install it.

Mr A Scobbie said:- It is normal in discussing papers in this hall to thank the authors for their efforts and to say how stimulating and thought-provoking the contributor has found the paper. Tonight, however, I must immediately state that I have a very serious complaint - Why, oh, why were these papers not written and presented to the Faculty at least two years ago! If they had been, it would have saved both myself and my colleagues many hours of agonising, while endeavouring to put together a suitable scheme for the demutualisation with which we were concerned. It is one thing to start with a blank sheet of paper as we did - hopefully in the future the papers and the discussion this evening will provide a much more helpful starting point.

While reading the papers, I had a very close sense of revisiting many of the arguments and considerations which we discussed not only among ourselves, but also with our actuarial advisors, the Independent Actuary, and indeed, the Government Actuary's Department. It was with some relief however, that I found that I was in agreement with many of the comments made by the authors of both papers; put another way, I was pleased that we covered much the same ground, although not necessarily reaching the same conclusions.

Being presented with two such readable papers, it is difficult to restrain oneself from wishing to comment on a wide range of points. Having had some practical experience of the process of demutualisation, I thought it might be of some value if I were to concentrate my remarks primarily on a few areas of the practical process where I have different viewpoints to those expressed in the papers. While I was tempted to relate much of the discussion tonight and in both papers to the circumstances of the FS demutualisation, that might sound like an attempt at vindication which is not necessary. Consequently, I will resist the temptation and I will not dwell on the particular circumstances of the FS demutualisation, except to say that I consider that there were considerations special to FS which are not necessarily capable of generalisation.

The first point I wish to make is that I cannot agree with the view of the Research Group that a proprietary office exists, "to maximise the profits for its shareholders" and that such offices are "*obliged* to treat policyholders fairly". This seems to me to be the typical thought process of these who have been brainwashed in a mutual environment, which leads them to the conclusion that "The mutual life office exists to offer financial services".

This is almost like listening to the arguments put forward in the 1950s by those in favour of nationalisation of industry - and we all know what disastrous consequences flowed from the removal of the profit motive. In this regard, I consider that the Research Group have got it seriously wrong where they imply that the profit motive exists only in respect of shareholders' interests, and that such profit motives are not applicable to policyholders' interests. I also have a fairly jaundiced view of the statement made in support of the mutual culture that "being able to look after the best interests of policyholders with no concern for shareholders leads to better investment performance, actuarial management and general strategy". I certainly cannot support the view that by the process of demutualisation our organisation has somehow suddenly deteriorated in management and investment terms.

The truth of the matter is that all offices (both mutual and proprietary) operate in a fiercely competitive market to provide policyholders with the best possible returns and quality of service. If that is not so for any office, it will be unlikely to survive long in the marketplace, and it is naive for mutuals to think they have some inherent advantage in investment, actuarial or general management.

The Research Group make a statement in 3.5 to the effect that "in general, policyholders fare better in the US than in the UK where their compensation depends on the negotiating ability of their directors". It is far from clear to me how they reach such a conclusion, and I am not convinced as to the correctness of their generalisation. The authors seem to base their conclusion on the openness of the New York method without actually being in a position to comment accurately on the UK cases considered.

In passing, the authors make reference to the fact that London Life employed both merchant bankers and consulting actuaries. To keep the record straight, it should be noted that FS did employ consulting actuaries. It must be a matter of opinion as to the additional benefit or comfort which policyholders may achieve by the use of merchant bankers. There seems to be an automatic assumption by the authors that the costs involved (which can be considerable) will be fully justified on behalf of the policyholders. I for one, take leave to doubt such an automatic assumption.

I was disturbed to read the statement that despite the benefit of discussion with the actuaries concerned, the Research Group had difficulty in obtaining a total understanding of the actuarial principles which had been used in the London Life and FS cases. I have some difficulty with accepting that statement in relation to FS in the light of the fairly full information the authors provide in Appendix 2. Perhaps there was some confusion in regard to the fact that the precise details of the negotiations are confidential.

This leads me to the real point I wish to make, which is that the negotiations attending a demutualisation must in my view remain confidential. It is not in the best interests of the policyholders or the long term future of the office that negotiations should be conducted in public. This applies not only to the evaluation of goodwill, but also to the value to be placed on the future surplus to be allocated to shareholders. The stream of future profits from existing business has no unique value. Clearly, the value to policyholders will be different from the value to shareholders. It is a matter for negotiation between the parties concerned. Obviously the directors of the mutual office, acting on actuarial advice from their Appointed Actuary and their consulting actuaries, have a duty to maximise the compensation which the policyholders are to receive. There is certainly a minimum value below which they would not proceed.

The Research Group support the view of Stuart Lyon in his paper that an evaluation should be disclosed "for the benefit of policyholders". I disagree with the necessity for disclosure because the policyholders already have quite a number of parties looking after their interests:-

1 It is the legal duty of the directors to obtain the best deal possible for the policyholders. If the directors have concluded that demutualisation is the best course, they must be in a position to recommend the scheme and will have satisfied themselves as to the various criteria which are outlined clearly in 2.5.4 of the Demutualisation Paper.

2 The responsibility for actuarial advice rests with the Appointed Actuary.

3 It is normal practice for the Appointed Actuary to be supported and advised by a firm of consulting actuaries.

4 The Independent Actuary will have carried out fairly exhaustive investigations.

The cry for disclosure seems to me to rest on the belief that the directors and their actuarial advisors will fail in their basic responsibilities, and that somehow others will be able to second guess them and come up with a "better" answer. Not even the Government Actuary attempts that!

In this connection, I support the views of in the Demutualisation Paper on the responsibilities of the Independent Actuary if he were to consider schemes which are not put forward by the directors. This would place the Independent Actuary in the untenable position of second guessing the directors and effectively entering into commercial recommendations. That is neither sensible nor acceptable.

I would also counter the argument for disclosure with the proposition that it is entirely possible that the directors or their advisers will have negotiated a price which is in excess of what the policyholders could reasonably expect. In these circumstances, why should they have to disclose such a commercially sensitive fact. Such disclosure could lead to a collapse of an eminently satisfactory deal for the policyholders.

While commenting on this question of disclosure, I would also point out that neither paper appears to have considered the possibility of a contested demutualisation. This could take two forms. Firstly, when the announcement is made, some other party could mount a counter bid which cannot initially be accurately quantified until that party has had the opportunity of carrying out the necessary evaluation, based on accurate facts and data. There could be a conditional additional inducement to policyholders.

The alternative form of contest could be an offer by some third party to convert the office to a closed fund without the necessity for demutualisation, with a claim that the policyholders would be better off.

What concerns me about such contested bids is that there are no statutory or other regulatory rules which protect the mutual office from highly contentious, unsubstantiated and perhaps irresponsible press statements which may well accompany such publicised bids. At least with public companies the rules of the Stock Exchange apply to all communications addressed to shareholders and public statements.

The directors of the mutual office are duty bound to give very serious consideration to such bids no matter how fanciful they may appear, which leads the office to considerable extra expense, delay and uncertainty. This undermines the confidence of both existing and prospective policyholders, the market-place, the management and staff.

In my view, there is an urgent need for some rules to be established which give the same level of protection to mutual offices considering merging or demutualisation, as they would receive as a quoted company under Stock Exchange Rules and all parties must be able to substantiate their public statements.

Much has been written and said about the reasonable expectations of policyholders. I subscribe to the view that it is implicit in the way mutuals operate that surplus does not belong to the current generation of policyholders. I also agree with the view in paragraph 4.2.5 of the Demutualisation Paper that the value of membership rights is a commercial decision depending upon individual circumstances and cannot be quantified by actuarial techniques. As regards the determination of goodwill, I agree that that is a particularly difficult area, especially if the future new business and growth prospects are poor. The purpose of the demutualisation may be to secure a guaranteed flow of business from the new shareholder and thus the question can be posed "What should a shareholder pay for prospective profits arising from a flow of new business which will be provided by the shareholder?"

Mr W B McBride said:- Having attempted to assist the Research Group with Appendix 3 I had not actually intended to get in the way of further discussion tonight but may I just say that I would support Mr Turvey in his plea for full disclosure in these matters. He echoes 3.5 of the Research Group Paper as Mr Scobbie did when he said that it is difficult from the documents available in our and the FS cases to obtain a total understanding from the principles we used in our merger. May I just say that if we failed to give enough information that should be put down to inadequate powers of communication rather than a desire to hide anything. We took the view in our case that it was all very simple, with our fund after merger retaining all its structure as a non-statutory sub fund. Were some actuaries perhaps perplexed because they had a reasonable expectation of something more complex?

I hope Appendix 3 to the paper helps although there is little in it which was not in the document we sent to policyholders. While on that point about disclosure I wonder if there is anyone in the hall who might share my view that the reasonable expectations of actuaries as to the reasonable expectations of with-profit policyholders, who are largely ignorant of their power of ownership, is interesting but academic. Do we who manage mutuals not owe it to our members, however defined, to explain to them what they have inherited? Must we be forced to do this only when we are considering, by restructure, an improvement on what we think their current expectations to be?

Mr A D Shedden closing the discussion said:- Could I pick up the last point made by Mr McBride? As you know, the Society of Actuaries had a task force on demutualisation; their report may well have had an influence in shaping the New York statute on demutualisation. Since such statutes in themselves would seem to create a policyholder expectation I do not think it is altogether correct to state that we actuaries cannot have a say in this regard.

I am sure that both sets of authors will have been pleased at the length of the discussion their papers have generated. In the time available I will not attempt to summarise the numerous points raised but will simply touch on one or two matters not mentioned specifically in the discussion.

Firstly, I would disagree with the Needleman-Westall definition of Orphan Surplus. This is a North-American term denoting surplus that does not derive from the existing policyholders but from the contributions of past policyholders. Also, the North-American term Entity Surplus is used to denote the surplus assets remaining after deducting assets to cover policyholders' reasonable expectations. It seems to be assumed by Northern-American actuaries that Entity Surplus will normally be greater than Orphan Surplus, since it is further assumed that any contributions to surplus that may be deducted from policyholders' asset shares are not normally returnable. Thus the authors' "orphan surplus" appears to correspond to Entity Surplus whereas the Research Groups' "additional estate" corresponds to Orphan Surplus. In fact if one deems the expectations of policyholders to be an entitlement to asset shares without any deduction for surplus contributions the two definitions of orphan surplus become identical.

The Working Party on PRE suggest that asset shares should form a measure of these expectations. It envisaged, however, that deductions might be made from asset shares in order to finance future expansion but said nothing directly about the incrementing of asset shares from profits earned from such investment of the estate. It seems to me that where bonuses, in the past, have been augmented by profits from the estate a reasonable expectation may have been established, so that, on a demutualisation, credit should be given for the continuance of such profits over the remaining terms of the existing policies, subject of course to the likely future business scenario.

Where the mutual, perhaps because of expansion or diversification, has tied up surplus with little or no return, or even with a negative return, the existing policyholders, on demutualisation, may then have a claim for a refund of surplus as well as for a share of future surplus earnings. It seems unfair to hold that no credit should be given for such a windfall profit and it matters little whether one regards this as a policyholders' expectation or as a members' compensation. The larger such potential profits become the greater may be the reluctance to pass them over to a reconstituted company on demutualisation and the greater might be the attraction of closing the mutual to new business, unless, of course, the members of the mutual were to become shareholders in the new company.

There is not time for me to comment on the various aspects of "open" and "closed" funds mentioned by the authors except to note that, ideally, any injection of capital should both demonstratively benefit existing policyholders and offer value to shareholders. Where the existing policyholders bring with them adequate surplus the capital injection will not necessarily benefit them; in these circumstances there would seem to be no case for using a shareholder rate of return when discounting the value of future cost of bonus in the calculation of the embedded value. From an actuarial point of view I have a slight preference for the notional fund approach since this gives better definition to the existing policyholders' benefits. However, with both open or closed funds, there is the danger that an initially satisfactory capital position may be eroded through the financing of new business and the transfer of profits to shareholders.

The balance of my discussion concerns the implications of GN15- a subject well-aired this afternoon. In spite of the interpretations being put on this guidance it is not clear to me that the Court would necessarily accept that the Independent Actuary, in his report, should directly compare the position of policyholders under the demutualisation scheme with their position were the mutual to close to new business. I doubt whether GN15 goes so far as to put this onus on him. For one thing, the requirements of both GN15 and Section 49 apply not only to demutualisations but to mergers of mutuals; it would seem presumptuous in the case of mergers for the Independent Actuary to consider gratuitously the effect of closure of both merging offices when neither set of directors had raised such a possibility.

Nonetheless, Section 49 in general requires the Independent Actuary to compare the prospects of policyholders under the scheme with their prospects should the scheme not be adopted. This comparison may well involve some element of business judgement and lay him open to a charge of "second-guessing" the directors. To clarify his position the independent actuary should ascertain the directors' views as to the most likely future scenario for the offices, if these views are not already apparent, and base his actuarial assessment accordingly, stating so in his report. Presumably he can question the directors' views to the extent that they may involve an element of actuarial judgement, probably based on actuarial advice. Also, where the directors, in their report to policyholders, have themselves introduced the closure possibility- even if only to reject it - it would seem appropriate for the Independent Actuary to comment on it in his report.

GN15 goes beyond the guidance quoted in the demutualisation paper to require the independent actuary to state whether and to what extent members will receive compensation for any diminution in their proprietary rights and comment on its appropriateness. Here there is a difficulty, especially if we, as a profession, take the stand that such compensation cannot be quantified actuarially but follows from a commercial transaction. Certainly, the Independent Actuary can comment on the appropriateness of any method of allocation of such compensation, and perhaps can relate the aggregate amount of compensation (which GN15 requires him to quantify) to the entity surplus of the mutual, stating what will happen to this surplus under the scheme. He may also be able to give an actuarial assessment of the advantages and disadvantages of various features of the scheme, inter alia pointing out the potential nature of members' rights and thereby introducing the closure option indirectly.

A difficulty arises if the Independent Actuary feels that the terms of the scheme do not in fact represent a realistic commercial bargain in respect of compensation for loss of proprietary rights. He can, of course, make his views known to the directors and perhaps make the DTI also aware of his position, but if the directors choose to ignore him in this regard there seems little more that he can do. It is in my view uncertain whether or not the Court would listen to any objections in this regard, even from the DTI, in view of the doubtful nature of the rights of policyholders to any such compensation and the necessarily unscientific method of assessment.

The discussion seems to conclude that GN15 needs to be changed, at least for clarification, but there was disagreement on whether or not policyholders should be directly pointed towards the closure option. Such an option, I am sure we all agree, should not be taken lightly. Perhaps this opens up a field for further research - another Research Group Paper perhaps?

Mr D R L Paul replying said:- May I first of all thank every speaker for their contribution to such a good discussion and their generous comments on our work.

The opener, Mr Needleman, thought that mutuals were a bit strange, I think that is a bit unfair because in their own paper 2.2.2 they pay a fairly hefty tribute to the success of mutuals in the last twenty years, but there is a danger that we overlook the whole issue. Mr Thomson's golf club analogy was a good one, I think another analogy would be a school or a hospital set up under some sort of independent charitable trust. I think they would run for a very long time before they thought about changing their status. It may be that life offices are different because they work alongside something that is so obviously the same kind of thing but with a proprietary cloak on it. He made the point about manufacturing companies and that they may well expand and contract without the need for outside capital, but I think the difference with life offices is that they have this rather artificial, or arbitrary capital requirements. Mr Thomson said himself that solvent offices could be insolvent under the regulations and it may be these very regulations themselves which threaten the future of the mutuals.

Mr Thomson took exception to us saying that a mutual should contemplate its navel from time to time. I do not think that it should look and decide that there is a great big pot of gold and it is time to share it out. What we are saying is that every mutual should understand at any time its own mission and if it chooses, say, an entity approach then it should at least internally understand fully what that means. The final point I picked up from Mr Thomson was his comment about using unrealistic bonus rates. We deliberately chose our example in order to avoid clouding the issue of demutualisation by bringing in a totally separate issue, namely that of unsupported bonus rates against future rates of return. We felt that this topic had been tackled fairly exhaustively in our 1987 Research Group Paper and we wanted to keep the two issues apart. Where this argument breaks down is when pressures to maintain bonuses or the flexibility to cut bonuses change in the course of the restructuring. Ideally more research would build on a dynamic bonus strategy but we stopped short of this because we already felt that interpreting our output was difficult enough.

Some speakers made comments about Section 2.6 where we tried to tackle raison d'être. Mr Burdon particularly referred to our reference to 'existing to write financial services'. That conclusion was reached after a considerable matter of soul searching within the group. The alternative is that the raison d'être is to write with-profits business. Given that we came up with the financial services approach, if we had developed the subject we would have brought in comments about efficiency and quality of service. I do not, however, understand Mr Burdon's reference to profitability because how can that be defined for a mutual? What would the office do with profits other than plough them back into efficiency and quality of service? Finally, would Mr Burdon be happy with a life office that was getting smaller, had a declining market share but could claim that it had the best quality of service? Is the management in that situation likely to get much praise?

Mr Scobbie was also disappointed in 2.6 to our rather glib reference to the raison dêtre for a proprietary life office. I would certainly accept his comments that the philosophy of management is not so terribly different and I think if we reviewed our paper we might want to change our stance. The bottom line must be that when the management has to face the shareholders, it is the shareholders who are the first priority.

Mr Duval had the regret that we had not concentrated in either paper on how much the purchasers were prepared to pay. We did actually calculate different purchase prices with different new business plans and we had every sort of purchase price that you could imagine coming out of our output. For two reasons it did not reach our final paper:-

1 It seemed so speculative and we ended up with such an incredible variety of prices that all we could conclude was that it would be a commercial transaction, not an actuarial calculation, that would carry the day.

2 We also had the problem that we were not clear other than as part of that commercial transaction how much of the profits from future new business properly belonged to existing policyholders and how much was due to, say, the tie which brought the new distribution channel.

Mr Ferguson made the comment that he thought a restructuring would be more complex than in the Demutualisation Paper and I was frightened that he would then say it was not quite as complicated as the Research Group's Paper had made it look. His concern centred on a closed fund operating under draconian investment conditions, but if we were proposing a closed fund we would also be proposing the circumstances under which it should be run. We would not normally envisage the switch to fixed interest that he described.

I will finish off with comments on disclosure. I would make the point that we are saying that in the FS case, we reckon it is difficult from documents *publicly available* to obtain a total understanding of what goes on and I would thank Mr Scobbie again for the access that he gave to the Research Group.

It remains the case that that is not available to the lay public.

Our plans for disclosure stem from a desire to ensure that existing policyholders are not treated unfairly however that fairness is defined. Confidentiality to protect policyholders when they may be about to receive more than they could reasonably expect is an angle that the Research Group did not consider and I think we ought to have done. Perhaps the problem with disclosure is not any misplaced desire for secrecy but simply that we as a profession have not collectively and clearly decided what needs to be disclosed. Finally as tends to be the case our research and tonight's meeting highlight the need for more investigations and broader debate. I hope that this Faculty Research Group can play a continuing role and I think we may have a special part to play in a fuller study of the merits and benefits of mutual status to which Mr McLean referred.

I will close with what is fast becoming the standard disclaimer of every Faculty Research Group. Our model is freely available on a floppy disk to anyone who wants to ask a few more questions.

Mr G Westall, FIA replying said:- I would like to thank everybody here for the discussion this evening which I found most interesting and stimulating.

There are two bases on which one can approach a reply to a discussion, one is to answer each point in detail and the other is the politician's approach which is to give the speech you have prepared irrespective of the debate that has come before.

I propose to take neither of these courses. First of all I do not think I can do justice to the many and varied points that have been made and I will try to deal with these in writing at a later date, but I will try to make my comments sympathetic to the spirit of the debate as I have understood it.

I am conscious of the work undone: I do not think either paper would claim to be exhaustive and I am sure there is much more work to be done which is illustrated by some of the points that were made this evening.

Secondly the difference between a shareholder company and a mutual. I strongly believe in the discipline of the profit motive and basically I am all in favour of shareholder owned enterprises, I think in many ways it makes for the most efficient use of resources. Unfortunately when I come to look on my own industry I see that mutuality and shareholder owned companies do not necessarily bring the result that I would expect from that firm belief. There seems to be an array of results for mutuals, an array of results from proprietary companies and nothing can be told from this about the actual constitution of the company. It is much more the basis of operation and I pay testament to the mutuals who, in spite of the supposed absence of this discipline, seem to be able to compete very effectively and to do well in the areas which are very important for life assurance companies to do well in.

Turning to PRE, I find this a most difficult concept. I would almost go as far as to say it is a meaningless concept. First of all I do not find the golf club analogy a very profitable one. I know it appeals to Scotsmen who are familiar with golf clubs. However, there are too many differences from being a member of a golf club to being a mutual policyholder - the benefits of belonging to a golf club are so much greater. Secondly we have introduced the concept of a reasonable policyholder, which is a very interesting concept but I do not think it has any relevance.

Also one person drew attention to a comment we made on PRE. We made that comment because we do not believe PRE are necessarily totally monetary. A policyholder may consider that part of his expectations is that he will continue to be a member of a mutual company, and demutualisation by definition prohibits that expectation. Finally, on policyholders expectations, the idea that potential policyholders may have reasonable expectations is one that I find difficult to grasp, the most I could allow is that potential policyholders have only potential reasonable expectations.

Turning to the responsibilities of the varied parties in a demutualisation, the problem with GN15 has been discussed in detail this evening. I feel very strongly about this and although several speakers have said that the closed fund should only be considered if this is a definite option if the scheme does not go through, GN15 does not say this. Although I criticise GN15 very severely I would not like it to be thought that we consider that the closed fund should not be considered. We think the closed fund should be considered but it is not the Independent Actuary's responsibility to do so. We assume that it is the directors' responsibility, as are many other things in a demutualisation. In a way the Institute and Faculty are saying that they do not believe that directors will fully discharge their responsibilities, hence the need for GN15. We feel that all roles need a very much clearer definition, especially the actuarial roles, and as was mentioned earlier, the Appointed Actuary has a very important part to play. There are as yet no guidance notes and there is no help in the legislation for Appointed Actuaries.

Some speakers expressed considerable unease that there was a body of rapacious potential shareholders who were going to take over mutuals and asset strip them.One of the things about scheme under Section 49 is that there is a scheme, and this is both an advantage and a disadvantage. The advantage is that the scheme does actually prevent some of these nasty things happening. If it is correctly framed, it does say how the future operation of the company will be carried out, especially with respect to existing policyholders. This may prevent cuts in the proportion of the distributable surplus going to policyholders, so the benefit of the scheme is that it can enshrine protections for the existing policyholders. The disadvantage in the scheme is that once it is in force it is not easy to change. Everything put in to protect the policyholders may potentially inhibit the operation of the company in the future.

We are conscious that we did not go into the valuation of the company to any extent. We do of course believe that actuaries have an important part to play in this, but as has been said several times many of the items are a matter of commercial judgement. Also we would like to make the point that they are not simple straightforward exercises, because many of the valuation items would actually depend on the future structure of the company.

Finally I would like to finish by saying that when projections are done the result of the projections depends upon the assumptions. That is self evident, and so one must pay great attention to the assumptions, not just the projections. However, the future will depend upon actual experience, and this in turn will depend upon investment expertise, the new business production, the management and so on. These cannot of course, be known at the time of the demutualisation and must to some extent be taken on trust.

In our paper we have tried not to understate the difficulty, what we have tried to do is to simplify some of the problems so that they can be analysed much more easily, but we would not like to leave anybody with the feeling that a demutualisation is something that can be undertaken lightly.

The President who closed the meeting said:- Although there have been few contributions to the discussion from members employed by offices still exposed to this risk of demutualisation, we have had a lively discussion.

We are indebted to the authors of the papers, thank you all ten.