Society of Actuaries in Ireland

Initial Views on the Government's Roadmap for Pensions Reform 2018-2023

June 2018

About the Society of Actuaries in Ireland

The Society of Actuaries in Ireland ("the Society") is the professional body for actuaries practising in Ireland. Actuaries provide advice and relevant solutions for financial, business and societal issues involving uncertain future events. Most of the Society's members work in the financial services industry, and the profession has several statutory roles relating to the supervision of pension schemes and insurance companies. The Society seeks to make an impartial contribution to public debate on social policy and public interest matters where an actuarial perspective can add value.

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Introduction

In February 2018, the Government published “A Roadmap for Pensions Reform 2018-2023” (referred to in this document as the “Roadmap”). The Roadmap acknowledges that the Irish pension system, through the use of the State pension and other measures, now largely protects older people from the effects of poverty. However, it also recognises that the current approach to providing for pension income in retirement needs to be overhauled so that people can achieve their desired standard of living in retirement, particularly given the expectation that people will live longer and taking account of the cost of living.

The Roadmap consists of six main strands. These strands contain a wide range of measures, ranging from ensuring the sustainability of our pension system to achieving greater equity and fairness, aimed at improving pension outcomes for all.

The strands extend across the three main pillars of our pension system namely:

- First Pillar – the State pension
- Second Pillar – occupational pensions
- Third Pillar – personal pensions

Underlying the six strands are a number of key objectives, some explicitly stated and others referenced in sections throughout the document. In this document, we begin by setting out our understanding of the key objectives underpinning the Roadmap. In the sections that follow, we outline our views on the proposed measures to achieve each one and make suggestions where appropriate. We conclude with a summary of our key points on the Roadmap’s objectives.

The Society welcomes the publication of the Roadmap, which contains many worthwhile proposals and pulls together all strands of the pensions framework in Ireland. We look forward to actively contributing to the discussion on the future development of pension provision in Ireland, through upcoming consultations and by providing input on the detail of the various proposals as they are being developed.

The Key Objectives Underpinning the Roadmap

In this paper, we have considered each of the seven objectives below and have set out our views on whether the existing system, combined with the proposed changes in the Roadmap, will likely achieve those objectives.

In general, we consider the underlying objectives form an appropriate basis for the Roadmap. There are, however, two overarching points that we believe are important to make:

- Firstly, **it is essential that there is full clarity on the objectives and what we are trying to achieve with our overall pension system**. While most of the objectives underlying the Roadmap are clear and straightforward, the one area where we believe greater clarity is needed involves objectives around coverage and adequacy targets for supplementary pension coverage.

- Secondly, when assessing the likely effectiveness of our pension system and any proposed changes to it, **it is important to consider how the overall combined system, and not each part of it in isolation, measures up in achieving each of the objectives**. This is a critical point. The three pillars of our pension system are deliberately aiming to achieve different things and it is only by considering all three together, under headings such as cost and equity, that one can form a clear overall picture.

Key Roadmap Objective	Comments in the Roadmap
1. Protecting against poverty	The Roadmap outlines the State's achievements to date in protecting against poverty through the provision of the State pension and highlights the importance of ensuring the ongoing adequacy of the State pension into the future. Allied to this, the Roadmap also references targeting resources to those most in need.
2. Ensuring our pension system is sustainable	The Roadmap identifies the State pension as the bedrock of the entire pension system and highlights the need to manage the State pension in a sustainable manner into the future so that benefits are fully safeguarded. It also identifies the importance of ensuring private pensions are sustainable and proposes improved governance and supervision as new measures to achieve this.
3. Sustaining personal living standards in retirement	The Roadmap includes the maintenance of living standards as a key objective and outlines the role Pillar 2 (occupational pensions) and Pillar 3 (personal pensions) play in achieving this objective. The significance of both coverage and adequacy of supplementary pension provision in achieving this objective is covered in the Roadmap.

4. Maintaining an appropriate level of cost for the Exchequer	The issue of cost to the Exchequer is referenced in several parts of the Roadmap. Avoiding shortfalls in the funding of the State pension, which could put pressure on Exchequer resources, is identified as one requirement. Controlling the cost of public sector benefits and the cost of tax reliefs for supplementary pension provision are also covered in the Roadmap.
5. Achieving greater equity and fairness	The achievement of an equitable outcome features in several sections of the Roadmap. Intergenerational equity is highlighted as an important factor in the operation of the State pension as is the achievement of greater equity by removing anomalies in how the State pension is calculated. The proposed amendments to public sector pensions also consider issues of equity between different cohorts of public sector workers and between public and private sector workers generally. Achieving equity in the distribution of tax reliefs is also referenced.
6. Reducing Overall Pension Charges	The Roadmap includes an objective of achieving greater economies of scale and reduced charges for the benefit of pension savers. Among the measures proposed are the rationalisation of the numbers of pension schemes in existence and a review of the framework within which Approved Retirement Funds (“ARFs”) operate.
7. Supporting Fuller Working Lives	One of the strands of the Roadmap is devoted specifically to this objective which recognises that as people live longer, healthier lives more will want to continue working at older ages. The Roadmap sets out proposals to accommodate this.

1. Objective 1: Protecting Against Poverty

The Roadmap sets out the achievements to date in reducing poverty in retirement and correctly identifies the central role the State pension has played in this regard.

The Roadmap addresses the importance of maintaining the adequacy of the State pension and sets out proposals to maintain it at a level equal to 34% of average earnings through future indexing in line with CPI and average earnings. It is not clear at this stage how the indexation will be set to incorporate both CPI and average earnings (which are expected to increase at different rates in the future), but the Society fully supports the general thrust of protecting adequacy by maintaining the real value of the benefit.

The cost of any commitment to providing future increases at a certain level should be considered and acknowledged by decision-makers before any such commitment is given. The impact of the potential costs was considered in an Actuarial Review of the Social Insurance Fund 2015, undertaken by KPMG on behalf of the Department of Employment Affairs and Social Protection[1], in which the authors projected future shortfalls in the Social Insurance Fund if the benefit is increased in line with general earnings inflation. Consequently, we welcome the fact that the proposal is accompanied by other long-term measures aimed at controlling the cost of the State pension and we have commented further on these in the next section.

The proposal to switch to a Total Contributions Approach to remove some of the anomalies in the system and introduce greater equity and fairness (Objective number 5) is also welcome and should enhance the sustainability of the State pension.

[1] https://m.welfare.ie/en/Pages/Actuarial-Review-of-The-Social-Insurance-Fund-31-December-2015.aspx

2. Objective 2: Ensuring Our Pension System is Sustainable

To ensure public confidence and trust in all aspects of pension provision, it is vital that each of the main pillars of our pension system operates in a sustainable manner.

2.1. Sustainability of the State pension:

The Society has for many years argued for measures to improve the sustainability of the State pension: in particular, in 2003, we called for an increase in the State pension age[2]. We regard the focus on measures to achieve this as fundamental to the success of long term pension planning in this country.

We welcome the commentary in the Roadmap which recognises the concerns around sustainability, the pressures caused by a deteriorating dependency ratio, the advantages of a more automated decision-making structure disconnected from short term political influence and the significance of the State pension age in improving sustainability.

The impact of the potential costs was considered in the Actuarial Review of the Social Insurance Fund 2015 and the authors noted "Re-rating benefits in line with CPI rather than in line with earnings dramatically impacts the Fund finances and alleviates the projected shortfalls". However, the downside of a less costly approach means that living standards for those in receipt of the State pension may be eroded over time. If a more costly approach is adopted, the costs will presumably have to be met from increased PRSI receipts (or elsewhere).

While supportive of maintaining the real value of the State pension at 34% of national average earnings, such an approach will be costly to provide. Indeed, if significant increases in PRSI rates are to be avoided, it is highly likely that it can only be achieved if other measures to improve sustainability are taken.

The Society welcomes all measures that will improve the sustainability of the State pension system in an equitable manner. The State pension age is set to increase to 67 in 2021 and to 68 in 2028. In the Society's view, further increases to the State pension age that are directly linked to increases to life expectancy are equitable and may help to alleviate sustainability concerns. The approach proposed of undertaking an actuarial assessment of life expectancy and providing a reasonable lead-in time for any future changes is practical and we look forward to seeing the full set of proposals when they are produced in line with the Roadmap timetable.

The Roadmap identifies the current absence of a long-term focus in decisions around the level of benefit and the level of PRSI contributions and proposes an annual actuarial review to assess changes required to fund benchmarked increases in payment rates or expansion of benefits cover. We support such a proposal and any other steps that can be taken (such as legislative changes) that will ensure decision-making in this area is framed by longer-term considerations.

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[2] https://web.actuaries.ie/sites/default/files/story/2003/09/_Older_Retirement_Age_Most_Effective_Way_to_Reduce_Cost_of_State_Pensions/030925-pr_older_retirement_age.pdf

2.2. Sustainability of private sector defined benefit schemes

For members of defined benefit schemes, the way in which they earn benefits is largely predictable: they earn pension benefits gradually over the course of their career based on their salary and pensionable service. Today, this type of scheme exists mainly in the public sector (360,000 active members) and to a lesser extent, in the private sector (111,000 active members).

Unlike public sector schemes, private sector defined benefit pension schemes are voluntary funded arrangements and the Government has said in the Roadmap that it will legislate for measures to support defined benefit pension scheme sustainability. While the Roadmap is light on any detail, the Society notes that the Government intends to advance the Social Welfare, Pensions and Civil Registrations Bill 2017 in Q2 2018 and welcomes in principle any changes to the legislation to improve the security and sustainability of defined benefit schemes. The Society would be pleased to provide support to legislators to ensure that the practical application of any new legislation reflects the Government's intentions.

The Society has contributed to the debate on the Funding Standard and the way in which the liabilities are valued for this purpose. For example, in the case of pensioner liabilities (where the liabilities are calculated as the estimated cost of securing annuities in the open market), the Society has expressed concerns that these estimates may, in some cases, significantly overstate the liabilities and this has been noted by the Minister for Employment Affairs and Social Protection[3]. As it is impractical for actuaries to seek quotations for bulk annuity purchases for the purpose of assessing the ability of each scheme to meet the Funding Standard, the Society has proposed to the Pensions Authority a process to enable actuaries to assess the liabilities in a more efficient and consistent manner.

The Roadmap also outlines a number of new measures on the horizon mainly in the areas of governance and supervision arising from the IORP II Directive. We note in particular the likely increased focus on risk management and look forward to reviewing the detailed proposals when they emerge later this year. The Society has already made a submission to the public consultation on Key Function Holders[4].

2.3. Sustainability of public sector defined benefit schemes

Ensuring sustainability applies not just to the State pension system and private pension provision, but also to public sector schemes. While we note steps have been taken to curtail public sector pension liabilities into the future, there are further measures that could be taken for example in relation to controlling the discretionary layers of benefits that apply. We have commented further on this point later in Section 4 of this paper.

[3] https://www.kildarestreet.com/debates/?id=2017-10-04a.483&s=actuaries#g499

[4] https://web.actuaries.ie/sites/default/files/story/2018/01/171208%20Submission%20to%20Pensions%20Authority%20Consultation%20on%20KFH.pdf

2.4. Sustainability of other types of private pension provision

For people who are not members of a public sector or a defined benefit pension scheme, saving for retirement can be achieved through membership of an occupational defined contribution scheme (i.e. a defined contribution scheme facilitated by a worker's employer) or other personal retirement saving vehicles, such as PRSAs and Personal Pension Plans (for the self-employed, or those who do not have access to an employer-facilitated scheme). Under the current regime, saving for retirement may be voluntary or a condition of employment.

The benefits available at retirement through these types of vehicles are much less predictable and depend on multiple factors including the total amount saved, long term investment returns, charges and the cost of providing benefits at retirement. The individual bears all of the risk in this type of vehicle. Good governance and operational considerations, including management of costs, will be of particular importance when ensuring sustainability. We await the detail of changes proposed as part of the implementation of the IORP II Directive and in regard to the rationalisation of pension saving vehicles and schemes, as proposed in the Roadmap.

3. Objective 3: Sustaining Personal Living Standards in Retirement

The Roadmap incorporates a key objective of sustaining personal living standards in retirement and recognises that to achieve this, the current approach to providing for pension income in retirement needs to be overhauled, particularly as people continue to live longer.

Living standards in retirement can be sustained if:

- More people save for their retirement (“coverage”); and
- People save enough for their retirement (“adequacy”).

The design of effective Pillar 2 and Pillar 3 pension provision is central to achieving this particular objective. In this section, we comment on the main considerations involved, including how people are encouraged to save for retirement, and some of the proposals in the Roadmap focused on supplementary pensions.

3.1. How much do we need in retirement?

Ensuring people save enough to enjoy their retirement is a significant challenge and is one that successive governments have attempted to tackle. The considerations involved are complex and multi-dimensional, and this makes it all the more important to understand what precisely we are trying to achieve – who are we trying to encourage to save (coverage) and what level of retirement income should they be targeting (adequacy)?

In 1998, the National Pensions Policy Initiative[5] (“NPPI”) set out the background to a target post-retirement income from all sources of 50% of gross pre-retirement income, subject to a minimum post-retirement income of 34% of average industrial earnings. This was reconfirmed in the 2005 National Pensions Review[6] (“NPR”), which was used as the benchmark in the 2007 Green Paper on Pensions[7] and was referred to in the recently-published Roadmap.

The Society believes that it is essential that a target replacement ratio is determined as it is very difficult to design Pillar 2 and Pillar 3 supplementary systems without a clear end goal. The Roadmap does not explicitly outline a target replacement ratio, although it does mention a replacement income of 50% to 60%, which is consistent with the view taken in the NPPI report in 1998. The Society recommends that further research be undertaken to determine what target replacement ratio would be appropriate for the future, although it is recognised that this is a complex exercise as issues such as social security benefits and taxation also need to be considered. The Society notes that research is being undertaken in this area by Stephen Moore of UCC and Tiago McCarthy of the Department of Employment Affairs and Social Protection and looks forward to seeing the outcome of their study.

It is also worth noting that the introduction of a Standard Fund Threshold has effectively placed an upper limit on the amount that can be saved tax efficiently for retirement. This equates to a pension of between €54,054 pa and €100,000 pa, depending on the age at which the person retires and when the benefits were accrued (the higher pension applies to benefits accrued before 1 January 2014). See Appendix 1 for more details on the limits.

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[5] https://www.pensionsauthority.ie/en/News_Press/News_Press_Archive/NPPI_Report.pdf
[6] https://www.pensionsauthority.ie/en/Trustees_Registered_Administrators/Policy/Reports_to_the_Minister_for_Social_Protection/National_Pensions_Review_October_2005_.pdf
[7] http://www.welfare.ie/en/downloads/greenpaper.pdf

Throughout the remainder of this section, we have proceeded on the basis that the State considers 50% to be an appropriate replacement ratio (with the floor of 34% of national average earnings and the upper restriction inherent in the Standard Fund Threshold as outlined).

3.2. Where will our post-retirement income come from?

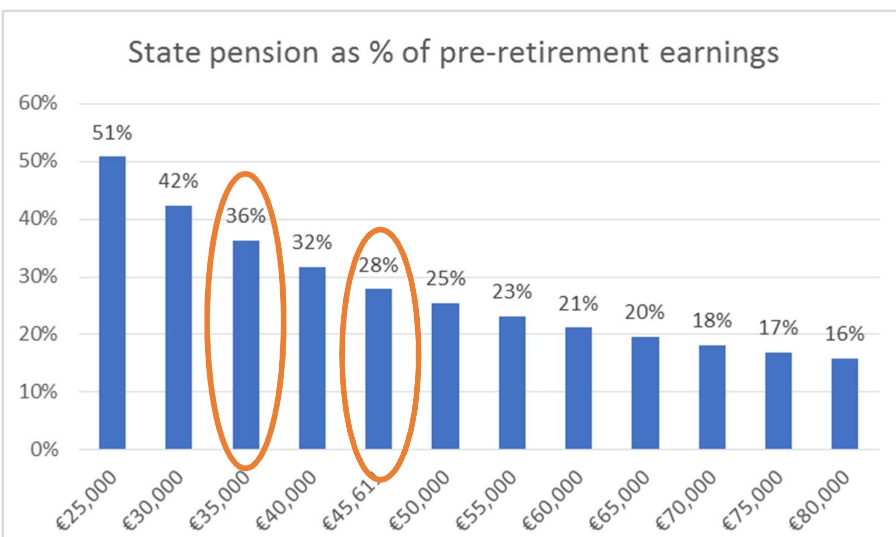
As noted previously, standards of living in retirement are supported by several pillars: the State pension, benefits provided from unfunded schemes (for those employed in the public sector), benefits provided through supplementary pension schemes (defined benefit and defined contribution occupational or personal schemes), as well as private savings/investments and (potentially) working in retirement.

3.3. The State Pension System

A means-tested State Pension (Non-Contributory) is available to older people (currently from age 66, rising to age 68 in 2028) who do not qualify for a State Pension (Contributory) or who only qualify for a reduced contributory pension based on their insurance record. For people who have paid enough social insurance contributions, the State Pension (Contributory) is payable from State pension age. The maximum rate of State Pension (Contributory) for a single person is currently €243.30 per week, or €12,695 per annum. The State pension[8] provides a minimum replacement income; however, for many people, some form of supplementary provision will be required to ensure that a desired standard of living can be maintained into retirement.

3.4. How does the State pension contribute towards our post-retirement income target?

As outlined in section 3.1, the target amount of post-retirement income is set by reference to our pre-retirement income. For individuals in receipt of lower pre-retirement earnings (lower paid and those on part-time incomes), the proportion of their target post-retirement income provided by the State pension is higher (as the State pension is fixed, regardless of a person's income) than for those with higher pre-retirement earnings. This is illustrated in the following graph which shows the State pension as a percentage of pre-retirement earnings.



[8] Any references in this paper to State pension refer to the State Pension (Contributory), unless otherwise specified.

It can be seen that as the level of pre-retirement earnings increases, the proportion of the target of 50% pre-retirement earnings delivered by the State pension falls. For example, for someone earning €35,000, the State pension represents 36% of their pre-retirement income. This falls to 28% for someone earning the national average earnings of €45,611 pa.[9] Therefore (all else being equal), people on higher salaries will have to save a higher percentage of their salary for retirement to achieve the target 50% of pre-retirement earnings (inclusive of the State pension).

Some people may have other sources of wealth and may be less reliant on pensions savings as an exclusive income support post-retirement, whilst others may find the State pension adequate. In the case of middle-income earners, there is a particular concern that they may find the State pension alone to be inadequate for their needs but are less likely to have other sources of wealth to rely upon in retirement.

3.5. How will we get more people saving for retirement?

The Pensions Authority reported in its 2016 Annual Report (the most recent report available at the time of writing) that over 771,000 individuals were active members of some type of pension scheme[10], while there were approximately 251,000 PRSAs. This contrasts with 2.2m individuals recorded by the CSO as employed in Q4 2017[11].

In its 2017 meeting on "Challenges and Opportunities of an Ageing Population", 87% of the Citizens' Assembly members recommended that the Government should introduce some form of mandatory pension scheme to supplement the State pension at retirement.

To encourage people to save for retirement, the Government has announced its intention to develop and introduce a new automatic enrolment retirement savings system. Under this type of arrangement, individuals are automatically enrolled (subject to certain criteria) into a defined contribution-type pension vehicle and they can choose to opt-out if they do not wish to continue to save for their retirement.

This approach uses learnings from behavioural economics to maximise pension coverage. When faced with complex choices people often struggle, and inertia can result in no action being taken. The automatic enrolment approach looks to use that inertia to encourage longer term retirement saving by placing the onus on the individual to make an active decision to remove themselves from the system.

There is evidence in several jurisdictions that this type of quasi-mandatory arrangement can be effective. The Roadmap cited the example of the UK, in which 9 million employees have been enrolled into its automatic enrolment system since 2012 and almost 90% have continued to save for retirement. However, at the time of publishing the Roadmap, the UK automatic enrolment scheme only required a total (employer plus employee) contribution of 2% of pay. The pattern of opt-out

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[9] CSO reported average annual earnings for a full-time employee in 2016. See http://www.cso.ie/en/releasesandpublications/er/elca/earningsandlabourcostsannualdata2016/

[10] https://www.pensionsauthority.ie/en/About_Us/Annual_reports/The_Pensions_Authority_Annual_Report_and_Accounts_2016.pdf , Appendix II

[11] http://www.cso.ie/en/releasesandpublications/er/lfs/labourforcesurveyquarter42017/

may change as the total minimum contributions increase (to a minimum of 5% of pay in 2018 and 8% from 2019 onwards) and we await the emerging statistics here.

Some other countries that operate automatic enrolment systems have reported significantly higher opt-out rates (for example, Turkey[12] at the Spring International Organisation of Pension Supervisors meeting in Dublin Castle). It will therefore be important to understand the key drivers that encourage people to stay in an automatic enrolment scheme. We have commented later in this paper on some of the considerations involved in designing an automatic enrolment system.

Previously, the Society had argued for a mandatory approach[13], citing the benefits of increased coverage and easier administration in comparison to an automatic enrolment approach. Notwithstanding that there can be some drawbacks to an automatic enrolment system, the semi-compulsory nature of the approach, along with behavioural nudging, should help increase coverage and is a welcome improvement on the status quo.

3.6. Are we saving enough for retirement?

Along with increasing the number of people saving for retirement, it is equally important to ensure that we are saving enough.

As noted previously, the average annual earnings for a full-time employee in 2016 was €45,611 pa. A target replacement income of €22,806 pa (i.e. 50%) inclusive of the State pension (€12,695 pa) would require the individual to save for an additional pension of €10,111 pa by State pension age.

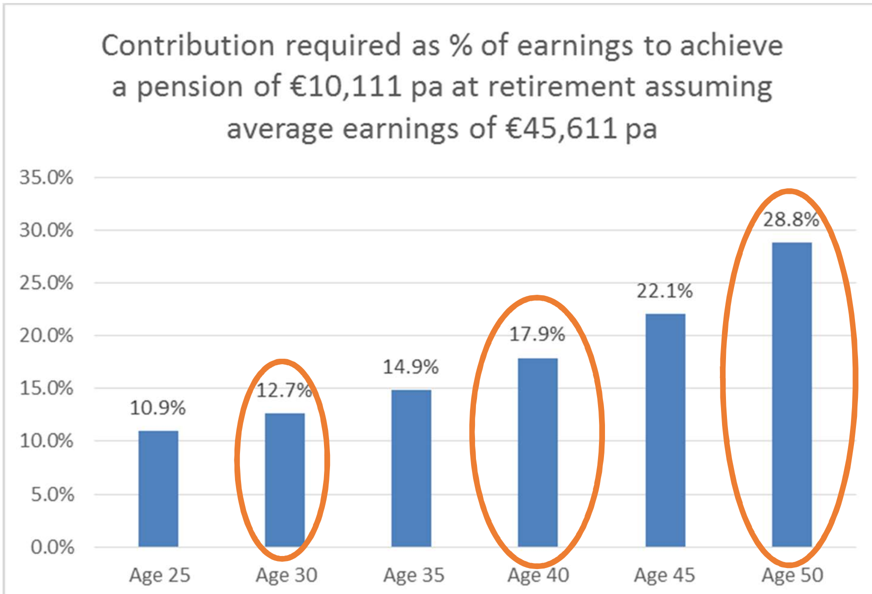
We need to save more each year if we leave it until later to start saving or if we need a higher income in retirement. To illustrate this challenge, it is useful to consider some examples.

[12] http://www.bloomberght.com/haberler/haber/1975377-beste-39-bin-kisinin-21-bini-cayma-hakkini-kullandi refers to an opt out rate of 55% within two weeks' of enrolment in the Public and Vakıf Emeklilik system

[13] https://web.actuaries.ie/sites/default/files/story/2014/02/140206_review_of_policy_options_to_expand_private_pensions_coverage_in_ireland.pdf

Example 1: If we start to save later, we need to save more each year

Based on the assumptions underpinning the Pensions Authority's Pension Calculator[14], the estimated total contribution rate (which may include employer contributions, if applicable), expressed as a percentage of salary, which is required to provide a post-retirement income of €10,111 pa depends on the age at which the person starts to save:



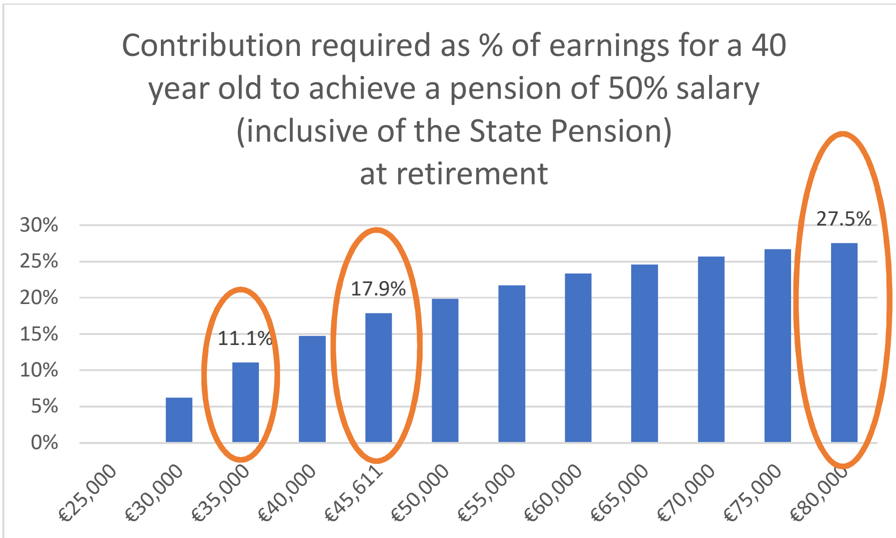
The above chart shows that for example, a person on the average annual earnings who begins to save for retirement at age 30 would have to save 12.7% of his/her pay every year to achieve an estimated pension of €10,111 pa from age 68. The required contribution rate increases to 17.9% if saving starts at age 40 and to over 28% if the person delays retirement saving until age 50.

(Note: all contribution rates shown are the total contribution, i.e. they may comprise employer contributions, if applicable, in addition to the individual's contribution.)

[14] https://www.pensionsauthority.ie/en/Calculators/Pension_Calculator/ See Appendix 3 for details of the assumptions and the modifications made.

Example 2: If we earn more, we must save more to achieve the target 50% post-retirement income

Looking at different levels of earnings allows us to build up a picture of how much it costs to save for retirement and to reach the target 50% replacement ratio. The graph below shows the contribution required for a person who begins to save for retirement at age 40, based on a range of starting incomes (from €25,000 to €80,000).



As can be seen, the 40-year-old with earnings of €25,000 may not need to save for retirement (as the State pension already provides more than the 50% target replacement income). At earnings of €35,000, he/she needs to save 11.1%. As the earnings increase to €45,611, the required savings rate increases to 17.9% while at earnings of €80,000, the required savings rate is 27.5% annually to meet the 50% target.

The examples demonstrate the very significant challenge of saving enough for retirement. More moderate contribution rates will only be sufficient if people start to save for their retirement very early in their career and continue to save with minimal gaps in their savings pattern. This may be possible in some cases, but for many, their working pattern may not be full-time due to, for example, caring or child-rearing duties, career breaks or periods of unemployment. This may impact on women more than men. Some people may also choose to opt out of any voluntary or quasi-voluntary retirement savings scheme to meet other, shorter-term financial commitments e.g. young people who are trying to save for their first house or who have young families and high childcare costs.

A total contribution rate of 14% was suggested in the Roadmap. This is unlikely to be adequate in all circumstances. However, we are aware that the target audience for a new automatic enrolment scheme is currently not contributing to a pension plan in any form and has therefore not yet developed a culture of saving for retirement. Taking this into account, a gradual increasing of contribution rates from a low base to a longer term sustainable level may be appropriate to minimise early opt-out rates. It will also be important to ensure that the minimum contribution specified for an automatic enrolment scheme does not become the "standard contribution". People should be encouraged to save enough for retirement.

3.7. How do we encourage people to save enough?

In the absence of a fully mandatory system, appropriate incentives are key to fostering a culture of saving for retirement. Ireland operates an "EET" (Exempt, Exempt, Taxed) model in which tax relief (up to certain levels) is granted in respect of pension contributions and on investment returns (for funded arrangements), while retirement income is subject to income tax rules[15].

The Irish tax system has evolved over the last 20 years and is now highly progressive. Indeed, the Tax Strategy Group noted in its 2017 paper published by the Department of Finance[16] that Ireland has one of the most progressive income tax systems in the developed world. It is the most progressive within the EU members of the OECD, and the second most progressive within all OECD countries.

In particular, it is worth noting that:

- The tax system is progressive in the period up to retirement;
- It is progressive in the period after retirement (although the setting of favourable tax exemptions and bands for citizens over age 65 means a greater proportion of the retired population does not pay tax and we have commented further on this below) and
- If the State pension is added to the picture (with its very redistributive combination of a flat amount of benefit funded by PRSI contributions linked to uncapped salary), the overall system is even more progressive.[17]

Some concerns have been expressed about the level of expenditure on pension tax reliefs, and indeed the Roadmap indicates that a review of the cost to the Exchequer of tax relief in funded supplementary pensions will be carried out. In this regard, it should be noted that:

- Significant reductions in tax reliefs have already been made: e.g. changes to the age/salary-related limits on tax-relieved employee contributions have been introduced; relief from USC and PRSI on individual contributions no longer applies; and the Standard Fund Threshold (SFT), which was introduced in 2005, was been reduced from a high of €5.4m to €2m from 2014; and

- An obvious conflict would arise between reducing tax reliefs on the one hand and successfully achieving the stated Roadmap objective of increasing coverage and adequacy (which, if anything, would signal a need to increase, not reduce, incentives) on the other hand.

When analysing the tax reliefs available for pension savers, it is important to draw distinctions between measures linked to pension policy and other measures. It has been argued that the tax incentives may be considered overly generous because in many cases, what is intended to be an EET system is more akin to EEE. One of the main reasons for this is that there are other "social policy" provisions in the tax system which discriminate in favour of certain groups in view of the additional

[15] Retirees also have the option to access a tax-efficient lump sum at retirement. There are Revenue limits on the amount of lump sum that can be accessed. Subject to these limits, the first €200k is tax free, while the next €300k is taxed at 20%.
[16] http://www.finance.gov.ie/wp-content/uploads/2017/07/TSG-17-02-Income-Tax-and-USC-paper-FINAL-JC.pdf
[17] http://www.publicpolicy.ie/wp-content/uploads/FiscalIncentiveRetirement1210121.pdf

challenges they face. These groups include (for example) older people. Measures such as the age tax credit[18] have been introduced into the tax code because of social policy decisions to provide additional supports to people in these groups and are not directly part of pension tax reliefs.

EET systems exist in many countries with tax relief on pension contributions in place as a measure to encourage retirement saving and avoid potential double taxation when benefits are drawn down in retirement. While not necessarily advocating changes to the system, we do believe that if the incentives are considered too generous in Ireland, it should not automatically be assumed that the fundamentals of the EET system must be changed. Rather, the value of the reliefs could be reduced by adjusting the social policy measures, as the Government has already done to some extent.[19]

Another way to encourage people to save for retirement is to present retirement savings vehicles in a manner which is easy to understand. The Roadmap refers to a contribution structure scenario in which a worker contributes 6% of pay and the State contributes 2% (total 8%). In addition, for employed people, there may be an extra employer contribution of up to 6%.

Under the current system, the tax relief available on a worker's pension contributions is 20% or 40% (subject to the age/salary limits) depending on their marginal rate of tax. Under an approach where the State makes a 2% contribution for every 6% of employee contribution, this would equate to tax-relief of 25% on an individual's contributions. This would involve giving additional payments to people who do not currently pay any tax and also to those in the standard rate tax band.

For those earning more than the standard tax-rate cut-off point of €34,550 (€43,550 for a single-income married couple) and therefore subject to a marginal rate of tax of 40%, the cost to save for retirement would increase substantially if 25% relief was to be introduced. This would effectively represent an increase in the tax payable for all people earning more than the standard tax-rate cut-off point and who are currently contributing to any form of retirement savings (public or private).

This can be quantified from the individual's perspective. Take the example of a 40-year-old self-employed person earning an income of €45,611 in line with the national average earnings. He/she would need to save 17.9% of his/her salary each year to target a post retirement income of 50% (inclusive of the State pension). Under current tax rules, and ignoring USC or PRSI, the annual after-tax cost of this contribution is €4,899 or €408 per month. If the tax relief were to reduce from 40% to 25%, this would mean that, to fund the same target pension at retirement, the cost would rise by €102 per month to €510 (or an extra €1,225 per annum).

[18] The Age Tax Credit is an additional tax credit for people who have reached age 65. http://www.citizensinformation.ie/en/money_and_tax/tax/income_tax_credits_and_reliefs/older_peoples_tax_credits_and_reliefs.html

[19] For example, in the case of a single person over age 65, in 2010 the age exemption limit below which income tax was not payable was €20,000, which, when compared to the State pension of €12,017, left a band of income which would not be subject to tax of €7,983. The age exemption limit was reduced to €18,000 in 2011, while the State pension has increased to €12,695, and so the tax-free income band is now reduced to €5,305.

The Society believes that the net effects of this would be to:

- adversely impact rather than improve the position for the main cohort of people (i.e. middle-income earners) where adequacy of retirement provision and hence the achievement of the stated objective of sustaining living standards in retirement is currently a problem; and
- improve the position for others for whom achievement of the 50% replacement target is arguably less of an issue as the State pension already represents a significant proportion of their pre-retirement income.

A move to 25% tax relief on employee contributions could trigger significant side-effects. It could become more tax-efficient for employees who pay higher rate tax if the employer contribution to the plan were to be increased with a corresponding reduction in salary.[20] To mitigate the effects of such a response, it would be necessary to make members liable to benefit in kind (BIK) taxation on employer contributions (both real in the case of the private sector and notional in the case of the public sector), with very major implications.

If the timing of any changes were close to the introduction of an automatic enrolment system, it could also cause widespread confusion in the public mind at a time when pensions are being actively debated. This could further undermine the objective of encouraging people to save enough for retirement.

The Roadmap is clear in reiterating the importance of people saving for retirement over and above the State pension. It is therefore important to ensure that any changes to the system do not undermine the achievement of this overriding objective. In the Society's view, such measures to simplify the tax system, while well-intentioned, could lead to fewer people saving for retirement (coverage) and people saving less for retirement (adequacy).

There are also some calls made for changes to be made to pension tax reliefs on the grounds of equity. Indeed, the Roadmap itself mentions that the review of tax incentives will include an evaluation of equity in the distribution of tax expenditure on pensions. We have commented further on the equity and fairness of tax reliefs under Objective 5: Achieving Greater Equity and Fairness.

3.8. Introduce more flexibility into the system?

The proposed approach of making a Government contribution rather than granting tax relief on personal contributions may be more easily understood. This may be an advantage in an automatic enrolment system. This approach was adopted for the Special Saving Incentive Accounts (SSIAs) launched in 2001. We have included some further commentary on the experience with SSIAs in Appendix 2.

[20] For a marginal rate tax payer, payment of contributions by the employer would effectively achieve relief from tax at the top rate of 40% plus also PRSI and USC which would be significantly more valuable than 25% tax relief.

If this approach were adopted, it does not necessarily mean that this should be extended to the existing pension system. There is precedent for maintaining different retirement tax systems side by side in other jurisdictions. For example, in the UK, people can save tax efficiently in several different ways:

- Net pay approach: Contributions made to a pension scheme are tax-free up to certain limits;
- Relief at source approach: Under this route, the individual benefits from a 25% top-up on contributions (subject to limits), regardless of their tax position; and
- Individual Savings Account (ISA)[21]. After-tax savings (subject to a limit) are invested in an ISA. Any gains are free from tax while the tax rules on withdrawal depend on the type of ISA. For example, savings can be withdrawn from a Lifetime ISA tax-free from age 60.

If there is a desire to introduce a SSIA top-up approach, the Society would advocate the UK approach, which has extended coverage without damaging existing provision, by introducing the top-up as an additional option rather than a replacement for marginal rate tax relief.

Increased complexity may bring with it the need for greater advice and the Government should consider the extent to which any default mechanism is robust. Special considerations may also be warranted for employers operating automatic enrolment pension schemes for their workers: they may require protection from legal action in respect of any steps taken in good faith under any automatic enrolment system.

3.9. Detailed Features of Automatic Enrolment

The Government has said that it will issue a strawman outline of its proposal in the coming months. There are several critical features of any automatic enrolment system that are important in determining its success. We have listed below issues that we hope are addressed in the consultation:

- Inclusion scope: What salary ranges to include? Is there a threshold level? How frequent is re-opt in? Is there a maximum or minimum age? How will the self-employed be accommodated in the system? Is salary per employment or cumulative? What of "vulnerable" self-employed in the "gig economy"? Would these people be treated differently to more traditional self-employed individuals?

- Post-retirement: How will decumulation work? Annuity or ARF, lump sum or income? Will income guarantees be introduced?

- Staging: Will the system be restricted to employers of particular type/size initially? The UK system started with very large employers and then worked down to SMEs. Should we do the same in Ireland or just adopt a "big bang" approach?

- Contribution Rates: What rate should contributions start at? How do these escalate over time? Will these be set out in legislation or flexible? What is the employer/employee mix?

- Provider: Who will deliver the automatic enrolment system: the Government (e.g. NTMA, An Post) or providers such as life offices or some hybrid or free competition approach?

21 https://www.gov.uk/individual-savings-accounts/how-isas-work

- Charges: Will there be a cap or a "fair and reasonable" requirement? If so, how will this be policed? Will fixed € charges be allowed or not (as for PRSAs)? If charges are capped, is there a risk that providers will choose not to develop automatic enrolment systems as they may not be profitable? The profile of very small contributions over very many employees may not be commercially attractive in the short term. This could reduce choice for consumers.

- Investment options: what investment options should be offered? Who should provide them? Will it be investment managers or the NTMA? Will there be guarantees on investment returns? In particular, careful consideration will need to be given to the default investment strategy (this has an added importance as the system is aimed towards people who may not have saved for retirement previously).

- Interaction with existing pension schemes: If an employer offers a defined contribution scheme (with contributions at least equal to the automatic enrolment minimum), is the employer exempt from the requirements? What if the eligibility age/earnings thresholds are different? What if an automatic enrolment scheme has some features which are more attractive than DC schemes generally e.g. tax relief, early access? Does the employer have to set up a basic scheme plus a top-up arrangement?

- Portability/transfers: Can automatic enrolment pension savings be transferred out to other pension vehicles and can other pension savings be transferred into the automatic enrolment arrangement?

- Encashments: Can they be encashed early under any circumstances? Consistency with other pension plans will be important.

We look forward to the consultation on automatic enrolment and to contributing to the discussion on the design of an effective system. In our view, critical to its success will be ensuring there is a very rigorous analysis and business case developed for all of the individual features of automatic enrolment, together with the adoption of a bias towards simplicity in design and operational requirements. It is essential that the structure which is developed and the retirement savings vehicles which are designed within that structure are trusted by consumers, thereby leading to a low opt-out rate.

4. Objective 4: Maintaining an Appropriate Level of Cost for the Exchequer

Controlling the cost to the Exchequer of pension provision is a theme running throughout the Roadmap.

The Roadmap references the achievement of a more sustainable State pension as a key goal, and incorporates measures aimed at avoiding a fallback on the Exchequer due to shortfalls in the Social Insurance Fund as the population ages.

The Roadmap also proposes a review of the cost of tax incentives, and we have already set out our views on this and the need to distinguish between tax incentives and the costs related to social policy decisions.

In our view, any review of cost should cover all aspects of pensions, including the very significant cost for the Exchequer which arises from public sector pensions.

The Roadmap outlines a number of public sector pension changes that have already been introduced or are planned which have reduced the benefits for new hires from various dates and which will increase superannuation contributions from public servants. For example, under the Single Public Service Pension Scheme[22] (introduced in 2011 for new entrants from 2013 onwards), benefits at normal retirement age are based on the person's average salary (adjusted for the Consumer Price Index, "CPI") and pension increases thereafter may increase in line with any increases to the CPI, subject to the approval of the Minister for Public Expenditure & Reform.

Notwithstanding these measures, the State retains a large liability in respect of public sector pensions.

While it is appropriate that public servants receive the benefits promised under relevant scheme rules, there are some provisions which operate on a discretionary basis.

A particularly costly discretionary benefit involves the granting of discretionary pension increases which have in the past operated on a pay parity basis (i.e. linked to increases in pay grades). The recent 2017 actuarial valuation of public service pensions estimated that the extra accrued liability associated with granting pay parity increases instead of increases in line with price inflation was €17.3bn.[23]

The Society believes that any review of the steps needed to limit the cost to the State of the pension system should consider, *inter alia*, discretionary elements in public sector schemes.

[22] https://singlepensionscheme.gov.ie/wp-content/uploads/2017/12/Scheme-Booklet.pdf
[23] https://www.per.gov.ie/wp-content/uploads/Accrued-Liability-Report.pdf

5. Objective 5: Achieving Greater Equity and Fairness

The achievement of greater equity and fairness features in several parts of the Roadmap and is an important ingredient if there is to be public confidence and trust in our pension system.

In relation to the State pension, we particularly welcome the fact that the projected deterioration in the dependency ratio is fully recognised and that the achievement of greater intergenerational equity is central to the proposed measures to improve sustainability. We note the conclusions in the Roadmap that the pay as you go model works so long as there are roughly four or more workers contributing into the Social Insurance Fund for every pensioner drawing from it and we agree that steps should be taken to avoid the Fund becoming financially destabilised due to population ageing.

The proposal to move to a Total Contributions Approach is also grounded in improving the fairness of the State pension and is again welcome. Under the current averaging system, a person can qualify for a full State Pension (Contributory) based on a small number of years' payments (currently as little as 10 years' contributions is required) provided they have no gaps in their record, whereas a person with more than 10 years' contributions, but with a significant gap in their record, might be paid a reduced rate. The Roadmap proposes to introduce an approach in which a full State Pension (Contributory) will be available to all people with a full record of 40 years' social insurance contributions, with pro-rata payments for people with less than 40 years of contributions

Equity is also referenced in the context of the proposed review of tax incentives.

In our view, when assessing the fairness and equity of our pension system it is important to consider the overall pension system combined and not each part of it in isolation. This is a critical point. The three pillars of our pension system are aiming to achieve different things and deliberately favour some groups over others. While it is the case that marginal rate tax payers generally benefit more from tax incentives than lower paid workers, the State pension, with its combination of a flat rate benefit and uncapped contributions linked to a person's salary, is heavily redistributive in favour of the lower paid. As noted in section 3.7 of this paper, the 2012 research carried out by Deloitte for The Society of Actuaries in Ireland and Publicpolicy.ie concluded that Pillar 1 and Pillar 2 combined was progressive.

Some have called for a significant redistribution of the existing Pillar 2 and Pillar 3 tax incentives towards the lower paid for equity reasons. However, this does not factor in the redistributive effect of the Pillar 1 State pension, and as noted previously, would run directly counter to addressing the main problem with Pillar 2 and Pillar 3 i.e. that many middle income earners are not saving enough to maintain their standards of living in retirement.

6. Objective 6: Reducing Pension Charges

The Roadmap references pension charges in a number of areas and puts forward several measures to achieve cost savings for the benefit of pension savers.

The pension system in Ireland is far too complex with too many variations in regulations and tax treatment applying to different savings vehicles and the Society has long called for changes to simplify pension provision. The following sets out our view on specific proposals in the Roadmap that could impact favourably or unfavourably on pension charges:

- General drive for simplification – We welcome the stated drive for simplification of pensions although are somewhat wary of the degree to which this can be achieved at this point given the major complexity already embedded in legislation and in Revenue rules.

- Rationalisation of the number of schemes – The Roadmap notes the disproportionate number of schemes in Ireland and the inclusion of steps to reduce this greatly and to target greater economies of scale is sensible. The Roadmap mentions promoting greater use of master trusts for defined contribution arrangements. It should not be assumed that master trusts will automatically deliver the rationalisation of schemes that is hoped for and it would be beneficial to learn from the experiences with master trusts in other jurisdictions including in relation to what has worked well and what has not.

- Approved Retirement Funds – The Roadmap notes that ARFs are not regulated as a pension product, and that there is a wide variation in charges borne by the customer. With the increasing move to defined contribution schemes and the strong preference among retirees for the ARF option, this is an important area. The Society is supportive of a broader review of options for the decumulation phase being carried out, including potentially maintaining pooling arrangements into retirement, which has the potential to generate cost efficiencies.

- Proportionality for small and medium sized schemes – The Roadmap outlines a number of new measures on the horizon mainly in the areas of governance and supervision arising from the IORP II Directive. While welcoming the focus on improved governance and risk management, it is essential to recognise the position of smaller schemes. The application of the new requirements to smaller schemes needs to be done in a measured way. Many defined benefit schemes are seeking to manage the run off of their benefit commitments in an orderly way. It would not be a good outcome for pension scheme members in small and medium sized schemes, if the imposition of a greatly increased regulatory burden were to trigger significantly adverse consequences such as scheme wind up.

- Design and operation of automatic enrolment – The operation of an automatic enrolment system requires the introduction of a number of different design features which would not apply in a simpler mandatory scheme. We have referenced some of these previously. There is a very significant risk that such features, if not developed properly, may greatly increase the cost of operating the scheme. It is therefore essential that a very rigorous cost/benefit analysis be carried out on all design aspects of the scheme and that there be a bias towards simplification in the design and operational requirements when such a scheme is launched.

7. Objective 7: Supporting Fuller Working Lives

The Roadmap contains a number of measures which reflect the increasing reality that as we live longer many people will wish to continue working to an older age and make a positive contribution to society through their work.

The inclusion of proposals to support a positive ageing environment is welcome. Such measures include:

- Flexibility in drawing the State pension – Providing citizens with the flexibility to defer the commencement of the State pension, with actuarial uplift to the benefit to allow for late payment, will be a positive development and accords with a recommendation from the Society in its Submission to the Department of Social and Family Affairs on the Green Paper on Pensions May 2008. [24]
- Retirement ages – Differences between the compulsory retirement age in an employment contract and the age at which State pension becomes payable have caused difficulty, and the steps already taken and proposed to clarify the requirements in this area and to provide increased flexibility are welcome.
- Drawdown rules - The wide variation in drawdown rules that apply to different pension arrangements is described well in the Roadmap, including in relation to the ages at which pension savings can be accessed. It would be very worthwhile if, as proposed, the provisions could be simplified and modernised.
- Combining retirement, work and pensions – To a very significant extent, the existing rules around pensions stemmed from the typical situation in the past where retirement was associated with a complete cessation of work. This, however, is increasingly at odds with the reality for many people who may want to continue with some level of work while also perhaps drawing down some of their pension benefits. The Roadmap proposes reviewing the rules to allow greater flexibility in this area which will be a positive outcome if it can be achieved.

24 https://web.actuaries.ie/sites/default/files/story/2008/05/Submission_to_the_Department_of_Social_and_Family_Affairs_on_the_Green_Paper_on_Pensions/080528_sai_reponse_to_green_paper_on_pensions.pdf

8. Summary of Key Points

The Society welcomes the production of the Pensions Roadmap and looks forward to contributing to the discussion on the future development of pension provision in Ireland, through future consultations and through providing input as the detail of the various proposals emerges.

In this paper, we have sought to set out what we believe are key factors to consider at this early juncture, mapped to the main objectives underpinning the Roadmap.

The following table summarises the main points we have set out:

Key Roadmap Objective	Key Points of Note	Section
1. Protecting against poverty	• Maintaining the State pension at a set adequacy level is central to the objective of protecting against poverty.	1
2. Ensuring our pension systems are sustainable	• We welcome the variety of measures set out that focus on ensuring sustainability of the State pension and we look forward to the various measures aimed at enhancing sustainability of private sector schemes being progressed.	2
3. Sustaining personal living standards in retirement	• Increasing coverage and adequacy of supplementary pension provision are both essential to ensuring personal living standards are sustained in retirement.	3
	• To focus initiatives, the Society advocates clear replacement income targets. The long-standing 50% replacement income ratio, with a floor of 34% of national average earnings and the limit effectively imposed by the Standard Fund Threshold, is objective and could be set as a target. More research is required to ascertain if it is an adequate target.	3.1
	• The introduction of an automatic enrolment scheme should help coverage.	3.5
	• In the absence of a mandatory scheme, tax incentives are key to encouraging people to save for their retirement.	3.7
	• Issues with achieving a target percentage replacement ratio are most pronounced with middle income earners. Reducing tax incentives would run directly counter to improving the current situation with this grouping.	3.4, 3.7
	• The existing tax system is highly progressive, even more so if the redistributive nature of the PRSI/State pension system is taken into account.	3.7
	• There is a need to distinguish between the core Exempt-Exempt-Taxed pension tax relief system and social policy decisions which may indirectly increase the value of tax incentives.	3.7
	• Reductions in tax relief could have very significant knock-on implications if employer contributions were treated as BIK, particularly so in the public sector.	3.7

	• A move to an SSIA-type approach may be easier for people to understand than the current tax relief system. However, a 2% State credit for every 6% contribution would be equivalent to 25% tax relief. This would lead to an increase in costs to the Exchequer in respect of those who do not pay tax or pay at 20%, and, for higher rate tax payers, a reduction in the incentive to save. • Adopting a SSIA-type approach for an automatic enrolment system does not necessarily mean it should apply to other pension savings. There are precedents in other countries for operating dual retirement saving systems. The Society supports a flexible approach if it helps encourage people to save for their retirement. • The Society recommends a rigorous cost/benefit analysis for all features of the proposed new automatic enrolment scheme and adoption of a bias towards simplicity of design and operational requirements.	3.7 3.8 6
4. Maintaining an appropriate level of cost for the Exchequer	• The Society's view is that cost control should cover all aspects of the pension system, including discretionary practices in public sector pensions. • The Society points out the need to distinguish, in the proposed review of costs, between the cost of tax incentives for pension saving and the costs of social policy measures which have been put in place to benefit older people.	4
5. Achieving greater equity and fairness	• We welcome the inclusion of key actions to achieve greater intergenerational equity in the State pension system. • In considering fairness and equity elsewhere, decision-makers should consider the whole system and not individual parts of it in isolation. • Specifically on the point regarding the fairness of the distribution of tax reliefs, it is appropriate to also factor in the redistributive effects of the PRSI/State pension system.	5
6. Reducing Overall Pension Charges	• The Society welcomes measures to simplify pensions and does not favour disproportionately applying onerous new requirements on small to medium size schemes as part of the implementation of the IORP II Directive. • The automatic enrolment scheme must operate in a cost-effective way so that charges are minimised.	6
7. Supporting Fuller Working Lives	• The Society welcomes the focus on this area and the various initiatives proposed.	7

Appendix 1: The Standard Fund Threshold

The Taxes Consolidation Act 1997 deals with the limit on tax-relieved pension funds. The legislative provisions impose a maximum allowable retirement pension fund for tax purposes. These provisions operate by imposing a lifetime limit, or ceiling, on the total capital value of pension benefits that an individual can draw in his or her lifetime from tax-relieved pension products where those benefits are taken, or come into payment, for the first time on or after 7 December 2005 (benefits which came into payment prior to 7 December 2005 are ignored). This limit is called the Standard Fund Threshold (SFT) and is currently €2m.

Revenue has provided a table of factors to convert a defined benefit pension into its capitalised value for tax purposes. The higher the factor, the lower the allowable pension for tax purposes. The factors depend on:

- When the defined benefit was accrued: for benefits earned prior to 1 January 2014, the capitalisation factor is 20. For benefits accrued on or after this date, the factor is higher.
- The age at which the person retires: for benefits accrued on or after 1 January 2014, the factors are higher for younger retirees and lower for older retirees.

Taking account of the factors, the maximum pension benefits before a chargeable excess arises are:

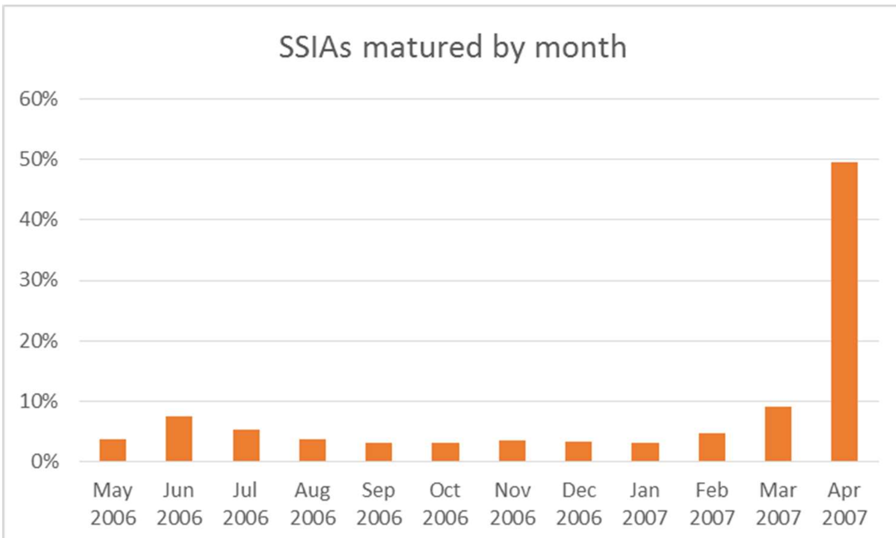
Age of person at retirement	SFT (A)	Capitalisation Factor (B)	Maximum pension (A/B)
Age 50 or under	€2m	37	€54,054 pa
Age 68	€2m	24	€83,333 pa
Age 70 or over	€2m	22	€90,909 pa
All ages*	€2m	20	€100,000 pa

* for any defined benefit pension accrued pre-1 January 2014, the factor is fixed at 20.

Appendix 2: Comparison of the SSIA Experience and Pension Savings

While a SSIA-type Government matching contribution may initially appear more attractive and understandable than the current tax relief system, there are important differences between the SSIAs and a pension scheme:

- The SSIA scheme opened in May 2001, closed in April 2002, and as the SSIAs had been designed to encourage people to save for 5 years, they matured between May 2006 and April 2007. The hard deadline was designed to encourage action. We believe this was an important contributor to their success and, for example, 49.6%[25] of SSIAs were taken out in the last month. We can see the take-up rate by month by looking at the profile of maturities:



- The SSIA was a relatively short-term investment which may have been used by many people to save for large-ticket items such as a house deposit or a car. By contrast, a pension scheme is a very long-term investment that cannot be accessed before retirement
- On maturity, the full SSIA proceeds could be withdrawn as a lump sum without paying tax (although DIRT was payable on interest earned). By contrast, pension money cannot usually be withdrawn in its entirety as a lump sum (as the objective is to provide an income in retirement) and withdrawals are subject to income tax at the marginal rate.

It is also worth noting that a total of 1.08m SSIAs matured. As the total adult (ie over age 18) population in 2005 was approximately 3.0m[26], this suggests that over 60% of the Irish adult population did <u>not</u> take out an SSIA, effectively rejecting free money with a simple bonus and a hard deadline.

In the light of the above, we would caution against assuming that adopting an SSIA type approach will automatically lead to high pension take-up rates.

[25] http://taxpolicy.gov.ie/wp-content/uploads/2011/04/0613.pdf
[26] http://www.cso.ie/en/media/csoie/releasespublications/documents/population/2009/popmig_2009.pdf

Appendix 3: Assumptions Underpinning the Pensions Authority Pension Calculator

1. All values shown are in present day money terms, i.e. the calculations aim to take account of inflation between now and the person's retirement date. Inflation of 2.5% pa has been assumed.

2. The person is assumed to be eligible to receive the State pension from his/her State pension age (assumed to be age 68). The current State pension is €12,695 per year (or €243.30 per week).

3. The calculator assumes that the retirement fund pays an annual management charge of 1% per annum. In addition, a 5% contribution charge is assumed to be paid on each regular contribution (based on Standard PRSA fees and charges maximum limits).

4. Regular monthly contributions are assumed to continue to the State pension age and are assumed to increase by 2.5% per annum.

5. Investment return is assumed to be 4% per annum after expenses until 10 years before the retirement date. The investment return is then assumed to reduce annually to the post-retirement interest rate over the 10 year period prior to retirement. According to the Pensions Authority, this is intended to reflect a common investment strategy of defined contribution pension scheme members and allows for a reduction in exposure to investment risk during the 10 year period leading up to retirement.

6. The annuity rate used to calculate the pension at retirement uses a post-retirement interest rate of 2% per annum after expenses. The pension is assumed to increase at 1.5% per annum in retirement and is assumed to be guaranteed to be paid for a minimum of 5 years.

7. The annuity rate used in the calculations is a long-term average rate. The actual annuity rate at retirement may differ from the annuity rate used in the illustrations.

8. Mortality post-retirement is assumed to be in line with 42% of the ILT15 table for males and 50% of the ILT15 table for females with allowance for future improvements in mortality. Under this mortality table, the average life expectancy at age 65 for somebody retiring in 2038 is approximately 26.4 years (male) and 27.6 years (female).

The Pensions Authority Pension Calculator assumes a spouse's pension on death in retirement of 50%. The analysis in this paper has focused on the position of a single person (considering the target replacement ratio, how much should be saved, etc). To ensure consistency, the calculations in this paper have assumed a single life annuity is payable in retirement.