



The Pensions Institute

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Clerk to the Economic Affairs Committee  
House of Lords  
London SW1A 0PW

Dear Sir/Madam

### **Aspects of the Economics of Ageing: Call for Evidence**

1. To what extent is the UK's population ageing? What effect will this phenomenon have on the supply of labour and capital, wages, interest rates, asset prices (especially housing) and productivity? How do the relevant facts vary by gender and ethnic group?

**In 1990, there was one pensioner in the UK for every four workers. By 2030, there is projected to be nearly two pensioners for every five workers (World Bank: *World Population Projections*). Furthermore, the average birth rate per female in the UK is below two. These two trends indicate that, if there are no other changes, the UK population is ageing and will eventually decline.**

***Ceteris paribus*, the supply of labour will fall relative to capital which, in turn, will raise wages relative to interest rates (the return on capital). This will encourage a substitution away from labour towards capital in the production process. The resulting capital creation (i.e., investment financed by borrowing or equity issuance) will increase capital per worker and hence increase labour**

productivity. The effect on total output and national income depends on whether the growth rate in productivity exceeds the rate of decline in population. Asset prices could fall as the elderly, in order to finance their increasingly longer retirement, start to sell their assets (including houses) to the smaller younger generation. Gender- or ethnic-specific factors would not alter this 'big picture'.

What would alter the big picture, however, would be population migration. We live in an increasingly global economy with increasing capital and labour mobility. The UK and also the rest of Europe are clearly very attractive places for people located outside Europe to work in, so immigration would be one way of changing the worker-pensioner balance as well helping to attenuate the growth rate in wages that would otherwise be induced by labour shortages. Population migration (whether planned or unplanned) is likely to have a dominating influence on the future demographics of this country (immigrant populations also tend to have very high birth rates) and this could lead to a relative decline in the indigenous population, particularly in some urban areas.

2. How might policy reverse the recent trend towards early retirement? Should legislation to outlaw age discrimination be introduced? Would it work? Should there be a statutory retirement age? Can the labour market absorb more older workers? To what extent do people choose when to retire?

The trend towards early retirement does not appear to be voluntary in the main. Around one-third of men aged 55-60 are unemployed or on disability benefit: the figure is 50% for men aged 60-65. This means that 50% of men do not reach official state pension age at 65 from a position of work, but from a position of unemployment or disability. Half the male population therefore do not choose their effective retirement date, it is imposed upon them. The situation is different with women whose participation in the labour market has been increasing over the last quarter century and many may be forced to retire at 60 when they would want to work on longer.

Age discrimination legislation is clearly sensible, since the easiest way to solve the pension 'crisis' is to get people to work longer and to build up a larger retirement fund that can be drawn down over a shorter retirement period. By the same token, there should not be a statutory retirement age, whereby people are 100% employed one day and 100% retired the next. Phased retirement, allowing a gradual transition from work into retirement, would seem to be far more sensible for many people.

However, age discrimination legislation and phased retirement will not work if, on the one hand, older workers are not willing to be flexible and retrain if necessary to make themselves more attractive to employers, or, on the other hand, employers are not willing to

value the experience of older workers. Employer attitudes are changing, however. In the US, for example, some shops have begun a deliberate policy of employing older workers as sales staff and customers are seeing the benefit that experience and know-how can bring. So there is no problem, in principle, with employing older workers, so long as flexibility is shown on both sides.

3. Why do people not save enough for retirement? How might they be encouraged to do so? What new products could the financial services industry offer to support retirement income and to influence retirement decisions?

**People do not save enough for retirement because:**

- the rapid ageing of the population is a fairly recent phenomenon (only really beginning in the 1980s and only attracting public attention in the 1990s), so the need to make adequate provision for retirement has only recently become apparent,
- of what economists call high rates of time preference, i.e., many, if not most, people prefer current consumption to future consumption and would rather spend their income today rather than save for the future,
- of moral hazard, i.e., people realise that the state will bail them out if their retirement savings are inadequate,
- of the disincentive effects of the Minimum Income Guarantee which is worth £92,000 (*Sunday Telegraph*, 17 November 2002): why bother to save if by doing nothing you can get the MIG worth £92,000?,
- the ending of compulsory membership of occupational pension schemes has meant that only around half of new members join their employer's scheme where one is available,
- the closure of defined benefit schemes and their replacement with defined contribution schemes has resulted in lower overall contributions going into pension schemes,
- increasing labour mobility and rapid job turnover (28% of employees in the UK have been in the same job for less than two years) has had two effects: it has made many workers ineligible to join an employer's scheme where a period of minimum service is required, and it increases portability losses when people transfer their pension rights between schemes (which has the effect of reducing the pension for a given stream of contributions),
- the widening of the distribution of incomes in the UK since the beginning of the 1980s has meant that very poor people simply cannot afford to save for retirement.

Governments have probably done all they can to encourage people to make adequate provision for retirement on a voluntary basis. The December 2002 Green Paper (*Simplicity, Security and Choice: Working and Saving for Retirement*) has been called 'the last chance for voluntarism'. If this fails to encourage greater retirement saving

(which I fear will be the case) then the only alternative will be greater compulsion (see also my reply to Q.7 below).

Increasingly, people are having to rely on defined contribution pension schemes provided by the company or provided by themselves through financial institutions such as insurance companies. What we need to ensure is that these DC schemes are well designed as a single integrated product in order to help mitigate the range of risks (contribution risk, investment risk, mortality risk etc) that members of such schemes face.

We have been working on design issues in DC pension schemes at the Pensions Institute (see David Blake, Andrew Cairns and Kevin Dowd (2001) Pensionmetrics: Stochastic Pension Plan Design and Value-at-Risk during the Accumulation Phase (<http://www.pensions-institute.org/wp/wp0102.pdf>) and David Blake, Andrew Cairns and Kevin Dowd (2002) Pensionmetrics 2: Stochastic Pension Plan Design During the Decumulation Phase (<http://www.pensions-institute.org/wp/wp0103.pdf>)).

Briefly well-designed pension schemes are designed from back to front by addressing the following questions:

- How long do I expect to live in retirement, bearing in mind my planned retirement age and improvements in life expectancy in retirement?
- What standard of living do I desire in retirement?
- What level of pension fund do I need to have accumulated over my working life in order to meet this standard of living in retirement, taking into account the expected returns and risks from investing in different classes of assets and my attitude to financial risk?
- Given this fund size and the asset classes in which I intend to invest, what level of contributions do I need to make to my pension scheme during my working life to meet my target pension fund with a specified degree of success, taking into account the anticipated length of my working life and the chances of being temporarily out of the workforce due to, say, spells of unemployment or child care? (See annexe for an illustration.)

Currently most DC schemes in the UK are not designed along these lines: in particular, the accumulation and decumulation phases are treated quite separately.

4. Why are most pensioners who live in poverty women? How might public policy provide for people (mostly women) who cannot make regular and continuous contributions to a pension scheme throughout their working life? What responsibilities do private-sector financial product providers have?

**Female pensioners are more likely to live in poverty than male pensioners because they have shorter working lives on average than men, retire earlier than men, live longer than men, and have a greater likelihood of needing long term care (which is hideously expensive). It is also because they begin retirement with lower accumulated pension entitlements than men (because of breaks in career for child rearing, lower earnings when in work, and a lower incidence of pension scheme membership) and because their husband/partner has not made adequate provision for them in case he died first; for example, many married men with personal pension plans choose single life annuities when they retire (which end when they die), rather than joint-survivor life annuities (which have lower initial payments, but would continue to pay out to the widow if the husband died first).**

**However, all this is beginning to change as a result of a reducing earnings gap between men and women, an increasing working life (women are taking less time off for child rearing and are working longer), and increasing female membership of pension schemes.**

**The state already grants women home responsibility credits in respect of the state pension and provides a Minimum Income Guarantee and Pension Credit. Its hard to see what more the state can do in terms of making these more generous without creating a moral hazard problem, e.g., reducing further the incentive of husbands to make adequate provision for their wife if they die first. One possibility might be to make it compulsory for everyone to take out a long-term care insurance policy when they are very young and when the premiums would be very small. Let us not forget that one-in-five of us will need long term care costing £20,000 per year for an average of two years.**

**The only real responsibilities that private-sector financial product providers have is to provide well-designed and competitively priced defined contribution pension plans and long-term care insurance products. They should also join with government to improve the woefully inadequate standard of education in personal life-cycle financial planning in this country, beginning with schools, with specific classes for girls to highlight the different nature of women's financial life cycle in comparison with that of men's.**

5. What is the role of the basic state pension and does it fulfil that role? How is pension policy influenced by ideology, short-term political considerations, the need to produce consensus and the need to protect existing benefits?

**In our Beveridgean system of social welfare, the role of the basic state pension (which is the UK version of the so-called first pillar of support in old age) is to provide a minimal safety net for people in retirement. It is currently equal to 17% of national average earnings, but because it is indexed to prices rather than earnings it will fall to below 10% of average earnings by 2030. So as a foundation stone of our pension system, it is a slowly sinking ship (to mix metaphors).**

**The amazing degree of political interference in the UK pension system over the last 30 years, however well-intended each particular act of intervention has been, has resulted in an over-regulated, over-complex, constantly changing leviathan which not even pension professionals fully understand. The average consumer finds it impossible to make sensible pension arrangements and stick to them, given the complexities of the system and the frequent changes to the rules and incentives. The simplification proposals contained in Sandler, Pickering and the December 2000 Green Paper are most welcome, but are probably too late to save private sector final salary schemes in the UK. A pension scheme is the longest duration financial arrangement any of us has to make (40 years of building up pension entitlements and up to 30 years of drawing down those entitlements). There has to be a massive degree of commitment and perseverance by individuals to make this work. This will only happen if the rules, regulations and incentives are kept simple and do not keep changing.**

6. How should the following objectives of pension provision be prioritised in formulating pensions policy: adequacy, fairness, protecting incentives, affordability, certainty, simplicity, transparency, practicality and choice? What are the trade-offs?

**The overriding objective of any pension scheme should be adequacy: does it work and does it deliver the pension promise to an acceptable standard? The second objective should be efficiency: does it deliver the pension promise at the lowest possible cost to the consumer? Pension schemes do not have to be as complicated as they currently are. They can be designed as simple integrated commoditised products that are easy to understand (i.e., are fully transparent). But if that is the case, most of the design work has to be done by the pension scheme provider and the consumer will be left with very few choices, principally the contribution rate into the schemes.**

**For comparison consider a car. Virtually all the design work is done by the manufacturer. The consumer is left with only a small number**

of choices, such as the colour or type of seat fabric. While these choices are important for the consumer, they are not important for the efficiency of the car. Where the consumer does make an important choice that does affect the efficiency of the car, such as the number of seats, the consumer does not then also choose the engine size; this choice is made by the manufacturer who is better at designing a car than the consumer.

In contrast, with DC pension plans, the consumer is offered too many choices which he/she is not skilled enough to exercise: too many choices of contribution rate that are unrelated to the pension desired in retirement, too many choices of fund with the risks inadequately explained, too many choices of retirement date with the risks of retiring too early not explained, and too many choices of annuity once retired, again with the consequences not fully explained. All these choices actually make it less rather than more likely that the consumer will bother to start a pension scheme and stick to it.

It is not possible over a 70-year investment horizon to have complete certainty. However, it is possible to quantify the uncertainty involved in a pension scheme. This is the objective of the PensionMetrics approach discussed above and illustrated in the annexe.

Fairness is a social objective and any redistribution needed to achieve fairness is best made via the state pension system.

7. Is it appropriate to have as an explicit policy objective the reduction of public spending on pensions as a proportion of GDP? What is the role and relevance of (i) the institutional framework; (ii) fiscal policy; (iii) regulatory requirements?

The relative size of the state in pension provision vis-à-vis the private sector depends on two main factors.

The first is the relative sizes of consecutive generations. Given that the state finances pensions on a pay-as-you-go basis, state funding becomes more onerous if the young generation in work is small compared with the old generation in retirement: this is certainly the case in the UK as a result of population ageing and declining birth rates. This would lead to demands from the young generation to reduce the relative size of state provision (equivalent to lowering the burden on future generations) and increasing the size of funded private provision (equivalent to making each generation pay for its own pensions). However, the ability of the funded private sector to deliver adequate pensions depends on the commitment of funded pension scheme members and sponsors to make adequate contributions into their scheme. To the extent that there is a shortfall in this commitment that results in pensions falling below the poverty line, the state will find itself under pressure to make

good this shortfall, thereby countering, in part, the reduction in the relative size of state pension provision.

The second is the degree of redistribution from rich to poor that society desires. Since only the state can undertake effective redistribution exercises, an increasing desire for redistribution increases the relative size of state pension provision.

A policy objective of reducing public spending on pensions suggests that the desire to lower the burden on future generations dominates the desire for redistribution within a particular.

The following factors can be used to support this policy objective:

- The institutional framework –

The key roles of the institutional framework should be to promote good design in private-sector pension schemes and to promote public awareness of the importance of making adequate pension arrangements.

The analysis conducted at the Pensions Institute on the PensionMetrics model suggests that low-cost defined contribution pension schemes are an effective vehicle for encouraging individual long-term savings for retirement if only individuals can be persuaded to start them and persist in making adequate contributions throughout their working lives. Private-sector financial institutions therefore have an important role in improving the design of their products.

Unfortunately, these are big barriers to mount, since, as they say in the pensions industry, ‘pension products are sold not bought’. A substantial fraction (at least one-third for a typical scheme and more for a scheme with low contributions) of the total costs involved with a personal pension scheme are initial marketing and set-up costs. Marketing costs can be substantially fixed and independent of the premiums collected on new policies.

This makes it unattractive for private sector pension providers (such as insurance companies) to market their products to low-income workers (such as women) who are likely to make low contributions and, just as important, have low persistency rates. This is a real problem since private sector financial institutions, unlike the state and companies, would seem to be the key vehicles of the future for delivering pensions.

The best way to counter this attitude is a public awareness campaign (beginning in schools) covering life-cycle financial planning issues, making clear that pension provision is the longest duration financial planning issue of them all, and that as

a result of the benefits of compound interest, the burden during the working life of transferring resources to the retired part of life (which is the essential purpose of a pension scheme) is smaller the earlier one starts.

I believe the public awareness campaign should be led by the government, since private sector providers (either companies which are rapidly moving away from final salary schemes or insurance companies which are still tarnished by the pensions misselling scandal and the fiasco over Equitable Life etc) do not presently have the necessary credibility. However, both companies and insurance companies have a crucial support role.

The government should come clean about the matter by stating very clearly that in future we cannot rely on the state to provide anything more than a minimum safety net (the ageing of the population and the declining birth rate have created a demographic imbalance which prevents anything better and these trends have not yet been countered by any inward migration). It should point out that changing labour market conditions make it unlikely that companies will be willing in future to provide pensions linked to earnings. So it is left to individuals to make their own arrangements with private sector financial institutions. But for this to work the product (namely the DC pension) must be well-designed and quite frankly it is not at the moment.

- **Fiscal policy –**

The key fiscal policy intended to influence the public/private mix is tax incentives. The role of tax incentives depends on the degree of compulsion involved in saving for retirement. The lower the degree of compulsion, the greater the (tax) incentives needed to encourage people to switch from current consumption and short-term savings to long-term savings. But two factors need to be recognised.

First, the government's stated aim is that pension schemes are tax-neutral over a scheme member's life cycle: what is given in tax breaks during the accumulation phase is clawed back by taxing pensions in payment; if less tax is clawed back in present value terms during the decumulation phase than tax relief is granted in present value terms during the accumulation phase, this implies that there are implicit transfers from the general tax payer to the surviving beneficiaries of the scheme member (since pension assets can be bequeathed without attracting inheritance tax). The greater the tax breaks granted during the accumulation phase, the greater the restrictions that need to be imposed during the decumulation phase to frustrate these

**implicit transfers, but at the cost of alienating scheme members as we know from recent press coverage.**

**Second, there is evidence that tax incentives that favour one particular type of savings vehicle merely lead to substitutions away from other less favoured savings vehicles with little or no net increase in aggregate savings: so governments can spend a lot of tax payer's money changing the form but not the level of aggregate savings (David Blake (2000) The Impact of Wealth on Consumption and Retirement Behaviour in the UK (<http://www.pensions-institute.org/wp/wp199804.pdf>).**

**The case for compulsion is gathering strength all the time. People are retiring earlier and they are living longer. As Alistair Darling said recently, many people are in retirement for almost as long as they are in work, so every day's pay must also provide a day's pension. Now this does not mean that we need to save half our income whilst in work, because of the benefits of compounded returns. But it does mean that we need to save around £1 in every £6 that we earn (however this is shared between the employee and the employer) for 40 years if we want to have a pension of two-thirds of our final salary in retirement (assuming real earnings growth is 2% pa, the real return on assets is 3% pa, and post retirement mortality is based on PMA92).**

**The average contribution rate into a DC pension plan in the UK is around 10% (evenly split between employee and employer). This will generate a pension of 40% of final salary in retirement if contributions are kept up for 40 years. If people only worked every other year and only contributed 10% of earnings while they were in work, the pension would fall to 20% of final salary.**

**Most pensioners claim that they have inadequate resources to live on in retirement. It is too late to do anything about it at this stage. Obliging everyone in work (both employed and self employed) to contribute 10% (evenly split between employee and employer) to a well-designed DC scheme (if they are unable to join an equivalent occupational scheme) would provide a reasonable pension in retirement (especially when the basic state pension which equals 17% of average earnings is added in).**

**There is a definite case for considering compulsion (while continuing to use the tax incentives as a sweetener) and we should not be deterred by the inevitable claim that this is just another stealth tax.**

- **Regulatory requirements –**

**The role of regulations is to protect the consumer, but without overburdening the producer.**

**It appears to be the case, or at least this is what is being claimed, that the current demise of final-salary schemes in the private sector is partly the result of over-regulation (e.g., the funding obligations required by the Minimum Funding Requirement, and the reporting obligations and the effect on corporate distributable reserves of FRS17).**

**But there is also a danger of too little regulation. I can see another potentially massive mis-selling scandal over the horizon: no-one is doing the necessary ‘due diligence’ exercise to confirm that the move to DC pension schemes will provide adequate pensions in retirement. As has already been mentioned, DC pensions are barely adequately designed at present, since they have not been purposefully designed as a single integrated product across the life cycle. The PensionMetrics model is one example of a model that can be used for quality assurance purposes and so satisfy the ‘due diligence’ requirement.**

**But, if DC pension schemes fail to deliver adequate pensions, the state will come under considerable pressure to compensate pensioners.**

8. What effect do means-tested benefits for pensioners have on work and saving incentives? Are there any people for whom zero or low saving is the appropriate economic response to their circumstances?

**Research at the Pensions Institute (see Blake (*op cit*)) found the following relationships:**

- **higher state pension entitlements reduce the need to save privately for retirement, but have no discernible effect on the timing of the retirement decision,**
- **higher occupational (defined benefit) pension entitlements have the effect of increasing private savings, but also of encouraging earlier retirement,**
- **higher personal (defined contribution) pension entitlements have the effect of increasing private savings, but also of delaying retirement.**

**These findings might be the result of a selection effect. For example, the kind of people who choose to take out personal pensions may also be the same kind of people who are both thrifty and enjoy their work and would wish to keep working for as long as possible.**

**On the other hand, the kind of people who rely heavily on state pension entitlements and means-tested benefits may be the kind of people (namely those with high rates of time preference) who are prepared to live for today rather than for tomorrow, and if state pensions increase or means-testing is made easier, such people would rather spend some of their accumulated savings now, since they calculate that they will need less in the future. By the same token, they are likely to put in less work effort today if, when they retire, a means-test is easy to pass. For such people a Minimum Income Guarantee in retirement worth £92,000 provides a powerful disincentive to save privately for retirement. But this is also true for a whole range of otherwise responsible low- to middle-income individuals for whom saving up £92,000 of pension assets during the working life would represent an enormous sacrifice. Why should anyone bother to save for retirement when by doing nothing they can get the MIG worth £92,000?**

9. Is the continuing trend away from public and towards private provision economically sustainable? How are we to determine the best public/private balance?

**It is not certain that there is a clear trend away from public and towards private provision. The MIG and Pension Credit (linked to earnings) will be very expensive for the state to provide, while the switch from DB to DC in the private sector has resulted in a substantial fall in employer contributions going into private pension schemes and could well lead to lower private-sector pensions in the future.**

**As outlined in my reply to Q.7 any desired public/private balance will reflect the desire to lower the burden on future generations in relation to the desire for redistribution within the current generation.**

Yours faithfully

Professor David Blake  
Director

**Annexe: Required contributions into a pension scheme (estimated using the PensionMetrics Model)**

Contributions (as % of salary) required for a male worker to achieve a pension of 2/3rds of final salary at age 65 at different starting ages (assuming real earnings growth is 2% pa, the real return on assets is 3% pa, and post retirement mortality is based on PMA92):

<b>Starting age</b>	<b>25</b>	<b>35</b>	<b>45</b>	<b>55</b>
<b>Contribution rate (%)</b>	17	24	37	72

A simple rule of thumb for those starting a pension scheme under 45 is to take the starting age and subtract 10 to find the required contribution rate.

The equivalent table for women using PFA92 is:

<b>Starting age</b>	<b>25</b>	<b>35</b>	<b>45</b>	<b>55</b>
<b>Contribution rate (%)</b>	19	27	42	84

The risk involved in pension schemes can be quantified by calculating value-at-risk confidence levels at different contribution rates (assuming the same volatility as experienced in UK and global securities markets over the last half century). The following table shows VaR confidence levels as a % of final salary at different contribution rates for a male worker starting a pension scheme at age 25 and retiring at age 65:

	<b>Contribution rate (%)</b>		
<b>VaR confidence level (%)</b>	<b>9</b>	<b>17</b>	<b>21</b>
<b>50</b>	37	67	84
<b>80</b>	22	40	50
<b>95</b>	15	27	34
<b>99</b>	10	19	24

With a contribution rate of 17%, the scheme member can be 50% confident that he will get a pension of at least 67% of final salary, 80% confident of getting at least 40% and 95% confident of getting at least 27%. If he wanted to be 80% confident of getting at least 50%, his contribution rate would have to be 21%.

Since average earnings are £24,000, a contribution rate of 17% amounts to £4,080 pa. With 25m workers, total labour income is £600bn and the total required contribution into pension schemes is £102bn. In 2001, total contributions into pension schemes amounted to £55bn (Blue Book 2002), indicating a shortfall of £47bn. Average contributions per worker in 2001 were therefore £2,200 pa, or 9% of average earnings, sufficient to purchase a pension of 37% of final salary after 40 years for a male worker. Note: these calculations ignore the contribution to the final pension provided by the basic state pension.