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THE ROLE AND RESPONSIBILITIES OF ACTUARIES IN THE DEFINED CONTRIBUTION ENVIRONMENT IN THE UNITED KINGDOM

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ABSTRACT

This paper takes an overview of the potential roles and responsibilities of pension scheme actuaries in the United Kingdom in relation to defined contribution (DC) schemes.

First it summarises briefly the background to U.K. retirement provision and in particular the move to DC arrangements. The paper then compares and contrasts the pension scheme actuary's current role in both defined benefit (DB) and DC schemes. This is then developed to consider what further statutory roles there may be for actuaries in DC schemes.

The paper challenges the profession to champion the public interest by seeking clarity and simplification, and finally considers the impact on actuarial employment.

KEYWORDS

Scheme Actuary; Pension Schemes; Defined Benefit; Defined Contribution; Public Interest

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1. INTRODUCTION

1.1 A Working Party was set up in October 1997 by the Technical Support and Research Committee of the Pensions Board to consider the roles and responsibilities of actuaries in the defined contribution (DC) environment. The Working Party initially reported in July 1998, and the report was subsequently revised following comments from the Pensions Board. One of the report's principal recommendations was that the report be widely distributed to seek further views from the profession.

1.2. The paper has been tailored for presentation to the Institute, but, on the whole, the content is largely unchanged from that report, except for an appendix on consumer education, which has been drafted by M. A. Pomery (Chair of the Pensions Board).

1.3 The paper is therefore set at a reasonably high level, and hence certain proposals will merit further consideration and debate.

1.4 The proposals presented in the paper are not those of the Pensions Board, but rather those of the Working Party. Even then there was not full agreement on all aspects, but it was felt helpful to present these proposals to encourage further debate.

2. BACKGROUND

2.1 *General*

2.1.1 The nature of retirement provision within a country reflects the culture of that country, and changes naturally as the underlying cultural values and imperatives change.

2.1.2 Thus it was that, in the 1960s and the 1970s, final salary pension provision came to dominate in the United Kingdom. This was a time during which the values of loyalty and collectivism were to the fore, and both employees and employers were likely to view the relationship as being a long-term one. Employers often felt a responsibility to 'reward' long-service employees by maintaining a defined proportion of their standard of living into retirement.

2.1.3 Initially the economic backdrop was stable, and therefore the dominant pension structures were essentially career average type plans of one form or another. However, during the 1960s economic uncertainty crept into the equation, and retirement provision switched to a final salary format to protect employees against the unpredictability of inflation. Although it is difficult to predict the time lag that will occur between economic and cultural change and the adaptation of retirement provision, it is arguably inevitable that one will follow the other.

2.1.4 Fiscal treatment then favoured final salary pensions, but, by that stage, tax and social security policy were merely reinforcing the values of society. The strength of the implied social contract may be seen from the relatively penal treatment given to early leavers, who, by implication, had broken the contract.

2.1.5 By the late 1970s virtually all corporate pensions (other than arrangements for only a few people) were final salary plans. This was true even in those industries in which turnover is typically high and the argument for a final salary plan is weak.

2.1.6 At the end of the 1970s a sea change occurred. Collectivism was seen to be a bad thing, and society changed to embrace the power of the individual.

2.1.7 From an actuarial perspective, a large group may sensibly accept a higher level of risk than a group which is small, but otherwise identical. However, the structure of retirement provision is not necessarily logical, and a change in the values of society can lead to changes to pensions.

2.1.8 One of the principal catalysts for change was the recession of the 1980s, and the consequent transfer of benefit control, in some cases, from the human resource function to the finance function. This precipitated the shedding of risk by companies and its transfer to the employees, but, in the longer term, the change was probably inevitable.

2.1.9 In common with governments all over the world, the U.K. Government, too, has become uncomfortably conscious of the increasing burden that an unfunded defined benefit (DB) state pension may represent as the population ages. This prompted the development of DC vehicles for contracting-out for the first time in 1988. Ten years on, the current Government is looking at options to move the second tier of state pensions to a funded DC basis. However, it should be noted that the U.K. is relatively well placed amongst the international community with regard to the potential increasing burden of state provision.

2.1.10 The tide of change is undeniable. New plans, now established, are almost invariably DC (unless there are compelling factors that force the employer to maintain a DB approach).

2.1.11 However, the rate of conversion from DB to DC of established pension plans has not been as high as predicted in many quarters just a few years ago. There are many reasons for this, including:

— The existence of surplus in DB plans has masked the underlying ongoing cost and helped to keep down the balancing contribution rate. The introduction of the Minimum Funding Requirement (MFR), together with the loss of advance corporation tax (ACT) reclamation, may eliminate this reason.
— There is a natural inertia that acts against change.
— The timescale for change may have been seriously understated.
— We may not be able to measure the changes until after they have occurred (due to the time lag in the recording of those changes in survey material).

2.1.12 The pace and extent of the change may be debated, but the direction of change and that it is happening are both undeniable.

2.2 *The DB to DC Conversion Process*

2.2.1 Companies do not start with clean sheets, and there are many issues to manage in the conversion process. It is important for companies to be clear on their objectives in making the switch, and that they put the advantages and disadvantages fairly to employees. There is a potential role for actuaries in helping employers in this regard. As part of this process, it is important that the benefits projected under the DC plan are based on comparable assumptions to those projected under the final salary plan. Sufficient time and attention must be given to the wind-up of the DB plan. The use of surplus in the DB plan is often a difficult and contentious issue, the resolution of which is likely to impact materially on whether employee expectations can be maintained.

2.2.2 The essence of a switch from DB to DC is the transfer of risk from the employer to the employee. In this context, risk is the volatility of the standard of living that each employee can maintain in retirement by virtue of being a member of the pension plan. It is important that employees understand this message, and the actuarial profession has a pivotal role to play in this. Other objectives (for example a desire by the employer to reduce pension cost) often complicate the process. However, these other factors should not be allowed to obscure the nature of risk transfer.

2.3 *DC Projections*

Projections may be carried out for various purposes (e.g. to test maximum funding, to test for the maintenance of prior expectations or to predict what proportion the emerging benefit will be to the final projected salary). It is legitimate that projection assumptions should vary with the purpose of the projection, but it is important, in all cases, that the nature of the projection is understood and that the projection assumptions are consistent with the purpose.

2.4 *DC Investment Policy*

2.4.1 In a DB plan the investment is structured collectively. This has implications for the asset allocation and portfolio volatility. By necessity, DC plans are structured individually. This means that the investment allocation should vary from member to member with factors such as age, risk aversion, personal circumstances and so on.

2.4.2 The trustees need to decide on the type and range of funds to be offered; whether individuals have wide or restricted choices; whether lifestyle portfolios will be offered or even insisted upon; whether to offer a drawdown facility; and so on.

2.4.3 The trustees must also decide if they should advise the members on investment choice where they can do so legally (and thereby incur the risk of subsequent litigation), and, if so, who should advise the trustees. A significant criticism of the DC pension movement in the United States of America in recent years has been that insufficient education in the portfolio construction has been given to employees. This has led to portfolios that are too risk averse and, therefore, in the long term, are likely to result in lower emerging pensions than might have been expected, based on initial projections.

2.4.4 There is an important need and a role for actuaries, to ensure that employees have access to adequate education and enabling tools to plan their investment portfolios in a controlled and conscious manner.

2.5 *The Range of Options*

2.5.1 The range of options is wide, complex and sophisticated. It is important that the actuarial profession rises to the challenges of design and communication needs, both for the transition process and within the ongoing DC environment.

2.5.2 Also, the need for education and clear explanation is made even more pronounced, as traditional final salary and DC represent the polar extremes of approach. There are other intermediate options.

2.5.3 Although the transfer of investment risk is the principal change in the switch from final salary to DC, there is also a change away from final earnings to career earnings. To this extent, DC has some similarities with career average DB.

2.5.4 One option which is well established in the U.S.A. is the cash balance plan, which can be regarded as a career average DB scheme. This type of plan has characteristics of both DB and DC. In the U.S.A. it is viewed as a DB plan that looks like a DC plan. The employees have an account balance that accumulates as contributions are credited, and purchase annuities at retirement. The account balance roll-up is declared by the employer rather as an insurance company would operate a deposit administration fund. To that extent, the plan looks like DC. However, the crediting of the employee's account is not dependent or coincident with the actual payment of contributions. The employer is free — within limits — to underfund or overfund, provided that there is enough money in the plan in the long term.

2.5.5 The new Swedish second tier social security is based on this model, and in Germany there is interest in book reserve DC plans (which are, in effect, the same concept). It may well be that future developments will be based on a synthesis of both DB and DC, attempting to capitalise on the advantages of each system. If this does happen, opportunities will exist for the actuarial profession.

2.5.6 Through the rest of this paper we concentrate on the issues raised by the switch from DB to DC and on the role of the profession in respect of ongoing advice to DC plans. However, it must also be borne in mind that DB plans that are not final pay related (of which cash balance is just one example) might well be at least as prevalent as pure DC in the future, and the profession should categorise these plans into types, and consider the actuarial role in them.

3. Roles and Responsibilities of Pensions Actuaries

3.1 *DB Roles and Responsibilities*

3.1.1 The actuary's role is, primarily, to provide advice to the trustees and employer on contribution rates and funding levels, in conjunction with the requirements to provide certain statutory certificates. Furthermore, the actuary advises on the bases to be used when members exercise options under the scheme. Frequently scheme rules require the actuary to be consulted in the event of bulk transfers and benefit augmentations.

3.1.2 The trustees of a DB scheme must appoint a Scheme Actuary.

3.1.3 The actuary carries out a valuation at least once every three years, for the following purposes:

- to set the contribution rate for the period following the valuation; this contribution rate should cover future benefits as they accrue and take account of any difference between the values of the assets and accrued liabilities on the assumption that the scheme continues;
- to establish the extent to which the assets are adequate to meet the liabilities accrued to the valuation date, again on the assumption that the scheme continues;
- to check if there is a surplus on the statutory basis (as defined in regulations), and, if so, to present a range of options to the trustees and company;
- to check whether the value of the assets exceeds the value of the liabilities on the MFR basis and to certify a contribution rate which will ensure that the MFR is satisfied within the required time limits; and

— to ensure that the scheme can meet its contracting-out requirements, if appropriate.

3.1.4 The actuary is required to produce a number of certificates:
— an actuarial statement which must be included in the trustees' annual report;
— a MFR certificate and schedule of contributions;
— a certificate for the Inland Revenue in relation to the statutory surplus requirements; and
— if the scheme is contracted out, a certificate confirming that the scheme satisfies the statutory standard.

3.1.5 In addition, pension costs shown in company accounts are required to comply with SSAP24 and also with the parent company's GAAP, if different. For DB schemes, actuarial input is required.

3.1.6 The trustees will also normally consult the actuary when deciding the rates to be used when members exercise options under the scheme. These will include the factors used to convert pension to cash at retirement and the extent to which a pension should be reduced (or increased) on early (or late) retirement. If there is an option to exchange part of a member's pension for a dependant's pension, the actuary will also be involved in setting the basis. Under preservation regulations, the actuary must determine the basis for calculating the cash equivalent of the deferred benefits when a member transfers benefits from the scheme.

3.1.7 The actuary will often be involved in providing advice on the scheme benefit design. When a scheme is established, the actuary will help the employer choose benefits which are appropriate for the workforce within acceptable costs. This can take into account the whole employee benefit package, providing benefits on retirement, ill health, injury or death.

3.1.8 From time to time the benefit structure will be reviewed, to take account of prevailing conditions and competitors' benefit packages. Legislation can also be a driver for alterations to the benefit structure, e.g. changes to the contracting-out requirements in April 1997 necessitated schemes' compliance with the reference scheme test. The employer and trustees will usually rely on the actuary for guidance. Actuarial certification is required if any changes are made which adversely affect accrued benefits, if members' consents are not obtained.

3.1.9 Sometimes the employer will want to improve the benefits for one or more members without changing the scheme structure. The actuary will calculate the cost of any such augmentations. If there is a scheme surplus, which the trustees/employer wish to use to enhance existing benefits, the actuary can suggest options and calculate costs.

3.1.10 The actuary will also become involved where bulk transfer values have to be calculated. This is primarily in connection with company restructuring. The actuary will often advise employers and/or trustees on the appropriateness of the pension clauses in any sale and purchase agreements.

3.1.11 Furthermore, if transfer values are to be paid without member consent, the actuary to the transferring scheme must sign the necessary certificate.

3.1.12 Another area where the actuary can be involved in is asset/liability modelling. This can be used to set investment constraints or to quantify the levels of risk associated with different asset profiles.

3.1.13 The actuary may also help the employer and trustees communicate and explain to members and potential members the value of the scheme and what it means to them. If there is a scheme alteration (for example when equalising benefits), the actuary may help explain to the members the reasons for the change and the impact on their benefits.

3.1.14 A final responsibility of the actuary is to 'blow the whistle' to the Occupational Pensions Regulatory Authority (Opra) if there is a breach of the Pension Act requirements.

3.2 *DC Roles and Responsibilities*

3.2.1 Under a DC scheme, there are fewer purely technical issues. For example, once a DC scheme is set up the contribution rate is known, but under a DB scheme actuarial skills and judgement are required to calculate the contribution rate. However, under a DC scheme there is the same fundamental issue of ensuring that the scheme meets its objectives, typically to provide the members with appropriate benefits at an acceptable cost.

3.2.2 The actuary can provide assistance to the employer and the trustees. However, as other professionals, for example accountants and lawyers, also provide advice, it is important that actuaries use their experience, knowledge and insight to add extra value to the communication. There are many areas where this is possible:

— The actuary can help in the scheme design by demonstrating how different designs can meet different objectives. For example, the use of tiered contribution structures, different member categories, the provision of death and ill health benefits, integration with the state scheme. The actuary should be able to demonstrate the effect of future conditions on these benefits, and hence help assess risk.

— Under a DC arrangement, the targeting of one benefit, for example on normal retirement from active service, has implications for benefits arising in other situations, e.g. retiring early. The actuary is well equipped to help the client understand the financial implications.

— The actuary can also illustrate the impact on future cash flow, for the employer, of different tiered contribution structures, and how this will be affected by levels of recruitment, staff turnover and salary progression.

3.2.3 There are some technical requirements:

— Non-insured, non-earmarked schemes are subject to surplus regulations, and are, therefore, subject to valuation on the statutory basis.

— Preservation requirements apply to schemes with contribution rates which vary with age or length of service; they must uniformly accrue benefits if the contribution structure does not satisfy tests set out in regulations.
— A maximum funding check is generally carried out every three years.

3.2.4 Other areas where actuarial techniques may be used are:
— A review of the continued ability of the scheme to meet its original objectives. If the scheme is aiming to provide broad levels of benefit, these can be reviewed in the light of changing economic circumstances and changing scheme demographics.
— The provision of illustrations to members, in a meaningful manner, of the benefits prospectively available. It is important that members have realistic expectations and understand the risks associated with DC arrangements.
— The actuary can advise on appropriate investment selection and methods for minimising various risks. Such advice is costly to provide on an individual basis. However, it may be provided in other forms, for example through generic advice to the trustees for onward communication to members or by retirement planning presentations, design of scheme literature and software.
— The actuary can advise on the design of suitable investment vehicles. For example, there may be a need for investments to be automatically switched from an equity basis to a gilt basis as members approach retirement.
— If the member is to be allowed to draw income from the fund instead of securing an annuity, then the level of income must be reviewed periodically.

3.2.5 As with DB schemes, there is a role for the actuary in providing advice in connection with company restructurings, e.g. the sale of a subsidiary. However, the actuarial role in the DC case is usually diminished from that with a DB scheme.

3.3 *Preliminary Conclusions*

3.3.1 There is an increased importance for members to understand their benefits properly and to take an active part in planning for their own retirement. As the risks are switched from the employer to the members, there is a greater need for advice to be communicated to the members. Much of this advice is financial and actuarial in nature, and the actuary is well placed to give it.

3.3.2 However, professions other than the actuarial profession are also able to advise on many of the needs associated with DC schemes. The challenge to the profession will be to demonstrate the unique added value that actuaries can bring to the process.

3.3.3 Traditionally, the strength of the profession has been to understand the complex interaction between the many factors involved in projecting the progress of financial systems. These factors include both the probabilities of certain events occurring and also how the various expected values and probabilities depend on each other. As a profession, we must capitalise on this essential strength of actuarial judgement and demonstrate the intelligent projection of the future based on the past, and how it is expected to be modified going forward.

4. A Statutory Role for Actuaries in the DC Environment

4.1 *Possible Requirements*

4.1.1 As discussed in Section 3, there is, at present, a significant statutory role for actuaries in the DB, but not in the DC environment.

4.1.2 When DB schemes started, there was little by way of legislative control or a statutory role for actuaries. These grew steadily as DB schemes became more prevalent, and more control was considered necessary.

4.1.3 Although the statutory role for actuaries may always be greater in the DB environment, one might expect legislative control and statutory roles to increase in the DC environment as the proportion of employers providing DC pension arrangements increases over the years. The potential switch of the second tier state pension from DB to DC (SERPS to stakeholder pensions) may increase pressures in this direction.

4.1.4 The main scope for a statutory role is analogous to that in a DB scheme, and covers the validity of the balance between contribution levels and benefits. In a DB scheme, the actuary certifies that the contribution levels proposed are appropriate to the benefits promised. In a DC scheme, the role is likely to be to certify that the benefits projected to emerge are consistent with the intended contribution level.

4.1.5 The extent of the statutory role for actuaries could vary between occupational schemes and personal pensions, although there is little logic to suggest that this should be the case.

4.1.6 Two of the main areas in which statutory roles are likely to develop are with regard to the 'reasonable expectations' and kite-marking concepts. These concepts are discussed in Sections 4.2 and 4.3.

4.1.7 In Section 4.4 onwards we develop these themes for target funded DC arrangements and in the DB to DC conversion process.

4.2 *Reasonable Expectations*

4.2.1 Quotations on regulatory (e.g. PIA) bases have value in ensuring consistency of approach across different product providers, but they give little indication as to the chances of expectations/goals being achieved nor of risk/reward issues.

4.2.2 There is a role for actuaries, which should include some latitude for individual professional judgement, in projecting the range of benefits likely to emerge from a DC arrangement (whether occupational or personal pension). In particular, the actuary should be expected to incorporate into the projections the state of the investment markets at the time of projection (e.g. via some market value adjustment factor), as well as the impact of life assurance cover on the proportion of funding that is applied to retirement benefits.

4.2.3 As DC pension arrangements become the main source of retirement income for more of the population, the ability to plan with a reasonable degree of certainty will become more important.

4.2.4 Risk/reward issues must be given more prominence. Lifestyling of investments later in one's career and other 'stabiliser' type products are becoming more commonplace. Nevertheless, there is little guidance as to whether the price paid (in the form of lost yield) is reasonable for the greater certainty of retirement income.

4.2.5 While regulation may have a larger role to play in this respect, the actuarial profession might have some statutory role in the communication of projections, to ensure that participants in any DC arrangement receive financial information about their prospective benefits in a manner that is not misleading. The actuary may also be required to ensure that any assumptions about the investment approach are clearly explained, along with the implications of deviating from this path.

4.2.6 To the extent that there is a demand for drawdown, there is a potential statutory role for the actuarial profession in advising on the financial implications of this practice, and ensuring that any advice given by sponsoring employers or trustees is backed up by expert analysis.

4.3 *Kite-Marking*

4.3.1 Kite-marking could provide a statutory role for actuaries, depending on the attributes which are being assessed in the kite-marking process.

4.3.2 The profile of kite-marking has been increased through recent government reference to the possible kite-marking of ISAs and stakeholder pensions. Recent statements have suggested that kite-marking of ISAs will focus on charges, accessibility of funds and contract terms (CAT). These may be important attributes, but they miss out on a critical attribute — the quality of the investment manager — and possibly will lead to a false sense of security. In particular, where the investment manager is making available a range of funds or options, the suitability of those options, and the investment manager's capacity to offer expertise in the full range, will need to be addressed.

4.3.3 If there is a kite-mark system, it is important that it recognises that there will be differences in product terms, for example an equity-based product, where added value is being sought through active management, will inevitably have higher charges than an index-tracking product. The important point is whether the charges are reasonable for the services being offered. Whether or not the chances of an increased investment return through active management are sufficient to make the extra costs worthwhile is a different point, which comes under the heading of 'risk/reward'. The bigger risk (certainly when one is close to retirement, and ignoring draw down possibilities) is being in equities instead of in gilts/cash as opposed to being in an active rather than in a passive equity fund.

4.4 *Target Funding DC Arrangements*

4.4.1 Target funding in DC arrangements covers a whole spectrum of design types. At one extreme, this would be a one-off comparison of the proceeds of the DC scheme benefits against a given accrual rate in a DB scheme, with the results determining the contribution rate for each age or age range, possibly rounded to the nearer 1%, say. At the other extreme, there could be an individually calculated rate for each member, reviewed annually or triennially, with advice on investment options, and careful consideration, as retirement approaches, of the lifestyling options, in order to minimise the risk of changes in annuity rates not delivering the expected pension.

4.4.2 Target funding only becomes a DB arrangement if the pension to be provided, as a percentage of final pay, is actually promised in the rules of the scheme. More commonly it is merely an expectation, and, indeed, that expectation may become less well defined, the longer the time goes on from the point at which conversion was made from the DB arrangement.

4.4.3 A possible role for the actuary is in kite-marking the review process and the investment choices available to members. For the kite-mark to be given, the actuary would have to certify that a set of minimum standards had been met in making the calculations and giving written advice to members as to the expected pension, the variability in the expected pension with regard to the investment vehicle chosen, and the investment choices available.

4.4.4 No additional recommendations are made about a statutory role for actuaries in target funded DC arrangements

4.5 *The Actuary's Role in a DB to DC Conversion Process*

4.5.1 The actuary will often have a role, at present, in the conversion process from DB to DC, for example with a GN19 certificate if the old scheme winds up, or possibly a Section 67 certificate if the scheme continues with future benefits being under a DC arrangement.

4.5.2 An area in which actuaries could add value would also be some form of certification concerning the value of the future DC benefits compared with the DB benefits which previously accrued. It is to be hoped that it would be normal practice amongst employers to give pension scheme members frank information about the reasons for switching from DB to DC, and the relative value of the two arrangements. However, it is felt that, in some situations, the work force may be led to believe that they will be no worse off, or at least most of them are likely to be no worse off, by the new DC arrangement, when this may not be the case, due to the relatively low contribution rate adopted.

4.5.3 Consideration could be given to the introduction of some form of certification which the employer could apply for, in which the actuary would certify, in some way, that the value of future DC benefit was for a certain proportion of the membership, likely to be at least equal in value to a specified percentage of the DB benefit which it replaced. It is unlikely that there would be any compulsion on an employer to obtain such a certification, but the absence of it would form a warning to the workforce. The question arises as to the actuarial basis to be used for such a comparison.

4.5.4 Following on from this is the possibility of a role for an actuary to provide some form of certification concerning the risk benefits; in particular on how the benefits on the day after conversion to DC compare with those that applied immediately before conversion.

4.5.5 There could also be a form of certificate which the trustees and/or employer could request on a periodic basis, in which the actuary gave his opinion on the expected pension which the DC arrangement would provide. The purpose of this certificate would be to reassure members and their representatives concerning the value of the benefit provided. The certification could cover the expected pension and also the risk of it not being delivered, with particular reference to the investment of the contributions, and perhaps the suitability of any lifestyling arrangements.

4.5.6 The provision of an ongoing certificate is perhaps more difficult, e.g. the conversion to DC may have changed the decisions that the employer makes with regard to, for example, discretionary pension increases. It may, therefore, be more meaningful to compare the overall projection (of combined accrued and future accruals) against a standard pension, perhaps some form of NAPF national measure. In a wider context, this also opens the way for all plans (DB or DC) to be expressed as a percentage of the national standard plan (where the percentage may, or may not, vary by individual).

4.6 *Projections*

4.6.1 A further potential role for actuaries in the DC environment could be in the projections which are provided for the pension. The PIA projections have a particular function in comparing the charges of different product providers. They are less helpful in giving the members of pension schemes a useful estimate as to what their pensions are likely to be as percentage of final pay, or the likely fluctuation in the amount, or how expected pension depends on the investment funds selected.

4.6.2 At the present time, a member who is close to retirement, but not so close that current annuity rates are used, could be led to believe by the PIA projections that a given level of fund could produce a significantly higher annuity than can currently be obtained in the market, if the highest growth rate assumption is used.

4.6.3 It is also important to bear in mind that many retirements are not anticipated much in advance. Thus, this adds weight to the argument that individual projections should communicate exposure to different retirement dates.

4.6.4 One possible area of work for the profession is to seek to improve the sophistication of these projections, although this would have the disadvantage of administrative complexity, and therefore cost.

4.6.5 Another option would be to develop a different form of projection, whose primary purpose was not to compare one product provider with another, but to advise clients on the range of pensions which could be expected from a given contribution rate, taking into account inflation, and also how the expected pension, and the variability of the expected pension, would depend on the funds selected.

4.7 *Advantages and Disadvantages*

4.7.1 There are undoubted advantages in controls being introduced into the DC environment. The retirement income of many people is at risk. It is difficult for the 'man in the street' to judge the level of contributions required to secure an adequate retirement income. Anecdotal evidence to date suggests that participants in DC arrangements have little understanding of the cost of delivering adequate pensions or of the implications of different investment choices on the likely level of benefits in real terms.

4.7.2 Control of the professionals involved in the selling and administration of savings products is required. Much of the control required focuses on risk/reward concepts. The actuary's training in financial projections, demographics and, specifically, in risk issues make him well suited to taking on many of the statutory roles.

4.7.3 There are risks to the actuarial profession in taking on such statutory roles. Actuaries could be blamed if DC arrangements fail to deliver adequate retirement income, and actuaries are seen to be closely associated with the DC movement. This is not an adequate reason to shy away from providing the statutory support that is clearly required.

4.8 *Preliminary Conclusions*

4.8.1 The statutory role for actuaries in the DC environment should, and is likely to, grow from small beginnings.

4.8.2 Clearly, however, there will be a range of opinions as to the extent to which such control is required, and the extent to which this control should be exercised by actuaries.

5. Actuaries and the Public Interest

5.1 *Championing Clarity and Simplification*

5.1.1 Financial planning is not well understood by the majority of the public. Planning for retirement seems to pose particular difficulties, partly because retirement is a long way off for many (and too soon for others!), and partly because of the complexity of modern DB arrangements. Government regulation to avoid tax abuse further complicates issues. Members of the public often underestimate the amounts needed to provide for a 'decent' pension in retirement.

5.1.2 The actuarial profession, as a whole, has an important role to play in encouraging better understanding of pensions issues throughout society. The profession should ensure that the public receives the benefit of the best possible advice. Actuaries should be seen to champion the public interest by seeking clarity and simplification. If we do not, others will seek to take this role from us.

5.2 *Contrasting DB and DC Arrangements*

5.2.1 One important topic of interest to members of the public and to government will be judging the relative merits of different sorts of benefit delivery systems.

5.2.2 The membership of a good final salary pension scheme is still considered by many to be an effective way of providing retirement benefits for some types of employees. These include ones who remain employed by the same employer throughout their working lives, on a career path that progresses steadily upwards. Many actuaries express a preference, themselves, to remain in DB arrangements, presumably because they think that they correspond relatively well with this role model.

5.2.3 However, DB schemes are increasingly mistrusted by many for mass provision of benefits. This is partly because of a perceived reduction in general job security and an increase in job mobility, making the above role model rare. Several widely publicised problems historically afflicting DB arrangements have not helped, including:

(a) Longer periods of vesting before preservation in the 1970s and 1980s meant that employees often merely received a return of their own contributions plus interest when they left private sector funds. In consequence, they lost the benefit of employers' contributions, and their pension, if viewed as akin to deferred pay, was devalued.
(b) Where deferred rights were granted, it was not common practice for these rights to be regularly increased to take account of inflation. Against a background of high inflation in the 1970s and early 1980s, this led to widespread condemnation in the press, and resulting legislation.

5.2.4 However, this does not mean that DC schemes are flawless. Indeed, many older DB schemes were originally set up in response to the perceived failings of earlier DC arrangements.

5.2.5 The 'pensions mis-selling scandal' has dented public confidence in the pensions industry, and, indeed, in much of the financial services industry. However, the evidence supports the view that it has highlighted the importance of planning for retirement. Many employees opted out of good employer schemes and selected personal pensions to which their company did not contribute. Although this was partly because of aggressive (or perhaps just misguided) sales techniques, it also reflects the difficulty that some employees had in understanding the value of the pension benefits that they were foregoing. In DC arrangements, the relative values of the members' and the employers' contributions are usually much more apparent.

5.2.6 Actuaries need to be careful how they deliver specific advice on the relative merits of DB and DC arrangements. Actuaries have a direct responsibility to their clients when providing them with advice. They also have a responsibility to ensure that their advice is not misunderstood or misconstrued by third parties, who might reasonably gain access to that advice and act on it.

5.2.7 In particular, suppose a company is switching from DB to DC and is suggesting to its employees that the new scheme is much better than the old one. Actuaries should be very careful not to give the impression of endorsing this message if it is not true. Even if, overall, the change is neutral, most DB schemes contain cross-subsidies (e.g. between high-fliers and those whose salaries rise more slowly), so that it is almost inevitable that change will benefit some to the detriment of others.

5.3 *Influencing Public Opinion*

5.3.1 The profession, as a whole, needs to identify effective ways of influencing government and public discussion of pension issues, so as to ensure that the shift away from DB to DC arrangements is the subject of informed debate.

5.3.2 Actuaries should have a role in:
- commenting on the pros and cons of different sorts of benefit delivery systems; and
- commenting on how existing DB arrangements can be made simpler to understand.

5.4 *Maintaining the Influence of Actuaries within the Industry*

5.4.1 The profession should also encourage actuaries within relevant parts of the pensions industry to take responsible positions (within their appropriate level of competency), to enhance the overall standing of the profession by demonstrating the added value that actuaries can bring, whilst recognising the contribution of others.

5.4.2 Possible suggestions include:

(a) *For investment managers/pension providers*

Encourage independent investment management houses to route their DC pension business through a life office subsidiary, and to develop the role of actuaries within such organisations (e.g. the Appointed Actuary role). This would develop specific statutory roles for actuaries.

Encourage the same sorts of responsibility structures within the mutual pension providers being proposed by the Government for stakeholder pensions.

(b) *For pension schemes*

Possible roles for Scheme Actuaries are discussed in Section 4. A further possibility is that actuaries should have responsibility to check that benefits are being administered effectively. It is questionable whether actuaries would want this sort of responsibility. Maybe there could be a formal responsibility for the actuary to sign off on communications to members.

5.5 *Preliminary Conclusions*

5.5.1 Actuaries should be seen to champion the public interest, by seeking clarity and simplification.

5.5.2 The profession should seek to ensure that it identifies ways of helping the Government and the public to understand fully the many complex issues, such as the risk/reward analysis, related to the choice of pension type.

6. THE EFFECT ON THE PENSIONS ACTUARY

6.1 *Skill Sets*

The move from DB to DC will inevitably change the set of skills required by a pensions actuary in order to be able to continue to service his clients, although one would expect the changes to be evolutionary rather than revolutionary.

6.2 *Technical Skills*

6.2.1 With DB schemes, the actuary's traditional role has been concerned with advice on solvency, contribution rates, sale and purchase agreements and so forth, as detailed in Section 3. The actuary will also have been involved in scheme wind-ups, and this role will temporarily expand as schemes convert to DC.

6.2.2 A significant role for pensions actuaries in the future will be the design, or assistance in the design, of the replacement DC plan.

6.2.3 For a small insured scheme, the DC plan may be little more than an off-the-shelf insurance product, with contributions of a level percentage of pay for each member.

6.2.4 However, for larger schemes, in particular, the actuary can add value by a more sophisticated design of the arrangement. There is scope for advising on:

— contribution levels to attempt to mirror the defined benefits being given up;
— age-related contributions or tiered contributions; integration with state benefits; and
— hybrid schemes combining features of both DC and DB.

6.2.5 At the initial stage of setting up the DC arrangement, technical skills would be needed to advise on:

— the appropriate ages for contracting out of SERPS;
— the use of surplus, if any; and
— the design of the risk benefits, such as ill-health, and early retirement, which requires a different approach in the DC environment.

6.2.6 Technical input on an ongoing basis would include:

— the Inland Revenue maximum evaluation for non-insured schemes;
— monitoring compliance with the preservation regulations for tiered contribution schemes, if appropriate;
— for target funded arrangements, a periodic review against objectives, especially for members near retirement age; and

— the suitability of investment and investment profiles.

6.2.7 At present, many DC schemes use the fund at retirement to purchase an annuity; as these schemes mature there will be an increased tendency to pay the pension from the scheme's assets, which requires actuarial input.

6.2.8 Many schemes also retain some form of DB element after the DC scheme is put in place, for example, the scheme may only provide DC for new entrants, or there may be an underpin for some members.

6.3 *Communications and Advice*

6.3.1 Communication skills will have increased importance in the DC environment. In particular, the actuary will need to explain the implications of the change to an employer. A particular difficulty may be that the actuary needs to take particular care in not being seen to endorse a message that contributions at a reduced level are expected to produce no worse benefits.

6.3.2 Notwithstanding earlier comments, the actuary may no longer have a statutory role to fulfil in the scheme, and his input will be valued by the client according to his communication skill.

6.3.3 The actuary may also be called upon to give individual advice to, or on behalf of, members of DC schemes, particularly with regard to investment choices, switching and lifestyling arrangements.

6.3.4 The nature of investment advice given to the employer will also be different from that for a DB arrangement, with emphasis on investment choices which enable the member to have a better chance of meeting his reasonable expectations, as opposed to the main focus being on asset/liability matching and overall investment performance.

6.4 *Systems and Product Design*

6.4.1 A particular area in which an actuary can extend his skill sets is the development of software for making projections for individual members, in order to advise them better on their likely pension as a percentage of final pay. There is also scope for modelling to examine the effect of different investment strategies, particularly close to retirement, on the variability of the pension ultimately delivered.

6.4.2 For actuaries in insurance companies, the move to DC has also created opportunities in product development, with the associated workload of pricing, research and development, administration system design, and so forth. This has been a traditional role of the insurance company actuary, but the development of the DC market is increasing the size and sophistication of the market, and actuaries are increasingly working with other professionals at delivering the products which the market wants.

6.5 *Future Developments*

6.5.1 As yet, DC schemes are neither so numerous nor mature enough to be causing any large shortfalls of the pension delivered below what might have been expected. As DC schemes spread and time goes on, we may find that an increasing proportion of the U.K. population is retiring on pensions below the level that they were led to expect.

6.5.2 The actuarial profession needs to take its responsibilities seriously in ensuring that this does not become the next pensions scandal.

6.5.3 A possible future statutory role for actuaries in DC schemes has been discussed elsewhere in this paper.

6.5.4 The question arises of whether DB schemes make a comeback at the expense of DC schemes.

6.5.5 This remains to be seen. The factors driving schemes towards DC are as follows:

— cost control; the extent to which this continues will depend on the general economic situation;
— apparent lack of appreciation by at least some of the workforce of the value of the DB arrangement; this can be addressed by improved communications, which the actuarial profession is well placed to assist with;
— the increased mobility of the workforce; a job is no longer a job for life, and DC schemes are perceived as offering better, or at least more comprehensible or fairer, benefits for the early leavers; this issue can be addressed by more sophisticated scheme design or simply by types of DB arrangements other than final salary; and
— the increased administrative burden, with layer upon layer of legislation, has made some DB schemes, at least many smaller ones, uneconomical in relation to the administrative effort. The actuarial profession, which also has a potential role here, in seeking to influence legislators on the wisdom of the administrative bureaucracy which is now imposed on schemes with a DB element.

6.5.6 However, many of these factors are more to do with the inadequacy of the benefit design in the DB schemes rather than with the underlying DB nature, and that these inadequacies could be addressed if sentiment swings back to DB.

6.6 *Actuarial Employment*

6.6.1 Long term, the effect of the move to DC will be potentially less security as far as actuarial employment prospects are concerned. The current minimal level of statutory involvement in DC schemes will mean that, while actuaries have a role to play, they will be in competition with non-actuaries who are potentially capable of fulfilling the same role. The trend will be gradual, as, over the short term, a great deal of work remains in setting up DC arrangements, and, where appropriate, winding-up the DB schemes. For schemes which have retained DB arrangements for existing members, the current workload will substantially persist for a further generation. Of more significance, perhaps, is the related issue of the personal pensions mis-selling review, which is currently creating a substantial demand for pensions actuaries, but which must surely produce a glut of appropriately qualified people within a few years.

6.6.2 As actuaries' roles move away from the technical content of triennial DB calculations, more towards advising on the structure of DC arrangements, actuaries working within purely actuarial disciplines will find themselves less well placed to compete with actuaries working in consultancies, whose organisations may be able to offer a more complete range of services.

6.6.3 Overall, this may mean that the workload will be less predictable, with a reduced dependency on regular annual or triennial actuarial reviews.

6.6.4 A further effect may be that, with the increased administrative burden of both DB and DC schemes, companies may decide to outsource their pension scheme administration, in which pension scheme administrators having their own actuarial resources may be well placed to secure actuarial work.

6.6.5 For actuaries in insurance companies, the trend will be away from providing advice on DB schemes and towards product design and other services on DC schemes.

6.6.6 Actuaries will find an increasing role in giving advice and communicating, as opposed to technical work. Authorisation under the Financial Services Act will tend to become more important.

6.7 *Preliminary Conclusions*

It is likely that the move from DB to DC will result in:

(1) a move away from a technical role towards giving advice on scheme design; and
(2) an increased role for actuaries within broader-based companies.

7. CONCLUSIONS

7.1 *Preliminary Conclusions*

The conclusions reached in each section of the report are reiterated below.

7.2 *Roles and Responsibility of Pensions Actuaries*

7.2.1 There is an increased importance for members to understand their benefits properly, and to take an active part in planning for their own retirement. As the risks are switched from the employer to the members, there is a greater need for advice to be communicated to the members, much of this advice is financial and actuarial in nature, and the actuary is well placed to give it.

7.2.2 However, professions other than the actuarial profession are also able to advise on many of the needs associated with DC schemes. The challenge to the profession will be to demonstrate the unique added value that actuaries can bring to the process.

7.2.3 Traditionally, the strength of the profession has been to understand the complex interaction between the many factors involved in projecting the progress of financial systems. These factors include both the probabilities of certain events occurring and also how the various expected values and probabilities depend on each other. As a profession, we must capitalise on this essential strength of actuarial judgement and demonstrate the intelligent projection of the future, based on the past, and how it is expected to be modified going forward.

7.3 *The Statutory Role for Actuaries in the DC Environment*

7.3.1 The statutory role for actuaries in the DC environment should, and is likely to, grow from small beginnings.

7.3.2 Clearly, however, there will be a range of opinions as to the extent to which such control is required and the extent to which this control should be exercised by actuaries.

7.4 *Actuaries and the Public Interest*

7.4.1 Actuaries should be seen to champion the public interest by seeking clarity and simplification.

7.4.2 The profession should seek to ensure that it identifies ways of helping the Government and the public to understand fully the many complex issues, such as the risk/reward analysis related to the choice of pension type.

7.5 *The Effect on the Pensions Actuary*

It is likely that the move from DB to DC will result in:

(1) a move away from a technical role towards giving advice on scheme design; and
(2) an increased role for actuaries within broader-based companies.

APPENDIX

CONSUMER EDUCATION ON PENSIONS MATTERS

A.1 *Introduction*

The issue of consumer education on pensions matters has risen to greater prominence in recent months. The trend to greater numbers of members of occupational DC schemes, coupled with the large numbers of people with personal pensions and the imminent introduction of stakeholder pensions, have combined to highlight the enormous need for better understanding of pensions issues among the general public. The actuarial profession has a potentially important role to play in this process.

A.2 *Pensions Education Working Group*

This Group was set up in September 1997 as part of the Government's Pensions Review, to look at ways of improving education and awareness of pensions issues. Among the Group's main recommendations in its report, delivered in June 1998, were:

"The Government should develop a major pensions education and awareness programme — both in terms of the current structure of pension provision and the proposed introduction of stakeholder pensions — and the resources and timetable necessary to achieve this.
Employers, pension providers and other interested parties should consider what immediate steps could be taken to improve pensions education, knowledge and information.
The Government and pension providers should consider the provision of more automatic information on pension entitlements."

A.3 *Financial Services Authority*

In November 1998, the FSA published its Consultation Paper (No 15): 'Promoting Public Understanding of Financial Services: a Strategy for Consumer Education'. The following quotation indicates clearly the way that thinking within the FSA is developing:

"The FSA considers that easy access to clear, simple, authoritative advice and information from an independent, non industry source could help many consumers decide how much to save or spend, determine their attitude to risk, clarify their long term objectives and identify which sort of financial product or service might best meet their particular needs and preferences. Having gone through these processes, they would then be better equipped to shop around and eventually make an informed decision on a particular product or service, often with further help from expert professional advisers.
Clause 87 of the [Financial Services and Marketing] Bill will enable the FSA to develop initiatives to improve financial literacy. This could be of considerable value if the FSA is to play a role in helping consumers to understand how to plan their finances and take appropriate decisions about saving, protection, investing and borrowing money for a secure future. Without enabling consumers to understand the context within which individual financial decisions are taken it may be difficult for the FSA to achieve its statutory objective of 'promoting awareness of the benefits and risks associated with different kinds of investment or other financial dealing.'"

In its response to the Consultation Paper, the Faculty and the Institute of Actuaries indicated strong support for the proposed strategy for consumer education, underlined the profession's extensive experience and highlighted areas where we would welcome the opportunity to be involved.

A.4 *Green Paper : A New Contract for Welfare : Partnership in Pensions (Cm 4179)*

A.4.1 The Government's Green Paper, published in December 1998, contains references to:
— education issues;
— proposals to provide integrated annual benefit statements; and
— requirements for illustrations of benefits from DC schemes.

A.4.2 *Education*

"We believe it is necessary to bring about a radical improvement in the quality and accessibility of information on pensions, both in general and in the information people are given about their own pension position. We will work closely with the Financial Services Authority (FSA) to improve the general quality and comparability of pensions information. We will take immediate action to improve the quality of the state pension forecasting system and work with employers and private pension providers to find the best ways to provide everyone with a personalised forecast of their complete pension position, state and non state, which they can use in planning the savings and investments they wish to make.
The Government and the financial regulators have the central role to play in developing the long term framework and for driving forward the specific initiatives needed to improve pensions information. In turn, we believe that the private sector can provide expertise, ideas and enthusiasm to make a significant contribution in many areas. In partnership, we can press ahead with a dynamic and effective programme of action to counter lack of awareness, interest and understanding of pensions."

A.4.3 *Benefit statements*

"We want to develop integrated personal pension statements, combining state and private pension rights. We can only achieve this outcome in partnership with the private sector. It will require changes to the way both the state and private schemes provide information at present. But we are certain that we should work together towards this outcome."

A.4.4 *DC scheme illustrations*

"We are proposing immediate improvements to help people understand their private pension position. At the moment, members of money purchase pension schemes (both occupational and personal) must be given a benefit statement every year, but schemes are not required to give members a projection of their likely future level of pension. Some give illustrative projections, but this is not widespread. In contrast, members of salary related schemes can have statements which show how much pension has been accrued to date and forecast how much members can expect to accrue by the time they reach pension age if they continue in the same job.
We are proposing that:
— all money purchase schemes should be required to provide annual statements showing the projected value of the individual's fund at retirement age and the amount of pension it might buy at today's prices;

— the statement must be as simple and straightforward as possible. It must also be clear that it is only an estimate which depends on unknown variables that will inevitably change over time; and
— there will also have to be clear and evident warnings about the actuarial and economic assumptions used in the projections."

At the time of writing, the profession's response to the Green Paper was still in the course of preparation. It is likely to argue strongly for a central role for actuaries in the areas of benefit statements and illustrations.

ABSTRACT OF THE DISCUSSION

Mr K. R. Wesbroom, F.I.A. (opening the discussion): Defined contribution (DC) is both a threat to and an opportunity for the actuarial profession, and the main conclusions of this short, well-focused paper include both aspects. In Section 6 it is suggested that the changes in the actuarial skill sets will be evolutionary rather than revolutionary. I am not so sure; it seems to me that the switch to DC in the United Kingdom does represent a rather fundamental switch in the economic realities, and a change in the relationship between employers and employees. As a profession we must not get a reputation for hanging on to the past, for fighting the battles of yesterday, and for being cynical about DC. It will not help us to hear actuaries say: "We have seen DC before, and it did not work then. The risks are far too much. It will all end in tears". We cannot take that attitude. The fact is that DC, nowadays, bears no resemblance to the pensions plans of the 1960s and 1970s.

The conclusions in Section 7 summarise many of the threats and opportunities that we face. Paragraph 7.2.2 is about our relationships with other advisers and providers, and this is a key issue. Other professions have a role to play in DC pension provision. We have no pre-ordained right to be there at the table. We have to earn our keep and demonstrate the extra value that we can bring to the investment and DC process. I firmly believe that we do have something to offer, particularly in the case of investments. If we look back, the actuarial firms have been at the forefront of investment design, setting benchmarks, and selecting and monitoring managers. This role is even more important in relation to DC, where the end results of the investment process are distributed directly to members.

Investment in a DC plan is all about understanding risks — and surely that is the essence of actuarial training. We do have a unique added value to bring to the process.

That is the opportunity. The threat is that we have to learn to work with other advisors and providers and with other professionals. On the defined benefit (DB) side, we are struggling to come to terms with some of these new players in our market place. Financial economists, for example, are starting to encroach and challenge some of our basic tenets, and now they are involved in the areas of DC benefit design and delivery. The financial economics text books cover subjects such as how you might design a DC plan, taking account of utility theory and the like. This is an indication that there is some good, detailed technical analysis to which we can apply actuarial science.

These financial economists are an unforgiving bunch, and they would have a field day with the odd signs of actuarial regression that the authors exhibit at times in the paper; such as actuaries taking into account the state of investment markets in projections. It is hard enough to be told that we cannot use anything other than market values in DB plans nowadays, but surely, in DC plans, we cannot be seen to call the markets too high or too low.

There are many other advisers who have a role in the brave new world of DC. Utility theory is fine, but ask the question: "Do investors actually behave like this?" to which the answer is a resounding: "No". People, given a choice, do not always invest their money as financial economists would like. So, we have to design DC schemes that are going to be relevant, where individuals have an element of choice. New techniques are evolving such as behavioural finance, which is psychology applied to financial and investment processes, with applications in the way in which we design DC products. This opens a whole new range of tactics and techniques — areas called prospect theory, regret, illusion of control, over confidence. If we combine these aspects about how real life people go about making decisions with actuarial insights and discipline, then perhaps we can produce better solutions for the end consumers.

One of the other key areas with both threats and opportunities is relation to clarity and simplicity. Section 7.4.1 says: "Actuaries should be seen to champion public interest by seeking clarity and simplification". Unfortunately we are not seen in this way. If, in DC, we are to remain relevant, we must stick to this principle of clarity and simplicity. The trouble is that we are reluctant to let go and accept simplicity, because we like to hold on to the complexity — and some of the underlying issues are complex. That is not to say that we should walk away from them or pretend that they do not exist. We have to recognise complexity, but we have to communicate our results in an effective, easy-to-understand fashion. If we do not, we run the risk of being sidelined and ignored.

One problem with DC is that we have a much wider audience than in, say, DB plans. In DB plans we have had time to educate the people that are taking our advice: the trustees and the employers. In the case of DC we shall be dealing with the end consumer. Simplicity is important. An example of this is in ¶4.5.6, which refers to benchmarking DC plans against some form of national standard plan. I think that we might agree that benchmarking was in the public interest, and would lead to greater understanding of the issues, but for us it would be quite a difficult technical exercise. How do you take into account age-related contributions, SERPS integration, death benefits, leaving benefits, communication, different contributions for different employees? If we made this too complicated, then we would probably be ignored, but what if we compromised, and, say, gave just one of three grades to all occupational schemes: gold, silver or bronze? This simple approach could radically increase public understanding of the issues: employers could promote their schemes accordingly; members moving between employers could understand the differences in the values of what they were being offered.

Section 4.6, dealing with projections and illustrations, is an obvious opportunity for the actuarial profession. DC provision, based on future unknown events, risks and the interaction with investment, is a classic area where we really should be taking control. However, again we have to recognise the instructions that have been given to us that the results should be: "as simple and straightforward as possible". The threat is that we will over-complicate things, and there are three references in the paper that hint at this: in ¶¶4.6.4 and 2.3 reference is made to varying the projection assumptions according to purpose; and in ¶4.2.2 to latitude for individual professional judgement. The Pensions Board has set up a Projection Working Party to help the Government with the Green Paper. Perhaps we could use this as a basis to argue for a statutory role for actuaries in projections, but I think that we would have to be prepared to compromise on some things; we would have to demonstrate that we could deliver with clarity.

This might lead us to question some of our sacred cows, like actuarial discretion. Do we really want a system where we have a plethora of projection assumptions for different purposes, all signed off as equally valid by actuaries, and leading, perhaps, to a rather confused public, or would we be better compromising on a single set of projection assumptions and getting the benefits of education that that might lead to? These would not necessarily be the PIA assumptions — they are not fit for the purpose for much of what we are trying to do, but a single set of assumptions or a lack of actuarial discretion may actually be in the public interest.

From enquiries, I detect a bias on the part of actuaries towards DB plans. Now I am going to ask you two questions: which plan are you in; and which would you prefer to be in? For each question you will have only two choices: DB or DC.

I ask you, by a show of hands, what is your current pension arrangement? If it is DB raise your hands now. And is it DC? That is probably 60:40 in favour of DB.

Which would you prefer to be in on a personal basis? If you would prefer to be in a DB plan, please raise your hand. And would you prefer a DC plan? Only a few brave souls!

In practice, the choice between DB and DC is not an either/or decision — it is a question of degree. Part of the joy of being involved in DC is that you can start to talk about how a company's pension arrangements support its reward structure or its corporate structure. What mix does it want between DB and DC? It is an opportunity for us to start to consult at the core of a client's business rather than being on the periphery. It is a big opportunity.

There are plenty of threats if we do not remember what happened in the past or place too much emphasis on the past, but there are equally plenty of opportunities for actuaries to be moving ahead to a very bright future. I remain very much in the optimist camp.

Mr C. D. Pullan, F.I.A.: The paper discusses the issue of projections and suggests, in ¶4.6.1, that the current PIA basis is "less helpful" in giving members "a useful estimate as to what their pensions are likely to be as a percentage of final pay". This criticism is fair, but it must be remembered that the original proposal by SIB in 1988 was for real value projections. However, technical difficulties in designing a suitable form of presentation meant that a monetary approach was adopted. This issue is raised by the PIA in its Consultative Paper 29, on projections published in October 1998, and given further impetus by the Department of Social Security proposal for benefit statements.

Paragraph 4.6.2 states: "a member who is close to retirement, but not so close that current annuity rates are used". Since the rules permit a projection which takes account of current annuity rates up to 5 years from retirement, one wonders what period the authors had in mind.

I believe that the projection basis can be developed to give members: "the ability to plan with a reasonable degree of certainty" (as suggested in ¶4.2.3), and contain sufficient flexibility to deal with individual circumstances. However, I do wonder whether investors will be best served by too much latitude, as suggested in ¶4.4.2; the point being, should investors be getting different figures depending on whether the actuary is an economic optimist or pessimist?

Section 2 gives a brief resumé of defined benefit pension provision since the 1960s, but rather curiously omits to mention that defined contribution has been the normal form of benefit provision for small groups and individuals throughout this period. Defined benefits need a reasonably sized group to justify funding, and hence the need for an actuary to be involved in the regular financial monitoring of the scheme. A larger scheme provides sufficient economies of scale to support the cost of employing an actuary. This is not the case with small groups, and the conclusion reached in ¶7.3.1, that there should be statutory involvement of actuaries in DC schemes, without any comment about the position of small and individual arrangements, seems surprising. One of the major concerns about future pension provision is its cost, and I suggest that development of a policy position in this area should be subject to rigorous cost benefit analysis.

Mr L. Edmans (a visitor, Chairman of British Insurers Pensions Committee): I make it clear, in line with ABI policy, that I speak on my own behalf. The timing of the paper is extremely pertinent, especially with stakeholder pensions more likely to accelerate a move towards DC than to retard it.

In this paper there is a strong sense of the wheel turning full circle, and, notwithstanding any differences between the DC schemes of the 1960s and the 1970s and those of today, there are analogies. One of my earliest jobs in the business was to do with carrying out the calculations which were necessitated by the move away from DC schemes towards final salary. To be more precise, this was a move from mainly average salary schemes to final salary schemes. Subsequent to doing the calculations, I found myself involved in the process of trying to obtain new business, and thus spent many hours explaining the virtues of final salary schemes in relation to the inadequacies of money purchase, in whatever form.

Against that background, there are two more pertinent reasons for the move to final salary schemes in the 1960s and 1970s. One of them is the Wilson pay freeze, which, as part of its conditions, froze pay increases, but did not freeze the provision of fringe benefits. That, I suggest, was as much a stimulant as any public spirited inclination on the part of employers to provide final salary pension schemes, because, in my recollection, it spurred the extension of what, in those days, one called staff schemes to works employees. The other reason is the strong negative relationship between investment returns and salary increases experienced in the mid 1970s. I can recall vividly going to see boards of trustees in the mid 1970s with a story which went something like this: "Well, gentlemen, for the next three years the assumptions we are making for your scheme are that there will be a 15% return on investment; salary increases will be at 20% p.a.; but the good news is that you can keep your scheme going provided that you input a lump sum equivalent to the total amount of the fund at the moment, and you double the contribution rate. However, beyond the next three years, we are very positive about the way in which investment returns will compare with salary increases, and we have assumed that, from the point after three years to the point when benefits are taken, there will be a 0.5% positive gap between investment returns and salary inflation". I remember this vividly because, at that time, the company for which I was working would, if pressed, widen that gap to a 1% positive one, and we were the subject of several newspaper articles about our racy and under-conservative approach towards funding.

The big concern, and the reason why I support the direction of the paper, with some important concerns about practical issues, particularly as they pertain to smaller schemes, is that there seems to be an assumption inherent in most thinking, over recent years, that the days when an investment return of 1% over national average earnings was considered racy, are gone for ever. That does not seem like a safe assumption to me. If anybody had said to trustees in 1978 that their biggest problem in 10 years' time would be what to do with their surplus, they would have been well and truly thrown out of the room. The need, therefore, for individuals, unassisted, without any guarantees, to understand what is going on, is paramount if their employers are, indeed, to leave them to face the consequences of a return to 1970s conditions, or, indeed, 1990s Japanese conditions. I believe that the paper, in stressing that, is making some very important points. Yet we know just how unaware the vast bulk of the working population is of the issues, so I find myself fully in agreement, therefore, with the emphasis on education within the paper.

I am concerned about how some of the admittedly desirable ambitions can be achieved. For example, the idea that a scheme which models itself to aim to provide benefits which are relative to final earnings, but without any guarantees for so doing, can inform its members of its aims without leading to the risk that, retrospectively, an expectation is deemed to have arisen if the aimed for result did not materialise. This could then be visited upon the people who set up that scheme. I am not used to finding the word 'merely', as in ¶4.4.2, in front of the word 'expectations' in anything that comes from an actuarial source. The risk, if we adopt that form of approach, is that schemes find themselves backing into a defined benefits promise without realising that they are taking it on.

I have a question to the authors. The paper does not mention the role of independent financial advisers (IFAs) in this area. The interaction of IFAs with employers, employees, providers, trustees, is crucial, especially for small schemes. The considerable majority of DC schemes, if not by number of members, then by number of schemes, are insured. Of these, between 75% and 80% are arranged and advised by IFAs. I wondered whether the authors have given any consideration to how the presence of an IFA should fit into the scheme of things.

Mr T. S. Shucksmith, F.I.A.: I do not think that I found the word 'preservation' once in the paper. Surely an important difference between money purchase and final salary schemes is that money purchase delivers preservation, whereas final salary schemes do not. The authors are over-eager to publicise that, on a switch from final salary to money purchase, investment risk is transferred from the employer to members. By implication, they seek regulation of the investment process, the administration process, the projection of benefits, comparison with final salary schemes and income draw down, all to be policed by actuaries in a statutory role. What a burden on money purchase schemes!

I found ¶2.1.4 particularly infuriating. I quote: "The strength of the implied social contract may be seen from the relatively penal treatment given to early leavers, who, by implication, had broken the contract". Employers and their advisers were not interested in the welfare of employees. These schemes were designed to retain (i.e. to trap) employees. Actuaries were not in the business of providing general financial security in old age, they were in the hand-cuffs business. I do not believe that there was an agreement between employers and employees that, if they failed to stay to normal retirement age, they would get no or greatly devalued benefits.

At a recent actuaries' meeting to discuss financial products, somebody criticised final salary schemes for failing to deliver preservation. A member of the Pensions Board said that preservation was 90% solved, and no longer an issue. Later in the meeting he had to explain that transfer values were a valuation of deferred benefits with a (usually) statutory rate of escalation. When service credits were granted in receiving schemes, these were calculated allowing for revaluation in line with salaries. He explained that, if the difference in assumed rates of escalation is (say typically) 2% p.a., this would result in a service credit of some 40% of previous service for an employee 30 years from normal retirement age, that is four years' credit in the new scheme for 10 years' service in the old. Is preservation 90% solved?

At a recent meeting of predominantly pensions actuaries to discuss Government policy on pensions, the conclusions were:

(1) every possible argument should be put forward to favour final salary rather than money purchase; and
(2) contracting out must continue and be viable for final salary schemes.

In other words, these actuaries saw their business in final salary schemes, and they would do everything they could to retain it. I feel this paper is playing from the same base line. Outsiders sense this, and this results in the authority of actuaries on pensions policy being much weaker than it should be.

I am convinced that actuaries could make a useful contribution if they threw off the model of final salary scheme thinking. In final salary schemes value accrues very slowly at young ages. However, close to retirement the value of accrual may be very high. This is the exact opposite of what an individual would plan if he took seriously personal responsibility for his welfare. Nobody knows what misfortunes may lie ahead. A prudent person will save heavily when he is young, and will have sufficient to retire on an acceptable income by the age of 50. We should, therefore, be arguing for:

(1) higher contribution rates in personal pensions and similar schemes;
(2) a relaxation of the surplus regulations in money purchase group self-administered schemes imposed by the Revenue;
(3) a prohibition of tiered contribution rates (particularly those designed to mirror final salary accrual); and
(4) a relaxation of Inland Revenue rules prohibiting funding for early retirement.

There is also much other baggage from final salary schemes which should be thrown away:

(1) the requirement for limited price increases;
(2) target benefits;
(3) the Inland Revenue expectation of some kind of a benefit structure; and
(4) the Financial Services Act and the Pensions Act rules relating to investment should be tailored to money purchase schemes and not, primarily, to final salary schemes.

The Government's aim of all-embracing benefit statements seems to me to threaten to be a horrendously difficult task. Simple projections are fickle. I suggest that a person's entitlements from all sources should be reduced, periodically in statements, to capital values, using what, in the past, I have called capital value retirement theory. Everybody would be issued with a booklet which would give a fair estimate of what pension £10,000 of pension scheme capital would be expected to produce on retirement at ages 50, 55, 60, 65, and 70 years. There would be variations according to whether the investment return achieved was low, medium or high. There would be variations according to the type of pension increase that was selected; indication would be given of the effects of the provision of widow's pensions, the age of the widow, and anything else required. I suggest that this should be considered as part of the education of the public in pension matters. It would give a varied picture, but it would be realistic.

Mr J. R. Bowman, F.I.A.: In my view, this paper is aimed at the consumer as well as at those of us in the profession. It is aimed at the people who look to provide for their retirement, based on the advice provided by people like ourselves. I fear that, at the moment, this country is sleep walking into a potential disaster. The information is simply not there, in respect of DC schemes, for individuals and their employers to make the right decisions for them and their families for the remainder of their lives. Never, in my view, has there been a more important time for the actuarial profession and this Institute to speak out clearly. We have had reforms virtually every year or so in the recent past. The difference between then and now was that then most of the reforms were designed to improve and extend pensions coverage. We could be in the bizarre situation, today, that the Government's well intentioned, but not well thought out, reforms will actually have the perverse effect of reducing pension coverage for millions of people, but they will not know it, nor will their employers know it. Will opinion formers know it? Who is best placed to put the other side of the argument? I submit that it must be, and can only be, the actuarial profession.

The paper highlights a number of key problem areas for consumers, where the issues are complicated. It makes a number of very important points about the difficulties faced by consumers in deciding what pension benefits they should aim for; how much should be invested? There are plenty of questions, but not enough answers. The answers are not simple. If they are difficult for actuaries, how much more difficult are they for consumers? It is, however, a set of issues which we cannot afford to shirk. It is a challenge that we must embrace. I cannot think of a better way for this profession to raise its profile than by addressing this most urgent issue.

DC may well be the way forward for many people. Whether we like it or not, it is the way of pension provision for many people, and will be for many more people in the years to come. However, we must do all that we can to ensure that consumers and their employers are able to plan properly for their retirement with their eyes open.

Employers are still, in my view, missing the point about the change from DB to DC. Many of them believe that somehow DC pensions are cheaper. They seem to forget that you only get out of a pension scheme the proceeds of what goes in. That is just one example where employers — never mind employees — are totally confused by the issues arising from the changes we have today.

Mr M. A. Pomery, F.I.A.: I consider first the terms of the background to the remit to this Working Party. The last decade has seen a profound change in the pension scene in the U.K. Before 1988 about half the working population were in occupational schemes, which were predominantly final salary. The bulk of the remainder of the workforce relied on state benefits: the basic state pension; and SERPs, which are DB. A minority had DC arrangements, including the self-employed. Then, in 1988 the Government introduced money purchase contracting out of SERPs, and we saw the advent of personal pensions. I believe that somewhat over six million personal pensions have eventually been sold. In the 1990s we have witnessed changes to employment patterns, with many more people self-employed or employed on short-term contracts. There has been a trend among occupational schemes away from DB to DC, and that trend is still continuing.

The latest development is the current Government's introduction of stakeholder pensions: a DC vehicle designed to replace membership of SERPs for those not in occupational schemes. It is quite clear that DC schemes are going to play a major role in the U.K. pensions scene in the years to come. Actuaries have had a well-established role in the operation of final salary schemes, particularly after the 1995 Pensions Act. Although I do not believe that such schemes are about to disappear, there are very few new ones being set up at the current time. It is, therefore, very important for the long-term future of the actuarial profession that we identify and promote roles for actuaries in the DC environment, and that was the background to setting up this Working Party.

Turning to the role of actuaries, it seems to me that there are really two key issues for members of DC schemes: how much should they be saving for their retirement; and how should they invest those savings? The actuarial profession can, and should, play an important part in helping them with both of these issues. When there is a switch from DB to DC, whether it is between two occupational schemes or whether it is from SERPs to stakeholder pensions, the investment risk is transferred to the individual. There is, consequently, a huge and growing need to help people to make sensible decisions when faced with investment choices. This involves communicating about life's uncertainties. Here, then, is a mighty challenge for us.

Helping people to understand how much they need to save to provide a decent income in retirement hinges around projections of the expected benefits from DC schemes. Some months ago, the Pensions Board set in motion the preparation of a draft guidance note on projections for DC schemes. The catalyst for this was the concern about the nature of advice that people should receive when they are switching from final salary to DC schemes. The Working Party on that draft guidance note is nearing completion, and there should be an exposure draft coming out in the next few months for everybody to see.

Then we had the recent Government Green Paper which contained proposals for an annual combined benefit statement, covering state, occupational, personal and stakeholder pensioners. This was the catalyst for us to set up a high level group led by Mr Ritchie, the Deputy Chairman of the Pensions Board, to try to pull together all the strands on these benefit statements. For instance, should there be one projection or a range; should there be a prescribed basis for making projections; should it use long-term assumptions or market-related assumptions; where do the PIA projections fit into the picture? And so on and so forth. That group has already had an initial meeting with DSS officials. It is clear that the emphasis is going to be on a broad brush approach. We may have to drop many actuarial niceties that we might normally like to include.

Concerning the public interest, many millions of citizens in this country will rely on DC schemes for a major part of their retirement income. It is very important for them, and I suggest for the wellbeing, the social cohesion and the future prosperity of our country, that DC schemes are made to work and made to work successfully. The actuarial profession has a vitally important role to play in making sure that this happens.

Mr J. S. R. Ritchie, F.F.A.: In ¶4.2.6 the authors say: "ensuring that any advice given by sponsoring employers or trustees is backed up by expert analysis". I was quite concerned to read that partial sentence, because I am concerned about the idea of the employers and trustees giving advice. It is one thing for employers and trustees to give information to members, but quite another if they get involved in giving advice, and not just for reasons of the Financial Services Act or legal technicalities.

The role of employers and trustees in advice issues for employees is to facilitate — to make it easy — for employees to get advice. I think that employees are going to need it in the complex environment that we face. If the employees are very lucky, then the employer may even be prepared to pay for some of it, either directly or through some variation in the flexible benefits package. In the context of stakeholder pensions, employers need to watch out for the facilitation of advice, as suggested by the Government in the Green Paper, and that they do not get sucked in to the giving of advice.

In ¶4.4.2 the authors write about the fact that a benefit can be promised if it gets into the rules of the scheme. Yes, of course it can; but again we need to be careful, because, if there are other documents which are not actually the rules of the scheme, but, nevertheless, can be interpreted constructively as giving some kind of guarantee or promise outwith the rules of the scheme, then there is a real danger that courts will interpret this as being as good as a promise being made in the rules of the scheme. So, I would caution that it is not just the rules of the scheme that we need to look at when we are concerned about only making promises that we really want to make.

In ¶4.7.2 it is stated that: "much of the control required focuses on risk/reward concepts". I take that comment out of context, and apply it to the forthcoming concept of stakeholder pensions. I am very concerned that there has been much talk about stakeholder pensions, about who might provide them, and about how the providers might be different from traditional providers, namely life offices, without any real discussion taking place about the risks that will be run, and who will be running them. It seems to me that if, in a stakeholder scheme, the trustees of the scheme are, for example, not buying out annuities at the point of retirement, but are running the annuity risk themselves; if they are running a direct sales force; if they are, as almost certainly they will be, limited in the charges which they can make to the members of the scheme, but yet they may have engaged in contracts with suppliers of services which may not have the same shape or limitations on charges; all of these things imply that there could be circumstances in which substantial risks are being run — financial risks. I am very concerned, not that they should not be run, but that they should be recognised and that they should be properly managed. If that involves the explicit subscription of risk capital, so be it. I agree with Mr Daykin who has said, at another time, that, perhaps, it is important, in this context, to consider the potential role of an Appointed Actuary for a stakeholder scheme. I think that it depends on the way in which the scheme is constructed and the risks that it chooses to run. If, in practice, it is starting to look very much like a mutual life office which runs a direct sales force, then, perhaps, it should be capitalised, and have an Appointed Actuary in the same manner as a mutual life office which runs a direct sales force.

Mr H. Popat, F.I.A.: The paper outlines a number of laudable activities for actuarial involvement in a DC environment. However, it is written from a DB perspective, and I am going to approach the question of retirement savings from a slightly different angle. One example of this thinking would be tiered age-related contributions. To me, tiered contributions seem to be a completely inequitable method of remuneration. We have established the concept of equal pay for people of both sexes; we have the concept of equal pay for people of different religions, but, at present, we are allowed to pay people differentially, depending on their age. I suspect that we will not be able to do that for very long.

I agree wholeheartedly with the Working Party's opinion that one should wish to receive advice in a DC scheme, if it is applicable to one's situation, and that there should be actuarial input in the team of advisers. However, I do not believe that, ultimately, it would be in the profession's long-term interests to be associated with compulsory advice or certification of this nature, as our involvement and influence in DC plans is both complementary to, and in competition with, other professionals. Therefore, we should aim to be involved in the full spectrum of advisory activities, and not just in those where we have a statutory role.

The primary aim of a DC plan is to accumulate a sum to benefit the recipient in retirement, perhaps by purchasing an annuity, although not necessarily. The majority of people in the U.K. do not require advice to prevent them contributing above Inland Revenue limits in approved plans, and neither do they have a specific target or expectation — rather they would wish for as large a pension as possible, given their own and their employers' ability and desire to contribute. To compel individuals or employers to receive or to provide such advice would raise the administrative burden of these plans, reducing their efficiency and attractiveness compared to other forms of saving. However, I do believe that it would be beneficial for a typical individual to receive actuarial advice in the form of a retirement benefit projection at various stages during his or her career. I do not think that, in the past, we, as a profession, have been very good at providing low-cost retirement planning advice. The challenge will surely be to provide good-quality low-cost generic advice, perhaps by some form of expert system. Actuarial input would certainly result in a higher quality system, both in terms of communicating and of formulating the written or on-screen advice, and also in highlighting scenarios where extra investigation of an individual's circumstances would be beneficial.

In terms of the nature of such a projection, I believe that the profession should consider moving away from prospective methods, such as PIA projections, where undue credit is given for future contributions. In many cases these contributions are contingent, not only on just future employment within the current company, but on some pre-defined rate of salary escalation or employment. Therefore, we should be looking for projections which are easy for the layman to interpret and expressed in today's monetary values. A more suitable projection might be to convert the individual's fund value, at the present time, by using annuity rates at a chosen retirement age, and comparing this level of income to the individual's current income. I leave the question of the yield on which to base the annuity rates open, but possible suggestions might be immediate annuity rates or annuity rates based on the term structure of interest rates. This would avoid the need for statutory certification of projections, which is almost certainly incompatible with a low-cost mass-market form of advice, especially for smaller employers, where economies of scale are less likely to apply. If this projection were provided regularly (perhaps a simplified one could form part of a benefit statement), this would also reduce the likelihood of an individual having unreasonable expectations of his or her standard of living during retirement. This would not diminish the added value of a more complex funding projection, at the same time, which allows for future contributions and changing salary patterns, and which would include an element of subjectivity. A good example of the pitfalls of this subjectivity is described in ¶2.4.3, where it is stated that many individuals in the United States of America have opted for risk-averse asset allocations. This has resulted in lower expected (and actual) returns over the long term, compared to those assumed in the initial projections.

On the subject of kite marking, I suggest that pension plans should be subject to the same kite-marking criteria as other savings vehicles to maintain comparability. The CAT (charges, access, terms) standard is already in usage on a voluntary basis by individual savings accounts, and likely to be mandatory, in its current form, for stakeholder pensions, and any occupational or personal pension plan kite mark should fall within this framework to prevent a proliferation of standards. Perhaps there is scope for a super CAT, which could incorporate a qualitative assessment of the investment manager's skill. I suggest that this is not a route that the actuarial profession would wish to go down. I also disagree with the idea, stated in the paper, of relaxing the charge criteria for active funds from the CAT standard, as to do so would weaken the CAT standard.

Mr C. T. Haines, F.I.A.: My comments come from the perspective of people in their twenties and thirties who need to start providing for their own pension. What do they need to know about their future pension? I think that they need to know about how much pension they can each expect to receive at retirement in current terms, a pension, either as a monetary amount or expressed as a percentage of the current salary. Generally people find pensions very complex. They need to understand what the projections are actually showing; they need to understand what level of income they need in retirement; and they need to understand what their salary is expected to be at retirement. All these unknowns can make pensions appear to be confusing, and difficult to understand. If projections are not kept simple, people may not understand their potential benefits, and are likely, as a result, to make inadequate provision for their retirement.

Several companies, at the moment, are moving from DB to DC plans. Often young employees are trying to work out what is the best type of plan for them. If a company provides one plan only — for example a DC plan — the employee either joins the plan or does not join the plan. He or she does not have a choice of which plan to join. It is more difficult with companies which also operate a DB plan, and employees have the choice to enter one or the other. How are employees going to work out which is the best choice for them? Perhaps one alternative — and this is an alternative which employers may not like — is to state the cost of the pension being provided in the next year as a percentage of current salary. They can then compare the pension benefits that they may accrue in the DB plan against the alternative contribution rates that they will receive in the DC plan. If those alternatives were shown, it would make it easier for the employee to choose which arrangement is best. Unfortunately, many companies moving from DB to DC are doing so on the grounds of cost. Ultimately, that probably means lower contributions being paid by the employer. At least this proposed scenario, although it may be unpopular for employers, will make it easy for employees to understand what they are, in effect, giving up or gaining when switching to DC.

There is a need to communicate effectively the differences between pension providers. Kite marks or charges may not actually help an individual to make a decision as to whether a particular personal pension or money purchase plan is a good one to be in. Unfortunately, if you have a kite mark just based on charges, that is no guarantee of having a good fund at retirement, because the ultimate pension will depend on investment returns achieved up to retirement and also on annuity rates at retirement. A fund with low charges will provide an inadequate pension if investment returns achieved by the fund manager are low. Perhaps, therefore, we need to have some sort of performance kite mark in addition to a charges kite mark. That kite mark cannot be subjective; it has to be based on past performance, and surely, as a profession, we can provide some sort of past performance indicator which will allow a fund to achieve a kite mark.

All the fund managers reported in the personal finance sections of the Sunday newspapers manage to say they have been the top performers over the last three, five or ten years. If every fund manager claims to be first, then who is the best? Actuaries can try to work this out; most others will find it complicated. Perhaps we need some objective standard for comparison of performance. Managers who have achieved a standard — for example, have outperformed a return for a certain index consistently over the past five years, perhaps looking at rolling five-year periods — get a performance kite mark. If they do not meet that return, then they do not receive it. At least, then, the public will have some idea as to whether their investment manager has been a good performer in the past.

However, past performance is no guarantee of future performance, and there is no guarantee that the manager will perform well in the future. At least this kite mark will provide an indication when the members make that choice, and it will help them not to be drawn by all the misleading advertisements. Perhaps the message that we need to give to young people is that they do need to pay substantial amounts whilst they are young in order to have an adequate income at retirement. If annuity rates are better when they actually retire, they will receive a bigger pension than expected. There is always a possibility of over-funding, but at least they have made sufficient contributions to receive an adequate income.

If we can encourage people to compare what they need to save for retirement against their mortgage repayments, perhaps we have something to fulfil the condition of ¶7.4.1: "Actuaries should be seen to champion the public interest by seeking clarity and simplification". Perhaps an easy message which people understand — quite scary, but it may make them contribute — is: "If you want a decent pension in retirement, you need to pay payments at least equal to your mortgage payment or monthly rent".

Mr D. B. Duval, F.I.A.: The authors have taken this topical subject and looked at it from an unusual angle, which is the point of view of the actuary. Although it is not explicit in the paper, it is really the point of view of the consulting actuary. There is very limited mention of the role of the insurance company actuary, although, in practice, DC retirement provision has traditionally been the role of insurance companies.

Concerning the future of the consulting actuary in DC schemes, imagine that you are running a consulting practice, are wanting to build up a DC capability, and are looking outside to recruit. You get actuaries and non-actuaries applying. You notice two things: actuaries cost a lot more; and they know much less about DC schemes, because they have never actually worked in that area. It is rather difficult to see why you should recruit actuaries in those circumstances. So, I find it difficult to see actuaries, with the current enormous premium for the existence of the qualification, carving out an effective niche advising DC schemes, other than when their existing schemes convert, sometimes against the actuary's advice. That is my view about the potential future at the moment.

The opener asked about the preference for DB or DC plans. The question he omitted was: "Are they of equivalent value, of equivalent contribution?" The practical experience is nearly always that DC plans are for lower contributions. Therefore, anybody answering that question in the real world will say that a DB scheme is better, because the employer is nearly always putting more into it. This might not always be right, but right often enough.

The main discussion has been on the public interest question, and has appeared to be somewhat condescending: "We have to make things really simple because most people are pretty stupid. We have to simplify so enormously that it is almost meaningless". We are just going through 'quality in pensions' discussions with the Government, and the industry has correctly pointed out that this is a gross over-simplification. Now actuaries appear to be proposing to reinvent this type of simplification, in very simple standard projections. It does not matter whether they mean much; at least they will all be the same.

That is unfortunate. Standardisation is extremely undesirable where it fossilises development. I have only noticed one positive suggestion as to how we should solve the communication problem in a forward looking way, and that was Mr Popat's suggestion of expert systems, where you take actuarial expertise and make it available at cheap rates to ordinary people to answer the questions that they have. That is looking forward. A standardised approach could not possibly achieve that. Only half the workforce in Britain has ever been in DB schemes at any one time. DC retirement provision has been the norm, other than state provision, for the great majority of people in Britain. One of the important points is that state provision is now, for the first time for a long time, effectively declining. We are looking at a projection forward when state provision will decline, whereas, in the past, it has been generally increasing. When we look at the public interest, we should try to work out what should be our measures of success. Clearly, the success measure that is being applied by many people is whether they think that they understand what they are doing. They do not actually understand it, because we have simplified it so much that we are not telling the truth. However, they will think that they understand it, and have a nice warm feeling. I do not think that this is a particularly desirable or sensible measure of success. The measure of success should be: "Is the outcome of the system working?" That, in practice, means, for most people, bigger pensions from the schemes than we are currently likely to see; and bigger pensions can come from three places: from bigger contributions; from better investment returns; or from lower expenses. That is a better success measure for what we are trying to do in the communication exercise than anything else. There is one caveat to that, which is the question of risk, and the fact that DC schemes, as currently constructed, can produce a very heavy concentration of risk on particular individuals who are unfortunate enough to retire at the wrong time.

Mr Edmans was quite right to remind us of the very poor results that we have seen in the past from DC schemes owing to poor returns. What he did not say was that, with mature final salary schemes those conditions would create an appalling strain as well, and it is quite possible that the final salary promises could not be paid if we went through those conditions again. It was the immaturity of schemes in the 1970s that fundamentally saved the DB system, and the lack of promises on pension increases and probably on early leavers as well.

Mr R. E. Brimblecombe, C.B.E., F.I.A.: Following on from what Mr Duval said about education and the role of the actuarial profession in terms of the public interest, I agree with him that we must not be seen to be condescending. Nevertheless, we do have a very difficult task in front of us if we are to provide the appropriate education for people to provide income in retirement.

I believe that the actuarial profession has a role to play in providing education in a straightforward way. For instance, for a given pension for an individual retiring at age 60, it will cost twice as much each year if you begin paying at age 45 than it would if you had begun at age 40. I am sure that the actuarial profession, together with others, possibly, has a role to play, and I hope that we are going to pick up the challenge. This, in my view, is the only way in which the Government's proposals for pensions will succeed.

Concerning tiered contributions, where one speaker asked whether they should be banned, and another suggested that there should be higher contributions at younger ages, unfortunately, it is a fact of life that, if you are in your twenties there is relatively little spare cash that you can put aside for your pension, generally until, perhaps, you are in your forties or even fifties, when you begin to get your children off your hands and are earning relatively more. We are always going to have a situation where more people will be paying higher contributions nearer to retirement.

An increasing number of actuaries give financial advice to individuals. Some speakers have commented about the fact that our services do not come cheaply, but I have always had the vision that we could have a new generation of 'high street actuaries', being able to give relatively simple and general advice to people.

Little has been spoken, and there was relatively little in the paper, about the problem of annuities. There has been much effort, in Government Green Papers, in responses to Green Papers, in papers such as this, and in the press, on the new, different ways of funding pensions until retirement. Nevertheless, the greatest risk for anybody saving for their pension is the fact that they have to convert the majority of their pension to an annuity at retirement. There is an increasing clamour in the financial press for that to be reviewed again. I think that it is beholden on the actuarial profession for its voice to be heard, because only in that way can we achieve a decent level of retirement income for people who are going to retire in the future.

Mr C. D. Daykin, C.B., F.I.A., Hon.F.F.A.: It seems to me, particularly in relation to ¶¶3.2.3 and 3.2.4, concerning the responsibilities and roles of the actuary, that the roles are very narrowly defined and, perhaps, reflect a narrow view of what a DC pension scheme is. There is no mention of how to handle reserving for pensions in payment or reserving for future expenses or future guarantees, conversion of pension to annuity, how to operate a bonus system in a DC pension scheme, and whether the charging structure is viable. These seem to me to be the core of actuarial work, and the kind of matters which, automatically, should be required in some types of DC schemes.

If the authors seem to think that a DC scheme is just an investment vehicle (such as the one which the Treasury have recently been putting up: essentially a unit trust), and that that is all that the DC arrangement is, with it being somebody else's problem to provide the annuities at retirement, so be it. However, that is only one type of DC scheme. If DC schemes are going to be run by trustees, as under the stakeholder proposals, or run by employers, or, as in other countries, run with external pension providers, then the actuary needs to be at the heart of the considerations of whether guarantees can be given, how the mortality risk is to be met, and how the expense costs are to be provided for out of the different types of charges, as well as in assessing long-term viability.

Dr A. Robinson (a visitor, Director General of the National Association of Pension Funds): As an economist I have been struck by this discussion, and I have been thinking about this for quite some weeks, since the publication of the Government's Green Paper on pensions. In the last 30 years many economists have won Nobel Prizes in the area to which I am going to draw your attention.

While you have choice in pensions, you have to look to rational choice theory. The whole of economics is constructed on the basis of rational choice — the capacity to make rational choices, but it is now understood very well that pure economic rationality is never achieved, because it requires a complete set of information, complete foresight, and supreme computational capacities on behalf of the individual.

Herbert Simon, a Nobel Prize winner, developed this theory of satisficing behaviour. Individuals seek as much information as they can until the cost of looking for any more would lead them not to continue. What they do when they buy something, is to choose something that satisfies them — hence 'satisficing' behaviour. It has struck me that, now a human being has to decide, probably at the outset of his or her career, whether to be a DC stakeholder, stay with the state second pension or go to an occupational pension, which may be DC or DB, there can be no right answer.

The real solution for the Government is to create some sort of mechanism whereby people can be satisfied with the choice that they have made. I believe, therefore, that actuaries have an enormous role in the future, because there is much that they can do to help people look for information in the areas where they need to make choices. There is much that actuaries can do to help people think about foresight: "What is your career going to be?" This is not what is the average career of all the people in ICI or Marks & Spencer, but: "What is your own career likely to be?" People need help through the maze of choices. Actuaries, supremely, are good at maths, so they must be able to help with the tremendous computational facilities that each one of us is going to need when we decide what kind of pension scheme we join.

Mr P. G. Meins, F.I.A.: Speakers have talked about abolishing the requirement to buy an annuity, but I do not believe that this is the answer, or that the Inland Revenue or the DSS would be happy either. Annuity rates merely reflect the lower absolute and real returns now available. I suspect that society will take some time, even with greater assistance from our profession, to get used to the reduced benefit of saving, as compared with consuming. The position is, of course, potentially even worse for new investors, who do not have the benefit of the corresponding market appreciation which has accompanied the decline in interest rates in recent years.

Having said that, I think that more flexibility should be available. Obviously, a certain amount of money is needed just to live and avoid reliance on state means-tested benefits, but above that there should be more choice. Maybe a decreasing annuity might be suitable for those who anticipate a decline in their activities over time. Possible long-term care needs should, of course, be borne in mind. An annuity which increases, or decreases, under certain contingencies could also be attractive. 'Income drawdown' does not, presently, provide this kind of scope.

Mr C. G. Singer, F.I.A. (closing the discussion)**:** My sense of the discussion is that we do feel that there is a role for the actuary in DC schemes, even if some believe it to be focused on the larger schemes, but there seems to be no unanimity on what that role should be. Indeed, some felt that we had not quite left our final salary comfort zone.

The main roles concern, perhaps most strongly: educating public opinion; plan design, both general and specific to DC schemes; and benefit statements and projections (but we seem to be rather divided on whether they should be complex or very simple; and even those who suggest that they should be complex would be happy if the analysis were complex, but the presentation were simple). Investment issues, including the uncertainty of future returns, are also important, as is how much individuals need to save.

One aspect which was only obliquely referred to was a possible role for the actuary advising on income drawdown. I believe that most actuaries would agree that, in order to encourage employers and individuals to lock away their money for the long term to provide for their retirement, there needs to be both a stable planning environment and a relatively more advantageous tax environment than that for short-term saving. Moving towards DC arrangements, and particularly ones involving drawdown, could further blur the distinction between short-term and long-term savings. Income drawdown makes a DC scheme look, at least partly, like a member's savings account. I feel that we need to be rather careful in seeking a role for actuaries in intelligent income drawdown options if, at the same time, we are seeking to persuade successive Governments to maintain a difference in tax treatment between long-term and short-term savings vehicles.

The opener and a number of other speakers have referred to the possible role for actuaries in assessing whether benefit projections are actuarially reasonable and, as the authors put it, benefits projected to emerge are consistent with the intended contribution level. This is surely classic actuarial work, and a vital part of the added value that we can provide is in articulating, in an understandable way, the essential uncertainties involved. Individuals need to know the size of the risk that they are taking by following different investment strategies, and the profession is ideally placed to provide this information. I empathise with the opener's concern that we might make a meal of it, but I shudder to think of the length of any guidance note that we might draw up which sets out how we can calculate the spread of outcomes, and what risk modelling should be prescribed. Perhaps some actuarial discretion will need to be retained, and I am more inclined to agree with Mr Duval's comments on this subject.

I turn now to conversions from final salary to DC, and the proposed voluntary certificate outlined in Section 4.5. I would question the motivation for such a certificate. Is the basic intention to make clear to members the extent of the reduction in benefits on a switch to DC, by any chance? This will need careful consideration, not only because of the different nature of DC and final salary schemes, but also because of members' contributions, and particularly matching contributions. It could be, for example, that a member paying full matching contributions could have expected benefits which are not very dissimilar from those in the final salary scheme. However, this might be at a significantly greater cost to the member than his or her contribution to the final salary scheme. Perhaps this is a detail, but it makes me think that a certificate — if we agree that one is desirable — will need to cover more than just a benefit comparison, and should also consider the cost to the employee.

However, looking at things from a different perspective, it may be quite reasonable for the employer to reduce the level of benefits for competitive or other reasons. If, ultimately, the absence of an actuarial certificate is deemed to imply that the new arrangement is, in some way, poor value, then this might be unfair. The new scheme could provide competitive benefits, but just not ones which are as generous as those of the scheme that it replaces. We should, perhaps, also consider whether such certificates are to be provided when it is only new entrants who are to be offered the DC scheme.

In ¶6.2.7 the authors suggest that, as DC schemes mature, paying the pension from the scheme's assets will be increasingly common. We do not need to wait so long. Consider a final salary scheme which is closed to new entrants, but not wound up, and a DC scheme is introduced for new entrants. Subject to trustee considerations, it might be possible for the DC scheme to be part of the same trust as the final salary scheme. Thus, the employer would have the option to provide annuities within the scheme for DC section retirements. This is, perhaps, a particularly useful option for larger schemes, and can have major implications for the investment strategy that the member should follow before retirement, including the relevance of lifestyle arrangements.

On pension actuaries and our future employment prospects — and here I am at odds with Mr Duval — I am hugely optimistic, even if we do not all resemble the DC actuary. If we do our job properly at this stage and we succeed in influencing Government — and certain members of the profession are in the ideal position to do just this — and we take our messages out to our clients, then we will end up with a world which is divided between different types of pension plan, both DB and DC. There will be a number of closed schemes which will need to be run off; there will be new schemes starting, which will be reviewed from time to time, as it seems to me that the culture of introducing a pension arrangement and leaving it unamended for many years has probably disappeared. In addition, we are being asked to do increasingly more compliance work. Thus, as a profession, we will have roles for the good communicators as well as the more technically minded.

I take issue with the title of the paper, which seems to imply that we are already in a DC environment in the U.K. We are not, as many surveys show. Like Mr Bowman, I felt that much focus in the paper is on assisting the understanding of pensions for individuals, and while I agree with a great deal of this, we should strive for a bigger role in the U.K. at this time. I do not believe that we should take it as given that we are moving inexorably down a one-way street towards DC arrangements. This is implied, for example, in ¶5.3.1. It is often suggested, for example, that the U.K. is heading in the same direction as the U.S.A., and that their market is dominated by DC plans. However, this is really quite wide of the mark, especially for large companies. Their model is closer to a low cost DB arrangement, typically either final salary or cash balance, together with a matched additional voluntary contribution (AVC) arrangement, which they call Section 401K. Also, of course, their cultural environment and background is so different from ours. Do we really expect the U.K. to be more of a DC environment than even the U.S.A.?

I was a little disappointed about some of the information given or implied about final salary schemes. For example, in ¶5.2.3 we are told that DB — presumably final salary — schemes are increasingly mistrusted by many for the mass provision of benefits. Are they? Who says so? A look at the joining percentages among eligible employees in the 1998 NAPF survey shows a massive increase from 1997, up to a staggering 91%. Could it be that a slightly better educated work force — and here I am being optimistic — seeing what a mess of pensions the Government and personal pension providers have made, are beginning, at last, to understand the value of their final salary schemes? How ironic it would be if, just as members and the media begin to appreciate their value, employers decide that they should be replaced!

So, in my view, there is a great deal to play for at this stage of the evolution of U.K. pension plans, and one of my main worries is that the Government's changes to state arrangements, and the advent of stakeholder pensions, will inadvertently provide an incentive for employers to reduce benefits — perhaps by moving to lower cost DC arrangements. This, surely, is where much of our energy should go at this stage.

We must do everything that we can to ensure that the Government is fully aware of the implications of their policy changes on private pensions provision. We also need to be consulting at the core of our business and skill set, not just squeezing out new roles from the results of a largely ill-informed change in direction in the U.K.

Actuaries are pre-eminent in advising on these issues. Therefore, in my view, our main role, at the moment, is to ensure that employers, not just employees, genuinely understand the issues and the nature of — as the authors put it — polar extremes of final salary and DC, as well as all the design continents between.

Mr M. W. Miles, F.I.A. (replying): The opener carried out a straw poll to try to find out whether actuaries have a natural preference towards DB schemes. I was interested to see that the authors' bias towards DB was actually less than that of the audience as a whole. Many probably interpreted the question about DB as being a question about final salary schemes. If so, I am a little bit surprised that so few of you recognised the risks that final salary schemes have for younger employees. Perhaps it is because the average age of the audience is a little bit older than 40.

The opener and others liked the idea of benchmarking plans against some national standard plan or, indeed, some sort of Olympian style of kite marking. I think that kite marks have their place, but there are problems with a kite marking system: how do you tell someone that they have only just got the bronze, and a competing employer has a silver? There will be much debate about whether the kite marking has been done correctly. There is a tendency to say that a 60ths final salary scheme is, by nature, a good scheme, and will do well in the kite marking. However, if an employer recruits graduates in their early twenties, and most have moved on before they get to thirty, then a 60ths final salary scheme is hardly a good scheme for that type of employee. Indeed, a low-contribution money-purchase scheme might actually be considerably more generous.

On the subject of benefit projections, most speakers seemed to agree that there is an obvious place for the actuary here, but several wondered if the public interest could best be served by leaving any discretion on the projection basis to the actuary. Mr Pomery referred to draft guidance notes in this area. I think that it is a very important debate which the profession has started, but it is much too early to conclude. Many of Mr Duval's points need to be fed into this debate.

I am sorry if we irritated Mr Shucksmith. He commented that final salary schemes do not deliver preservation, but that DC schemes do. I know what he was driving at, and I think that there is some truth in the point, but, in the end, whether schemes give fair recognition in the way of benefits to older and younger people is really a question of scheme design. In theory, a final salary scheme, with accrual rates reducing with increasing age, would probably meet the requirement of a scheme which is fair. A DC scheme with contributions which increase with age does not. This is an illustration of the fact that it is a scheme design point more than anything else.

Mr Daykin mentioned several points that were not in our original brief, and more work is required in those areas. Mr Edmans asked if we had considered the role of IFAs. I do not think that we did in our discussions before we wrote the paper. We would certainly think about that a bit more in any continuing debate. We did think about the role of small schemes, and we recognised the impracticalities of some of the ideas for small schemes. I do not think that these appeared in our paper.

Mr Ritchie spoke about the possible problems of stakeholder pensions. I, too, think that stakeholder pensions will cause problems. I do not think that the Government has come up with the right answer, and I wonder if there is a place for the alternative to second-tier state provision being DC, if the first tier is only just above subsistence level.

The President (Mr P. N. Thornton, F.I.A.): There is no doubt that actuaries can, and should, play a significant part in designing pension schemes that are fit for their purpose. I agree with Mr Daykin's points about DC schemes. The way in which mortality risks are covered and bonus rates are determined are certainly relevant to the larger schemes — and were in the past when those schemes did exist. A major role for us is in explaining the risks involved in DC schemes, as in other types of schemes, and I agree with the closer's remarks that it is important that we advise both employers as well as employees.

Whatever our personal preferences might be, as employees the reality is that, at this time, employers and the Government both seem to be less willing than they used to be to shoulder the risks of providing pensions, even if they are actually rather better placed to do so than the individual.

There is a significant danger of inadequate pension provision. (Theoretically, there is also a danger of excessive pension provision, which ought to be a concern to employers providing the DC schemes, if we, as actuaries, are under-estimating future investment returns. Currently, that seems more remote than the risk of inadequate pensions.) We certainly need to help individuals understand the cost of their pensions, and we need to do a lot of work on how to develop reliable projections of benefits in order to enable them to make informed decisions. That is, indeed, as many speakers have commented, where our public interest role comes in.

In general, the profession will survive if it meets the needs of society. What has been demonstrated in this discussion is that society does need actuaries to be involved in DC pension arrangements.

This has been a healthy discussion, as well as a very timely one. I should like you to join me in expressing our thanks to the authors, the opener, the closer, and all who contributed to the discussion.

WRITTEN CONTRIBUTION

Mr C. D. Sharp, F.I.A.: It is surprising that nowhere in the paper nor in the discussion was any reference made to the effect of means-tested state allowances after retirement in respect of rent, council tax, etc. Means testing of such payments means that, in very many cases, there is little, if any, financial benefit to be obtained by lower-paid employees making contributions to occupational pension arrangements, whether those are DB or DC. Surely all scheme actuaries have a responsibility to draw the attention of the employees (through the trustees) and the employer to this crucial fact. It would also seem appropriate for the Councils of both the Institute and the Faculty to draw attention to the impact of these substantial means-tested allowances on the desirability of lower paid employees being encouraged to contribute to occupational arrangements if such payments were, on present showing, unlikely to benefit them when they retire. This view is supported by the statistics provided by the DSS and given in an article in the *Daily Telegraph* on 19 December 1998.