PENSIONS AND LIFETIME SAVINGS ASSOCIATION

RETIREMENT INCOME ADEQUACY

GENERATION BY GENERATION

NOVEMBER 2016

ACKNOWLEDGMENTS

Steering group

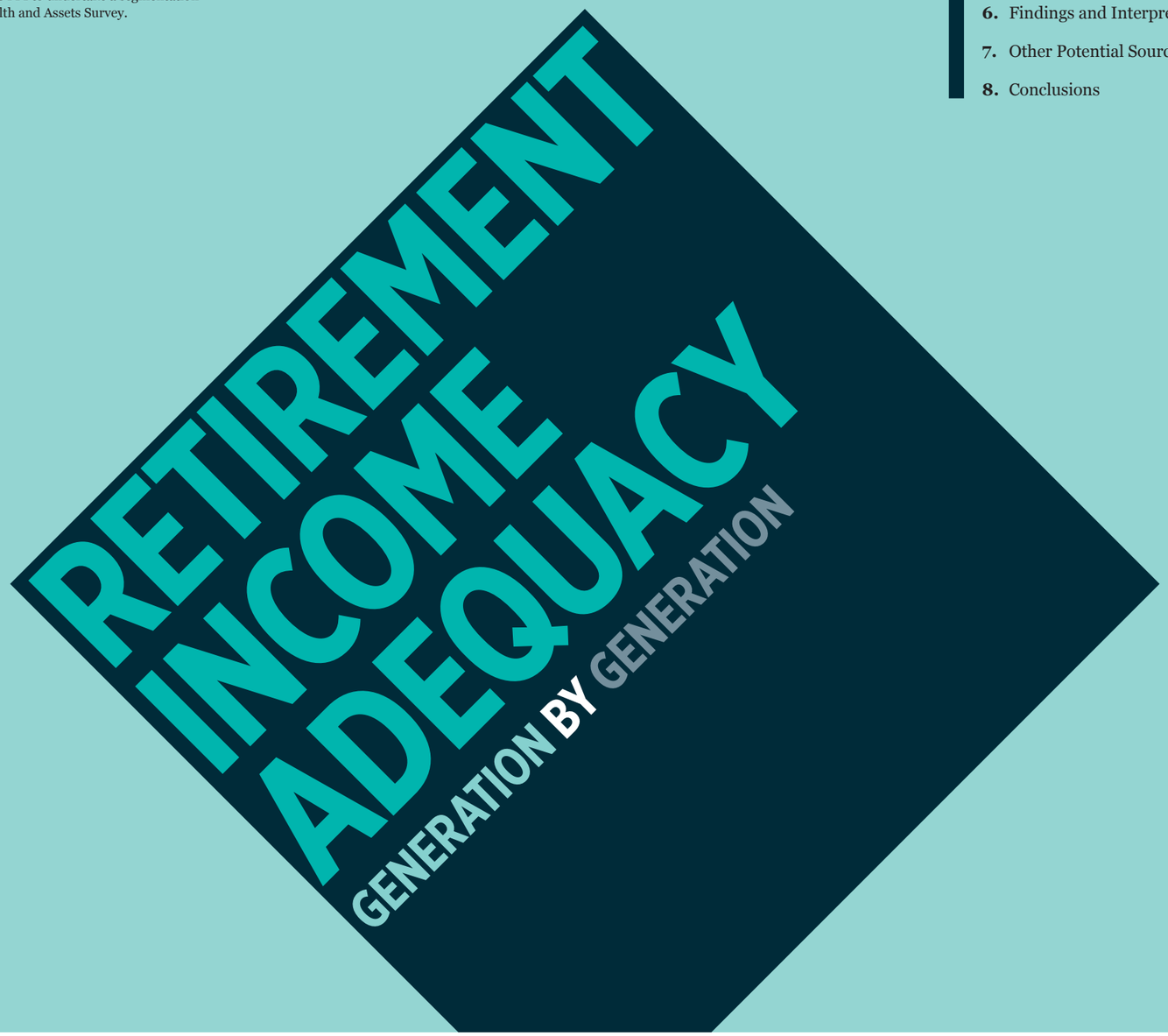
This work was supported by a steering group of industry experts: Andy Cheseldine, Partner, LCP; Cormac O'Dae, Associate Director, Head of Consumption and Saving, IFS; Darren Philp, Director of Policy and Market Engagement, the People's Pension; Tim Sharp, Policy Officer, Economics and Social Affairs Department, TUC; Andy Tarrant, Head of Policy and Government Relations, the People's Pension; and Carol Young (Chair), Head of Pensions and Benefits, RBS.

Hymans Robertson

The PLSA worked in collaboration with Hymans Robertson using their Guided Outcomes ® methodology to undertake the modelling for this work. With special thanks to Chris Morton and John Taylor for their dedication to this project.

PPI

We commissioned the PPI to undertake a segmentation analysis of ONS' Wealth and Assets Survey.



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1. EXECUTIVE SUMMARY

THIS NEW ANALYSIS SUGGESTS THAT AUTOMATIC ENROLMENT WILL DELIVER A REAL IMPROVEMENT IN THE RETIREMENT OUTCOMES OF MILLIONS OF WORKERS IN BRITAIN BUT THERE IS STILL MUCH MORE TO DO TO ENSURE THEY RECEIVE AN ADEQUATE RETIREMENT INCOME. THE PLSA HAS SUPPORTED AUTOMATIC ENROLMENT STRONGLY SINCE ITS INCEPTION AND IS COMMITTED TO ENSURING IT REACHES ITS POTENTIAL.

The Government estimates that around 10 million people will be newly saving as a result of automatic enrolment by 2018[1]. For the population covered by our modelling, we estimate that there will be 7.2 million individuals who were not contributing to a pension in 2013, and will therefore be newly saving into DC schemes as a result of automatic enrolment. We estimate that on average, individuals will be an additional £2,500 per year better off in retirement (in today's prices) as a result of being automatically enrolled; for those in the 22 to 34 age group, they would be better off in retirement on average by around £4,000 per year (in today's prices).

Despite this progress, as things stand, many individuals are not on target to attain the Pensions Commission's[2] definition of an adequate retirement income – 67% of pre-retirement income for a median earner. This is not, in the main, the result of current policy failing to deliver its objectives. The target for statutory minimum contributions, 8% of qualifying earnings, was intended to achieve a replacement rate of around 45%, with the remaining 15-22% being made up of additional voluntary contributions. Rather, many people are not on track to achieve an adequate retirement income due to a combination of past developments, such as the gradual decline of DB pensions from the mid-1990s; the failure of attempts to stimulate voluntary saving in the 1990s and early 2000s; rising longevity; and the impact of relatively poor market conditions.

As we approach the 2017 Review of Automatic enrolment, the completion of phasing contributions up to 8% in 2019, and the completion next year of the State Pension Age (SPA) review[3], we believe now is the right time to assess the adequacy of retirement income in Britain.

The challenges are great, not least because of the high cost of an adequate pension. Under current financial conditions, for an individual to match the c. £8,000 they can expect to receive from the new State Pension, they would need to accumulate a pension pot of around £280,000[4]. However, for someone aged 55-64, the average value of an individual's total DC savings is currently only £25,000[5].

In this analysis, we have used the Wealth and Assets survey[6] ("WAS") to provide a detailed snapshot of the nation's pension wealth and contributions in 2012-14. Overlaying this information with assumptions about the subsequent progression of automatic enrolment[7], we then used Hymans Robertson's Guided Outcomes ® methodology to project likely retirement incomes for nearly 800 stylised individuals, obtained by segmenting the c. 40,000 individuals in the survey into representative groups and scaling them up to a population level of c. 25.5 million. We then compared these against two markers of adequacy: an updated version of the replacement rates used by the Pensions Commission and the Joseph Rowntree Foundation's minimum income standard[8].

1 Workplace pensions: Update of analysis on Automatic enrolment, Department of Work and Pensions, 2016: **https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/560356/workplace-pensions-update-analysis-automatic enrolment-2016.pdf**

2 A New Pension Settlement for the Twenty-First Century: The Second Report of the Pensions Commission, 2005: **http://webarchive.nationalarchives.gov.uk/+/http:/www.dwp.gov.uk/publications/dwp/2005/pensionscommreport/main-report.pdf**

3 John Cridland CBE was commissioned by the UK Government to undertake the "Independent Review of the State Pension Age" in 2016. The terms of reference for this review can be found here: **https://www.gov.uk/government/publications/state-pension-age-review-terms-of-reference**.

4 This figure was derived using the Money Advice Services retirement income calculator, which can be found here: **https://www.moneyadviceservice.org.uk/en/tools/pension-calculator .**

5 Wealth and Assets Survey, 2012-2014, Office for National Statistics: **http://webarchive.nationalarchives.gov.uk/20160105160709/http://www.ons.gov.uk/ons/rel/was/wealth-in-great-britain-wave-4/2012-2014/index.html**

6 Wealth and Assets Survey, 2012-2014, Office for National Statistics: **http://webarchive.nationalarchives.gov.uk/20160105160709/http://www.ons.gov.uk/ons/rel/was/wealth-in-great-britain-wave-4/2012-2014/index.html**

7 Details of these assumptions can be found in the appendix accompanying this report.

8 While there is much academic debate over the merits of replacement rates as a benchmark for adequacy, we believe that the benefits of adopting an approach that allows comparability with previous work outweighs other considerations.

BOX 1: DEFINITIONS OF ADEQUACY USED IN THE PROJECT

We adopted two commonly used definitions of adequacy for the purposes of this report:

Pensions Commission's Target Replacement Rate: for an individual earning a median income of £27,456 the replacement rate of 67% equates to a retirement income of £18,395.
Joseph Rowntree Foundation's Minimum Income Standard (JRF MIS) would require an income of £9,500 (in 2016).

Of 25.5 million people in employment[9] we found that only around 6%, 1.6 million people are at high risk of falling short of the minimum income standard, reflecting the expected contribution of the new state pension. People in these circumstances are most likely to be those over 55 (the so called 'Baby Boomers') who only have limited savings. In contrast, just over 50%, or 13.6 million people, are at high risk of not meeting their target replacement rate.

BOX 2: AGE COHORTS USED IN THE PROJECT

In order to simplify the data analysis we divided individuals into three age cohorts:

- Millennials: aged between 22 and 34
- Generation X: aged between 35 and 54
- Baby Boomers: aged between 55 and 64

Prospects for adequacy measured by replacement rates are dominated by the type of pension scheme of which people are currently members. Over 90% of people currently accruing benefits in defined benefit (DB) schemes are likely to hit their target replacement rate, given our simplifying assumption that they will continue to accrue benefits until they reach SPA (we have excluded the possibility of DB scheme failure for the purposes of this analysis). The PLSA's DB Taskforce[10] has outlined the severe pressures facing DB schemes, including rising longevity, growing regulation, growing deficits and structural weaknesses. In contrast, over 90% of DC savers are at high risk of not achieving their replacement rates, given the current very low levels of contribution and the lack of any evidence to suggest savers will voluntarily increase them above automatic enrolment levels.

In order to better understand what might "move the needle" in terms of helping people in DC pensions get close to the project's adequacy benchmarks, we used Hymans Robertson's Guided Outcomes ® methodology to model the impact on adequacy of four different scenarios. These are not fully worked up policy choices; they are intended as illustrative of what happens to adequacy under various circumstances. These are:

- Scenario 1: Increasing contributions to 12% of Qualifying Earnings from 2019;
- Scenario 2: Increasing contributions to 16% of Qualifying Earnings from 2019;
- Scenario 3: Increasing contributions to 14% and removing Qualifying Earnings upper and lower limits from 2019;
- Scenario 4: Increasing contributions to 12% of salary from 2019, removing the Qualifying Earnings upper and lower limits from 2019 and increasing working life by five years.

These scenarios impact differently on the various groups we identified in our segmentation of Britain's working population. The dominant distinguisher of outcomes relates to age, particularly, the implications for the three generations in the working population: Millennials, Generation X, and the Baby Boomers. Recent demographic shifts, changes in the availability of workplace pensions and in workplace pension policy have affected each generation differently and this is reflected in our results.

9 This figure derives from the PLSA/PPI analysis of the WAS, wave 4, ONS, 2012-2014.

10 These issues and the choices faced by government, schemes and sponsors are discussed in more depth in the interim report of the PLSA's DB taskforce, 2016: **http://www.plsa.co.uk/PolicyandResearch/DB/DBTaskforce.aspx.**

Millennials: the automatic enrolment generation

Those furthest away from retirement will be the first to experience the UK's pension system as intended by the reforms of the last decade. This cohort benefits from the combination of the full basic state pension and savings resulting from automatic enrolment over a full working life. As things stand, this combination will not on its own get this group to an adequate retirement income as defined by the Pensions Commission's proposed target replacement rates. Automatic enrolment is expected to generate the level of retirement income originally envisaged for this group[11], but there is no evidence that Millennials are accruing the levels of additional voluntary savings the Commission anticipated.

Our findings show that higher pension contributions, at least 12% along with a later retirement date, could meet the gap created by the absence of voluntary additional saving and would probably bring this group close to an adequate retirement income as defined by Pensions Commission replacement rates. This finding goes against the grain of current public commentary on the life chances Millennials will never be able to afford to retire. There is no room, however, for complacency, Millennials face new challenges[12] in saving, in particular, the high cost of housing and accommodation, and many will have additional costs, such as student debt.

Generation X: the in-between generation

This generation's story is defined by two events: the first is the decline of DB pensions and the subsequent failure of policies in the 1990s and early 2000s intended to get more people to save voluntarily in DC. The second is the roll-out of automatic enrolment. This meant that many of these individuals went through the early phases of their working life without accruing any pension savings. Many are now making pension savings at too low a level to reverse this shortfall.

The distance to adequacy is much greater for this group than for the Millennials. Albeit, automatic enrolment will make a difference to their overall level of retirement income and some higher earners will have legacy state second pension (S2P) entitlement that is worth more than the state pension assigned to them in our modelling. A strategy focused purely on increasing pension contributions is unlikely to succeed, so to achieve an adequate income this generation may need to work longer and, if available, utilise property or other forms of accumulated wealth to derive a higher retirement income. We recognise that for many individuals faced with ill health or working in certain manual occupations, working longer is simply not a possibility. This group need to be alerted to the potential challenges they are facing and the opportunities, even if limited, for improving their retirement income. Ultimately, this is a policy challenge for government to address with some urgency.

Baby Boomers

The situation for the Baby Boomers reflects the long-running inequality that has been created by the UK pensions system. Some people, especially those who have accrued DB pension entitlement, have very good retirement income prospects but others, around half, have quite poor ones. Even though the latter group may now have been automatically enrolled, the short period (10 years or less) they have left to retirement means that they will depend largely on their state pension entitlement.

There is little that can be done in the time left before retirement for this group to substantially alter their position. While increasing pension contributions for this group will increase the amount of cash available during retirement it is unlikely to materially alter their income replacement rate. Only working longer is likely to make a real difference as this will both increase the amount saved at the same time as it decreases the amount of time in which their assets will need to be used up; though we note again that this may not be possible for all. More positively, a majority in this generation have some property wealth which might be drawn upon to support their income.

11 The Pensions Commission intended that automatic enrolment into a workplace pension should contribute about 15 per cent of pre-retirement earnings for a median earner. As noted above, together with a full state pension entitlement, this would give an individual a total replacement rate of 45 per cent.

12 The PLSA's millennials research', 2016 explores these challenges in more detail: **http://www.plsa.co.uk/PressCentre/Press_releases/0521-18-35-year-olds-under-pressure-stuck-saving-for-the-short-term-despite-long-term-ambitions.aspx**

Conclusions

Automatic enrolment is working well and must continue. It is on a path to substantially raise the retirement incomes of many people in the UK. It will not though, as things stand, bring everyone up to the replacement rates suggested as adequate by the Pensions Commission.

The Commission proposed that automatic enrolment should deliver around 45% of previous earnings for a median earner and that the remainder of their proposed target replacement rate of 67 % would be achieved through voluntary saving[13]. While those who have accrued a reasonable amount of DB pension are on course to achieve the adequacy targets, for those who mainly have DC pension savings, there is a gap.

It is clear therefore, that default automatic enrolment contributions will need to rise in the future from the current target of 8% of qualifying earnings up to at least 12% of salary and that it may also be necessary to supplement this with additional voluntary contributions and an increase in their working lives. This runs counter to the general view that "Millennials will never be able to afford to retire".

We believe that the timing and pace of change should be considered after the current phased rise of contributions from today's 2% of qualifying earnings up to 8% by 2019 is completed. This would also be the right time to consider the right way to share the cost of additional contributions between employers and the employee. To take decisions on this earlier would deny Government the chance to see how the phased increase in contributions works in practice and whether it throws up challenges or opportunities.

For older savers, those in Generation X and the Baby Boomer generation, additional saving at 12% of salary will help improve retirement incomes but will not achieve target replacement rates. To achieve an adequate income in retirement they will almost certainly need to work longer and, where they have it, use other forms of wealth, such as property wealth.

Issues of how much and when to increase contributions for Millennials, and for other generations with less time to save, are complex and can be contentious. We believe these issues cannot be worked through in the time scale currently planned for the 2017 review of automatic enrolment given the need for significant engagement with a diverse range of stakeholders, further research, and the current critical stage in the roll out of automatic enrolment. As part of the 2017 Automatic enrolment Review the Government should instead commit to the creation of an independent commission with a remit to:

- review existing measures of adequacy and make recommendations for a national standard or standards which reflects the changing nature of retirement;
- make recommendations for increasing minimum contribution levels to at least 12% of salary including how and when this change should be made, and how it should be divided between worker and employer contributions; and
- make additional recommendations to improve the situation of older savers who have less time to benefit from an increase in contribution rates.

13 A New Pension Settlement for the Twenty-First Century: The Second Report of the Pensions Commission, 2005: **http://webarchive.nationalarchives.gov.uk/+/http:/www.dwp.gov.uk/publications/dwp/2005/pensionscommreport/main-report.pdf**

2. THE PLSA

WE'RE THE PENSIONS AND LIFETIME SAVINGS ASSOCIATION; THE NATIONAL ASSOCIATION WITH A NINETY YEAR HISTORY OF HELPING PENSION PROFESSIONALS RUN BETTER PENSION SCHEMES. OUR MEMBERS INCLUDE OVER 1,300 PENSION SCHEMES WITH 20 MILLION MEMBERS AND £1 TRILLION IN ASSETS, AND OVER 400 BUSINESSES. THEY MAKE US THE VOICE FOR PENSIONS AND LIFETIME SAVINGS IN WESTMINSTER, WHITEHALL AND BRUSSELS.

3. INTRODUCTION

THIS IS AN IMPORTANT TIME FOR PENSIONS POLICY. AUTOMATIC ENROLMENT IS IN ITS INFANCY AND THERE IS A REVIEW OF THE POLICY SCHEDULED FOR EARLY 2017. DB PENSIONS ARE UNDER INCREASED PRESSURE AND THE STATE PENSION AGE (SPA) IS UNDER REVIEW. IN ADDITION, THE LIFETIME ISA OFFERS A NON-PENSION ALTERNATIVE FOR RETIREMENT SAVINGS. IN THIS CHANGING CONTEXT, THIS REPORT AIMS TO PROVIDE A BASELINE FOR THE DEBATE ABOUT THE FUTURE OF AUTOMATIC ENROLMENT AND THE ADEQUACY OF RETIREMENT SAVING IN BRITAIN. WE HOPE TO HELP BUILD A CONSENSUS AROUND THE CHALLENGES OF THE CURRENT REGIME FOR EACH GENERATION OF SAVERS AND TO IDENTIFY THE ACTIONS THAT MAY BE NEEDED TO DELIVER THE LEVEL OF RETIREMENT INCOME PROPOSED AS A TARGET BY THE PENSIONS COMMISSION.

In this project we took survey data from wave 4 of the Wealth and Assets Survey (WAS), which shows levels of pension saving and entitlement and projected it forward in time using an economic model in order to estimate what people will have to live on if current trends continue.

This report is divided into four main parts:

- Section four outlines our definition of adequacy. We use the Joseph Rowntree Foundation minimum income standard (JRF MIS) and the Pensions Commission's suggested target replacement rates (TRR) as the basis for this project. (However, we believe further discussion on how best to define pension adequacy for policy purposes is needed.)
- Section five is a summary of pensions policy and adequacy in the context of the Pensions Commission's report and how Governments have responded.
- Section six outlines the core findings of our research and some background information on the methodology used and data sources.
- Section seven looks at other aspects of lifetime saving and what other sources of wealth people in Britain can draw upon for their retirement income.

The context for this work is that pensions policy has undergone 20 years of rapid change. We have seen the decline of future DB provision and signs that accrued DB rights are less certain. We have seen the failure of purely voluntary approaches to encouraging people to save in DC products. And we have seen the early success of automatic enrolment on which any future pensions policy will have to build.

Based on our assessment of the future pension incomes of today's pension savers, it is clear that further discussion and action will be needed before everyone in society is to achieve an adequate retirement income.

4. ADEQUACY

Policy makers generally use two approaches to define adequacy:

- a threshold above which income is considered adequate, for example a defined poverty line or the income necessary to purchase a certain level of income; or
- a figure related to pre-retirement income, in particular, a percentage replacement rate.

From a policy perspective, though, two things matter as much as any other factor. The first is comparability: it is important to be able to look backwards, compare the past with the present and judge progress or lack thereof. The second is applicability: it is important to be able to apply research-driven insight to policy.

For these reasons, this work uses two definitions of adequacy, both of which fit the criteria given above. The Joseph Rowntree Foundation minimum income standard, which offers a clear and objective baseline. The second is the Pensions Commission's target replacement rates. These give comparability with the Pensions Commission's modelling work.

There is, though, much criticism of replacement rates as a policy tool. Critics argue that replacement rates do not accurately reflect what people want or need in retirement. They assume a consistent, inflation linked and even spending profile through retirement, where in reality income needs may fluctuate. They also assign a single income level to entire income cohorts irrespective of individual preferences. In light of this, we believe there would be value in a future discussion on whether replacement rates are the best tool to inform future policy.

A MINIMUM INCOME STANDARD - JOSEPH ROWNTREE FOUNDATION

A minimum income standard is an income set at a minimum socially acceptable level. This may well be in excess of any means tested assistance level. There are a variety of ways of defining what should be the relevant threshold. One way is to define a 'basket' of goods that is required to achieve a certain standard of living in retirement - either a basic set of goods that enables an individual to avoid poverty or an enhanced set of goods that enables an individual to achieve a certain quality of life over and above the poverty threshold.

The Joseph Rowntree foundation in association with Loughborough University, has produced a yearly study since 2008 – 'living standards, poverty and inequality in the UK' setting out what they see as the minimum income required to live adequately in the UK. This is known as the Minimum Income Standard (MIS) with the underlying methodology explained by the research team as:

"The MIS is based on detailed research with groups of members of the public specifying what items need to be included in a minimum household budget. The groups are informed by expert knowledge where needed, for example on nutritional standards. The results show how much households need in a weekly budget and how much they need to earn in order to achieve this disposable income.[14]"

14 " What is MIS"?, Loughborough University Department of Social Policy, 2016: **http://www.lboro.ac.uk/research/crsp/mis/whatismis/**

In 2015 the study found that the minimum income standard for single people was £17,100 gross salary and for couples with two children it was £20,000 each. For a single pensioner, the minimum income standard was set at £9,500.

This standard is underpinned by qualitative research that explores the minimum standard of living acceptable to the group and then extrapolates an income figure based upon this. Thus the basket of goods underpinning the income figure is more than a judgement by the researchers involved, it derives legitimacy from the views of pension savers themselves.

REPLACEMENT RATES – PENSIONS COMMISSION

This approach looks at an individual's income approaching retirement and then compares it to their income in retirement. This indicates whether an individual is able to achieve a standard of living in retirement that is broadly comparable to that the individual had during their working life. Since income needs in retirement are typically less than income needs in working life, the replacement rate will typically be a proportion of the individual's income in retirement.

This was the approach used by the Pensions Commission in 2003-5. The Commission's replacement rates constitute a best judgement of what they thought should be an adequate income in retirement. The Commission undertook market research into the subject and the rates outlined below are broadly but not exactly consistent with their findings.

Using these benchmarks means that in today's prices, a median earner with earnings of £27,456 per annum requires an income of £18,395 if the Pensions Commission benchmark is used[15]. That is 67% of pre-retirement income, assuming the earner had no income from any sources other than employment.

The Pensions Commission benchmarks of adequacy are:

TABLE 1: PENSIONS COMMISSION BENCHMARK REPLACEMENT RATES[16]

PRE-RETIREMENT GROSS EARNINGS (2004)	PRE-RETIREMENT GROSS EARNINGS (2016)	REPLACEMENT RATE THRESHOLD (%)
>£9,500	>£12,600	80%
£9,500 to £17,499	£12,600 to £23,299	70%
£17,500 to £24,999	£23,000 to £33,199	67%
£25,000 to £39,999	£33,200 to £53,199	60%
£40,000 or more	Over £53,200	50%

15 Annual Survey of Hours and Earnings, Provisional Results, Office for National Statistics, 2015: **http://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/earningsandworkinghours/bulletins/annualsurveyofhoursandearnings/2015provisionalresults**

16 Pension Commission, A New Pension Settlement for the Twenty-First Century: The Second Report of the Pensions Commission, 2005

5. PENSIONS COMMISSION: ADEQUACY, PROPOSALS AND THE POLICY RESPONSE

ADEQUACY – THE PENSIONS COMMISSION'S ASSESSMENT

Faced with increasing concerns about both the cost and value of pension provision, in 2003 the Labour Government established the Pensions Commission. It outlined a growing crisis in pensions adequacy in Britain and identified two main reasons.

The first reason was endemic problems with workplace pensions. DB pensions were in decline, principally as a result of increasing life expectancy but also as a result of declining investment returns and shifts in regulatory policy. The Commission went further and pointed out that there had never been a pensions "golden age" for many and that the distribution of DB assets was highly uneven – at any one time, less than half the working population benefitted from any form of workplace pension. They also argued that as DB declined, the share of assets would become even less equal and that policy initiatives aimed at encouraging voluntary pension saving had not succeeded, and would be unlikely to do so in the future.

The second reason was the low value of the basic state pension and the consequent growth of means tested supplements to the basic state pension. From inception it had been set below the subsistence level but this did not present a problem for those who also benefitted from a workplace pension or from additional state pension provision in the form of first State Earnings Related Pension Scheme (SERPS) and later the State Second Pension (S2P). However, by the early 2000s, the Pensions Commission found that, in large part due to a decision in the early 1980s to link rises in the basic state pension to price inflation rather than earnings, pensioner incomes were falling further behind those of the rest of the population. In addition, as a consequence, the Government was having to pay out ever larger amounts in means-tested pension benefits.

WHAT THE PENSIONS COMMISSION RECOMMENDED

The Commission's recommendations are laid out in boxes 1 and 2 below. The Commission had come to believe that people would not enrol themselves into a pension of their own choosing but would join if it was made the default option by their employer.

BOX 3: THE PENSIONS COMMISSION - STATE PENSION AND S2P, PREFERRED WAY FORWARD[17]

1. Build on the current two-tier system and recent reforms, accelerating the evolution of S2P to a flat-rate pension by freezing the Upper Earnings Limit for S2P accruals in nominal terms.
2. Index the Basic State Pension (BSP) to average earnings growth over the long-term: ideally starting in 2010 or 2011 as the public expenditure benefit of the rise in women's State Pension Age (SPA) begins to flow through ... making this indexation affordable long-term by raising the SPA gradually, broadly in proportion to the increase in life expectancy, for instance to 66 by 2030, 67 by 2040 and 68 by 2050.
3. Maintain the Reductions in pensioner poverty achieved by Pension Credit, but limit the spread of means testing by freezing the maximum level of Savings Credit payments in real terms (which implies that the lower Savings Credit threshold increases faster than in line with average earnings).
4. Base future accruals to the BSP on an individual and universal (i.e. residency) basis, and improve carer credits within S2P.
5. Accept the consequence that public expenditure on state pensions and pensioner benefits must rise from 6.2% of GDP today to between 7.5% and 8.0% by 2045 (depending where SPA reaches in 2050).
6. Ideally introduce a universal BSP for pensioners aged over 75.

This approach, with a minimum legal level of contributions on a band of earnings would, in conjunction with the state entitlement, lead to a replacement rate of around 45 per cent for a median earner. This would stand in contrast to a replacement rate of around 30 per cent absent automatic enrolment. Further voluntary savings would move the replacement rate to 60-67%[18].

BOX 4: THE PENSIONS COMMISSION, WORKPLACE PENSIONS RECOMMENDATIONS[19]

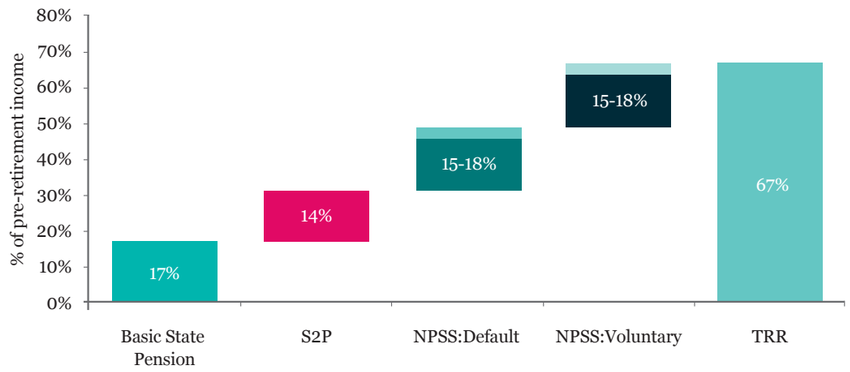
1. All employees to be automatically enrolled into funded pension saving but with the right to opt-out, and with a modest compulsory matching employer contribution, into either:
   - High quality employer pension schemes; or
   - A newly created National Pension Savings Scheme (NPSS).
2. Minimum default contributions set at about 8% of the earnings above the Primary Threshold and below the Upper Earnings Limit:
   - 4% out of individual post-tax earnings;
   - 1% paid for by tax relief; and
   - 3% compulsory matching employer contribution.
3. Contributions collected via PAYE or newly created Pension Payment System.
4. Contributions held in individual accounts and invested at the individual's instructions in a range of funds, including some bulk bought from the wholesale fund management industry, with a default fund for those who make no selection.
5. Additional voluntary contributions above the default level by both employees and employers encouraged; and the self-employed allowed to enter the NPSS on a voluntary basis.
6. Target Annual Management Charge of 0.3% or below.

17 Page 21 of the Pensions Commission interim report. A New Pension Settlement for the Twenty-First Century: The Second Report of the Pensions Commission, 2005: **http://webarchive.nationalarchives.gov.uk/+/http:/www.dwp.gov.uk/publications/dwp/2005/pensionscommreport/main-report.pdf**

18 The Pensions Commission interim report used 67% as the suggested benchmark for a median earner.

19 Page 20 of the Pensions Commission's report. A New Pension Settlement for the Twenty-First Century: The Second Report of the Pensions Commission, 2005: **http://webarchive.nationalarchives.gov.uk/+/http:/www.dwp.gov.uk/publications/dwp/2005/pensionscommreport/main-report.pdf**

FIGURE 1: PENSIONS COMMISSION OUTCOMES FOR A MEDIAN EARNER[20]



THE POLICY RESPONSE

Not all of the Commission's recommendations were enacted. The Labour and subsequent Coalition governments chose to pursue a modified version of the Commission's blueprint for workplace pensions and to adopt an alternative reform package with regard to the BSP and SERPS/S2P.

As a result, while the basic state pension is much higher than the Commission intended and is being uprated in a much more generous manner, S2P has been wound down far faster than the Commission recommended. Thus the main difference is a much more radical and Redistributive reform of the basic state pension. This will primarily benefit those who would not have had a full NI contribution history under the previous regime and lower earners. It will disadvantage those who would have been entitled to a much higher state pension as a result of SERPS/S2P entitlements, the flat rating of that entitlement notwithstanding

The situation in respect of workplace pensions is different. Box 2 shows the Pensions Commission recommendations in respect of workplace pensions. These have been carried into action more or less intact and although there are some important differences, these changes have little impact on the adequacy of savings shown in our modelling.

PENSION SAVING SINCE 2006

At the time of writing, automatic enrolment is proceeding well – opt out rates have been far lower than expected (only around 10%)[21] and employer compliance with the new duties is high. As a result, there has been a major increase in the number of people enrolled into a qualifying workplace pension schemes and saving for retirement. DB provision has continued to decline with almost all schemes outside the public sector now closed to new members and a high number closed to future accrual.

However, as discussed above, in setting the target for automatic enrolment, for a median earner, at around 45%, and not at their proposed target replacement rate of 67%, the Pensions Commission assumed that the shortfall would be made up by voluntary saving. To date there is little evidence of this additional voluntary saving taking place. There has been no dramatic increase in savings in ISAs and the household savings ratio has shown no sign of the sort of overall increase in saving required[22].

20 **http://webarchive.nationalarchives.gov.uk/+/http:/www.dwp.gov.uk/publications/dwp/2005/pensionscommreport/main-report.pdf**. A New Pension Settlement for the Twenty-First Century: The Second Report of the Pensions Commission, 2005: **http://webarchive.nationalarchives.gov.uk/+/http:/www.dwp.gov.uk/publications/dwp/2005/pensionscommreport/main-report.pdf**

21 Automatic enrolment evaluation report, Department of Work and Pensions, 2015: **https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/477176/rr909-automatic-enrolment-evaluation-2015.pdf**

22 Figure three of: Alternative measures of real households disposable income and the saving ratio, Office for National Statistics, 2016: **https://www.ons.gov.uk/releases/**

6. FINDINGS & INTERPRETATION

METHODOLOGY

This section provides a short overview of our research methodology. It is intended to make the findings easier to understand and interpret. A more detailed description of our approach is contained in the appendix.

We began with the Wealth and Assets Survey[23], the most robust source of population level data on wealth and savings relating to Great Britain. We commissioned the Pensions Policy Institute (PPI) to segment the Wealth and Assets Survey for all individuals in employment aged 22 – 64.

The segmentation was based on a number of factors expected to have an impact upon adequacy in retirement: gender, socio economic background, age and tax band. Socio economic background was selected to act as a proxy for likely educational attainment, and tax band to provide greater granularity by earnings. We also split out segments between the employed and the self-employed.

We then grouped the data according to pensions tenure, and whether pension entitlements were retained or still in accrual. This further subdivision gave us 783 segments in total, relating to an estimated 25.5 million individuals. Each segment is represented in the analysis by the typical individual from that segment in terms of pensions wealth and other attributes.

Each segment was then modelled using the Hymans Robertson's Guided Outcomes ® methodology. This is a stochastic projective model, producing 1,000 simulated of scenarios per segment, which allowed us to forecast further pension accrual for each segment. The modelling explored adequacy under a 'base case' and four additional scenarios.

Our base case examined these individuals making the following assumptions about scheme membership:

- Those currently contributing to a DB scheme, continue to contribute to a DB scheme.
- All those contributing to a DC workplace pension, continue to do so at the phased automatic enrolment minimum contribution levels (unless their existing contribution rates exceed this).
- Those not contributing to any pension scheme, but who are currently eligible for automatic enrolment are auto enrolled into DC workplace pension, and contribute at the phased automatic enrolment minimum contribution levels. We assume no one opts out.
- Those not eligible for automatic enrolment but who were existing members of a DC workplace pension scheme, remain in this scheme at their existing contribution rates – which may or may not exceed automatic enrolment.
- All those not eligible for automatic enrolment but not already in a pension scheme remain not contributing to any scheme.
- The self-employed continue to be self-employed, and only contribute to personal pensions where they are currently doing so.
- We assume that all remain healthy and working throughout their life course.
- Our modelling does not explore the impact of career breaks or time out of work although because we are working with real life data we can assume that input data reflects that individuals in some segments may have taken time out of the workforce.

23 For more information on the Wealth and Assets Survey and limitations of this data source please see here: **https://www.ons.gov.uk/economy/nationalaccounts/uksectoraccounts/methodologies/wealthandassetssurveywas**

Our base case set some core parameters for automatic enrolment contribution levels, qualifying earnings bands and retirement age that we varied in our scenario analysis. Our base case was as follows:

- Increases to the automatic enrolment minimum contribution rates would be increased in line with current phasing under automatic enrolment[24]. Contributions must be a total of 2% from an employer's staging date until April 2018 (if later), 5% from April 2018 to April 2019, and 8% from 2019.
- Qualifying earning bands for automatic enrolment would remain in place at current levels. Both the lower and upper limits have been assumed to increase in line with projected RPI, but the upper limit is also subject to a cap on the annual increase of 1.5%, while the lower limit was subject to a cap on the annual increase of 0.5%.
- Everyone works to the SPA, appropriate to their age as per existing timetables for gender equalisation and increases to the SPA[25].

As well as these parameters, there were also a number of assumptions applied as part of the Guided Outcomes® methodology. The key assumptions are outlined below. Further details of all assumptions are in the methodology appendix accompanying this report.

- Earnings: For all individuals, income or earnings are assumed to increase in line with retail price inflation (RPI) plus 1% per annum.
- Contribution rates to DC: should an individuals 'typical' contribution levels within the WAS data be assessed as being higher than relevant automatic enrolment minimum contributions, then the contribution levels and pensionable pay definition used are assumed to continue. Otherwise the contribution levels and pensionable pay figure within the WAS data are replaced by the automatic enrolment minimum contributions and a Qualifying Earnings pensionable salary definition.
- Value of retained DB benefits: an individual with retained defined benefits will see the value of these benefits increase by uncapped RPI each year until retirement.
- Value of accrued/accruing DB benefits for segments where members are current member of a DB scheme: an individual with continuing DB accrual is assumed to be a member of a final salary scheme and is projected to see the value of these benefits increase by the number of years' service to retirement, and an accrual rate of 1/60th.
- DC income conversion at retirement: DC Savings are annuitised at the point of retirement, with an RPI-linked income paid throughout the life of the member (single life basis), with no tax-free cash taken.
- State pension: state pension increases in line with average earnings, using an underlying assumption that the assumed annual average earnings increase will always be greater than both the projected Consumer Price Inflation increases and 2.5% annual growth.

Clearly the parameters and assumptions applied within the model will have an impact upon the results of the modelling. Of importance to note:

- No opt out from automatic enrolment: in our model we have assumed that no one opts out of automatic enrolment. This may overstate the number of individuals who are automatically enrolled, which may mean that levels of adequacy are overstated.
- The continuation of DB: our model assumes that those contributing to DB continue to do so. This assumption may mean that we have overstated projected incomes for those currently accruing benefits in a DB scheme.
- Working only to SPA: our model assumes that everyone exits the workforce at SPA. In fact the average withdrawal age from the labour market is 64.8 for men and 63.2 for women[26], and not everyone will retire at exactly the SPA. This is likely to vary by job type in particular. Therefore for some segments the model may overstate levels of saving.
- Career breaks: within our model career breaks are not accounted for – although for older segments they are likely to be accounted in the existing data. However this is less likely for younger age categories and for that reason it is possible that the model may overstate levels of savings for younger groups.
- DC income conversion at retirement: our model examines DC income conversion being based on annuitisation. Under Pension Freedoms, introduced in April 2015, individuals aged over 55 are also able to access their pension savings using drawdown or taking their pension savings as cash. If money is left in drawdown or taken all at once as cash, rather than annuitised or indeed taken before the SPA, retirement income may be affected.
- Individuals and adequacy: our model treats savers as individuals; many individuals at retirement may be supported by incomes from partners or other family members.
- National Living Wage (NLW): Our model does not implement the NLW. The implementation of the national living wage will result in much larger increases in wages for lower earners than we have accounted for in our model. As a result of the presence of the lower qualifying earnings threshold this will mean that those earning at the level of the NLW will receive a disproportionately large percentage uplift in their pensionable pay.

Estimating adequacy

Adequacy is reported at a probability level for target replacement rates for the base case and our four scenarios throughout the report[27]. This gives each segment a probability of achieving, or not, their target replacement rate at retirement in line with Pensions Commission recommendations. We have converted this probability into a 'Red, Amber or Green' status shown in **TABLE 2.** This is set out in the table below, and for example, when we refer to individuals being "more likely than not" to achieve their target replacement rate this means that they have a 60% probability of achieving the target replacement rate recommended by the Pensions Commission and used as the primary test of adequacy in this report; this is referenced by a Green status.

TABLE 2: ADEQUACY, RED, AMBER GREEN STATUS

COLOUR	WHAT DOES THIS MEAN?
Green	This is a probability of 60% or above of achieving the target replacement rate. This means an individual is more likely than not to achieve the TRR recommended by the Pensions Commission.
Amber	This is a probability of 40% - 59% of achieving the target replacement rate. This means an individual has an even chance of achieving the target replacement rate recommended by the Pensions Commission.
Red	This is a probability of less than 40% of achieving the target replacement rate. This means an individual is more likely not to achieve the target replacement rate recommended by the Pensions Commission.

The Hymans Guided Outcomes ® methodology uses target replacement rates that are in line with the recommendations of the Pensions Commission. This methodology applies smoothed rates across each salary band; this technique is used as it smooths the gross targets to produce a more consistent target for members of all salaries, and also has no material impact at the aggregate level of this analysis compared to using the raw Pensions Commission targets. In consequence, when looking at individuals at a specific earnings level, the target replacement rate may be slightly different to those in the Pensions Commission's report.

24 For details of AE phasing please see here: **http://www.thepensionsregulator.gov.uk/employers/contributions-funding-tax.aspx**
25 The Government provides a timetable of the state pension age; this is available here: **https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/310231/spa-timetable.pdf**
26 The PLSA's pension bookmark, 2016
27 Please note our RAG status differs from the regular RAG status produced by Hymans Robertson Go model, to the extent that the RAG status has gradients of Red and Green 80% and above is bright Green and less than 20% is bright Red.

TABLE 3: ADAPTED REPLACEMENT RATES[28]

EARNINGS RANGE (2016/17 EARNINGS FIGURES)	PENSIONS COMMISSION TARGET REPLACEMENT RATE	HYMANS ROBERTSON GO TARGET REPLACEMENT RATE AT THE BOTTOM OF THE EARNINGS RANGE	HYMANS ROBERTSON GO TARGET REPLACEMENT RATE AT THE TOP OF THE EARNINGS RANGE
Less than £12,600	80%	80%	80%
£12,600 to £23,299	70%	80%	70%
£23,300 to £33,199	67%	70%	67%
£33,200 to £53,199	60%	67%	60%
£53,200 to £80,000	50%	60%	50%
Over £80,000	50%	£40,000	£40,000

We also report on whether individuals meet the Joseph Rowntree Foundation (JRF) minimum income standards (MIS)[29]; this is a binary outcome of "met" or "not met". To achieve 'met' the 40th percentile modelled must have a retirement income at or above the JRF MIS in real terms for 2013 levels (approximately £8,500). We have used JRF MIS from 2013 to align with the mid-point at which the WAS data was collected; otherwise the likelihood of not meeting the MIS may be overstated[30].

Throughout this report we have rounded data from this analysis to the nearest 100,000 for the population level data and to £10,000 for income as appropriate.

WHAT IS THE ESTIMATED POPULATION IN SCOPE?

We examined 22 – 64 year olds who were either in employment or self-employed; individuals could be either contributing and or not contributing to a pension. **TABLE 4**. provides an estimate of the population by pension status at the time the data was drawn.

28 Source: Hymans Robertson.
29 We have used JRF MIS from 2013 to align with the mid-point at which the wealth and assets data was collected; otherwise the likelihood of not meeting the MIS Standard maybe overstated.
30 In 2016, the JRF MIS is around £9,500.

TABLE 4: ESTIMATED POPULATION BY PENSIONS STATUS

	ESTIMATED NUMBER OF INDIVIDUALS (MILLIONS)
Currently contributing to a DB scheme (although they may also have DC)	8.3
Currently contributing to a DC workplace scheme	4.1
Not currently in a DC workplace pension scheme but have previously contributed	2.3
Not currently in a pension scheme and never been in a pension scheme	4.9
Not eligible for automatic enrolment	2.3
Self-employed and currently contributing to a personal pension	0.9
Self-employed and not currently contributing to a personal pension	2.6
Total estimated population (millions)	**25.5**

We have also provided an estimate of the population by three age categories, commonly referred to over the life course: Millennials, Generation X and Baby Boomers:

TABLE 5: ESTIMATED POPULATION BY AGE

	CURRENT AGE CATEGORY	ESTIMATED POPULATION (MILLIONS)
Millennials	22 – 34	7.5
Generation X	35 – 54	13.6
Baby Boomers	55 – 64	4.4
Total estimated population (millions)		**25.5**

HOW IS ADEQUACY AT CURRENT CONTRIBUTION LEVELS?

Our base case simulates automatic enrolment as it is currently planned (8% contributions by 2019, maintaining qualifying earnings bands). The modelling shows that, of the estimated 25.5 million 22 – 64 year olds currently in employment:

- just under half (46%) of the population would be likely to achieve a Green status at SPA– **the equivalent of 11.8 million individuals.**
- just under 0.5% would achieve Amber status at SPA – **the equivalent of 100,000 individuals.**
- just over half (53%) achieve a Red status at SPA – **the equivalent of 13.6 million individuals.**

However, 94% of individuals would meet the MIS; **this is the equivalent of 23.8 million people.**

Table 6 below displays:

- the number of individuals achieving Red, Amber and Green status;
- Those meeting or not meeting the JRF MIS.

TABLE 6: PENSION ADEQUACY (RAG, MIS) – ESTIMATED NUMBER OF INDIVIDUALS

	MET MIS (ESTIMATED MILLIONS)	NOT MET MIS (ESTIMATED MILLIONS)	NOT MET MIS (ESTIMATED MILLIONS)
Red (estimated population)	12.9	0.7	13.6
Amber (estimated population)	0.1	0	0.1
Green (estimated population)	10.9	0.9	11.8
Estimated population (millions)	23.8	1.6	25.5

The 1.6 million who did not meet their MIS were generally Baby Boomers, who had no, or limited, pension savings.

DB AND ITS EFFECT ON ADEQUACY

It is important to identify the key factors driving Green versus Red status in our base case. Our analysis suggests that there is a fundamental split between savers who currently contribute to DB and those who currently contribute to DC (or will in future contribute to DC). In our base case, currently accruing DB is the key driver of achieving a Green status.

When we examine only DB savers, the large majority of savers (93%) accruing in a DB pension achieved a Green status, as displayed in **TABLE 7.**

TABLE 7: PENSION ADEQUACY (RAG) – ESTIMATED POPULATION OF INDIVIDUALS WITH DB

	% ACHIEVING
Red	7%
Amber	<0.5%
Green	93%
Estimated population (millions)	8.3

It is worth noting that although DB is often considered as the preserve of the Baby Boomers and the older age range of Generation X, there are a sizeable number of Millennials currently contributing to a DB scheme[31]. In our population:

- Generation X (those aged 35 – 54): approximately 5 million individuals or 37% of the individuals in this generation have some DB accrual.
- Millennials (aged 22 – 34) approximately 1.9 million individuals or 25% of the individuals in this generation have some DB accrual.
- Baby boomers (aged 55 – 64): approximately 1.3 million individuals or 31% of the individuals in this generation have some DB accrual.

31 Differences in the numbers currently accruing to DB with other data sources (for example the Occupational Pension Schemes Survey and the Annual Survey of Hours and Earnings) are likely due to differences in weighting and methodology between the three surveys. The Wealth and Assets survey is also likely to suffer from non-sampling error – however it is the most robust survey on population level pensions wealth data.

About a quarter of the Millennial generation currently in work are currently accruing benefits in a DB scheme, with 52% of Millennials who are currently accruing DB benefits employed in the public sector (which is equivalent to 52% of Generation X and Baby Boomers accruing DB employed in the public sector); if this path continues they will be likely to achieve good retirement outcomes, as did those with DB in the generations before them. However for Millennials, and all DB savers, there is no guarantee of the future of DB. Indeed the recent work of the PLSA's DB Taskforce[32] has evidenced that DB schemes are under severe pressure.

The remainder of this report focuses on the situation facing those saving into a DC scheme.

WHAT DOES THIS MEAN FOR THOSE SAVING INTO A WORKPLACE DC SCHEME?

Outcomes are less positive for those just saving into a workplace DC scheme[33]. Of this group, 97% achieve a Red status, with just 2% achieving Green. Under our base case, where those automatically enrolled typically contributed at the statutory minimum, (a total of 8% by 2019) individuals are not likely to achieve Green.

TABLE 8: PENSION ADEQUACY (RAG) – SAVERS WITH WORKPLACE DC

	% ACHIEVING
Red	97%
Amber	1%
Green	2%
Estimated population (millions)	11.3

Within this population we examined factors that might impact of adequacy: age, socio economic group, gender and tax band – however none had a material impact on achieving a Green status[34]. Where individuals were Green under our definition, 90% had retained DB, emphasising that the driving factor in adequacy is the nature of the pension entitlement.

THE IMPORTANCE OF AUTOMATIC ENROLMENT

This overwhelmingly Red status for the DC savers is not surprising. Automatic enrolment was not intended to get median earners any more than a 45% replacement rate in retirement when added to state pension.

We should not lose sight of the fact that the modelling shows that there have still been clear benefits from automatic enrolment. There will be an estimated **7.2 million additional** individuals making contributions into DC schemes as a result of the introduction of automatic enrolment who previously would not have contributed.

For 4.9 million who are completely new to pension savings (who have no retained pensions and were not contributing in 2013) they are likely to acquire on average an additional £2,500 of income for every year in retirement; for those in the 22 – 34 aged cohort this is likely to be an average of £4,000.

Looking at the typical journey of a saver from the Millennial generation, the first generation to be automatically enrolled from a young age, demonstrates the difference that automatic enrolment will make. For women of an average age of 28 with a current salary of £18,000 working in an intermediate occupation[35] – automatic enrolment will provide an additional 20% of income towards achieving their target replacement rate.

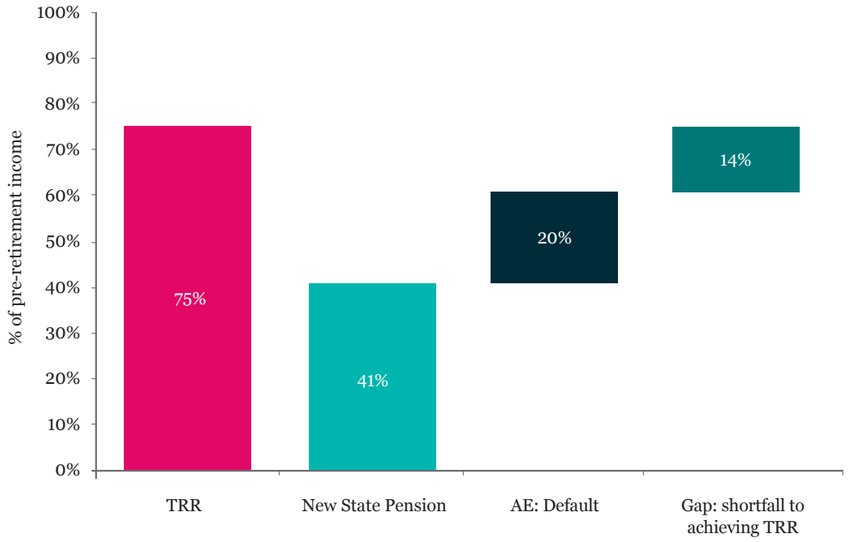
32 PLSA, DB Taskforce Interim report, 2016, p.35

33 This does not include those who are self-employed as we assume that their pattern of employment remains the same; it also excludes zero rate taxpayers who we assume will not be auto enrolled.

34 This is not to say that the factors have no effect on income levels at retirement, but in terms of achieving a Red, Amber of Green status the proportion of individuals is broadly the same.

35 Our professional categories are derived from NS-SEC: full details can be found here: http://webarchive.nationalarchives.gov.uk/20160105160709/http:/www.ons.gov.uk/ons/guide-method/classifications/current-standard-classifications/soc2010/soc2010-volume-3-ns-sec--rebased-on-soc2010--user-manual/index.html . Where we refer to intermediary occupation as a very broad proxy please consider this to mean: positions in clerical, sales, service and intermediate technical occupations that do not involve general planning or supervisory powers; NS-SEC provides a full description of jobs that are included.

FIGURE 2: MEDIAN OUTCOMES FOR A NEWLY ENROLLED DC PENSION SAVER



SCENARIO ANALYSIS: IMPACT ON ADEQUACY LEVELS FOR THOSE ELIGIBLE FOR AUTOMATIC ENROLMENT

To address the shortfalls in projected retirement income, we explored how a number of adjustments to the current parameters of saving might alter outcomes for those who are eligible for automatic enrolment into a DC workplace pension.

We ran four additional scenarios to examine the impact that the changes would have on adequacy. Our scenarios were selected on the basis that we anticipated they would all make some improvements to adequacy – including a 16% contribution rate, which was the approximate contribution rate including voluntary saving estimated by the Pensions Commission as being necessary to achieve their target replacement rate. Indeed 16% contribution rates mirrors the average contribution rates in OECD countries, where the average contribution rates for employer and employees are about 18%[36].

TABLE 9: OUTLINE OF SCENARIOS MODELLED

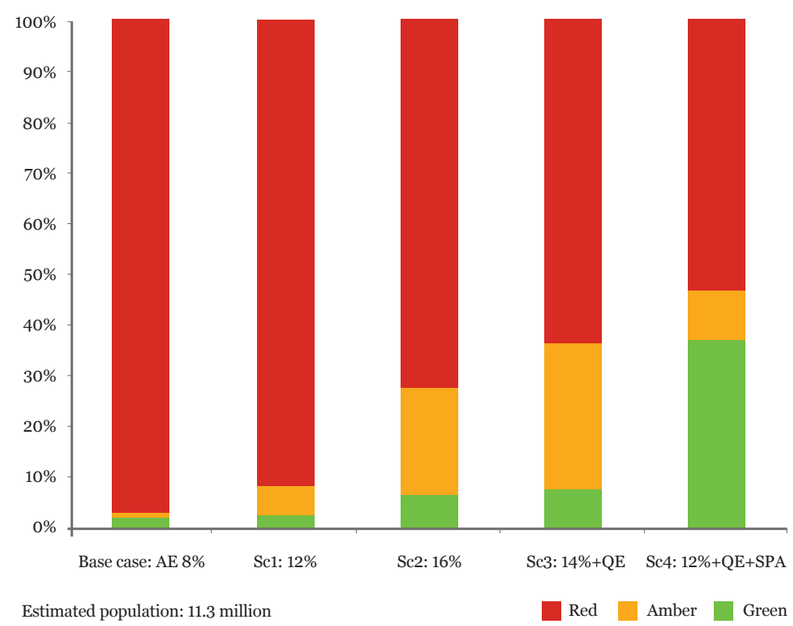
SCENARIO	PARAMETERS
1	Increasing contributions to 12% of Qualifying Earnings from 2019
2	Increasing contributions to 16% of Qualifying Earnings from 2019
3	Increasing contributions to 14% and removing Qualifying Earnings upper and lower limits from 2019
4	Increasing contributions to 12% of salary from 2019, removing the Qualifying Earnings upper and lower limits from 2019 and increasing working life by five years

FIGURE 3 shows how each of the scenarios impact on adequacy for those eligible for a workplace pension.

The most limited intervention (scenario 1), increasing contributions from 8% to 12%, has only a minor effect on achieving a Green status. The most substantial intervention proposed here (scenario 4), increasing contributions to 12%, removing the QE bands and working 5 years beyond SPA, results in around 50% of pension savers achieving a Green or Amber status. However as we will discuss in detail later, scenario 4 does bring about positive improvements for those who have a longer time period to save.

36 OECD, Mandatory Pension contribution sourced here: **http://www.oecd-ilibrary.org/docserver/download/8115201ec030.pdf?expires=1478513974&id=id&accname=guest&checksum=E06C7811765475A38AF755A5AE78986B**

FIGURE 3: SCENARIO ANALYSIS FOR INDIVIDUALS ELIGIBLE FOR DC WORKPLACE PENSION



Overall what our analysis tells us is:

- Every intervention increases the overall level of savings into pensions – although some interventions had a greater impact on increasing the number of individuals who achieve a Green status.
- Increasing contribution rates to 12% from April 2019 alone increases the levels of savings but not sufficiently to have a material impact on those achieving Green. It will have some effect but does not do enough to move the majority of individuals who have Red status.
- Increasing contribution rates to 16% from April 2019 alone again increases the level of savings, and additionally moves some individuals to a Green status and a larger proportion to Amber but is still not great enough to see significant improvements, with the majority of individuals still more likely than not to remain at a Red status.
- The removal of qualifying earnings and increasing contribution rates to 14% from April 2019 increases the proportion of savers who will achieve an Amber status, and marginally increases those who will achieve a Green status.
- The introduction of longer working lives in scenario 4 ensures that two fifths of individuals achieve a Green status at retirement. Longer working lives, coupled with the removal of qualifying earning and higher contribution makes a positive difference for many individuals.

It is important to note that, although an individual may achieve a Green status as a result of the interventions, every intervention has the effect of increasing an individual's saving towards their retirement income – so enables savings that would not have occurred before the introduction of automatic enrolment.

This is evidenced by returning to our case study of a newly enrolled workplace DC pension saver; a 28 year old female saver with a current salary of £18,000. When an individual has enough time to save into their pension, improvements can be seen. If we examine the difference that each scenario has on her savings we can see how even an intervention that only has a limited effect of moving an individual to achieve a Green status can have a beneficial impact on the level of savings.

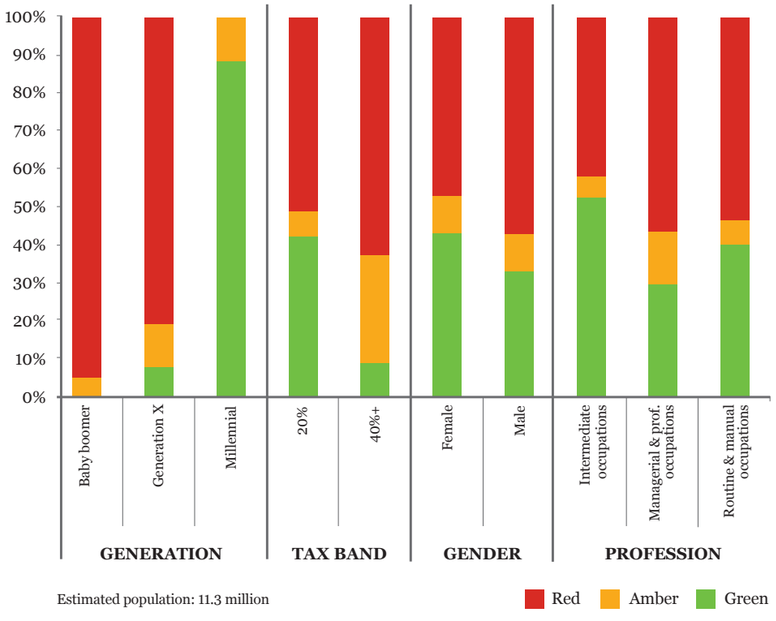
The increases in retirement income are clearly outlined in **FIGURE 4;** in our base case workplace contributions provide 20% of the target replacement rate, increasing across the scenarios until scenario 4 where workplace pension contributions amount to 51% of the target replacement rate and are greater than value of the state pension. Indeed, three of the interventions would achieve at least an Amber status.

Although not all individuals will reach a Green status, at each scenario the fundamental importance of saving across the course of a life time through automatic enrolment cannot be underestimated.

FIGURE 4: MEDIAN OUTCOMES FOR A FEMALE MILLENNIAL, AGE 28 EARNING £18K ACROSS OUR MODELLING SCENARIOS

As the most substantial intervention (scenario 4) clearly is the most effective, we examined what would happen across the four factors that we initially assumed could play an important role in determining adequacy: age, gender, socio economic group and tax band – Figure 5 demonstrates the impact.

FIGURE 5: RAG STATUS FOR DC SAVERS ELIGIBLE FOR A DC WORKPLACE PENSIONS AT SCENARIO 4 ACROSS ALL FACTORS



Estimated population: 11.3 million

What this analysis clearly demonstrates, is that:

- The amount of time there is remaining to save clearly has the greatest impact on the likelihood of achieving a Green status; across the generations Millennials are much more likely to be on track to achieve a Green status under scenario 4.
- Basic rate taxpayers are more likely than higher rate taxpayers to achieve a Green status at scenario 4. Generally higher rate taxpayers need to save a lot more into their pension pots to achieve the target replacement rate for their salary. On average a basic rate taxpayer has a salary of around £20,000, whilst a higher rate taxpayer has a £60,000 salary.
- A greater proportion of women are likely to achieve a Green status than their male counterparts; this difference is due to the fact that women are more likely to be basic rate taxpayers than their male counterparts (92% of women compared to 80% of men).
- A greater proportion of those in intermediate occupations are more likely to achieve a Green status than those in managerial occupations and those in routine occupations. Those in managerial occupations are much more likely to be higher rate tax payers than those in intermediate occupations (30% compared to 6% respectively). A slightly higher proportion of those in routine and manual occupations (57%) had never before saved into a pension, compared with 44% of those in intermediate occupations.

However where the greatest gains are clearly made is by age cohort. We examine how age affects our adequacy outcomes in the next section.

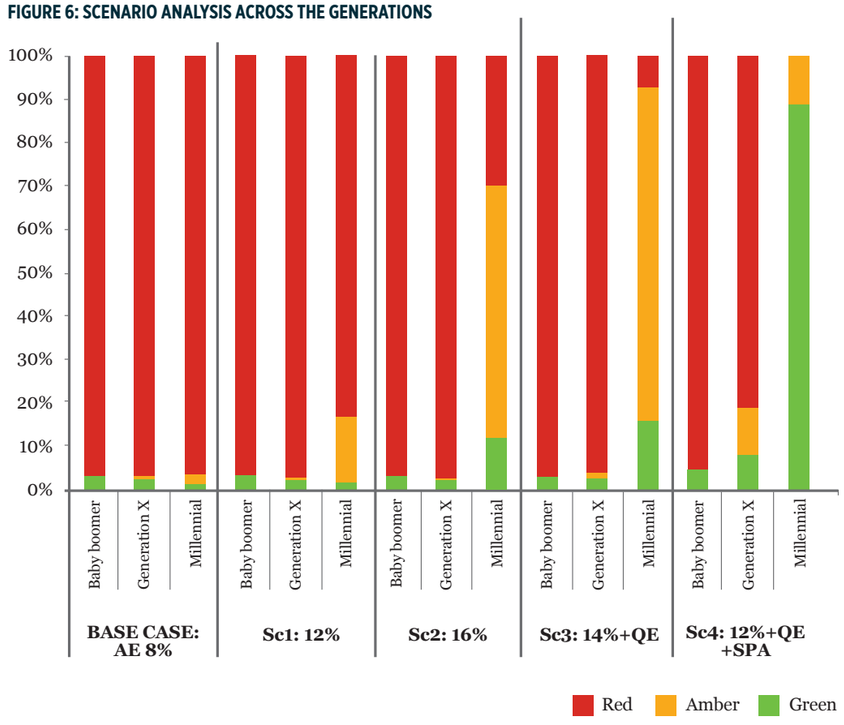
GENERATIONAL FOCUS

HOW DO THE SCENARIOS AFFECT PENSION ADEQUACY FOR DC SAVERS ELIGBLE FOR AUTOMATIC ENROLMENT ACROSS THE GENERATIONS?

Having a greater length of time to save is fundamental to achieving a better outcome at retirement. This is demonstrated in Figure 6 which shows that each of our interventions works best for those with the longest to retirement, in particular the Millennials, and less well for those closer to retirement.

Figure 6 demonstrates the effect of each of our scenarios across each of the generations.

FIGURE 6: SCENARIO ANALYSIS ACROSS THE GENERATIONS



Estimated population: Baby boomer (1.6 million), Generation X (5.6 million), Millennials (4.2 million)

Given the importance of ensuring sufficient time to save to achieve our definition of an adequate income at retirement, in particular for our suggested interventions, we compared the outcomes for DC pension savers of the interventions on the three main generations: Millennials, Generation X, and Baby Boomers. This relates to the 11.3 million savers covered by automatic enrolment into a DC scheme[37].

We have selected one case study for each generation on the basis of some key criteria:

- That they will be automatically enrolled into a DC pension in our model, are already in a DC pension or have some retained DC pension; none of the individuals selected have any current or retained DB pension.
- That they are basic rate taxpayers – as they represent a higher proportion of the population than higher rate taxpayers.
- That those selected have earnings that are closer to the typical earner for both their generation and gender.
- That their contribution rates are below the automatic enrolment minimum at the start of our modelling process.

We have also selected an additional contrasting case study for each generation to demonstrate findings that may be of particular interest for those cohorts:

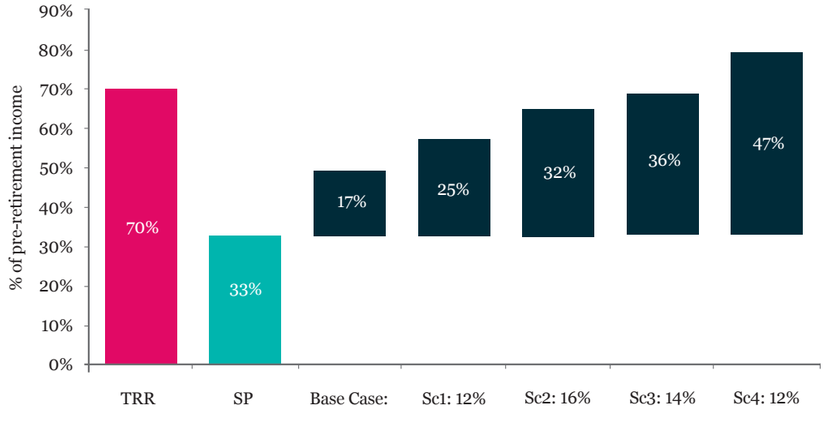
- Millennials: a higher rate tax payer.
- Generation X: an older member of Generation X.
- Baby Boomers: an individual that has some retained DB.

FOCUS ON MILLENNIALS

Our analysis shows that, at present, around 3.0 million (39%) of 7.5 million working millennials are more likely than not to achieve their target replacement rate (a Green status). This majority of this group are the 1.9 million who are currently accruing DB, and zero rate taxpayers (0.8 million). However, as our scenario analysis shows, the time this group have until retirement is sufficient to make it relatively straightforward to plot a path to adequacy for those saving in DC. Our three strongest interventions (**FIGURE 6** above) give the majority of DC millennials a broadly even chance of reaching their target replacement rate (an Amber status).

Figure 7 shows how the current landscape and different scenarios might play out for one millennial segment. At the base case, automatic enrolment could give them approximately a 50% increase in retirement income over their potential state pension. Increasing contribution rates to 16% of QE could bridge almost the entire gap to their target replacement rate, while an intervention which increases their contribution rate and extends their working life by five years means they are more likely than not to exceed their target replacement rate (a Green status).

FIGURE 7: MEDIAN OUTCOMES FOR A MALE MILLENNIAL, AGE 28 EARNING £23K



Millennial male: For a 28 year old male, earning approximately £23,000 a year, working in a managerial / professional occupation who is automatically enrolled to a DC workplace pension scheme.

37 Therefore excluding those in a DB scheme, zero rate tax payers and the self-employed as in previous sections.

As can be seen from figure 8, a Higher Rate taxpaying Millennial is less likely to achieve their target replacement rate than a Basic Rate taxpayer. However, under our strongest intervention (scenario 4) such a Millennial would achieve an Amber status.

FIGURE 8: MEDIAN OUTCOMES FOR A MALE MILLENNIAL, AGE 31 EARNING £54K, HIGHER RATE TAXPAYER

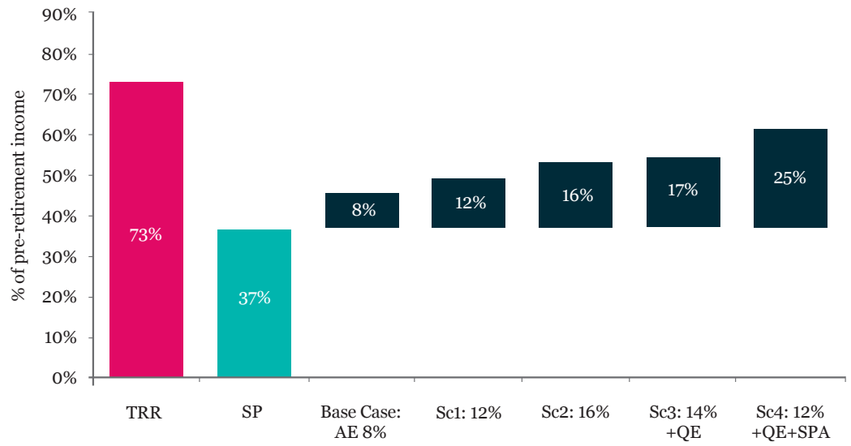
Millennial male: For a 31 old male, earning approximately £54,000 a year working in managerial and professional occupations who is automatically enrolled to a DC workplace pension scheme.

FOCUS ON GENERATION X

Generation X is the largest generation in our analysis with 13.6 million in employment. Our analysis shows that, at present, around 6.9 million (51%) of this group are more likely than not to reach their target replacement rate (Green). This majority of this group are the 5.0m who are currently accruing DB, and zero rate taxpayers (1.1 million). Those saving in DC, by definition, have less time to make good their retirement savings than their millennial counterparts. Our scenario analysis (**FIGURE 6** above) illustrates how difficult it will be, using just the levers of pension contributions and longer working lives, to set the majority of DC savers in this generation on course for their target target replacement rate.

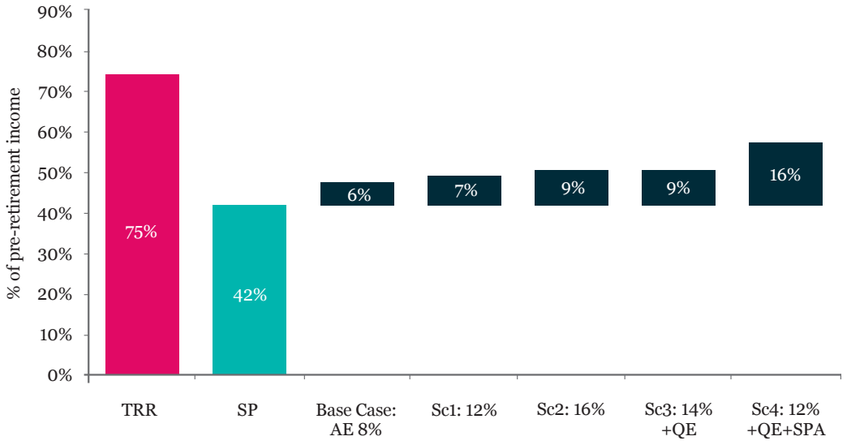
Nevertheless, figures 9 and 10 show how automatic enrolment and alternative scenarios may add to the retirement incomes of different segments within this generation. In broad terms, for both the 40 year old and the 50 year old modelled here, our strongest intervention gives an even chance of achieving a 60% replacement rate. Each scenario, of course, makes a stronger contribution to outcomes for the younger saver who has more time to make up the gap.

FIGURE 9: MEDIAN OUTCOMES FOR A FEMALE GENERATION X, AGE 40 EARNING £20K



Generation X females: For a 40 year old female, earning approximately £20k a year, working in a managerial profession who is auto enrolled to a scheme.

FIGURE 10: MEDIAN OUTCOMES FOR A FEMALE GENERATION X, AGE 50 EARNING £18K



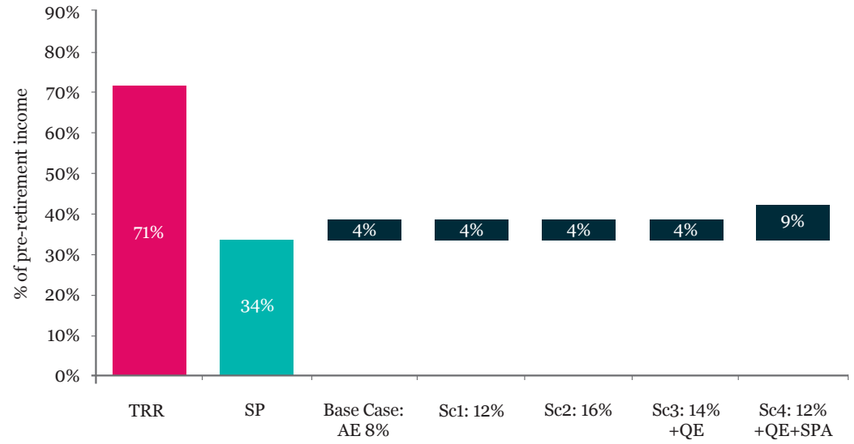
Generation X females: For a 50 year old female, earning approximately £18k a year, working in an intermediate occupation who is automatically enrolled to a scheme and has a pre-existing DC pot valued at approximately £5,000.

FOCUS ON THE BABY BOOMERS

Our 4.4 million working baby boomers have the least time to change their potential retirement income. Our analysis shows that, at present, around 2.0 million (45%) of this group are more likely than not to reach their target replacement rate (Green). The majority of this group is made up of the 0.8 million who are currently accruing DB, and zero rate taxpayers (0.5 million).

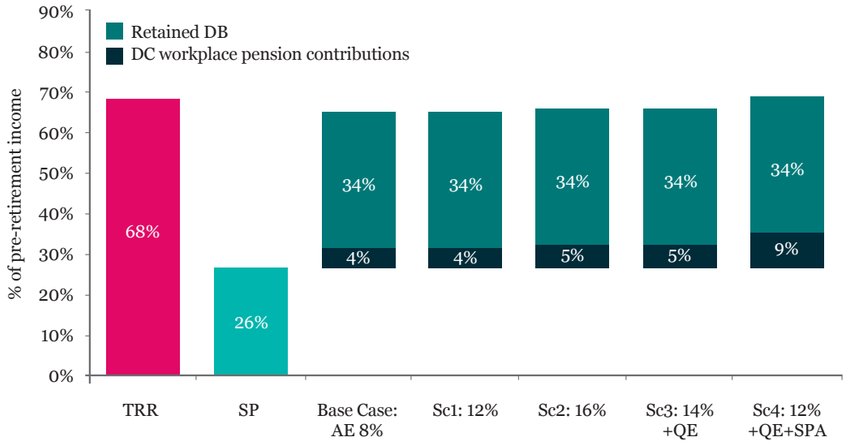
FIGURES 11 and **12** contrast the position of one automatically enrolled baby boomer with a small existing DC pot, and one who is currently contributing to a DC pot but also has retained DB. Automatic enrolment provides a modest amount of additional retirement income, but it is their history of pension saving rather than any further changes to contribution rates which dominate their prospects of reaching their target replacement rate.

FIGURE 11: MEDIAN OUTCOMES FOR A MALE BABY BOOMER, AGE 59 EARNING £22K



Baby Boomer Male: For a 59 year old male, earning approximately £22k a year, working in a routine/ manual occupation who is auto enrolled to a DC workplace pension but already has acquired some pre-existing DC valued at approximately £23,000.

FIGURE 12: MEDIAN OUTCOMES FOR A MALE BABY BOOMER, AGE 58 EARNING £29K, WITH SOME RETAINED DB



Baby Boomer: For a 58 year old male, earning approximately £29k a year working in a managerial/ professional occupation who already has acquired some pre-existing DC valued at approximately £17,000 and also has acquired some retained DB over the course of his working life.

WHAT HAPPENS TO THOSE NOT COVERED BY AE?

ZERO RATE TAXPAYERS

There are an estimated 2.8 million people in our study who earn less than the personal earnings threshold for tax purposes, currently around £11,000 per year. They are not eligible for automatic enrolment. Of the 2.8 million, 500,000 have a DB pension scheme.

All of the remaining 2.3 million zero rate taxpayers, achieve a Green status at our base case; with average salaries for this cohort at about £6,000, the State Pension alone means that they are likely to achieve a Green status. However an estimated 400,000 do not meet JRF MIS; those who do not meet the JRF MIS are all baby boomers, with limited DC pension savings.

THE SELF-EMPLOYED

The self-employed are not within the scope of automatic enrolment, however, they may well have previous pension provision from when they were in a workplace.

Within our model we assumed that those who were self-employed would continue with their current work patterns and would only contribute to a personal pension in the future if they currently contributed to a personal pension. In total an estimated 900,000 self-employed people were contributing to a personal pension, with the remaining 2.6 million not contributing.

In total 44% of all self-employed achieved a Green status. It is unclear how reliable this finding is as some may have lower income levels from self-employment than their previous earnings.

With regard to our other measure of adequacy, 17% (0r 600,000) of the self-employed did not meet the MIS; suggesting that unless they have significant amounts of wealth elsewhere, they may have less positive outcomes in retirement than their employed equivalents.

However we would suggest these results are treated with caution – as self-employment income is difficult to capture, and complex in nature[38].

TABLE 10: PENSION ADEQUACY (TARGET REPLACEMENT RATE) – THE SELF EMPLOYED

	% ACHIEVING
Red	56%
Amber	1%
Green	44%
Estimated population (millions)	3.6

As our scenarios were primarily focussed on DC workplace pensions, they have had a more limited impact on those who were self-employed.

38 BIS reports in their recent The Income of the Self Employed report that self-employment income is particularly hard to capture in surveys and is incredibly complex; it is likely that WAS is affected by the same issues as other sample surveys. However our median average for the self-employed (approximately £12,000), is broadly aligned with figures reported in the Family Resources Survey. The full BIS report is available here**: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/500317/self-employed-come.pdf.**

7 OTHER POTENTIAL SOURCES OF RETIREMENT INCOME

THIS SECTION LOOKS AT OTHER SOURCES OF RETIREMENT INCOME. PENSIONS ARE NOT THE ONLY FORM OF SAVING OR CAPITAL ACCUMULATION AVAILABLE TO PEOPLE. OTHER FORMS OF SAVING AND OTHER ASSETS CAN PLAY A ROLE IN RETIREMENT TO A GREATER OR LESSER EXTENT. IT IS WORTH NOTING THAT THE REVERSE CAN ALSO BE TRUE, FOR INSTANCE OUTSTANDING CONSUMER DEBT OR MORTGAGE DEBT COULD CONSUME SAVINGS WHICH MIGHT OTHERWISE HAVE BEEN USED FOR RETIREMENT INCOME.

This section presents snapshot data, primarily from our segmentation analysis of the WAS Wave 4[39], and where appropriate is supplemented by other data sources, to explore the potential role that some of these other sources can play.

TOTAL WEALTH

Pensions play an important role in terms of individuals overall wealth, however, in Britain, there are a number of other commonly held forms of wealth.

Figure 13 shows a comparison of the typical values of wealth across our three age cohorts. It looks at four types of wealth: net financial wealth; net property wealth; physical wealth; and pension wealth.

It should be noted that pensions and net property wealth outweigh other forms of wealth, for both Baby boomers and Generation X. For most people by retirement, the only substantial wealth they have is either in a pension or in their property. Furthermore, those with high levels of financial wealth tend also to have high levels of other forms of wealth. Those without high levels of financial wealth tend to have proportionately more in pensions and property[40].

39 The PLSA also commissioned the PPI to undertake some analysis of wealth data within WAS.

40 Wealth and Assets Survey, 2012-2014, Office for National Statistics: **http://webarchive.nationalarchives.gov.uk/20160105160709/http://www.ons.gov.uk/ons/rel/was/wealth-in-great-britain-wave-4/2012-2014/index.html**

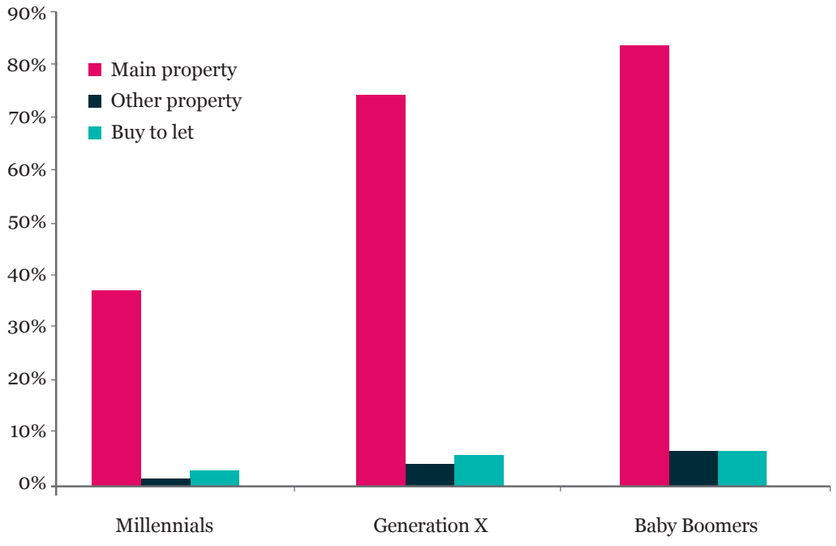
FIGURE 13: MEDIAN WEALTH BY GENERATION

It follows, therefore, that for most people retiring soon, the main source of funds they have that are not in a pension will be in their property and whether they use this as a resource to supplement their retirement income, will depend on their ability and willingness to use this property wealth.

HOUSING WEALTH

Figure 14 shows the ownership of property by value of property band and age of owner in Britain.

FIGURE 14: PERCENTAGE OF EACH GENERATION WITH PROPERTY WEALTH



The chart shows that the likelihood of owning a property rises with age, with Millennials less likely to own their own home than Generation X or Baby Boomers. Across most generations ownership of a property in addition to a main residence is low. This means that individuals would need to rely on their main residence if they were looking to fund their retirement using property.

Our analysis demonstrates that the median average, net value of property for Baby Boomers is approximately £100,000. This could only ever make up a small proportion of an adequate retirement income for most people.

As noted earlier, some people, notably Baby Boomers, with valuable houses and low pension entitlement, may have an option to extract equity from their homes in order to help fund their retirement. Those with the most valuable homes, though, are also those most likely to have the most significant pension rights, suggesting that there is a limit to how far equity release will resolve any adequacy shortfall[41].

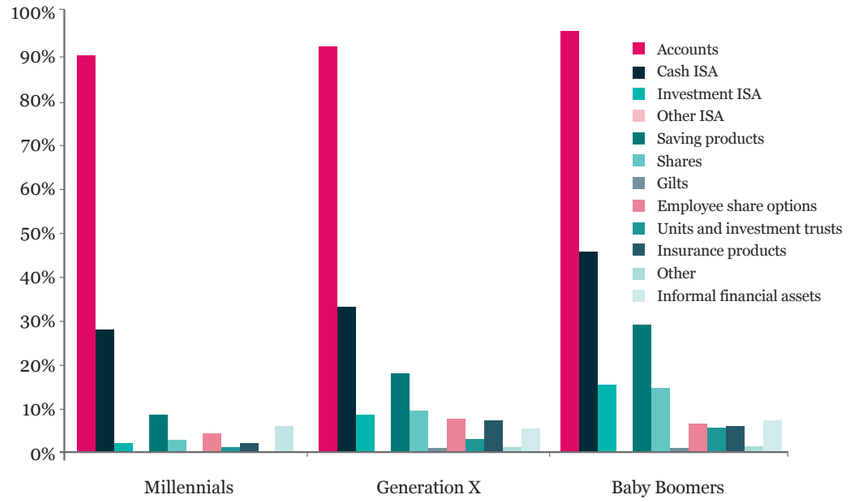
Furthermore, just because people have equity in their property does not mean that they will be prepared to use it to fund their retirement. We have been examining the planned use, and use of property to finance retirement in the UK for those aged between 35 – 85 years old[42]. Within our research, a third of the younger individuals in Generation X (35 – 45 year olds) assumed they would simply have no other option than to use property. When it came to those who had already retired, only 19% of those who owned property had actually used their property to finance retirement; with just 3% using equity release. Of those who were retired and had not used their property, the reason most often cited by 35% was that they did not want to use their property to fund their retirement. It seems that there is often a strong emotional attachment to property that goes beyond simply viewing a home as a financial investment.

Equally important is whether or not homeowners have paid their mortgage off by the time they retire. This is not necessarily the case for all savers approaching retirement to: 43% of our Baby Boomer segment who owned property were yet to pay off their mortgages. Additionally, with the average age of first time property ownership increasing from 30 years to 33 years over the last 20 years[43] it is possible that this trend will continue and increase with more individuals approaching retirement with a mortgage still to pay off, and even the possibility of a potential increase in renting. This will mean that more money could be required in retirement to cover these costs.

FINANCIAL WEALTH

Figure 15 shows the percentage of our segment with each type of financial wealth. As can be seen the majority of each segment have some form of current/savings account. As with other forms of wealth, those in older generations are more likely to hold any given form of wealth; nearly half (45%) of baby boomers have money in a cash ISA. ONS analysis also shows that those with higher levels of financial wealth tend also to have higher levels of pensions and property wealth also[44].

FIGURE 15: PERCENTAGE OF EACH GENERATION WITH DIFFERENT TYPES OF FINANCIAL WEALTH



41 Wealth and Assets Survey, 2012-2014, Office for National Statistics: **http://webarchive.nationalarchives.gov.uk/20160105160709/http://www.ons.gov.uk/ons/rel/was/wealth-in-great-britain-wave-4/2012-2014/index.html**

42 Unpublished PLSA research.

43 English Housing Survey: First Time Buyers and Potential Home Owners Report, 422014-15. Department for Communities and Local Government, 2016: **https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/539256/First_Time_Buyers_and_Potential_Home_Owners_Report.pdf**

44 Wealth and Assets Survey, 2012-2014, Office for National Statistics: **http://webarchive.nationalarchives.gov.uk/20160105160709/http://www.ons.gov.uk/ons/rel/was/wealth-in-great-britain-wave-4/2012-2014/index.html**

FAMILY STATUS

This project, like the Pensions Commission's original modelling has run on an individual rather than household basis. Individuals may not be relying solely on their own individual savings in retirement. They may be intending to rely partly or largely on a partner's savings or, conversely, they may intend to support another from savings they have put aside.

However our analysis shows that the proportion intending to rely on a partner for support are small, lower than 10 per cent in each age cohort. The clear implication from this is that people intend to be self-reliant in retirement to a degree that is probably unrealistic.

While the reality may be that people will end up relying on a partner in retirement, they do not expect to and there is a limit to how far policy makers can or should rely on an expectation that marriages or other partnerships will persist for the whole of individuals' lives. In reality a proportion of relationships will end before or during retirement. Savings at the household level may not be a good indicator of future retirement income as not all households will persist in their current form until retirement.

EMPLOYMENT INCOME

Although typically most individuals leave the labour force at SPA[45], there has been a rise in older workers; between 1993 and 2011 the number of people of SPA and above in employment doubled from 753,000 to 1.4 million[46]. This suggests that there may be opportunities for some individuals to supplement their retirement income with employment income.

Despite these increases there are still barriers to continuing employment past the SPA; a recent report by the Government Office for Science highlighted the issues of perceived age discrimination, health and caring responsibilities among others that could prevent people working into later life[47]. There are also barriers around support available for older workers working into later life within the workplace – the DWP reported that 32% of organisations did not offer any opportunities specifically to support later life working[48].

INHERITANCE

Inheriting money, property or other goods is reasonably common but the value of an inheritance may be low. In our segmentation analysis, 6% of Millennials, 14% of Generation X and 7% of Baby Boomers have received an inheritance worth more than £1,000 within the previous two years.

Inheritance, though, is uncertain. It seems likely that while many in the Baby Boomer and Generation X segments have valuable properties, they may not automatically pass the equity in their properties to their children[49]. Similarly, while the rules around inheritance tax strongly favours using pensions as a vehicle to transmit wealth to future generations, people may not be inclined to do this.

Our research suggests that many approaching retirement may have to consider using the resources they have, including pensions and property to replace income or meet the costs of long term care after they have retired, irrespective of what they currently intend. This may have implications for the level of any inheritance received by future generations and also whether individuals receive any inheritance at all.

45 Pensions bookmark, PLSA, 2016 - sourced from Office for National Statistics Labour Force Survey.
46 Older Workers in the Labour Force, Office for National Statistics, 2012: **http://webarchive.nationalarchives.gov.uk/20160105160709/http:/www.ons.gov.uk/ons/dcp171776_267809.pdf**
47 Future of an ageing population, Government Office of Science, 2016: **https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/535187/gs-16-10-future-of-an-ageing-population.pdf**
48 Employer attitudes to fuller working lives, Department for Work and Pensions, 2015: **https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/410660/employer-attitudes-to-fuller-working-lives.pdf**
49 Consumer Demand for Retirement Borrowing, Council of Mortgage Lenders, 2015.

8 CONCLUSIONS

AUTOMATIC ENROLMENT IS WORKING WELL AND MUST CONTINUE. IT IS ON A PATH TO SUBSTANTIALLY RAISE THE RETIREMENT INCOMES OF MANY PEOPLE IN THE UK. IT WILL NOT THOUGH, AS THINGS STAND, BRING EVERYONE UP TO THE REPLACEMENT RATES SUGGESTED AS ADEQUATE BY THE PENSIONS COMMISSION.

The Commission proposed that automatic enrolment should deliver around 45% of previous earnings for a median earner and that the remainder of their proposed target replacement rate of 67% would be achieved through voluntary saving. While those who have accrued a reasonable amount of DB pension are on course to achieve the adequacy targets, for those who mainly have DC pension savings, there is a gap.

For savers in the millennial generation, most of the gap can be filled by increasing contributions from today's target default of 8% of qualifying earnings to a new target of 12% of salary. Additional saving, for example 16% of salary and choosing to work longer, would further enhance their retirement income. This runs counter to the general view that "Millennials will never be able to afford to retire".

We believe that the timing and pace of change should be considered after the current phased rise of contributions from today's 2% of qualifying earnings up to 8% by 2019 is completed. This would also be the right time to consider the right way to share the cost of additional contributions between employers and the employee. To take decisions on this earlier would deny Government the chance to see how the phased increase in contributions works in practice and whether it throws up challenges or opportunities.

For older savers, those in Generation X and the Baby Boomer generation, additional saving at 12% of salary will help improve retirement incomes but will not achieve target replacement rates. To achieve an adequate income in retirement they will almost certainly need to work longer and, where they have it, use other forms of wealth, such as property wealth.

Issues of how much and when to increase contributions for Millennials, and for other generations with less time to save, are complex and can be contentious. We believe these issues cannot be worked through in the time scale currently planned for the 2017 review of automatic enrolment given the need for significant engagement with a diverse range of stakeholders, further research, and the current critical stage in the roll out of automatic enrolment. As part of the 2017 automatic enrolment Review the Government should instead commit to the creation of an independent commission with a remit to:

- review existing measures of adequacy and make recommendations for a national standard or standards which reflects the changing nature of retirement;
- make recommendations for increasing minimum contribution levels to at least 12% of salary, including how and when this change should be made, and how it should be divided between worker and employer contributions; and
- Make additional recommendations to improve the situation of older savers who have less time to benefit from an increase in contribution rates.

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PENSIONS AND LIFETIME SAVINGS ASSOCIATION

Cheapside House,
138 Cheapside,
London EC2V 6AE

T: 020 7601 1700
E: plsa@plsa.co.uk
www.plsa.co.uk