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THE PARTICIPATING PROPRIETARY LIFE OFFICE

by

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1. INTRODUCTION

"What shall I tell you first, what shall I leave for last?"

1.1 The Aims of the Paper

The invitation on the title page from Homer's Odyssey was chosen to reflect certain aspects of the current position of a group of life offices which form a major part of the UK Life Assurance market.

Recent years have seen major upheavals in the life assurance sector of the Financial Services market. This paper began as an attempt to examine the effect of these changes on those Life Assurance Companies who have shareholders but also have, as a major part of their client base, with-profits life assurance policyholders. The latter share, as of right, in the profits of the Life Fund of that company. There are many titles in use for these offices, 'Participating Proprietary Offices' has been selected for the purposes of this paper.

Like Odysseus, when he arrived in the city of the Phaecians unannounced, these offices have not seen their journeyings widely reported in professional papers, though of course much written about life offices in general clearly has significance for them also.

The recent changes in these companies are market driven, or driven by legislative or fiscal considerations, but it is always important to ensure that the changes do not conflict with the rights of different groups of policyholder.

Within the UK, these offices, many of who form the life insurance arms of insurance groups who are household names, make up a significant part of the life insurance market. In spite of many arguments put forward in recent times as to their theoretical weaknesses, they seem to be displaying a remarkable resilience.

However, given their relative absence from actuarial literature, the second objective of the paper thus developed — to examine the peculiar actuarial issues involved in the management of these offices.

Before proceeding to consider the actuarial issues involved it is helpful to consider the nature of the offices, and in particular how they contrast with the other, better documented, life offices.

To some extent the desire to examine the changes currently happening, has led to the need to step back slightly in the history of these offices. This results in a picture slightly at variance with the current state of these companies. The author hopes that by the end of the paper the changed picture will be presented in a form which is both clear and comprehensible within the historical perspective.

In preparing this paper I have received support and assistance from many colleagues, to whom I am most grateful. Especial thanks are due to M.I. Iqbal for his help. However the views expressed in the paper are entirely those of the author, who also accepts responsibility for errors.

1.2 The Structure of the Paper

The substance of the paper begins in section two with a brief description of the Participating Proprietary Office, and comparison with the other main types of UK life office.

Sections three, four and five respectively look at the expectations of policyholders, and the equity issues, first between participating policyholders and shareholders, and then between the groups of policyholders whose policies do and do not participate in the profits of the fund.

Section six considers some of the changes that have occurred within the life assurance market that impact upon these issues of equity, and section seven examines some of the possible responses to these changes before distilling a recommended course of action in section eight.

1.3 The Conclusion of the Paper

The paper leads to the conclusion that change is necessary in the management of these offices. However, in general the changes advocated are already underway, at least partially in most of the larger offices of this type and in many of the smaller ones.

The paper points further than current change in that it anticipates a need to monitor and review these strategic changes and suggests that managing change may well become a permanent feature of the management of these offices.

However, in a contract of long term assurance it is important that the changes are managed to achieve equity between generations of policyholder. Radical solutions can only be accommodated if they respect the rights of all groups of policyholders.

Further, it appears increasingly likely that change must be managed in a way that is not only fair, but also seen to be fair. Can the industry afford to be right if the world judges it to be wrong? Unfortunately emotional heart-string pulling has greater impact than actuarial equity. An industry which is dependent for its survival on the latter must ensure that its public is aware of the need for practices which are not only perceived to be right but are calculated to be right.

1.4 To Move the Target or To Re-Align the Sights

Not all the possibilities discussed in the paper will be appropriate to all offices and there are a range of possible responses. However, it is likely that few offices will be able to resist completely the winds of change for long.

In many aspects the changes represent a more controlled approach to certain aspects of management than has been needed in the past. Better information on the financial position of the office allows the implementation of strategies fine-tuned to the needs of the office.

To achieve this control requires the full use of a range of actuarial tools both in terms of analysis of the past and the examination of future scenarios.

However, it is not sufficient to rely on monitoring what is happening and may happen, it is necessary to implement the appropriate actuarial strategy. Although the author could not claim to have produced an exhaustive list of options that may be used to make up such a strategy, this is an area where members of the profession involved with such companies might give consideration.

The ultimate conclusion is that these companies require a precise form of management, to ensure that the interests of both shareholders and policyholders are met.

2. WHAT IS A PARTICIPATING PROPRIETARY OFFICE?

"Goddess, daughter of Zeus, to me in turn impart some knowledge of all these things, beginning where you will."

2.1 A Question Deferred

Before defining a Participating Proprietary Office (see section 2.4), it will be useful to briefly consider the other two major types of Life Assurance company in the UK. However, it must be appreciated that this is little more than an overview.

Further it should be noted that around the basic idea of such an office there are many variations. In order to obtain as wide a view of practicable, the author conducted a survey of such offices, and it became clear that although many differences of detail exist there are many offices who share much similarity of form and structure.

It was also interesting that in a number of offices, falling within the definition proposed for this paper, the recipient of the survey felt that the office fell outside the spirit of the definition. Accordingly the author has chosen not to try to embrace these other offices within the scope of the paper.

The pursuit of a more precise definition may be a worthy exercise but not one which would shed much more light on the present situation.

2.2 What is a Mutual Life Insurance Company?

Until the 1950's the only major alternative form of office to a Proprietary Participating Office was the Mutual Life Insurance Company. Although there may be some considerable dispute as to who is the legal owner of such a company, the beneficial owners are the with-profits policyholders of the company, in the sense that any profits earned can only be distributed to these policyholders.

Policyholders effecting a policy with such an office will contract to pay premiums and in return the office undertakes to pay out claims in accordance with the policy terms. These benefits may be augmented by the distribution of profits described above, where the policy conditions so provide.

In general the greater part of the life fund of these companies will be invested in 'market investments' which must be managed with a view to maintaining the security of all the policyholders and maximising the benefits that can be paid to the with-profits policyholders.

However, there may be occasions when it is considered appropriate for part of the funds to be invested in commercial activities to be managed by the management of the life company. Thus, for example, a Mutual may choose to offer certain types of life contract through a subsidiary company; this company then forms an investment of the main life fund.

This structure may also be employed for other non-life activities. However, as pointed out in 'Repackaging the Life Office' (1), there may be constraints on this form of expansion.

The reasons for operating through a subsidiary company, rather than by incorporating the activities within the fund may be legal, fiscal, or to offer greater flexibility. However, beneficial ownership remains that of the policyholders.

2.3 What is a Proprietary Office?

A Proprietary Office has a defined legal owner, or owners. Generally they will also be the beneficial owners who are entitled to receive any profits that are to be distributed in the form of share dividends.

The policyholders will contract with the company to pay premiums and in return receive insurance benefits. These benefits may depend on certain factors relevant to the management of the life business, as explained below, but are not generally directly dependent on the profits of the company. However, there are exceptions to this principle.

Policy benefits are often fixed in relation to the value of a fund of investments to which the policy is said to be linked. In this way all or part of the investment profits of the company in relation to such policies are, in effect, passed on to the client.

Similar devices enable all or part of the mortality profits and expense profits to be likewise passed on. This enables the policies offered to imitate certain features of with-profits contracts. Such arrangements are usually structured in a way that does not take account of the profits arising on other policies or other commercial activities of the company. Though clearly, where for example average expenses per policy are estimated, there may be some cross subsidy.

2.4 What is a Participating Proprietary Office?

It is probably easiest to consider a Participating Proprietary Office in two parts. Although, in practice, many such offices will only transact business in one part.

The two parts are effectively formed thus:

(i) The Participating Fund: This comprises the life fund of those policies the surpluses from which make up the total surplus which will be distributed to participating policies. For most UK offices this will be almost all of the business including both with and non profits business, but non-participating business need not be included as is the case in a few UK companies. Outside the UK and the Republic of Ireland it is not normal practice to write non-participating business in the participating fund, though again exceptions do exist.

(ii) The Rest: This comprises the shareholders' fund together with any other investments or business activities, whether in Life Assurance or otherwise, which the company may transact. For those UK companies who transact most of their non-profits business in the participating fund, there may still be minor business lines transacted in such a fund.

Legal ownership of both parts is in the hands of the shareholders.

However, in the sense that profits from the first part pass in part to the participating policyholders, one may take the view that beneficial ownership of the first part is split between participating policyholders and shareholders, whilst beneficial ownership of the second part is that of the shareholders, in that all its profits pass directly to them.

As in the case of the Mutual Office the policyholders will have effected contracts which in general provide defined benefits, which benefits may or may not be entitled to participate in the distribution of future surpluses by way of bonuses.

The shareholders will generally receive a distribution of surplus, by way of a transfer to the shareholders' fund when a distribution is made to policyholders. Normally this transfer will be a defined percentage of the value of reversionary bonuses declared, and terminal bonuses paid. The valuation of the Reversionary Bonuses is usually effected on the Published Valuation Basis.

It is argued that the use of a conservative Valuation Basis, such as that which is published, ensures that the value of the benefits to shareholders is greater than it need be and unfairly penalises the participating policyholders. However, it should be noted that the use of such a stringent valuation basis does provide an additional benefit to all with-profits policyholders by way of security; indeed the smoothing which is one of the major benefits of with-profits contracts is only possible with this stringency. This is a policyholder rather than shareholder benefit and one may thus argue that this apparent anomaly is not quite what it seems at first sight.

However, the more conservative the basis the higher the proportion passing to the shareholders, whilst at the same time the less likely the need to call on shareholders' funds to support the portfolio. As this mechanism is intended to reflect risk and reward, actuarial judgement is called on to assess its price.

The result of the inherent security of the life fund and the lack of an historic need to use shareholders' funds to finance policyholders benefits can lead to the claim that such an office is effectively a Mutual with part of the benefits passing to the shareholders.

The major part of the investments of the life fund will be in stock exchange securities. As with the Mutual Office there may be other activities which may be transacted in certain circumstances as if a direct investment of the life fund, or may be transacted through a subsidiary company.

Alternatively these other activities can be transacted on behalf of the shareholders directly. In principle it may be possible to achieve this by the shareholders' fund owning a separate company though currently it would usually be advantageous to establish a rather different corporate structure as described in 'Repackaging the Life Office' (1).

What is important to realise from the point of view of equity is that whether the other activities are 'owned' by the policyholders' funds or the shareholders' funds has major significance. This will determine whether the profits emerge for the benefit of shareholders only, or for policyholders with a defined part passing to shareholders.

This question is one to which we shall return in section 6, but for now it is necessary to note that, although issues of fiscal advantage and capital efficiency may favour one course or the other, the potential effect on the equity between shareholders and policyholders is likely to be the more significant.

However, it is quite possible that for financial and legal reasons a sensible investment for one part of the office may be totally inappropriate for the other.

2.5 The Comparison with a Mutual — Corporate Point of View

The comparison of the Participating Proprietary Office with the Mutual Office from the point of view of the policyholder has been made many times. The statement that the Mutual must be better value because there are no shareholders to finance is an established cliche. However, there are other issues that require consideration, after looking at the relative management flexibilities.

From the point of view of the beneficial owners a comparison between a Mutual and a Proprietary Participating Office is probably meaningless because of the different natures of such owners. This will not strictly apply in the case of a Mutual managed by a Proprietary Management Company. The author is not aware of any such example in the UK other than in the case of Friendly Societies. In principle such a structure is possible, and may have application in the future. However, it is not without its difficulties.

From the management point of view, the Participating Proprietary Office can use its flexibility to raise capital from its shareholders in order to establish new operations, which would then form a part of its shareholders assets, whether within the life company structure, or under the umbrella of a holding company.

In this way the Participating Proprietary Office can move into areas denied to the Mutual either on the grounds of lack of capital, or because such investment would be considered an inappropriate use of policyholders' funds. Although Mutual Insurance Companies may have considerable free reserves and access to loan capital, any activity that they undertake is necessarily undertaken on behalf of the with-profits policyholders, with the associated benefits and risks being borne ultimately by them. Thus where a new activity becomes a market requirement, and this activity does not represent a reasonable investment for the policyholders, the Mutual appears unable to respond to this challenge. Conflict appears inevitable unless the opportunity exists to pursue the activity free of the requirements of the policyholders. Again legal constraints cannot be ignored in considering the use of funds of a Life Assurance Company for diversification.

An interesting comparison exists in comparing the diversification currently being explored by those Building Societies who effectively choose to retain their 'Mutual' status.

The effect of this greater flexibility for the Proprietary Office is that where diversification is required for competitive market reasons, the Mutual may be at a commercial disadvantage, and therefore since its beneficiaries are its policyholders, it may be forced to put its with-profits policyholders, i.e. its owners, at a commercial disadvantage. For the Participating Proprietary Office, the corresponding advantage will only be passed to its policyholders if an equitable apportionment of these commercial benefits is secured between shareholders and policyholders.

Where the decision is not one as to whether or not the investment is financially attractive, there still remains the question of its appropriateness to the life fund. This becomes a question of risk management of the particular project. As this question is similar to that between whether the investment in the case of a Participating Proprietary Office should be on behalf of policyholders or shareholders, we shall return to this in section 6.

It must be noted that the greater flexibility to the Participating Proprietary Office should not be confused with greater security. Although if properly used the flexibility can provide benefits to both shareholders and policyholders it would be dangerous to assume that the policyholders of a Proprietary Life Office were protected by the owners' ability to raise fresh capital. It is unlikely that capital markets would be willing to provide funds for companies needing such protection except at an unacceptably high cost.

2.6 The Comparison with a Proprietary Office — Corporate Point of View

From the corporate point of view the difference between a Pure Proprietary Office and a Participating Proprietary Office need not in principal be great. However, the nature of the different contracts offered tends to create major financial differences.

The contracts of the Pure Proprietary Office have tended, especially in recent years, to be designed with a view to minimising initial strain and accelerating emergence of profits. Although this may have been attempted for the contracts of the Participating Office, there are severe limitations on the extent to which this can be achieved with a conventional with-profits contract.

To the extent that modern 'linked' contracts pass the insurance risk onto the client the Pure Proprietary Office can reduce the exposure of shareholders in the same way as the Participating Office. However, the Pure Proprietary Office will still retain the risk for its non-linked contracts and the non-linked parts of its linked contracts (e.g. mortality and expense on a traditional unit-linked plan).

In theory the Pure Proprietary Office can pass all its risk back to the policyholders by appropriate policy design. However, the author suspects that this ideal has yet to be achieved, although it may well have been sought.

3. POLICYHOLDER EXPECTATIONS

"Take heart, dear nurse; this purpose of mine came from a god. But now you must swear to tell my mother nothing of this until...."

3.1 The Relevance of Policyholder Expectations

Section two has concentrated on the corporate position of the offices but, before moving to consider the plans from the clients' point of view, it is probably necessary to consider the principles of equity against which the office should be judged.

For shareholders the objectives are as for any other investment that they may make, albeit taking account of the particular features of the Life Insurance industry.

The position of the policyholder is less clear, in that in general the expectations will vary enormously between individuals. Although the author has heard wide ranging views on what insurance companies should and do provide to their participating policyholders, 'Equitable treatment with other policyholders and with the shareholders' has only ever be mentioned by other actuaries.

3.2 Reasonable Expectations

The 1982 Insurance Companies Act places an obligation on Life Insurance Companies to meet the reasonable expectations of policyholders.

The author believes that we must begin our definition with the expectations defined in the Market Place, which is where the expectations are formed.

The reasonable expectations will certainly include the offer made at point of sale and may be conditioned by illustrations implicit in respect of prospective future benefits. They probably also take account of subsequent correspondence issued by the company.

The author believes that, whether they ask for it or not, the policyholders are entitled to the equitable actuarial treatment mentioned above.

The policyholders are also entitled, though this may appear obvious, to the rights defined in their policies. In particular this will apply to participation in profits.

3.3 Actual Expectations

The actual expectations may be based on the projections offered at point of sale. They will probably be modified by subsequent correspondence.

These views may then be modified to take account of the optimism or pessimism of the client. This unfortunately can create expectations which are sufficiently unreal and heterogeneous to render this basis of measurement unusable.

3.4 'Actuarial Expectations' — Equitable Treatment

The actuarial definition of equity would take a paper itself to define, but is roughly a fair distribution of defined actuarial surpluses.

To achieve this definition requires an awareness of the risks borne by groups and the charges that should be made for those risks. Whilst, at least with the benefit of hindsight, one can devise an equitable solution for a shared risk, it is more difficult to establish a fair price where one group of policyholders has borne risk on behalf of another.

If a group of policyholders have all borne the same risk then one could argue that the cost per policyholder should the total payment divided by the number of policyholders.

Where risks are similar the individual contributions can be scaled up or down in accordance with appropriate rating factors (e.g. in the case of a mortality risk — q).

Where one group has borne risks on behalf of another there should be some recompense for that risk acceptance, in the same way as the shareholders might argue that their capital has borne risks for policyholders and therefore deserves a return to reflect that risk. The mutual risk sharing described above is then no longer adequate.

The determination of a return for the acceptance of risk is not a concept well documented, though it is vital to our understanding of all with-profits offices, and indeed to other life offices.

The policyholders can also expect to receive the benefits of sound management of their policies, and through them of their funds. This may often be considered to be taken for granted, but it must not pass from familiarity to contempt.

4. EQUITY BETWEEN SHAREHOLDER AND POLICYHOLDER

"We divided them amongst us, so that none of my men, if I could help it, should depart without his fair share."

4.1 Definition of 'Profits'

Although referred to as 'With-Profits Policies' at the annual valuations the distribution is usually calculated on a basis of the emerging surplus within the life fund.

The surplus is calculated in the actuarial sense, usually on the published valuation basis. However, the use of other bases is permitted, and there is indeed a strong case that whilst the published basis should demonstrate solvency and therefore be based on conservative principles, the distribution should be designed to ensure equity between policyholders and may therefore be on a different basis.

It must be borne in mind that the choice of basis will determine the relationship between the benefits that are paid to different generations of policyholders, for example the more passive the basis in general the greater the degree of smoothing between generations, but also the greater the holding back of surplus for future generations.

Traditionally the use of a net premium valuation basis coupled with book valuation of assets ensured that the rate of bonus declared from year to year changed slowly and thus achieved the smoothing characteristic of with-profits contracts. Although this approach may be equitable in stable investment conditions, in times of rapidly fluctuating investment values, and where it is not the policy that all such fluctuations should be smoothed from one generation of maturity to another, account must be taken of these fluctuations. This can be accomplished through a terminal bonus which is payable either on death or at maturity in accordance with the declaration rules of the office.

The demand for a more active approach to bonus distribution has required that the bonus distribution be determined by a more active method. One such approach uses a combination of a Bonus Reserve Valuation coupled with the use of asset share models. This approach allows the capital appreciation on equities to be reflected in the distribution. Where the published valuation basis remains on a Net Premium basis a transfer from the Investment Reserve will be made to reconcile this valuation to the more active approach.

In making this change With-Profits Life Offices have effectively changed their philosophy of distribution from a smoothed approach to a more active and, we may expect, more volatile approach. This has taken place gradually over a period when investment conditions were generally favourable to the change and it is unlikely therefore that previous generations of policyholders will have lost out relative to the more conservative regime, indeed they will generally have benefited considerably. To more recent policyholders it has generally been made clear that the new environment is more active, with greater risk and volatility. It is to be hoped that these warnings have been heeded and the stability experienced by previous generations of policyholders is not still expected.

An alternative approach is outlined in 'With Profits Without Mystery' (2).

4.2 The Scope of Activity

For the Participating Proprietary Office a more fundamental decision is which activities shall constitute the business whose surplus will contribute to the surplus to be distributed.

In principle the answer is simple, in that if the policyholders' capital has been used to finance an activity then the policyholders should receive the benefit of the investment. However, with the greater diversification of life offices in recent years the question must arise as to whether it is in the best interests policyholders for their capital to be used to finance activities other than life assurance, and indeed which types of life assurance it should be used to finance.

4.3 How Profits Arise

It may be helpful to consider first how profits, or surpluses, emerge in a life fund.

In principle the company who manage a life fund will contribute a number of skills to make the operation successful.

Perhaps the most obvious is that they will sell life insurance policies. Within each policy will be loadings for marketing, and for individual activities of the operation. These will typically include allowances for administration, rates of claim, rates of surrender, and interest. To the extent that the outcome is more favourable than that assumed, there will arise at some point in time a surplus.

Although initially there will with most policies arise a strain (new business strain), the corresponding surplus should be released during the course of the contract.

In addition, with-profits contracts will generally contain a specific loading incorporated in the premium rates to finance part of the bonuses. This loading may be a specific bonus loading, in the form of a sum assured bonus increase factor, or implicit by the use of a lower interest rate assumption than used for non-profit business.

However, on the assumption that non profit business is written on rates which the office regard as a fair reflection of expected experience, plus a margin for profit and/or to cover unfavourable contingencies, the with-profit premium rates inherently carry a margin equal to the non-profit policy margin, plus the value of the excess of the with-profits premium rates over the corresponding non-profits rate.

4.4 How Profits are Distributed

The normal pattern of bonus distribution within the UK — many other countries adopt different approaches — is that each participating policy has a guaranteed sum assured, which may be payable on death and/or maturity. To this guaranteed sum assured will be added bonuses at a simple rate, or at a compound rate, or at a rate which can be regarded as a hybrid in that different rates apply to the basic sum assured and to the previously declared bonuses. Clearly both the simple and compound systems can be thought of as special cases of the latter structure.

In general, offices offering a two tier rate will allocate a higher rate to bonuses than to basic benefits although there is no invariable rule to this effect.

It is important to remember that the rate of bonus is generally declared on a sum assured value considerably higher than either the value of accumulated premiums, or the reserve value of the policy. Thus the rate of bonus may be expected to be considerably lower than the rate of surplus interest earned on reserves. This may seem obvious but is sometimes overlooked.

The results of the valuations and asset share investigations described in Section 4.1 are translated into a combination of reversionary and terminal bonuses, possibly together with a special reversionary bonus, to distribute the surplus to the policyholders. Of fundamental importance in this consideration is that the only policyholders to benefit from this distribution are those with an entitlement to participation, who will generally have paid higher premiums to secure the right to these additional benefits.

4.5 Equity between Groups of With-Profits Policyholders.

It is always important in managing the benefits of a With-Profits fund to ensure the equitable treatment of different policyholders, whether different by reason of type of contract, or time of inception of the contract.

Unlike a unit-linked contract, where the equity is usually defined within the rules of the policy, there is an element of judgement required for a With-Profits contract, especially if the results are to be smoothed, which is normally the main attraction of the With-Profits contract.

Recent dramatic changes in investment conditions have shown the need for a quick response to such changes and the use of techniques such as Asset Share Models enable this to be undertaken. Although usually concentrating on investment changes these techniques can equally be applied to expense and mortality changes, and, in theory, to option costing. However, in the latter case it is unlikely that the company will be able to reflect properly the cost of the option at the time it is effected, only a market cost as if the benefit where being transferred out of the fund.

There is an element of catastrophe risk which is not reflected in Asset Share calculations. In the context of an office any event which could seriously affect the payout of policyholders in the short term can be regarded as a catastrophe. In general, an Asset Share Model ensures an equitable distribution in accordance with actual experience. Where one considers catastrophe risk this approach is clearly inadequate as in most years no charge will be made and those policyholders whose policies have benefited from the protection will not contribute to the cost of this risk.

Although we shall consider equity with non-profits policyholders in section 5, it is worth considering that where surplus arises from non-profits business it should be distributed equitably among those with-profits policyholders whose contracts have contributed to their security. In most years an asset share model can assist in this allocation, by considering surplus derived as if an addition to investment yield.

In theory where a catastrophe risk exists for one group of policyholders, and is borne by another group, then the risk should be assessed and charged to the former group, within the context of the asset share model if they are participating policies, or the premium rating structure where they are not. The 'charge' can be accumulated within the fund until needed or distributed to those participating policyholders who bore the risk, according to whether it is decided that such risks should or should not be smoothed in their effect on bonus rate. Where they are to be smoothed a further small adjustment will be required to preserve equity.

Catastrophes in the sense described here can be of varying magnitudes and clearly there are limits to the extent to which it is prudent to make provision. The four major risk factors are investment, expenses, mortality and tax. There are many possible techniques to establish a charging structure for catastrophe risks for the first three of these. These vary from time series analysis, to a consideration of market price for the risk, where available from either the investment or reinsurance market. General insurance colleagues use other techniques to consider the cost of catastrophic risk especially in reinsurance. Similar techniques may be applied here, but generally in life business one may need to consider a longer time period to obtain useful experience data. The fourth risk factor, tax, is particularly difficult, and although theoretically capable of treatment in an analogue manner, there are different issues involved in this consideration, which are not discussed here.

4.6 The Shareholder Policyholder Equity Relationship

Of particular importance to the Participating Proprietary Office is the equity relationship between policyholders and shareholders. This must take account of any finance provided to the policyholders. It must also take account of the risks that are accepted, whether explicitly or implicitly.

The policyholder takes a share of the risks implicit in the life assurance business. Thus for example if the policyholder chooses a company with stricter than average underwriting he may (if his policy was not declined) expect to receive the benefit of this, though perhaps suffering from higher policy costs, reflecting the increased scrutiny required.

This benefit is geared to the extent that the risks accepted on non-profits business tend to be similar — underwriting, expense control, investment returns.

However, historically, the benefits have tended not to be linked to the profits arising from other non-life insurance activities within the same company. For example the composite insurers only distributed surplus in respect of long term business, not of general business. This may appear strange, but is justified in that whilst the policyholder may wish to receive the profits (and risk the losses) accruing to a type of business in which he is participating, this is no reason to assume that he wishes to participate in diverse other activities.

5. EQUITY BETWEEN WITH-PROFITS AND NON-PROFITS POLICYHOLDERS

"Zeus had made him warden of all the winds, to bid each of them to rise or fall at his own pleasure."

5.1 The Relationship between Participating and Non-Participating Policyholders.

If the premiums charged to non-profits policyholders are adequate then the security offered by the with-profits policyholders is in the nature of catastrophe cover. Although there can be no rigorous definition of such a catastrophe, I would suggest that any situation where the insurance market generally found that what it believed to be secure long term premium rates were inadequate would constitute a catastrophe.

In return for accepting this risk, the with-profits policyholders are entitled to the expectation of profit arising from the non-profit policies. However, the actuary must determine the price that is to be put on these risks first. In general the price of the risk acceptance is determined by market forces, in that the non-profit premium rates are set in an open market place, whose players include companies with no participating policyholders.

Clearly if the rates required to operate in the market are too low to satisfy the requirements of with-profits policyholders the company should not use with-profits funds to support this class of business.

This 'equation of satisfaction' must take account of risk, and also of the cost of servicing any policyholders' surplus used to finance the business. It should be noted that by using policyholders' funds to finance new business strain the company will defer the release of surplus because the 'asset' of value of future surpluses secured by the financing will not be taken into account in the valuation.

This latter point places a constraint on the volume of business which it is proper for the life company to transact if it is not to withhold bonuses unacceptably. It may be argued that it is morally wrong to use any of its capital in this way, but given that current generations of policyholders are benefiting from the non-profit business of previous generations it seems equitable to continue to invest funds in them. Difficulties would arise if the volumes of non-profit business grew too rapidly resulting in a distorted strain pattern. It is subject to question as to the precise levels of growth which may be sustained, but that there are such limits appears beyond debate.

It is probably true that the early with-profits policy maturity benefits were reduced on this account and that in equity a with-profits fund should not have entered into such contracts. However, the actuarial environment at the time that these funds started was different to today and it is therefore difficult to apply principles, which are fully justified in current circumstances, to past history.

This caveat on increasing volumes of non-profits business can be applied equally to with-profits business where the initial strain will tend to defer emergence of surplus.

If one considers the non-profits business as an investment on behalf of the with-profits policyholders then the latter can expect that adequate standards of stewardship be applied to this investment. The proper skills and expertise must be applied to ensure that it does at least carry the expectation of return intended. Obviously the outturn may be different but it is hoped it will not be due to mismanagement.

As stated previously the insurance risks borne are very similar to those of the with-profits contracts and therefore the effect is one of gearing of insurance risk rather than acceptance of other types of risk. A possible standard of care in management may be set as the same level as applied to the with-profits business, though clearly there may be arguments for different levels of care.

5.2 Is Non-Profit Business an 'Investment' of With Profits Policyholders Money?

It is sometimes claimed that non-profit business is an investment of the with-profits policyholders.

As the universal justification for all activity on behalf of the life fund it is a truism, but as an investment this has some unusual features. The immediate reduction in value to policyholders followed by an emergence of profits is clearly unusual compared to other investments made on behalf of policyholders. It is also unusual in that the risks associated with the investment are similar to the risks inherent in the policies on whose behalf the investment is made.

In this sense the non-profits business is very different to the other investments of the fund which are generally in other dissimilar activities. Here it is not possible to directly compare standards of stewardship, though in both high standards are called for. However, the non-profits business will generally have its own investment requirements and it is normal practise to manage the funds in aggregate, effectively ensuring that consistent standards do apply to the investment management.

To illustrate this homogeneity of risk one may consider a fund which chose to avoid such contracts in a time of worsening mortality, then the effect on with-profits policyholders' benefits would be less than if the fund had chosen to 'invest' in non-profit life contracts (other than annuities). Similar effects would occur if there were a sudden change in per policy expense levels, or in investment returns. However, it should be noted that in the case of the investment change the funds with and without non-profit contracts may well be invested differently and therefore actually exposed in different degrees to the same change.

This similarity of risk is what characterises the non-profit policy as an investment. Whether or not one now accepts it as prudent, it was so accepted at the time that most, currently in force, with and non-profits policies in such companies were written. It therefore forms the background against which alternative strategies must be judged, for any alternative strategy necessarily alters the risk and reward profile. To make such a change does not normally require the consent of the policyholders, but morally those responsible for the change must ensure that they serve their clients well by the change, and do not expose them to unacceptable or underpriced risks.

5.3 Risks and Returns

As the contracts being written on behalf of the life fund are essentially life insurance products the investment is in a combination of insurance management skills of the company, and in the risks undertaken.

The risk/return issue is thus largely one of insurance risk rather than investment risk. There may be an associated investment risk but only in the sense normally associated with any life insurance contract. However, it must be noted that with the changing types of life insurance contracts it may be appropriate to consider whether the current generations of non-profits contracts are suitable investments for with-profits policyholders' funds.

5.4 The Rights of Non-Profit Policyholders

Before concluding this consideration of equity it is worth considering the rights of the non-profits policyholders, who tend to be overlooked in the shareholder/policyholder question.

Although in principle their only legal rights are to the contractual benefits under their contracts, they can expect an environment in which those benefits can be regarded as secure.

This security is largely provided through the existence of with-profits policyholders, and, in view of the fact that a significant proportion of the profits from these contracts will go to these policyholders, it is important to these clients that the flow of with-profits policyholders continue. Clearly if there were a sudden cessation of with-profits business other solutions could and would be found, but again it is important to consider what precisely was bought by the policyholder.

In particular the security provided is against expense inflation, falling investment returns, and adverse claims experience. However, it is clear that other risks may need to be considered, and it is a particular challenge of this form of mutuality of insurance risk that in spite of major fluctuations in each of these factors it has still been possible to provide support. However, if there were a fall in with-profits business volumes a reduction in non-profit volumes may be required to preserve equity, and if the fall were judged to be permanent it would raise questions as to the prudence of continuing this form of support. We shall look more at this issue in section 7.

6. A CHANGING MARKET — NEW DEMANDS ON PRODUCTS

"Then for two nights and two days Odysseus was driven at random by swollen billows, and time and again his heart foreboded death."

6.1 An Overview of Change

The major developments that have affected the life insurance companies in recent decades have proved to be market driven in one form or another. There have been legislative and fiscal changes, but although these have been major, it is in the area of changing consumer demands that most impact has been apparent.

In many ways these changes have led to a blurring of the boundaries between financial institutions. This has taken the form of composite products where parts of the client's money are used to secure benefits from more than one type of institution, or more commonly where product design has sought to cross traditional boundaries between life insurance companies and other financial service providers.

The most obvious example of the latter boundary crossing is the unit-linked life insurance product. From the mid 1950's to the 1970's a gradual development can be traced as Unit Trust and Life Insurance Policies have adapted to each other, from what may have seemed a fairly difficult birth designed to provide the benefits of Life Assurance Premium Relief to regular savers in Unit Trusts, to a Maximum Investment Plan whose benefits are similar but whose method of operation is much more client-orientated.

The growth of these plans has been in part at the expense of traditional life insurance products, especially with-profits contracts. This is to some extent explained by the switch in emphasis of a number of traditional life insurance companies into these products.

In principle a large part of the risk associated with these contracts is absorbed by the policyholders (most of the investment risk) and so in some ways it is not only that as a form of saving that these contracts compete with the with-profits contract, it is also true that to the writing company the contracts offer similar benefits in reducing risk.

The fundamental difference lies in the ability of the with-profits contract to smooth the benefits of policies maturing from day to day, and to thereby remove much of the investment risk from the returns to the client. However, from this hang the associated issues such as costs of smoothing, reserve implications, and other technical differences which of course affect the choice for the client and the relative benefits to the selling company.

Although initially Participating Proprietary Offices may have sought to offer these plans through their main participating life funds, or through subsidiaries of these funds, in general those offering them in recent times have arranged that the profits of these operations pass directly to the shareholders, and the capital required is provided by the shareholders.

The normal structure today would be to establish a form of group holding company in which the participating life company and unit linked life company (or companies) are owned by a holding company itself owned by the original shareholders in the life company.

Before considering the reasons behind this change it is well to consider some of the other changes occurring in the market.

6.2 The Impact of 'Total Linking'

Having dealt with investment risks, another major product development effectively dealt in a similar way with, first the mortality risk, and then the expense risk. Thus the modern, totally linked contract, which is generally designed to be highly flexible, minimises the risk of the writing office. In effect the office seeks to operate a type of mutual fund, through a management company, whereby in theory the exposure of the office to insurance risk is severely reduced.

The question arises 'Is this true insurance?'. From the point of view of the client the answer is 'Yes'. However from the companies' point of view it may be considered that the role has moved significantly from that of a risk accepter (albeit probably reassuring a significant part of the risk elsewhere), to that of a risk manager. The manager, unlike the acceptor participates only to a very limited extent in the outcome of the risks in question.

The situation is similar in a Mutual Insurer, where at the end of the day the sum of the income equals (almost) the sum of the expenditures, but unlike the Mutual the modern portfolio of linked contracts seeks to achieve this equality in a much shorter time frame. However, the profits of the portfolio thus become based primarily on the cost effectiveness of the marketing operation coupled with the efficiency with which the organisation can manage its own operations. This is perhaps more akin to an investment management company than to an insurance company, though the benefits to the clients are undoubtedly insurance benefits.

6.3 The Rise and .... of the With-Profits Contracts

Whilst these changes have been occurring in the Unit Linked industry, we have also seen major changes elsewhere in the marketing of life business. One of these is in the mortgage market. This time the stimulus has not been 'product driven', but rather driven by distribution, coupled with price changes. Since the early 1970's there has been considerable growth in the use of Low Cost Endowment Policies for Mortgage repayment. In view of the traditional background of the Participating Proprietary Offices as part of Composite Insurance groups who had already established contact with mortgage lenders in connection with property insurance, it is not surprising that these companies formed a part of this change.

These moves were initially accepted only cautiously by the Building Societies, but the market gained new impetus in 1983 with the changes to the method of operation of Mortgage Income Tax Relief. At this stage the market boomed, and in spite of new linked product offerings, and the loss of Life Assurance Premium Relief in 1984, this sector of the market flourished.

However, for any industry to assume continued growth in its one key product type, which for many offices this had become, is always dangerous, and although the medium term future for this type of business remains bright, too great a reliance should not be placed upon it.

6.4 Pensions

For many years there has been considerable interest in pensions provision and a corresponding steady growth in pensions plans from within the Life Insurance sector. Clearly these must keep up-to-date with legislative changes but in general they offer an area of considerable potential growth. However, apart from occasional bursts of energy they only seem able to achieve a part of that potential.

For many companies these plans now represent a significant part of their portfolio. In general, these plans may be structured in the same way as life policies with regard to risks, but they do not usually include the same type of mortality risk, although they can and some do. They are also, of course, subject to different tax regimes.

6.5 Falling Interest Rates and Pressure on Bonus Rates.

In terms of marketing the life offices have been helped by the beneficial effects of rising investment returns and the consequent improvement in bonus rates with resulting increases in policy payouts. Unit linked offices have experienced the same advantages in their ability to demonstrate past performance benefits.

Falling interest rates and investment returns generally, have produced downward pressure on bonus rates. This has been recognised, albeit rather belatedly, by the industry in the changes in presentation of illustrations to prospective clients.

However, what the companies must do is to take a more strategic view of these changes, and this is where no industry standard can help, and ask what changes they must make to their method of operation and indeed how and where they should be operating.

It is with these strategic options that the rest of the paper is concerned.

7. RADICAL SOLUTIONS & POPULAR MYTHS

"You will come to the Sirens first of all .... If a man in ignorance draws too close and catches their music, he will never again return to find wife and his little children near him"

There are a number of possible radical courses of action for these offices. These from time to time form the subject of idle actuarial speculation. In this section some of these are considered, and an attempt made to understand the wider implications of such changes. Although it is unlikely that any of the solutions will be appropriate for all offices, or necessarily any, it is hoped that a better understanding of these possibilities may offer indications of possibly less radical solutions which may be incorporated in a wider strategy.

7.1 Close the Doors

One of the facile answers to the question of how to offer the best possible returns to with-profits policyholders, is for the office to stop writing new business. At times of falling interest rates, with the reversionary bonus structure there is certainly some justification for suggesting that by transacting new business the office is effectively diluting the share of the with-profits policyholders in the estate of the office.

The argument continues that many offices could effectively immunise themselves against further change in investment conditions in respect of existing business only, but cannot do so with unpredictable volumes of new business.

In this scenario there are many problems unresolved. For example how should the estate be distributed. The estate has been built up by many generations of often former policyholders. To suddenly distribute it all to one generation would require the Wisdom of Solomon; in particular an asset share model would not distribute any surplus not earned by the current generations.

This option, though superficially attractive, does have certain flaws.

In particular immunisation strategies not only protect against loss but also against profit. The policyholder who chose to throw in his lot with the life office management could rightly feel aggrieved if they announced that they were giving up the struggle on his behalf. The approach of a 'golden handshake' might have some appeal, but it is certainly not what the client bought.

Further, true immunisation strategies do not generally exist.

Given that two of the unknowns involved are lapse rates and rates of inflation, it is unlikely that it will be possible to cover both those within an investment strategy guaranteeing a presumably high level of bonus and equitable treatment of surrenders, relative to the pre-immunisation strategy.

What of the non-profit policyholders? These do have some rights. Without the further stream of with profits business their security will be progressively reduced. Reinsurance may ease the burden theoretically, but their security is in any event impaired by this move from a legal point of view. In particular they will be vulnerable to the expense inflation eroding the solvency of the fund, especially as the number of policies falls and per policy expenses thus increase.

In the event of a catastrophe, the shareholders may feel duty bound to intervene on behalf of the non-profits policyholders, but the management of the company should not be advocating a course of action designed to make this need likely, especially when almost all the possible benefit of such a strategy passes to a group who will not have to pay the bill.

7.2 Diversify the Life Fund

Another answer is that the Participating Life Fund should transact a multiplicity of diverse activities largely for the benefit of the with-profits Policyholders. This clearly has attractions in that the resulting profits could help both policyholders and shareholders.

This would enable the expense of management of the fund, or company, to be spread amongst more activities and hopefully therefore the per policy expenses reduced, again to mutual benefit.

This option is also seductive but again exposes the policyholder to many risks. The diversification required over recent years by the market place has pushed to the limit (or beyond) the idea of associated business. Whilst providing a top up loan in connection with a mortgage policy may be so regarded, operating a removal firm strains the imagination.

In effect the market is driving companies to offer services in which traditional life assurance skills have ceased to be relevant, e.g. stockbroking, estate agency, unit trust management.

Management of these businesses requires entrepreneurial management in fields where current generations of policyholders have not had the opportunity to vote with their premiums for their faith in the offices' abilities. True they may wish to share in the benefits, but almost certainly not the risks. Such activities, whilst they may well make good sense from the point of view of a Life Office trying to market financial services, may be totally inappropriate for its Life Fund Investment. Certainly one would need to question a life fund manager who felt it appropriate to invest a large part of the clients' money in, say, estate agency to the extent necessary to achieve a national network.

Given the likely size of investment required to establish diverse operations of this type the use of policyholders' funds for finance can carry risks similar to those involved where a sizeable part of the fund is invested in a single company. Legislation effectively prevents this latter abuse except in situations where substantial surpluses exist. The wider application of Section 16 of the Insurance Companies Act 1982, explained in "Repackaging the Life Office" (1), effectively restricts the former.

Where the 'investment' is effectively in other long term insurance risks the issue is perhaps more clouded, but the author would claim that where the insurance risks are fundamentally different, perhaps by reason of the nature of the risk, the arguments against investing policyholders' money in these areas are similar to those applying to other activities.

Further, the more active approach toward bonus distribution which has been adopted and has generally been of benefit to existing policyholders effectively results in greater problems of equity where investments are made which anticipate an initial fall in value. Many acquisitions, and most new company start ups, fall into this category. The new environment imposes more stringent restrictions on the extent to which such activities can be seen as being to the general benefit of current policyholders. The extent of this limit is dependent on the value of free assets available.

Such investment may be right and proper for the shareholders, if they so wish; an investment strategy of policyholders' funds suborned to a marketing strategy on behalf of the shareholders is another matter.

Fundamentally the nature of these activities is generally sufficiently different from the life assurance business that the shared similar risks argument ceases to apply.

This point may seem an irrelevance but in the Participating Proprietary Offices it has held for a long time. As noted in section 4.6 it was usual practise in Composite Insurers to exclude general insurance profits from the calculation of surplus. Rightly or wrongly this was held to be a different type of business and as a result excluded.

Since this was the environment into which most current policyholders bought, it would be inappropriate to reverse that principle without full cognisance of the risks.

7.3 Mutualisation and Associated Issues

The Participating Proprietary Offices were generally established at a time when it was perceived that the interests of both policyholders and shareholders could be served by a common arrangement. For this to achieve a mutually satisfactory result depended heavily on the commonality of interests of the partners in the union.

In times of great strength in the Life Assurance Industry it may appear that the costs to the policyholders of the shareholders participation in the surplus outweighs the benefits. At such times it may be suggested that the office should mutualise its Life Fund, perhaps offering to continue to manage the portfolio on a fee basis. In the event of such a mutualisation the shareholders may expect to receive a price to relinquish their future profits.

Although an interesting exercise, and I am sure that the determination of an equitable price represents a fascinating actuarial issue, this idea is currently purely speculative as it is difficult to see how this desire to mutualise could be achieved other than at the instigation of the shareholders who appear to have little incentive to do so, except to improve short term cash flow. In today's acquisition hungry market they could probably raise more money by sale of their interest to a third party. It is now some years since such a Mutualisation has been successfully attempted.

The risks of mutualisation for the policyholder are in the areas of expense inflation, but also in the present climate, with the active approach to bonus management being displayed, this sort of purchase of future bonus distribution rights would be a highly speculative venture for the policyholders. Further, that we have recently seen a Mutual demutualise itself into a Participating Proprietary Office perhaps suggests that the market pressure is in the other direction.

However, the absence of any other example of a recently created office of this type removes any confidence that this situation is permanent or inevitable. Certainly in the optimism of the early 1980's there have been occasions when a mutualisation of this type could have been considered reasonable for both shareholders and policyholders. With the benefit of hindsight and the experience of the latter part of the 1980's this would probably have been a mistake.

In a similar way, it is possible to consider that the shareholders could offer to buy part of the rights to future bonuses by a payment to policyholders, probably by way of a special reversionary bonus. Thus where the shareholders received 10% of the distributed surplus, a special one-off increase in assets and a corresponding special bonus distribution could be offered in return for an increase in this entitlement to perhaps 20%. In a more dramatic example the shareholders could buy out all future bonus rights and effectively replace the policies with non-profit plans with higher benefits. Again it is difficult to envisage situations in which this would be to the mutual benefit of both parties, and the sanction of the courts would be required.

Although these may appear dramatic, and costly, options it is perhaps interesting to speculate on whether a more sophisticated variant on one or more could be found allowing some fine tuning of the ownership.

Given that the issue of more with-profits business effectively dilutes the share of the existing with-profits policyholders, and at the same time increases the stability of the fund with regard to inflation, it could be thought that a single premium with-profits 'bond' could be issued giving equivalent risk and returns. If such 'bonds' were long term, negotiable, and non-encashable, then in terms of equity, ignoring the legal, fiscal and solvency problems, such bonds would appear similar to fresh capital.

If the legal, fiscal and solvency problems could be resolved, the shareholders could purchase such bonds and may be prepared to pay more than the acceptable market price of equivalent insurance policies to do so. In such a case perhaps the fund should issue these bonds rather than attempt to sell more life policies. Further, if the obvious legal constraints could be overcome and the policyholders' funds allowed to own such capital, then the transfer of such capital in either direction would allow policyholders to increase their stake at times when they feel the shareholders undervalue the asset.

Apart from the difficulties described above, such a proposal, though perhaps theoretically attractive as it allows shareholders and policyholders to take a very positive approach to the benefits of the Participating Proprietary Structure, does imply a major need to consider the protection required for policyholders in this decision making process.

8. MANAGING THE PORTFOLIO

"When your crew have rowed past the Sirens, I will not expressly say to you which of the two ways you ought to take"

8.1 The Objectives and Constraints

The first important factor that must always be remembered in the context of life insurance is that essentially it is long term business. The traditional contracts of Participating Proprietary Offices are long term contracts and they do not usually try to hedge the fact with short term rate guarantees and single premium charging structures.

Accordingly, if the business is long term it is likely that consideration must be given to the long term implications of changes, and in particular to the need to establish strategies which do not leave any of the policyholders exposed to excessive vulnerability to environmental changes.

In considering new strategies to meet changes the Proprietary Office has the flexibility to seek further capital from its shareholders but this must be effected with due regard to the position of policyholders, as well as to the benefits it can offer to the shareholders.

It is worth noting that whilst the problem of managing the portfolio may be long term, the actions which go together to make a solution may be either short, medium or long term, both in their execution and their results.

8.2 The Benefits of Diversification

The recent developments in Life Offices have shown one important new tool to these offices; though in reality it has given greater importance to an existing one. Diversification into other corporate activities allows the Insurer to improve operating effectiveness, and to use its human and other physical resources to achieve economies for both policyholders and shareholders.

For example a company can effectively time share its staff, computers and buildings between activities to ensure that expensive resources are not wasted. Senior management of such companies may not like to think of themselves timeshared like a holiday home in the South of Spain, but if these companies are to recruit and employ the specialist skills needed to manage the diversity of products demanded in the market place, the flexibility offered by this type of solution has major attractions.

8.3 Managing Shifts in Consumer Preference

Although to many the idea of marketing is synonymous with selling, it is generally recognised even by Actuaries, (cf Marketing of Retail Financial Services, M.I. Iqbal (3).), that it has a wider scope. In particular it is possible through the coordinated strategy of Product Design, Pricing, Publicity and Choice of Distribution, to influence not only volumes of business but also the types of business sold. Marketeers may argue that this is fine tuning in an industry that has been slow to awaken to the demands of its market place. However, there is actually very little here that is not just an application of the combined experiences of the actuaries and the sellers of Life Assurance.

In order to protect the rights of existing policyholders the office is limited in the extent to which it can reduce premium rates in response to market pressure. However, given that the future outlook for the fund is at best uncertain, there is probably no single defined point at which it becomes clearly detrimental to write new business. Rather, as price falls, the probability of future new business having a detrimental effect on the bonus prospects of existing business increases.

Based on the various projections of the portfolio with different inflation and other assumptions, the actuary must take a view as to the desirability of writing more business at a given price, and of the prospects of obtaining business at that price, given the rest of the marketing strategy of the company. From the point of view of existing policyholders falling prices would generally make desirable a reduction in new business volume.

In general, a large volume of non-profits business will not help these policyholders in the short term, and major diversification probably carries far greater risks.

However, if the shareholders are willing to invest in such a development, a shareholder-owned expansion into other areas allows the participating fund to decline or reduce its growth without incurring the particular risks of expense inflation normally associated with fund contraction. As prices rise again this process can be reversed to the benefit of existing with-profits policyholders.

More drastic strategies can be employed such as effectively designating segregated funds which would typically be managed as a Unitised With-Profits Fund, although it appears that this approach is rather more permanent and leaves less room to manoeuvre in the future unless the original with-profits fund remains open. The implications of managing two competing with-profits based contract ranges with different underlying approaches requires careful consideration.

Managing business volumes of product type, and in particular managing the proportion of business which flows into the with-profits fund, gives greater flexibility as a short term action albeit with long term implications that need attention.

8.4 Managing Changes in Investment Conditions

Before concluding, it is appropriate to consider other less controversial aspects of the management of these offices, which will generally correspond to similar management action on behalf of Mutual Insurance Companies.

The investment strategy needs to be able to take appropriate advantage of the opportunities available, as well as the requirements of the liabilities. In particular, matching assets to existing liabilities is not just a matter of contractual rights and reasonable expectations of policyholders, it also includes the expenses associated with providing those rights, an important factor especially if with-profits funds decline in size.

The range of investment possibilities available today is substantially greater than, say, 10 years ago and the well planned use of this range enables risks to the policyholders to be substantially, but not completely, reduced.

A more sensitive and better informed response to changes in investment performance is possible with the availability of Asset Share models coupled with the flexible use of Terminal Bonuses. However, before seeking perfect investment equity between policyholders from one day to the next, the actuary must decide what is this elusive smoothing which With-Profits policyholders value so much. I believe it is more than just a guaranteed basic cash value. If not, then the lower financing requirements implicit in modern designs of unit linked contracts probably mean that a day to day equity could be provided more cheaply by other types of contract.

Further the use of a Model Office allows the actuary and the management of the office to test various alternative scenarios to arrive at a controlled pattern of business flow which is resilient to conditions tested. This, for example, allows the actuary to consider the level of expense inflation which the fund could tolerate at a given business volume.

9. CONCLUSION

"As for Odysseus he finished first his handling and scrutiny of the bow; then, ... did Odysseus string the bow tranquilly."

Whilst Odysseus was able to conclude his journey by slaughtering his competitors and being reunited with his wife, the position for the Proprietary Participating Offices is that they must continue to face up to more challenges in an ever changing world.

The flexibility of the capital structure of the Participating Proprietary Offices gives them the opportunity to face these changes in the markets in which they operate, with optimism.

The extent of that optimism is dependent on their ability to manage the changing environment and to adopt sound strategies for change, hopefully coupled with the ability to learn from their experiences of such changes to date.

BIBLIOGRAPHY

"Some words, Telemachus, you will find in your own heart unaided: others a god will prompt you with"

1. Repackaging the Life Office by A. Kerr and I.T. Rogers, presented to the Staple Inn Actuarial Society, 12th April, 1988.

2. With Profits Without Mystery by R.H. Ranson and C.P. Headdon, presented to the Institute of Actuaries, 20th March, 1989. (JIA Volume 116 Part III.)

3. Marketing of Retail Financial Services by M.I. Iqbal, presented to the Institute of Actuaries, 22nd February, 1988. (JIA Volume 115 Part III p. 405 etseq.)

Quotations in the chapter headings and under the title are taken from Walter Shewring's translation of Homer's Odyssey (Oxford University Press 1980) and are made with the translator's permission.