Preface

In 1999, Dr Oonagh McDonald published a report, commissioned by AUTIF, entitled, 'Income in Retirement-are Annuities the Answer?' That paper researched the history and background of annuities and was critical of the current state of the market of the obligation to purchase an annuity. Philip Warland, Director General of the Association of Unit Trusts and Investment Funds (AUTIF) referred to it as a 'comprehensible and intelligible treatment of annuities'. However, as he added, 'this paper does not answer all the questions'.

The publication of that report led to the establishment of an independent group of financial services and pensions experts in June 1999. The group met once a month until January 2000, and this report is the outcome.

The purpose of the report is to make a contribution to the public policy debate about how best to provide retirement income and to set out practical alternatives to the current regime.

Members of the Retirement Income Working Party

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Acknowledgements

As Chair, I would like to thank all those who have contributed to the report, and especially Professor David Blake, Director of the Pensions Institute, Birkbeck College, University of London and Robert Hudson, Fellow of the Institute of Actuaries, Senior Research Fellow, International Institute of Banking and Financial Services, University of Leeds for their contribution.

I would also like to thank the Aberdeen Asset Management team for their time and support in researching the market and proposing new product alternatives.

The report has also benefited from the advice and contributions from a number of industry experts and academics. These include Stuart Dunbar and David Smyth of Aberdeen Asset Management; Tim Reay of Bacon and Woodrow; Tom Boardman of Boardman Consulting; Yusuf Samad of Citibank; Andy Agar and Adrian Boulding of Legal and General; Michael Hare of MarketMinder; Philip Middleton, Andrew Roberts and Paul Turnbull of Merrill Lynch; Kim Lerche Thomsen of Prudential Annuities; Graham Bishop of SalomonSmithBarney, Gary Smith of Schroder Investment Management and John Moret of Winterthur Life. We are particularly grateful to Ann Hamilton of PriceWaterhouseCoopers for advice on the tax implications of the Report.

Dr Oonagh McDonald CBE
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March 2000

Summary

Purpose of the Report

The Report aims to identify ways in which the current compulsion to take annuities by age 75 might be amended. It examines the current provision of retirement income for members of defined contribution pension (DC) plans who are obliged to purchase such annuities, regardless of personal circumstances. It also looks at the shortcomings of existing annuities.

Main Proposals

The Report presents four main proposals:

1. An individual would continue to be free to take a tax-free lump sum from his or her pension fund subject to the current limits
2. When someone retires, they must purchase an index-linked annuity to meet a Minimum Retirement Income (MRI)
3. There should be much greater freedom over the application of any Residual Fund after the Minimum Retirement Income is achieved
4. The current shortcomings of existing annuities should be reduced by government and the financial services industry

Whilst some questions still remain, the members of the Retirement Income Working Party, believe that the report considerably develops the debate around retirement income.

1. Minimum Retirement Income

The concept of MRI is based on the following simple principles:

- On retirement, an individual's only obligation (assuming sufficient funds exist) should be to ensure an income that, taking into account life expectancy and inflation, will keep the individual above State support for the rest of his or her life
- There should only be an obligation to purchase an annuity from a DC pension plan if individuals are not able to fund the MRI from other sources
- In 1999/2000 the MRI would be set at around £140 per week (equivalent to a Basic State Pension and a SERPS pension for an individual on National Average Earnings). In practice, this would mean purchasing an index-linked annuity to the value of £70 per week, assuming that the individual had no other guaranteed income for life

2. The Residual Fund

Having met the MRI, individuals would have greater freedom to use any Residual Funds remaining in their pension plan. The Report proposes that individuals may, as now, draw up to 25% of the original pension fund (pre MRI) tax free. Remaining assets would be then allowed to grow on a tax-privileged basis, until withdrawn, when they would be subject to the individual's highest marginal rate of income tax.

3. Existing Shortcomings of the Annuity Market

Once MRI is accepted, then more innovative ways of providing for further income in retirement from pension plans can be found – not simply based upon annuities.

4. Conclusions

There are no simple answers to the present problems associated with providing income in retirement. Individuals are different and have differing requirements. This Report offers ideas and solutions to provide individuals with both choice and flexibility whilst ensuring they do not fall back on State benefits. Our aim is to open up public debate on these issues.

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The Report

1. The Current Means of Retirement Provision

The current pensions legislation requires those with personal pension plans, or those who are members of money purchase occupational pensions, to buy an annuity by the age of 75. This same obligation will apply to those who save for their retirement through the forthcoming stakeholder pension schemes. This is also imposed on those who make additional savings through additional voluntary contributions (AVCs) and free-standing additional voluntary contributions (FSAVCs).

The primary objectives of a pension plan are to:

Provide adequate retirement income security for the remaining life of the pensioner

and

Eliminate the risk that the pensioner outlives his or her resources.

It is for this reason that successive governments have required pension holders to purchase an annuity. This was incorporated into pensions legislation and taxation legislation in the twentieth century. The fear is that, left with a substantial sum on retirement, pensioners will dissipate their assets and fall back on state welfare provision, a practice known as 'double dipping' in Australia.

The obligation to purchase an annuity guards against that eventuality.

An annuity is a contract that provides a regular income to the purchaser for the rest of his or her life. The pension holder does not have to use the whole of the pension fund to purchase an annuity: under present rules, 25% of the fund can be taken as a tax free lump sum (up to, broadly, 30% for those with pre-July 1988 retirement annuity contracts) nor do they have to purchase an annuity immediately on retirement.

Declining annuity rates, and an intensive lobby during the 1990s, led the Government to introduce greater flexibility in the1995 Finance Act in the form of income drawdown. This allowed personal pension plan holders to postpone the purchase of an annuity until the age of 75, and it has since been extended to members of defined contribution occupational pension plans and to those who have enhanced their pensions through AVCs and FSAVCs.

In income drawdown, the capital sum remains invested and individuals are allowed to draw an income from the fund for a specified period before buying an annuity. The income drawdown level has to stay within strict parameters as laid down by the Government Actuary. Some 11,000 policies were sold in 1996. By 1998, income drawdown accounted for 24% of the retirement income market, rising to some 29% in 1999 with the sale of approximately 16,000 policies. The average plan last year was worth between £118,333 and £207,265[1]. Income drawdown plans are complicated and as such require financial advice, not only when buying, but at each subsequent review. This affects the cost and makes them less suitable for smaller funds. The extra risks need to be understood and acceptable to the purchaser.

It is important to note that the obligation to purchase an annuity (or to avoid it through the special vehicle, income drawdown) is an unusual feature of the British pension system. Annuities are not widely used as a means of providing retirement income in the rest of the world, including mainland Europe, nor is there a compulsion to purchase an annuity with the proceeds of a pension fund. The USA and Australia, for example, allow individuals considerable freedom, both as to the funds and their investment, in order to provide themselves with retirement income. Annuities are available and may be widely purchased, but the selection of an annuity is simply an option available to the individual in providing retirement income. Following recent reforms, other countries, such as Chile, Singapore and Ireland, allow access to the pension fund after a minimum income or minimum fund has been secured. (See appendix A for further details.)

[1] ***Estimates from Mintel and Standard Life***

2. The Annuity Market in the UK

A range of different types of annuities is available in the UK market. These are as follows:

- fixed or level annuities
- index-linked and escalating annuities
- with profits annuities (conventional and guaranteed)
- unit-linked annuities
- purchased life annuities
- long term care annuities
- income drawdown, and-phased retirement
  (For further detail refer to Appendix B)

Despite the availability of a wide variety of annuities, most people purchase non-profit annuities (level, index-linked or escalating). Of these purchases, between 80% and 85% were level annuities in 1999[2]. With-profit annuities accounted for an estimated 5% of the market in 1998, but it is the fastest growing segment and product providers are coming forward with new with-profit annuities. Unit-linked annuities have a tiny share of the market and this is not expected to grow significantly.

In 1999, the average size of the fund used to buy a compulsory purchase annuity from an individual life office was believed to be £30,000. This figure could however be misleading as individuals may have more than one policy. Table 2.1 shows the structure of retirement income products sold in 1999 to male and female customers of a typical life office. Male retirement income is substantially higher than female retirement income, especially in income drawdown, a product that is overwhelmingly purchased by men, although the average purchase ages are only a year apart. Only a small proportion of customers take any form of escalation. Men are currently more likely than women to purchase joint survivor annuities.

Finally, Table 2.2 lists some key annuity rates for January 2000. Since inflationary expectations are well below 5%, RPI and LPI annuities offer the same initial income, which is (depending on the sex of the purchaser) between 22% and 25% lower in the initial stages than the corresponding income from a level annuity. Unisex annuity rates give women nearly 10% more than standard rates, but do not reduce male rates to anything like the same extent.

Table 2.1 Retirement income products in 1999 by sex

		Males	Females
Average payment per annum	Pension annuity	£2,687.11	£1,813.54
	Income drawdown	£9,199.63	£4,288.01
Average purchase age	Pension annuity	63.0 years	61.6 years
	Income drawdown	63.1 years	62.1 years
Purchaser sex	Pension annuity	52%	48%
	Income drawdown	70%	30%
Proportion with escalation	Pension annuity	16%	17%
	Income drawdown	6%	15%
Proportion of annuities with Spouse's benefits		45%	23%

Source: Typical life office

Table 2.2 Annuity rates for January 2000

		Standard (£)	Unisex (£)
Male aged 65	Level	4,291	
	Retail price indexed	3,341	3,296
	Limited price indexed	3,341	3,296
Female aged 65	Level	3,978	
	Retail price indexed	3,001	3,296
	Limited price indexed	3,001	3,296

Note: Purchase price of £50,000, guaranteed 5 years, monthly in advance

Source: Prudential Annuities

[2] ***Source Mintel: Annuities, Financial, February 2000***

3. The Obligation to Purchase an Annuity

Given falling annuity rates, it is not surprising that many wish to remove the obligation to purchase an annuity.

Coupled with low rates, there is a growing recognition on the part of annuity purchasers that an annuity is an irrevocable contract, which with increases in longevity and earlier retirement may well last some thirty years or more. Furthermore, the purchase of an annuity requires the exchange of the whole of the pension fund for a guaranteed income with the consequent loss of capital to leave to family and friends on death.

Life in retirement continues to change as well: people undertake part-time work; face changing family circumstances, or find that a higher income is needed later in life owing to ill-health or frailty. Greater flexibility in retirement income is required and the security, provided by a level annuity, does not necessarily balance these requirements.

On the other hand, only an annuity can provide the purchaser with a guaranteed income for life, or, in other words, enables the individual to withstand longevity risk.

The individual may be tempted to spend a capital sum too quickly, or find that the pension fund, though invested, does not provide them with an adequate income for the rest of their lives. Part of the reason for that is that the individual foregoes the 'mortality cross-subsidy', that is, the cross-subsidy which annuity rates encompass, which arises because some annuitants die shortly after taking out an annuity, thereby releasing a 'mortality profit'. Life offices share this 'profit' with the longer lived annuitants.

By delaying the purchase of an annuity, individuals experience the so-called 'mortality drag', that is, the extra return on investments required when the individual faces his own mortality risk, and the extra returns required to purchase an annuity increases with age. Thus, delaying the purchase of an annuity until the age of 75, as is the case with the current income drawdown rules, increases the risk owing to the lack of mortality cross-subsidy.

The fact that most pension holders purchase a level annuity creates further problems. As Table 2.2 showed, the purchase of an index-linked or escalating annuity, provides a lower income immediately on retirement. Typically, if the 65 year old male annuitant chooses an index-linked annuity, he will receive an initial annual income which is about 30% lower than he would receive from a level annuity purchased with the same amount of money. If inflation runs at 3% p.a., it would take 11 years for the indexed annuity to exceed the level annuity and 19 years before the total cash payments are equalized.

Most people underestimate how long they will continue to live at the point of retirement and fear the immediate drop in income immediately after retirement.

Of course, it can be properly argued that both the level and the index-linked annuity have equivalent values, provided that the pricing of both types of annuities is actuarially fair and that the longevity and inflation assumptions built into these prices are realised in full. Only the timing of the payments is different. But, of course, the timing is precisely the issue which understandably seems so important to the individual, when they are entering into the annuity contract.

A further problem is that annuity purchasers do not appreciate the full extent of the inflation risk.

The table overleaf shows the erosion of the value of the level retirement income which is noticeable even with low levels of inflation. It is also a risk from the point of view of the State, since those with comparatively small pension funds, using them to purchase a level annuity, could find that, over time, they may become eligible for income support.

Retirement Income Options: Retirement Income Fund = (£100,000) Male aged 60

Table 3.1

Assumptions			**Expenses of Retirement Income Account**	
Price Inflation	3.00%		Fund Charge	1%
Investment Returns	8.00%	WP fund	Initial Charge	5%
(before charges)	8.00%	Retirement Income Account	Admin Fee	£100 per person
Income Increases	2.50%			increasing with RPI

Age	**Level Annuity £ Per Annum**	**RPI Linked Annuity £ Per Annum**	**With Profits Annuity £ Per Annum**	**Retirement Income Account Income £ Per Annum**
60	8,333	6,112	8,691	7,000
61	8,090	6,112	8,557	6,966
62	7,855	6,112	8,424	6,932
63	7,626	6,112	8,294	6,899
64	7,404	6,112	8,166	6,865
65	7,188	6,112	8,040	6,832
66	6,979	6,112	7,916	6,799
67	6,775	6,112	7,793	6,776
68	6,578	6,112	7,673	6,733
69	6,387	6,112	7,544	6,700
70	6,201	6,112	7,438	6,668
71	6,020	6,112	7,323	6,635
72	5,845	6,112	7,210	6,603
73	5,674	6,112	7,098	6,571
74	5,509	6,112	6,989	6,539
75	5,349	6,112	6,881	6,507
76	5,193	6,112	6,774	6,476
77	5,042	6,112	6,670	6,444
78	4,895	6,112	6,567	6,413
79	4,752	6,112	6,465	6,382
80	4,614	6,112	6,365	6,351

Note: Annuities based on market rates in force as at August 1998. All incomes in real terms i.e. discounting for 3% inflation

4. A Minimum Income in Retirement: The Proposals

Given both the advantages and disadvantages of the current forms of annuities, outlined previously, the Working Party considered ways in which flexibility of retirement income provision could be improved without sacrificing life-time security both for the individual and for the State.

The principle underlying the Working Party's proposals is:

> *Recognising that the legislation requires that a pension fund is intended to provide retirement income, an individual's only obligation on retirement (assuming sufficient assets in the pension fund) should be to provide a guaranteed income that, taking into account life expectancy and inflation, will keep him above the eligibility levels for State support for the remainder of his or her life.*

The Working Party considered that an individual should continue to be free to take a tax-free lump sum from his or her pension fund subject to the current limits.

The State provides tax breaks to encourage people to build up a pension fund for their retirement. It follows from this that the State can oblige the pension holder to use that fund to provide an income at a sufficient level to prevent that individual from having to rely on income support at any stage during their retirement. In addition, the pension plan must be broadly tax neutral throughout the accumulation and distribution phase: in other words, the tax reliefs granted when the individual is saving up for retirement have to be recouped when the funds are used during retirement.

We therefore propose a Minimum Retirement Income (MRI). This consists of the Basic State Pension (BSP) for a single person (currently £66.70 per week) plus other retirement income up to a total level of £140 (index-linked) per week. This level was selected, because it represents the amount that can be achieved from the basic state pension for a single person and the State Earnings Related Pension Scheme (SERPS) for someone on national average earnings. In practice, this SERPS amount is about £70 a week, which is what SERPS provides for those on national average earnings with a full record. It is in fact 20% of national average earnings in excess of the lower earnings limit[3].

The proposed Minimum Retirement Income has been set at a level sufficiently above both the Basic State Pension and the Government's Minimum Income Guarantee (MIG) to ensure that the individual will not have to rely on the State's welfare provision at any time during their lifetime. It has been set at a relatively high level above the Minimum Income Guarantee, since the Government is committed to increasing this in line with earnings during the lifetime of this Parliament. If such increases were continued indefinitely, then the Minimum Retirement Income, which we have proposed here, would have to be reconsidered, since earnings normally increase faster than prices.

What are the implications of this proposal for the obligation to purchase an annuity? The individual may have other sources of index-linked pension which is guaranteed for life. It is envisaged this would count towards the Minimum Retirement Income. If that is the case, then the individual will only be required to purchase an annuity to cover any gap between that pension and £140 a week. The difference between the Minimum Income Requirement and other sources of income is denoted the Residual Income Requirement (RIR): this amount would be funded by an annuity purchased from the total DC pension fund.

When is the individual obliged to purchase an annuity under this proposal?

When the individual first decides that he or she has retired from all full-time or part-time work and wishes to draw a retirement income other than the state pension, whenever that may be. The age at which this occurs is called the MRI Start Age. We recognise that phased retirement is becoming a more popular option, and that individuals may have a number of personal pension plans or be a member of more than one defined contribution pension schemes: hence, the obligation only bites on the *individual's* chosen date.

If the Start Age is at or after the state retirement age, then the issue of the level of annuity to be purchased is straightforward, since the actual state pension benefits are taken into account in the calculation of the Residual Income Requirement (RIR). If the Start Age is before the state pension age, then the individual has freedom of choice. In many cases, if the individual has taken early retirement or has been made redundant, he or she may wish to take a pension, which meets all or most of the requirements, or may be entitled to invalidity or disability benefit of some kind. The current DSS rules disregard both the pension fund, and any future potential pension income from personal pension plans/retirement annuity contracts, in claims for income support before the State

[3] ***for employees with protected rights this may account for a significant portion of their MRI. Even with the abolition of SERPS, this effect will take some time to disappear***

retirement age. To meet the minimum retirement income, the individual would be expected to be able to declare that his or her *combined* pension entitlements, both state and private, are sufficient to deliver the MRI for the rest of his or her life.

There are two complications: the first is that the assets in the pension fund may be insufficient to meet the MRI. In that case the full amount of the pension fund, excluding the tax-free lump sum, in recognition of the importance of the current entitlement, must be utilised to purchase an annuity at the Start Age.

A second complication arises as the Minimum Retirement Income is intended to provide an income stream, which is inflation proof at the level suggested. The calculations for MRI could be complicated in certain circumstances: if, for example, the pension from a defined benefit or defined contribution scheme is either not index-linked or is only subject to limited price inflation, assuming that it is being used as part of the MRI calculation. To be fair to all in such circumstances, a suitable formula would have to be applied.

The obligation to purchase the Minimum Retirement Income remains with the individual, regardless of marital status, assuming that they have the relevant pension funds arising from a personal pension plan or a defined contribution pension scheme. In other words, the current requirements for both personal pension plans and defined contribution pension schemes would apply, should the proposal for a minimum retirement income be introduced. Married holders of a personal pension plan are not obliged to purchase a joint life annuity, and, indeed, the figures cited previously show that currently only 45% do so. The compulsory purchase annuities from defined contribution pension schemes can be on a single or joint life basis, depending on the scheme rules[4].

Some employees have accrued protected rights as a result of being members of defined benefit arrangements that have been contracted out of SERPS. There are certain restrictions placed on protected rights benefits. Escalation protected rights, benefits accrued after April 1997 must increase in line with LPI, protected rights benefits accrued before April 1997 must increase at the lower of 3% and RPI. For the protected rights element accrued after after April 1997, the regulations allow for the purchase of a limited price indexation annuity or one, which is fully indexed[5]. Beyond the limit of protected rights, the Government is considering a relaxation of the rules on the funds that must be used to provide an indexed annuity.

Under the Government's proposals, scheme members would have the choice of purchasing investment-linked annuities (mainly with profit annuities) instead of annuities, which match the Limited Price Indexation standard, which applies to non-protected rights benefits. We also invite comments as to whether protected benefits should be included in any amendment of the indexation rules. The Working Party welcomes the increased flexibility that would result from these proposals. They do note, however, that investment-linked annuities cannot guarantee annual increases that match the RPI.

A lack of such guarantees may potentially be serious for individuals with limited incomes. We therefore consider that the MRI should be assessed on an income stream that is guaranteed to match inflation (with any pensions that are received that are not index-linked being converted to an equivalent index-linked pension for MRI calculation purposes).

There is some evidence that mortality rates for men and women are beginning to converge. Office for National Statistics figures in table 4.1 show that over the past 20 years there has been a convergence in the life expectancy of males and females. If these rates continue to converge, then the Government should consider the introduction of unisex annuity rates to cover the minimum income requirement where this is in excess of the protected rights income, which is unisex. This is not to ignore the fact that life offices calculate annuity rates on the basis of their own population of annuitants where the mortality risks may differ quite substantially from those of the population as a whole[6].

[4] This does, however, mean that the remaining spouse may end up with an annuity in excess of the minimum income requirement, if the remaining spouse receives 50% of their partner's SERPS entitlement (if the death occurs after April 2000) or up to two thirds of a defined benefit occupational pension scheme. But, since obvioulsy the death of either partner cannot be predicted, such as possible future income cannot be taken into account in the calculations. The provisions for pension sharing on divorce, contained in the Welfare and Reform and Pensions Act, 1999, have not yet come into force. The draft regulations for pension sharing will be laid in Parliament by Easter. The implications for pension splitting would have to be taken into account when these are available.

[5] Protected rights have to provide for the spouse and are on a unisex basis.

[6] The continuous mortality investigation committee of the Faculty and Institute of Actuaries studies the mortality experience of pensioners of schemes insured by life offices. Expectation of life on the latest (1992) tables for individuals aged 60 or 65 in 1999, with allowance for future mortality improvement show a greater degree of convergence than those in table 4.1.
Current figures: Age 60 – Male 21.6 Female – 25.2. Age 65 – Male 17.1 Female 20.4.

Table 4.1 Variation of Average Life Expectancy with Time

1980 –1982	Male aged 60	16.38
	Male aged 65	13.04
	Female aged 60	20.89
	Female aged 65	16.98
1990 –1992	Male aged 60	17.85
	Male aged 65	14.27
	Female aged 60	22.08
	Female aged 65	18.11
1998	Male aged 60	20.6
	Male aged 65	16.4
	Female aged 60	24.8
	Female aged 65	20.0

Source: English Life Tables/Government Actuary

4.1 Illustration

John Smith has had a variety of jobs over the years. He has been an employee all his working life but has not always had access to an occupational pension, although he was in a defined benefit scheme for a few years. He has always contracted out of SERPS. He is 65 and has decided to retire.

He has the following pension entitlements and assets:

- A Basic State Pension of £3,471
- A defined benefit entitlement of £1,000 a year (not index-linked)
- A personal pension plan with assets of £150,000

The MRI is set at £7,280 per annum.

John begins by deducting the Basic State Pension from the MRI. This is appropriate as all State entitlements are guaranteed to rise in line with price inflation:

	£
MRI	7,280
State pension	(3,471)
Difference	3,809

The next stage is to consider any pension entitlements, which are lifelong but are not indexed to inflation. John's defined benefit scheme will provide a fixed income of £1,000 a year. Suppose this is treated as equivalent to an index-linked income of £779. John's MRI calculation now looks like:

	£
MRI	7,280
State Pension	(3,471)
Defined Benefit	(779)
Residual Income Required	3,030

John therefore has to fund an annual Residual Income Requirement of £3,030 from the assets in the personal pension plan. Suppose that the current market price of an RPI life annuity paying £3,030 per annum is £45,866. This amount must be used to purchase this annuity.

John's tax-free lump sum is 25% of the original £150,000 in the personal pension plan. This gives a maximum tax-free lump sum of £150,000 x 25% = £37,500. He decides to take the full amount.

John is left with £66,634 of the original £150,000 in personal pension assets. We propose that there should be much greater freedom over how this residual sum might be invested.

5. Affording the Minimum Retirement Income (MRI)

At current prices, the costs of the MRI at £70 per week are set out below in table 5.

Table 5. Cost of Annuities to meet the £70 per week MRI

		Standard	Unisex
Male aged 65	RPI Linked	£55,076	
Male aged 65	LPI Linked		£62,297
Female aged 65	RPI Linked	£62,180	
Female age 65	LPI Linked		£62,297

Source: Norwich Union

In the absence of freely available data, market research was used to estimate the proportion of pensioners who might be affected by the recommendations of this Report. The Working Party was given access to the *Aberdeen Asset Management Retirement Income Survey.* The sample design of this survey aims to accurately reflect the UK population in terms of region and informant demographics.

In principle, the people who will be affected by the Working Party's proposals are those who will have an income from pensions (i.e. not including other sources of income such as investment income) greater than the MRI, part of which has been obtained from an annuity-based product. Information on this group of individuals can be obtained from surveys of existing pensioners and of people who have yet to retire.

5.1 Survey of Existing Pensioners

The *Aberdeen Asset Management Retirement Income Survey* for November 1999 identifies retired individuals obtaining a pension from an annuity-based product by the size of their total pension. This information is summarised in Table 5.1.

Table 5.1 – Existing Pensioners obtaining a pension from an annuity-based product

Currently monthly pension (£)	Individuals obtaining a pension in this band as a percentage of all pensioners receiving pensions from annuity based products (%)	Individuals obtaining a pension in this band as a percentage of all pensioners (%)
Up to 200	13.8	3.7
201 to 300	15.4	4.1
391 to 400	21.5	5.8
401 to 500	21.5	5.8
501 to 750	12.3	3.3
751 to 1000	10.8	2.9
1001 to 1500	4.6	1.2
1501 to 2000	0.0	0.0
Over 2000	0.0	0.0

Number of pensioners surveyed: 500.
Pensioners who refused to answer questions about their income, or who did not know their income, have been excluded in calculating the percentages above.
Source*: Aberdeen Asset Management Retirement Income Survey*

The proposed MRI is currently about £560 per month (£140 per week). Table 5.1 can be used to determine the percentage of pensioners who believe they have a current pension that exceeds this figure. There are, however, some pitfalls in interpreting this to be the percentage of pensioners who will be affected by the recommendations. The MRI will only affect any particular pensioner at the date he retires, not at some snapshot date in the future. Both the MRI and pensions in payment tend to increase over time. Part of the MRI is related to the Basic State Pension and this will increase in line with the Retail Price Index (RPI). The remaining portion will increase in line with earnings. Pensions in payment may increase at a variety of different rates, normally at no more than the rate of increase in RPI. Thus pensions in payment will tend to increase more slowly than the MRI, since it rises by more than the RPI. Thus some pensioners who would have had a pension above MRI at retirement will eventually find that their pension falls below the MRI after some years of retirement.

It is difficult to make a precise estimate of the effect of these differential increases. To give a rough estimate of the effect one might anticipate that the MRI would perhaps increase by say between 1% and 3% more than the average pension in payment. To take account of this effect, and recognising the bands in which the data are

grouped, it is probably a conservative approximation to consider that all the pensioners currently in the £501 to £750 per month pension band and above would have had a pension above the MRI at retirement.

Based on this assumption, it can be deduced from column 1 of Table 5.1 that 27.7% of pensioners receiving pensions from annuity-based products (corresponding to 7.4% of all pensioners (column 2) would have had a pension above the MRI at retirement.

5.2. Survey of Prospective Pensioners' Expectations

The *Aberdeen Asset Management Retirement Income Survey* also identifies the value of the pension per month that adults aged 45 and over expect to receive when they retire. This information is summarised in Table 5.2 for individuals expecting a pension from an annuity-based product.

Table 5.2 – Adults aged 45 and over but not yet retired expecting a pension from an annuity-based product

Expected monthly pension (£)	Individuals expecting a pension in this band as a percentage of all pensioners expecting pensions from annuity based products (%)	Individuals expecting a pension in this band as a percentage of all adults agd 45 and over but not yet retired (%)
Up to 200	21.3	7.1
201 to 300	19.1	6.4
391 to 400	23.4	7.8
401 to 500	10.6	3.5
501 to 750	10.6	3.5
751 to 1000	8.5	2.8
1001 to 1500	6.4	2.1
1501 to 2000	0.0	0.0
Over 2000	0.0	0.0

Number of individuals surveyed: 444.
Individuals who refused to answer questions about their income, or who did not know their income, have been excluded in calculating the percentages above.
Source*: Aberdeen Asset Management Retirement Income Survey*

The percentage of adults aged 45 and over (but not yet retired) who currently expect to have a pension that exceeds the proposed MRI can be deduced from Table 5.2. There are some difficulties in interpreting this to be the percentage of individuals who will exceed MRI at retirement. As discussed above, the MRI will increase in future. When estimating their expected pension, individuals may or may not fully take into account future investment returns, future contribution increases and future salary and retail price increases. Distortions may arise from comparing an MRI in current prices with estimates of future pensions, which may not always be made in current terms. Nonetheless, in the absence of more detailed information, it is perhaps reasonable to assume that individuals expecting a pension of over £560 per month will have a pension above the MRI at retirement.

Based on this assumption, it can be deduced from Table 5.2 (with suitable interpolation) that about 23% of adults aged 45 or over receiving pensions from annuity-based products (corresponding to 7.6% of all adults aged 45 or over but not yet retired) would expect to have a pension above the MRI at retirement.

Interestingly, these figures are of the same order of magnitude as for those recently retired. However, we can reasonably expect that these percentages will be somewhat higher in the future as a larger percentage of the population adopt defined contribution pension arrangements.

6. Projecting the Level of Contributions Required to Provide a Minimum Retirement Income

We have undertaken some projections of the level of contributions into a DC pension plan needed to meet the Minimum Retirement Income level for someone who joins the plan in 2000 aged 25 and retires in 2040 aged 65. The main set of economic assumptions used are in line with those used in the intermediate rates currently required to be used by the Personal Investment Authority (PIA) for the purpose of the projection of future benefits from pensions contracts. (The assumptions used in the projections are given in Appendix C.)

6.1 Target Level for the Minimum Retirement Income (MRI)

The target level for the MRI in 1999/2000, amounts to approximately £140 per week. If the individual is entitled to a full Basic State Pension, this leaves a Residual Income Requirement of about £70 per week to be provided by other DC pension funds.

6.2 Contributions to meet the Target Level

6.2.1 Intermediate Basis

Table 6.1 Projections of the required contributions on the Intermediate Basis

Type of annuity	Contribution needed to give an expected benefit equal to the target benefit (£ pa)	Contribution as a proportion of national average earnings (%)
Male annuity rates	930	4.5
Female annuity rates	1010	4.9
Unisex annuity rates	970	4.7

Table 6.1 presents the projections on the intermediate basis. It shows that, on average, male contributions of £930 per year for 40 years are needed to generate a retirement income of £70 per week, in constant earnings terms, although by 2040, this will be £127 per week at the year 2000 prices, since we are projecting that real earnings grow by 1.5% p.a. Contributions have been assumed to increase in line with earnings. Female contributions, as result of the greater longevity of women, start at £1,010 p.a. or nearly 9% more than male contributions. However, if unisex rates are used, then male contributions rise by £40 p.a. and female contributions fall by the same amount. In this case, the MRI can be met with contributions equal to 4.7% of national average earnings.

Calculations have also been carried out to find the expected pension resulting from contributions of £3,600 per annum: this represents the maximum contribution to a stakeholder pension plan (introduced by the Welfare Reform and Pensions Act (1999)) that does not depend on the level of salary earned during the year in which contributions are made. Table 6.2 shows that, using unisex annuity rates, a pension of £260 per week (equal to 68% of NAE projected in 2040) can be achieved on average.

Table 6.2 Projections for Stakeholder Pension Plans on the Intermediate Basis

Type of annuity	Pension in constant earning terms based on a contribution of £3,600 pa (£ per week)	Pension as a proportion of national average earnings in 2040 (%)
Male annuity rates	270	70
Female annuity rates	250	65
Unisex annuity rates	260	68

6.2.2 Projections on Alternative Bases

Projections have also been undertaken on different sets of economic assumptions to illustrate the effect of the uncertainty attached to investment returns and to the annuity rates available at retirement. Table 6.3 shows the effect of using a weaker (more optimistic) set of assumptions on the size of the contribution needed to give an expected benefit equal to the target benefit. Table 6.4 shows the effect of using a stronger (less optimistic) set of assumptions. (The assumptions used in the projections are given in Appendix C.) A higher level of contributions will result in a higher probability of achieving the target benefit at retirement.

Table 6.3 Projections of the required contributions on the Weaker Basis

Type of annuity	Contribution needed to give an expected benefit equal to the target benefit (£ pa)	Contribution as a proportion of national average earnings (%)
Male annuity rates	700	3.4
Female annuity rates	760	3.7
Unisex annuity rates	730	3.5

Table 6.4 Projections of the required contributions on the Stronger Basis

Type of annuity	Contribution needed to give an expected benefit equal to the target benefit (£ pa)	Contribution as a proportion of national average earnings (%)
Male annuity rates	1,280	6.2
Female annuity rates	1,400	6.8
Unisex annuity rates	1,340	6.5

7. The Residual Fund

The cost of the purchase of an index-linked annuity to meet the Residual Income Requirement (RIR) above Basic State Pension is currently £55,076 for a man aged 65 and £62,180 for a woman. Once that annuity has been purchased, the individual may well have more money left as a residual fund. The view of the Working Party is that there should be the maximum possible flexibility in the use of the residual fund, subject only to considerations of taxation.

The following range of options should be open for further discussion:

- (i) There should be no restrictions on the use of the residual fund, so that the funds can be drawn down at any time.
- (ii) There should be a minimum annual withdrawal, but no maximum.
- (iii) There should be a maximum annual withdrawal, but no minimum.
- (iv) There should be both a minimum and a maximum annual withdrawal as with income drawdown.

Investment return on monies remaining in the Residual Fund would continue to accumulate on a tax-deferred basis; drawdowns from the Residual Fund would be subject to taxation. The intention would continue to be to achieve broad tax neutrality over the whole accumulation and distribution phase. Thus, where an individual chooses to use part of the Residual Fund to purchase an annuity, the annual payments will form part of his taxable income. Other withdrawals from that Fund, whether of annual income or of capital sums, will be subject to income tax at the individual's highest marginal rate.[7]

Special rules are likely to be required to deal with any monies remaining in the Residual Fund on death. It is envisaged that those would be similar to the current personal pension scheme rules, where tax is levied on any lump sum paid out on death after an individual has elected for income drawdown at (currently) 35%. The lump sum, net of that 35% tax charge, may then also be part of the estate for Inheritance Tax purposes, depending upon whether it is paid to a surviving spouse, other financial dependent or some other beneficiary.

7.1. New Product Alternatives

The Working Party considered that, once the MRI had been secured, the individual should have the maximum freedom to reinvest the rest of the Fund in a range of investment vehicles. These would include annuities offered by life offices, which have introduced new products over the past year including with-profits annuities, both conventional and guaranteed. There are of course a wide range of other investment products such as income drawdown, investment bonds, unit trusts, investment trusts, UCITS and OEICS, which could be used to provide the pensioner with further income. Given that the individual may still wish their Residual Fund to grow, rather than to provide income, another possibility would be to invest it in an 'Individual Retirement Account' the rules for which should be harmonised with other savings and investment vehicles.

The residual fund would continue to grow in a tax-deferred environment. Such a move could involve extending the PEP and ISA regime to allow authorisation of PEP and ISA managers as Approved Pension Managers[8]. This could be on a similar basis to that authorising ISA managers. It would enable such managers to offer any defined contribution pension product. On reaching retirement, pensioners with residual assets would be permitted to hold investments as previously, or switch to another provider.

7.2. Approved Pension Manager

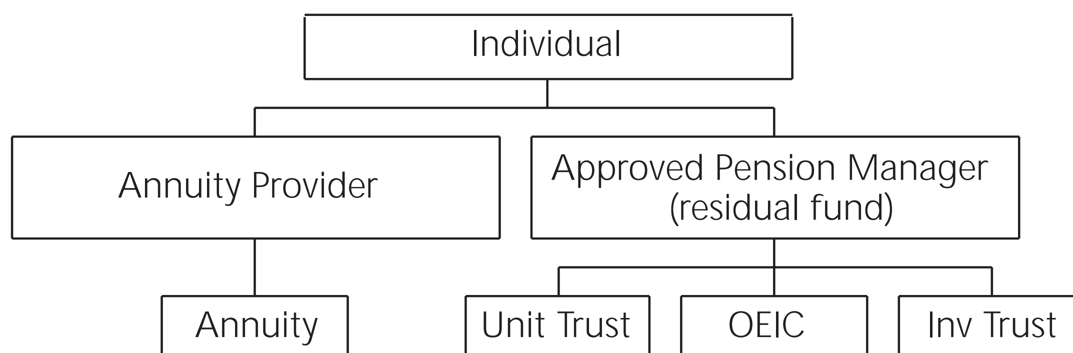
This flexible system could be combined with other tax-advantaged savings vehicles, such as ISAs, to create a complete life cycle of savings products. The Approved Pension Manager would be subject to existing FSA conduct of business requirements, that apply to existing personal pension providers and would require the provider to effectively contract with each individual retiree. The retiree could choose to place their entire retirement fund with a single annuity provider or they could choose to appoint an alternative Approved Pension Manager.

[7] *If the investment fund is to be continued to be allowed to grow, the possibility of a capital charge at a relevant point may have to be considered as an alternative to a requirement to annuitise at a given age.*

[8] *Broadly under the ICTA 88 s.630 personal pension schemes can currently be offered by:*

- *Those approved under FSA and carrying on life assurance and managing authorised unit trusts*
- *EC insurers operating in the UK*
- *Banks, building societies and certain other members of such groups*

The diagram below illustrates how the structure would operate:



This new framework would allow investors to remain more fully invested in equity or bond funds for longer than is currently the case. In the United States, similar accounts, known as IRA rollover accounts, are taxed on distribution from the age of $70^1/_2$, following minimum annual distribution rules based on an annual recalculation of life expectancy of the individual or their beneficiary. However, while the average return on the invested assets is likely to be greater initially than the implied return on the annuity, there is some risk that individuals may be worse off than if they had used the full Residual Fund to purchase an RPI annuity at the retirement age, especially when the charges for managing the investment assets are taken into account.

An advantage of this approach is that it would encourage improvements in the design of annuities and give better protection against interest rate risk, using vehicles such as phased annuity purchases and protected annuity funds, which employ derivative instruments. With greater freedom to use the residual fund, competition between companies should decrease costs in this growing market.

Each kind of product will carry its own risks and it is vitally important that the decisions people take about their retirement income are fully informed. The risks, benefits and costs of each investment decision, whether it is to take out another annuity or invest in some other way, must be explained to potential purchasers. Charging structures in the UK, such as those for income drawdown, currently lack transparency, perhaps due to the taxation regulations, and need clarifying and simplifying. The FSA must also be involved therefore in ensuring that its 'conduct of business rules' accurately reflect the changing market.

8. Conclusion

The current obligation to purchase an annuity and the introduction of stakeholder pensions will ensure a steady and increasing demand for annuities. Considerable anxiety has already been expressed by the industry over the decline in supply of suitable assets, in general and index-linked gilts in particular. Our proposals do not increase the demand for annuities in general, but only for index-linked annuities (above the level of protected rights, which are subject to limited price indexation). They could be seen as easing the problem of matching assets, since if these ideas were adopted, they would allow people to choose when they bought another annuity if they wished to, or invest in other instruments which involve less reliance on Government bonds. These proposals, especially if they are accompanied by a re-definition of the rules for the structure of annuities, may well encourage greater innovation than has taken place recently.

In principle, a defined contribution pension plan is a very straightforward financial product: there is a saving stage during the working lifetime, followed by retirement and then a spending stage. However, current arrangements have resulted in a complex set of choices at the point of retirement. Should an individual buy a level annuity or an indexed annuity? Should they delay this choice and instead use drawdown?

Most individuals are confronted with these choices without knowing fully the benefits, risks or costs involved. The proposals in this report widen the range of choices open to the individual. They are designed to enable the individual to plan for his or her retirement in a way which suits them best, but recognises that widening the choices will require access to high-quality advice.

The report recognises that an annuity is the only way in which the individual can be sure of an income for life, but argues that the whole of the pension fund need not be used to secure such an income for life. The State has an interest in ensuring that the individual is not free to exhaust the pension fund and then turn to the State for income support: the 'double dipping' on the part of some people which has caused some concern in Australia. This poses the question about an acceptable level of annuitisation, which we have sought to answer in terms of a Minimum Retirement Income. People will only be required to purchase index-linked annuities up to the same level as the current second pension: the state earnings related pension (SERPS). The appropriate context in which to judge the minimum level we have proposed is that of the current 'contracting out' requirements, which are intended to provide a pension broadly comparable with the SERPS benefits forgone.

We have proposed greater flexibility and choice over the use of the remaining pension funds. Widening choice in this way will open up competition in the financial services industry, encouraging both life offices and asset managers to develop new vehicles for savings and the provision of income in retirement. Such competition in a growing market for retirement income will serve to drive down costs and could be used to encourage greater transparency over costs and charges. Pensions and tax legislation should be reviewed to allow for greater flexibility in annuity provision.

Detailed tax proposals have not been provided, but the report recognises that the State has provided generous tax breaks during the period of pensions savings and should be able to recoup those through timely taxation of the pension fund and pension income.

Finally, it is important to point out that, although we have suggested improvements in the security and flexibility of pension plans during the retirement stage, no improvements at this stage can adequately compensate for insufficient contributions made into a pension plan during the working lifetime. Suggestions for improving security and flexibility during retirement will make little difference if the fund accumulated on the retirement date is a small one.

Appendices

Appendix A
Summary of Annuity Arrangements in Other Overseas Markets

A.1 United States of America

A.1.1 Background

The US pensions system is complex with the State, employers and individuals all playing important roles.

A.1.1.1 The State System

State retirement benefits are available from the Social Security system. Social security benefits are available to people who have worked for at least 10 years. They are based on earnings averaged over most of an individual's working life (somewhat like SERPS in the UK). The formula for calculating benefits is somewhat complex, but a worker with average earnings can expect a retirement benefit that represents about 42% of his or her average lifetime earnings. Low income workers can expect a higher percentage and high income workers a lower percentage.

There is a mechanism for assuring a minimum monthly income for elderly and disabled persons who have few assets. This is known as Supplemental Security Income Benefits and it supplements income up to a basic rate set by the federal government. Some states supplement this amount. This benefit is very strictly means tested.

A.1.1.2 Employer-sponsored retirement plans

There is tax relief on contributions and investment returns. Income tax is payable on retirement benefits.

In the past, most plans were defined benefit arrangements. Defined benefit arrangements are often set up to provide an income for life, but this is not obligatory. The entire benefit can be paid as a lump sum. There is no obligation to buy an annuity.

Today most companies offer defined contribution arrangements. There are two common forms:

1. 401(k) plans = for employees in private companies

2. 403(b) plans = for employees in public and non-profit organisations.

The employee decides the contribution and how it is invested. The employer may match contributions at, say, 25c or 50c (or even $1) per employee $1 contributed. Employee contribution limit (1999) is $10k pre-tax for 401(k) plans and the lesser of 20% or $9,500 of salary for 403(b) plans.

The employee can make additional contributions of taxed dollars, typically up to a total of 12% of salary. The investment growth is still tax free. In the case of after-tax contributions, when the corresponding benefits are distributed, the contributions are treated as a non-taxable return of capital, but all investment earnings are treated as income.

It is common for 401(k) plans to provide at least some participant-directed investment. The types of investments are not restricted, but various fiduciary responsibilities are imposed on the plan operators (the so-called 'prudent man' principle) under the Employee Retirement Income Security Act of 1974 (ERISA).

The employee can borrow money from a 401(k) for any reason, at a prescribed interest rate with an agreed repayment term. Failure to repay invokes a tax liability. It is common for plans to allow specified 'hardship' withdrawals.

Draw down must start between $59^1/_2$ and $70^1/_2$ (or on retirement if later). The employee may be given the choice between pension payments or a single lump sum. Plans typically offer a lump sum and may also provide for payments over a period of years, such as the life expectancy of the participant and his/her beneficiary. The lump sum can be used by an individual to create an income in retirement: for example, he/she may buy an annuity from an insurer at market rates or buy long-dated Treasury bills.

Most 401(k) plans do not offer annuity options because of the increased administrative burdens associated with annuities. For example, plans that offer an annuity are subject to 'joint and survivor requirements' under which a

spouse must continue to receive payments after the death of the pensioner (Senate Committee (1999). If an annuity is not offered, there are no requirements specifying a particular death benefit. The member's nominated beneficiary is entitled to the remaining account balance upon the member's death.

A.1.1.3 Individual Retirement Accounts (IRAs)

There are a number of different types of IRAs.

Traditional IRAs

These are available to people with employment income. The maximum annual contribution is $2,000 (this limit applies to the total contributions to both traditional and Roth - IRAs). In some circumstances, the non-working spouse of a member may contribute to another IRA. There are complex rules for deciding whether contributions are tax deductible. Broadly speaking, contributions are deductible if the individual has no participation in a company-sponsored retirement plan. Investment growth is tax deferred. Distributions from pre-tax contributions are taxed as income. Distributions from post-tax contributions are treated as a non-taxable return of capital apart from any investment growth which is taxed as income. Individuals can assign the benefits to their children upon their death, but these will be taxed. Transfers known as 'rollovers' can be accepted from employer plans when changing employer.

Draw down must start between $59^1/_2$ and $70^1/_2$. There is no requirement to buy an annuity. At age $70^1/_2$ the individual must take a required minimum distribution (RMD) annually or be subject to penalties. The RMD is determined by a formula applied to the individual's life expectancy or the joint life expectancy of the individual and his or her beneficiary.

Roth - IRAs

These are available to people with incomes below a certain level (less than $110,000 for a single person) in the particular year of contribution. The maximum annual contribution is $2,000. In some circumstances, the non-working spouse of a member may contribute to his/her own IRA. Contributions are not tax deductible. Investment growth is tax free. Distributions are free of tax if the account has been open for more than five years and the investor's age is greater than $59^1/_2$. So long as the account has been open for five years, up to $10,000 can be withdrawn tax free to purchase a first home. There is no age by which the individual must start drawing income. It is possible for an individual to assign the payments to his/her children upon death, tax free.

SEP - IRA (Simplified Employee Pension IRA)

These are for the employees of small businesses. Contributions are made by the employer, up to 15% of each employee's total compensation, with a maximum annual contribution of $24,000. With the exception of the higher contribution limits, they are subject to the same rules as a traditional IRA.

SIMPLE - IRA (Savings Incentive Match Plan for Employees IRA)

These are for the employees of small businesses (fewer than 100 employees). Both the employee and the employer may contribute to the plan. The maximum employee contribution is $6,000. If the employees contribute to the plan, the maximum employer contribution is the lesser of 3% of the employee's compensation and an equal match of the employee's contributions. If the employees do not contribute to the plan, the maximum employer contribution is 2% of each employee's compensation. With the exception of the different contribution limits, these plans are subject to the same rules as a traditional IRA.

Keogh plans

These are for the self-employed. In a Profit-Sharing Keogh, contributions are limited to the lesser of $30,000 or 13.4% of the individual's income from self-employment. The contribution percentage can be adjusted yearly. In a Money Purchase Keogh, an individual can contribute 20% of income up to a maximum of $30,000. In this case, however, the contribution percentage cannot be changed from year to year. With the exception of the different contribution limits, these plans are subject to the same rules as a traditional IRA.

With all the different types of IRA and Keogh plans, the member normally has a wide choice of investments such as stocks, mutual funds, bonds or strips to hold inside the shell.

If an individual wishes to take the benefit in the form of an immediate annuity, he/she may use the IRA/Keogh assets to purchase an annuity in the market. In this case, income tax is payable on the annuity payments, not when the cash is released from the IRA to the annuity provider.

A.1.1.4 Annuities

There are differences in terminology between the US and the UK. In the US, an annuity is a tax-deferred investment vehicle packaged as an insurance product. Within an annuity package, the investment earnings are tax-deferred until the money is withdrawn. Thus, money invested in an annuity grows faster than in a taxable account. Contributions to an annuity are not tax deductible. There are no limits to the amounts that can be contributed to an annuity. A variable annuity is an annuity in which the returns are linked to an underlying equity-based account.

An annuity has two phases: the accumulation phase and the distribution phase. During the accumulation phase, individuals can contribute as much as they wish and the earnings grow tax-deferred. During the distribution phase, individuals can elect to receive a *lump sum* or can 'annuitize' which means that the annuity can be turned into a series of payments for a specified period. There are few, if any, restrictions on the series of payments that are possible.

There are many common permutations, some examples of which are set out below:

1. The single life annuity provides highest annuity payment per invested dollar but ends at death.
2. A 'life and "n" year' annuity provides that in the event of an early death, payments continue to a beneficiary for the remainder of the n years.
3. A 'revocable' annuity lets the individual exchange the remaining income payments for a lump sum at any time on period-certain contracts (not lifetime).

Fixed immediate annuities provide a set return backed by an insurance company. Variable Immediate Annuities (VIAs) are tied to an underlying equity-based account. In return for a one-off payment, an annuity is guaranteed for life, but payments are adjusted in line with the equity account performance. However, VIAs are not very popular compared with fixed immediate annuities.

Distributions and withdrawals from annuities are generally taxed as income. In broad terms, annuities in the US are similar to a traditional IRA except that contributions are not tax deductible.

In the US, a variable annuity is a tax-deferred investment vehicle packaged as an insurance product in which the returns are linked to an underlying equity-based account. A variable annuity has two phases: the accumulation phase and the distribution phase. Contributions are made during the accumulation phase. During the distribution phase, individuals can elect to 'annuitise' their plan which means they receive a regular income according to some specified criteria such as income for life or they can make a series of withdrawals over time. There are few, if any, restrictions on the series of payments that are possible.

The tax treatment of variable annuities is as follows: contributions to a variable annuity are not limited in amount but are not tax deductible. Within an annuity package, the investment earnings are tax deferred until the money is withdrawn. When withdrawals from an annuity are taxed earnings (dividends, interest and capital gains accumulated within the annuity) they are taxed as income not capital gains. When a plan has been 'annuitized', income payments are taxed using a concept known as the exclusion ratio. Part of each payment is considered to be a return of principal and is not taxed. The remaining portion is taxable as earnings. When a series of withdrawals is made over time, payments are taxed using the concept of earnings out first. In this case, withdrawals are taxed as earnings until the account value is reduced to the total of the purchase payments, less any necessary adjustments.

A.1.2 Role of annuities in the US pension system

In the US pension system, there is no compulsion from the State for retirement income to be received in the form of income from annuity arrangements. There is a great deal of freedom regarding the manner in which income can be received in retirement. To a large extent individuals are able to choose arrangements that suit their own particular circumstances and attitudes. It should be noted that this does not preclude the choice of an immediate annuity as the market for annuities is fairly well developed.

Within this system, there is the possibility of individuals taking the proceeds of their pensions arrangements as a lump sum and rapidly spending the money. Generally, this would not cause a problem for the State as most individuals, who would have been in a position to amass substantial private pension funds, would also be entitled to a non-means tested State pension which be sufficient to prevent them from claiming means tested State benefits.

A.2 Australia

A.2.1 Background

A.2.1.1 The state system

Australia operates an Age Pension funded through general revenues at age 65 (61 for women but this is being raised progressively to 65). The pension is means tested and not universal. Australia has never operated an earnings related pension system. The Age Pension pays 25% of average male workers' weekly earnings and is adjusted twice per year.

A.2.1.2 Employer plans

In 1992, the government mandated employers to make contributions to pension (or superannuation) schemes. Currently, the contribution rate is 7% (and being increased in steps to 9% by 2002) of employee earnings. The amounts are fully vested and fully portable. The schemes are compulsory, except for lower paid employees who can opt out of the scheme and receive higher wages.

The employer offers the employee a choice of funds. Investments are not controlled by the employee. The large majority of schemes are defined contribution. The superannuation funds are taxed. All contributions, earnings (unless tax has been paid by the dividend issuer) and capital growth is taxed.

Withdrawal can occur after reaching age 55 (moving to 60 by 2025). The withdrawal may be by lump sums or by annuity. There are no stipulated limits. An individual can take the money out all at once and spend it before age 65 and be eligible for the means tested Age Pension, a practice known as 'double dipping'. The minimum age for withdrawals is being increased to 60 to reduce the scope for double dipping. Annuity income and lump sum withdrawals are taxed above a threshold amount.

A.2.2 Role of annuities in the Australian pension system

The market for 'for life' annuities in Australia is small at the moment. Only 2% of retirees were receiving income from annuities in the 1992-93 fiscal year. Most annuity sales are fixed term and only 16% of annuity sales in 1997 were 'life long'.

A more popular alternative to annuities is what is known as 'allocated pensions' which somewhat resemble an income drawdown product in the UK. Assets typically can be invested in a wide variety of funds and are then used up over time according to the remaining life expectancy of the drawer. The maximum withdrawal rate is that which will exhaust the account by age 80, after which the Age Pension is available. They are more flexible than annuities because the individual can vary the withdrawal rate if he/she wishes. The schemes do not protect against the risk of outliving the assets. If an individual does outlive them, they are still eligible for the means tested Age Pension.

In summary, there is no state compulsion to purchase annuities in Australia. Individuals have considerable freedom over how to use their retirement funds. Although a reasonable range of annuity products exists, annuities are not generally a popular choice. The Australian system does, however, face considerable difficulties caused by people exhausting their retirement funds and then falling back on the State; as a result, the Government is taking action to address this problem.

A.3 Ireland

A.3.1 Background

A.3.1.1 The state system

Ireland operates a universal scheme without means testing. Pensions are payable from age 66. The State pension is currently equal to 29% of average industrial earnings.

A.3.1.2 Occupational schemes

In 1995, 52% of employees were covered by occupational schemes, but 75% of schemes do not allow part-timers to join. There is a growing trend towards defined contribution schemes, but currently only about 10% of schemes are defined contribution. Many schemes have vesting periods of five years, the present statutory maximum.

A.3.1.3 Personal pensions

Only 27% (1995) of the self-employed have personal pension plans.

Proposals are underway for a 'Personal Retirement Savings Account' (PRSA). This would be available to all individuals, irrespective of employment status, and would be fully portable. A deferral option would be permitted allowing for the investor to enter into a drawdown arrangement, and thus postponing the decision to buy a life annuity. However, annuities must be purchased by age 75 at the latest.

Up to 25% of accumulated PRSA funds (up to a maximum of £25,000) can be used as collateral for taking out loans, analogous to 401(k) plans in the USA.

A.3.2 Role of annuities in the Irish pension system

Until recently, defined contribution scheme members and the self-employed had to purchase an annuity contract immediately on retirement: up to 25% could be taken as a lump sum. But annuities came to be perceived as poor value as long-term interest rates declined.

The annuity market in Ireland is characterised by lack of competition and a narrow range of products. Only one company offers a with-profits annuity. Index-linked annuities are not available as no index-linked bonds have been issued by the Irish government

The Irish Pensions Board has proposed that pension scheme members be able to defer the purchase of annuity until age 75. For example, an individual could buy an interim term annuity which gives taxable income for five years, plus the return of capital at the end. The capital then has to be used to purchase a 'for-life' annuity (or another temporary annuity if the individual is less than 75).

The 1999 Finance Act introduced elements of these proposals but only for the self-employed and owner directors. The retirement options are:

1. Take up to 25% of the value of the fund as a lump sum and also purchase an annuity.
2. Take the 25% lump sum and invest the rest in an Approved Retirement Fund (ARF). Unless an individual has other income of at least IR£10,000pa (or is already 75), he/she must deposit IR£50,000 (or the total if less) of his/her fund in an Approved Minimum Retirement Fund (AMRF) or purchase an annuity at once. ARFs and AMRFs can consist of deposits, life funds, unit trusts, individual shares or property. Monies in an ARF can be withdrawn at any time. Drawdown withdrawals are taxed at the marginal rate of income tax. Monies placed in an ARMF may not be withdrawn until age 75.
3. Take the 25% lump sum and 75% the balance as a taxable cash payment. However, again, if the investor does not have an income of at least IR£10,000, he/she must put IR£50,000 in an AMRF or an annuity.

In summary, the Irish system has changed from a system, similar to that in the UK, in which the self-employed were compelled to purchase an annuity on retirement. This compulsion to purchase annuities has been removed, allowing individuals some discretion over how to deal with the proceeds of their pension funds. The new system has introduced measures to ensure that individuals without sufficient alternative income cannot exhaust their funds too quickly.

A.4 Chile

A.4.1 Background

A.4.1.1 Replacement of a State system by a private system

In 1981, Chile replaced a State pay-as-you-go system with a private system based on individual accounts. Workers must save in personal retirement accounts and contribute to disability and survivor insurance. The responsibility is the employee's. In a one-off step, what used to be the employer's contribution is transferred to the employee as income, so the employee could, in turn, save it in his/her pension scheme.

The system is mandatory for all new joiners to the workforce and voluntary for existing workers. To recognise the fact that existing workers had previously paid into the State system to date, they were given 'recognition bonds' which the Government will honour within their personal retirement accounts when they retire.

Contributions equal 10% of wages. All contributions are tax deductible. They are voluntary for the self-employed. Contributions are invested with a private pension firm. Individuals may switch firm every four months. The firm must arrange disability and survivor cover. Investments can be in bank deposits, government securities, equity, corporate bonds, or real estate. Each investment type within the portfolio is subject to percentage limits of the whole.

The credited return on the fund is prohibited from diverging by more than two percentage points from the average return for all funds. Excesses are placed in a 'profitability reserve' portfolio and credited back into the fund during lean years.

Withdrawals at retirement take the following forms: the individual may either buy a life annuity or make periodic drawdowns on the basis of a defined schedule acceptable to the government, based on life expectancy and interest rates. Income is taxable. Individuals can take a lump sum only if the account balance is greater than required to buy a pension of 70% of average salary and at least 120% of the Minimum Pension.

If individuals have been members of a scheme for 20 years and still have insufficient funds, the government will top-up their scheme to enable them to buy a Minimum Pension. The Minimum Pension is now 25% of average income (about 75% of the minimum wage).

A.4.2 Role of annuities in the Chilean pensions system

Annuities sold in Chile must be index linked and provide survivor benefits. Retirees are free to choose an annuity in the open market. Annuity providers may not act as individual pension account providers. Providers are regulated and the government has an annuity guarantee scheme if annuity providers default.

In summary, in the Chilean pension system, there is no State compulsion to purchase annuities. Individuals may take a lump sum withdrawal from their accumulated pension funds after securing an appropriate pension. This pension may be secured by means of an annuity or by making periodic drawdowns on a schedule acceptable to the government.

A.5 Singapore

A.5.1 Background

Unlike most other countries that finance their social security systems on a pay-as-you-go basis, Singapore requires its working citizens to save for their own retirement through a mandatory, publicly managed savings programme known as the Central Provident Fund (CPF).

Most employed Singaporean citizens are required to be members of the CPF. Fund accounts belong to individual members and are portable, remaining with the employee through job changes and forming part of the account holder's estate on death.

Both employees and employers make monthly contributions to the fund. The total contribution rate for workers up to the age of 55 is 30%, 20% from the employee and 10% from the employer. Until recently, total contribution levels were 40% split equally between employee and employer; but, due to the recent economic turmoil in Asia, the employer's contribution level has been reduced to 10% for a period of two years.

CPF contributions are only levied on salaries up to a ceiling of S$6,000 per month. Contribution levels vary from zero, for low-paid employees (those earning up to S$200 per month) up to the full 20% employee contribution rate for employees earning over S$363 per month. In order to encourage employees to work for as long as possible, contribution levels are reduced for those over 55.

CPF contributions are credited to three accounts:

1. Ordinary account: can be used for retirement, buying a home, insurance, investment and education.
2. Medisave account: can be used to pay hospital bills and approved medical insurance.
3. Special account: reserved for old age and contingencies.

Contributions to the CPF earn market-related interest rates based on the 12-month fixed deposit and month-end savings rates of four major local banks. Since 1986, members of the CPF have been able to invest a proportion of their accumulated funds into equities and other approved investments in order to maximise investment returns.

Deposits and withdrawals from the fund are tax-exempt as are gains within the fund.

A.5.2 Role of annuities in the Singaporean pension system

Members can withdraw their CPF savings when they reach 55, after setting aside a minimum sum in their Retirement Account for old age. As at 1 July 1999, this was set at S$60,000 but it is gradually being increased to S$80,000 by 2003. Couples need only set aside 1.5 times the minimum sum, providing each is named beneficiary on death.

In practice, two thirds of CPF members reaching age 55 have accounts exceeding the minimum sum, and most participants withdraw the excess funds to invest in higher yielding investments.

The minimum sum can be used in three ways:

1. To buy a life annuity from an approved insurance company.
2. It can be deposited with an approved bank.
3. It can be kept in a Retirement Account with the CPF from which an income would be received.

Income payments from the above options begin at 60 and only the option of the life annuity guarantees income for life. Payments from approved banks or the CPF board only continue until the minimum sum is used up.

Individuals are expected to make proper use of any surplus funds withdrawn from their CPF account in order to provide for a comfortable retirement. In this way, they remove the financial burdens of retirement and old age from the State.

In summary, there is no State compulsion to purchase an annuity. Individuals may take withdrawals from their CPF savings after setting aside a minimum sum. Purchasing an annuity is one of three options for investing the minimum sum.

A.6 Continental Europe

A.6.1 Background

In general terms, most countries in Continental Europe provide generous State pensions. Except for Holland and Switzerland and to a lesser extent the Scandinavian countries, funded private pension plans did not begin in the Continental countries until the late 1990s.

Individuals do have the discretion to augment their retirement income by purchasing annuities. There is generally a reasonably active market in annuities, despite the fact that private funded pension plans are a recent phenomenon. Annuities in Continental Europe are designed using methods quite unlike those used in the UK as discussed below.

A.6.2 Annuities in Continental Europe

Annuities in many Continental European countries are priced on a 'technical rate' basis, a legacy of the old tariff-based insurance system where prior approval of premiums was required from the supervisory authority. The annuity price is calculated using a discount rate equal to the technical interest rate. The initial annuity payment is revalued in subsequent years by an amount equal to the excess of the insurer's actual declared rate of return obtained on its general fund (less expenses) over the technical rate. The annuities are therefore effectively 'with profits'.

The maximum interest rate is set by legislation, and is effectively the rate of return which is guaranteed in advance by the insurer. In other words, if the actual declared rate of return less expenses is equal to the technical rate, the annuity payment remains the same from one year to the next; and if it is less than the technical rate, the annuity payment is not reduced and the strain is borne by the insurer.

The underlying investments are generally bonds, so the returns are stable if unexciting. The gross returns declared are typically the insurer's general with-profits bonus rates (with-profits policies are generally more prevalent than in the UK), so the rate at which the annuity payments are revalued is the difference between the with-profits bonus rate and the technical interest rate. Within the EU, the Third Life Insurance Directive calls for a maximum guaranteed (i.e. technical) interest rate equal to 60% of the long bond yield, allowing a safety margin so that annuities will be able to be revalued (upwards) each year. The interpretation of this directive into local legislation, and the circumstances in which exemptions are allowed, vary from country to country. Such a safety margin has not existed in recent years in countries, such as Japan, where insurers have been unable to obtain the investment returns to cover their interest rate guarantees.

It is therefore not possible to buy fixed-rate (non-increasing) annuities in these markets; prospective purchasers accept that their annuities will be revalued in some way (and are generally astonished to learn that this often does not happen in the UK). Comparison of annuities at point of purchase is difficult: purchase prices are all very similar (differences mainly being due to expenses), but the products are not all the same unlike in the UK: after, say, five years, an annuity of 1000 euros per year bought from insurance company A will have been revalued to a different amount than an annuity of 1000 euros per year bought from insurance company B.

Also, index-linked annuities are not sold, as index-linked bonds to back the annuities are not issued (except for a small recent issue in France).

Prices of annuities do not generally change every year as they do in the UK. Instead, there are 'step changes' when the technical interest rate changes (e.g. from 4.75% to 3.25% as recently happened in Belgium, or 4.5% to 3.5% as happened several years ago in France).

The other factor affecting the price of annuities is mortality. In these markets, another legacy of the old tariff-based insurance pricing system is that insurance companies in each market use the same mortality table. When this is changed (as in 1998 in Germany, or several years ago in France) there is a 'step change' in the price of the annuity.

Appendix B
Types of Annuities

Level annuity: pays a fixed amount for the duration of the annuity. All other types of annuity pay variable amounts.

Escalating annuity: an example is where the annuity increases annually at a fixed rate of, say, 5%. The starting payment is lower than with a level annuity costing the same amount.

Index-linked annuity: an example of an escalating annuity where the payments are increased in line with increases in the retail price index.

Limited price indexed: *(LPI) annuity*: this compensates for inflation up to a stated limit e.g., 5% per annum compound).

Investment-linked annuities: Examples are with-profit and unit-linked annuities, but only a few insurance companies offer them. They allow a wider range of investments, including equities, and produce an income related to the performance of the underlying assets. This can either be via a with-profit fund or a conventional unit-linked fund.

With-profit annuity: the capital sum is invested in an insurance company with-profit fund and the annuity is based on an assumed or anticipated annual bonus rate e.g. 8%. The initial payment is lower than with an equivalent level annuity, but is higher the higher the assumed bonus, although, as a consequence, the subsequent rate of increase in the annuity is lower. However, the annuity could fall in value if the assumed bonus rate turns out to exceed the actual declared bonus rate. Some providers offer a two-tier bonus system: an annual reversionary bonus, which, once declared, cannot be removed, and an annual terminal bonus, which applies only for the year in question and can be raised or reduced in subsequent years. With-profit annuities are considered less risky than unit linked annuities due to the 'smoothing' effect of a with-profit fund. Funds are subject to charges such as an annual management fee, a policy fee and in some cases a set-up fee. Guaranteed with-profit annuities are similar to conventional with-profit annuities but have a minimum income guarantee, a level below which the annuity will not fall.

Unit-linked annuity: the capital sum invested in unit-linked funds is lower than with an equivalent level annuity. The annuity either fluctuates in line with unit prices, or is assumed to grow at a constant rate, e.g., 10% pa; in the latter case, if investment performance is lower than this, the income from the annuity falls and *vice versa*, in a similar manner to the with-profit annuity. If a unit-linked annuity is selected, the purchase price is exchanged for a number of units in an investment fund at retirement. Some unit-linked funds guarantee a minimum performance in line with a particular index. Such a guarantee would improve the attractiveness of unit-linked annuities.

Appendix C
The assumptions made in the calculations of the contribution rate required to meet the MRI.

C.1 Pension plan membership assumptions

- Contributions to start in 2000 when the plan member is 25 years old.
- Contributions increase in line with earnings.
- Retirement at age 65 in 2040.
- No spouse's pension.
- No other pension accrued to date.
- Basic State Pension for single person payable from the State at retirement age.
- Target benefit of £70 per week, in addition to BSP, in 2000 prices and wages.
- Benefit will increase in line with earnings pre-retirement.
- Benefit will increase in line with RPI post-retirement.

C.2 Projections on the Intermediate Basis

• Increase in retail price index (RPI)	2.5% pa
• Pre-retirement investment returns in excess of RPI	4.5% pa
• Yield for purchasing annuity at retirement in excess of RPI	3.5% pa
• Earnings growth in excess of RPI	1.5% pa
• Promotional increases	Nil
• Career breaks	Nil
• Pre-retirement expenses	1% pa of the fund
• Pre-retirement mortality	No assumption needed as benefit is assumed to be a return of fund.
• Post-retirement mortality	
• Male annuity rates	PMA92 (B=1975)[1]
• Female annuity rates	PFA92 (B=1975)
• Unisex annuity rates	50% of PMA92 (B=1975) + 50% of PFA92 (B=1975)[2]
• Profit loading on annuities	5%

The economic assumptions used are in line with those in the intermediate rates currently required to be used by the PIA for the purpose of the projection of future benefits from pensions contracts.

C.3 Projections on the Weaker Basis

The assumptions are as for the intermediate basis apart from the following changes:

• Increase in retail price index (RPI)	3.5% pa
• Pre-retirement investment returns in excess of RPI	5.5% pa
• Yield for purchasing annuity at retirement in excess of RPI	4.5% pa

C.4 Projections on the Stronger Basis

The assumptions are as for the intermediate basis apart from the following changes:

• Increase in retail price index (RPI)	1.5% pa
• Pre-retirement investment returns in excess of RPI	3.5% pa
• Yield for purchasing annuity at retirement in excess of RPI	2.5% pa

[1] PMA92 and PFA92 are standard tables of mortality which have been compiled by the Continuous Mortality Investigation Bureau of the Institute of Actuaries and the Faculty of Actuaries. The tables refer to males and females respectively. The tables were derived from the mortality experience of life office pensioners in the period 1991 to 1994. The tables have been adjusted to allow for expected future improvements in mortality. The notation (B=1975) denotes that the version of the tables used is applicable to individuals born in 1975.
[2] This weighting anticipates the eventual covergence of male and female participation in the workforce.

Appendix D
Glossary of Terms

The report uses a number of technical terms and expressions and in addition the Retirement Income Working Party has expressed and devised some new concepts that may help being clarified.

Minimum Retirement Income (MRI)

The Minimum Retirement Income is the calculation used by the Retirement Income Working Party to define the minimum amount on which an individual would need to subsist in retirement from their pension.

Residual Fund

The Residual Fund is used to describe any remaining assets in a Defined Contribution plan once the Minimum Retirement Income requirements have been met through annuitisation.

Longevity Risk

Longevity Risk is the risk that an individual may outlive his or her expected lifespan and as a result have depleted their remaining assets.

Mortality Risk and Mortality Drag

Individuals not taking out an annuity will carry their own Longevity Risk rather than pooling their own Longevity Risk with others through a Life Office. Mortality Drag is a term given to describe the extra return on investments required when an individual faces his own Mortality Risk.

Minimum Income Guarantee

The Minimum Income Guarantee was introduced by the Government in April 1999. Through Income Support, which is means tested, the Government guarantees a minimum income for single pensioners of at least £75 and £116.60 for couples. Pensioners aged between 75 and 79 receive £77.30 a week (single) or £119.85 a week (couples), whilst those over 80 receive £82.25 a week (single) or £125.30 a week (couples).

Residual Income Requirement

This is the term given by the Retirement Income Working Party to describe the shortfall to be met by the assets from Defined Contribution Pension Funds to meet the Minimum Income Requirement.

MRI Start Age

This is the date at which an individual would choose to annuitise the amount of his or her pension funds to achieve a Minimum Retirement Income. This may differ from the State Pension Age; It would be up to the individual to select his or her start age depending upon their own needs and circumstances.

Basic State Pension

This is the foundations of the Government's pension provision and is not to be means tested. However the level of pension is dependent on National Insurance contributions.

The current maximum basic state pension is £66.75 per week, (£3,471 a year) for a single person and £106.70 per week (£5,548.40 a year) for a couple, and is set to increase in line with the retail price index, (RPI). Those who have not made enough contributions of the right type will receive a smaller basic pension. The state makes credits to the contributions of those not working.

State Earnings Related Pension Scheme (SERPS)

SERPs is the State Earnings Related Pensions Scheme, which is the earnings-related pension available to employed people earning above the Lower earnings limit. It will be replaced in April 2002 by the State Second Pension which is designed to increase pension provision for those earning between £3,300 and £9,000 a year. It is also aimed at helping those who are not able to provide for themselves, such as carers and the disabled.

Stakeholder Pensions

Stakeholder Pensions are to be introduced in April 2001, the Stakeholder Pension is a new, secure, flexible, value for money state scheme for individuals to save for extra income in retirement, above that provided by the Basic State Pension.

Individual Retirement Account

An Individual Retirement Account is a proposed concept to allow individuals to continue to remain invested after the Minimum Retirement Income requirement has been met. The account would be similar in concept to the IRA rollover account in the United States of America.

Approved Pension Manager

The Approved Pension Manager is a new proposed product provider who would manage the Individual Retirement Account. They would contract with each individual retiree. Retirees would be offered the choice to place their Residual Fund with a single annuity provider at the Start Age or to appoint an alternative Approved Pension Manager, thus offering individuals the freedom to choose.