WITH PROFITS WITHOUT MYSTERY

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ABSTRACT

The paper describes the philosophy of with-profits business which has been developed in the authors' office, as a practical illustration of the running of such business in modern conditions. A description is given of how the philosophy is implemented in the main areas of actuarial management, including valuation methods, bonus distribution, product design and expense control. The discussion is extended to address a number of topics which are the subject of current debate including the financial strength of offices, future bonus prospects and disclosure of expenses.

1. INTRODUCTION

1.1 Origins of Paper

1.1.1 The idea for this paper was born while listening to the discussion on C. S. S. Lyon's paper(1) at the Institute sessional meeting in January 1988. Within our office we had begun to feel a growing frustration with the fairly prevalent obfuscation within the industry regarding with-profits business compared with our tendency to view it in a simple straightforward way. For example, the resistance to unbundling contracts to allow expense loadings to emerge and the concentration on so-called 'strength' when discussing best advice are just two aspects of that attitude. Accordingly, we were pleased to hear a number of speakers describing the way they viewed with-profits business in their offices and how they would like to advance those concepts. In our office a considerable amount of thought has gone into developing a coherent philosophy of with-profits business in the modern environment and it seemed to us that we had, perhaps, already gone a long way down a road which others were attempting to follow; a road, of course, particularly relevant to our own office. Other actuaries will develop philosophies and strategies relevant to their own particular offices. With that in mind, discussion of a paper setting out that philosophy and how it influences the way in which our office is run would seem to offer the possibility of some benefit to the profession.

1.1.2 Given the nature and purpose of the paper, the usual form of disclaimer is not appropriate. Most of the ideas and views in the paper have the endorsement of our office and we are grateful to our employers for permission to describe them in this paper. However, the paper is naturally written with a particular audience in mind and the expression of views would not necessarily be immediately recognizable to our colleagues and board of directors. For any deficiency in the expression of those views, and the conclusions drawn from them, we take the usual personal responsibility. Our office is, of course, in a special position in that
it is a non-commission paying mutual. We would hope, however, that some of the views are capable of wider application.

1.1.3 It is also appropriate to explain the involvement of the authors, and make some specific acknowledgements. R. H. Ranson has held a senior actuarial position in the office for many years and is the Appointed Actuary. As such he has played a fundamental role in the development of the philosophy set out in this paper, the foundations of which were laid while working in his early years for M. E. Ogborn when he was Actuary of the office. In recent years C. P. Headdon has assisted in the development and practical implementation of the philosophy. If this were not a professional paper, a third name would have appeared, that of our colleague, D. C. Driscoll, who has worked with R. H. Ranson for many years and has made a significant contribution to the development of the philosophy.

1.1.4 The paper is a description of the practical implementation of an approach to with-profits business and is not a theoretical treatise. The concepts involved have developed over the years and no particular aspect of them can be attributed to any specific development in thinking within the profession. There have been numerous papers on the various topics associated with the actuarial and financial management of traditional business over the last twenty years or so and most of them have contained some material which is relevant to the subject matter of this paper. Readers should not, therefore, take the short bibliography to this paper as evidence of any particular claim to originality in the paper. Rather it is that to have acknowledged our debts to the many authors in the past would have led to an inordinately long list and we have, therefore, only given references where we refer specifically to a particular author’s work.

1.1.5 It is also worth mentioning that the paper is written in a deliberately simplistic way and covers a broad area of subject matter providing a high level view of the operation of a particular life office. We hope, however, that the simple treatment will not lead to the view that the matters discussed are themselves simple. Indeed they raise many of the most fundamental concerns of the profession at this time and a number of papers could have been developed by a detailed treatment of particular areas.

1.2 Structure of the Paper

1.2.1 The organization of the paper is simple. In the second section we set out the central concept on which the philosophy is based. The third section describes how, in practice, that philosophy affects the various areas involved in the actuarial management of the office, including product design. In the fourth section we look at some broader implications of the philosophy, in particular with reference to the current debate about financial ‘strength’. The paper ends with some brief conclusions.

1.3 With-Profits Business in Modern Conditions

1.3.1 Before embarking on the main body of the paper it seems worthwhile recording a few comments about with-profits business in general.
1.3.2 The continuing popularity of with-profits business indicates that it meets a real need amongst the investing public. We see that popularity continuing since with-profits business offers a unique investment medium. The combination of performance based on a diversified portfolio, a degree of smoothing to iron out peaks and troughs of asset performance, and increasing guarantees over a policy term is not seen in any other mass-marketed investment product. That is not to deny the attractions of linked business. We believe both types of business have a future since they meet different needs.

1.3.3 It should also be noted that with-profits business is attractive for offices since it provides a source of capital for expansion of the office and for the development of subsidiary businesses. That is so because, in current conditions, the actuary and his board have a considerable degree of freedom in the 'investment' of the with-profits fund. Provided that the actuary and his board exercise a proper prudence in the utilization of the funds in the light of the circumstances of their companies, there seems no reason why that freedom of action should not be retained. A greater willingness to discuss the topic more openly than has traditionally been the case is likely to be helpful in retaining that freedom. In the case of a mutual office with-profits business is, of course, the only such source of capital for practical purposes.

2. THE 'MANAGED FUND' CONCEPT

2.1 Description of the Concept

2.1.1. The essence of the concept is that we regard with-profits policyholders as participating in a 'managed fund'. The premiums they pay, after meeting expenses and the cost of life cover and other benefits and options, are invested in the managed fund. The benefits a policyholder ultimately receives will reflect the value of the assets in the fund attributable to his policy, i.e. that policyholder's asset share. Viewed like that, the analogy with linked business is clear although, in the case of with-profits business, results will not follow asset values with the precision that applies with linked business. The mechanics are, of course, different because with a linked contract a specified proportion of the premium is invested at a specified price and benefits emerge calculated on a specified basis. With with-profits, the price at which a policyholder buys into the managed fund and the value placed on the underlying 'asset share' when the policy benefits become payable are bound up in the premium basis and the various bonuses added; those are within the control of the actuary and directors.

2.1.2 The above description brings out parallels with linked business. However, the 'with-profits managed fund' has a number of special features not normally present in an internal linked fund:

(i) Each policy will have a guaranteed amount of benefit. The ultimate proceeds cannot fall below that amount.

(ii) The investment return on the fund is allocated to policyholders by means of bonus systems. Those bonus systems are arranged to give a degree of
stability of results by some smoothing and averaging of the investment return. That reflects the mutual pooling of investment risk which is one of the distinguishing features of with-profits business. The assets of the managed fund may also be ‘invested’ in the business to provide a capital base for other activities, for example in the financing of new business.

(iii) Part of the investment return is allocated regularly in the form of declared reversionary bonuses. Those serve to increase the minimum value of the ultimate benefits over the life-time of the contract.

(iv) The remainder of the investment return each policyholder receives is allocated at the point his policy benefits become payable. That allocation, known as final or terminal bonus, represents a final ‘topping-up’ of benefits in respect of investment earnings not already passed on via the annual reversionary bonuses and will include a return of his ‘investment in the business’, i.e. his contribution to financing the expansion of the office. Final bonuses may be more volatile than reversionary bonuses, although the office expects to average these over time to avoid severe and frequent fluctuations.

(v) In the case of a mutual office, the with-profits policyholders, as the proprietors of the business, benefit from any profits (or sustain any losses) made in respect of other types of business sold. Such profits or losses emerge as additions to, or deductions from, the bonuses otherwise attributable.

2.2 How the Concept Developed

2.2.1 It may be instructive to consider briefly how the concept has developed. In many ways it is the explicit expression of an attitude which has prevailed in the office for many years. Put simply, that is that the business belongs to the current generations of with-profits policyholders. Those policyholders participate in a pooled fund and, when they leave, should take ‘full value’ from the fund. The fund is continually open to new members. In particular, we do not believe in the concept of an ‘estate’ in the sense of a body of assets passed from generation to generation and which belongs to no-one. This is a point developed later in the paper.

2.2.2 Once expressed, the managed-fund concept has proved a natural, and valuable, way of looking at the with-profits business. In our view it aids clear thinking in a number of areas and has gained currency within the office as a way of thinking about the way we operate. In particular, we find quite alien the concept of adding a ‘bonus loading’ to non-profit premium scales in order to participate in the ‘profits’ of the office. That concept carries the implication that the policyholder could have paid a different, lower, premium for guaranteed benefits. That is simply not an appropriate view for many modern contracts as can, perhaps, most easily be seen by considering unitized with-profits business. Providing cover on a non-profit basis is a quite separate activity and we do not find parallels between, say, non-profit and with-profits endowment assurances.
relevant. The concept of joining a managed fund on appropriate premium rates to share in the experience of that fund is fundamentally different from that of paying additional premium charges to earn a share of the profits of the office.

2.2.3 Although the concept has been used internally for a number of years, it is only relatively recently that we have attempted to use it as a way of describing with-profits business to policyholders. The results have been pleasing, in that clients generally seem to find the idea understandable and helpful. We believe that other benefits can ensue from emphasizing the investment nature of the business and the parallels between linked and with-profits contracts. For example, a client who appreciates the concept is, we feel, less likely to find changes in declared bonus rates in the face of changing investment conditions surprising. By this means we have tried to take some of the mystery and mystique out of with-profits business.

2.3 Effects of the Concept in Practice

2.3.1 It is fair to say that, once accepted, the concept permeates all areas of the financial and actuarial management of the office and plays a fundamental role in product design. Section 3 of the paper considers the main areas of such management and how the concept influences actions in each area.

3. THE 'MANAGED FUND' CONCEPT IN PRACTICE

3.1 Valuation

3.1.1 Redington(2) described his wish to achieve a valuation basis where the emerging surplus was close to the 'natural revenue surplus'. We take that to mean that the emerging surplus reflects the difference between actual experience and that assumed in the premium bases. Although Redington was cautious in defining the term, his comments(3) on the statement made by one of our Presidents indicate that he was broadly in sympathy with such an interpretation. Such a basis seems to us consistent with the managed-fund concept. In particular, it seems appropriate to take strains as they are incurred—those strains can be analysed separately and dealt with through bonus systems in order to preserve equity between successive generations. The actual surplus emerging in a given year then reflects the experience—i.e. how the managed fund has progressed—in that year.

3.1.2 Unlike Redington, however, the approach in our office for valuation for surplus is to use a passive gross premium valuation where the valuation basis, as far as possible, reflects the premium basis of the business in question. That would seem to avoid the risks of 'prescience' in the use of gross premium valuations which made Redington such a vigorous advocate of the net premium method. Our method could be considered effectively to be a retrospective approach—in essence, we compare the amount we should have accumulated (on the premium basis) with what we actually have.

3.1.3 The effect of such an approach is that, in recent and current conditions, profits on non-profit business emerge as they are earned. We have not had to face
up to inadequate premium bases (on interest grounds) for a generation. If those circumstances arose again, we should need to consider whether to allow the losses to emerge as they are incurred or to take the expected loss immediately. With-profits premiums accumulate at 'full value'; that is, the reserves are consistent with the premium bases. Reserves calculated in that way are compared with assets at (written-up) book value. The excess of market values over 'book value' is held in the balance sheet as an investment reserve. Transfers from that reserve to revenue to support the cost of declared bonuses are made as necessary—a topic addressed in more detail below. In theory such a presentation could be maintained in conditions where assets at market values were below book values. The negative investment reserve in those circumstances could be held as 'unrealized depreciation in asset values' as it was at the end of 1974. However, in such conditions it is accepted that some departure from the usual valuation approach would be needed to demonstrate solvency. That could take the form of increasing the valuation rate of interest whilst leaving the rate of future bonus unchanged—not an inappropriate set of assumptions in the conditions which would then apply. In those circumstances similar problems would, of course, be likely to arise if a net-premium valuation were published.

3.1.4 In practice, the major part of our office's business in force is recurrent single premium pensions contracts. For such business the debate between net and gross premium valuations is, of course, academic. Such business does, however, provide a straightforward illustration of the approach. Most business of the type in question is written with a guaranteed accumulation rate of 3½% p.a. Each premium paid secures a slice of fund calculated by accumulating the premium, less an explicit expense deduction, at 3½% p.a. until the chosen pension date. The reserve held is simply the premiums, net of deductions, accumulated at 3½% p.a. until the valuation date. In practice the reserve is most conveniently calculated by discounting the fund at pension date at 3½% p.a. to the valuation date. A higher valuation rate of interest is in fact used, with a future bonus rate sufficient to bring the discount rate back down to 3½% p.a. That is simply a convenient means of breaking the total reserve up into broadly a part required to meet the guaranteed liabilities and the 'balance' (i.e. that commonly called the future bonus reserve—although that is not a phrase we find particularly helpful). Such a split is used as a guide for asset-matching purposes.

3.1.5 The 'natural revenue' character of the emerging surplus is immediately apparent. The earnings on the reserves in excess of 3½% p.a. and the implicit 'fund charge' to finance expenses (see § 3.3.1) will form the interest surplus. The explicit deductions on premiums paid within a year together with the implicit 'fund charge' will be available to finance the acquisition and maintenance expenses in the year in question; any difference forming the loading strain or surplus for the year. In particular, it should be noted that initial expenses are borne in full in the year in which they are incurred. In current conditions, where a substantial part of earnings arises in the form of capital appreciation, the revenue surplus plays only a limited role in bonus strategy as is discussed in § 3.2.
3.1.6 The above approach seems so natural as to be the obvious one to take. It is important to note that that impression is, to some extent, misleading. It would clearly be possible (and quite proper) to discount the liability at pension date at, say, 4% p.a. That would alleviate initial strains in a manner broadly equivalent to a zillmerized net premium valuation. To some extent the ‘naturalness’ is a function of the contract design which enables one to ‘look through’ the business. Where a more traditional form of contract is involved, the ‘naturalness’ or otherwise of the valuation method is less clear, although we aim to take a comparable approach to those types of business also.

3.2 Bonus Distribution

3.2.1 A natural extension of the managed fund concept is to regard each with-profits policyholder as having a specific stake in that fund. The well-known approach of looking at ‘asset shares’ is, thus, wholly consistent with the managed fund concept. However, we look at the asset share as part of the accumulated pooled fund (subject to averaging), not as the product of a mechanistic model at the individual policy level assuming, for example, a changing mix of fixed interest and equity holdings over a contract’s term, which, we understand, is used by some offices. Such an approach represents a quite different philosophical standpoint and can be expected to produce different results. In our view it suffers from complexity in practical application and does not give due prominence to the mutual insurance of investment risk, which we regard as a key feature of the business. That is a concept developed more fully in the following paragraph.

3.2.2 The managed fund’s holding of fixed-interest stocks broadly matches the guaranteed liabilities. However, that fixed-interest holding can be considered to match the guaranteed liabilities in aggregate. That is, the members of the fund are regarded as mutually insuring the investment risk amongst themselves so that the same investment mix applies to each asset share irrespective of duration in force or outstanding term. In that context it is worth noting that new business is desirable for the existing members because it helps maintain the proportion of guaranteed benefits on the business as a whole at a level that does not unduly constrain investment freedom. The key consideration for bonus distribution policy is the most appropriate way of passing on their ‘asset shares’ to policyholders leaving the fund. It should be noted that this approach to bonus policy is quite general. Although the recurrent single-premium form of contract is well-suited to the asset share approach, it is possible to look at most other, more conventional, types of product in a similar way and, indeed, we do.

3.2.3 In his Presidential address in October 1986, Marshall Field(4) spoke of his concerns regarding the tendency for the insurance risk to be passed back to the policyholder in modern contracts and for those contracts to become increasingly like products offered by other investment media. We would make the point very strongly that in the with-profits contract, as we view it, the insurance of the investment risk is far from dead. As noted in §1.3, life offices offer a unique vehicle under which clients pool the investment risks between
them. Apart, say, from friendly societies no other type of provider can offer such a contract.

3.2.4 The question of averaging and smoothing of performance is crucial. We believe that policyholders selecting the with-profits approach do not wish to see the volatility of returns which characterizes linked business; that is, the mutual insurance of the investment risk, which, as noted above, is a key feature of the business, should apply not just to reversionary bonuses but also to total proceeds. It therefore follows that assessed asset shares should move in an orderly fashion from year to year, tracking the general trend of overall investment returns rather than reflecting directly individual years of under or over-performance. There are a number of ways in which such smoothing and averaging can be achieved and the approach used in our office is outlined below.

3.2.5 We also believe that, in modern conditions, with-profits policyholders expect to achieve total policy proceeds broadly commensurate with those under a linked managed fund contract (although, as mentioned above, not exhibiting the short-term volatility of linked results) because it is with such contracts that comparisons can properly be made. That clearly has implications for the investment mix of the with-profits managed fund, which will, in turn, affect bonus policy. The interaction of those items is considered in the following paragraphs.

3.2.6 If one accepts that the policyholder’s key concern is the total proceeds achieved, then the matter of how those proceeds are made up between declared and final bonus elements should be of secondary importance. As the asset share builds up from year to year, the decision on the relative balance between declared and final bonuses can be viewed as a decision on how much of the overall return (after meeting any guaranteed accumulation implicit in the contract terms) should be ‘consolidated’ as declared bonus and how much should be left ‘unconsolidated’, either for future consolidation, or payment as final bonus. That is, of course, the theoretical position. In practice, policyholders tend to want reversionary bonuses to be as high as possible to avoid the potential volatility of too great a concentration on final bonus. Also, marketing colleagues are uncomfortable if declared rates deviate too far from the market norm. It is also interesting to note that the introduction of the requirement to hold a solvency margin effectively implies that at least a portion of the return must be left unconsolidated, for distribution as final bonus at the end of a contract’s term.

3.2.7 Since the ‘with-profits managed fund’ is invested in a mixed portfolio of assets which produces both income and capital appreciation in the assets, it naturally follows that the form of bonuses allocated to policyholders must be in harmony with the form in which the investment return on the portfolio arises. Since it automatically offers scope for new investment, the income received can generally be distributed by way of declared reversionary bonuses. The extent to which the return arising in the form of capital appreciation can be passed on as declared bonuses requires judgement unless a programme of switching of investments is to be undertaken. A balance has to be kept between the return
which can be consolidated in the form of declared bonuses and that left unconsolidated. Unless that process is carefully controlled, the result could be that too great a proportion of the capital appreciation is distributed in guaranteed form and the office, apart from suffering restricted freedom of future investment, becomes unacceptably vulnerable to the effects of a fall in capital values which could render it technically insolvent. To avoid such risks, the investment strategy would probably have to be adjusted to increase the proportion of fixed-interest stocks held in order to match the increased guaranteed benefits given.

3.2.8 If the situation described above were allowed to develop, the result would be that of investment strategy being determined by non-investment considerations. It seems unlikely that that will be in the best long-term interests of policyholders in terms of achieving their expectations described in § 3.2.5. Clearly, by its very nature, with-profits business implies some investment constraints as does any managed fund. However, our approach is based on the belief that those constraints should be controlled, so that the relative weight of fixed interest holdings need not be higher than would be considered suitable on investment considerations alone in a balanced mixed portfolio.

3.2.9 If the decision as to the level of declared bonus rates is viewed as really being a decision as to the level of earnings which should be consolidated, then the choice of the precise level of declared rates is clearly arbitrary. There will be a range of ‘sensible’ choices between rates so high that investment strategy is constrained and rates so low relative to the market that they would not be regarded favourably by policyholders. Within that range (and the limits of the range are, of course, a matter of judgement), the precise level of rates is a matter of choice. Naturally, such choice has to have regard to the marketing implications of any decision. In our office a reasonably objective method has been followed for a number of years as a base from which to determine the appropriate level of declared rates.

3.2.10 For several years up to and including the declaration as at 31 December 1982, the approach was to use a model based on the yields available on fixed-interest investments over the period covered by the declaration. It was considered that policyholders could reasonably expect that transfers of capital appreciation would be made to the Revenue Account to augment the surplus to the level which would have applied had the investment been wholly in fixed interest stocks. That was the minimum return to be expected. Declared bonus rates were therefore established by reference to such rates of return, taking due account of the taxation position of the different tax funds and the likelihood, or otherwise, of conditions being similar at the next declaration at least. The relevance of that final point is that in the late 1970s and early 1980s a slavish adherence to the model would have led to declared rates which were unlikely to be sustainable or, at the best, would become erratic. Such an approach was considered to be inconsistent with what we had led our policyholders to expect. In other words, on certain occasions bonuses were declared at rates lower than those indicated by the model. A summary of how the model has been applied over recent years is
given in Appendix A, and years in which particularly significant decisions were taken are discussed in more detail below.

3.2.11 The implications for bonus rates of the sharp fall in interest rates in the autumn of 1982, if the lower level had persisted for any length of time, were discussed with the board. Various plans were considered as to how to move to a lower bonus rate climate if that became necessary. Those early discussions, and reference back to them from time to time, subsequently eased the path in 1987 and 1988 when reductions in declared rates were recommended.

3.2.12 At 31 December 1985 use of the model would have indicated a cut in rates. However, in view of the exceptional performance of equities over the triennium covered by the declaration it was considered appropriate to maintain rates at the previous level. A year later the trend to a lower interest rate climate seemed to be firmly established and it was felt that the rate of return represented by the previous declared rates was sufficiently above the prevailing level of interest rates to make beginning a move to lower declared rates desirable. Accordingly, rates were declared at the rates of interim bonus which had applied during 1986, which had been set below the rates declared at the end of 1985 for similar reasons. Although that was a cut in rates, it passed largely unnoticed because it took the form of confirming an expectation established by the level of interim rates during the year. At that time interim and terminal bonuses were amalgamated into one ‘final’ bonus, partly for simplicity because interim bonus is essentially a type of terminal bonus, but also to avoid the situation where the level of interim rates creates an expectation as to the level of declared rates and hence constrains freedom of action.

3.2.13 At the end of 1987 a further reduction in rates was made. On that occasion there was no argument but that an explicit cut in declared rates was being made. The basis for the decision was, as mentioned above, the apparently clear trend to a lower interest rate climate. As such, it represented the continuation of the strategy commenced a year earlier and the events of October 1987 were largely irrelevant to the decision. Indeed, the intention to make a further reduction in declared rates had been discussed at length well before October of that year. However, somewhat paradoxically, the sharp reduction in overall earnings from the levels that would have applied had it not been for the ‘crash’ in some ways made the presentation of the decision more, rather than less, difficult. There was a clear danger that the cut could be seen as a sign of weakness. To avoid that danger there was a very full briefing of the Press and of our field force and a letter setting out the reasons for the decision was issued to each policyholder with their bonus notices. That strategy appears to have been successful in that there was very little adverse comment either from our policyholders or external commentators. Over the two declarations the gross rate of return represented by the declared rates was reduced from above 13% p.a. to about 11\(\frac{1}{4}\)% p.a. The latter rate is, of course, still relatively high in a long-term interest rate climate of 10% p.a. or less. Indeed, it is interesting that, despite the sharp rises in short-term interest rates during the autumn of 1988, longer term
rates were largely unaffected. A general climate of rates broadly around 10% p.a. seems quite persistent.

3.2.14 The precise form of the rates (i.e. fully, semi, or super-compound) applied to different classes of business are determined so as to pass on the desired rate of return equitably to policies of different durations in force taking into account the form of the policy and the taxation fund to which it is referred. Although it should be possible to iron out any inequities in the application of declared bonuses by adjustments to terminal or final bonus rates, it is felt that a fair level of total proceeds is most likely to be achieved if the declared rates are as equitable as possible in their effect during the lifetime of each contract.

3.2.15 For final, or terminal, bonus rates the starting point is the rates needed to lift the guaranteed benefits and declared bonuses to the appropriate asset share. It is at this stage that the averaging and smoothing of returns mentioned above are undertaken. Initially, crude asset shares are calculated as the gross premiums paid, less an allowance for deemed expenses and mortality costs, accumulated at the rate of return earned on the fund at market value over the lifetime of the contract. The calculation in respect of contracts in the life and general annuity funds takes account of taxation at rates which broadly follow the actual tax rates suffered from year to year. Profits on non-profit business are brought into account by an appropriate adjustment to the yields actually achieved. Dividing the asset shares so calculated by the guaranteed benefits and reversionary bonuses payable gives crude scales of final bonus. The scales are then smoothed in two ways. The detailed scales are smoothed to iron out irregularities in the progression of rates from one duration to another. Furthermore the overall level of the scales is adjusted to bring in some smoothing of scales over time. The starting point for that process is the size of the investment reserve as a percentage of with-profits reserves, averaged over a number of years. The purpose of that latter exercise is to introduce some stability in the scales from year to year, and has a similar effect to introducing some averaging of the overall rates of return achieved from year to year. It is clearly a matter of judgement as to how far that smoothing process should be followed and, conversely, how quickly one should reflect market movements. There is scope for a range of views on this and we are aware that some offices vary terminal/final bonus rates more frequently than does our office. A significant factor in formulating the approach to this matter must be what policyholders have been led to expect. Similarly, changes of approach in future cannot be ruled out as attitudes and policyholders’ views of with-profits business evolve.

3.2.16 It should be noted that all of the with-profits reserves are brought into these calculations. In other words, the final bonus rates are not just assessed in respect of business leaving the fund but in respect of all of the with-profits business in force at the date of valuation. There is a further point that solvency margins are set up from the unconsolidated surplus and, by implication, the outgoing policyholder takes his contribution to those margins with him.

3.2.17 We mentioned in §3.1 that strains are taken as they are incurred,
particularly on new business of the recurrent single-premium type. Since one would expect those strains to be offset by surpluses in future years as renewal premiums are received, it would be inequitable to base the proceeds for policyholders now leaving the fund on asset shares resulting from earnings which reflect the effect of those strains. Accordingly, the accumulated new-business strains incurred are identified and treated as a notional addition to the current fund value, with a suitable enhancement for the loss of interest, before determining the appropriate level of final bonus rates. Where there has been a failure to recoup some of the procuration costs, e.g. through non-renewal, that is brought into account. Such an adjustment is, in part, a reflection of the approach taken to asset shares in the sense that, under different approaches, e.g. detailed individual asset shares, such an adjustment may not be necessary.

3.2.18 The results of a bonus declaration are presented in the conventional way to policyholders and a number of final bonus scales appropriate to different types of business are published. At the declaration as at 31 December 1987 the effect of the declaration was also shown to policyholders in present value form for all contracts of the recurrent single-premium type. That is, the present value of their contractual benefits including declared bonuses was shown on bonus notices together with the amount of final bonus which would apply if benefits were payable immediately. It is felt that such a presentation gives clients a helpful insight into how their policy benefits, both consolidated and unconsolidated, are building up. For new contracts, such as personal pensions, the present value presentation will be the only one used. If clients are accustomed to seeing their benefits building up from year to year in present value form then with modern computing facilities the need for published final bonus scales is, perhaps, arguable. However, it seems likely that, for at least some years to come, policyholders will expect to see their proceeds determined on published scales of rates so that they can see that they are being treated fairly relative to other policyholders.

3.2.19 In adopting the present value presentation it is important to make the nature of with-profits business clear. That is, unlike a deposit-based contract, the present value is not available at all times. Although the value is steadily accumulating over the contract’s lifetime, the policyholder is only entitled to receive it in the circumstances described in the policy, for example, on retirement or prior death. In practice, in current conditions, the full present value is also paid out in other events such as on transfer or surrender but that basis is not guaranteed. The retention of flexibility in this area is essential if constraints on the valuation of the business are to be avoided.

3.2.20 It is important to emphasize that equity is regarded as being of prime importance throughout, in that we attempt to treat all policyholders fairly. To the extent that there has been any over-distribution in the past to one class relative to another, we would aim to rectify that by means of the final bonus scales used at termination. If the final bonus rates are calculated fairly, then the precise form of the declared rates should be irrelevant. We, therefore, find the
view that is sometimes expressed that a simple bonus structure favours short-term policies while a compound bonus benefits the long-term difficult to understand. In practice, as noted in §3.2.14, we aim as far as possible to achieve equity through the reversionary rates since that helps avoid the inconvenience of a proliferation of final bonus scales.

3.3 Product Design and Premium Rating

3.3.1 The essential concern in setting with-profits premium rates in the office is to ensure that new policyholders make an appropriate level of investment in the with-profits managed fund, so that an equitable result will be achieved by uniform bonus systems applicable to new and existing business. Despite modern computerized calculation techniques and the theoretical possibility of many different bonus series, we believe that a complex structure inevitably leads to a loss of clarity of vision about the business. Simplicity throughout our activities is regarded as being supremely important. That approach has led to a recurrent single premium contract as the natural base for the business in modern conditions. As has already been mentioned, each premium paid, after an explicit deduction, rolls up at a guaranteed rate of interest. The rate is, to a large extent, arbitrary in that the guaranteed benefits simply provide a ‘peg’ on which to hang the bonuses. It should be remembered, however, that the higher the guaranteed roll-up, the greater the potential constraints on investment strategy. A rate of 3½% p.a. is now the norm for contracts in the Pension Business fund. A 0% accumulation rate is used for assurance contracts. The explicit deduction is designed to ensure that each contract bears a fair share of expenses and also to meet the cost of any other benefits, such as waiver of premium. The balance of the expenses is met by a charge on the accumulating reserve. The analogy with the initial and regular management charges on unit-linked business is clear.

3.3.2 It may be a helpful illustration of the practicalities of operating with-profits business to indicate how the 3½% p.a. accumulation rate for pensions business arose. When the recurrent single premium contract was introduced in 1957 a 2½% p.a. roll-up was guaranteed. That was based on the premise that bonuses in the early years should be at a similar level to those applicable to level annual premium contracts in the assurance and general annuity funds. A roll-up rate of 2½% p.a. on the recurrent single premium business was seen to be a satisfactory fit. After a year or two bonus rates were allowed to diverge from those for the other classes. Then, as investment earnings rose, it became necessary to increase the guaranteed rate, first to 3% p.a. and then to 3½% p.a. if equity were to be achieved between old and new business by a common bonus rate for the class overall. That was, of course, before the introduction of final bonuses. In the new environment we should expect that such changes to the accumulation rates would probably be unnecessary, since it should be possible to use the final bonus scales to achieve the relevant degree of equity.

3.3.3 The recurrent single-premium approach has gradually evolved over the years from an initial design based on regular annual premiums of varying
amount. Until relatively recently the bonus systems reflected the origins of the design, in that each premium paid was related to a particular policy anniversary for bonus purposes, and bonus was declared in respect of complete policy years. Given the flexibility allowed both as to the timing and amount of premiums, such a system led to some practical complications which were becoming increasingly onerous for the office as well as for policyholders. Under the recurrent single premium approach the policy anniversary should have no special significance and bonus systems have recently been changed to reflect that. Under the current system each premium paid ranks for bonus from the date of payment and bonus is declared in respect of calendar years. Such a system is well-suited to a present-value presentation. Each year the benefits accrued to the end of the previous year accumulate at the guaranteed rate of roll-up and one year's declared bonus. Premiums within the year, less explicit deductions, are brought forward with a proportionate roll-up and bonus reflecting the part-year for which they have been within the fund. The method has been applied to existing business as well as new. That again illustrates the conscious striving to retain simplicity of operation. It is often overlooked that the office has only one very simple pensions contract which is used for all pensions business, whether individual or group.

3.3.4 The change to bonus systems provides an illustration of how the actuary needs to look ahead and begin to plan and recommend adjustments (and encourage his board and colleagues to accept them) well before a change of practice is fully implemented. The office maintained a triennial approach to bonus declarations up until 1985 and it was not practicable to introduce the new bonus method in those circumstances. However, a move to annual compounding of bonuses, although still declared triennially, took place at the 1982 declaration in preparation for a move to annual declarations. The change to a calendar-year system of bonus allocation had to be implemented over the two years 1986 and 1987. At the 1986 declaration policyholders were briefed as to how their future entitlement to bonus would be calculated and that was implemented for premiums payable after the 1987 policy anniversary. At the 1987 declaration a 'catching up' bonus was allotted to bring the allocation on all recurrent single premium contracts up-to-date as at 31 December 1987.

3.3.5 The point made in §3.2.19 regarding the nature of guarantees is also of relevance in the context of product design. A present value presentation does not imply a guarantee that the present value is actually available at all points in time. However, we see a need for a degree of flexibility appropriate to the circumstances in which a contract is used and, in practice, we guarantee a 'full value' return at a range of retirement ages—for example, from 60 to 75 under s226 business and from 50 to 75 under personal pensions. In our view, issues of that kind require the actuary to have a close involvement, and interest, in the marketing aspects of the business. We would not regard as helpful an environment in which the actuarial involvement in product design was limited to narrow technical matters.

3.3.6 In §3.2 it was explained that the managed fund concept was applied
equally to more conventional with-profits products such as endowment assurances. However, in such cases the form of the contractual benefits makes the mechanics less clear to the policyholder although they are still there. Recently the recurrent single-premium approach has been extended to provide alternatives to such conventional products, although the office continues to offer traditional endowment and whole life assurances etc. for the time being. On the life side, a with-profits version of a ‘flexible whole of life’ type contract is clearly suitable for the recurrent single premium approach. Less obviously, the idea has been used to develop a with-profits immediate annuity. That is most easily thought of as a bundle of pure endowments, one maturing each year over the life-time of the annuitant. Each pure endowment participates in the managed fund during the period of deferment and on ‘maturity’ the proceeds secure a one-year temporary annuity at whatever mode and frequency of payment has been selected by the annuitant. The single premium paid can be split equally between the endowments—so that each year’s basic annuity payment is the guaranteed 3½% more than the previous year. Alternatively, the premium can be split so as to anticipate a certain level of future bonus and hence achieve a higher level of starting annuity.

3.3.7 The earnings on the with-profits managed fund will reflect profits made on non-participating business. Before leaving the section on premium rating it is worth noting that the pricing of non-participating business is not aimed at generating significant profits. That is, the concept of mutuality is extended to non-participating business, in the sense that such contracts can be effected under the umbrella of the fund and, although they are expected to cover their costs, profits are not actively sought. In practice, the fact that prudent assumptions are used in setting rates should mean that normally a small profit will accrue to the with-profits policyholders, in addition to the repayment of any ‘loans’ (plus interest) from the with-profits fund made in writing the business. The ‘rate of interest’ on the loan is expected to be broadly commensurate with the rate of return earned on the fund from time to time. That is, the intention is that the with-profits policyholders should be left in broadly the same position as if the business had not been written.

3.4 Expenses

3.4.1 It is essential that the expense loadings for each class of business are adequate and consistent between each class. Otherwise, the use of bonus rates based on the overall rate of return will give rise to inequity between different classes and, possibly, successive generations. Expense monitoring and control is thus a fundamental activity in the use of the managed fund approach.

3.4.2 As a consequence of the above, there are two arms to the necessary expense control:

(i) to ensure that the loadings overall are adequate;

(ii) to ensure that each category of business is making an appropriate contribution.
The mechanism used for both purposes is that of a 'management expenses fund'. That is a notional fund comprising the initial and renewal expense loadings deemed available in the premium rates for new and existing business. The first part of the expense control is satisfied by ensuring that the management expenses fund covers the total incurred expenses, the second by monitoring the components of the management expenses fund against an analysis of actual expenses by business category.

3.4.3 The use of the expression 'deemed available' in the above description is important. The expenses brought into the management fund are not the actual charges levied but the allowances for procuration and maintenance expenses built into the premium rates. A unit-linked analogy might help make the point clear. Premium rates might be designed to recoup initial expenses of, say, 50% of the first premium and renewal expenses of 3% of each subsequent premium. The charges levied to recoup those expenses could be a 90% allocation rate for the first 2 years' premiums, a 5% bid/offer spread and a ½% p.a. fund management charge. In that case the contribution to the management expenses fund would be 50% of the first premium and 3% of each subsequent premium. Such an approach means that the contributions to the management expenses fund are well-matched to the incidence of actual expenses, making control of expenses by a straightforward comparison of the two items valid.

3.4.4 Although the comparison of incurred expenses and the management expenses fund is made annually, a precise match is not expected each year because trends are more important than the results of a single year in isolation. In particular, two points are worth noting:

(i) Most products have a natural 'servicing life-cycle'. Initially volumes are small and servicing can be relatively cheap. Then volumes increase and manual systems come under strain and their cost-effectiveness declines. At that stage mechanization is called for and that normally brings a dramatic improvement in cost-effectiveness. A similar argument applies when mechanization is introduced at the outset. Initially the expense may not be covered; eventually, as the class matures, it produces a loading surplus. One would not, therefore, necessarily expect costs to be fully covered by the available loadings at every point in a product's lifetime. Again, it is the trend that is important.

(ii) Major projects such as the development of a new business area or a redesign of central computer systems are undertaken to bring long-term benefits. It is not reasonable to expect the costs of such activities to be covered as they occur and some special action is warranted. That would normally take the form of identifying the costs of such projects as they arise and looking to recoup them with an allowance for the loss of interest over the period in which the benefits are expected to emerge. Such monitoring does take place to ensure that the expected recoupment is realized. As an example, the expenses incurred in fully entering the unit-
linked market in 1984 were identified at that time and planned to be recouped by a loading in the unit prices over about five years according to the new business plan. That has already been achieved.

3.4.5 Before leaving the subject of expenses it is worth noting that, under the approach described above, there is no real difficulty in assessing the costs of running with-profits business, in a manner very similar to unit-linked business. The disclosure of those costs would not, therefore, be a problem. We would again highlight the similarities between unit-linked and with-profits business. With both types of contract identifiable loadings are applied for expenses. Under neither contract is there normally any kind of expense guarantee. If, in the event, the loadings are inadequate, the explicit unit-linked charges will be increased and with-profits business will suffer lower bonus rates than would otherwise be the case. It is important to note that in both cases the net effect is the same—the policyholder’s investment return is reduced. The open nature of the management expenses fund is being reinforced at all levels throughout the office by the introduction in 1987 of a staff performance bonus scheme where the bonus is related to the extent to which actual expenses undershoot a target based on the management expenses fund.

4. BROADER IMPLICATIONS OF THE MANAGED FUND CONCEPT

4.1 The Myth of the Estate

4.1.1 Underlying the managed fund concept is the belief that the assets of the office are owned by the current generations of policyholders. The price at which those assets are transferred from one generation to another is determined by the premium rates and bonus rates in force. As explained above, we would regard our reserves for with-profits business as being the ‘natural’ ones. The bases for non-profit business do not anticipate the potential profits on that business and the prudent valuation assumptions will give rise to strains on new non-profit business. However, the accumulated amount of such strains (net of subsequent releases) is trivial in relation to the totality of with-profits reserves. Profits on the non-participating business (mainly investment earnings in excess of the interest rates assumed in the premium bases) are brought into account as they are earned. Consequently, for our office we would regard it as reasonable to take the assets not required to cover the liabilities as essentially equal to the ‘investment reserve’—i.e. the difference between the market value and written-up book value of assets. Although there will be a small cushion within the liabilities, as noted above, that is not a significant element in the context of the overall position. However, under our approach, the investment reserve represents the unconsolidated earnings attributable to current policyholders. Where then is the estate?

4.1.2 Discussion of the ‘estate’ would, in the case of our office appear to rely on some notional apportionment of the investment reserve between what ‘belongs’ to policyholders and that belonging to no-one. Obviously, once an ‘estate’ has been created it can be deemed to accumulate thereafter. However, the
intellectual argument for its genesis and subsequent maintenance does not seem well-grounded. It would appear to be particularly difficult, for example, to explain in product disclosure particulars that not all of the investment return on a policyholder’s savings will be returned to him because some will be retained to build up the ‘estate’. We have not yet seen such an explanation. Provided one works on the basis that assets are passed from one generation to another at ‘fair value’ (which may be above or below market value, due to the effects of smoothing) then the need for the concept of an estate is unclear.

4.1.3 If the estate does not exist, from where does the funding of new business growth come? The answer is, of course, the with-profits policyholders from the unconsolidated surplus. (For simplicity, the position of a proprietary office is not considered, but there seems no reason why similar arguments should not apply. In practice, traditional proprietary offices do not appear to have recourse to shareholders for additional capital.) The ‘investment’ by the with-profits policyholders is the accumulated new business strain described in §3.2.17, and as described in that section, the ‘investment’ is ‘repaid’ to policyholders leaving the fund by an appropriate adjustment to final bonus scales.

4.1.4 In various papers and discussions analysing the rate of new business growth supported by the estate, the arguments appear to be based on the approach of assuming maintenance of current bonus rates and that the ‘non-estate’ part of the investment reserve must be reserved for policyholders. The resulting conclusion that a rate of new business growth in excess of the investment return on the estate will eventually wipe it out, and is thus not sustainable, is not therefore surprising. We do not accept this approach and, in the theoretical extreme, we believe that the whole of the investment reserve is available to finance new business growth. In practice, of course, getting near that extreme would not be desirable since management’s freedom of manoeuvre would become extremely constrained. It should be noted that writing-up from capital appreciation to cover new business strains depresses the income yield through revenue, other things being equal, and hence requires progressively higher levels of writing-up in future to enable a given rate of bonus to be declared. Whatever view is taken, it is clear that, broadly speaking, the growth of new business strain at a rate in excess of the earnings on the fund will, for a mutual, ultimately be unsustainable. However, we believe that for a mutual with a healthy investment reserve, the constraints on new business growth in the short and medium term are not so severe as the conventional analyses of the position of the estate might lead one to suppose. The figures in Appendix B illustrate the rate of growth of our office over recent years.

4.2 Investment Strategy and Future Bonus Prospects

4.2.1 The office’s investment strategy in respect of with-profits business can be simply expressed as maximizing the return on the with-profits managed fund, subject to the relevant actuarial constraints. As discussed above, one of the aims of bonus policy will be to keep those constraints to a minimum. Expressed in that
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way, the analogies with the sort of investment objective which is likely to apply to a unit-linked fund is clear.

4.2.2 The with-profits managed fund can be simply presented as just that to the board and to investment colleagues and broad comparisons can be made with other offices, to bring out different investment approaches as an aid to explaining differences in performance. For our office we take the non-linked assets and exclude fixed interest stocks sufficient to cover the non-profit liabilities. The investment mix of the remaining assets can then be determined and comparable figures can be estimated for other offices from their DTI returns. As an example of the approach, the office’s distribution at 31 December 1987 in respect of the with-profits managed fund compared with the estimates for two other leading offices are as follows:

<table>
<thead>
<tr>
<th></th>
<th>Our office</th>
<th>Office ‘A’</th>
<th>Office ‘B’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed interest</td>
<td>23%</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Index-linked</td>
<td>7%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Equities</td>
<td>50%</td>
<td>56%</td>
<td>64%</td>
</tr>
<tr>
<td>Properties</td>
<td>16%</td>
<td>39%</td>
<td>22%</td>
</tr>
<tr>
<td>Other</td>
<td>4%</td>
<td>3%</td>
<td>12%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Clear differences of approach are apparent.

4.2.3 Use of the managed fund concept means that with-profits business is clearly seen as an investment product packaged in a particular way. Future bonus additions will necessarily depend on the return which can be earned on the managed fund. It follows that any discussion of future bonus prospects, in the sense of ability or otherwise to maintain current rates of bonus, is largely irrelevant. Such considerations are no more fruitful than asking whether a building society will be able to maintain its current deposit rates unchanged over the next five years. The industry has done itself no favours by allowing the view to develop that in some way life office bonus rates are largely unconnected with general investment conditions and that there are ‘massive reserves’ always available to meet any deficiency in returns. It is pleasing to note that there are signs of a more realistic attitude now being promulgated. That is also true in the area of endowment assurances used in connection with mortgages. It seems to us that, in modern conditions, making reversionary bonus levels the critical item in that connection is not helpful. Surely a more realistic approach, as is necessarily used with linked policies (which are becoming increasingly accepted by lenders), is to define the rate of future growth which the client (and his lender) are happy to anticipate. The form in which that rate of growth, if achieved, is passed on to policyholders should be a secondary consideration, although it is accepted that clients will find a reasonable level of consolidation of earnings in the form of reversionary bonuses reassuring.

4.2.4 A natural consequence of those views is that ‘policyholders’ expec-
tations' expressed as a relationship of future bonus rates to current levels are also meaningless. In our view the reasonable expectations of policyholders are that an office will conduct its affairs so as to produce the best return it can in the conditions which prevail, and will distribute those returns fairly between different participating policyholders in a way which smoothes the emergence of the earnings. Such an approach is, of course, very much in tune with that expressed by C. S. S. Lyon(1) in his recent paper. The approach is also useful internally in, say, discussions with directors about maintenance or otherwise of bonus rates. If future bonus rates are clearly seen to depend upon future earnings then it is not difficult to paint the various pictures arising in different investment climates.

4.3 Financial Strength

4.3.1 A recent trend has been for commentators to discuss the financial strength of life offices by reference to the so-called 'free asset ratio'. The numerator of the ratio is generally what we have referred to above as the investment reserve. In our terms, the assets are, of course, not 'free'; they are simply the unconsolidated earnings attributable to the current policyholders.

4.3.2 In general, the relative size of the investment reserve will be affected by a number of factors. Apart from changes in the market value of assets the chief amongst those will be the valuation basis used, the bonus policy followed by an office (in terms of mix of reversionary and final or terminal bonuses) and the rate of new business growth (since one would normally expect a proportionately lower level of unconsolidated earnings on a recently effected policy than on one which has been in force for some years). A simple example illustrates the point. If earnings are at 12% p.a. on a £100 level annual premium policy and declared bonuses consolidate earnings at 8% p.a. and 10% p.a. respectively then, ignoring expenses and calculating the liabilities by accumulating the premiums at the consolidated rates, we have the following picture:

<table>
<thead>
<tr>
<th>Term in force</th>
<th>Assets at market value</th>
<th>Liabilities (8% bonus basis)</th>
<th>Liabilities in (10% bonus basis)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 years</td>
<td>712</td>
<td>634</td>
<td>672</td>
</tr>
<tr>
<td>10 years</td>
<td>1965</td>
<td>1565</td>
<td>1753</td>
</tr>
</tbody>
</table>

If those 4 combinations of term and bonus levels represented 4 different offices, the 'free asset ratios' of the two offices where business is 5 years old would be 12·3% and 6·0% respectively, while for the two offices whose business is 10 years old the ratios are 25·6% and 12·1% respectively. In each case the contract is the same and the same overall level of earnings has been achieved.

4.3.3 This trivial example brings out some important points which can be overlooked in practice. The office which consolidates more of its earnings will have smaller 'free reserves', other things being equal. Similarly, the office whose business is of shorter duration will have smaller free reserves than a more mature
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office. It is by no means clear why an item affected by such factors should be regarded as a suitable measure of strength from the viewpoint of a new policyholder. Indeed, a high level of such ‘strength’ could indicate features such as poor growth or under-distribution to policyholders which would make the suitability of choosing such an office doubtful. It could also be argued that with-profits policyholders expect bonuses to be declared at the highest levels sensible. Comparisons of ‘strength’ based on measures of unconsolidated earnings run directly contrary to that expectation.

4.3.4 There is, however, a more fundamental issue to be addressed. Even if a better measure of strength could be made, it must be asked why strength is of itself a desirable feature. Clearly there needs to be an adequate level of strength or an office is at risk of having the DTI intervening in its affairs. However, beyond such a level of adequacy it is difficult to see the merit of strength as an end in itself. One must ask for whom the strength is being built up. There is an argument that a high level of strength could indicate a failure to achieve a full value return to policyholders although, of course, such strength does add to the office’s freedom of manoeuvre. Whether that is desirable or not is a matter of judgement. In the extreme, maximum strength could be achieved by having no declared bonus and passing all the return on by way of final bonus.

4.3.5 The figures in Appendix B illustrate how the relative size of the investment reserve of our office has varied fairly widely over the years, essentially in response to external investment conditions. The average is some 15% to 20% of the market value of assets. Commentators who are currently concentrating on so-called ‘Form 9 strength’, i.e. essentially the figure in the above table, might well consider the implications of some of their discussions if, and when, the conditions of the 1970s reappear.

4.3.6 It is, of course, easy to dismiss crude attempts to measure ‘strength’ without suggesting an alternative. In our view, in choosing an office for a with-profits contract, policyholders should be interested in one that exhibits the following features:

(i) Cost-effective administration, so that more of each £1 of premium is available for investment.
(ii) Good investment performance.
(iii) An adequate level of strength so that the office is allowed by the DTI freely to manage its affairs.
(iv) Consistent and fair treatment of with-profits policies of all types and terms. (Specifically, to beware of offices which achieve good results on one particular form of contract and indifferent results elsewhere.)

Constructing comparisons based on such items is by no means straightforward. However, the dynamics of a life office are not capable of being simply summarized by a single ratio and that message needs to be clearly made. There will also be qualitative factors such as underwriting standards and quality of service which will be relevant in making a choice of office.
4.4 Actuarial Control

4.4.1 It will be evident from the wide range of topics addressed in this paper, that for the successful application of a concept such as the with-profits managed fund, there needs to be a high level of actuarial involvement across all aspects of the business. It is, perhaps, not surprising that the concept has developed in our office which has a long tradition of strong actuarial control running back to William Morgan. That control is not applied in a limited technical way but in an outward-looking positive manner designed to foster the commercial success of the organization. We believe that actuaries have unique insights into the operation of life offices which make it vital they should play a central part in running those institutions. Recent proposals to strengthen the position of actuaries in organizations where their role has been less central are, therefore, to be welcomed, but there is, perhaps, scope to develop actuarial attitudes so that offices see the gains to be obtained in involving actuaries fully in their businesses. We fully agree with Redington's well-known comment that "an actuary who is only an actuary is not an actuary".

5. CONCLUSIONS

5.1.1 In a paper such as this, which is essentially descriptive of an approach, detailed conclusions are out of place. However, we have tried to bring out the intellectual basis for the approach taken in a clear manner so as to provide points for discussion. Views on the conduct of the business have intentionally been expressed strongly—both because they are strongly held and also to stimulate discussion.

5.1.2 It is perhaps appropriate to conclude by re-emphasizing that the paper describes the approach which has been explicitly developed and applied in our office over, say, the last fifteen years but based on many years of less explicit practice. The essence of the approach is to look at the business in as simple a way as possible whilst achieving a fair outcome between policyholders of different classes and generations. During that period the office has shown high levels of growth (see Appendix B) and achieved past performance results which may be regarded as consistently good across the spectrum of with-profits products. The objectives of the approach, therefore, seem to result in a satisfactory practical outcome and that gives us some confidence in setting out the approach in this paper as a working and workable philosophy.

REFERENCES

APPENDIX A

DETAILS OF DECISIONS ON DECLARED BONUS RATES IN RECENT YEARS

(i) Triennium ending 31 December 1970.
The average yield on the balance sheet value of the assets had been 7½% p.a. A comparison with wholly fixed interest investment suggested that a yield of 8½% p.a. might have been earned. Hence the surplus disclosed by the valuation was augmented by 3% of the average fund in force. Balance sheet values were written up by this amount, which allowed an increase in declared rates.

Income yield on assets at balance sheet value again averaged 7½% p.a. Corresponding yield if in fixed interest investments deemed to be 10½% p.a. Writing up of 9% of average value of fund allowed a further increase in declared rates.

(iii) Triennium ending 31 December 1976.
A special situation in that market values were just equal to book values and hence there was no appreciation available to augment actual earned income which had been less than that required to support the current bonus rates. Yet the assets still had their intrinsic value. (In theory, the equity and property assets could have been sold and the income of the fund immediately increased by investment in fixed interest. On this basis, the current bonus rates were more than comfortably supported.) It was decided to maintain current rates and that was achieved by releasing some unnecessary margins in the valuation basis which existed at that time.

(iv) Triennium ending 31 December 1979.
Yield through revenue of 11% p.a. compared with deemed yield on fixed interest of 12½% p.a. Writing up of 4½% p.a. of average fund value permitted a further increase in declared rates.

(v) Triennium ending 31 December 1982.
Yield through revenue again 11% p.a. Deemed fixed interest yield had increased to 13½% p.a. (which was somewhat below the actual level of fixed interest yields for much of the triennium) so writing up of 6½% of average fund value permitted a further increase in declared rates.

(vi) Triennium ending 31 December 1985.
Yield through revenue fell to 10% p.a. and average fixed interest yield had also reduced to 11% p.a.
A straightforward application of the previous approach would have indicated a substantial cut in bonus rates. Equities had, however, performed very well over the triennium and the Investment Reserve had grown substantially. It was decided that some modification of the
approach was appropriate so that some of the benefit of the out-
performance of equities was consolidated. Accordingly, it was decided
to maintain reversionary bonuses at the previous declared level. The
 corresponding writing up required was 9\(\frac{3}{4}\)\% of the average fund over the
triennium.

(vii) Year ending 31 December 1986.
Further reduction in yield through revenue to 9\% p.a. Average fixed
interest yield remained at around 11\% p.a.

In view of the outlook for interest rates it was considered appropriate
to begin to adjust the balance between the reversionary and terminal
bonus elements. A move back to the level implied by the approach used
up to and including 1982 was considered too dramatic a step to make in a
single year and so bonuses were declared at the 12\(\frac{1}{2}\)% level which had
applied for the triennium ending 31 December 1979. The corresponding
writing up required was 3\(\frac{1}{2}\)% of the average fund.

(viii) Year ending 31 December 1987.
Yield through revenue and average fixed interest yield had both reduced
further to 8\(\frac{1}{4}\)% p.a. and 10\% p.a. respectively. Decided to take a further
step in line with the strategy to move to declared rates appropriate to the
lower interest rate climate and rates were reduced to a level consistent
with earnings of 11\(\frac{1}{4}\)\%. Fund written up to permit a declaration at that
level.
## APPENDIX B

### HISTORICAL DATA

<table>
<thead>
<tr>
<th>Date</th>
<th>Fund at market value £m</th>
<th>Transfer to revenue account* £m</th>
<th>Investment Reserve (after transfer) £m</th>
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</thead>
<tbody>
<tr>
<td>31.12.72</td>
<td>194</td>
<td>—</td>
<td>51</td>
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<tr>
<td>31.12.73</td>
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* Excluding transfer to cover change in value of linked assets but including transfer needed to cover the cost of terminal or final bonuses paid.
Mr C. P. Headdon, introducing the paper, said:—This paper was drafted some eighteen months ago, and in the nature of things life has moved on in the intervening period. Accordingly, in these introductory remarks, I should like to make a few comments about subsequent developments, and also make some supplementary observations on one section of the paper.

On a purely factual level, the data in Appendix B is now two years out of date. You may like to know that at 31 December 1989, the market value of assets had risen to around £5,700 million and after the transfer of appreciation to revenue to support the bonus declaration, the investment reserve amounted to about £1,000 million.

A more interesting point, however, which illustrates the active approach we try to take to managing our with-profits business is that we have made a further development to our bonus systems.

Paragraph 3.2.18 of the paper foresees the development of the business so that total policy proceeds, that is the sum of consolidated and unconsolidated benefits, steadily accumulates from year to year in a way which would enable published final bonus scales to be done away with. Such an approach is consistent with our general philosophy in that we consider all business of whatever term or duration in force to experience the same uniform asset mix.

At the time of writing, we had seen this development of our bonus systems as a possibly long-term development. However, circumstances have changed, and we find it desirable to make such a move sooner rather than later. Accordingly, the new approach was introduced in respect of 1989.

Under the new system, an allocated rate of growth is applied to the total benefits, consolidated and unconsolidated, at the start of the year, together with premiums paid during the year to produce the year-end total benefits. Consolidated benefits effectively accumulate at a growth rate determined by the interaction of the contractual policy terms and the declared bonus rate. The relationship between the total growth rate allocated and that applicable to the consolidated benefits only, will determine whether for a practical contract, the unconsolidated benefits increase, decrease or remain constant over the year.

Our recurrent single premium business is, effectively, equivalent to unitised with-profits business. Since most unitised with-profits business is fairly new, the terminal bonus element in policy proceeds is not yet very significant, and most offices appear to be taking a fairly straightforward approach to this part of total proceeds.

By contrast, we have been selling such business since 1956, and have substantial tranches of business which have been in force long enough to have attracted a sizeable final bonus element. Arriving at an approach which deals with the unconsolidated element of total benefits in an equitable manner, in the face of a very wide degree of variability in the timing and amount of premium payments, is, we feel, a problem which we have encountered in advance of most offices. It would be interesting to learn if actuaries with offices now writing unitised with-profits business have different ideas of how to cope with terminal bonuses when the business becomes more mature.

I should now like to make a few points on Section 4.1 of the paper entitled 'The Myth of the Estate'. This Section was intended to be provocative and on reflection it should perhaps have been entitled 'The Myths of the Estate' because there would appear to be two distinct myths to be tackled.

The first myth is that all offices have an estate, in the sense of a body of assets which belongs to no-one. Our office does not, and we suspect that the same is true of others. Any office where the sum of the asset shares represented by realistic reserves for the accrued guaranteed benefits plus terminal bonus on current scales, is at or above the market value of assets, almost by definition has no estate. This is not to say that no office has an estate, and we did not intend to imply that. Indeed, at least one office has described publicly its policy for what might be termed 'estate management'. We welcome and accept that as a valid alternative standpoint.

The second myth is that by having an estate, an office's policyholders are much better protected than if no estate exists. If one has an estate, then it seems to us that one of two approaches can be
With Profits Without Mystery

taken. The first is that the estate really is a cushion that is available for use if the need arises. The second is that it is money held in a kind of trust, to be maintained and passed on to future generations.

If the first of those approaches is taken, then additional protection is available on a one-off basis for one fortunate generation of policyholders. However, once used, the estate ceases to exist and the office moves to our position.

In the second case, the estate cannot be utilised except for some temporary additional smoothing, since it would otherwise not be preserved for the future. In that case, are policyholders really better protected? Indeed, should not product particulars state that the office’s policy is to maintain an estate of x% of assets, and that a charge of y% on the investment earnings otherwise available to policyholders will be made in order to support that policy.

The discussion at the Institute last year concentrated on the estate issue, we felt to the detriment of the other, possibly more fundamental, issues raised by the paper. By making these supplementary observations on that part of the paper, I hope to have pre-empted some points so as to facilitate a more broadly-based discussion this evening.

Mr S. T. Meldrum, opening the discussion, said:—Tradition has it that amongst professional people declarations of personal interest are inappropriate at Faculty discussions. This paper is different, at least as far as the authors are concerned, in that it sets out to describe the bonus philosophy of one particular office, the authors’ employer.

The paper is not a rigorous mathematical proof of a new actuarial principle. It is a clear and straightforward description of a bonus philosophy tinged with pragmatism. We must thank the authors for their efforts in taking the time to write the paper, for exposing their day to day work to the professional scrutiny of their colleagues, and in particular for bringing their labours here to Edinburgh. We must also thank their employer for his permission. The profession would benefit by more disclosure of this nature.

At this point I will declare my own interest. I qualified at the office whose bonus policy is described in the paper. I left that office to work in a unit-linked environment, and most recently I have been involved in the investment side. You can guess therefore that my sympathies tend to be with the approach described in the paper.

The authors in paragraph 1.1.1 find themselves frustrated at industry obfuscation in the form of resistance to un-bundling of expenses and an emphasis on ‘strength’. They find their escape in borrowing some of the concepts of unit-linked insurance and applying them to the with-profits contract and in particular to one form of that which makes up the bulk of their office’s business, a form of recurring single premium with-profits pension accumulation policy.

Each premium paid secures a slice of the fund calculated by accumulating the premium less expenses at a guaranteed accumulation rate of 3.5% to the chosen pension date. Effectively this is the ‘sum assured’ of the policy. Reversionary and terminal bonuses are declared on this sum assured with the intention of returning full value to the policyholder at his pension date, but with a ‘smoothed’ investment return.

Since 1987 results have been shown to policyholders additionally in present value form and for new contracts such as personal pensions this is the only form. The contract is then effectively a unitised with-profit. The authors in paragraph 3.2.6 define the policyholders key concern in bonus declaration as the total proceeds with the question as to how much can be declared and how much should be left to emerge as terminal bonus as of secondary importance. The increasing guarantee given by declared reversionary bonuses is however central to with-profits business.

In paragraph 3.2.15 the authors describe how the final bonus lifts the declared bonus to an appropriate asset share subject to averaging and smoothing. The smoothing occurs two ways: firstly over durations at that point in time, and secondly over time.

The essence of smoothing is insurance of the investment risk. It is a system which has inherent appeal but I have some practical difficulty with its application.

My first problem relates to the smoothing over time of an investment risk whose first move is downwards. It does not appear possible to do this within the ordinary understanding of prudence unless there is some other source of capital available. This appears to have been the situation
described in Appendix A for the triennium ending 31 December 1976. The situation was then met by releasing unnecessary margins in the valuation basis. It is in this sense that I describe the approach in this paper as one of pragmatism rather than one of rigorously proven theory.

It is in the area of the policyholder’s self insurance of investment risk that I believe a lot more could be done to make the techniques more scientific. A life company can self-insure mortality risks with the experience, good or bad, reflected in the returns to with-profit policyholders. But to do so it must have some measure of the expected risk to be charged initially to each policyholder and on the basis of which the subsequent experience is then spread. This is the principle of equitable assurances. I cannot see a corresponding principle of equitable investments described here.

How sure are the authors that the averaging over contracts fully reflects the risks of those contracts? How sure are the authors in averaging over time of where the market then stands? Hindsight is a great help, but without it the consensus of all the players in the market is that the next move is as likely to be down as up. The market reflects all that is known. I would like to hear more on how the authors improve on this.

The process of an increasing level of guarantees under each policy as bonuses are declared while the totality of policies still participates in the investments underlying the whole fund is one whose pricing basis lies in option pricing theory. This is an area dealt with by David Wilkie in November 1986 in “An Option Pricing Approach to Bonus Policy” (JIA 114). Although the practical difficulties may be large I recommend that some thought be given to this because it is in this area that I am least comfortable.

The authors in paragraph 1.3.2 and again in 3.2.3 refer to the unique investment medium offered by with-profits bonuses of a diversified portfolio, increasing guarantees and a degree of smoothing. But a number of products are now springing up offering guarantees—typically of outperforming a particular stock market index at best or returning the money invested at worst.

Such products are based on a mix of fixed interest investment to provide the guaranteed return and long term call options to provide the index performance side of the contract. A further extension of such techniques to produce products with increasing guarantees would not only threaten the uniqueness of the with-profits product but would also provide a measure of the equity of the authors bonus distribution.

The authors do not believe in the estate as a free body passed on from generation to generation. Indeed they talk of the myth, or now ‘myths’, of the estate. Referring to the first myth, others however would take the view that the estate belongs to the office rather than specifically to the current generation of policyholders and correspondingly that the current generation of policyholders must leave an estate for their successors. Chris Headdon I think recognised this in his introduction.

Are the authors suggesting that it is inappropriate or inequitable to have an estate or are they simply arguing that, at least for them, it is possible to do without.

They have certainly demonstrated that under the particular circumstances of their fund and especially for the type of recurrent single premium pension described it is possible to manage without an estate. This might not be so more generally. The authors in Paragraph 4.1.4 do, I think, accept that even if the whole of the investment reserve is used to finance new business growth there would be a limitation on the sustainable rate of new business growth to the long term rate of investment return.

The authors, in paragraph 3.2.8, suggest that the ideal would be that investment strategy should not be determined by non investment considerations. They accept however that the guarantees in with-profits business imply some constraint. They suggest that their approach results in the relative weight of fixed interest holdings not being higher than would be considered suitable on investment considerations alone in a balanced mixed portfolio.

I have some difficulty with the concept of a balanced mixed portfolio existing in isolation without reference to a specific set of liabilities or a particular risk profile. While unit-linked life company managed funds were originally set up as a mixture of fixed interest, property and equity investments I think we have moved on from there. It is clear that the long term return from equity investments exceeds that under fixed interest investments. The portfolio need only be diluted
From pure equity investment to the extent that guarantees are given. The mechanics of this are described in Wilkie's paper.

In paragraph 4.2.4, the authors state that policyholders expectations based on current bonus levels must be meaningless. One can but agree, and clearly the message must be that future bonuses depend on the earnings of the managed fund.

In paragraph 2.2.2, the authors reject a premium basis for with-profits business based on non-profit premiums plus a bonus loading. Historic evolution has forced us down this quixotic road, as Frank Reddington described it. The authors' logic cannot now be faulted as the two activities are quite separate.

However, one has to question why, in paragraph 3.3.7, the authors' office does not seek to make active profits from non-participating business? With-profit policyholders are surely taking a risk on such business and should not be left broadly in the same position as if the business had not been written, but rewarded for that risk at something more than the rate at which they would have been rewarded for portfolio investment.

Comment is made in paragraph 4.3.4 on current concerns with life office 'strength'. It is demonstrated that the strength depends on the degree to which earnings have been consolidated, not on total earnings. To that extent, I must agree 'Form 9 strength' is misleading.

The authors' bibliography is short, and of the highest quality, consisting of just 4 papers. The authors, of course, will have been influenced by a much wider selection of views, but they have chosen just to list the dominant ones. A longer list might not have clarified the thought processes which have gone into this philosophy, but could have made the student's task of setting it into context that much easier.

The authors have done us a great service in exposing these issues and there is a lot of material here which those present can use to compare with the philosophy of their own offices. I would like to think that more offices would be encouraged to expose their philosophy in this manner. I look forward at least to reading a mini version in the many company booklets which are shortly to be produced.

Mr P. Kilgour said:—The paper is entitled "With Profits Without Mystery". What is this mystery? The authors indicate that with-profits policyholders may have an incomplete understanding of the true nature of with-profits business, and in particular of what the profits are in which their policy is to participate. They claim this understanding is hindered by the fact that in conventional regular premium business bonuses accumulate on full prospective benefits, which makes it difficult for policyholders to visualise what is happening year by year.

The authors believe their managed fund concept highlights the fact that interest surplus is the major component of what is distributed as profits. They suggest that if a with-profits contract is described in this way the policyholder has a much clearer understanding of the nature of the contract and amongst other things this understanding will make it easier for companies to move bonus rates in sympathy with movements in investment returns.

I am not sure that the best way of improving the situation is to represent a with-profits contract as being similar to a unit-linked contract. The comparison runs the risk of highlighting the areas of similarity whilst diminishing the relevance of the points of difference, one of which is the difference between the guarantees.

The authors suggest that with-profits policyholders expect to receive policy proceeds on maturity broadly equal to those that would have been achieved under a unit-linked contract invested in a balanced managed fund. I wonder whether all policyholders would agree on the investment mix in a balanced managed fund. A lack of clarity about the target at which they think their with-profits contract is aiming is likely to result in confusion.

The balanced managed fund against which they should be comparing is one which is appropriate given the guarantees in the contract, and any attempt to describe an appropriate portfolio of investments for a with-profits contract must include a comment on the relevance of the guarantees.

The significance of these guarantees is substantially reduced if declared bonus rates are at a level financed by only a fraction of the full investment return being achieved. The authors do not
say so but I wonder if they are suggesting that in future, policyholders can expect that, whether there is inflation or not, declared bonuses will be at a level financed by a fraction of the investment return achieved—thereby creating a continuance of the current picture for maturities in that a substantial element of the maturity payout will be in the form of a terminal bonus. This seems in concert with their claim that with-profits business is a source of capital in fact I do not see how it is unless such a bonus policy is pursued.

The forthcoming statements on bonus philosophy will probably contain a relatively detailed explanation of a company’s current stance but will not tie the company to a continuation of that stance. Over the duration of their contracts, policyholders will be able to gain access to up to date statements on bonus philosophy and will be free to make their views known to the appropriate parties should any changes not meet with their approval.

The authors indicate that in a mutual company they would expect non-profit business to be written on a basis which produced neither profit nor loss to the fund, with the result that with-profit policyholders are left in the same position as they would have been in had the non-profit business not been written. I find myself in agreement with the opener here. In a mutual company it may be that the non-profit policyholders have the same voting rights as with-profits policyholders and, if they are in the majority, they could impose their will on with-profits policyholders. However, if they were to exercise their authority to the disadvantage or perceived disadvantage of with-profits policyholders, it is likely that their actions would be self-defeating.

From the with-profits policyholders’ point of view, any attempt to write non-profit business to result in neither profit nor loss to the fund is a one way option which will at best cost them nothing, and at worst could result in their contract being worthless, if the experience on non-profit business is extremely adverse. It seems to me that non-profit policyholders must expect to have to pay some premium to their with-profits colleagues in return for the risks being underwritten.

The authors do not believe in the concept of an ‘estate’. I am not clear how they make sure that the full fund values, asset shares, etc, which they attribute to individual contracts, do in the aggregate amount to the whole fund—and if they do not, what steps they take to alter things so that they do. In a mutual company I think the individual asset shares will sum to less than the total fund. But for as long as the policyholders agree to run the fund as a continuing fund, I can see no objection to there being within the fund, an excess over the combined asset shares, this excess being a dowry which is passed on by each generation of policyholders to the next and to which each generation may expect to make a contribution. The existence of this dowry adds extra security and permits, amongst other things, an investment freedom which offers with-profits policyholders the prospect of higher bonuses than they would otherwise gain.

I do not believe there is any ideal size for this dowry. There are obvious practical constraints on its size in that should it grow too large, the policyholders of the day might not be able to resist the temptation to wind up the company, and should it be too small the company would appear unattractive to prospective policyholders.

The authors state a preference for assuming the mix of assets backing each with-profits contract to be the same. They do not like an alternative proposition, which is to assume each policy has a different investment mix, perhaps based on term elapsed and duration to run. A system which attributes the same investment mix to all contracts contains an element of mutual insurance which may balance out over the duration of a contract, but may well result in particular generations of policyholders always falling into the class which gains.

The alternative position of adopting for each contract a different investment mix, based on duration elapsed and term to run and which also reflects the level of guarantees, is one where there may be closer agreement at individual policy level with the required investment mix. The degree of mutual insurance, though still existing, is not nearly as great. It seems to me that either position is tenable as long as the various parties agree. I prefer the second approach and accept that this can present difficulties in making sure that the aggregate investments held are indeed the sum of the asset shares attributed to each policy.

I liked the demonstration in paragraph 4.3 at the end of the paper, of the dangers in using free asset ratios as a measure by which to rank companies, without first carrying out other investiga-
tions to make sure that the companies being compared are indeed alike. The authors outline four areas prospective policyholders should investigate when choosing an assurer. I would guess it is easier from published data to form a view on items 2, 3 and 4 than it is on item 1. The yield drags which will shortly appear on cooling off notices and in company booklets may assist in future, but since they are to be rounded to the first decimal place, quite wide differences between companies may not be immediately apparent. A company whose real expenses for the same service are 10% higher than others may in the short term escape detection where yield drags are of the order of 1%, because the difference is not sufficient to produce a difference in the reported yield drags. Over time of course the real position will surface.

The position revealed in the table in paragraph 4.2.2 is interesting, but I wonder how much it is dependent upon the relative strengths of the valuation bases employed by the companies concerned. There is broad similarity in the proportion of each fund held in equities, the main differences being the amount of property and/or cash held. Perhaps a breakdown of equity and the property investments might reveal that the portfolios of the three companies are not as dissimilar as they appear at first sight.

Thank you gentlemen, for a very stimulating paper.

Mr W. B. McBride said:—The authors of tonight’s paper have been generous in providing the profession with information about the financial management principles and practice of their office. The opener is not alone in thinking that a response on similar lines would appear to be in accordance with their reasonable expectations. I would like to be part of that response.

My office has traditionally evidenced strong parallels with that of the authors. We too are mutual, and we too do not make payments to third parties for the introduction of business. The major part of our current portfolio is also in the single premium with-profits business category; and in recent years we too were growing rapidly. Our trading experience, however, as is public knowledge, has been rather different.

Again until recently my office would probably have subscribed, although more subconsciously than the authors, to their view of the mythical nature of the rationale of the estate, even of its existence.

We would not hold that view today. Instead, we recognise the estate as a precious attribute of the office, inherited from the past, yes, but to be husbanded, and handed on to future generations of with-profits policyholders. We would recognise the estate as the difference between the value of the assets and of the published liabilities, plus the present value, at the required rate of return, of the future stream of profits from the business (other than profit attributable to policyholders). This measurement should reconcile with the difference between the value of the assets and the total of the asset shares of current policyholders.

We would not consider the fact that various methods of making these measurements exist, so that the size of the estate at any moment is not an absolute and precisely measureable quantum, as any barrier to accepting its reality. As to its rationale, our experiences have reinforced the view, held by many actuaries, that the estate is of benefit to the current generation of policyholders in a number of ways, notably the power it conveys to the office to smooth out the effect of fluctuations in the equity markets.

Given that shares now change hands every hour of the 24 somewhere in the world, and that there is instantaneous reaction to news good or bad, smoothing power has never been more important.

Where there is no estate, and the investment reserve represents the unconsolidated earnings attributable to current policyholders, one would expect terminal bonus rates to be rather more volatile than I believe has been evident in the declarations by the office of the authors. I immediately dismiss as unworthy the suspicion that perhaps they do not know their own office’s strength.

The authors set out very clearly in their paper how profit-sharing in their office is based on a managed fund philosophy. There is of course a wide range of possible and acceptable bonus philosophics, but we would recognise as more natural those which attribute a higher average equity-type backing to the longer term contracts throughout their duration. In association with that perspective we would also take the natural model to be a progressive move from equity-type
to fixed interest type investments as the contract matures, in line with the increasing element of guarantee in the liability.

Departure from the natural models by mismatching, in the case of some offices even to 100% equity-type backing over the whole contract lifetime, is a game that can be played—to the policyholders' advantage—all the more confidently with the backing of an estate. In return for enjoying this advantage—unsupportable out of his own separate contributions—I would expect the new policyholder sitting down at the table with us to be willing to pay an entrance fee. This is one explanation I would offer to the authors under their paragraph 4.1.2.

In practice, while maintaining a mix of assets not dissimilar to that of the office of the authors, we still relate our reversionary bonus declarations to the results of a wholly fixed-interest type investment model, of the type described by the authors in paragraph 3.2.10. Mismatching profits emerge in our terminal bonus declarations, whose shape is found by a study of asset shares allowing, as I indicated earlier, for a higher average equity-type content at the longer terms.

This is the key to the matter of how the total policy proceeds are to be made up, a matter which the authors say in paragraphs 3.2.6 and 4.2.3 to be a secondary consideration. Such a viewpoint seems to me curiously reminiscent of pre-terminal bonus days.

Moreover, in paragraphs 3.2.5 and 4.2.4 the authors link this option to their belief as to what reasonable policyholders nowadays in fact expect from with-profits contracts. Even leaving aside the dangerous gap which can exist below the surface, between what the office thinks policyholders should expect and the reality of that expectation, the authors' opinion seems to ignore the effect, which can reasonably be expected on the best return the office can produce, of the degree of guarantee afforded during the contract lifetime. (The opener raised this issue in his remarks). Most with-profits league tables of results regrettably also ignore the effect of guarantees.

We do not claim that our asset share calculations represent precise reality—they could not hope to in practice and ought not to in theory, or the process reduces to unit linking—but we believe that their relativity to one another is valid. The process implies, of course, a significant degree of smoothing which has recently been made practicable again for us by virtue of becoming backed, as a sub-fund of an international mutual, by a powerful estate.

I should add that we, like the office of the authors, publish a passive gross premium (or bonus reserve) valuation, but as for them, with a large volume of single premium pensions contracts, the debate about the relative merits of net and gross premium valuation is largely academic. However, unlike the authors, we do find the concept of a future bonus reserve (including a reserve for terminal bonus) acceptable, in the context of the active gross premium valuation which we carry out internally, and in which we make our best attempt to anticipate reality. The published reserve may be seen as our genuflection towards Regulation 54.

My remarks so far have related to with-profits business and I had intended to comment on paragraph 3.3.7 of the paper, in which the authors set out their philosophy in relation to non-profit business, but the two previous speakers have already dealt with the point I had in mind to make. So I shall merely say that we would now have difficulty with a philosophy which considers it correct to aim to leave the with-profits policyholders no better off than if they had not taken risks on behalf of the non-profit policyholders. Non-profit business requires financing—it cannot finance itself—and the capital which is lent to it deserves a fair return, one which recognises the risk profile of the business. Again, I echo the opener.

Mr President, if in my remarks I have indicated areas of the paper with which I do not agree, may I say that there are many with which I do, most notably with the belief expressed in paragraphs 3.2.3 and 3.2.4 of the value of insurance of the investment risk. Moreover, I would not wish, in disagreeing with the authors, to do more than recognise the diversity of valid opinion in our profession, a sure sign of its good health.

May I thank the authors for the frankness of their paper and the contribution thereby made towards the de-mystification of with-profits business.

Mr C. E. Barton, F.I.A. said:—I wholeheartedly support the principle which the authors set down in paragraph 2.2.1, and elaborated on in Section 4.1, that “the business belongs to current with-profit policyholders who should take their ‘full value’ from the fund” when they leave it.
Like the authors, I do not accept the concept of an ‘estate’ in the sense of a body of assets passed from generation to generation and which belongs to no-one. I firmly rejected this approach in a paper to the Institute of Actuaries Students’ Society 25 years ago and in comments on Institute papers over the next few years, which may have been just before the principle started to evolve in the authors’ office. Unlike the authors, however, I cannot claim to have been associated with the implementation of the principle.

This principle of the full and fair value being paid on leaving a fund has always seemed to me patently simple and incontrovertible, and yet, as was reflected at the Institute discussion last year, it has gained so little acceptance within the profession. Very often the principle appears to have been accepted in one breath but contradicted in the next, and certainly has not been generally adopted in practice.

I very much like the authors’ preference for the term ‘non-consolidated assets’ rather than the somewhat mysterious term ‘the estate’. When Redington coined the word ‘estate’ in 1952 he was much more concerned with solvency than with the equitable management of a participating fund. Twenty nine years later, against the background of ‘The Flock and the Sheep’, Redington’s concern was with ‘non-consolidated assets’ rather than what has been called an ‘inviolate estate’.

In paragraph 3.2.3 of the paper, it is said that in a with-profit contract, insurance of the investment risk is far from dead, and it is suggested that the with-profit policy is a unique means of pooling investment risks. This might be taken to imply that a unit trust investment or a unit-linked assurance does not offer this feature of pooling investment risks, but of course they do. Both a linked assurance and a with-profit assurance offer a means of pooling together many individual investments and thereby reduce the risks considerably.

Where the with-profit contract differs is that, in an unspecified and arbitrary manner, it aims to average out not only the results of different investments at any one point of time but also the overall results over periods of time. Now whilst it may be practicable to average over a relatively short period, it is not practicable to average over the unknown and indefinite future as well as the known past. It seems, however, that even the authors are prepared for some degree of smoothing into the future, although they do not specify how much; they too want to leave themselves some room to manoeuvre.

In operating a managed fund there may have to be some inexactitude, some averaging, but there should be no bias in one direction or another. There should in particular be no bias arising from a reluctance to reduce bonuses in future, or for marketing or competitive reasons.

Competition is of vital importance as regards investment performance, and also administration costs and underwriting, but once performance is a matter of past record and the die has been cast, competitive and marketing considerations should not influence the translation of performance into individual pay-outs. Here the authors’ advice in paragraph 4.3.6 (iv), that the buyer should be wary of the office which produces good results for one particular form of contract but not the whole range, is very pertinent.

The paper repeats what has been said so often, that with-profits business enjoys great popularity because of its smoothing and ironing out of peaks and troughs. In making this comparison between with-profits and a fully linked contract, it needs to be appreciated that if with-profits business is conducted on the basis of building up an estate in order to provide a bastion against the possibility of having to reduce bonuses with a view not to eliminating the possibility, but of considerably reducing it, and if the business is expected to grow at a rate greater than the rate of return achieved on the estate, then the expectation under the with-profit policy will be less than that under the linked policy. If we are going to make the case that many people prefer a with-profits contract we should make sure that they understand there is this lower expectation. As the authors indicate in paragraph 4.1.2, up to a year ago they had not seen such an explanation.

It is relevant to mention here that, as has been pointed out in recent discussions, the claim that the with-profit contract is more stable is subject to significant qualification when, as has often been the case in recent years, there is a very sharp difference between the claim proceeds of a policy which terminates at the end of one bonus year and a similar one which terminates on the following day at the beginning of the next bonus year.

There are two or three references in the paper, for example at the end of paragraph 3.2.15, to
what policyholders have been led to expect, and it is suggested that it may be reasonable for
different offices to adopt different approaches according to what their policyholders have been
led to expect.

When terminal, special or final bonuses were first introduced in 1956, the policyholders of the
offices concerned could not have been led to expect them, but even so, the offices concerned were
taking a very commendable step. It was many years before some offices adopted a policy of
changing their terminal bonuses more frequently than yearly. Again, the policyholders who had
already affected policies, particularly those who had done so many years earlier, could not have
expected any such development.

However, none of this matters so long as the office fulfils what surely must be the reasonable
expectations of its policyholders, that the office should deal fairly with them, and should do as
well as they can for them, in whatever conditions prevail which of course cannot be forecast; this
is just what the authors state in paragraph 4.2.4. It would have been very wrong not to have
introduced terminal bonuses on the grounds that policyholders had not been led to expect them.

The authors are quite right in saying the various constituent parts of the maturity proceeds, and
the various factors in the complicated bonus structures which have been evolved are of little
significance in themselves as far as the policyholders are concerned; it is the total amount paid
at the end of the day which matters. It is however, relevant to note that the make-up between
reversionary and terminal bonuses can have a considerable impact on the amounts paid to
shareholders of a proprietary office.

Whilst the authors make the very valid point that the reversionary bonuses in themselves are
of very little significance (since it is the total proceeds which matter), the summary which they
give in Appendix A and the commentary in the three paragraphs (3.2.11 to 3.2.13 inclusive)
appear to relate almost entirely to reversionary bonuses only, although this is not brought out as
clearly as it might be. Thus they have summarised the movements over the last twenty years in
fixed interest rates and have indicated the consequent effect on reversionary bonuses.

They have also referred to how movements in the value of equity investments were used to
justify deferring a reduction in reversionary bonus rates, but they have given no figures to show
how movements in the value of equity investments were reflected in final bonuses and the total
claim proceeds. They have outlined their approach in general in paragraph 3.2.15 and subse-
quently, but have not been at all specific about the vital bottom line.

There is shown in Appendix B the amount of the Investment Reserve at the end of each year and
the amount of the total fund. It would have been interesting to have known the value of the final
bonuses declared at the end of each valuation period—not just in respect of policies becoming
claims but in respect of all policies in force.

I very much welcome the statement in paragraph 3.2.19 that “in practice, in current conditions,
the full present value is also paid out in other events such as on transfer or surrender . . .”. This
is in marked contrast to what has been the common practice of regarding those who surrender as
being guilty of breaking a contract, notwithstanding that the contract provides for a surrender
value, and allowing only penal values, for example, by not crediting proper allowance for final
bonus. This important matter of treatment of surrender values should have been added to the four
features set out in paragraph 4.3.6 as those which should determine which office to choose.

However, it should be added that if the full and fair value is to be paid on surrender, as it should
be, then an active policy is required; even if stability over, say, a year can be achieved with regard
to maturity and death benefits, it cannot be relied upon as regards surrender values where the
policyholder can decide when to leave the fund.

On the question of averaging over a period of a year, even for maturities and death benefits, I
have already expressed an inclination to use a shorter period. In the limit it may be necessary to
revise the scale of final bonus at any time.

I very much agree with what the authors say in paragraph 2.2.2 that it is wrong to regard a with-
profit policy as a non-profit policy with an additional premium paid for participation in profits.
As the authors say, the two types of contract are fundamentally different; under the with-profit
policy the nature of the investments backing the contract are quite different from those required
to back a without-profit policy.
Finally, although the authors may still have a little way to go in implementing their principles, they deserve warm congratulations for having set out their principles in this paper. It is an admirable example in these enlightened days of disclosure.

Mr W. A. B. Scott said:—I found myself much attracted to this paper for a number of reasons. It is relatively short and easy to read. In its style and content it reminded me of Redington’s classic of 1952 and this latest “ramble through the actuarial countryside” is of equal interest, not least because the scenery has changed so much in recent years. Like the authors of tonight’s paper I have been something of an enthusiast for with-profits business and I share their concern that prospective buyers may be put off by an unnecessary aura of mystery. I therefore applaud the authors’ objective as expressed in the title.

To what extent have they succeeded? The central theme is the concept of with-profits business as a managed fund with its performance smoothed out and the recent history of the authors’ office is employed by way of illustration. I am sure most of us would agree with the basic managed fund concept and I would also agree with the comment on the mutual insurance of investment risk as expressed in paragraph 3.2.1.

As the authors note in paragraph 3.2.4, the question of averaging and smoothing is crucial. It is also very difficult and as stated in paragraph 3.2.15, it is a matter of judgement as to how far that smoothing process should be followed and conversely, how quickly one should reflect market movements. Mr Meldrum covered this topic in his remarks.

I think we can agree that it is this modified version of the managed fund concept which has to be communicated to the policyholders if the mystery of with-profits business is to be dispelled. On this front the authors may be ahead of most of us, assisted no doubt by the simple nature of the majority of their contracts and by the absence of intermediaries in their dealings with policyholders. Clearly there must be a risk of raising unreasonable expectations if communication of this nature is not carried out with due care and attention but on balance I am sure that this is the road down which we must go.

At present many policyholders approach maturity with, at best, a very vague idea of amount of the terminal bonus. While it is no doubt very pleasant for them to receive something like double the amount expected, I do not think this situation can be seen as entirely satisfactory.

I was somewhat less persuaded by the authors’ approach to the division of the policy proceeds between declared and terminal bonus. Certainly this is an aspect which requires careful judgement if the actuary is to satisfy the expectations of policyholders and intermediaries without constraining future investment freedom. But, if we adopt the managed fund concept, then I believe we must also accept the implication that what matters is total return and not how it is received as between income and capital appreciation. Clearly an investment mix which is designed to produce low volatility in the total return may be judged to justify a higher proportion of declared bonus but any connection between low volatility and a high income yield must surely be coincidental.

I was surprised therefore to find the authors stressing the importance of income versus capital appreciation in the first part of paragraph 3.2.7. In practice they appear to have used a slightly different guideline for bonus declaration, namely the income which would have been received had the assets been invested wholly in fixed interest stocks. Clearly this indicator is more useful as a guide to the market’s perception of future inflation and, to a limited extent, of likely investment returns from other sectors. In the event there have been significant departures from the guideline as noted in Appendix A. I would suggest that true believers in the managed fund concept should base their declarations on the total investment performance together with the perceived degree of volatility of the fund. I would accept that the answers might well be modified somewhat if fixed interest yields appear to be signalling significantly lower (or higher) investment returns ahead, but it seems to me that in the context of the managed fund theme this is easier to justify than an approach which starts with the fixed interest yield and then introduces modifications in the direction of the overall performance. Perhaps the difference is more apparent than real.

Finally I should like to comment very briefly on two other topics. I agree with the authors on the myth of the estate in current conditions though unlike Mr Barton I am a fairly recent convert to their philosophy. I can recall in the early 1960s setting down what were, presumably, acceptable
examination answers on the role of the estate and I have no doubt that the concept was valid at that time. I would suggest that what has happened in the interim is that the surplus held against ever larger terminal bonuses has replaced the need for a “semi-detached” estate at least for the present. It follows of course that the additional assets which represent terminal bonus (whether unallocated surplus or specific additional reserves or a combination of the two) must be adequate to finance expansion as described in the paper.

The authors point out the limitations of the “free asset ratio” as an appropriate measure of financial strength and go on to enquire for whom such strength is being created. Perhaps it is relevant to note that over the last twelve months or so one or two offices have appeared to conclude that their financial strength was sufficient to justify something of a quantum leap in their returns to policyholders. That apart it may be that the question we have to ask ourselves in the 1990s is, for whose benefit are we running down our financial strength. No doubt financial strength will remain a part of the with-profits mystery but to the extent that it can be measured fairly I believe it must carry more weight than the authors imply. In any event I would be somewhat surprised if the competitive conditions now current permit appointed actuaries to engage in squirrel-like activities.

As regards mutual offices there is another practical consideration which must reinforce the argument that the business does indeed belong to the current generation of with-profits policyholders. I am not one of those who believe that we are about to see a rash of demutualisations and I think it is significant that no office in the UK has sought to demutualise from a position of strength.

Nevertheless I believe it is likely that with-profits policyholders will become increasingly interested in any options which might be open to them to translate their ownership into higher rewards. It follows therefore that, in seeking to dispel the mystery of the business, actuaries and others may have to demonstrate that the option of continued operation as an expanding mutual is as attractive as any other.

In conclusion, and despite a few reservations, I believe the authors have achieved a good measure of success in presenting a coherent philosophy which is well suited to current conditions.

Mr A. D. Shedden said:—This is not the first time that the concept of the estate, or rather the concept of the absence of the estate, has been discussed in this hall. I quote from the authors’ reply to the discussion of the paper “Allocation of Surplus in a Mutual Life Office” presented here just over nineteen years ago.

“Our general approach to the allocation of surplus, involving asset shares and surplus shares, was developed to be used as a guide to controlling the equitable allocation of surplus within whatever bonus system was adopted, and especially where widely varying types of bonus system and with-profit contracts were in operation within the same office. Although the general approach is based on contribution principles, it does not follow, as some speakers seem to have supposed, that an office must cease to distribute surplus by means of level reversionary bonuses, since it ought to be possible to deal with any inequity by introducing a suitable system of terminal bonuses.

Most of the misunderstanding of the paper has arisen from the definition of surplus adopted. Our definition includes in surplus the value of future bonuses instead of including them explicitly or implicitly in the value of guaranteed liabilities.

We have great difficulty in conceiving of an identity called the estate which is separate from surplus in general and which cannot be considered to be the property of the current with-profit policyholders; the nearest we could get to such a concept would be to regard the estate as the proprietary interest of the with-profit policyholders, as distinct from their investment interest.

Just as a shareholder can get value for his proprietary interest by selling his shares, so can a with-profit policyholder be allocated a share in the estate and obtain value for it if new with-profit policyholders join and take over the proprietary function.

The real difficulty with the estate is in defining it, measuring it and separating it from other parts of surplus. We concluded that this could not be done and that, possibly, such a separation
was meaningless. Hence we abandoned any attempt to make such a separation and moved over to a definition of surplus based solely on assets and guaranteed liabilities."

It will be obvious from these quotations that there is considerable similarity between some of the theoretical concepts considered in that older paper and the practical system described in the paper before us this afternoon. I refer to the emphasis in defining what is meant by equity, the achieving of equity by use of an asset-share technique involving a system of terminal bonuses, and the concept that the estate be subsumed into the general body of surplus and considered as the property of existing policyholders.

The two papers also share a similar concept of tracking the general trend of investment returns through a system of smoothing and averaging, in order that with-profit policyholders as a whole may receive the benefit of the substantial degree of equity investment without being subject to all the short-term fluctuations implied under investment linked contracts.

The papers also share the concept of allowing in surplus allocation for some elements of the liability estate. In the older paper this was taken to be the value of the future profits from without-profit business, but in the authors’ paper it is the value of future releases of new business strain.

However, there is at least one important difference, namely in the degree of pooling of investment and other risks. In the authors’ fund there is a sharing of the same asset mix by all policyholders at all durations of contract, whereas in “Allocations of Surplus in a Mutual Life Office” it was felt that in the general case in allocating investment and miscellaneous profits, account should be taken of the different levels of guaranteed benefit enjoyed by policies having different terms, durations and bonus systems, since these levels govern the degree to which the various policies can support the mismatching and the other risks being underwritten by the fund as a whole. This led to attempts to identify and measure the proprietary interests of with-profit policyholders as distinct from their investment interests, in order that a proper reward could be given to those who, in effect, supplied this capital. However, this does not necessarily imply that guaranteed benefits need be covered by fixed interest assets entirely.

In the authors’ fund the miscellaneous profits are considered to be relatively minor, with precision in allocation possibly out of place. But this is by no means generally the case. Moreover, although the policies in the fund are all of a similar type, the system adopted for distributing non-terminal bonuses, that is by reference to the return on fixed interest investments, would seem to give short term policies a high degree of guaranteed benefit while still allowing them to share fully in the fruits of substantial equity investment.

On a more detailed point, I have some difficulty in understanding how the authors’ asset mix is determined. They reject the concept of a changing mix of equity and fixed interest investment over a policy’s term but nevertheless determine the fixed interest content overall by reference to the value of the guaranteed benefits of with-profit contracts (after having set aside the non-participating contracts and corresponding fixed-interest assets). I presume that, for this purpose, the value of these guaranteed benefits is measured by discounting the 3.5% roll-up to maturity at rates of interest consistent with the market yields on fixed interest investments; even so I cannot see how this leads to such a small proportion of fixed-interest assets in the fund.

Those discussing “Allocations of Surplus in a Mutual Life Office” some nineteen years ago were suspicious both of adopting an asset share approach and of the concept that the estate should be regarded essentially as belonging to the existing policyholders. Nowadays it would seem that an asset-share approach is not only respectable but may, conceivably, become mandatory in view of the increasing pressures towards demonstrating equitable operation of bonus systems. However the discussion this afternoon confirms my suspicion that attitudes towards maintenance of a separate estate (whatever this may mean) held for the benefit and protection of both the existing and future policyholders may not have changed much over the period.

Most actuaries today are still likely to subscribe to the entity theory of mutual company operations under which the estate is deemed to belong to no-one, rather than to the revolving fund theory, under which the estate is provisionally allocated to existing policyholders. The entity approach implies that policyholders may benefit from investment returns on the estate, or have to pay a contribution to maintain the estate, depending on the relationship between the rate of growth of business and the rate of investment return. The revolving fund approach implies that
terminating policyholders receive credit for their stake in the estate, provided the overall surplus position of the fund remains satisfactory.

This difference in approach has implications for the bonus system of the office and also for the process of demutualisation where the proprietary rights of policyholders have to be considered. For example the policyholders in a revolving fund office would seem to have a vested interest in maintaining an ongoing operation rather than in closing the fund to new business.

The authors' paper is valuable for demonstrating that a revolving fund approach can work in practice, although the particular system described therein may work more readily with the type of single premium contracts involved than with other types of with-profit contract. I was particularly interested in the comments in paragraph 4.1.4 relating to the ability of the fund to cope with growth in new business. Certainly many mutual companies have been able to sustain surprisingly high rates of real growth over the past 30 years. While this may have been in part at the expense of reducing bonuses below what they might otherwise have been—especially if an estate had to be maintained as, say, a fixed percentage of liabilities—it may not entirely be a coincidence that over this period terminal bonuses have grown relative to reversionary bonuses. This is in large measure a reflection of the high rates of investment return achieved from equities, a return which in recent years, especially, has far exceeded that obtainable from fixed-interest investments.

In my view, the authors' present bonus and investment policy will only work if equity investment maintains a significant long-term advantage over fixed interest investment. The substantial short-term advantage of equities in recent years has undoubtedly helped companies to pay high rates of non-terminal bonus and at the same time cope with high rates of growth. However the present levels of equity performance may well subside, and if this happens it could be necessary, in the authors' fund, for rates of non-terminal bonus to be reduced below the levels implied by fixed-interest yields, if the present emphasis on equity investment is to continue.

While this would be for the benefit and protection of the fund as a whole, and might even allow a higher level of equity investment, it would also have the effect of making the allocation of surplus more equitable.

In conclusion, I would like to add my thanks to the authors for giving us an opportunity to discuss the ownership of the estate at what appears to be a timely juncture in our actuarial affairs.

Mr M. D. Ross said:—There is very much in the paper with which I agree and which reflects my own views on bonus policy. However, there are some points brought out in the paper with which I disagree; I think they are based on what I would term as too serene a view of what future conditions might bring. I shall touch upon a few aspects in both categories.

Firstly, I agree with the generality of the concept of pro rata asset shares as a basis of determining policyholder results. By this I mean the assumption of investment returns based on a pro rata apportionment of assets excluding non-profit liabilities with no variation in the asset mix according to duration and/or outstanding term. However I cannot leave it there without qualification.

For such an approach to apply consistently over time there must be fairly clear understanding of the relationship between the guaranteed and non-guaranteed proportions of the ultimate policy payouts, with consequences in turn for investment strategy. I like to think of this in terms of having an overall target for the non-guaranteed or terminal bonus element, that is to say some terminal bonus target.

A problem arises between short and long-term policies since it is not easy to have similar target terminal bonus relationships for all policy terms, the terminal bonus element at very short terms usually being very small. Indeed the problem is most acute for unitised with-profits contracts which do not have premium rates per se.

Recognition must be given to the likelihood, at some time or another, that the underlying pro rata asset shares will fall below guaranteed payouts and some charge must be retained for this—logically it would vary by policy term.

Whilst reference is made to the pooling of investment risk I do not see this point emphasised in the paper. I see it as important, very important unless the non-guaranteed element can be set very high—perhaps at levels currently applying for long-term policies. However, as I have said
on other occasions, it is rather difficult to see such high targets reflected in current reversionary bonus declarations/unitised with-profits price increases.

This leads me on to the section entitled 'the myth of the estate'. Having done stochastic modelling it is not difficult to see the need for some free assets, certainly with the current valuation regulations. Of course the authors refer to the unconsolidated element of policyholders' asset shares as being available to meet finance strains and guarantees. However again the average duration of an office's business is important and an office's ability to keep the unconsolidated element alone high enough at all times to guarantee survival in a wide range of financial conditions has to be challenged. Free assets are likely to be required over and above the unconsolidated terminal bonus element.

What else can free assets achieve for policyholders? I would say that for a given bonus policy they can allow a freer investment strategy—say a more equity-oriented managed fund—than an office with lower or no free assets can utilise. This should in the long run give policyholders better returns, better returns than would otherwise have been possible; some of that might in some circumstances be retained to increase the free assets, that would depend on the office's own attitude. Perhaps there is something such as a revolving entity. I would tend to view strength in this context, certainly from the with-profits policyholders' standpoint.

I am always fascinated by remarks such as those in paragraph 3.2.7 about investment income and appreciation. I often wonder what the difference between the security of investment income invested in an asset and that of unrealised appreciation in the same asset actually means. Income may have a greater certainty of expectation but once it is reinvested, the difference is difficult to see. It is certainly difficult to see unitised with-profits price increases as coming from income alone and the notional gilt fund concept does not stand up to inspection.

In paragraph 3.3.5 reference is made to the nature of the guarantees and its relevance in the context of product design. Examples are given of full value guarantees at a range of retirement ages, e.g. 50 to 75. Interpretation of Regulation 62(2) in its strictest sense is likely to prove very severe in terms of reserving requirements over time, again stochastic or scenario modelling is likely to indicate that an office could not demonstrate statutory solvency over time without very considerable free assets—yet the authors eschew the need for this. Something must be wrong. It may be that it is envisaged that the terminal bonus element will always be maintained at a very high level, but of course in these circumstances the granting of a full value guarantee is not particularly meaningful. I raise this, not particularly to take issue with the authors, but more because we have found in our own modelling that a strict interpretation of Regulation 62(2) can prove very severe for pension contracts. I would be interested to know whether other Appointed Actuaries would assume all policyholders within the guarantee period would retire immediately or if, what I would call, a more realistic view of this can be taken in practice.

Finally I would like to end on a point of total agreement. The consideration of the maintenance of a particular rate of reversionary bonus is irrelevant and its elevation to any degree of importance is in my opinion rather stupid in this day and age.

Mr A. Eastwood said:—We are grateful for the openness with which the authors describe the manner in which with-profits business is operated in their office. If offices transacting with-profits business were to make such information available in a necessarily simplified format to policyholders and potential policyholders it would mean that the Appointed Actuary could have more confidence in what to regard as reasonable expectations. Perhaps the three most important points in which an informed potential policyholder should be interested are—

1. How the return on his premiums is likely to be calculated;
2. What proportion of his final pay out will be guaranteed, and
3. To what extent general adverse conditions might influence these factors.

This last point he might regard as the strength of the office. Although the paper might not be aimed at the informed policyholder, I think the authors cover the first two points well in their paper although the degree of smoothing remains somewhat unknown. However I feel they perhaps gloss over the third point. If we accept the Managed Fund approach the important features that distinguish with-profits policies from their unit-linked counterparts are smoothing and guarantees. The authors have adopted a global matching approach to the guarantees, that is the
guarantees are not matched at individual policy level. With this approach, policies will from time
to time mature with an accumulated asset share which is less than the total amount guaranteed at
the time of maturity. (If this is not to be the case the guarantees can be seen as worthless). In the
authors’ office the shortfall would necessarily be met from the unconsolidated terminal bonus
element of the asset shares of continuing with-profits policies. I am not qualified to comment in
the specific case of the authors’ office but in conjunction with a typical with-profit premium rate
structure seen in the market today it seems likely that in an office operated on the basis described,
short term policyholders would need bailing out more frequently and extensively than their longer
term counterparts. This clearly depends on bonus declarations as well as premium rates and the
recent moves to two-tier bonus structures might well alleviate the problem.

As an alternative to charging the full cost of guarantees when they bite against the policyholders
who at the time happen to have unconsolidated terminal bonus, all with-profits policies can be
charged for the guarantees that attach to their policy. Such charges would depend on the assessed
cost of the guarantees and may well vary by term of policy. An increased charge is clearly required
for increased investment in more volatile areas such as equities.

In order to operate on this basis, an office requires a buffer fund in addition to the asset shares
of with-profits policies. The charges can be accumulated in this buffer fund and it can be drawn
from when the guarantee bites, leaving the asset shares of the continuing with-profits policies
unaffected. This view of the buffer fund or perhaps an estate differs from that described by Mr
Headdon in his opening remarks in so far as charges are constantly fed to it and so it is not
something which can be used only once. The relative size of the available buffer fund (perhaps
an estate or the capital provided by shareholders in a proprietary company), considered in
conjunction with the office’s investment strategy for with-profits policies would rightly be
regarded as an indication of the strength of the office from the point of view of a with-profits
policyholder.

Where a very large buffer fund is available, for whatever historical reasons, an office can
guarantee a reasonable proportion of payouts while maintaining an unconstrained investment
strategy, using the buffer fund when necessary to provide the mismatching reserve required.

The charge on with-profits policies needs to be increased to allow for the greater risk of
guarantees biting if this mismatching approach is adopted. But provided the totally uncon-
strained investment manager can, on average, perform better than his constrained counterpart, the
payouts to with-profits policyholders in an office mismatching in this way will, on average, be
higher than those to with-profits policyholders in an office which has been constrained to match
guarantees by investing in suitable gilts. Such considerations may explain the alternative
distributions of with-profits assets shown in paragraph 4.2.2.

The authors have said that they were ‘deliberately provocative’ in suggesting that there is no
need for an estate. Perhaps I might be forgiven for being deliberately provocative in suggesting
that a mutual office wishing to transact significant volumes of with-profits business which does
not have a sizeable buffer fund in the form of an estate should seriously consider demutualisation,
thus permitting increased average payouts even after allowing for a small distribution to
shareholders.

Finally, a point prompted by earlier speakers, on the view of the profits taken from non-profits
business. I am surprised that it is not possible that investment in non-profits business can be less
risky than alternative forms of investment. Under these circumstances why should with-profits
policyholders expect to profit more on average from investing in non-profit business than by
investing, for example, in equities?

Mr A. K. Gupta said:—The authors have provided us with a valuable and fascinating expo-
sition of their office’s approach, and this has forced me to re-examine my own views on with-
profits business, and in doing so has increased my understanding of the subject.

I would like to consider two topics. Firstly the similarity of the authors’ approach to running
a unitised with-profits funds, and secondly the need for an estate.

In paragraph 2.1.2, the authors describe the managed fund concept. In reading this I was struck
by the similarity between this concept and the concept behind unitised with-profits business, the
aim behind both being to unbundle the product, charge explicitly for expenses, mortality cost,
With Profits Without Mystery

etc., and provide the policyholder with an investment return reflecting that earned on the underlying investments whilst maintaining a degree of smoothing and some capital guarantees. Many of the offices that have introduced unitised with-profit plans operate them using an approach similar to that described by the authors.

In comparing the managed fund concept with that adopted by other with-profit companies, I identified a few advantages and disadvantages.

The key advantage, I think is understandability. Policyholders can easily understand why they are getting the returns they receive and why these might differ from other forms of investment. As the authors point out it also allows a link between future investment returns and future bonuses to be more clearly seen. I think it enables the authors to manage policyholders reasonable expectations better. Reasonable expectations based on the current level of bonuses are, in my view, inappropriate.

The other key advantage is its simplicity and flexibility. The managed fund approach can cope more easily with changes in investment circumstances or policies with flexible premiums.

Another advantage is the ability to reduce new business strain, but this may be more a feature of the contract sold by the authors' office rather than their approach.

The key disadvantage however, is the more transparent nature of the bonuses could place increased commercial pressure on offices to consolidate a great proportion of their unrealised gains as reversionary bonuses, and this has been the experience in other countries. If interest rates remain at their current relatively low level, the pressure to consolidate a great proportion of unrealised gains may increase and it may be detrimental to the future of with-profits business not to do so.

There is another disadvantage for with-profit proprietary offices, and this applies to unitised with-profit plans as well. Under the managed fund concept the key component of the surplus is likely to be interest surplus which is earned on the funds under management. Whilst the funds under management are low the interest surplus will be low and the value of bonuses declared will be low, and consequently so will transfers to shareholders. This could result in a long pay-back period for any investment in with-profit business either conventional or unitised.

The concept of the estate is one which the authors have a very clear view on, and I would like to consider this. It is clear that the concept of the estate does not have a place in their office, and all the assets belong to the current generation of policyholders and the investment return merely represents the outcome of consolidating earnings. The implication being that asset shares equal total market value of the assets apart from a smoothing difference. This philosophy corresponds to the revolving fund theory of operation of the mutual described by Alex Sheddon, whereby insurance is provided at cost and no permanent charges are levied on member's policies. The alternative approach is the entity theory where the mutual is run for the benefit of future as well as existing policyholders.

Initially, I found the statement in paragraph 2.2.2, that the authors found the concept of bonus loading alien, to be puzzling. To try and reconcile their view with my own I found it necessary to bring risk into the equation. Any premium paid on a with-profit policy over and above that paid on a non-profit policy should relate to the future possible returns on the policy, and the risk undertaken by the policyholder. Any office operating strictly on the revolving fund theory (like the authors') should charge the same for both the with-profit policy and a non-profit policy, as the risk-adjusted return for the policyholder should be the same. However, for many offices operating on the entity theory I suspect that the risk-adjusted return for the with-profit policyholder is greater than that for the non-profit policyholder. So a premium, namely a bonus loading, is justifiable and appropriate.

As the authors have mentioned in their opening remarks, many offices including many mutuals do have what is termed an 'estate'; by this I mean a significant level of assets in excess of the accumulated retrospective asset shares attributable to the current generation of policyholders. In this, the free level of the estate may be substantially less than the investment reserve when account is taken of consolidating earnings.

It is still possible for offices with an estate to operate the managed fund concept and there may be very good reasons for doing so. The fund for the existing generation would need to exclude that part of the asset representing the estate; this approach would then focus attention on the issue of
whether earnings on the estate should be credited to the managed fund, or conversely whether the existing set of policyholders should be contributing to the estate. Any discipline which enables the office to identify and address issues such as this on an ongoing basis must be of value.

The estate could have arisen from a variety of sources—non-profit policyholders, profit on surrender values, and successive charges from past generations of policyholders—depending upon the philosophy of the office. However, many mutuals in the U.K. and overseas would appear to operate according to the entity theory, and this applies not only to life assurance companies but also to other organisations such as building societies.

The arguments put forward in paragraph 4.1.2 that it will be particularly difficult to explain in product disclosure particulars that not all of the investment return on a policyholders' savings had been returned to him are not convincing. Building societies did not appear to have any difficulty in explaining to their members why they need to make profits.

Finally, I agree with virtually all of the comments made by the authors in Section 4.3. I think comparisons of financial strength can be very misleading and they could ultimately force life offices to have the same valuation bases, and then the same bonus policies. Nevertheless, there is a perception that offices with large estates are in a better position to subsidise returns for new policyholders if they choose, than those without estates. This perception must be balanced with equivalent weight being placed on other factors such as those mentioned by the authors. If this is not done we will undoubtedly see fewer offices selling with-profits business and less choice for the consumer in the future.

Mr L. J. Gray said:—The stated aim of the authors of tonight's paper is to present with-profits business in a straightforward way—without mystery. To do this they have taken what may well be the unprecedented step of describing the philosophy of with-profits business adopted by their office and have presented this for comment by the rest of the profession.

I intend to take an overview and look at the paper from the viewpoint of those who have found with-profits mystifying, to discuss whether or not the suggestions made in the paper have removed the confusion, and if these suggestions are of universal application.

Policyholders appear to be mystified. They do not understand why bonuses are at levels of around 5% when their other savings in, for example, building societies are earning 10% or more. They fail to grasp that it is 5% of the sum assured and bonuses that are being added, but also they do not receive that sum now—only when the policy matures, or if they die early. We can hardly blame them for being confused.

We talk of the 'reasonable expectations' of policyholders without defining precisely what we mean, but for many with-profit endowment policyholders their expectation is that their policy will repay their mortgage with perhaps some money left over. They have been told that continuation of a substantial part of the office's bonuses would meet this expectation. Understandably they become concerned when bonus rates are restructured, as many have been recently.

In order to allay their fears, we could show these policyholders how these new bonuses, or a substantial part of them, build up over the years to the maturity date, and compare the end result with their mortgage loan. However, our regulatory masters prevent us from doing this by insisting that the figures be calculated at hypothetical 7% and 10.5% annual yeilds, thus providing no help in demonstrating the effect of the altered bonus scales.

The numerate policyholder who understands the form of a bonus declaration can work out for himself a projected maturity value assuming continuation of all or part of current bonus rates, but unfortunately offices are prevented from providing this useful service for its less numerate, but equally confused clients.

What does the paper have to offer to help the confused policyholder? The main theme of the paper is the managed fund concept and in paragraph 2.2.3 we are told that this concept has recently been explained to policyholders and "the results have been pleasing in that clients generally seem to find the idea understandable and helpful".

I can appreciate that it would be helpful, and that the present value approach to presenting figures in the bonus notices, as described in paragraph 3.2.18 is also helpful. However, the second point has its limitations in that it works well only for the recurrent single premium policies which
form the major part of the in-force business of the authors’ office. I cannot see that such an approach could be as helpful or even practicable for (say) with-profit annual premium endowments.

Perhaps it is the difficulty in relating the percentage figure in current yields to the percentage figures in bonus declarations which is at the root of policyholders’ confusion. Do the authors’ suggestions have anything to offer in this context, especially for with-profit endowments.

In presenting this point, we would first have to explain the smoothing process. This is the conversion of the earned yield into the target yield used for distributions, i.e. that earned on fixed interest investments. From the examples in Appendix A, this might be difficult since in only half of the declarations has the yield actually used in the bonus declaration equalled the fixed interest target yield.

However, reaching this point merely substitutes one yield for another and we are still left with the difficulty of explaining to policyholders how this yield translates into a bonus rate on sum assured and another one on attaching bonus. The comments in paragraph 3.2.14 on this part of bonus distribution philosophy do not offer much by way of an explanation which would be meaningful to policyholders.

Who else can we consider in this ‘demystification crusade’? Financial advisers or, to use the wider term adopted by the authors, commentators also exhibit symptoms of confusion. They may well share the same confusion as that attributed earlier to policyholders—hence possibly their increasing preference for unitised with-profits—but they also exhibit other symptoms.

How often have we seen the comment that unit trust or unit-linked savings plans have performed so much better than with-profit endowments as to make taking out an endowment seem unthinkable?

There are many potential pitfalls in this argument but one arises from a failure to understand the different risk profiles of the two types of savings. In other words, the guarantees and other special features which apply to with-profits and which are referred to in paragraph 2.1.2 have a cost for which no explicit charge is made but which results in different investment practices which can have the consequence of lower returns, generally, on with-profits.

The with-profit managed fund concept will help clarify this point provided the explanation is followed through to the need to invest the assets in respect of the guaranteed benefits in fixed-interest securities. If this point is not emphasised there is a danger that drawing too close an analogy between with-profit and unit-linked business will lead to the conclusion that, in investment terms, the two are identical, thus perpetuating the misguided comment referred to earlier.

Remaining with commentators for the moment, we come to the intractable question of free asset ratios and financial strength which the authors tackle in Section 4.3. In paragraph 4.3.6 they come to the point when they say: “The dynamics of a life office are not capable of being simply summarised by a single ratio and that message needs to be clearly made”.

I am sure no right-thinking actuary would disagree. However, the message clearly is not getting through and who can blame the commentators for ignoring it when some offices promote their single ratios, and even compare them with those of other offices, as if they were the last word on the subject. As long as this practice continues the logic of arguments like the one put forward by the authors, impeccable though it may be, will fall on deaf ears.

My third candidate for demystification is the profession itself. This may sound heretical for if actuaries are mystified by with-profits what chance do policyholders and commentators have? When we consider the fact that this paper was written and we listen to the differences of opinion which we have heard tonight, it is clear that there are many different with-profits philosophies, not all of which can be attributed to differences in business.

In conclusion, has the paper achieved its stated aim of simplifying with profits? I can see that the views expressed are helpful in the context of the type of business written by the authors’ office but I am less convinced that they are of universal application.

Mr President said:—While the closer is finally gathering his papers, I would make a very brief comment on something which comes through to me tonight. The authors’ objective is to remove
mystery from with-profit business; I suspect they have in part for some actuaries—whether they have or not for the public, I would not say. Whether they have removed the estate in the process, I leave for you to determine, but in the absence of an estate, or more properly the quantification of one, the policyholder has to make do with the disclosure of investment reserve or some similar free reserves, and in connection with that investment reserve I detect a trend which will test the judgement of the Actuary. At the end of 1989 I think we will disclose very large investment reserves and I would not be surprised if the informed analyst does not start pressurising offices to pay more out by way of bonus, basing endless articles no doubt on the amount of apparent profit which the Actuary does not seem to be distributing. We can of course mitigate that problem. We can strengthen the reserves quite a bit; we can at the same time transfer a proportion of the investment reserve to a revenue account and so we will appear not to be quite so well off, but the new company booklet which is on the way, majors on the way things have been done in the past.

In summary, the with profit system will always call for judgement on behalf of the Actuary, including Raymond Paul.

Mr R. M. Paul, closing the discussion, said:—May I add my congratulations and thanks to the authors for a most interesting paper presented in a clear and concise manner. I am sure the discussion tonight has shown that others have shared that view.

It was with some trepidation that I looked forward to closing a Faculty discussion, something which I have not previously had the privilege of doing.

As I read the introductory description, two thoughts came to mind. Firstly, like the authors, I suffered frustration during the early seventies, from attempting to counter the growing popularity of group deposit administration in preference to deferred annuity cash bonus. To the non-actuary, deposit administration was simplicity personified. The alternative recurring single premium purchase might have been easier to explain and therefore defend with the authors' concept.

The second arises from similarities the authors suggest between their concept and a unit linked Managed Fund, the difference, as Mr Eastwood mentioned, being the level of guarantee and the extent of smoothing in the ultimate proceeds, even though with-profit returns do vary from the 31st December to 1st January, as was referred to during the discussion. Mr Scott mentioned potential large variations in terminal bonus, perhaps as one of the least attractive features of with-profit contracts at present where one is anticipating smoothed returns, and certainly promulgating that as an advantage.

In an attempt to get back to the question of the difference between the unit linked Managed Fund and the authors' concept and to close that gap unitised with-profit funds have been developed which, as Mr Gupta suggested, bears even greater similarity to the authors' concept. In addition, unit linked contracts are now on offer with an associated investment guarantee, which Mr Meldrum mentioned, albeit over short periods, whilst unit linked policyholders are advised to consider gradual switching to less volatile funds in the run up to maturity. The options for the discerning client are considerable and rather than jumping from traditional with-profits to full unit linked, there are now several hybrid arrangements to narrow the gap. Perhaps continuing evolution of unit linked contracts in this way will lead to rediscovery of the benefits of traditional reversionary bonus contracts!

Turning to bonus distribution, I agree with the authors’ approach to a “smoothed asset share” rather than an exact asset share, and some, like Mr Ross, agreed generally with this approach, although several appeared to disagree and queried the lack of a direct correlation between the growing level of guarantee in a contract as the term progresses and the increasing proportion of fixed interest investments which would have been reflected in a very exact asset share. However, having said I agree with that approach, I disagree, as I believe Mr Kilgour also did, that with-profit policyholders can expect to achieve total policy proceeds broadly commensurate with those under the linked Managed Fund contract but without the short term volatility of linked results. Since linked results are potentially volatile, the smoothed asset share approach can only achieve a similar return to the link contract averaged over a period of years. Variation from an exact average will depend on the extent to which the investment policy was constrained (which, as Mr Ross suggested, might be quite a considerable restraint if we were to ensure that too big a variation in payouts was to be avoided in future). It was constrained under with-profits. How much more
successful a Managed Fund investment policy could be without such constraints.

I agree with the speakers who suggested that the most important thing is that each policyholder received a return in accordance with the type of contract he has effected, whether it be unit linked, with-profits, etc. Several people thought that full value on early withdrawals may perhaps be achieved at some point in future, perhaps through disclosure of SVs and policy particulars. That perhaps leads to the end of surrender surpluses as we previously experienced the end of significant non-profit surpluses.

The concept of openly fluctuating reversionary bonuses from year to year dependent on investment conditions is one with which I agree wholeheartedly. Several speakers certainly refer to that also being desirable. However, whilst the authors’ office was successful in voluntarily reducing declared reversionary bonuses, I wonder if the success of the strategy at the time was not correlated to their sales distribution channel. Recently a particular commission paying office forced into making such a reduction through excess expenditure and unfortunate investment policy was not so successful as continuing sales relied on the continuing support of IFAs. Perhaps the growing tendency for offices traditionally selling through IFAs to develop alternative sales channels selling direct to the public will allow more scope for change without the attendant risk of losing sales.

Under product design and premium rating I would, like Mr Gray, have been interested to see how the Managed Fund concept was applied, for example, to annual premium contracts where the authors admit the mechanics are less clear to the policyholder.

Also, like many speakers, I agree that non-profit policies should be loaded to produce a potential profit as they must be financed and the possibility of loss should be rewarded.

The need to ensure adequacy and consistency for expense loadings has taken on a new importance pending the disclosure of an “equivalent annual charge” referred to by Mr Kilgour. That concept will be introduced this year along with the company booklet itself, with or without the office’s concept of managing their with-profit funds explained therein. The need to ensure no expense overrun against product loadings will perhaps increase the number of staff performance bonus schemes as described by the authors.

The comment on recourse to capital by proprietary offices needs some comment. Providing new business expansion is carefully controlled and the actuary is satisfied that policyholders are not adversely affected, there is no need for additional capital, the estate provides a buffer. However, I can think of one recent example where, had a particular mutual company had recourse to shareholders, over-zealous new business expansion plans might not have caused the problem that they did. With the challenges facing offices now possibly leading to requirements for capital, the pressure on the Appointed Actuary in the mutual office will be even greater, particularly if, as Mr Scott suggests, de-mutualisation is unlikely from a position of strength. This strength must not be dissipated with resultant reduction in the existing policyholders’ expectations. At least one speaker suggested that this perhaps was not going to be very easy.

I agree with the authors, several speakers tonight and many others who have spoken at other meetings in this hall, there is no simple answer to the search for any one key ratio to compare financial strength of offices but I have no doubt that that search will be continued by the commentators.

The authors did not attempt to draw detailed conclusions but perhaps in a gathering of actuaries and the authors’ remarks in actuarial control, one conclusion will not be out of place. Non-actuaries can understand and operate simple unit linked contracts but only actuaries are able to understand, organise and protect the interests of different generations of policyholders investing in both traditional with-profit contracts and the variations from straight unit linking now in evidence. I agree with the authors that it is imperative for actuaries to be to the fore in any organisation offering such contracts. We must all strive to be Marketing Actuaries.

Once again my thanks to the authors for a most interesting paper.

Mr R. Ranson, replying to the discussion, said:— We said in the opening paragraph to the Paper that it was not a theoretical exercise and that it was written in a simplistic way to provide a high level view of the operation of a particular Life Office, and I do mean the practical operation
of that office. There were two purposes: firstly, to get into the open something about the practical operation of with-profit business from all of its aspects and also to paint a picture of an office in which the Actuary and his colleagues are very much involved in the overall running of that office; they are not backroom technicians, they are generally right at the forefront. The latter point has not been touched on much this evening although the closer did make a passing reference, but I regard that point to be of fundamental importance. I think there are too many actuaries whose powers of influence within their offices are limited, or to put it another way, their employers appear to employ them for technical input only. Those offices do not see what enormous advantage there is in giving the Actuary a central role. Of course, it is up to the Actuaries to insist on this central role if it is not given to them—they need to take it if it is not offered. That does, however, rather depend on the profession providing the right kind of actuaries and that takes us right back to Reddington's comment quoted in the paper ‘An Actuary who is only an Actuary is not an Actuary’—I think that is a very important point.

The Paper covers practically the whole range of activities associated with the operation of a predominantly with-profits office. The kind of points made through the Paper are discussed with the Board and senior colleagues very much in the way we put them in the Paper (the wording is a bit different on occasions) and to the extent that we can, with policyholders. That of course is a difficult exercise but we are making efforts. The matters laid out in the Paper are a rationalisation of the current stage we have reached through a dynamic history. Business needs and actuarial solutions change almost continuously. There was no sudden flash of light to show us how we wanted to run our particular office; it has evolved. Our approach is always in an evolutionary state, we modified our approach yet again this year and undoubtedly there will be further changes. There are certain invariables—primarily equity, of course, and that goes back a very long way with us. There are also invariables about our market and sales processes and with the consequential high average premium from a particular class of person and low unit costs, those influence much of our thinking. Again, that goes back a very long way.

Of course, speakers have been very kind about the Paper but they have not agreed with all we said; we did not expect them to, and there were certain areas where the technical approach has been criticised as fairly weak. I would not attempt to deny that, but in the practical operation of a Life Office—remember I am not talking as a backroom technician, I am talking about somebody who has to help manage the office—some theoretical niceties have to go. We have to fit together a jigsaw. We have to try to get the conflicting demands of, say, theoretical accuracy fitted in with staff and policyholder understanding marketing requirements, and all the other constraints. The organisation, no matter what we think in a technical sense, has to be capable of being operated and the extent to which technical niceties can be acceptable is, of course, a matter of judgement and possibly of expectations.

I would like to take a few moments, if I may, to deal with one or two particular points. I think I need to make an important point about bonus philosophy. This came up in one or two areas with the concern about smoothing. We have no expectation that next year’s bonus will necessarily have any relationship to this year’s bonus; of course it is convenient if it does, but if it doesn’t then it won’t—a brave thing to say! Since I was responsible for the 1976 valuation which was mentioned by one speaker, I can say that if we had not found margins in the valuation bases then we would have cut the bonuses on that occasion. We did not have to and that was convenient. We regard current bonus levels as reflecting recent history and nothing more. They imply nothing for the future.

Regarding the estate, of course we do not have objections to its existence and of course if it exists it is of value to existing policyholders, but I will keep asking the questions: who created it, which generation, and why was it created? These points need to be taken up and answered. What contribution is required towards it from the current generation? When are the holders of estates going to tell the public what it is all about? How did they have this flash of inspiration to create it and who paid for it? Who is going to go on paying for it? As a matter of interest I did not inherit one so perhaps that influenced my views.

There were quite a lot of comments about mix of assets and assets shares. We quite deliberately do not look at individual contracts and I think that when considering that point, we need to bear in mind that for all practical purposes, I repeat practical purposes, our business is all effectively
short. We have contractual guarantees with a very wide range of pension ages on our business (80% of our business is pensions). There is also a contracted payment basis on prior death. In practice, we also pay full value on withdrawal and surrender at any time. That is not guaranteed and that could be the first thing to go if things got difficult. On the regulatory side, we take account of the earliest possible contractual age for pension purposes in the costs of our guarantees.

On investment mix, we made a point in the Paper that we try to keep the balance between declared and final bonus such that it does not influence investment strategy. What I mean by that is that I advise the Board, whom I advise each year on investment strategy, that investment managers may form their own views. The mix of assets we have is a direct outcome of what our investment managers choose to do. It is five years or more since I recommended any kind of investment constraint. On the point of asset mix we are always puzzled as to why these offices which promote to the philosophy that, as you approach maturity, you move into fixed interest, have such high proportions of fund proceeds in terminal bonus?

There has been some comment also about how lucky we are to have the kind of product mix we have. May I go back to my opening statement. This is not by chance—simplicity of contract is not some God given feature of our office. We fought for it over many, many years—Maurice Ogborn introduced the original recurrent single premium contracts in 1956/57 and we have fought very hard to achieve overall simplicity in everything we have done from that time onwards. These things do not happen by chance—you get what you want by actuarial management. We are now introducing the with-profit recurrent simple premium type of contract into the life fund and I would personally expect to see traditional endowments ultimately disappear. Somebody asked for some more figures. Well perhaps since we have now made the declaration, and since we have posted our bonus notices I can tell you that last year for policyholders with pension contracts in force for the whole year the present or full value of those benefits would have increased by 20% over the year. We earned about 26% on assets last year. The aggregate value of policy values including accrued fund bonuses at the end of 1989 was broadly equivalent to market values. That implies they were higher than market values a year earlier and relatively higher than that the year before, that demonstrates the averaging process the fall back in investment returns in 1987 during which we mentioned bonus rates and that has now been made good.

One final comment, there have been various remarks about demutualisation, may I reassure members present that we have no intention of demutualising!

Mr L. J. Gray added the following written addition to his spoken contribution:—Due to the lateness of the hour I did not make my own views on bonus philosophy clear to the meeting and these are as follows:

In a mutual office, all of the assets belong to the existing policyholders—that is a matter of fact which cannot be disputed. The members of that mutual could apply for the life office to be wound up and those assets would be available to enhance their benefits. In that narrow sense, the belief expressed in the opening sentence of paragraph 4.1.1 is correct. It is so by definition.

Any extension or adaptation of this belief to a wider context thus implies some kind of hypothetical treatment of assets devised solely for the purposes of actuarial insight and control of an office which is not being wound up and, most likely, is continuing to take new business. If we wish to have a professional discussion on such hypothetical treatment of the assets and the control we wish to achieve, we must first be clear on the definitions we are now adopting or else confusion will result.

Is there an estate—or is it just unconsolidated surplus by another name—or can we have both an estate and unconsolidated surplus? I believe it is possible to argue for the existence of both in some circumstances. A full exposition of my reason for saying this would be rather lengthy so I shall make do with the following summary.

Consider first that an office will, by having regard to current and likely future investment conditions, have some idea of a fair rate of future bonus applicable at any one time. Depending on its bonus distribution philosophy this might be all reversionary bonus or it may include an element of terminal bonus—either way it can value its business using a bonus reserve valuation and these bonus rates. Let us call this value A.
It might also place a higher value (B, say) on the business taking account of bonus rates it is paying at the moment. I would call (B-A) unconsolidated surplus and any difference between the asset values and B, the estate.

You might object to these definitions on the grounds that they are somewhat circular in that you cannot value B until you know what current bonuses are and that is the question you are seeking to answer by doing a bonus reserve valuation! However, I think it is possible to imagine a situation where an office has such strong reserves (however they might have arisen) that to consider all of the shortfall of A from the asset value as unconsolidated surplus would lead to far too high an implied bonus rate. Thus, on this reasoning, all offices will have unconsolidated surplus and many will also have an estate.