Finance and Investment Board Working Party

Demand for DC Products

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Abstract

This paper begins by giving some market background about current DC arrangements. We include details about how many people are currently in DC arrangements and what types of arrangements they are. We also cover details about typical savings levels and details of typical investment options offered/chosen and the kind of advice (if any) given to members.

We then go on to explore the incentives and disincentives that will drive the demand in the DC pensions market. We look at how much people in different situations need to save and for how long. This includes an investigation of means tested benefits to assess the level of income needed before pension investment becomes effective.

Next we consider what types of investment options should be made available to members. This includes an assessment of how many different funds should be offered and what options could be offered to better allow members to control their investment risks.

Subsequently we consider what type of annuity/draw down options should be made available at retirement and also consider the issue of phased retirement.

Finally, we consider what advice, communication and modelling needs to be made available to members at different points in time in order for them to make appropriate choices.

1. Market background

1.1.1 The UK pension fund market represents approximately £850 billion of assets under management (UBS Pension Fund Indicators, 2003). This is comprised of an estimated £600 billion in occupational fund assets and £250 billion in private pensions. The majority of occupational fund assets are in defined benefit (DB) arrangements. However, as employers close their final salary schemes, defined contribution (DC) arrangements are replacing them.

1.1.2 According to the JPMorgan Fleming Annual Defined Contribution Industry Survey 2003, the shift from DB to DC schemes has gathered pace. (The 2004 survey was published just as this paper was being finalised. This confirms the findings of the 2003 survey and shows that trends established in 2003 are continuing. We have not updated this paper to include the 2004 survey results as time did not permit, however, this would not make a material difference to this paper.)

- 95% of organisations surveyed have a DB scheme in place. However, the proportion of DB schemes in the private sector now either closed to new members or not available to all staff has risen from 30% to 49% in the last year.
- 50% of respondents now have a DC scheme in place, representing an 11% increase since the 2002 survey. A further 16% of companies in the private sector say they intend to introduce a DC scheme in the next five years.

1.2 Occupational Pension Market Breakdown

1.2.1 The NAPF survey provides details of the type of schemes being offered to employees. The results for the main type of scheme in operation are outlined in Table 1.1.

Table 1.1: The main type of scheme being offered to employees

	% of Total Schemes
A final salary scheme	58
Career average scheme	3
A hybrid scheme	10
A money purchase scheme	18
A group personal pension scheme (GPP)	5
Stakeholder with employer contribution	6
Stakeholder without employer contribution	-

Source: NAPF 2003 Annual Survey of Occupational Pension Schemes

1.2.2 Final salary schemes are still the main scheme for 58% of the schemes participating in the NAPF survey. However, as this survey is drawn from those schemes that are members of the NAPF, it is likely to be biased towards DB arrangements. In practice, therefore, the percentage of all schemes that are DC is likely to be somewhat higher than this survey reveals.

1.2.3 The NAPF survey also provides information on the active membership of schemes as outlined in Table 1.2 below.

Table 1.2: Total number of active members currently accruing benefits under this scheme			
Active members	DB Schemes	DC Schemes	Hybrid Schemes
Less than 2,000	54%	74%	58%
2,001 - 5,000	19%	17%	26%
5,001 - 10,000	9%	4%	9%
10,001 - 25,000	11%	4%	5%
25,001 - 50,000	4%	1%	2%
More than 50,000	3%	-	-

Source: NAPF 2003 Annual Survey of Occupational Pension Schemes

1.2.4 A large majority (74%) of the DC schemes in the survey had less than 2,000 members. Only a small percentage (9%) of DC schemes had more than 5,000 members. This reflects the recent trends of old, larger employers closing DB schemes to new entrants with DC arrangements set up for new employees, and of new, smaller companies preferring to set up new DC rather than DB schemes.

1.2.5 A different perspective is obtained by looking at the New Earnings Survey. This survey looks at the pension coverage of employees categorised by their gross weekly earnings. Table 1.3 presents the results. It emerges that approximately 58% of people are covered by occupational pension schemes and 65% by some sort of pension. Of these, about a quarter are covered by DC arrangements.

Table 1.3: Pension coverage split by gross weekly earnings					
Weekly Earnings	Sample Size	DB Schemes	DC Schemes	Personal Pensions	Total
Less than £200	5,508	20%	6%	3%	29%
£200 - £300	23,439	37%	7%	6%	50%
£300 - £500	40,189	49%	9%	7%	65%
£500 - £1,000	28,814	61%	11%	8%	80%
£1,000 - £1,500	3,393	52%	18%	12%	82%
More than £1,500	1,582	46%	21%	13%	80%
Total	102,925	48%	10%	7%	65%

Source: New Earnings Survey 2003, National Statistics Website: www.statistics.gov.uk

1.3 Contributions

1.3.1 A vital factor in ensuring an adequate retirement income is the level of contribution paid into a scheme by members and employers alike. According to the NAPF, non-contributory schemes comprise one fifth of all DC schemes that participated in their survey. The remainder require member contributions. Employer contributions typically vary for different members depending on a variety of factors such as the level of contribution chosen by the member, member age, position or length of service.

1.3.2 There has been some concern about the fact that average employer contributions to DC schemes have been considerably lower than those to DB schemes. Average DC contributions have remained relatively stable over the period from 1997 to 2003, averaging around 6% (NAPF, 2003). The JPMorgan Fleming Annual Defined Contribution Industry Survey 2003 shows a similar finding in that the average contribution level for a 30 year old member of a DC scheme was 5.8% for the employer and 3.6% for the employee. However, the average contribution rate to DB schemes over the same period has risen from 13% to 16%. There is

some recent evidence that rates of contributions to DC schemes are increasing. This probably reflects the fact that new DC schemes are being introduced with higher contribution rates than existing schemes, rather than existing schemes increasing their contribution levels.

1.3.3 It is possible to explain the higher rate for DB schemes to a certain extent. First, employer contributions tend to be higher for schemes that have chosen to be contracted out of the State Second Pension (S2P) than schemes that are not. Secondly, DB schemes tend to incorporate benefits such as ill-health pensions and death-in-service benefits within the employer's contribution rate. This is in contrast to DC schemes where such benefits are provided by separate insurance arrangements and are not included within the contribution rate.

1.3.4 Despite these reasons, employer contributions to DC schemes are still markedly lower than to DB schemes. Hence it is reasonable to presume that members are likely to receive lower average benefits on retirement.

1.4 Savings Levels

1.4.1 There has been much recent publicity that the nation isn't saving enough. It is estimated that an annual savings gap of £27 billion exists (Association of British Insurers (ABI), 2003). The ABI survey also reveals that approximately 36% of the total working population are not saving enough through a pension. This figure represents some 8 million people who are not saving at all and a further 2 million who only have small amounts of savings. There are thought to be 11 million people saving sufficiently with 10 million belonging to DB schemes and just over 1 million belonging to DC schemes.

1.4.2 Figures 1.1 and 1.2 provide a detailed breakdown of the non-savers and under-savers. As might be expected, younger people (aged between 18 and 29) are a large proportion of the non-savers (3 million). It is also evident from Figure 1.1 that many people (1.9 million in total) who fall into an earnings bracket of less than £10,000 p.a. are unable to save for retirement. However, 1 million people in this category are adequate savers. These people are primarily covered by DB schemes. Hence it is believed that the non-savers are probably having problems accessing a scheme.

Figure 1.1: Non-savers: key demographics

Source: The State of the Nation's Savings, Association of British Insurers, October 2003

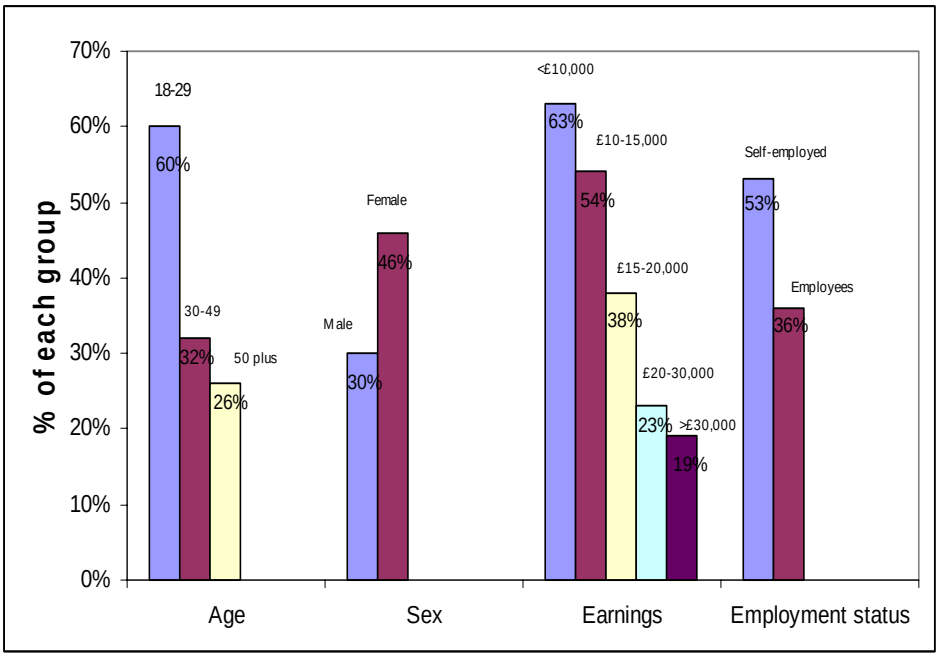
1.4.3 The results obtained for under-savers show a different distribution to that for the non-savers. It is noticeable that young people and low earners comprise a very small proportion. Therefore it would appear that these groups of individuals either save adequately or not at all. The majority (55%) of under-savers are aged between 30 and 49. Also, 66% of them are earning middle or higher incomes i.e. more than £20,000.

Figure 1.2: Under-savers: key demographics

Source: The State of the Nation's Savings, Association of British Insurers, October 2003

1.4.4 The ABI survey went on to analyse the percentage of non-savers in the various different categories. The results are illustrated in Figure 1.3. It can be seen that 60% of 18-29 year olds do not save. A high percentage of low-income workers are non-savers (63% of those earning less than £10,000 p.a.) and just over half of those that are self-employed also fall into the non-savers group.

Figure 1.3: Non-saving: prevalence

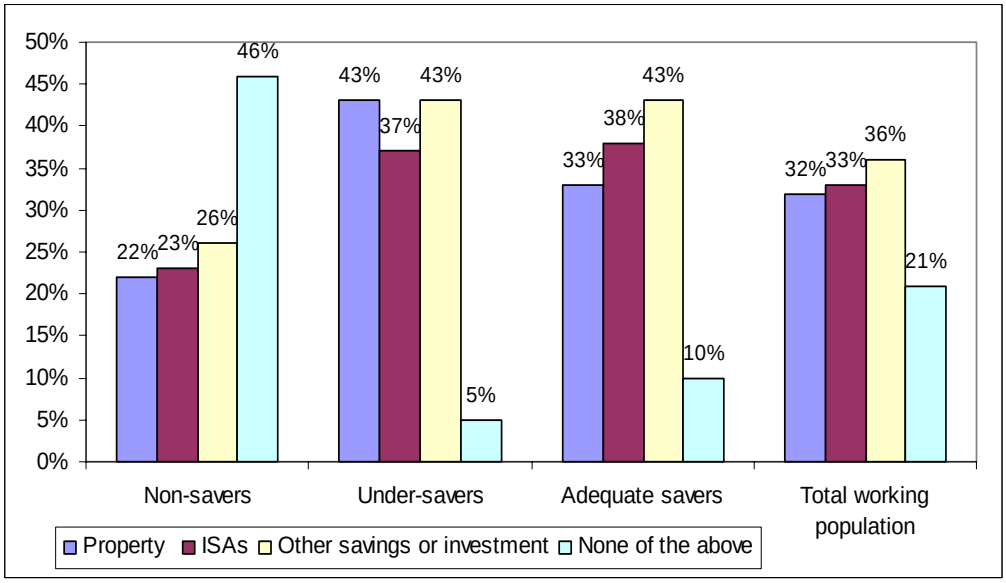


Source: The State of the Nation's Savings, Association of British Insurers, October 2003

1.5 Other Savings

1.5.1 It is important to note that people will be relying on other forms of savings in addition to pensions for their retirement income. There is evidence to suggest that people who do not have a pension are also the least likely to possess other assets (ABI, 2003). Generally, saving in non-pension products for retirement isn't viewed as a replacement for pension savings but rather as a supplement. The types of 'other savings' used by people are shown in Figure 1.4.

Figure 1.4: Which of the following are you saving/investing in for your retirement?

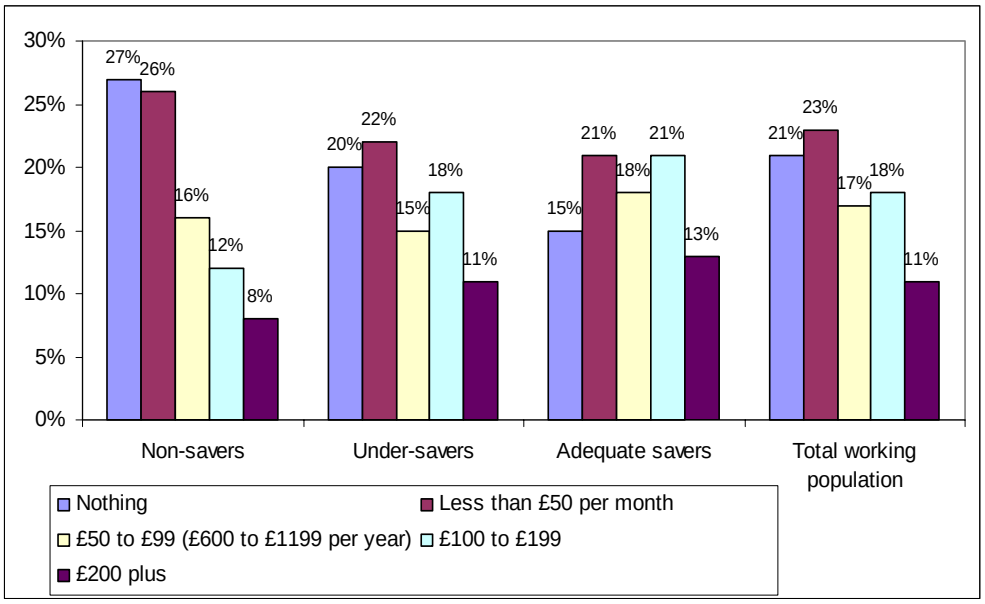


Source: The State of the Nation's Savings, Association of British Insurers, October 2003

1.5.2 A high percentage of the population (32%) are investing in property to fund for their retirement. Also, 14% of people state that property will be their main source of retirement income. However, since it has been estimated that only 1% use property to get retirement income through a buy-to-let approach (ABI, 2002) it would seem that people are planning on using the equity in their own home to supplement their retirement income.

1.5.3 It is also interesting to look at how much people are saving for the short or medium-term rather than specifically for their pension. It has been found that those that are saving the most for their pension are also saving the most for other purposes. The results are shown in Figure 1.5. It has been found that 62% of people with no pension do still save some amount each month.

Figure 1.5: On average, how much per month do you save for purposes other than your pension?



Source: The State of the Nation's Savings, Association of British Insurers, October 2003

1.6 Fund Options

1.6.1 Within DC schemes there has been a trend towards offering members a greater investment choice by increasing the number of funds they have access to. DC providers now offer an average of eight funds (JP Morgan Fleming, 2003). There has also been a trend towards greater fund manager choice. A majority of schemes still offer just one fund manager. However, the number of DC schemes limiting members to selecting funds from a single fund manager has decreased from 75% in 2000 to 59% in 2003 (JP Morgan Fleming, 2003).

1.6.2 The NAPF survey outlines the number of fund options offered to members of DC schemes, as does the JP Morgan Fleming Annual Defined Contribution Industry Survey. Their findings are outlined in Table 1.4 and Table 1.5.

Table 1.4: The number of different funds/options offered by the scheme

Number of fund options	Total Schemes
1 to 3	19%
4 to 10	41%
Over 10	39%

Source: NAPF 2003 Annual Survey of Occupational Pension Schemes

Table 1.5: The number of different funds/options offered by the scheme

Number of fund options	2002	2003
1 to 3	60%	20%
4 to 6	16%	32%
7 to 10	10%	24%
11 to 15	7%	12%
Over 15	7%	12%

Source: JP Morgan Fleming, Annual Defined Contribution Industry Survey 2003

1.6.3 Lifestyle and mixed asset/managed funds tend to be the most popular fund options picked by members. These and the other investment options typically offered to DC members can be found in Table 1.6.

Table 1.6: The investment options available to members, the percentage of assets in each and how they are managed					
	Available Schemes	Total assets in each fund	Management of each fund		
			Active	Passive	Both
Lifestyle	65%	29%	38%	44%	18%
Mixed asset fund	54%	22%	61%	18%	21%
With profits	36%	19%	64%	23%	14%
Global equities	60%	14%	30%	30%	40%
UK equities	76%	7%	38%	28%	34%
Overseas equities	56%	4%	42%	19%	39%
Gilts/Fixed interest	75%	3%	38%	40%	22%
Deposit accounts	64%	2%	44%	43%	13%
Ethical/SRI funds	36%	-	61%	18%	21%
Other	31%	-	-	-	-

Source: NAPF 2003 Annual Survey of Occupational Pension Schemes

1.6.4 A large proportion of DC schemes, which allow employees to make their own investment choice, have a default option installed for members who may not wish to choose their own investment fund. According to the JP Morgan Fleming survey, the tendency for DC schemes to do this has fallen slightly from 87% in 2001 to 81% in 2003. However, providing a default option still has a very high incidence. The most popular default option is a lifestyle plan, where an automatic switching process gradually alters the plan's investment from equity based funds into fixed interest, cash and index-linked gilt funds on approaching retirement. Table 1.7 outlines the types of default options typically offered.

Table 1.7: Types of default option		
	2002	2003
Lifestyle	90%	77%
With-profits fund	6%	7%
Actively managed equity fund	3%	5%
Passive index tracker fund	0%	7%
Other	1%	5%

Source: JP Morgan Fleming, Annual Defined Contribution Industry Survey 2003

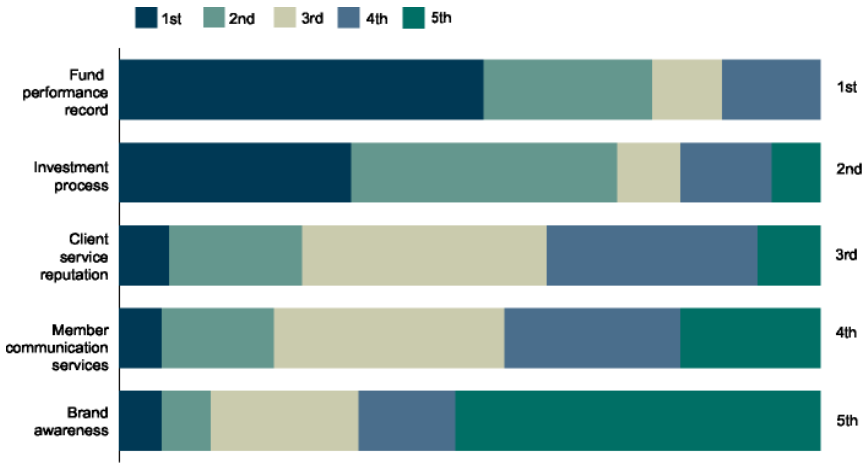
1.6.5 The options named in Table 1.6 are fairly traditional. In the JP Morgan Fleming Survey, DC scheme providers were questioned about whether they offered or considered offering certain specialist investment options; namely high risk/high return funds, multiple fund managers, guaranteed funds, property funds, absolute return funds, hedge funds or private equity funds. It was found that less than 50% of companies participating in the survey offered or were planning on offering any of the specialist options named above. The results are detailed in Table 1.8.

Table 1.8: Specialist fund options			
	Already offer	Yes, in the next 12 months	Yes, in the next 2 to 5 years
High risk/high return	26%	4%	12%
Multiple fund managers	17%	7%	24%
Guaranteed fund	17%	7%	8%
Property fund	9%	7%	22%
Absolute return fund	4%	3%	12%
Hedge fund	3%	3%	7%
Private equity fund	1%	1%	8%

Source: JP Morgan Fleming, Annual Defined Contribution Industry Survey 2003

1.6.6 DC schemes have been encouraged to consider guaranteed funds and property by the difficult equity market of recent years. Private equity and hedge funds have also received some keen interest as pension schemes look for ways of diversifying away from more traditional asset classes. Nevertheless, the focus of investment choice continues to remain largely on equity, fixed income and balanced funds.

1.6.7 The order of importance when selecting a DC fund manager is shown in the figure below



- Fund performance is by far the most important consideration when choosing a DC fund manager, followed by investment process.
- Brand awareness (i.e. how well the provider is known amongst employees) was ranked in 5th place in this year's survey, having been ranked 4th in the 2002 survey. It has been overtaken by member communications services that have gained in importance.
- The growing emphasis on the importance of good member communications is supported by the individual comments that respondents made when asked about their key concerns in meeting member requirements. A number of organisations suggested that more needs to be done to improve member communications, particularly in terms of explaining investment risk and the investment process.

1.7 Member Communications

1.7.1 The ABI survey found that just fewer than half of the working population believe they understand their pension well (ABI, 2003). Additionally, two-thirds of the population (including a majority of savers) have never attempted to determine how much they need to save for retirement.

1.7.2 When it comes to DC schemes, members are expected to choose how the contributions paid into their retirement fund should be invested. In order to make a competent decision they need to be able to understand the different investment options available and the trade-off between risk and reward. One of the principal challenges ahead for DC schemes is improving member communications. Pension managers feel that this could partly be achieved by DC providers playing a greater role in educating members about investment, for example explaining the inherent risks/rewards of the fund choices available.

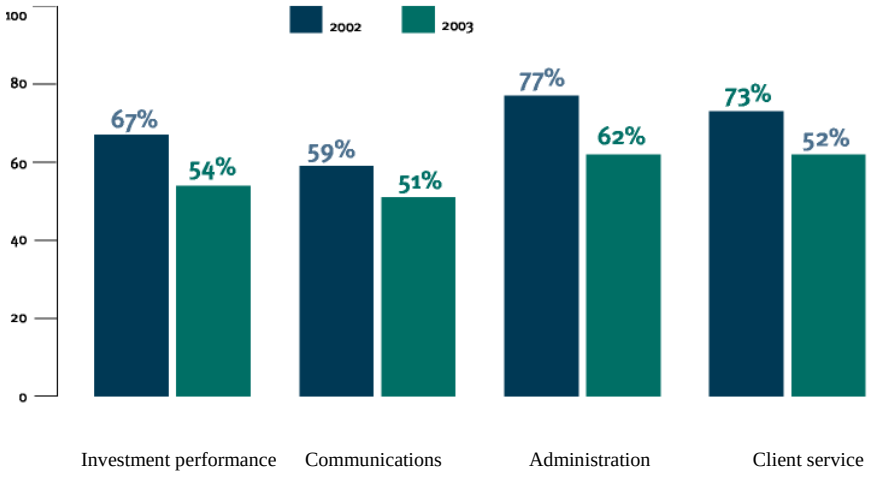
1.7.3 A variety of different communication methods are used by firms to inform their members. The most popular methods in descending order are:

- Hard copy
- Internet site
- Call centre
- Member presentations
- Investment newsletter
- Investment video
- CD Rom presentation

The use of hard copy information is still almost universally used. There has been an increasing use of call centres and presenting information on the internet/intranet. The poor performance of equity investments in the past few years has led one in three DC schemes (JP Morgan Fleming, 2003) to make additional member communications. Approximately half of pension managers and a third of scheme members are able to access their pension account online through their DC scheme administrator (JP Morgan Fleming, 2003).

1.7.4 Schemes were asked how well DC providers were meeting their members' needs.

% thinking DC providers are meeting needs of scheme members



- According to survey respondents, the success of DC providers in meeting scheme member needs has fallen in all four areas being assessed.
- The biggest drop has come in investment performance and administration. Disappointment with investment performance might be explained in part by negative equity returns.
- Again, there are clear signs that member communications need to be improved - barely half (51%) of respondents believe that these are currently meeting member needs.

1.8 Experiences in the US

1.8.1 The 2003 Trends and Experience in 401(k) Plans survey conducted by Hewitt Associates in the spring of 2003 enables comparisons to be made between the UK experiences considered above and experiences in the US.

1.8.2 Investment options offered:

- Plans have increased the number of investment options to participants. The average number of investment options available for 401(k) contributions is now 14 (up from 12 in 2001 and 11 in 1999).
- Over 75% of plans in the survey offer ten or more investment options.
- U.S. equity funds (large capitalization, mid-capitalization, small capitalization, or equity index funds) are offered by 96% of plans. Large capitalization equity funds are the most common investment option in plans, with 88% of plans offering them (85% in 2001, 78% in 1999, and 61% in 1997).
- 91% of plans offer either a balanced or an asset allocation (pre-mixed/lifestyle) fund. Similarly, 92% of plans offer non-U.S. equity, global equity, or emerging markets funds as investment choices. These percentages are consistent with the 2001 survey.
- The percentage of plans offering one or more asset allocation (pre-mixed/lifestyle) funds has increased to 55%, up from 35% in 2001. Bond index funds are also more prevalent, with 40% of plans offering them this year compared to 26% offering them in 2001.
- The percentage of plans offering a self directed brokerage account is up slightly, with 14% of plans offering this option. This is up from 12% in 2001 and 7% in 1999.

When comparing 2003 and 2001 survey results, the overall 401(k) asset mix has shifted out of equity investments and into money market, stable value, and bonds.

1.8.3 Investment education offered:

- Most plans (89%) provide investment education to employees. This is consistent with the 2001 and 1999 surveys, in which 85% and 86% of plan sponsors said they provided investment education.
- 78% of plans use Internet or Intranet for employee investment education. 79% of these plan sponsors report that it is either very effective or somewhat effective in communicating investment concepts.
- Over one-quarter of plan sponsors (28%) offer outside investment advisory services to employees. This is a sharp increase from 2001, when less than 20% offered such services. 41% of plan sponsors either offer outside investment advisory services or plan to do so in the next 12 months.
- The most common mistake made by employees in 401(k) plans, according to 26% of plan sponsors, is not diversifying investments adequately. Failing to contribute sufficiently to the plan was cited as the second most common mistake by 17% of plan sponsors.

1.9 Experiences in Australia

1.9.1 The report 'Choice of fund – myths and realities for members and markets' By Ross Clare, Principal Researcher ASFA Research Centre, June 2003 considered DC arrangements in Australia.

1.9.2 The most common number of investment choices on offer is 5 investment classes. Typically the range will include cash or capital guaranteed, balanced, growth, and Australian shares. Some funds will also allow the custom construction of portfolios from a range of specified asset classes such as bonds, property, Australian shares and overseas shares. However, some funds, typically in the

retail sector may offer hundreds of choices through allowing access to a wide range of investment products offered by a range of fund managers. These involve both choice of investment manager and type of investment. Master trust and wrap account administration platforms typically allow for selection from up to several hundred different investment managers, and increasingly retail funds are making use of this design capacity when they see marketing advantages in doing so.

Table 1.9 – Number of investment choices on offer

	Percentage of funds
1 to 5 choices	76%
6 to 50 choices	20%
More than 50 choices	4%

Source: APRA data from 1999-2000 annual returns

1.9.3 The take-up of investment choice varies from fund to fund, depending on the nature of the options available, the suitability of the age based or more general default option in place, the level of investment education provided to fund members, and the age, education levels and other characteristics of the membership itself including account balance. For instance, a low take-up rate of choices other than the default might flow from the default being appropriate for members rather than member apathy. As well, it might be unreasonable to expect a 20 year old with $400 in superannuation getting very excited about investment choice.

1.9.4 The experience of one industry fund was that for its 60,000 members, around 3,900 responded to a mail out requesting nomination of an investment option. Of those who nominated an option, 70% selected high growth, 18% selected medium growth, and 9% stable growth and only 2% capital secure (cash). A small number also would have liked the option to invest in a single distinct asset class such as Australian equities.

1.9.5 On the other hand, some employer sponsored master trusts and corporate funds with an emphasis on member investment education and active engagement of members in their superannuation fund have had 70% or more of fund members nominating a specific investment option (which may or may not be the same as their default option in the fund).

1.9.6 The Corporate Super Association survey recorded rates of take up for investment choice between 2% and 100%, with mostly less than 20%. The variation in reported take-up rates was attributed to variations in:

- The general level of education of fund members
- The degree of financial knowledge of fund members
- Resources devoted to communication of investment choices
- The form in which fund choice is offered
- The method of measuring take up – some funds include a conscious choice to take the default, while others report the numbers taking a choice other than default.

1.9.7 Master trust arrangements make use of platforms and investment management provided by other groups. Products compete on features, affiliation and brand rather than on price. There can be significant barriers to entry. Access to a

distribution chain is far more important than having a quality investment product at a low cost to consumers.

1.9.8 Mechanisms for better-informed consumer choice have their focus on providing members with the education and skills needed and on funds and advisers providing all necessary information and advice in a clear and effective way. A considerable amount of work is needed to change the current imbalance in knowledge and skills between providers of retail products and the consumers of such products.

1.9.9 Specific measures for informed choice and effective competition include:

- An industry wide standard for disclosure that improves upon that provided by the Financial Services Reform Act and associated regulations. ASFA has conducted extensive consumer testing of a variety of approaches to disclosure of fees and charges with the aim of providing a more effective template for fee disclosure.
- Public education campaigns which are adequately funded and which extend from school students to retirees to provide consumers with the skills and tools needed to compare superannuation funds.
- If disclosure, advice and licensing provisions are not sufficient to deal with possible conflicts of interest in recommendations by advisers, then other mechanisms and controls might be necessary if the goal is more effective price competition in the sector. These could extend to a prohibition on advisers to consumers having an ownership interest in providing master trust or wrap account services to the consumers they advise, or restrictions in regard to the level or type of commissions that can be received.
- Exit fees in particular can impact on portability between funds and effective competition. While banning such exit fees would facilitate greater competition in the retail market through enhancing portability, there would be considerable commercial ramifications for life insurance companies that had already paid substantial commissions to agents who sold such products.

1.9.10 Professional advice from a financial planner will not (in most cases) result in the selection of fund with a better than average return in the future, as such advisers generally use lists of suitable funds based on rankings provided by ratings agencies. These ratings may have their uses, but they do not, and do not claim to, identify funds likely to generate above average returns. This does not mean that clients of planners do not obtain value from the services provided. Often advice will be provided as to what is an appropriate mix of investment classes for their superannuation, along with helpful tax, social security and savings strategies. That said, the chance of a satisfactory return is enhanced by ruling out funds with actual or potential governance problems, unsound investment strategies and/or fees above those of alternative funds providing a similar mix of investments and standard of superannuation services.

1.10 Occupational Defined Contribution Schemes

1.10.1 A major difference between an occupational DC scheme and other DC arrangements is that an occupational DC scheme is set up under trust. All occupational DC schemes are sponsored by the employer. In most cases, the employer pays for the cost of administering the scheme.

1.10.2 The trustees of the defined contribution scheme will have the same responsibilities, in broad terms, as for a defined benefit scheme. In particular, the trustees have the power to set the investment policy of the scheme. The trustees decide on the fund choices to be made available within the scheme or they may operate the scheme as a common unitised fund, in which case they may set common asset allocations in which individual members have no investment choice. The trustees are also responsible for the ongoing monitoring of investment managers.

1.10.3 Apart from making investment decisions, trustees are responsible for member communications and the administration of the scheme.

1.10.4 Although the occupational DC scheme requires more employer involvement compared to other types of DC arrangements, it allows an employer more control over the benefits they offer to their employees.

1.11 Group Personal Pension (GPP) Schemes

1.11.1 A GPP is just a series of personal pension contracts between the provider and the individual members. Employers are often the intermediary between the provider and the employees because they are able to negotiate favourable charges via economies of scale.

1.11.2 GPP products are sold by insurance companies and investment houses, and offer a wide range of fund choices. Providers of this product are regulated by the Financial Services and Markets Act. Administration of the scheme and communications to members are provided by the providers. Individual members have the freedom to choose any funds offered by the providers. The employer usually contributes to this type of arrangement.

1.12 Personal Pension Schemes

1.12.1 A personal pension is a pension contract between provider and an individual. The investment characteristic of a personal pension is the same as for the group personal pension. An employer can make contributions to their employee's personal pension arrangement, although this is less common than for a GPP arrangement.

1.12.2 Members of contracted in occupational pension schemes can also use personal pension to contract out of the State Second Pension. Rebates are then paid by the Government into their personal pension.

1.12.3 The main drawback normally associated with personal pensions is the high level of charges levied by providers. However, most providers now charge fees similar to Stakeholder levels (see paragraph 1.13.2), apart from investment in specialist funds.

1.12.4 Saving via a personal pension generally offers more investment choice compared with occupational DC schemes.

1.12.5 In recent years, the popularity of personal pensions in the UK has suffered from negative publicity surrounding Equitable Life and pension mis-selling.

1.13 Stakeholder Schemes

1.13.1 Under the Stakeholder legislation, all employers which have more than five employees are required to offer access to a stakeholder scheme unless it offers a GPP or occupational pension arrangement that meets certain minimum criteria. The purpose of the stakeholder legislation is to offer (an almost) universal access to a pension scheme.

1.13.2 A Stakeholder scheme is similar to a GPP. However, the maximum annual charge that may be levied by the providers is one percent of the accumulated fund value. Also, any with profits fund offered under a Stakeholder arrangement must not cross-subsidise any other with profit contract.

1.13.3 Stakeholder schemes can be offered as a trust based (like an occupational DC scheme) or as a contract based (like a GPP) arrangement. Employers are not required to contribute to the Stakeholder scheme.

1.14 Unapproved arrangements

1.14.1 These arrangements are typically trust based and are usually set up by the employer for high earners. They can be set up as DB or DC arrangements to provide benefits in addition to those provided from a tax approved arrangement. There are still some restrictions on the form of the benefit payments.

1.15 DC as Part of a DB Scheme/Additional Voluntary Contributions (AVCs)

1.15.1 It is possible to pay into a DC arrangement whilst participating in a DB scheme. The most common way of doing this is by paying AVCs into the scheme.

1.15.2 There are schemes in which the AVCs are used to secure defined benefits (i.e. fixed pension or added years) within the scheme. However, most schemes provide AVC benefits that are DC in nature. That is, additional contributions are either paid to an external AVC provider or are invested in the pension fund.

1.15.3 If the AVCs are invested with external providers, the trustees select the range of funds and providers that are made available. Members choose the fund(s) in which their AVCs are invested.

1.16 New Tax Regime

1.16.1 In December 2002, the Inland Revenue delivered its proposals for simplification of its requirements for pension schemes. This was followed in June 2003 by the announcement of the Government's 'Action Plan' for delivery of the proposals. In the Budget of 2004, the Chancellor confirmed that he would introduce a new single tax regime for all approved pension schemes. The new tax regime will be implemented from 6 April 2006 and it will replace all the existing regimes.

1.16.2 All members of occupational pension schemes will be allowed to contribute to individual pension arrangements at the same time. It is likely that this will change the way people save for their retirement.

1.16.3 There will be no limit on the benefits that can be taken at retirement. Instead there will be a Lifetime Allowance (LTA), initially set at £1.5 million, on the value of tax-favoured pension benefits (from all private pension arrangements). The LTA

will be increased to £1.8 million by 2010. It will be possible to build up pension benefits of a greater value than the LTA but the excess benefits will be subject to an additional tax charge. It would seem likely that members would like to keep the value of their DC arrangements to within the LTA for this reason. This may affect the amounts that some members contribute to their DC arrangements and their investment choices.

1.16.4 There will be an annual maximum on the tax-favoured contributions of £215,000 (increasing to £255,000 by 2010). The maximum annual contributions will be 100% of salary, or £3,600 if greater.

1.16.5 Overall the proposals will significantly increase flexibility for low or middle-income earners but are likely to be detrimental for high earners.

1.17 Individual Savings Accounts (ISAs)

1.17.1 Individual Savings Accounts (ISAs) provide direct competition to DC pension arrangements. There is no tax on investment returns or savings taken from the account although contributions made into the account are taken from taxed income. The government has proposed removing the dividend tax credit in ISAs from 2005, which will bring them into line with pension arrangements.

1.17.2 Savings via ISAs offers flexibility for investors as they can disinvest at any point in time and there is no compulsion to buy annuities – unlike tax approved pension arrangements. There are wide choices of investment vehicles offered by ISA providers.

1.17.3 Investors can continue to make investments into their ISAs even after they retire.

1.17.4 The annual savings limit in an ISA is fixed at a rate of £7,000 per tax year. This annual contribution limit is unlikely to be sufficient for many people who would like to make ISAs their sole retirement savings.

2. Incentives and disincentives in the DC pensions market

2.1 The drivers of demand for (and against) DC products in the UK pensions arena are many and varied. They range from fiscal incentives, through regulatory controls, through cultural, sociological and psychological factors, to changes in the business and working environment that occur over time. Some of these drivers apply with equal force to their cousin, the DB pension scheme; others drive the differences between the two. Some drivers that favour DC pensions apply equally to all forms of savings; others apply only to savings for retirement. Demand for DC products will ultimately be driven by the existence of a favourable balance between all these various incentives and disincentives.

2.2 It is therefore pertinent to consider to what extent these drivers can be influenced or managed. Some clearly can be managed, primarily by government, through fiscal and regulatory policy. Others can be influenced, at least to some extent, by the pensions and financial services industries themselves through, for example, awareness raising, education and example. Yet others will always remain at the whim of changing markets and changing attitudes within our society.

2.3 The most significant driver of demand for DC in the UK of late has simply been the decline in favour of DB. The roots of this, of course, are somewhat deeper, but as employers have wrestled with sometimes immense burdens on their financial condition caused by the deficits in their DB scheme, so many have abandoned that ship and boarded new, DC vehicles instead. Anecdotal evidence of this is widespread. A side benefit to employers has been the opportunity, given them by this change, to reduce substantially the overall level of their contributions, usually with little or no complaint from workforce or trade unions that presumably failed to notice.

2.4 The demise of so many DB schemes at a time of relative economic prosperity and low inflation seems somehow counter-intuitive. One might have expected the threat to DB schemes to be greater, say in the early-mid 1970s, when inflation reached over 26%, the economy was reeling and the stock market had fallen 74% over 3 years, but they survived and went on to prosper, until recently at least. Clearly there were other, more powerful factors at work driving the recent changes, made all the more pronounced by the sheer scale of what are now in most cases mature pension funds.

2.5 There are two such factors that would seem to merit pointing to particularly. First, the Labour government's decision in 1997 suddenly to withdraw schemes' ability to reclaim tax deducted at source on dividends, thereby at a stroke putting up the annual cost of the UK's DB pensions by an estimated £1 billion. Secondly, the introduction of the accounting standard FRS 17. This requires companies to reflect shortfalls between the value of their pension funds' liabilities and their assets, valued at market value on their balance sheets. Falls in equity market values led to devastating results to the balance sheets of many major UK companies. Both changes brought home to finance directors the risks to their company that DB schemes carried – from political and regulatory interference as well as from economic influences.

2.6 A third factor, likely to have a severe negative impact on DB provision in the UK in the near future is the proposed introduction of the pension protection fund, which will add further costs to DB schemes as the well-funded subsidise or bail out the poorly funded.

2.7 These negative influences on DB, derived from fiscal and regulatory change, are significant drivers of demand for DC products because there remains a well-established expectation in the UK for employers to provide pensions, or 'deferred pay', for their employees. Thus there is a shift of funding from DB to DC. This expectation that good employers will provide pension funding is another key driver of demand for DC products. If the pattern of remuneration provision were to change – for example due to a greater move toward 'cafeteria' type reward systems, or simply a shift away from the paternalistic attitude of responsibility lying on an employer to ensure his employees make provision for their retirement, toward greater emphasis on maximising salary in order to leave employees to decide their own priorities – it would probably have far greater effect on the demand for DC products in the future than any other factor. This points to how social, cultural and psychological influences could in future prove to be incentives or disincentives for greater DC demand.

2.8 Social and cultural issues also affect how people view the need to make their own provision for retirement – whether they expect the government of the day to provide or whether they trust the government to provide. On the one hand, by virtue of means-testing for benefit entitlement there is a disincentive to save and instead to consume. On the other, for many people there is little trust and much cynicism about the pension promises made by governments, citing past promises made by one administration only to be watered down by succeeding ones, for example the erosion to entirely trivial levels of the graduated pension scheme benefits, and the reductions, both explicit and by stealth, to SERPS accrual post-1988. A population that believes in the need to save for its own retirement must surely be a key goal for any government and it is therefore crucial that governments recognise the need to establish long-term trust in pension provision and, particularly, in the interaction between private and State pension provision.

2.9 Of course one of the main incentives for pension provision of any type is the unique tax advantage that they enjoy, which successive governments have by and large (apart from 1997) left intact over many years. Against this incentive is the disincentive of having no access to those savings for what may be up to 40 years or more. It is crucial that governments recognise too the importance of maintaining stability and continuity in the broad rules governing such provision if people are to be expected to trade off between these competing incentives and disincentives in favour of saving for their retirement. Equally important is that alternative but shorter-term savings arrangements are not given fiscal advantages that will outweigh the more delicate balance that favours pensions saving. For example, ISAs offer identical tax advantages to the build up of funds once they have crossed into the wrapper of the plan but do not offer the attraction of tax relief at the time the saving makes that crossing. On the other hand, the ISA proceeds will emerge entirely as a tax-free sum, whereas the bulk of the pension fund will only emerge as a taxed regular income, which the saver may or may not live long enough fully to enjoy.

2.10 Within the pensions regulatory rule-base there are many detailed provisions that act as incentives or disincentives for pension savings as a whole. Some are relevant equally to both DB and DC arrangements while others relate more particularly to DC. One of the key provisions – and it is reaffirmed in the recent proposals for pensions simplification – is the ability to take 25% of the fund as a tax-free cash lump sum at retirement. Much store is set by many at the prospect of their lump sum – to fulfil a long-held 'dream' or other aspiration at retirement

– and any erosion of this feature would have removed an important incentive for them.

2.11 Another controversial rule is the obligation to use the fund to buy an annuity by age 75. Particularly for those with large funds built up, it is seen as unfair and that in turn acts as a disincentive for the following generation to save to a DC pension plan. Some tentative suggestions to alleviate the effect of this rule have been made in the pensions simplification proposals and subsequent debate but, at the time of writing, it is unclear if or precisely how these might operate. Clearly the government has to tread a careful line between removing disincentives to DC pensions saving and allowing changes, which could cause haemorrhage to its future tax take.

2.12 Many of the detailed rules governing benefit limits, particularly for occupational pension schemes, will be swept away when the simplification proposals are adopted and this will be a positive incentive to encourage pensions saving. It will remove part of the complexity that surrounds pensions, and thus make pensions saving more commonplace. It should also help reduce the cost of pensions saving by virtue of the simpler administration that should result from a simpler rulebook.

2.13 An interesting feature of the proposals concerns the possible opening up of residential accommodation to pension fund investment, presumably as another tool of political policy, aimed at generating finance for the substantially expanded housing stock that the UK needs. Residential housing has seen such a boom in prices over a number of years that it is seen by many – rightly or wrongly – as the most sound investment they could make, so the opportunity to divert tax-favoured savings into a residential accommodation fund is likely to be a significant incentive for DC plans that offer this option. Also, it may encourage more 'self-administered' pension schemes, holding one or more specific residential properties, and insofar as these self-administered scheme 'wrappers' can be deemed 'DC Products', they would be likely to see increased demand if this proposal comes to straightforward fruition uncluttered by overbearing rules and restrictions.

2.14 The pensions 'industry' and the financial services industry can do much themselves to affect the demand for DC products. Both have suffered severe bad publicity in recent years, with the Maxwell pensions scandal, the Pensions Review of mis-sold personal pension plans, and the Equitable Life debacle. More recently, fears about the security of other Life Offices, the disappearance of many smaller but well-known names and concern about many with-profits funds have all contributed to a growing lack of trust in the savings and pensions industry. A concerted long-term campaign to improve its image and rebuild consumers' trust would help drive future demand for DC and other investment products – provided there are no more skeletons in cupboards awaiting revelation.

2.15 The industry can also help drive future demand by encouraging and assisting with the education of consumers about pensions and investment, by sponsoring and partnering educational establishments that will influence the next generation of savers – we are, after all, in a long-term business.

2.16 Effective use of IT can also be used to encourage saving through DC products. This would enable ease of access to information about products, funds, personal holdings, and likely pension outcome. It would also be possible to provide simple, user-friendly software to guide consumers in their choice of quantum and

style of provision. These would incentivise the demand for DC products and it is the pensions and financial services industry that must develop these tools if it is to succeed.

2.17 Whilst the industry needs to spend to support growth in its market development and penetration, it also needs to balance this against the imperative of controlling its costs. The introduction of 'CAT standard' stakeholder pensions, with their restriction on charges to a 1% annual fund charge, has set a benchmark that has substantially reduced product charges in the retail DC market particularly – individual personal pension plans, group personal pensions and insured money purchase occupational schemes. Product providers have widely bemoaned the inadequate level of this cap on charges, arguing that it leaves insufficient margin to cover advice, let alone set-up costs, administration and investment management. The poor take-up of new savings into stakeholder plans – even though every employer of more than 5 staff is obliged to nominate and provide access to a stakeholder plan for its employees unless they already have a sponsored pension arrangement in place – is testament to the adage that financial services products are sold and not bought. In the absence of advisers to 'sell' the benefits of the product, and hence of adequate margins to reward those advisers, the development of the DC market at the smaller-scale end could be seriously hamstrung. Yet another example of where regulators, in their setting of controls on pricing in this instance, and the industry, in its responding to the challenges of balancing investment in 'sales support' and remunerating advisers, have the potential to influence either positively or negatively, if not make or break, the future of a significant segment of the DC product market.

3. How much people need to save

3.1 Introduction

3.1.1 In this section we set out an assessment of how much people in different situations need to save and for how long. This includes an investigation of means tested benefits so as to give cost benefit profiles for saving for people in different income groups. It includes a discussion on the viability of equity release schemes as an alternative to traditional saving for retirement.

3.2 Sources of income in retirement

3.2.1 The main sources of income in retirement are:

- Basic State Pension (BSP) (currently £4,027 per annum for a single person)
- State Second Pension (S2P) (currently a tiered salary related benefit)
- Means tested benefits provided by the State
- Income from occupational schemes
- Income from individual pension vehicles, e.g. personal pensions and Stakeholder pensions
- Income from equity release schemes
- Income from other investments

3.3 Means tested State retirement benefits

3.3.1 In the UK the Pensions Credit provides a top-up to individuals as follows:

- Single person – minimum income of £102.10 per week (£5,328 per annum)
- Married couple – minimum income of £155.80 per week (£8,130 per annum)

3.3.2 The previous form of means tested state pension, the Minimum Income Guarantee, reduced the level of top-up if an individual had a modest level of personal savings. The Pension Credit is combined with the Savings Credit, which is intended to encourage personal savings.

3.3.3 A single person will qualify for the savings credit if their weekly income is above £77.45 but below £139. It is calculated as 60p for every £1 above £77.45 but below £139. The savings credit is paid to a maximum of £14.79 per week (£769.08 per annum) for a single person. Higher amounts/limits apply for married couples. Savings of up to £6,000 are ignored for the purposes of the savings credit, but savings over £6,000 are assumed to produce an income of £1 for every £500 of savings above £6,000.

3.4 What is an adequate income in retirement?

3.4.1 When an individual retires, what level of income do they need to continue with the same standard of living? One measure used to assess this is the Net Replacement Ratio (NRR) – the ratio of income after retirement to the ratio of income before retirement. In the UK, it is widely accepted that the typical level for the NRR is 2/3rds in order to maintain the same standard of living in retirement. This is echoed by the current limits on benefits laid down by the Inland Revenue. There are a number of reasons why a lower level of income may be needed after retirement, in particular, mortgages on property will usually be paid off and children are likely to be self-sufficient.

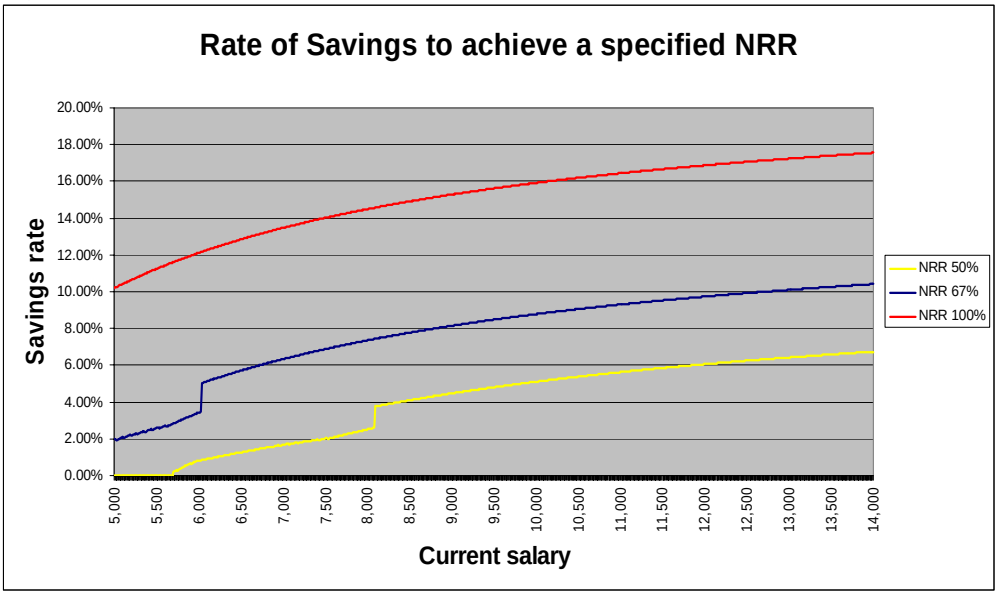
3.4.2 However, changes to the patterns of retirement may mean that a NRR closer to 100% would be necessary. As phased retirement becomes more commonplace, an individual's financial planning may focus less on a particular age of retirement. In particular, the term of mortgages may no longer be chosen to be coincidental with retirement and, as such, a drop in disposable income at retirement may result in a fall in standard of living.

3.4.3 It is also widely accepted that people on lower income levels will need a higher NRR to maintain the same standard of living. This is because they may not have mortgages or other expenses that fall away at retirement. Further, for those on very low incomes, any drop in income may result in financial hardship.

3.5 How much do people need to save to achieve a particular NRR?

3.5.1 The following graph (figure 3.1) shows the required rate of saving (as a percentage of salary) required to achieve a NRR of 50%, 67% and 100% with varying salary levels. It assumes that the individual is currently 25 years old, will retire at age 65 and is entitled to a full Basic State Pension but has no income from other sources. At retirement income from the Pension Credit and Savings Credit is allowed for. As you can see for someone saving for a NRR of 100%, the means-tested State benefits have no impact even for those on very low salaries. For the lower levels of NRR, the means-tested benefits impact those on very low salaries. The sharp increases in the lines show the point at which the individual is no longer entitled to the savings credit. For an individual targeting an NRR of 50% on a current salary of less than £5,700 the Pension Credit is sufficient to meet their target with no additional savings required.

Figure 3.1



The main assumptions underlying the graph are:

- Investment growth in excess of salary inflation – 3.5% per annum
- Increase in salaries in excess of price inflation – 1.5% per annum
- Cost of £1 per annum of pension at retirement – £18

3.6 Required savings levels

3.6.1 For those on modest to high incomes, the Pension Credit is unlikely to be relevant. However, a large proportion of individuals in this category under-estimate the amount that they need to save to secure what they feel to be an adequate pension.

3.6.2 The following graphs (figures 3.2) show the amount of pension for someone with a current salary of £25,000 per annum who starts saving for retirement at various ages at a rate of 5%, 10% and 25% of salary per annum respectively. It assumes that the individual is entitled to a full Basic State Pension and State Second Pension (S2P) but has no other source of income. The graphs assume that savings are made as a constant percentage of salary over the period up to retirement. In practise it is more likely that savings will occur unevenly over an individual's working life – this will be due to factors such as the need to save for a house and the expense of supporting children.

Figure 3.2a

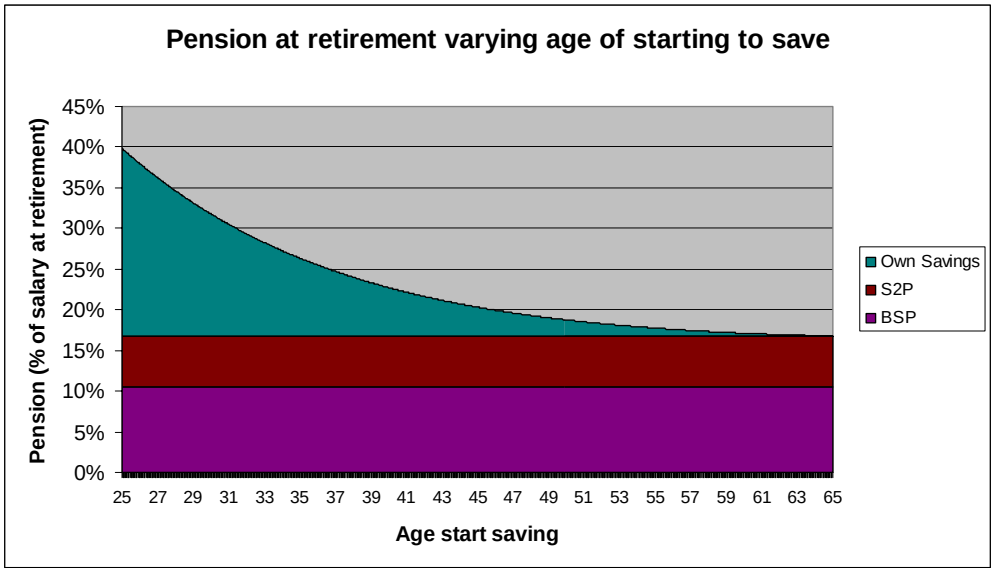


Figure 3.2b

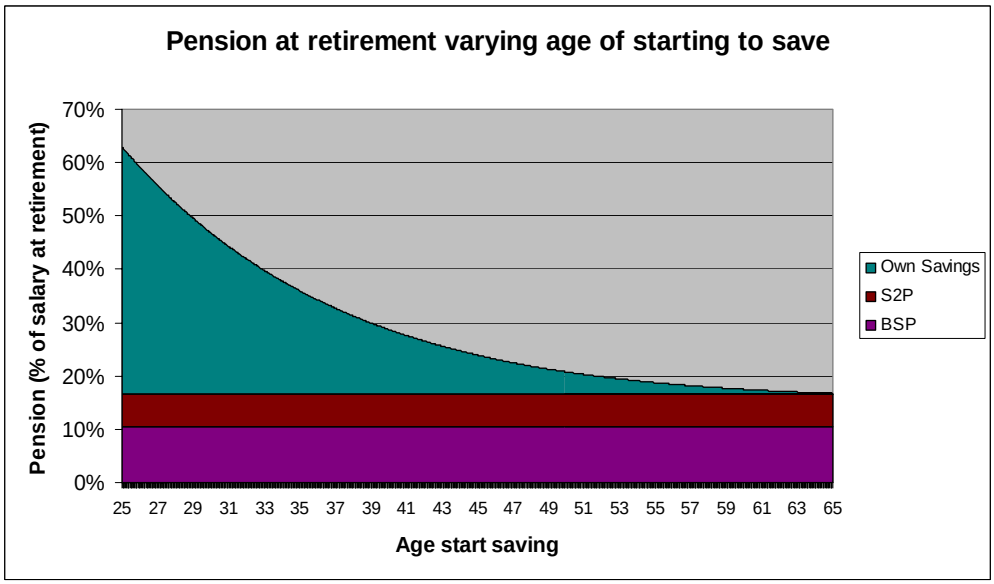
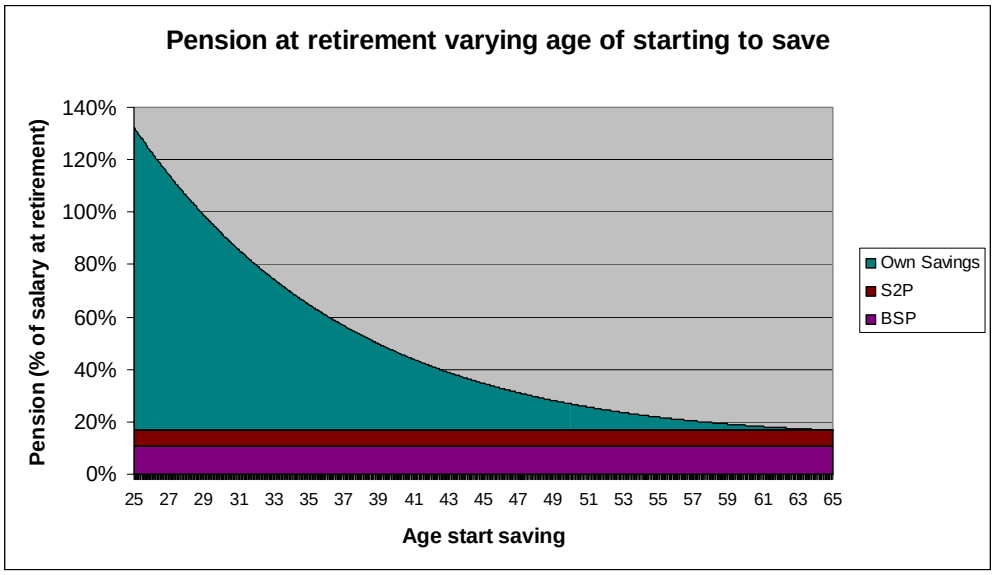


Figure 3.2c



3.7 Equity release schemes

3.7.1 Equity release schemes provide individuals with an income and/or lump sum together with the right to reside in the property in return for a share in the property. As people reach retirement with inadequate levels of income from other sources, this type of arrangement may become more popular and may reduce the demand for DC products.

3.7.2 There are two main types of scheme: reversion schemes and lifetime mortgages.

3.7.3 With a reversion scheme, the individual sells their home, or part of their home, to a plan provider. In return they receive a cash lump sum, a monthly income, or both. The individual can stay in the property rent-free for the remainder of their life or until the property is sold. The plan provider will then be entitled to all of, or a percentage of, the value of the property (depending on whether they own all or part of the property).

3.7.4 There are two types of lifetime mortgages: interest only mortgages and rolled up interest loans. With an interest only mortgage, a lump sum is borrowed and interest paid back on a monthly basis. When the property is sold or the individual dies the original sum borrowed is repaid. With a rolled up interest loan, a lump sum or annuity payment is provided. Interest is added to the loan but no interest is paid until the property is sold or the individual dies.

3.7.5 Equity release schemes – value for money? Those trying to sell schemes seem to advertise them as being a quick and simple way of unlocking the money tied up in property, and a good idea or suitable for those who:

- are elderly or well into retirement;
- are ‘property rich’ but ‘cash poor’;
- want to remain in their current home rather than releasing capital by moving to somewhere cheaper; or
- whose inheritors are not dependent on receiving the full value of the home.

3.7.6 Further positive features are:

- Providers often offer 'no negative equity' guarantees meaning that people can never owe more than the value of their property.
- Equity release schemes will lower the value of property from the homeowner's point of view. This means less will be paid to the taxman through inheritance tax on death.

3.7.7 Critics say these schemes are poor value and trap vulnerable people into a position they later regret. With home reversion schemes, people often only get 35% to 60% of the property value, although the provider would ultimately be entitled to the full value of the property. With rolled up interest loans people often end up owing more than twice the original amount borrowed.

3.7.8 Further negative features are:

- There is a possibility of high early repayment charges and restrictions on the type of property to which schemes can be transferred to if the borrower wants to move, making the schemes inflexible.
- Although lump sums taken are tax free, annuity payments are subject to income tax.
- Income from schemes may affect entitlement to means tested State benefits (the Pension Credit). This is something elderly homeowners may not be aware of when deciding to go ahead with a scheme.

3.8 Cultural change?

3.8.1 Some cultures have an informal system of supporting the elderly population in retirement. For example, couples with children work to support their parents who look after the children in return. When the children reach adulthood they in turn will become the providers for both the older and younger generation. This system has a clear drawback in relying on a strong family network. Nevertheless, it does show that there are alternative ways of providing for the elderly in society. It may be that, in years to come, the explosion of the demographic time bomb results in a significant change in how the elderly are taken care of in our society.

4. Investment options

4.1 Introduction

4.1.1 In this section we cover the investment of the funds that are being put aside to provide income in retirement. First, we explore the risks that are inherent in long-term investment for retirement and consider the types of investment that may be appropriate to mitigate the impact of these risks. We then go on to consider the number of fund options that should be made available. Finally, we look at specific fund options and ways that they might be structured to facilitate communications and informed decisions being taken.

4.2 Risks

4.2.1 The basic risk is that the investments deliver insufficient income in retirement. In financial terms, this can be broken down into risk components that can be addressed specifically with various types of investment. The major risk components are covered below.

4.2.2 Inflation risk – The risk that the real value of investments (in terms of their purchasing power) will be eroded by inflation. It is particularly important over the longer-term when building up funds for retirement. Inflation of just 2.5% a year would halve the real value of a fixed investment in under 30 years. Inflation in retirement can also seriously erode a pensioner's standard of living, especially given the increasing life expectancy of pensioners in retirement.

4.2.3 Pension conversion risk – The risk that, close to retirement and in retirement, the value of investments will not keep pace with the cost of securing pension income in retirement. For example, this could be the cost of purchasing a conventional annuity or the cost of putting in place a draw down arrangement to provide income.

4.2.4 Capital risk – The risk of a monetary fall in the value of the investment. This might be relevant for the benefits that can be taken as a lump and as retirement approaches. However, this assumes that the lump sum would be used to cover a specific expenditure at the point of retirement, e.g. paying off a mortgage. Where the lump sum is not used at retirement but is invested, capital risk at the point of retirement is less of an issue as taking the lump sum can be considered as simply moving the investment out of the pension fund.

4.3 Inflation risk

4.3.1 Index-linked bonds are specifically designed to provide inflation protection over the longer term. The main issuer of index-linked bonds in the UK is the government. Using government index-linked bonds provides an extremely low risk method of inflation protection. However, the level of return in excess of inflation is low and there is a limited supply of index-linked bonds, which means that it is impractical for all investors seeking inflation protection to invest in such bonds.

4.3.2 Other forms of investment might be expected to provide long-term returns in excess of inflation. However, there is a risk that such investment might not provide the expected inflation protection and indeed could suffer falls in the capital value of the investment – even over the longer-term. The major asset

class used for this purpose is equity investment, both UK and overseas equities. Historical data shows that equities have produced investment returns in excess of inflation over the longer-term. However, even over relatively long periods, equities can produce returns substantially below inflation.

4.3.3 Property is another investment where historical data shows investment returns in excess of inflation over the longer-term. It also shows lower levels of volatility compared with equities, although this might be partly due to the fact that it is valued infrequently and the "true" volatility is probably higher than the measured volatility. As for equities, there is a risk that property investment might not provide the expected inflation protection – certainly capital values can fall, even if there are upward only rent reviews.

4.4 Pension conversion risk

4.4.1 The cost of securing pension income in retirement depends upon the method of securing that income. If pension income is secured by purchasing a conventional annuity, the cost of securing the pension income will depend on terms offered by insurance companies. The price of an annuity is linked to the yields available on long-dated bonds. Therefore, long-dated bonds provide good protection against pension conversion risk. The use of index-linked and fixed interest bonds depends on the type of pension increases provided in retirement.

4.4.2 If pension income is secured by income draw down, funds remain invested pending eventual annuity purchase. The investment issues are similar to those in the pre-retirement period above. There is a risk that the eventual annuity is lower than if a life annuity had been purchased at the point of retirement.

4.4.3 Where pension income is secured by an investment-linked annuity, annuity payments fluctuate according to the underlying investments. The extent to which the pensioner can afford to have fluctuating income will determine the type of investments used.

4.5 Capital risk

4.5.1 Cash investments result in a very low risk of a monetary fall in the value of the investment. However, it is also possible to find other capital protection products. For example, products exist that provide for the return of the initial capital outlay or a return in line with the increase in an equity price index (e.g. the FTSE 100 index). The products effectively pay for the guarantee by the investor not receiving the benefit of dividend payments and also by giving up outperformance above a threshold (e.g. increases above 10% p.a. are forfeit). With-profit funds have also traditionally been seen as a capital protected product. However, they suffer from a lack of transparency and only provide capital protection over the long-term.

4.5.2 As retirement approaches, the importance of these risks change. Long-term inflation protection becomes less important and the importance of maintaining pension purchasing power (and possibly avoiding capital loss) increases. The relative importance of these risks also depends upon the wealth of the individual. If the individual can afford to suffer falls in capital value or income, then they may be in a position to take greater investment risks than otherwise.

4.6 Fund Options

4.6.1 Before going on to consider specific fund options that might be offered to members of DC arrangements, we consider the question of how many fund options should be offered. We have seen a trend over recent years of offering more fund options for members to select. This is partly due to the fact that administration systems are now more sophisticated and better able to cope with a multitude of options. However, there are many other reasons why the range of options offered is being increased.

4.6.2 Some of the main reasons for extending the range of fund options are:

- A wish to encourage individual responsibility. By giving members a wide range of options, they are able to take a greater role in pension planning.
- Members are demanding more choice. Where trustees of occupational pension schemes only offer limited choice, they may be open to challenge if members argue that the choices open to them did not give them sufficient opportunity to manage their investment risks in an appropriate manner.
- A broader choice allows members to choose from a greater range of risk and return alternatives. They will be able to tailor their investments to their specific requirements rather than trying to fit their requirements with a limited range of funds.
- The Myners review encourages choice – although the principle is that a wide range of investment options should be considered, not necessarily offered. However, where the issue is considered seriously, it is often difficult not to extend the range of fund options.

4.6.3 Some reasons why the range of fund options might not be extended are:

- Concern that members will make inappropriate choices. Where members are given a wide range of funds it is likely to make fund choices more difficult. This can be overcome to some extent with good communications.
- Additional options will increase administration. Administration systems are becoming more sophisticated and are now better able to cope with a large number of fund options. Where schemes use less sophisticated systems, this may still be a limiting factor in the number of funds that may be offered.
- A greater effort (and cost) will be required to educate and communicate with members. This is particularly the case following the Myners review, which encourages much greater information about fund choices.
- Members may not take up additional options. There is some evidence that, even where a large range of funds is offered, only a small number are actually used. If many options are only taken up by a small number of members, the additional complexity of the arrangements may not make sense under a cost/benefit analysis.

4.6.4 On balance the arguments for greater fund choice tend to outweigh the counter arguments and, in practice, there is therefore a growing trend to increasing the number of fund choices.

4.7 Possible Fund Structure

4.7.1 In this section we look at specific fund options and ways that they might be structured to facilitate communications and informed decisions being taken.

4.7.2 Where only a small number of options is offered, the following are simple structures that can be adopted that still allow members to tailor the risk/reward decision to meet their needs.

4.7.3 A possible structure is to have three funds that aim to address the major risk components identified above:

- An equity fund – this would probably be a global equity fund. The mix of UK equities and overseas equities could be predetermined or left to the discretion of the investment manager. Also, the composition of the overseas portion could be in line with market capitalisation weightings or some other predetermined mix.
- A bond fund – this might be a mix of government and corporate bonds and also include both fixed-interest and index-linked bonds. The appropriate mix would depend on the method for securing pension income in retirement and the nature of any pension indexation.
- A cash fund – this would consist of short dated, high quality liquid securities rather than being a deposit account.

Members would be able to choose the mix of the three funds in which they invest. As each fund aims to address a specific risk, the mix can be determined according to the risks that the member is most keen to address.

4.7.4 Another possible structure is to have a number of "risk-rated" funds. What we mean by a risk-rated fund is a multi-asset class fund with a fixed allocation to different asset classes, e.g. equities, bonds and cash. A particular allocation to the different asset classes would give different risk characteristics. Members could choose from a small range of funds from ones with a high equity allocation to ones with a high bond allocation according to the different risks that they wish to address. The advantage of this is that the funds would automatically rebalance to the fixed allocations so that the risk characteristics of the funds remain stable over time.

4.7.5 Where the structure in 4.7.3 is used, it could be combined with a "lifestyle" arrangement. This type of arrangement aims to invest in appropriate investments according to how close a member is to retirement. It would switch members' investments from equities, typically into bonds and cash, as a member approaches retirement. Critically, this requires a member to be able to predict accurately (many years in advance) the age at which he expects to retire. It does not eliminate the need for a member to monitor the mix of investments to consider whether the arrangement remains appropriate for his needs. Without a lifestyle arrangement, a member would still need to have a target retirement date in mind when deciding the mix of investments that he wishes to adopt. However, the need for monitoring is more explicit and could well lead to members having a more suitable investment mix. The limited number of options available under these structures should make this manageable for most members with appropriate communication materials.

4.7.6 Historically, DC schemes offered few investment options. Many schemes still retain these original options. Typically they might be a with-profits fund, a managed (discretionary) fund and a cash fund. Both with-profits and managed funds are multi-asset funds. However, they leave the investment mix to the discretion of the provider. They therefore do not allow members to tailor their investment options to meet their risk/return requirements. Often these fund choices are now closed to new contributions where more structured options have been introduced.

4.7.7 DC schemes have a natural attraction to capital guaranteed funds. These aim to provide good long-term returns and protect against a fall in the value of the investments. With-profit funds are an example. However, with-profit funds only provide capital guarantees in very limited defined circumstances. Usually, the fund has to be held to maturity (most likely to be normal retirement age), otherwise the fund value is not guaranteed. This has led to individuals being disappointed by the payouts from with-profit funds, as they did not fully appreciate the nature of the guarantees offered. In addition, there has been much negative publicity about with-profit funds, most notably in relation to Equitable Life. This has led to a much-reduced popularity for such funds.

4.7.8 As a result, alternative ways of providing capital guaranteed funds are now being explored by DC schemes. These have greater transparency than with-profit funds in that the return they provide is not discretionary. Guarantees are provided by the use of derivatives rather than by the capital support of "free assets" within the fund. This enables investors to have a clear view of the risk return characteristics of the fund (for an example, see 4.5.1 above).

4.7.9 DC schemes might also be able to adopt investment options now being developed for defined benefit schemes to better help them manage their investment risks. For example, by using swaps to create a desired risk/return profile. However, these options might only appeal to the high net worth end of the market, rather than as an option in mainstream DC schemes.

4.7.10 Where a large number of options is offered, the options offered are likely to include the options described in paragraphs 4.7.3 and 4.7.4 above. Additional options may be presented after the basic options described in these paragraphs so that investors do not need to consider more complex choices if one of the more basic options is suitable. These additional options are likely to include funds that cover fairly narrow asset classes. For example, a range of equity funds might be:

- UK equities
- US equities
- European equities
- Pacific Basin equities
- Emerging markets equities.

A range of bond funds could include:

- Fixed interest UK government bonds
- Index-linked UK government bonds
- Fixed interest UK corporate bonds
- International bonds.

Bond funds could also be offered with different durations, e.g. long-dated only or all durations. Fund options might also include property, private equity, hedge funds and high yield bonds.

4.8 Default Options

4.8.1 For administrative convenience, some funds nominate one of the options as a default, in which members' contributions will be invested if the member makes no specific investment decision. In an increasingly litigious environment, identifying a default fund involves risk because the default option will not be an appropriate investment choice for all members. The Myners principles point out that it is important for trustees to consider carefully any default option to ensure that it is appropriate. However, where trustees do consider this, they often take

the view that members are better served by not having a default option. The decision on how to invest for retirement is one of the most important that most people make and it seems appropriate that members should make an active decision.

4.9 Constraints on the Number of Funds Offered

4.9.1 Communications – DC plans place a large responsibility on members to make informed investment decisions. Where the resources available for communications are limited, it might be sensible to limit the number of choices available. A limited communication budget can be used to give good information to members about a small range of options so that they are in a position to make informed decisions. We consider this subject in more detail in section 6.

4.9.2 Administration – DC plan administration is much more complicated than for a DB Plan. Administration may be made easier by keeping the funds offered to a small range. Increasingly, it is difficult to justify a limited range of fund choices due to an unsophisticated administration system.

5. Annuity options

5.1 Background

5.1.1 A key driver in the demand for DC pension investments is the amount and flexibility of the income these investments can generate for an individual once they retire. By purchasing an annuity at retirement from an insurer an individual can be guaranteed to receive an income for life, in exchange for their DC fund. Without 'annuitisation' the risk of the individual's DC fund being extinguished will increase over time, as capital will need to be withdrawn to provide a suitably large income in retirement. From a public policy point of view it is generally considered desirable to annuitise retirement income to reduce the risk of poverty at advanced ages.

5.1.2 In many countries in which tax-advantaged DC pension investments are common, such as Australia, Canada, and the USA, there is no requirement to purchase an annuity; the UK is an exception to this pattern as described below. Globally, only a relatively small proportion of DC assets are used to purchase annuities at retirement, even though it is common within taxation structures for annuity purchase to be favoured over drawing down DC funds or taking lump sums at retirement.

5.1.3 In the UK there has been a requirement for many years for a member's DC fund to be used to purchase an annuity by 75; income withdrawals before age 75 are permitted, and up to 25% of the DC fund can be taken as a lump sum at retirement. This policy reflects the UK Government's fiscal objectives, where tax relief on pension contributions is offered partly in the aim of reducing dependence on State old age and social security benefits. This model is also under consideration in some other European countries that have generous DB State pensions and are contemplating reform. This means that the UK has the largest pension annuity market in the world as a proportion of its total pension assets (the North American markets are large, but smaller under this measure).

5.1.4 For the purposes of this paper we consider a pension annuity to be an income-generating product that is purchased with a lump sum asset at outset, and which satisfies two criteria (other types of annuity, such as temporary annuities, may not meet the requirements below):

- Redistribution of capital on death to other annuitants within the mortality pool. This does not prevent a lump sum payment on death to the individual's estate or dependants, which can be thought of as an embedded life insurance benefit.
- Provision of an income for life. Through redistribution of capital on the death of other annuitants in the mortality pool, and reinsurance if necessary, the annuity income will continue for life (although it may go up or down, depending on the terms of the annuity).

5.1.5 Traditional annuities providing a guaranteed nominal level of income for life are coming under increasing criticism. We consider the criticisms and possible solutions below in more detail, focussing on UK experience. We also consider whether we may see more complexity arising in rating pensioner mortality at the time of annuity purchase in response to regulatory demands and pricing opportunities. Finally we review the available products in the UK marketplace, noting where some of the newer product designs address these criticisms.

5.2 Problems with Traditional Annuities

5.2.1 The traditional annuity guarantees an income for life (often with annual increases) in return for a lump sum payment by the individual at outset. The terms of the annuity are guaranteed and, to meet the guarantees, the lump sum is primarily invested in Government and high quality corporate bonds of appropriate duration. Criticisms arise due to the cautious investment policy, which is driven by the guarantees inherent within the design. Secondary criticisms about the design are that the income pattern is inflexible, and it is generally not possible to pass wealth on to dependants after an initial guarantee period.

5.2.2 A key reason for criticism of the bond-based investment policy for a traditional annuity is that in recent years bonds have tended to produce relatively low (in historical terms) real returns. This is a particular difficulty for individuals purchasing traditional annuities as the income produced by the annuity is determined by the shape and level of the yield curve at the time of purchasing the annuity. A bond-dominated investment strategy, which is tailored to match underlying income guarantees, is unsuited to later revision due to the pensioner's income needs in retirement changing (often unpredictably). As pensioner life expectancies increase the likelihood of changes in income needs will increase and this combination of guarantees and matched investment will become more of a problem. Furthermore, as life expectancies increase, unless retirement ages also increase, pensioners will depend on their annuities for longer periods of time. This raises questions about whether a bond-based investment strategy is appropriate for periods of 20 or more years, and whether a guaranteed nominal income is a reasonable balance of investment risk and reward over such a long timescale.

5.2.3 To address concerns about the rate of return on annuity assets, and reduce the dependence on the bond yield curve at the retirement date, several solutions have been devised. All of the following methods involve a reduction in the level of guarantees compared to a traditional annuity, and therefore a different mix of risk and reward in retirement:

- With-profits annuities
- Unit linked annuities
- Staggered vesting using a cluster of pension policies, purchasing annuities over a period of time
- Deferral of annuity purchase, drawing down income in the short to medium term
- More radical designs – mortality derivatives or reinsurance products (possibly using unbundled arrangements)

5.3 Trends in mortality rating

5.3.1 In most countries annuities tend to be purchased (when weighted by premium) by healthier, wealthier pensioners. This can be seen from pensioner annuitant mortality tables, which exhibit lighter mortality than national statistics. This pattern is seen in UK and other countries' mortality tables, and creates opportunities for insurance companies to write business more profitably by rating pensioner mortality more carefully when pricing annuities.

5.3.2 Enhanced or ill-health annuities are becoming increasingly common, and these provide individuals in poor health with a higher retirement income than a

traditional annuity. As this trend becomes more widespread, the traditional practice of offering 'normal health' annuities to 90% or more of the population will break down. Over time, 'normal health' annuities are likely to be based on ever-lighter mortality rates, further increasing the trend to rate pensioner life expectancy more accurately at the time of retirement. It is possible that a 'normal health' annuity product will no longer be tenable in many markets for annuities above a certain size and we may see 'personalised health' annuities emerging, with an underwriting philosophy similar to that of a general insurance policy today.

5.3.3 "Personalised health" annuities would enable insurance companies to rate potential annuitants not just by age, gender, smoker/non-smoker, and healthy/unhealthy status, but also by reference to a more detailed personal and family medical history, and indicators of social and occupational class (suitable indicators might include total net worth, recent income history, level of educational attainment, place of birth or residence at retirement) and perhaps some form of lifestyle analysis. Medical and genetic testing may offer useful additional information, although the cost of these tests will need to be taken into account in pricing the annuities. A difficulty is that there is an incentive for individuals to make false disclosures to obtain a higher annuity on account of their state of health.

5.3.4 Countering this trend there has been a move by regulatory bodies to challenge insurers' "freedom to underwrite". A recent example was a ruling by the European Commission that "mortality is independent of gender" and, if this ruling remains in force, gender may no longer be used to rate life expectancy for annuity policies written in the European Union. This may have an unintended consequence of accelerating the trend of more accurately rating pensioner life expectancy at the time of annuity purchase. In response to this and desires by Government to reduce the scale of State pension provision, political considerations may mean that uniform pricing requirements for annuities below a certain size are imposed on insurers.

5.3.5 In the future it may be possible in some territories for insurance companies to reprice annuities in payment based on new pensioner mortality statistics. One possible way of doing this in a way that is acceptable to and binding on both the insurance company and its annuitants would be to task an independent third party to make these decisions. It is not clear how an insurer would be able to invest to cover a guarantee that is revised in this unpredictable way from time to time.

5.4 Survey of the UK marketplace

5.4.1 Traditional fixed/index-linked annuity. This type of annuity is usually invested in Government and high quality corporate bonds. The terms of the annuity are fully guaranteed at outset. Historically, this type of annuity has been the most common, but in the UK it is coming under increasing criticism for its cautious investment policy, which is constrained by the guaranteed terms of the annuity.

5.4.2 With-profits annuity. A variation on the above approach is for the annuity to be written in a with-profits fund. Although in theory it would be possible to create a new with-profits fund for the sole purchase of writing annuity business, all of the UK providers offering these products are in effect guaranteeing the mortality assumption and a proportion of the initial income within their existing with-profits funds. These guarantees are covered by the capital strength of the with-

profits fund, and surpluses and deficits achieved on the assets underlying the annuity policies are distributed to the annuitants in the form of (usually temporary) future increments of pension. There are a number of variations on how the basic approach above is translated into practice, and it would be possible for mortality gains and losses on the pool of annuities also to be distributed to the annuitants. In practice, it is likely that there would be some smoothing of investment experience between with-profits annuity policies and other with-profits business, depending on the exact policy terms.

5.4.3 Unit linked annuities. These annuities typically do not offer a guaranteed minimum income and the income is directly linked to the underlying value of the funds in which the members' assets are invested. In a similar way to a with-profits annuity, the mortality assumptions could either be guaranteed or it would be possible to pool experience. It would also be possible for there to be an embedded life insurance option to provide a return of capital on death. If the underlying funds were purely unit linked, without any unitised with-profits investment, then there would be no guaranteed minimum level of income unless there was an implicit minimum rate of growth implied by a specific fund. Capital protected funds, using derivatives, could potentially be attractive to individuals with this type of arrangement.

5.4.4 Flexible annuities. The Inland Revenue in the UK has recently approved flexible annuities on offer from insurance companies where a series of temporary annuities are purchased from the member's DC assets, or invested in unit linked funds on a drawdown basis, whilst ringfencing the balance of the fund to pass on as an inheritance. At advanced ages (85 in one case and 90 in another, but earlier if the remaining fund falls below a certain level) a conventional annuity must be purchased as the "mortality drag" and variation in remaining life expectancy between members becomes increasingly significant with age. These products are still new and it is not clear how popular they will be. These products are currently only sold through independent financial advisers, and require a relatively high minimum investment (£250,000 typically).

5.4.5 Open annuities. This design has been common for some time in South Africa (known as living annuities) where the assets of the annuitant are ringfenced in a cell and income is provided on a drawdown basis, within limits. There is no pooling with other policies, and on death the unused value of the cell is returned. If the assets fall below a certain level a conventional guaranteed annuity must be purchased. Under this segregated cell structure the annuitant needs to purchase life insurance on an ongoing basis from outside the pension asset to ensure that the segregated cell can be inherited on death. In some territories this product may be less tax-efficient than a more traditional annuity design, depending on the tax relief obtained on the life insurance premiums.

5.4.6 Property backed annuities. One provider has attempted to introduce a range of traditional guaranteed annuities that was property backed, rather than bond backed. However, the UK regulatory authorities have expressed reservations about the guarantees potentially not being met in the event of falling asset prices, and this product was not launched in the UK (it is well known in Australia). This type of investment would be possible within a unitised structure.

5.4.7 Some more radical designs have been proposed, including unbundled arrangements using mortality derivatives. However, there are regulatory and political barriers to some of the most radical options. New markets or

reinsurance products may also be needed to trade, exchange or pool mortality risks, although these may create catastrophe or concentration risks. A difficulty with some of the more unusual products is that marketing and distribution structures are geared towards standard products, so some of the most flexible solutions are only available to high net worth individuals who tend to be less reliant on their pension income than the majority of the population for their financial security in retirement.

5.5 Summary

5.5.1 In an era of low real rates of prospective return on bonds, and increasing life expectancies in retirement, the traditional pension annuity design is coming under increasing criticism due to its cautious investment strategy and lack of flexibility. Arguably it has an inappropriate mix of risk and reward for many people, although some of the criticisms are misguided as they are backward looking and refer to past investment conditions rather than prospects for investment returns in the future.

5.5.2 In response to these pressures, and the UK Government's confirmation of the requirement to purchase annuities by age 75 (albeit with some relaxations), UK insurance companies have responded to the desire for more flexible annuity products by introducing investment-linked annuities, some of which radically alter the balance of risk and reward for annuitants.

5.5.3 Over time it is likely that these more flexible annuities will become more commonplace and available to those with smaller accumulated DC funds at retirement. However, the most flexible products require high levels of ongoing client maintenance, typically provided by a financial adviser. Greater take-up of these products will require a streamlined process to be adopted towards income decisions in retirement. Ideally, these would be operated by insurance companies without involving an adviser, perhaps using web-based interfaces.

5.5.4 With these changes and other potential changes in the approach insurers use to assess pensioner longevity risks, further developments in the annuity markets are set to occur in the near future.

6. Advice, communication and modelling

6.1 Introduction

6.1.1 One of the most important aspects for the final consumer is being fully informed of what is available and being able to make an intelligent choice as to what is right for them. Traditionally this has been where Independent Financial Advisers (IFAs) have come in. However, the classical model of the IFA giving "free" advice and then taking a commission on whatever he sells has had negative consequences for the consumer – endowment mortgage and pension mis-selling being the obvious examples.

6.2 Currently Available Advice

6.2.1 The government response of increasing the compliance burden will control the problem of mis-selling to some extent but this cost burden must be passed onto the consumer at some point. While there is a financial incentive to sell one product rather than another, there will always be a temptation to tilt the advice.

6.2.2 It could be argued that commissioned selling of financial products should be outlawed but this only solves the integrity question and not the competency question. It would also mean that in many cases individuals would not take financial advice at all if they had to pay in advance.

6.3 Proposed Possible Solution

6.3.1 There are two questions to be addressed:

- How do we ensure advice is available at a fair and attractive price?
- How do we raise the quality of advice we give to individual consumers?

6.3.2 The answer comes in several parts:

- Sophisticated user friendly financial advice software
- New mobile companies with a chief actuary and, say, around a dozen IFAs
- Use of school IT facilities – for night school seminars on investment and interactive modelling
- Using the internet for statements and ongoing advice
- Flexible investment products that allow consumers to change priorities over time (the one member DB scheme).

6.4 Financial Advice Software

6.4.1 The current status quo for actuarial advice is that you can only receive sophisticated advice if you are a sophisticated consumer and you have a lot of money. However this does not need to be the case. Consider your last trip to the optician. It would be a hopeless piece of guesswork and intellectually inaccessible to all but the most sophisticated of consumers to get the right pair of glasses by guessing how short sighted you were from how blurred things looked and then trying to describe what your astigmatism was to the optician. However, what actually happens is that you get asked to read some letters, then you get asked which of the green or the red circles are the clearest, then you get asked to read some more letters and so on. After five answering some very simple questions, the optician is able to prescribe exactly the right pair of glasses.

6.4.2 This is brought about by the optician having access to technology that enables him to convert the simple evidence that you give him about what you can see into a sophisticated picture of the needs of your eyes – without any need for you to understand yourself.

6.4.3 It can be argued that this analogy does not apply to financial advice as when you buy a pair of glasses your requirement (i.e. to be able to see) is unambiguous, whereas, with financial planning the best strategy depends very much on the individuals preferences between various competing objectives such as risk, reward and retirement age.

6.4.4 The challenge for the financial services industry is the creation of an analogous "black box" for financial advice. This is possible if you know how much money you can afford to save; how much money you will need in retirement; when you want to retire and can differentiate between some simple risk reward trade-off scenarios. A sufficiently skilled expert should then be able to design the investment strategy that suits you.

6.4.5 The lack of sufficiently skilled people to give this advice is certainly an issue but the advice does not need to be given on a one to one basis – it could be given in a classroom type environment. This would need a computer program that can be used to model the person's wealth and allow them to investigate different savings strategies for their respective risks and rewards. Such ideas were very popular in the eighties when they were referred to as expert systems but perhaps did not really fulfil their promise – although now maybe their time has come in the savings advice context.

6.4.6 A possible format for such an expert system would be as set out below. As in the optician's analogy, any questions asked would need to be simple so that anyone would be able to answer.

6.5 Phase I

6.5.1 The first stage of the system would allow the user to enter details of their current financial circumstances. Their current wealth will consist of:

- Their house, if they own it
- Already accrued occupational pensions
- State pensions
- Other savings
- Potential inherited wealth
- Buy to let properties, if they have any.

6.5.2 This data has several purposes, including:

- To ascertain how much more needs to be saved
- To help understanding the risk tolerance with savings already earned and future savings, so as to understand the marginal contribution to total risk of any future savings options
- To anticipate the impact of means tested benefits on the total pension of the client.

6.5.3 There is no precise way of anticipating the value a house for equity release at retirement but, for example, looking in estate agents' windows should give an initial estimate.

6.5.4 State pension earned could be difficult to estimate as many people will not know what they are entitled to, however, this information may be obtained from the government.

6.5.5 Already accrued occupational DB pensions should be relatively straightforward to estimate based on the last benefit statement received. It should not be necessary to request a new statement or a transfer value.

6.5.6 Other savings should again be fairly straightforward to estimate unless they are in opaque vehicles (e.g. with-profit funds).

6.5.7 Inherited wealth is potentially an important source of future income and would be difficult to estimate as it is based on many unknowns that are difficult to quantify. It is also exposed to major specific risks such as longevity of parents and their spending habits. The model would need to warn against relying on inherited wealth but it would not be realistic to disqualify clients from including this in their analysis.

6.6 Phase II

6.6.1 Having satisfactorily entered the client's current wealth, the next stage would show how total income in retirement might develop based on continuing to save at the client's current level, under some reasonable set of assumptions. A graphical illustration of a cashflow projection showing the breakdown of where each year's net income is going to come from would probably be best. Different levels of expected outgoings could then be overlaid onto this. For example, essential expenditure, reasonable additional expenditure and luxury expenditure. This then gives the user a first order view of their future wealth so they can start to look at the different options available to them.

6.6.2 It would be sensible to start with a set of assumptions based on "risk free" returns.

6.6.3 While not recommending investment in risky assets, the next step would be to look at risk reward trade offs with higher risk assets. It would also be appropriate to consider different contribution levels.

6.6.4 The challenge with individual advice, as compared with company advice, is that there is greater uncertainty of outcome, as you don't benefit from averaging out the experience of a group. For example, the individual can vary his retirement date, take more or less risk with the amount of pension he receives and vary the level of contributions he makes.

6.6.5 The expert system would need to allow users to vary many different variables such as retirement age, savings amounts and possible inheritance in order to get a feel of how to produce an acceptable lifetime distribution of spending.

6.7 Phase III

6.7.1 Most people are likely to need some exposure to risky assets. The system would need to include stochastic modelling. As the client increases his appetite for risk, the distribution of possible pensions he might receive widens. This could be expressed graphically. This graphical output would need to be designed carefully

for ease of understanding. It might be useful to have more than one output option, as different people might prefer different representations.

6.7.2 Illustrations for different investment strategies are fine but ideally a good model would then assist the user to home in on the best strategy for them. For example, a constraint could be expressed as "deliver the maximum expected pension subject to at most a 5% chance of falling below a specified annual pension". Such constraints could equally be expressed in terms of retirement age or maximum contributions.

6.7.3 However, this still leaves the problem of adjusting the strategy for stock market changes or changes in client priorities. The most obvious solution to this is to revisit the problem every 3 or 5 years as in DB schemes. Potentially, there is a more sophisticated solution to this problem (described in section 6.11 below).

6.8 Phase IV

6.8.1 Although the first three phases are the major part of such an expert system, it would probably not be sensible to leave the user simply without any guidance. Guidance could come from an IFA or some kind of financial tutor but this would be labour intensive. Another idea would be for the expert system to generate sensible investment options itself with reference to the user's priorities.

6.8.2 Enabling the computer to understand a user's priorities and attitude to risk could be accomplished by the user just answering some relatively simple questions, such as:

- Would you prefer to know you would have a pension of £20,000 a year or have a fifty-fifty chance that your pension would be either £19,000 or £22,000?
- Would you prefer to retire at age 50 with a £12,000 pension or retire at age 60 with a £20,000 pension?
- Would you prefer to know that you could retire at age 60 or have a fifty-fifty chance of retiring at age 58 or age 65?

6.8.3 The responses to these questions could then drive more specific questions until a detailed picture of the user's priority order has been built up. The computer program could then "optimise" to find the best overall savings and investment strategy for the individual.

6.9 Phase V

6.9.1 Finally, the user would then have the option to override the computer generated investment strategy.

6.9.2 A hard copy report could then be generated by the user selecting from a number of options as regards the content of the report.

6.10 A New Kind of Consultancy

6.10.1 For most people, using such software unguided would be a recipe for disaster. However, there would be a massive manpower requirement to give everyone individual guidance on the software.

6.10.2 The answer to this problem might be to get actuaries working with IFAs so that the bulk of the advice and the guidance in helping people use the computer model can be done by the IFA, with perhaps one actuary for around a dozen IFAs to input more high level advice when it is needed. The actuarial advice on how to save for a pension on retirement needs to be on the high street – accessible in a number of ways.

6.10.3 Wealthier clients should be able to get tailored, bespoke advice from the IFA, using the kind of software outlined above. Given the problems that have arisen from advisers being remunerated by commission after selling a financial product, such guidance should probably be provided by charging a fee. This fee would need to be kept to a low level to avoid it being a disincentive to get the appropriate guidance in using the software.

6.10.4 However, even a relatively low fee is likely to be prohibitive for low and average earners. Also, even for the higher earners, the modelling software would need to do the bulk of the work in order to control costs.

6.10.5 For lower earners, a solution might be classroom-based seminars. For example, it might be possible to use school IT facilities outside school hours to deliver this service for a minimal charge. This service might proceed as follows:

- Clients apply for a place on the course (having seen an advert)
- Company sends a data gathering questionnaire to client – so they know what information they have to bring with them (see paragraph 6.5.1)
- Client attends seminar, enters key financial information into model and uses model under tutor guidance
- Model produces bespoke report for each client which client can then keep
- Possibly client has further access to model through the internet or via further drop in sessions

6.10.6 Tutors for these sessions could be IFAs. Where necessary, these tutors could refer matters to an actuary for more detailed guidance. It might be possible to provide cheap follow-up through the Internet. There might be automatically generated warnings when investments had diverged by more than a preset amount from the expectations in the original calculations – to notify the user to go and seek further advice and perhaps reset their savings/investment policy.

6.11 The One Member DB Scheme

6.11.1 While it would be possible, technically, to distribute such financial advice to a vast number of people as outlined above, this requires every user to have at least some level of understanding of their retirement needs. In practice, this might be difficult to achieve. There is another possible solution that we outline below.

6.11.2 Consider the management of a DB scheme. The funding position is reviewed at least every three years and a new contribution rate (and possibly investment strategy) is set to aim to achieve a particular funding objective. For example, a review might reveal that that experience was worse than expected and that contributions would need to be increased for a period of time in order to aim to achieve the objective over a suitable time period.

6.11.3 It might be possible to devise a pension product which entailed going to a provider and asking them to set up an arrangement with a suitable investment strategy and contribution level to aim for a requested pension amount at a

particular retirement age. The progress of the arrangement could be reviewed every, say, three years. Contribution levels and/or investment strategy would be reset to aim for the originally requested target. Alternatively, the target pension level or retirement age could be amended.

6.11.4 The investment strategy for such products might be set so that there is a specified low risk of the contribution rate exceeding a particular level in order to aim to achieve the required pension at the selected retirement age. This would probably generate investment strategies that change over time, since the closer the individual is to retirement the less time there is to adjust contributions rates and so the less scope there is to invest in risky assets.