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Voluntary saving for old age: are the objectives of self-responsibility and security compatible?

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Summary

Fiscal pressure and demographic change lead governments to seek ways of reducing state expenditure on pensions. Individuals are asked to take more responsibility, and funded, supplementary pension schemes have been established in many countries. This article looks at schemes that are voluntary – the system of Personal Accounts in the UK and the Riester Pension scheme in Germany. It examines the debate about whether it is worthwhile for some people to participate in schemes that are not mandatory – particularly those with low incomes and/or potentially broken careers. The small pensions they accumulate merely offset entitlements to means-tested benefits, leaving them no better off in old age. Such concerns are not new, but few policymakers have been willing to look back at when and how they were expressed. Nor have they been prepared to explain the costs involved in guaranteeing savings-based pensions or the implications that the lack of a guarantee might have for individual behaviour. Efforts to promote adequate and sustainable pensions by encouraging individual saving might well be frustrated by the difficulty of reconciling the state's objective of self-responsibility with the individual's objective of security.

Key words: fairness, Germany, means-testing, option pricing, pension guarantees, private pensions, UK

1. Introduction

Concern about the fiscal costs of societal ageing has resulted in initiatives to reform public pensions in Europe and across most of the industrialised and industrialising world. In a considerable number of countries, steps are being taken to raise the age of entitlement to a pension or to increase the number of contribution years required, in others the level of pensions has been cut, or at least its rate of growth curtailed. However, in addition, policymakers in many countries have taken steps to encourage, or even mandate, private saving for old age. Private pensions are 'off the books' and so benefits paid out do not appear as part of public expenditure. Moreover, the benefits they pay out reflect, at least supposedly, the contributions made, and thus they encourage longer working. They are also friendlier to mobile employees. Unlike

company pensions, they are fully portable, so that job change does not lead to the employee losing rights or building up a series of small, dormant pensions with a string of employers. On top of that, of course, benefits from a private pension might compensate for reductions in, or at least curtailments in the rate of growth of, public pensions. Last, privatising pensions is regarded as consistent with the promotion of greater ‘self responsibility’ – a dominant feature of recent initiatives in the areas of employment policy, education and training policy and health and social care policy (e.g. SPC, 2008).

The disincentives that are the subject of this paper are those that arise when there exists a guaranteed minimum income for pensioners and when this guaranteed minimum income is subject to a means-test. Those with low incomes during their working life might qualify for such a minimum pension, and any retirement savings they have made will merely reduce their entitlement to the minimum pension. That such a disincentive might exist had been pointed out by Beveridge in his 1942 report on Social Insurance (Beveridge, 1942). It had led to his insistence that a state pension should be sufficient to ensure subsistence without the beneficiary having recourse to the indignity of application for means-tested social assistance (then called National Assistance).¹ On top of this, he felt people should be free to make additional provision for themselves, and voluntary provision was certainly something he defended and advocated (see also Beveridge, 1948). A benefit above the subsistence level was a disincentive to voluntary saving. Indeed, he saw it as ‘an unnecessary interference with individual responsibilities’ (Beveridge, 1942: para. 294). On the other hand, ‘the State should make sure that its measures leave room and encouragement for such voluntary insurance’ (para. 302).²

¹ For Beveridge (1942) this was one of the ‘fundamental principles’ of social insurance. For example, para. 294: ‘[A] permanent Scale of benefit below subsistence, assuming supplementation on a means test as a normal feature, cannot be defended’. Para. 307 states: ‘Adequacy of Benefit: the fourth fundamental principle is adequacy of benefit in amount and in time. The flat rate of benefit proposed is intended in itself to be sufficient without further resources to provide the minimum income needed for subsistence in all normal cases’.

² Beveridge was not the first to make this argument. As far back as the 1890s, and following the introduction of a pension in Germany, trade unions in the UK had been demanding similar action at home. However, they had insisted the pension be universal – any element of means-testing both had connotations of the Poor Law and would question the small retirement savings schemes they already operated (Blackburn, 2002: 47-49).

In Germany, objections to high levels of pensioner poverty and dependence on means-tested benefits had been one of the factors driving the 1957 reform that introduced a pension that linked benefits to (revalued) past earnings – the so-called ‘dynamic pension’. It was seen as a way of allowing older people to benefit from the post-war recovery and growth of the West German economy from which, until then, they had been excluded (Hockerts, 1980). Chancellor Adenauer declared his intention to ensure that when working people reached old age, ‘they should be able to enjoy a reasonable standard of living and not have to go around like beggars’ (quoted in Hockerts, 1980: 413-4). Indeed, the reform was summed up as seeking ‘for once and for all time to break the traditional link between old age and poverty’ (Hockerts, 1980: 423; see also Wehler, 2008).

After sketching out the relevant pension schemes in the two countries (section 2), this article looks more closely at the way in which they interact with means-testing arrangements in each country (section 3). Next, it presents some of the arguments about the appropriateness of offsetting supplementary pension income against subsistence benefits that were raised in the two countries (section 4). In both the UK and Germany, to allow an offset has been rejected as too costly. Thus, the penultimate section (section 5) addresses in more detail the implications of guaranteeing savings-based pensions. Section 6 summarises and concludes.

2. Private pensions in Britain and Germany

There is a much longer history of publicly-promoted private pension provision in Britain than there is in Germany. Since 1988, UK employees have been able to opt out of the second, earnings-related, tier of the British state pension system (then called SERPS, now called S2P) and have their, and their employers’ contributions, diverted into a personal account that builds up a savings pot to be annuitized at retirement – a so-called Personal Pension (e.g. Pensions Commission, 2004). Employees, and their employers, could make additional contributions to a Personal Pension plan, although they were not obliged to.

The initial history of Personal Pensions was not a happy one. The way in which they were ‘mis-sold’ to people for whom they were not suitable has been well documented. The impact of high and often opaque charges, which substantially reduced the size of

the pension pot, was also the subject of criticism. It was in response to the latter that the government responded with legislation to establish Stakeholder Pensions. Charges for these were regulated and capped. Moreover, all employers with at least five employees were required to ‘designate’ a Stakeholder Pension and facilitate access to it for those employees who wished to join. However, employers were not required to make any contribution of their own (Pensions Commission, 2004). Take-up of Stakeholder Pensions since 2000 was not large, and many of the designated schemes remained ‘shells’, devoid of any participants (ABI, 2003). Moreover, insurance companies found the Stakeholder too constraining and not many marketed them.

Further reform came in 2008 when, following recommendations of the Pensions (or Turner) Commission, the government introduced a quasi-mandatory supplementary pension scheme – called Personal Accounts – aimed at those on low to median earnings who were not members of an employer-sponsored scheme. Employees would have to opt out of membership rather than opt in. If they did opt in and paid a minimum contribution of four per cent of earnings, the employer would be obliged to contribute a further three per cent and tax relief would give the equivalent of a further one per cent. Charges were to be capped at a much lower level than applied even to Stakeholder products. The Personal Accounts scheme was scheduled to be operative from 2012 (DWP, 2006).³

Rather than being introduced in a gradual and incremental fashion as in the UK, in Germany private pensions were the product of a single reform initiative that occurred at the start of the millennium. The intention was to constrain the growth of the contribution rate to the public pension and to make necessary, downward, adjustments to benefits. To enable people to maintain income in old age, a new tier was added to the overall system – the so-called Riester Pension (*Riester-Rente*, named after the then German minister of labour Walter Riester). The Riester Pension constituted the first private pension system based on individual accounts to be open to German employees (Schmähl, 2007). Membership was voluntary, although much of the discussion about the future development of pensions emanating from the government included the presumption that employees would have contributed to such a plan as well as to the

³ Employers also had the option to place employees into an existing occupational pension scheme as long as this offered at least equivalent benefits to those foreseen in the relevant legislation.

statutory social insurance system. Employee contributions, up to a maximum of four per cent of salary, were offset against tax, and tax subsidies were intended to encourage particularly lower paid workers to join. The level of the subsidy depended upon income and the number of dependent children. There was no provision for an employer contribution. Approved Riester Pensions are subject to considerable regulation, even if this did not result in a high degree of transparency (e.g., Oehler, 2009). However, the level of charges that can be levied is not capped.⁴

The number of Riester Pension policies opened rose relatively slowly. Initial hopes were for a take-up rate of between two-thirds and three-quarters of those eligible. Even by the end of 2007, five years after the scheme had been introduced, the share was little more than one third. There have been repeated calls to make the Riester Pension obligatory, from politicians, scientific advisers, employers and unions (Herden, 2006; Kennedy, 2007).

3. Means-testing and pensions in Britain and Germany

The value of a private pension to the individual contributing to it is illustrated in Table 1. Although the Table describes the British Personal Accounts scheme and the German Riester Pension, it is relatively generic and its principles can be applied to other schemes.

< Table 1: factors determining value of pension savings, UK and FRG >

The Table captures the various items that help build up the amount saved. These are items 1-4. It then lists those that diminish the pot of savings or the value of the annuity paid out at retirement. Of interest here is the final item – ‘offset against means-tested benefits’. Means-tested benefits can take a variety of forms and usually include, on top of direct cash assistance, benefits that cover housing costs.

3.1. The interaction of pensions and benefits

⁴ At the same time as the Riester Pension was introduced the government also legislated for a ‘salary sacrifice’ scheme – the so-called Eichel Pension that took its name from the then finance minister. This enabled tax free contributions to be made into occupational pension schemes, if these existed. The Eichel Pension is more favourable to higher earners, especially those without dependents.

A minimum income guarantee exists in both countries. That in the UK is rather more complicated than that in Germany. Despite Beveridge's strictures, the UK Basic Pension has always been at a level such that those who rely solely upon it have had to claim some top-up benefit – initially to cover housing costs (Marshall, 1975). The guaranteed minimum income for older people (not pensioners, *per se*, but those over the age of 60) was, for some time, set above the level for other groups. In 1999, this provision was formally named the Minimum Income Guarantee. Under it, as under other UK social assistance schemes, all income was offset against cash benefits, resulting in marginal tax rates of 100 per cent. In 2003, the Minimum Income Guarantee scheme was changed to the Pension Credit scheme with two components – a Guarantee Credit and a Savings Credit. The intention of the latter was to provide some reward for small savers and those with small pensions. An income that is some 30 per cent higher than the Basic State Pension is guaranteed. Moreover, additional income above that can be retained until a level of total income of about 190 per cent of the Basic Pension is reached. The marginal tax rate on income between 130 per cent and 190 per cent of the Basic State Pension level is taxed at a rate of 40 per cent. Those with an income above 190 per cent of the Basic State pension level receive no assistance. Figure 1 below illustrates this.

< Figure 1: how Pension Credit works >

However, matters are more complicated. Housing costs are taken into account when calculating minimum income. Home-owners and those paying a mortgage can enter these costs when calculating their entitlement to Pension Credit. Low-income people living in rented accommodation have to make an application for Housing Benefit and for a reduction in the tax paid to the local authority (Council Tax). Housing Benefit and Council Tax Benefit are both means-tested. When entitlement to these benefits is being assessed, income from Pension Credit is taken into account. The marginal tax rate applicable to Housing Benefit/Council Tax Benefit combined can be as high as 85 per cent. Combining this 85 per cent marginal tax rate with the 40 per cent

marginal tax rate for Pension Credit gives a total marginal tax rate of 91 per cent (Select Committee, 2003).⁵

In Germany, older people on a low income were, until 2003, treated as all other non-workers on a low income – they could apply for means-tested social assistance (*Sozialhilfe*). They could also apply for means-tested benefits to cover housing costs (*Wohngeld*). However, the social assistance authorities are able to reclaim social assistance payments from certain family members – in this case, adult children. This discouraged many older people from making claims – they were ashamed both to have to apply for help at all and to have to make calls upon their children. In order to reduce the incidence of poverty in old age and to reduce poverty that was the consequence of ‘shame’, in 2003 a Basic Security Income (*Grundsicherung*) was introduced (Steffen, 2008). The new benefit, which is available to people who are over the age of 65 or are permanently disabled, is granted without a requirement for liable relatives to make any reimbursement. Moreover, instead of having to make a separate claim for assistance with housing costs, these are taken into account in assessing the benefit payable.⁶

In calculating the amount of assistance payable under the Basic Security Income, all sources of income are taken into account. This includes any public pension and any occupational or private pension income. Thus, the minimum income system in Germany, although it is simpler than that in the UK, involves marginal tax rates of 100 per cent. Currently about two and a half per cent of the population aged 65 or over are in receipt of the Basic Security Income and about two thirds of these are also in receipt of a state old-age pension or an occupational pension.

3.2. Recognition of the problem

⁵ There is yet another group that also faces a 100 per cent marginal tax rate – people who have not made a sufficient number of contributions to earn a full Basic Pension. The Guarantee Credit assumes that a person has a full pension. If the Basic Pension is below this level, any additional income, including any occupational or private pension income, is counted towards making up the difference and so is taxed at 100 per cent. This marginal tax rate has tended to have its greatest impact upon women. As of 2010 the number of contributing years to the Basic Pension has been cut from 39 for women and 44 for men to 30 for all people.

⁶ In fact, an income test does remain. If liable relatives have an income in excess of €100,000, they can be called upon to contribute to their parents’ upkeep.

Although the UK public pension system became not what Beveridge had wished for but rather ‘a national means-tested safety net’, it was generally deemed to ‘have a good record’ in meeting the objectives set for it (Glennester and Evans, 1994: 70). Beveridge’s disappointment was either forgotten or, if recalled, dismissed as unrealistic on account of the costs it implied.⁷ The impact of means-testing on pensions received almost no attention until it was raised in the late 1980s in a paper analysing the ‘occupational pension trap’. This suggested that as many as a half of all pensioners – many of them women on small survivors’ pensions – were subject to means-testing (Walker et al., 1989).

It was not until the introduction of the Savings Credit scheme in 2003 that an attempt was made to restore incentives for small savings. The 100 per cent marginal tax rate was replaced by one of merely 40 per cent. To have made it lower, which would have meant lengthening the dark blue area in Figure 1, was considered too expensive. On the other hand, it was recognised that as many as 15 per cent of all pensioners might still be facing a 91 per cent marginal tax rate (Hills, 2008).

The discussion around the introduction of Personal Accounts brought the subject of means-testing once again to the fore. The scheme was intended for people on relatively low incomes and so the savings pot they would build up would be relatively small. Much emphasis was placed on keeping charges, which at the rates applying to Personal Pensions were seen as consuming over a fifth of money saved, as low as possible (Pensions Commission, 2005). However, most projections of the benefits of the scheme were based on the assumption that the low-earning participants were, at least, enjoying more-or-less uninterrupted careers. The Personal Accounts proposal was greeted with almost universal support, from employer organisations as well as trade unions, and from opposition parties as well as the government. It was the principal UK opposition party that raised the most concerns about whether it was ‘worth saving’. This enabled it to continue to support Personal Accounts in principle but to raise objections in particular (Timmins and Barker, 2007).

⁷ Beveridge’s disappointment, expressed in a speech to the House of Lords in 1953, is referred to in Marshall, 1975: 90.

A number of estimates, largely by policy-oriented researchers, were made of the share of people who might open a Personal Account and yet find themselves losing all or part of their benefits. One study assumes that by 2050, when the new scheme would be fully mature, 50 per cent of pensioners might still be subject to means-testing – only ten percentage points fewer than the number today. The same study (see Table 2 below) suggests that the number facing marginal tax rates of at least 80 per cent was likely to be unchanged by that date (PPI, 2008).⁸

< Table 2: MTRs 2005 and 2050, UK >

In Germany, the 2001 pension reform attracted considerable attention. It was characterised as involving paradigmatic change. One element of this change – the introduction of a new, funded tier – has already been described. The second and equally important element was the switching of the public pension scheme from what was in many ways a defined benefit system to a defined contribution system. Henceforth, rather than contribution rates being driven by benefit levels and the size of the pensioner population, benefit levels would be driven by contribution rates and these would not be allowed to rise beyond a given level (Schmähl, 2007).

It was quickly recognised that the new benefit calculation formula reduced the level of the pension that people were likely to collect. It was also recognised that, all things being equal, more years of contribution would be needed to ensure that the accrued pension was above the social assistance level. Examples of such calculations are given in Table 3.⁹

< Table 3: years needed to avoid means testing in Germany >

⁸ As before, the assumption was that those affected would mainly be women, who tend both to be lower-paid and to experience more interrupted careers.

⁹ In most cases, the discussion about the level of the public pension relative to the level of income guaranteed via means-tested benefits is conducted with reference to a single person. However, entitlement to means-tested benefits is assessed on the basis of household income. It might be assumed that, in many pensioner households, there are two pensions and, in such cases, income would increase. But so, too, would the minimum income required. There is no suggestion in the German debate that concentration on a single person's pension when making illustrative calculations distorts the extent to which more and more pensioners (and so pensioner households) will find themselves liable to means-testing.

One of the reasons for promoting supplementary pensions was that they would enable employees to repair the reduction in benefits available from the public pension system. On the other hand, although the legislation that introduced the Riester pension was the same legislation that introduced the Basic Security Income, there was no acknowledgment of the possible conflict between the two measures in any of the contemporary debate – either in parliament or amongst the scientific community (see Deutscher Bundestag, 2001).¹⁰ The first time the contradiction between the two measures was aired widely was when the ‘scandal’ of the offset was analysed in a radio programme in late 2007 (Sozialverband, 2007). The issue was picked up by a number of opposition politicians and resulted in a series of parliamentary questions (Rohde und Fraktion der FDP, 2007; and, subsequently, Ernst und Fraktion DIE LINKE, 2008).

Wider public interest was first awakened by a television programme at the start of 2008 (WDR, 2008). This reported that people on an average income but with fewer than 32 years of contributions to the public pension scheme would be eligible for the Basic Security Income. Any Riester Pension income they might receive would simply reduce their entitlement to benefit. How many were likely to be in that situation was rather unclear. ‘Experts’ were, however, quoted as talking of ‘millions’, whilst a former Christian Democrat labour and social affairs minister entered the debate with the claim that by the time recent reforms to the public pension system had taken effect, as many as 20 per cent of over 65 year-olds would be on means-tested benefits (Blüm, 2008).

4. The debate in Britain and Germany

In both the UK and Germany, the realisation that there might be no advantage in participating in supplementary pensions that the respective governments were promoting produced a fierce, if somewhat brief, debate. This debate focused on two main issues – namely whether means-testing was fair, and whether the difficulty of determining who might be affected by means-testing might further discourage pension saving. These two questions, which often overlapped each other, are examined in turn

¹⁰ A perusal of German social policy periodicals – *Sozialer Fortschritt*, *Zeitschrift für Sozialreform*, *Soziale Sicherheit* – revealed no references to possible conflicts of policy being made in the years 2000 to 2007.

below. However, the way in which the governments responded to them was ultimately determined by their views about the cost implications of removing the offset. A discussion of the nature of these is reserved for the subsequent section (section 5).

4.1. The unfairness of means-testing

The fact that pension income offsets entitlement to means-tested benefits has led some to suggest that governments had a hidden agenda in promoting supplementary savings plans. As the 1989 UK study put it, ‘that element of the pension that serves to offset the entitlement to [benefit] shares many of the characteristics of a direct tax’ (Walker et al., 1989). A similar argument was made in Germany, again by an academic, although not in a scientific publication, who suggested that those who contributed to a Riester Pension were behaving ‘nobly’, thereby ensuring that they did not become a burden to ‘society’ and the ‘taxpayer’ (Miegel, quoted in Plusminus, 2008).

Others saw it not as the employee who was relieving the social assistance budget but rather the employer. This argument had some relevance in the UK because, once the employee had decided not to opt out of the Personal Accounts scheme, the employer would be obliged to make a contribution into the pension plan that had been chosen. Echoing the arguments from Germany about ‘nobility of behaviour’ on the part of the employee, one consulting actuary described the Personal Accounts scheme as ‘well-meaning’ but suggested that employers be permitted to point out to their employees that they might lose out on means-tested benefits if they had pension savings. Moreover, because employers were also required to contribute, the scheme was ‘tantamount to imposing a new tax on employers to subsidise the cost of means-tested benefits’ (Branford, 2008).

On the other hand, there were those who argued that it was legitimate for the state to claw income back because it, initially, had subsidised the pension savings. Thus, in the UK, the 40 per cent marginal tax rate has been argued as not posing a major disincentive to save because the amount withdrawn is ‘offset by ... the combination of the 3 per cent employer contribution and the tax relief [granted]’ (Turner, 2008). In addition, in so far as the contributions they made reduced their disposable income, the amount of tax credits that low-paid employees could claim to top up their current

income was increased. There were, indeed, further subsidies for those who were living in rented accommodation and, thus, were eligible for Housing Benefit. For such people, contributing to a pension would reduce their disposable income and increase, by 50 per cent of this amount, the amount of tax credit or Housing Benefit that they would receive (Hills, 2008).

In Germany, it was the subsidies made by the state for contributors on low incomes and with several children that were referred to. For some, the size of the subsidy dwarfed the employee's own contribution to the Riester Pension – in extreme cases, it could amount to 90 per cent of the total that flowed into the savings account (Deutsche Bundesbank, 2002). In other words, in so far as it was the state that was paying for the pension that took the person over the Basic Security Income, it was legitimate for the state to take this income into account when assessing whether somebody was in need of social assistance (Riester, 2008).

Another response to critics of the means-test was that, if Riester Pensions were to be disregarded, a floodgate would be opened. Other sources of income, too, would have to be disregarded, and this would make a mockery of the Basic Security Income scheme or, indeed, the whole social assistance system. Employing a *reductio ad absurdum* approach, it was suggested that not only would private pension savings have to be ignored, so too would income from the public pension system (Riester, 2008).

4.2. The uncertainties of means-testing

All projections about the future are based upon assumptions. These assumptions can vary, but one thing they reflect is uncertainty. Individuals who have to decide whether or not to contribute to a supplementary pension scheme face this uncertainty. They are also confronted by the complexity of a number of benefit systems interacting with one another in manners that are not transparent. This has been recognised by some of the advocates of reform. Even the UK Pensions Commission saw a problem here, although did not pursue it (Pensions Commission, 2005). Evidence from ad hoc consumer surveys underlines the extent to which consumers might find themselves confronted with potentially insurmountable problems. Thus, a recent survey found

that about a third of working adults would be put off from saving for a private pension because of the impact of means-testing, and amongst people in the 16-29 age band the share was as high as 40 per cent (Scottish Widows, 2008).

A study undertaken by the UK Department for Work and Pensions and using ‘extensive analytical modelling’ and the construction of hypothetical examples, came to the conclusion that ‘there is no readily identifiable group in the working-age population whose members would not, on average, gain back more than they put in to a pension’ (DWP, 2009: 2-3). However, the DWP emphasised that it did not take account of how savers might behave. Rather, the study was intended to reassure those who had to market pensions that they had few grounds to fear subsequent accusations of mis-selling (interview DWP, 11 February 2009).

Surveys on what individuals in Germany felt about means-testing do not appear to be available. Nonetheless, a poll dating from the spring of 2008, after the ‘Riester scandal’, showed how a large majority of the population feared that poverty in old age was a growing problem (N24-EMNID, 2008). Commentators in Germany have made it clear that there are certain people who should not open a Riester Pension. The frequently advanced example is the person on a low wage and aged in his or her 50s (Brandstetter, 2008; Abendblatt, 2008; SWR, 2008). It was much the same people who were identified as potential (not actual) losers in the analytic study undertaken by the UK DWP (DWP, 2009). However, simply because a younger person is on a low wage at present is not considered a reason not to participate. To refuse to do so is said to display undue pessimism – that one’s career will not progress. One commentator in the UK argued that advising people not to subscribe to a Personal Account because a series of bad luck in personal as much as work life might result in them falling into the 100 per cent marginal tax rate trap, was like arguing that people should regret having taken out home insurance because their home had not been burgled (Turner, 2008).

If liability to a 100 per cent marginal tax rate cannot be presumed for categories of people, and it is only by close examination of a person’s circumstances that it is possible to tell whether participation is worthwhile, it could be argued that potential subscribers need thorough advice. The validity of this argument is recognised. Some,

for example the UK Consumers Association, feel that the generic advice available to all potential subscribers is adequate (Which?, 2007). Others believe it is not. However, were thorough advice to be given, the costs of provision would be high. This would defeat the purpose of the Personal Accounts scheme, which was to deliver a plan where savings would not be eaten away by selling and management charges (Hills, 2008). The UK government appears to have subscribed to this view.

5. The implications of guaranteeing savings-based pensions

One of the justifications for moving pension provision from one based upon pay-as-you-go (PAYGO) principles to one based on funding has been that a far higher return is thereby achievable. Some have even argued that a switch to funding could generate higher returns for lower contributions (Feldstein, 1997). They point to how, over the longer term, the notional rate of return of a PAYGO system depends on a combination of labour force and productivity growth and that, whilst productivity might continue to grow, the labour forces of many industrialised countries are projected to stabilise or even decline. They also show how, at least over extended periods, the value of equity markets has grown substantially. If this is the case, it might seem surprising that governments refuse to guarantee that a funded pension scheme will return even a minimal level of benefits or, where means-tested minimum income schemes operate, that participation in a voluntary supplementary pension system will be worthwhile.

5.1. The cost of insuring pension guarantees

Most exercises intending to show the value of defined contribution supplementary pension plans are conducted using the assumption that the amount contributed will earn a specific rate of return and will earn it consistently for as many years as contributions are made. Sellers of private pension plans produce projections on this basis as part of their marketing activities. So, too, does the European Commission when it is projecting the contribution made by defined contribution pension schemes to total replacement rates for employees in relevant EU member states, and so, too, do the governments of the UK and Germany when they are carrying out similar exercises

(ISG, 2009; DWP, 2006; BMAS, 2008).¹¹ The UK government also used this approach when searching for groups that might lose out by contributing to Personal Accounts (DWP, 2009).

Of course, equity markets do not deliver a steady rate of return year in year out. They are volatile, and the probability of falling below any target return in any one year is quite high. However, advocates of defined contribution plans rely on the contention that, for a given level of volatility, the probability of failing to reach any target rate of return declines with time.¹² The UK Pensions Commission felt justified in proposing that employees be encouraged to participate in funded plans to supplement their retirement incomes. It pointed to the low probabilities of equity markets failing to achieve long-term returns when investments were made for long periods as they would be when it was a pension that was being built up (Pensions Commission, 2005: ch. 5). On the other hand, if the probability of failing to meet a target is low, the question of why the UK government will not guarantee any target for Personal Accounts and, equally, of why the German government will not make more than the most minimal guarantee with respect to a Riester Pension, or why any other government is equally cautious with respect to similar products, needs to be faced.

The answer lies in the fact that for people contributing to a pension, what matters is not merely the probability of their investments failing to achieve the target rate of return but the size of the failure if it occurs. There will be an average shortfall, but some shortfalls will be bigger and some smaller – in other words, shortfalls will have their own volatility. Unlike the volatility of the rate of return, which declines with time, this volatility increases with time. Losses (and gains, but it is losses that count

¹¹ The UK government and the Turner Commission, which influenced its thinking, presumed a four per cent rate of return and then deducted charges of half a per cent so giving a net return of 3.5 per cent. The European Commission calculations are based upon a 2.5 per cent net return.

¹² This assumes that, in the same way that investing in many different assets or classes of asset rather than in only one diversifies risk, so too does holding any one asset class over many time periods. If annual investment returns are independent of each other, the formula for calculating the volatility of the return includes the number of years for which returns are observed in its denominator. In other words, the more returns that are observed, the narrower is the range within which a given share of them fall. This result draws from a component of basic statistical theory whereby the standard error of a sample (s.e.) = $\frac{\sigma}{\sqrt{n}}$. Sigma (σ) is the population standard deviation, here the measure of ‘volatility’, and \sqrt{n} is the square root of the number of observations, here years for which information is available. A volatility of around 20% has often been calculated for the equity markets of many OECD countries when long-run annual returns are analysed.

for the purpose of guarantees) are compounded, because shortfalls affect the total accrued so far and not merely the amount contributed in any one year.¹³

To provide a guarantee is to provide insurance against such a shortfall. To buy insurance that an investment will indeed have a certain value at some point in the future is referred to as buying a ‘put option’.¹⁴ The cost of such an option, and so the cost of the insurance policy, rises the greater the distance into the future covered by the insurance contract.¹⁵ Figure 2 provides a stylised illustration of this, whereby the policy ensures that at least the ‘risk free’ rate of return – the return available from investing in indexed government bonds – is achieved.¹⁶

< Figure 2: probability of shortfall and cost of insurance >

The cost of insuring against an unlikely but potentially catastrophic outcome constitutes the principal reason why governments, despite suggesting that saving is worthwhile and pointing to the low probability of a shortfall, are not prepared to provide a guarantee for the supplementary pension plans they promote.¹⁷ Although

¹³ In this case it is not the volatility of annual returns that is considered but the volatility of total returns. The relevant formula for this is an increasing function of the (square root of the) number of years observed.

¹⁴ Farmers producing commodities, the price of which is highly volatile, also purchase put options – insurance that they can sell the commodity at a particular price. If that price is exceeded, they have paid insurance but not benefited in the period in question. If the market price is below the insured price, the insurance has been worthwhile in the period in question.

¹⁵ The formula for calculating the price of insurance derives from Black-Scholes option pricing theory (Black and Scholes, 1973). What is to be noted is that, in the relevant formulas, both volatility and (the square root of) time enter in the numerator. Thus, the cost of the insurance premium is an increasing function of both variables. A rule of thumb that allows an approximation of the insurance premium (P) as a proportion of the initial stock price (S) is $P/S = 0.4 \sqrt{t}$ (Bodie and Merton, 2000). This makes clear how both volatility and time are important. A good, albeit relatively technical exposition of the cost of insuring returns in the equity markets, which also applies it to guaranteeing pension schemes, is to be found in Bodie, 1995. For a recent exercise, although based upon a somewhat different approach, see Munnell et al., 2009.

¹⁶ The risk free rate is less easy to determine empirically than it is conceptually. However, long term (25 year) government bonds – which might be considered to provide a match for people saving in pension plans – were yielding an average of 1.74 per cent per years in real terms over the years 2000 to 2006 – i.e., before the onset of the “credit crisis”. This is considerably less than the real rate of growth of the economy – approximately 2.7 per cent per annum.

¹⁷ For example, the UK government stated ‘Personal accounts will build funds on a defined contribution basis. As with all defined contribution products, the value of the individual’s fund can fluctuate over time due to changing investment performance. For example, the value of stocks and shares can decrease as well as increase. ... There is no absolute guarantee that the value of the fund would be more than the value of the contributions invested, and that there would be investment growth. The value of these investments therefore cannot be underwritten by government’ (DWP, 2006: para. 1.75).

contributors rather than the government might be asked to pay the insurance premium, they are unlikely to be willing to do so. From their perspective, it would seem as if they were contributing extra but not building up a bigger pension pot by doing so. The addition to the pension contributions would appear as money lost, even if, to refer to an argument made earlier, it might be no more lost than are house insurance premia paid on a house that never burns down.

Insurance costs would be lower than those described so far if the purchaser of the policy were prepared to forgo the upside risk – returns in excess of the target rate – and did not merely wish to buy protection against the downside risk. The insurer would reap the benefit every time the investment exceeded the guaranteed value. On the other hand, from the contributor's point of view, such a pension becomes less attractive. At the extreme, when upside risk is completely surrendered, the contributor would have been assured to receive neither more nor less than the risk-free rate of return. A product offering this could have been chosen at the start, and if it had been chosen, there would have been no need for insurance.¹⁸

If supplementary plans such as Personal Accounts and the Riestler Pension cannot be guaranteed a given level of return, neither can they be guaranteed to bring savers' incomes above a minimum level. Moreover, in so far as governments guarantee any return at all, by doing so they might encourage morally hazardous behaviour. *Ex post*, there might be few occasions when contributors would have failed to achieve the sort of modest returns that, for example, the UK and German governments assume. Nonetheless, knowing they were protected by a guarantee might lead people to choose more risky investment strategies. They would be 'less responsible' when it is precisely 'self-responsibility' that is being sought. Governments, thus, tend to limit their activities to enhancing financial literacy, indicating the implications of different investment strategies, making sure that the relevant products are available for savers and/or ensuring that the products being marketed meet relevant standards. They might

¹⁸ Examples illustrating this can be found in Munnell et al., 2009.

go so far as to establish default savings plans and products, including those that shift savers into less volatile products as they come closer to retirement.¹⁹

5.2. The Citizens Pension alternative

The means-testing problem, itself, exists only if the a mandatory pension such as that provided by the state already places people on an income that is above subsistence. However, in the UK, providing such a pension was rejected as too expensive at an early stage.

Proposals for some kind of ‘demogrant’ – a non-contributory or tax-financed pension – have been made many times in the post-war years, both in the UK and in Germany. The UK government reappraised a Citizens Pension at the same time as it was concretising its proposals for the Personal Accounts scheme, but again turned it down on cost grounds (DWP, 2006). In Germany, calls for the introduction of a *Grundrente* or *Volksrente* were made with renewed vigour when it was realised that income from a Riester Pension could be offset against entitlement to Basic Security Income. Some proposed a reform to the public pension system to ensure that all who had worked at least 35 years, regardless of earnings, would receive a pension above the social assistance minimum (Braun, 2008).²⁰ Those who thought their proposals through were aware that these involved substantial cost (Gei ler, quoted in Lau, 2008).

6. Conclusions

Demographic ageing has led governments across the world to reduce the generosity of public pension provision. In the case of the UK and Germany, the consequence has been an element of convergence between pension regimes that were, initially, rather different. In the UK, under the welfare state that was established after the Second World War, the public pension was a flat-rate benefit. For a limited period, an earnings-related component was added, but this proved too expensive and the supplement as currently constructed will be for many no more than a further flat-rate benefit. In West Germany, under the social market economy that was being built up in

¹⁹ This is frequently referred to as ‘life-styling’ and switches investments from volatile equities to less volatile, interest bearing bonds as the saver gets older. Such an approach has been proposed for the default option under the UK Personal Accounts scheme.

²⁰ However, even this would not be enough to help those with the highest risk of poverty in old age. It has been calculated that two-thirds of female contributors would not be helped by such a reform (Bogedan and Rasner, 2008).

the 1950s, the public pension became proportional, albeit subject to floors protecting low earners and ceilings penalising high earners. However, the 2001 reform substantially changed this. Although the proportionality principle was maintained in the accrual formula, it became clear that a minimum pension would be the best that many would achieve. Moreover, many would receive a pension that required them to make a call upon a means-tested benefit. The extent of convergence was reinforced by the way in which governments in both countries gave an increasing role to individual savings plans to produce an adequate level of retirement income.

Means-testing lies uneasily together with the promotion of self-responsibility and saving. Such incompatibility might be unproblematic when only a small proportion of the pensioner population is potentially affected by means-testing. However, means-testing was never a marginal phenomenon in the UK, whilst, according to most projections, it will cease to be one in Germany. Moreover, there is evidence that people are aware of the trap into which they might fall. Their fears might be exaggerated. Subject to reasonable investment performance and an acceptable work history, most employees might be able to increase their living standards in old age by participating in a supplementary pension savings plan. Nonetheless, some might not and, if failures occur, contributors will be left with much lower pensions than they were led to expect. Governments, although they promote savings-based supplementary pension plans, are aware that, for some savers, on some occasions, some plans will fail to deliver. They are not prepared to guarantee against failure to deliver because to do so would contradict their intention of taking pension obligations ‘off the books’ and would discourage ‘self-responsibility’. Even proposals to ensure that pension savings do not reduce entitlement to means-tested benefit will be resisted for precisely these reasons.

Last, it is worth noting that the groups targeted by Personal Accounts or the Riester Pension tend not to be highly financially literate. They tend to be risk averse and favour security in old age.²¹ They have observed volatile stock markets. They have experienced the growing incidence of employment interruptions and non-standard

²¹ Studies showing risk aversion being negatively related to wealth are plentiful. Those showing risk aversion relative to income are much less common. For a review of the relevant literature see Meyer and Meyer, 2006.

working that bring with them volatile earnings. Schemes such as Personal Accounts and the Riester Pension might add to income in old age, but the refusal of governments to offer any guarantee that it will – and thus to guarantee that small savings are worthwhile – does not add to a sense of security.

Many potential participants are aware of family members, friends and neighbours, who have done no better by making modest savings than others who have shown less ‘responsibility’ or have not even had the chance to be ‘responsible’. Such ‘narrative’ is powerful.²² It, as much as the incomprehensibility of explaining why means-testing is fair, or why alternatives are unaffordable, might alone be sufficient to hole the UK and German governments’ flagship projects below the waterline and condemn them never to achieve the aspirations with which they were launched.

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²² On the power of narrative with respect to situations that are perceived ‘unfair’, see Graetz and Schapiro, 2005.

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Table 1 Determinants of value of a supplementary pension		
	UK – NPSS	FRG – Riester Pension
1) own contribution	+	+
2) tax relief	+	+
3) subsidies		+
4) employer contribution	+	
5) interest on 1-4 above	assumed +	assumed + (also guarantee that own contributions and subsidies received returned, but only in nominal terms)
5) management charges	- (structure regulated and pressure to keep level low)	- (structure, but not level, regulated)
6) income tax/social security contributions on pension	-	-
7) means-tested benefit entitlement	-	-
<i>Note:</i> + means present and having (potentially) positive effect; - means present and having (potentially) negative effect.		

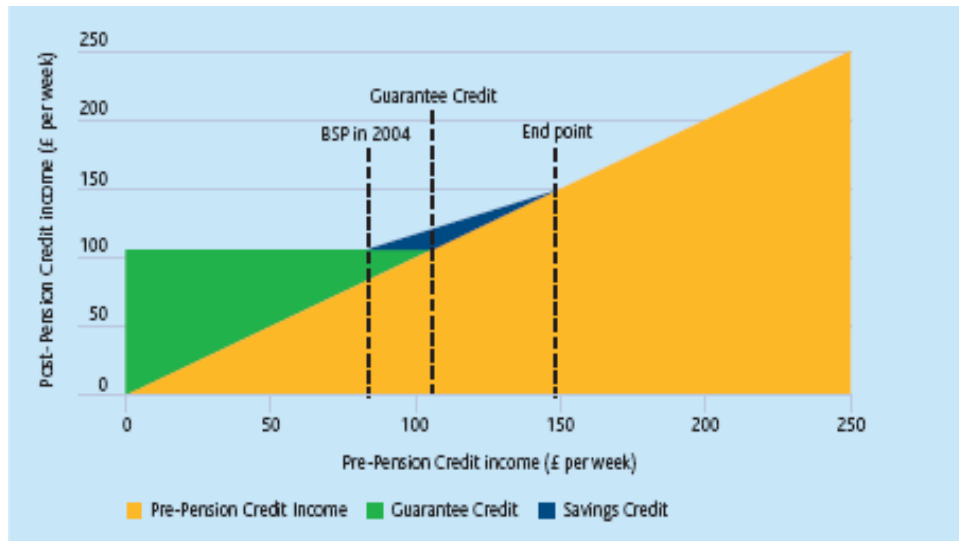
Table 2 The proportion of pensioner households experiencing a positive marginal tax rate on a supplementary pension in the UK		
with a marginal tax rate of	2005	2050
zero	40%	50%
under 20%	10%	10%
21-39%	20%	15%
40-59%	10%	5%
60-79%	0%	0%
80% or more	20%	20%

Source: PPI, 2008 (chart 3).

Table 3 Years of contributions needed to avoid means testing in Germany		
people earning	2008	2030
50% of average wage	56	68
70% of average wage	37	45
average wage	28	34

Source: Steffen, 2008 (chart 2).

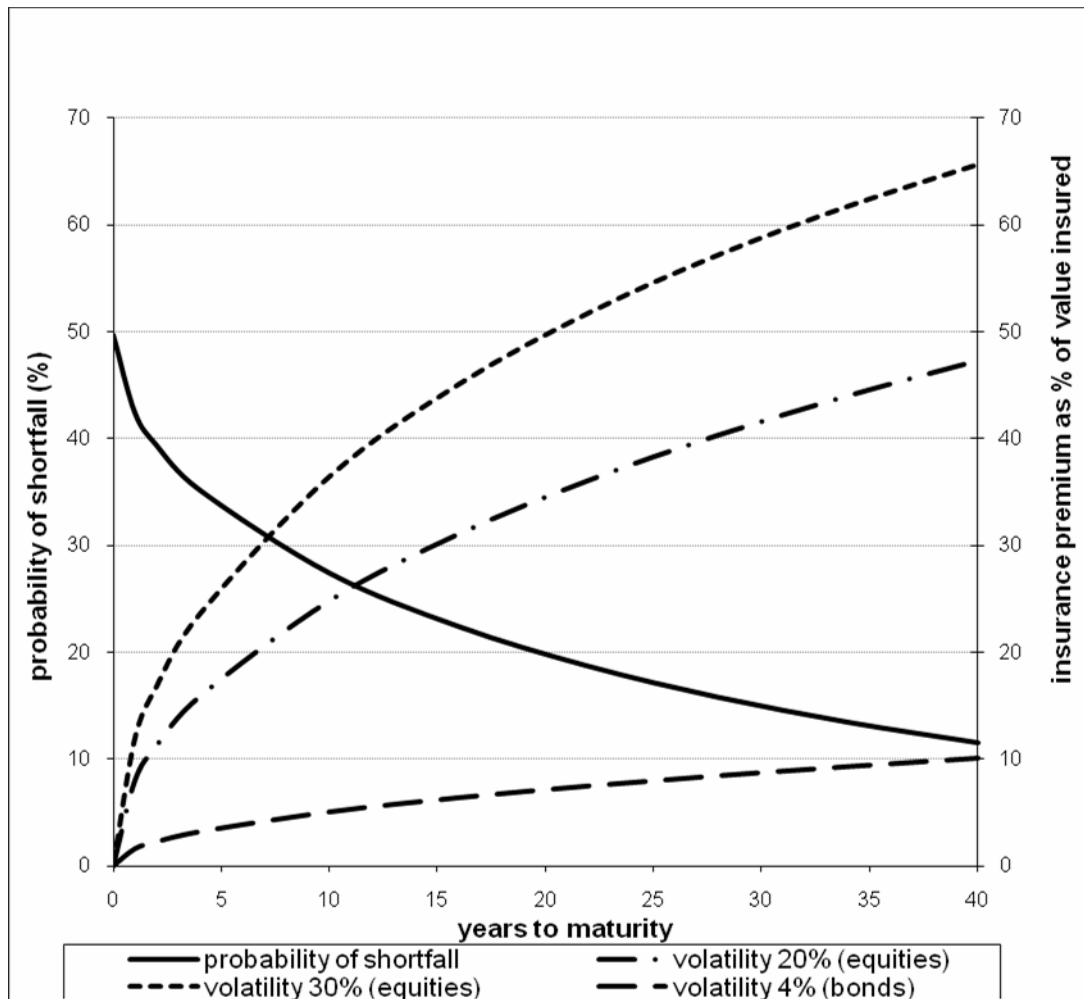
Figure 1 How Pension Credit works



Source: Pensions Commission, 2004.

Note: BSP = Basic State Pension (£77); Guarantee Credit (£102); End Point (£147). All amounts valid in 2004.

Figure 2 Probability of shortfall and cost of insurance



Note: The probability of a shortfall is the probability that returns will be less than 5.5 per cent per year and where the one year volatility is 20 per cent. The 5.5 per cent is the median real rate of return on UK equities used in the UK Pension Commission illustrations. The 20 per cent volatility approximates the standard deviation of rates of return calculable for both UK and US equities over the long-term. The 4 per cent volatility approximates the volatility of rates of return on investment grade bonds. The 30 per cent volatility is included for illustrative purposes.