

Golden Years?

What freedom and choice will
mean for UK pensioners

Nigel Keohane
Katie Evans
Ben Richards

Golden Years?

WHAT FREEDOM AND CHOICE WILL
MEAN FOR UK PENSIONERS

Nigel Keohane
Katie Evans
Ben Richards

Kindly Supported By



FIRST PUBLISHED BY

The Social Market Foundation, November 2015

ISBN: 978-1-910683-04-0

11 Tufton Street, London SW1P 3QB

Copyright © The Social Market Foundation, 2015

The moral right of the authors has been asserted. All rights reserved. Without limiting the rights under copyright reserved above, no part of this publication may be reproduced, stored or introduced into a retrieval system, or transmitted, in any form or by any means (electronic, mechanical, photocopying, recording, or otherwise), without the prior written permission of both the copyright owner and the publisher of this book.

THE SOCIAL MARKET FOUNDATION

The Foundation's main activity is to commission and publish original papers by independent academic and other experts on key topics in the economic and social fields, with a view to stimulating public discussion on the performance of markets and the social framework within which they operate. The Foundation is a registered charity and a company limited by guarantee. It is independent of any political party or group and is funded predominantly through sponsorship of research and public policy debates. The views expressed in this publication are those of the authors, and these do not necessarily reflect the views of the sponsors or the Social Market Foundation.

CHAIR

Mary Ann Sieghart

MEMBERS OF THE BOARD

Lord Charles Falconer

Daniel Franklin

Baroness Oilly Grender MBE

Nicola Horlick

Graham Mather

Sir Brian Pomeroy CBE

Peter Readman

Baroness Gillian Shepherd

Professor Alison Wolf

DIRECTOR

Emran Mian

DESIGN AND PRODUCTION

Pistachio Design

www.pistachiodesign.com

PRINTED BY

Diversified Global Graphics Group

www.dg3.com

CONTENTS

Acknowledgements	5
About the authors	6
Executive summary	7
Chapter 1: Introduction and background	13
Chapter 2: International evidence on decumulation patterns	20
Chapter 3: Modelling methodology	28
Chapter 4: Modelling findings – what if UK retirees behaved like retirees elsewhere?	32
Chapter 5: Policy response	60
Annex 1: Modelling assumptions	83
Annex 2: Median AHC income for ‘median man’ for each drawdown path figures	87
Annex 3: Make-up of total income	88
Endnotes	90

ACKNOWLEDGEMENTS

The publication of this report has been made possible by the generous support of Just Retirement.

We would like to thank the experts who made up our advisory board over the course of the project, including Professor Nicholas Barr (London School of Economics), Christopher Brooks (Age UK), Maggie Craig (Financial Conduct Authority), John Fingleton (Fingleton Associates), Ben Franklin (International Longevity Centre), James Lloyd (Strategic Society Centre), Alex Roy (Financial Conduct Authority) and Gemma Tetlow (Institute of Fiscal Studies).

The research includes modelling carried out by the Pensions Policy Institute – we would like to thank colleagues there for the excellent work they did on this and for their advice throughout the project. Especial thanks go to Chris Curry, Sarah Luheshi and Shamil Popat.

We are grateful to the many people from industry, regulation, the advice sector, other think tanks and the civil service who participated in a policy workshop in the summer. Thanks are also due to those who gave up time to discuss our research including, Maria-Jose Barbeno, Ben Gaukrodger, Teresa Fritz, Professor John Hills, Charlotte Jackson, David John, Tim Sharp and Rob Yuille. At SMF, we would like to thank Nida Broughton, Emran Mian and Sean O'Brien for their input and advice.

ABOUT THE AUTHORS

NIGEL KEOHANE

Nigel is Director of Research at the Social Market Foundation, where he oversees the SMF's research programme and leads the work on public service reform and commissioning, welfare reform and low pay, and pensions and savings policy. Prior to the SMF, Nigel was Head of Research at the New Local Government Network think tank, worked in local government and taught history at Queen Mary College, University of London. He has a BA and MA in history from Exeter University, and a PhD in Political History from Queen Mary.

KATIE EVANS

Katie Evans is an Economist at the Social Market Foundation. Her research interests include financial services, the UK's long-term growth strategy and the impact of technology and network capabilities on the economy. Katie previously worked at the Centre for Economics and Business Research, where she led the global economics team. She has also undertaken economic research for a wide range of companies and public sector organisations. She has a BA in Philosophy, Politics and Economics from the University of Oxford and an MSc in International Political Economy (Research) from the London School of Economics.

BEN RICHARDS

Ben Richards is a Researcher at the Social Market Foundation, where he works on projects in a range of areas including business policy, productivity, and immigration. His other research interests include theories of social justice, and debates on multiculturalism and social solidarity. Ben recently completed a PhD in Social Policy at the London School of Economics, and has previously worked as a Researcher at the Centre for Analysis of Social Exclusion, LSE. He has also conducted research for charities including Oxfam and the Child Poverty Action Group.

EXECUTIVE SUMMARY

Since April 2015, people aged over 55 have been able to spend their pension savings however they want. This overturns almost a century of policy stability in which there was an expectation that retirees would annuitise the larger part of their pension savings.

The ‘freedom and choice’ pension reforms were introduced to hand control over to pension savers who if prudent enough to save for retirement could be expected to be prudent in how they use their pension savings. The Government hopes that allowing savers full access to their money may encourage greater saving for retirement and that deregulation will lead to companies developing new, innovative retirement products. However, the reforms come with significant potential long-term risks: to individuals, who may consume their pensions too quickly or too slowly; and to the state, which may be left picking up the pieces through the costs of increased claims of means-tested benefits by retirees.

Thus far there is no reliable evidence from the UK on which to judge whether such outcomes are likely or to understand how these risks could materialise in practice. For this reason, this report looks abroad to how retirees use their pension savings in other countries that have implemented regimes similar to the UK’s new framework, modelling the outcomes for a range of UK retirees based on these international experiences. The modelling for this part of the report was carried out by the Pensions Policy Institute (PPI).

INTERNATIONAL LESSONS

The evidence in the two countries that display the most similarities to the UK pension system – Australia and the USA – shows that very few buy an annuity and that those who draw down their pots consume their pensions at varying rates. On average, Australians preserve their pension wealth by consuming only a small percentage each year, ensuring some of their pot is left for later in retirement, although at the cost of having relatively low incomes. But a substantial minority of Australians consume their pension pots very quickly, with an estimated 25% of individuals exhausting their pension pots by age 70 and 40% by age 75. Evidence from

the USA suggests that, on average, retirees that draw on their pension savings consume relatively quickly; but again there is substantial variation between retirees.

From this international evidence we identify three decumulation paths. First, a 'Cautious Australian' path whereby retirees decumulate their pension wealth by less than 1% per year, ensuring there is money left for later life. Second, a 'Quick-spending Australian' path whereby retirees decumulate very quickly, exhausting their pension pots entirely by age 75. And third, a 'Typical American' path whereby retirees decumulate their wealth by 8% of their initial pension pot each year.

FINDINGS FROM THE MODELLING

Chapter 4 brings these international experiences to life in the UK context by modelling the long-term outcomes for a range of UK retirees assuming that they adopt one of the three paths taken from Australia and the USA. We also chart the outcomes for UK retirees opting for guaranteed income for life by buying an annuity as this was the most popular product prior to the pension reforms. Key findings include:

1. **UK retirees are at risk of pension pot exhaustion.** Copying the 'Typical American' path or the path of the 'Quick-spending Australian' would lead on average to pot exhaustion by retirement year 17 and year 10 respectively. This is far in advance of the average number of years that retirees can expect to live after retirement (22 for men and 26 for women). In contrast, buying an annuity or following the 'Cautious Australian' path ensures that the pension is not exhausted.
2. **Retirees are at risk of low replacement rates.** An individual's replacement rate is their retirement income measured as a proportion of their income before retirement. The choice of decumulation path significantly affects replacement rates in retirement. Those who over-consume in early years of retirement will be able to maintain a rate closer to their working income for some time, but will then face much lower rates of consumption in later life. In some cases this may match consumption behaviour in retirement – individuals tend to want to

spend more in the early years of retirement, and become less active as they grow older. However, individuals often require additional resources late in retirement to help cover costs associated with health impairments and social care. Individuals that follow a more even path of consumption (for instance through an annuity), by contrast, will see their income remain relatively steady compared to those who opt for drawdown options.

3. **Retirees are at risk of low incomes.** The New State Pension and Pension Credit mean that retirees are at a low risk of falling into poverty, defined as 60% of median income (After Housing Costs). But retirees are at substantial risk of falling below other poverty indicators, such as the 70% median 'low income' threshold in later life if they spend their pensions quickly.
4. **Preservation of pension wealth is possible through under-consumption, but has big drawbacks.** Following the 'Cautious Australian' path results in a very low risk of running out of pension wealth, even if retirees live until very old ages. However, in order to ensure wealth is preserved into very old age, it is necessary to consume very slowly. This typically comes at the cost of reduced incomes and lower replacement rates throughout retirement, subdued demand across the broader economy and sub-optimal use of retirement resources (given that pension savings are intended to fund retirement).
5. **Retirees face variation in investment returns and uncertain incomes.** Investment returns can result in huge variation of incomes in retirement and of the age at which pension savings run out. If investment returns are poor early in retirement this can mean running out of money significantly ahead of average life expectancy. For someone seeking to preserve their capital pot, the consequence is felt more directly in terms of private pension income: if investments go well the individual can preserve the capital and have a good income from the high returns; if investments go poorly, many individuals will have minimal income to withdraw in this strategy. Variation in investment returns can also lead to unpredictable incomes between one year and the next, with the significant financial uncertainty this creates for retirees.

6. **There are significant risks to the state.** Decumulation paths also affect fiscal risks to the state associated with the costs of increased claims of means-tested benefits. In some instances, especially where pension savings are large, over-consumption paths can drive up the benefits bill as compared with the annuity path. For instance, if a man with a pension pot of £185,000 takes the 'Quick-spending Australian' decumulation path, this would cost the state over £10,000 more by the point of average life expectancy (age 87) than had they bought an annuity.

The report also details specific sub-groups that may face enhanced levels of risk, either because of their characteristics or because of the behaviours they exhibit. Such sub-groups include those who are likely to live in retirement for longer – women and early retirees; those without other savings or assets to fall back on, particularly non-homeowners; and, those with only Defined Contribution (DC) pension savings who will not have other private income to top-up their budgets.

INTRODUCING AN 'EARLY WARNING SYSTEM'

On the basis of these findings and the long-term risks identified by the modelling, as well as the untested nature of the reforms, Chapter 5 argues that the Government should develop an 'Early Warning System'. This would monitor closely what retirees do with their pension savings and identify risks both to groups of individuals and to the state. It would allow government to alter policy to reflect consumer behaviour and also to target support at specific at-risk groups.

As part of the 'Early Warning System', we propose two recommended actions:

- **Recommendation 1:** 'Early Warning System: Retirement Risk Dashboard'. The 'Retirement Risk dashboard' would allow the Government to identify emerging risks at an aggregate level, allowing it both to understand whether there are groups of retirees particularly at risk, and also whether there are long-term fiscal risks associated

with the aggregate decisions retirees are making. These range from monitoring pension balances, the take-up of guidance and advice, and early access of pensions through to take-up of various product outcomes, investment risk decisions and consumer behaviours at and in retirement.

- **Recommendation 2:** 'Early Warning System: Personal Pension Alerts'. Alongside the 'Retirement Risk Dashboard', the report suggests that a more personalised monitor could be created to assess the risks to which retirees may be exposed at an individual level and so enable policymakers to intervene promptly where appropriate with these sub-groups. Potential interventions could include:
 - Targeted support and advice for those who with low financial capability.
 - Exploiting contact points for Defined Contribution (DC) pension savers such as when they leave the labour market and or start receiving pensioner benefits – using these moments as triggers to encourage individuals to engage in retirement planning.
 - Initiatives to make retirees think twice before they take big one-off decisions such as withdrawing all their pension savings.
 - A 'Mid-Retirement Financial Health Check' to encourage older people to reconsider their financial position for their later years.

By tracking consumer behaviours and the risks as they emerge, Chapter 5 concludes by discussing how the 'Early Warning System' could help inform further policy developments, such as default products and how these should be designed, pre-commitment devices and whether a minimum income policy is needed.

Monitoring points and risk factors for 'Early Warning System: Retirement Risk Dashboard'



- Large proportion of retirees taking early retirement
- High proportion of individuals accessing their pensions under age 60



- Low take up of Pension Wise guidance and alternative channels of support
- Low reported satisfaction with Pension Wise
- Low take up of regulated financial advice
- Widespread inactivity of retirees at SPA
- Large proportion of older retirees in income drawdown



- Rapid decumulation of average pension pot
- Large proportion taking lump sums for non-investment purposes
- High incidence of individuals paying 40% tax on pots under £200k
- Incidents of pension pot exhaustion
- High proportion of retirees not decumulating their pension pots



- Low proportion of consumers taking the Open Market Option
- Low levels of sales of enhanced, joint-life and impaired annuities
- Incidence of scams
- High proportion in providers' default option



- Low levels of longevity insurance
- Low levels of inflation-protected products
- Low take-up products pooling investment risk



- Incidence of means-tested benefit take-up for individuals with pension resources
- Large numbers affected by 'National Incomes' rule



- High proportion reporting dissatisfaction with pension decision
- Self-reported well-being of retirees

CHAPTER 1: INTRODUCTION AND BACKGROUND

This chapter describes the new pension flexibilities and how they have changed the choices retirees have over how they spend their pension savings. It goes on to describe why the new research set out in this report is needed to understand how consumers are likely to respond.

1. WHAT HAS CHANGED? THE 'FREEDOM AND CHOICE' PENSION REFORMS

The UK pensions' landscape has changed dramatically following the implementation of the 'freedom and choice' reforms on 6 April 2015. Before this date, the tax and regulatory framework incentivised retirees to use their Defined Contribution (DC) savings to provide retirement income (typically through an annuity) with the bulk of their pension.¹ All retirees were entitled to take 25% of their pension pot as a tax-free lump sum – this remains the case. After this, retirees could choose not to take an income, but faced a very high 55% tax rate if they chose to withdraw their savings instead.² In practice, this meant that around 75% of retirees with DC savings used them to purchase annuities, after having taken the tax-free lump sum.³

Since 6 April 2015, these rules have changed significantly: all individuals aged over 55 now have much more flexibility over how to spend their DC pots. The most significant change has been the removal of the 55% tax rate on withdrawals outside an individual's tax free allowance. Individuals can still withdraw 25% of their pot tax-free, with further withdrawals from DC pension pots then taxed at the standard marginal income tax rate for that individual. These reforms mean that there is no longer a tax incentive to use DC savings to purchase an annuity. Outside the 25% tax free allowance, individuals now face the same tax rates whether they choose to convert their savings into an annuity or to withdraw their income gradually from their DC pension. Making a large withdrawal in a given year, however, may push retirees into a higher tax band.⁴ Alongside the auto-enrolment

of employees into workplace pensions, the 'freedom and choice' reforms constitute the most significant policy changes to private pensions in a generation.

The changes affect a large and growing proportion of the population, applying as they do to anyone aged over 55 with a DC pension. There are 2.2m people aged 55-70 with some £175bn invested in DC pension savings.⁵ The proportion of people with DC pension savings is even larger among younger cohorts, as membership of Defined Benefit (DB) schemes continues to decrease and as auto-enrolment increases the number of individuals saving into a DC pension.

Under the new system retirees will face a number of decisions. First and foremost, they will have to decide how and when to access their DC pension savings. Some may choose to turn their savings into a guaranteed income for life through the purchase of an annuity. Others may choose a form of flexi-access drawdown, or an 'Uncrystallised Flexible Pension Lump Sum', full or partial withdrawal of their pension fund, whereby they withdraw from their pot over time, taking on their own longevity and investment risk, or a combination of these options. For non-annuity options retirees will have to make on-going decisions regarding investment risk, how much money to take out each year and how much to preserve for later life. Still others may withdraw large sums early in retirement, leaving little or nothing left for later in life.

The objectives of pension policy

The objectives of pension policy are to provide a secure retirement income and the means of having a reasonable standard of living during retirement.⁶ In seeking to achieve these objectives, UK governments have also had significant regard for two other goals. The first is to help people smooth consumption over their lifetime given that their income from work will cease when they leave the labour force. The second is to ensure that the responsibilities for achieving these objectives are shared between the state (through the State Pension and other benefits) and the individual (via pension saving) so as to ensure the system is sustainable in the long-

term. These objectives are supported by a framework in which savings locked away into pensions are eligible for favourable tax treatment, including the ability to invest income in pension savings without paying income tax.⁷ At the age of retirement, pensioners are able to take 25% of these savings tax free; and the remainder is often withdrawn at lower tax rates than would have been paid during working life. The Government is currently consulting on how best to incentivise long-term savings.⁸

Measured against the objectives of consumption smoothing and shared responsibilities, the new reforms have both potential benefits and potential risks.

Potential benefits and risks associated with ‘freedom and choice’

When announcing the reforms, principles of choice, freedom and flexibility were emphasised by the Coalition Government, along with the need to encourage a culture of saving.⁹ Ministers also pointed to the creation of a New State Pension above the level of mean-tested benefits to provide a more generous baseline state pension than existed previously. The reforms were also partly motivated by the fact that many consumers were getting a poor deal in the internal annuities market. Disengagement and low awareness had driven negative consumer norms, including the failure to ‘shop around’, resulting in reduced competition and an environment in which many consumers ended up with products which did not suit their individual needs and circumstances.¹⁰ Furthermore, the Government hoped that relaxing pension regulations could open the door to new, innovative retirement products that would be better tailored to the diverse needs of today’s retirees, and, in the context of increased longevity, trends such as ‘phased retirement’ – whereby retirees gradually reduce working hours – and different consumption patterns in later life amongst retirees.

At an abstract level, the prospect of the ‘freedom and choice’ reforms have been well-received by the public, with polling indicating largely positive responses.¹¹ Relaxing the rules for accessing pension savings may be expected to have some positive effect on people’s inclination towards saving into a pension.

Alongside these potential advantages, there are also considerable risks to which both individuals and the state are exposed in the new ‘freedom and choice’ framework. These are, by their nature, long-term risks affecting the financial circumstances of individuals throughout retirements that are likely to be significantly longer than those experienced by previous generations. A consumer’s decision at retirement needs to be right not just for year one, but also at year ten, year twenty, year thirty and beyond. In addition, these risks have the potential to undermine the long-term sustainability of pensions policy. As the Work and Pensions Select Committee argued “The success of the policy can only be measured against consumer outcomes over many years”.¹² While individuals will live with the consequences of their retirement decisions, the state is also exposed to risks, exacerbated by increasing longevity.

The most obvious risk is that pensioners exhaust their resources before they die leaving them facing years of retirement unfunded, with lower incomes and greater reliance on state benefits. This may lead to increases in the numbers of pensioners in poverty, which already stood at 1.6 million in 2011-12,¹³ though the New State Pension may help reduce this eventuality. Second, exhaustion may lead to lower replacement rates in the later years of retirement (that is, the rate of income received in retirement relative to income received before retirement). This may not match the conventional expectation of ‘u-shaped’ expenditure needs in retirement (high-low-high) and mean the trading off of high standards of living in early retirement against low standards of living in later life.

Third, pensioners may be more likely to rely on means-tested benefits. The move to the New State Pension from April 2016 is intended to reduce means-testing of pensioners and, therefore, reduce the savings disincentive. However, a number of means-tested pensioner benefits remain and at significant cost, including: housing benefit (at a cost of £6.6bn¹⁴) provided to renters on low incomes; the Guarantee Credit (received by individuals whose income falls below £151.20 per week, and couples whose income falls below £230.85 a week¹⁵); and Council Tax Reduction.

An alternative outcome is that pensioners may be overly cautious and thus conserve their DC pension savings. In this instance, individuals may not maximise their total retirement income and leave a large proportion of their pension wealth unspent. Potential consequences from this behaviour could include higher incidence of poverty and lower replacement rates for people in retirement, with the consequent effect this would have on reduced living standards and wellbeing.

The FCA has acknowledged these risks, arguing that: “Increased choice means people will have to make more decisions about how to use their pension savings. This poses significant new risks for many consumers, including investment risks, exposure to charges and the sustainability of income during retirement.” The FCA noted that “sustainability of income” is a particular concern given people’s tendency to underestimate their life expectancy.¹⁶

So much for the theory. The real challenge is to understand how UK retirees may behave and the specific risks to which the retirement population, specific sub-groups and the state may be exposed.

2. HOW ARE UK RETIREES LIKELY TO ACT?

Thus far, there is limited domestic evidence to help understand retirement behaviour. Early Treasury analysis of the costs associated with the reforms estimated that ‘around 30% of people in Defined Contribution schemes will decide to drawdown their pension at a faster rate than via an annuity’. However, the Treasury acknowledged that there are significant behavioural factors that make it extremely difficult to judge.¹⁷ Surveys of retirees have produced mixed results depending on the framing of the question.¹⁸ Meanwhile, it will be many months, more likely years, before analysis of UK consumer outcomes can tell us much usefully about new ‘norms’ given the long-term nature of the impact of decisions taken at or earlier in retirement.

Policymakers can be relatively confident that consumers will not act as rational economic actors. Standard economic theory predicts that an

'economically rational' individual would choose to guarantee income in retirement by buying an annuity, as doing so allows for higher consumption in retirement and eliminates investment and longevity risks. This theory has been endorsed by the Financial Conduct Authority's (FCA) recent inquiry. This study found that 'an annuity gives good value for money when purchased using the Open Market Option compared to other strategies'.¹⁹ But, the take-up of annuities is typically much lower than economic theory would predict.

A number of explanations have been advanced to rationalise this paradox (often called the 'annuity puzzle'), including: complexity of the decision; inertia; myopia and short-sightedness; and loss aversion. These factors together with existing evidence of poor financial literacy and capability across the general population explain why policymakers need to be alert to the risks identified above.

However, looking abroad can help us understand how UK retirees may behave and also the types of risks that may face retirees and the state. Surprisingly, international evidence remains a largely untapped resource for informing UK policy.

3. AIMS OF THE REPORT

This report has four key aims:

1. **To draw on international patterns of behaviour** to assess how UK retirees are likely to respond to the reforms.
2. **To use modelling to analyse the potential long-term impact** of the changes for an average UK retiree and assess the likelihood of positive and negative outcomes on a range of assumptions.
3. **To illustrate outcomes for specific groups** of UK retirees who are at risk of detrimental outcomes. International evidence suggests that certain groups – such as single women and non-homeowners – are at particular risk in retirement.

4. **To assess what policymakers could do to develop an ‘Early Warning System’** that could provide government with the data insights and policy levers to increase the probability of attaining positive retirement outcomes.

To achieve these goals, the rest of the paper is structured as follows:

- Chapter 2 describes international examples that offer the most comparable lessons for how UK retirees may behave and how retirees in other countries choose to access their pension savings.
- Chapter 3 sets out the methodology for the modelling.
- Chapter 4 describes the findings from our modelling exercise.
- Chapter 5 seeks to translate these findings into new policy proposals for government, regulators and the industry.

CHAPTER 2: INTERNATIONAL EVIDENCE ON DECUMULATION PATTERNS

At present it is difficult to predict how retirees will respond to the new choices available to them. Other countries with similar pensions systems could provide useful insights into how UK retirees may behave. In this chapter we assess which countries the UK can learn from and what lessons can be learned about how individuals spend their pension savings.

WHICH COUNTRIES OFFER RELEVANT LESSONS FOR THE UK?

Below we describe which countries possess important similarities to the UK in these areas. Two crucial dimensions for the purposes of this study are:

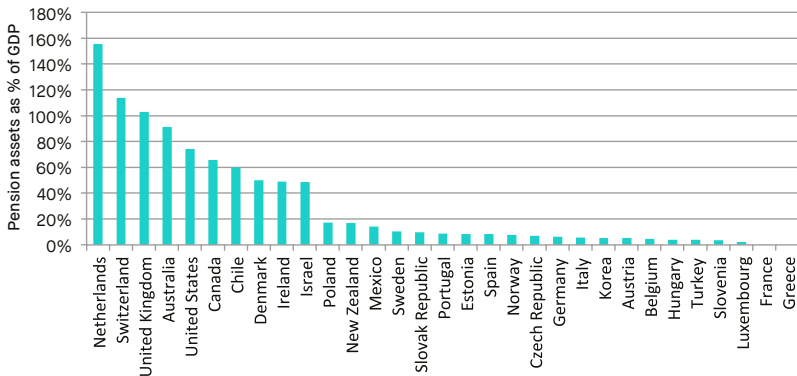
1. *The underlying structure of the pensions system – in particular whether it relies on pay-as-you-go state transfers, or funded pension schemes.*
2. *The level of choice offered to people in the decumulation phase.*

1. Pay-as-you-go versus funded pension systems

Pay-as-you-go pension systems rely on cash transfers from workers to pensioners, whereas funded pensions are financed from the contributions pensioners made when they were working.²⁰ The UK has a mixed system, with the State Pension being financed on a pay-as-you-go basis, but with substantial DB and DC schemes financed privately through funded pensions. Therefore, international evidence relevant to the UK's DC pension reforms is more likely to come from countries with a substantial element of privately-funded pensions, rather than a heavy reliance on pay-as-you-go systems.

An informative indicator of this difference is the size of a country's pension fund assets relative to its GDP (see Figure 1). The UK is one of ten countries with pension fund assets of over 40% of GDP; whilst the remaining countries generally have assets of around 10% or less. It is the former group we are most interested in, since the large size of pension assets reflects the importance of funded schemes in these countries.²¹

Figure 1: Pension fund assets as % of GDP in selected OECD countries, 2012



Source: OECD pension statistics

2. Regulation of the decumulation phase

The most direct lessons for the UK are likely to come from countries that not only have a similar level of funded pension provision but that also have deregulated decumulation regimes.

Below we describe which countries display these attributes. Both regulation and tax can be used to influence the options retirees have with their private pension pots. Some countries simply require retirees to annuitise. Others allow retirees freedom in principle, but adopt a punitive rate of tax for those wishing not to annuitise with the consequence that, in practice, such a policy is very similar to compulsory annuitisation.²²

- In both Chile and the Netherlands, options for DC savers at retirement are heavily restricted. Individuals are strongly incentivised (in Chile) and compelled (in the Netherlands) to annuitise.
- Israel and Ireland both have strict regulations governing DC pots, except where a retiree's income exceeds a minimum threshold. This ensures retirees reach a minimum level of guaranteed income, beyond which they have a much greater set of options on how to spend or invest their pension savings.

- Canada and Denmark have considerable variation in the pension schemes offered and rules at the point of retirement. Denmark is unusual in that in many cases the decision to annuitise is made relatively early, during working life. In Canada, pension systems vary geographically across provinces: some have elements of mandatory annuitisation, whilst other provinces allow free access to lump sums.
- Switzerland gives retirees some choice over how to spend their pension pot. Taking a lump sum is allowed, though this option is discouraged in two ways: by making a lifetime annuity the default option; and by regulating annuity rates such that they are very attractive to retirees. Consequently, around 80% of pension assets are converted into annuities in Switzerland.

Whilst all the countries above display substantive differences to the UK's new regulatory regime at retirement, two countries have very similar rules: Australia and the USA. These two countries have pension systems that allow retirees significant choice in how to access their pension pots at or during retirement.

In Australia DC pensions can be accessed between ages 55 and 60, depending on the retiree's date of birth. Retirees have full control over their pots: they can withdraw the money as a lump sum, set up guaranteed income for life by buying an annuity or purchase a form of drawdown product. Once retirees have reached pensionable age withdrawals are not subject to tax.

The USA has a similar system whereby retirees enjoy considerable choice; although after age 70½ minimum withdrawal rates apply to ensure retirees decumulate at least some of their pension pots.²³

This is not to downplay differences between the UK, Australia and the USA. Australia's means-tested State Pension may encourage some retirees to over-consume earlier in retirement as a route to getting higher levels of assistance from the government. Similarly, the minimum withdrawal rules in the USA may encourage retirees to withdraw regular sums from their pension pots. Both cases contrast to the current rules in the UK.

Nevertheless, both countries share clear similarities with the UK in terms of their tax and regulatory systems for retirees, and the freedoms given to retirees over their pension pots. Understanding how consumers have behaved in these countries could therefore provide useful insights into the range of potential long-term consequences of the pension freedoms in the UK.

In summing up, Table 1 illustrates the key similarities and differences between these ten countries.²⁴

Table 1: International differences in tax and regulation of the decumulation phase

Country	Retirees able to freely withdraw DC pension savings?	Retirees penalised for withdrawing savings?	Liberalised or restricted decumulation phase?
Australia	Yes	No	Liberalised
Canada	Varies by province	Varies by province	Mixed
Chile	No	N/A	Restricted
Denmark	Varies by scheme	Varies by scheme	Mixed
Ireland	No, unless have income of over €12,700	Yes, unless income of over €12,700	Mixed
Israel	No, unless income over minimum threshold	Yes, unless income over threshold	Mixed
Netherlands	No	N/A	Restricted
Switzerland	Yes	Yes	Mixed
United Kingdom	Yes	No	Liberalised
United States of America	Yes	No	Liberalised

HOW DO RETIREES USE THEIR PENSION POTS IN AUSTRALIA AND THE UNITED STATES?

In the following section we look to the evidence in Australia and the USA to understand how individuals spend their pension pots.

Australia

So-called 'superannuation' pensions in Australia are typically larger than DC savings in the UK. Studies suggest a major worry for Australian retirees and pre-retirees is the risk of exhausting their pension pots.²⁵ Despite these concerns the vast majority of pension assets are held in products that offer no longevity insurance. Term annuities account for just 5% of products purchased, and in 2009 just 17 life annuities were sold.²⁶ Perhaps in response to these fears, the number of life annuities sold has begun to rise in recent years with Challenger, the main provider of annuities in Australia, reporting record sales.²⁷ A substantial proportion of Australian retirees, however, continue to deal with this risk by under-consuming; a strategy which, although providing some protection against pension exhaustion, reduces average standards of living. By self-insuring against longevity risk, individuals must plan to stretch their retirement savings across their maximum possible life expectancy, rather than planning around the average and pooling the risk of a longer life, which reduces the amount of wealth which can be consumed in any given year.

The Financial Systems Inquiry (Murray Review) investigated the outcomes of this approach finding that incomes could be 15%–30% higher if retirees used products that pooled longevity risk, rather than the current typical strategy of drawing down the minimum amount from an account-based pension.²⁸

A study using a representative sample of the Australian population revealed a substantial group of relatively wealthy pensioners that failed to decumulate their pots at all, instead continuing to increase their assets during retirement. Of this group, those who were not newly retired saved around 4% per year on average, and as much as 8% per year if in poor health, possibly as a precaution against future health or social care costs.²⁹

These findings were confirmed by a separate study, which also found retirement decumulation rates to be slower than theoretical predictions. Furthermore, decumulation was found to slow in older ages, reducing the likelihood of exhausting the pension pot entirely.³⁰

The most comprehensive study of non-housing wealth held by Australians over time confirms that, on average, Australians under-consume. Wu, Asher, Meyricke and Thorp studied changes over time of the average non-housing assets of a cohort of Australian households. For all households in their sample, and over the period they studied, assets declined by an average of 0.875% per year.³¹

However, there is considerable variation in decumulation patterns in Australia. Although on average Australians decumulate slowly, a significant minority do not. Some groups are more likely to decumulate quickly, including those who start with a smaller pension balance, those experiencing poor health, those that are single, and non-homeowners.³² In a study of Australians with pension assets when aged between 50 and 54 years, J Rob Bray estimated that 15% of people had exhausted their pot entirely by the age of 65; 25% had exhausted their pot by age 70; and 40% by age 75. This demonstrates that over-consumption is a significant risk for a large minority of Australians. However, of those that do run out of financial assets in retirement, very few (that have them) run down their housing assets.³³

A range of factors may help explain the fact that the mean Australian decumulates slowly whilst a significant minority exhaust their pensions by age 75. First, the data come from different data sources and cover different aspects of wealth: the 'Cautious Australian' path covers all non-housing wealth (i.e. financial wealth as well as pension wealth) whilst the 'Quick-spending Australian' covers only pension balances. Second, all data sources highlight significant heterogeneity across the Australian population: some individuals actually increase their non-housing wealth year-on-year (either by savings, high investment returns or via inheritances). Third, as indicated in Chapter 3, those who exhaust their pensions rapidly in the early years of retirement tend to have smaller

pension pots.³⁴ Fourth, age may play a part with some evidence suggesting that younger individuals may consume their assets more rapidly than older pensioners.³⁵

USA

Some similarities with Australia can be found in the USA. Take-up of annuities is again not widespread, with fewer than 10% of retirees receiving guaranteed life income from annuities.³⁶ Love, Palumbo & Smith (2008) investigate the drawdown behaviour of retirees and find evidence of pensioners saving for uncertain medical expenses and longevity, as well as some retirees intending to pass on money as a bequest. Many retirees continue to hold a significant amount of wealth even at advanced ages.³⁷

Poterba, Venti & Wise (2011) found that the numbers of retirees making withdrawals from their pensions increases markedly after age 70½, after which minimum withdrawals are required, demonstrating how retirees respond to the regulatory framework. Although it varies by scheme type, around a quarter of individuals aged 60 to 70 withdraw in the year of observation, compared to approximately three quarters in the age bracket 70 to 85. For those taking money from their pension savings, the average withdrawal rate is around 8% between age 60 and 85.³⁸

There does, however, appear to be considerable heterogeneity in withdrawal patterns in the USA. Some retirees do not make withdrawals from their pension pots, even after age 70½, despite facing a tax penalty for not doing so. Those with greater wealth are more likely to decumulate at a slower rate; whilst those with lower levels of wealth are more likely to decumulate their pensions relatively early in retirement. There is evidence that households in the top quintile of the wealth distribution report rising wealth up until about age 85, before decumulating in later years.³⁹ The USA is similar to Australia in that households generally do not release housing equity. However, they may do so if they experience a shock – such as the death of a spouse or entry into a nursing home.⁴⁰

CONCLUSIONS

The evidence presented above suggests three patterns of drawdown for retirees. In the USA, the average withdrawal rate for those making withdrawals after age 70½ is around 8% per year. In Australia, the average decumulation rate is just 0.875% per year. However, a substantial minority of Australian retirees decumulate much more quickly than this, with 40% of retirees depleting their pension pots entirely by age 75.

Based on these examples from countries with pensions freedoms, we explore the likely key outcomes if UK retirees behave in similar ways. The next chapter sets out the approach taken to modelling these outcomes.

CHAPTER 3: MODELLING METHODOLOGY

This chapter briefly describes the modelling exercise and the assumptions used in the modelling. The aim of the modelling exercise was to estimate possible outcomes for UK retirees based on a number of decumulation paths observed in countries with similar pension systems as described in Chapter 2. The modelling was carried out by the Pensions Policy Institute (PPI).

Figure 2: Illustration of inputs into the modelling



1. DECUMULATION PATHS

We selected the decumulation paths on the basis of two criteria:

1. The international evidence suggests that they are plausible and credible drawdown rates pursued by a significant part of the population in America or Australia.
2. Together, they provide us with a range of drawdown rates to test against each other.

Based on the international evidence on drawdown rates described in the evidence review above, we chose the following decumulation paths to model. In the modelling we assumed that individuals did not take a lump sum (for an explanation see Annex 1).

Table 2: Description of decumulation paths used in the modelling

Description of decumulation path	Rationale for selection
Path 1: 'Annuitant' . Retiree buys a standard level annuity.	This is the most common form of annuity purchased in the UK.
Path 2: 'Cautious Australian' . Retiree withdraws 0.875% of pension pot plus investment returns each year.	This is based on the behaviour of the average (mean) Australian drawdown rate of non-housing wealth.
Path 3: 'Quick-spending Australian' . Retiree draws down at a rate of 11.6% of their original pot in each year.	This is drawn from Australian evidence that estimates that 40% of the Australian population exhaust their pension pot by age 75. This is equivalent to a drawdown rate of 11.6% of the original pot per year.
Path 4: 'Typical American' . Retiree draws down at a rate of 8% of their original pot in each year.	This represents the average withdrawal rate for those Americans withdrawing money from their pensions.

2. IDENTIFYING UK RETIREES TO MODEL

We sought to identify a range of characteristics within the UK population aged 55 to retirement age that would allow us to assess the effect of different factors on outcomes for the individual and the state. Variables that we considered important to include were:

- Homeownership status (because of the costs of housing benefit).
- A range of pension pot sizes.
- Gender (because of different pension characteristics, retirement ages and life expectancies).
- National Insurance record and eligibility for the New State Pension.

Restrictions on modelling capacity meant we were unable to evaluate each of these variables separately, so we constructed five consumer types that captured important variables reflecting gender, household characteristics and pension savings. These are detailed in Table 3.

Table 3: UK individuals modelled and their characteristics

Individual	Gender	Pension pot size	Housing	State Pension	Retirement age
1	Man	Median for men £29,046	Renter	Full State Pension	65
2	Man	Medium / High (70th percentile) for men £69,813	Homeowner	Full State Pension	65
3	Woman	Median for women £15,083	Homeowner	Full State Pension	63
4	Man	High (90th percentile) for men £184,787	Homeowner	Full State Pension	65
5	Woman	Low (30th percentile) £6,705	Renter	10 years of NI contributions lacking	63

Although international examples suggest that the size of the pension pot does influence the decumulation path chosen, with those with larger pots likely to decumulate more slowly than those with less wealth, we model the outcomes for each individual in each scenario to provide insight into the full range of potential results of pension freedoms in the UK.

3. THE MODELLING EXERCISE AND ASSUMPTIONS

The modelling was undertaken by the Pensions Policy Institute (PPI). The pension pot sizes were taken from the PPI's Dynamic Model which uses data from the English Longitudinal Study of Ageing (ELSA) as the starting point. The modelling of outcomes for individuals was done using the Individual Model. The Dynamic Model is a dynamic micro-simulation model – it takes in data about the characteristics of individuals and assesses how they would fare over time as circumstances vary, depending on the decisions they make by calculating their incomes and other outcomes.

ELSA collects data over time on the health, wealth and other characteristics of a representative sample of the English population over the age of 50. Organised by a group of academic institutions including the University College London, the Institute for Fiscal Studies, NatCen Social Research and the University of Manchester, it provides a rich and authoritative source of data on the characteristics of today's retirees, including their pension wealth.

The PPI individually modelled the outcomes of different decumulation paths at the point of retirement for each of the individuals shown in Table 3. The individuals are modelled in a stochastic investment and economic environment, to allow an analysis of how the different drawdown approaches could impact on individuals' financial resources in retirement. In total 500 scenarios for CPI inflation, earnings and investment returns were modelled. Further information on PPI's modelling approach can be found in Annex 1.

CHAPTER 4: MODELLING FINDINGS – WHAT IF UK RETIREES BEHAVED LIKE RETIREES ELSEWHERE?

This chapter reports the findings from our modelling exercise that applies withdrawal behaviours exhibited by retirees in Australia and the USA to UK consumers. Ultimately, it seeks to answer the question: what would long-term outcomes look like for UK retirees were they to access their pension savings like retirees in Australia and the USA?

1. LONGEVITY RISK AND PENSION POT EXHAUSTION

Comparison between the drawdown rates

The most hotly-debated consequence of the pension flexibilities in the UK has been the question of whether retirees will exhaust their DC pension savings leaving them with no or reduced income in later life.⁴¹

Depending on the path adopted, the average year in which the pension is exhausted varies significantly:

- The ‘Annuitant’ never exhausts their pension, having converted their savings into a guaranteed income for life.
- The ‘Typical American’ exhausts the pot 17 years into retirement - five years ahead of average life expectancy for a man (87) and nine years ahead of average life expectancy for a woman (89).
- The ‘Cautious Australian’ holds onto pension capital for a remarkable 56 years after retirement.
- The ‘Quick-spending Australian’ runs out of money by the end of the tenth year of retirement.

The effect of investment risk on pot exhaustion

As seen above, the rate at which a person decumulates their pension has a major effect on the likelihood of someone exhausting their pension savings. However, as well as the decumulation path chosen, the outcomes

for individuals are influenced significantly by investment risks. In an annuity or a DB pension the investment risk is borne by the insurer and the employer respectively. Under income drawdown, individuals bear the investment risks themselves.

Figure 3 illustrates the wide range of outcomes for individuals that pursue the same decumulation strategy, in this case the ‘Typical American’ path (i.e. taking 8% of the original pot per year). The model shows how the individual’s retirement income and pension pot would be affected by different economic and investment scenarios, based on 500 different hypothetical situations. These scenarios can be interpreted as 500 ‘parallel universes’ that a particular retiree might go through during retirement. In some scenarios, positive investment returns allow consumption at 8% of the original pot a year to continue for longer before the retiree runs out of pension wealth entirely; but in other scenarios with poor investment returns, pension wealth would be exhausted much more quickly.

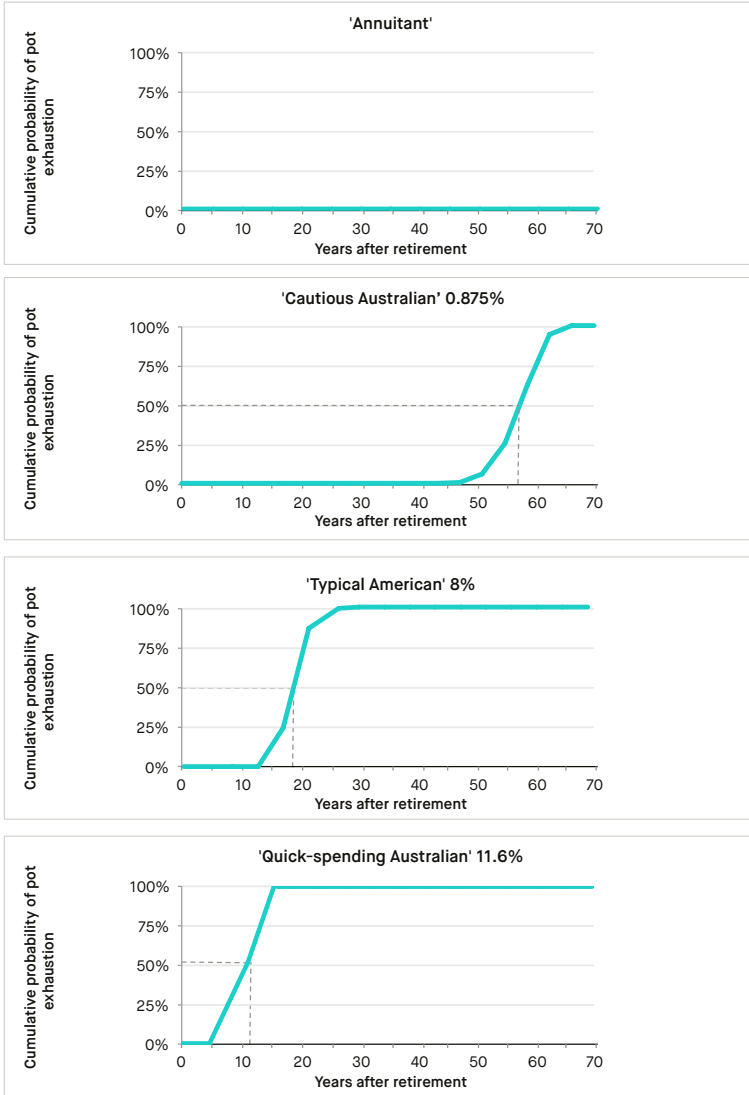
Figure 3: Distribution of outcomes for someone withdrawing like the ‘Typical American’ (8% of the original pot per year)



Figure 3 shows vast variation. For instance, in the best 10% of scenarios, the pot would last 22 years into retirement or beyond the average man’s life expectancy. On the other side, in 10% of cases, the pension pot would be exhausted 12 years into retirement – 10 years before the average man’s

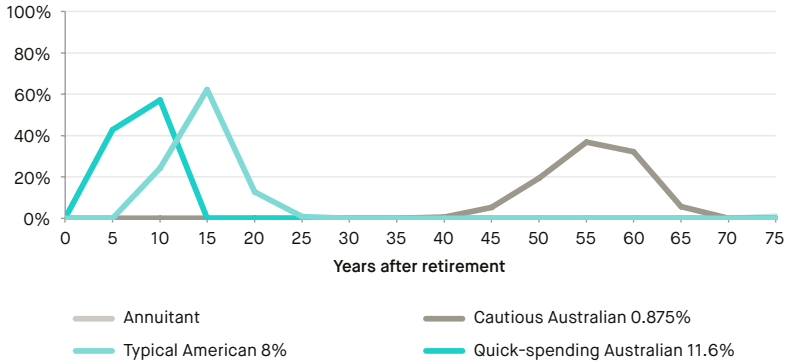
life expectancy and 14 years before the average woman's life expectancy. The difference is driven by investment returns. Figure 4 illustrates the effect of investment returns for each of the four decumulation paths.

Figure 4: Distribution of outcomes for different decumulation paths - years after retirement until pension pot is exhausted



The consequence of variation in investment returns is that a significant minority consuming at a rate of the 'Typical American' (8%) are shown (Figure 5) to run out of money before many who consume more aggressively like the 'Quick-spending Australian'.

Figure 5: Years until the pension pot runs out for each decumulation path



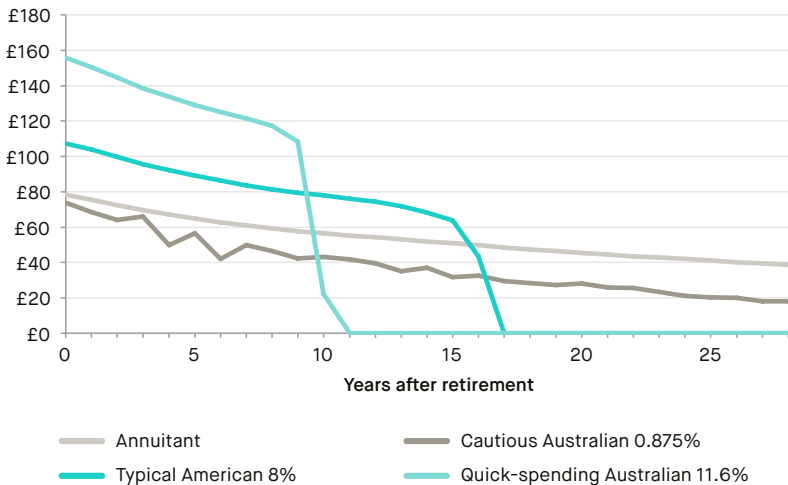
It should be noted that the likelihood of exhausting a pension pot is particularly affected by when positive or negative returns are registered during the decumulation phase. A number of years of strong investment performance can put a retiree onto a positive trajectory for a long period into retirement. Conversely, early investment losses may be non-recoverable. This sequencing of investment returns has been described as the 'known unknown' of the retirement debate. An individual's ability to self-manage their longevity risk (difficult enough in any case) can be knocked off course by such events. Research shows that even in the best performing stock markets in the last century, those withdrawing 4% per year would have been exposed to some risk of pension pot exhaustion during a thirty year period of retirement.⁴² The decumulation phase is particularly vulnerable to investment shocks. During accumulation, the saver benefits from 'pound-cost averaging' – they save gradually in other words, each month and therefore invest when stocks are under-priced as well as over-priced.⁴³ In retirement, these investment risks cannot be managed in this way.

2. PRIVATE PENSION INCOMES, DECUMULATION PATHS, INFLATION AND INVESTMENT RISK

2.1 Weekly private incomes

Section 1 above illustrated the variation in likelihood of individuals exhausting their pension pots. In Figure 6 we use a man with a 70th percentile pension pot (£69,813) to demonstrate the effects on retirees' private income. Private pension incomes vary significantly depending on the drawdown path adopted. The 'Typical American' and 'Quick-spending Australian' paths lead to high average incomes in early retirement before a huge drop off to zero when the pot is exhausted. In contrast, the most stable income is offered by the annuity path, which also offers the most even distribution of private income across retirement. The 'Cautious Australian' has an income not dissimilar from an annuity in the early years of retirement, although the difference grows: from £4.21 per week in Year 1 to £21.31 in Year 29. This lower income is intuitive given the premise of the path is to preserve a large part of the pension pot. Those taking the most aggressive decumulation paths have the most uneven private incomes in retirement: high in the early years and very low / zero in the later years of retirement.

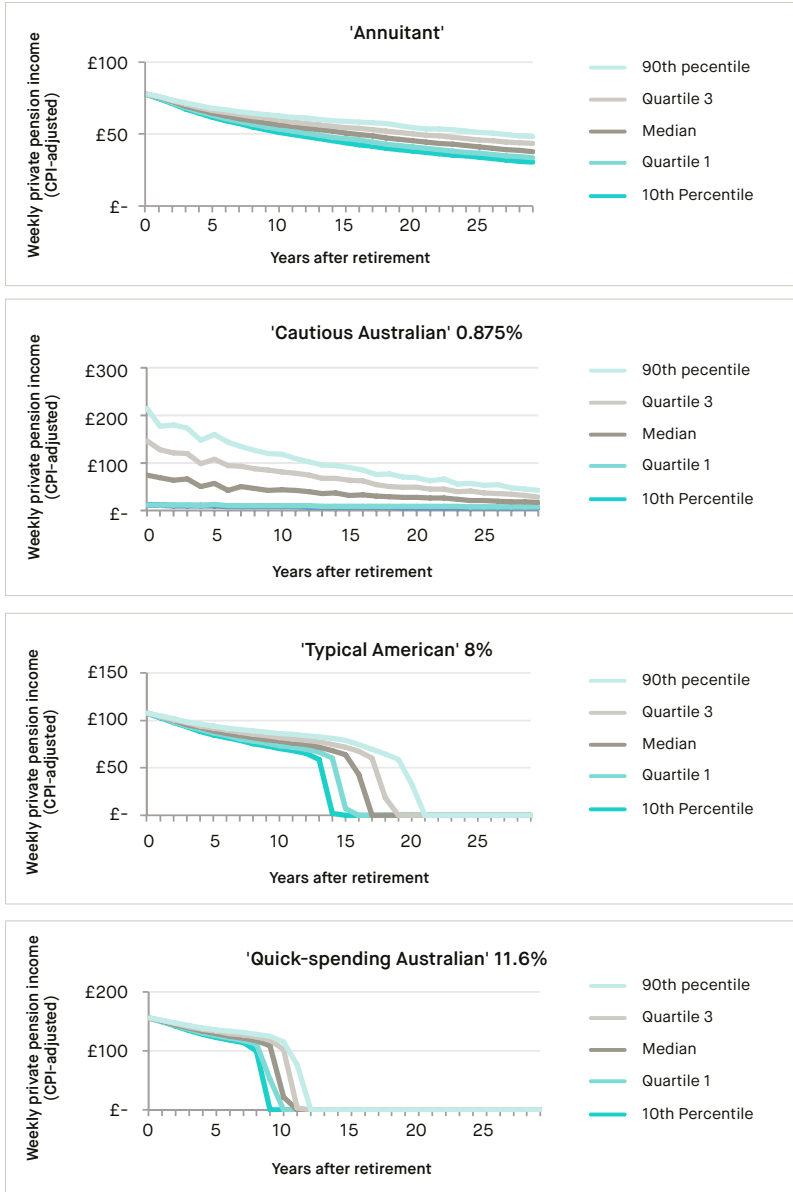
Figure 6: Weekly private pension income (CPI-adjusted) 70th percentile man (£69,813)



However, outcomes for each decumulation path are also affected by investment returns and by inflation – meaning that for each path there are a range of possible outcomes. Inflation risk affects private incomes in all the paths taken including the annuity. Variation in inflation means that among the 500 scenarios modelled, the top 10% of annuitants achieved £48.20 per week in Year 29 using an annuity, whilst the lowest 10% achieved £30.46 in Year 29. Whilst alternative products such as index-linked annuities offer inflation risk cover, level annuities are the most popular product currently.

On the other decumulation paths, income is also affected by variation in investment returns as illustrated in Figure 7. While an annuity allows retirees to pool the risks associated with variable investment returns and offer some insurance against volatility in their income, other decumulation paths leave retirees exposed to the risks of variable investment returns as well as inflation. The variation in incomes is most significant for the 'Cautious Australian' (0.875%) decumulation path. Here the individual acts to preserve their capital sum and only draws down a small amount per year as well as any investment returns. When the investment returns are large, the private income far exceeds that of any other decumulation strategy – in the first year of retirement 10% of scenarios register weekly incomes of £214.67 or more. However, if investment returns are small or negative, the private income becomes negligible. In a quarter of cases, the individual gets less than £11.75 a week, thus potentially increasing reliance on means-tested benefits. There is also a significant risk of incomes fluctuating widely from one year to the next as investment returns and economic conditions vary, making it very difficult for a retiree to plan or be certain of their level of consumption over time.

Figure 7: Weekly private pension income (CPI-adjusted), 70th percentile man (£69,813)



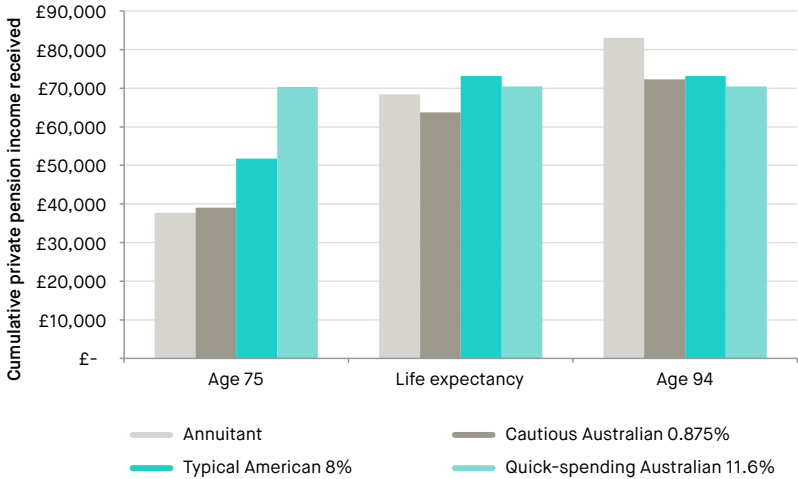
2.2 Cumulative private pension incomes

The pattern of income derived from different drawdown strategies can also be assessed on the basis of cumulative private pension income at various ages, as illustrated in Figure 8.

By age 87 (UK male life expectancy at age 65), the two strategies that deliver the highest real-terms private incomes are those in which pensions are spent most aggressively. This can be explained by two factors: first, the entire value of the pension has by that point been depleted; second, because the pension is consumed rapidly there is less time for inflation to erode the real value of the pension. The corollary not displayed in these graphs is that these individuals have no money left for later life or for inheritance.

By age 94 this story has changed, with the annuity delivering a significantly higher cumulative total than the 'Cautious Australian' path (11% higher) and the highest overall retirement income. Again, as with annual income, there is significant variation within the under-consumption pattern compared to the annuity in terms of cumulative income. For the 'Cautious Australian' (0.875%) path, a quarter of consumers receive nearly £80,000 but a quarter of them receive £65,000 or less by age 94. If you follow the median path under-consumption will be a sub-optimal method of spending pension savings because only a comparatively small proportion of the pension will be used for the purpose of funding retirement. This reaffirms the findings of studies into Australia: namely that retirees set aside an unnecessarily high proportion of their savings and that insurance products might 'increase the welfare of retirees by reducing the need for precautionary saving'.⁴⁴

Figure 8: Cumulative private pension incomes at different ages in retirement for the four decumulation paths – 70th percentile man (£69,813), CPI-adjusted, real-terms 2016 prices

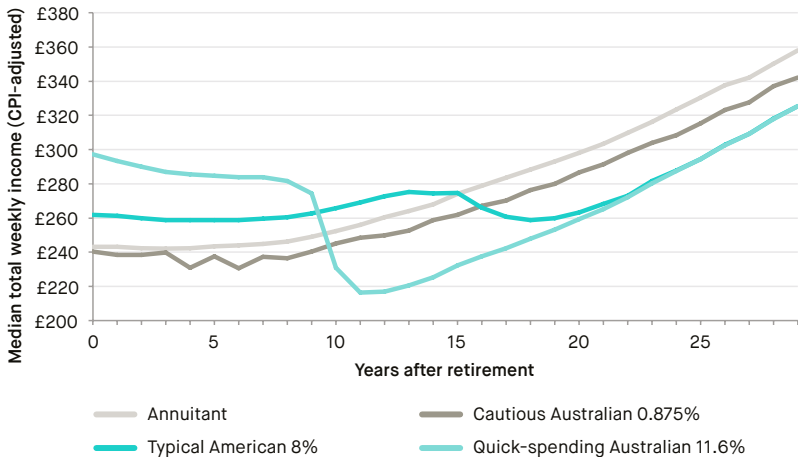


3. TOTAL RETIREMENT INCOMES, REPLACEMENT RATES AND RISK OF POVERTY

3.1 Total retirement incomes

Figure 9 sets out total retirement incomes (i.e. private pension plus state pension and benefits) for individuals across the four different decumulation paths. Two notable features stand out. First, the strategy providing the greatest income stability is the annuity.⁴⁵ In contrast, even when bolstered by the State Pension and topped up in later life with means-tested support, the two more aggressive paths result in much lower incomes in later life. Second, the generous up-rating of the State Pension (whichever is the highest of earnings, CPI or 2.5%) means that real incomes rise in the later years. This is despite the fact that the ‘Typical American’ (8%) and the ‘Quick-spending Australian’ (11.6%) strategy have exhausted their private pensions and the real-terms value of all the private pensions have reduced in real terms.

Figure 9: Total income graph: comparison of decumulation paths: 70th percentile man with a total starting pot of £69,813 (CPI-adjusted)



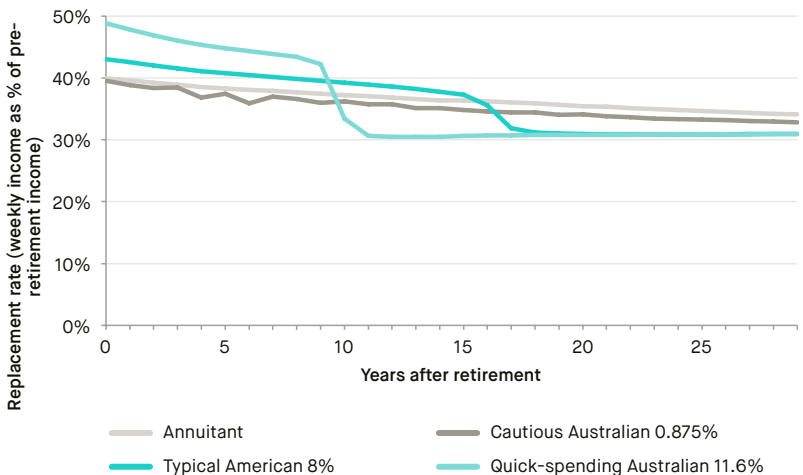
It should be noted that under the ‘Notional Income’ rules, the retiree following the path of the ‘Cautious Australian’ may receive lower means-tested benefits and therefore a lower income. Under this rule, if a retiree chooses not to buy an annuity, an amount of “notional” income will be taken into account when benefit entitlement is calculated. The ‘notional income’ is equivalent to the income you would have received if you had bought an annuity.⁴⁶

3.2 Replacement rates in retirement

Replacement rates in retirement are a key metric of pension policy. They convey the rate of income received in retirement relative to income received before retirement.

In the scenarios sketched out in Figure 10, replacement rates are typically low, reflecting previous under-saving across the population aged 50 to 65 who are reliant on DC savings. The result of this under-saving is that replacement rates are low except for those with median and smaller pension pots, for whom the State retirement benefits match (and in some cases exceed) working age benefits and earnings.

Figure 10: Replacement rates in retirement: comparison of decumulation paths: 70th percentile man with a total starting pot of £69,813



Faster decumulation strategies result in very uneven rates, with comparatively high income in early retirement offset by very low income in later years of retirement. This may match the desired trajectory of consumption for some retirees (spending more in the early, more active, years of retirement and cutting back in older age). However, this can cause problems if individuals incur substantial care costs and it does not match the conventional expectation of 'u-shaped' expenditure needs in retirement (high-low-high). Additionally, given the fact that most people underestimate their life expectancy, this may leave retirees facing low replacement rates in old age.

This drop off in replacement rates is even more marked for those with larger pension pots. This is because private income contributes proportionally more to their total income.

Figure 11, showing 90th percentile man with a total starting pot of £184,787, shows a replacement rate of 48% in Year 1, dropping to 18% in Year 11. It should be noted that evidence suggests that high earners require lower replacement rates than lower earners as a smaller percentage of a high salary pre-retirement still gives the individual a healthy income. The Pensions Commission used figures varying from 50% for someone earning over £51,098 through to 80% for someone earning below £12,136.⁴⁷ However, the figures set out above illustrate that higher earning individuals could be drawn much further from such replacement rates depending on their decumulation path.

Figure 11: Replacement rates in retirement: comparison of decumulation paths: 90th percentile man with a total starting pot of £184,787



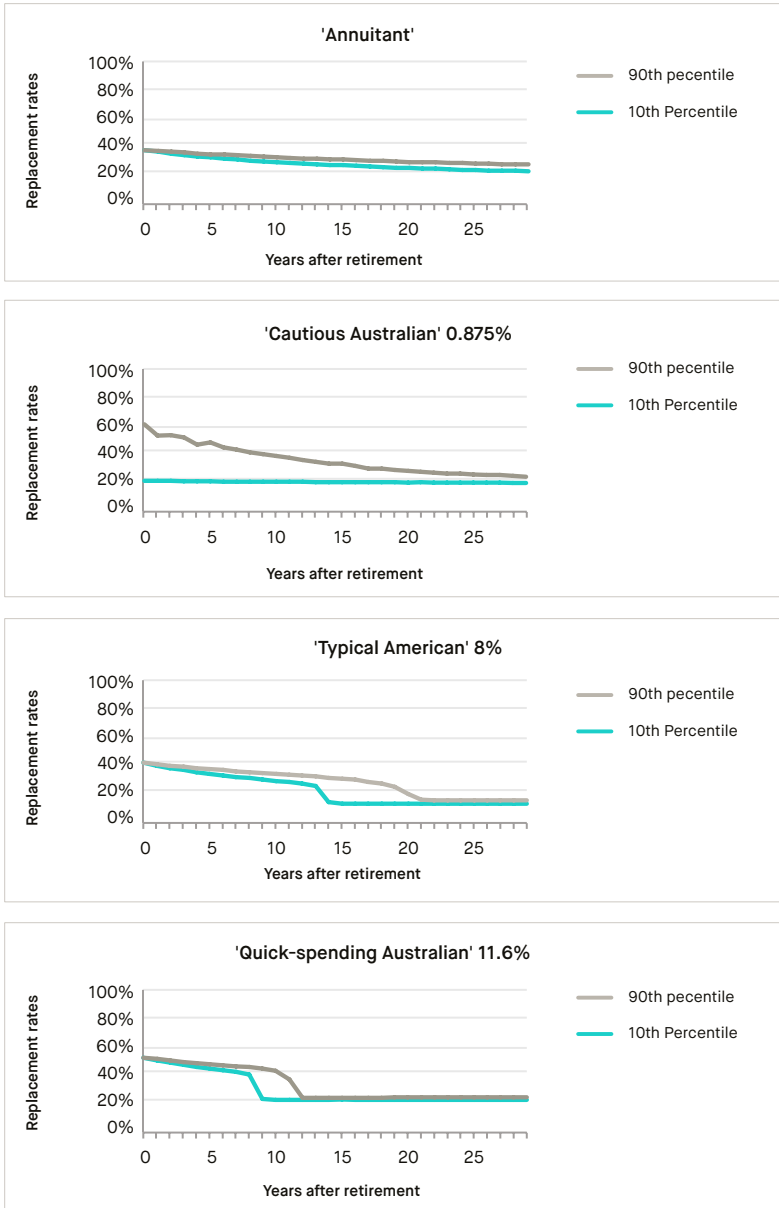
In contrast, having a small pension reduces the importance of the decumulation strategy chosen and its impact on total income in retirement. For instance, for a woman with a pension pot size of £6,705 and an incomplete National Insurance record, there is only minimal variation in replacement rates over retirement and very little effect on replacement rates as a consequence of variation in private income.

Replacement rates in best and worst case scenarios

The scenarios described above represent the median of 500 scenarios. However, as noted earlier the variation in private income within each decumulation path is sometimes much greater than the variation between the medians of the different decumulation strategies.

Figure 12 looks at replacement rates in a best and worst case scenario for a man with a pension pot of £184,787. For the best and worst case scenario we display the 90th and 10th percentiles to illustrate the scale of variation in replacement rates driven by inflation risk and investment risk. Most notable is the disparity in the income of the 'Cautious Australian' (0.875%) in the earlier years of retirement.

Figure 12: Comparison of replacement rates 90th percentile versus 10th percentile by decumulation strategy (pension pot of £184,787)

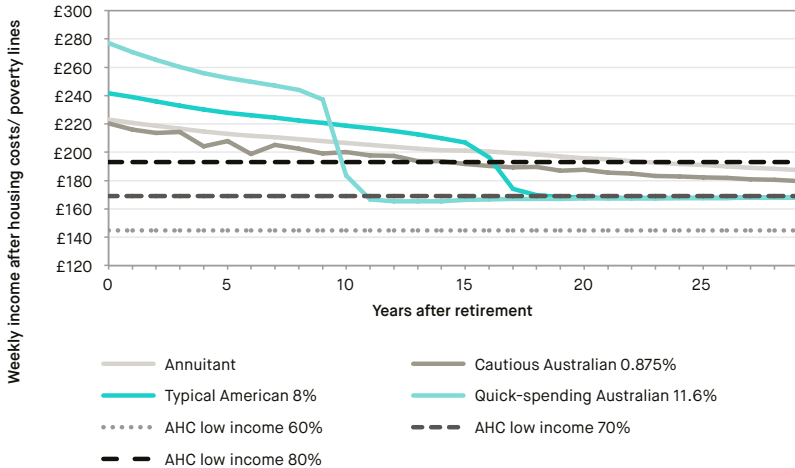


3.3 Risk of poverty

The traditional convention has been to measure poverty defined as 60% of contemporary median income. Due to the comparative generosity of the New State Pension the likelihood of a retiree going into poverty on this definition After Housing Costs (AHC) in later life is low.⁴⁸ However, other thresholds are also informative and can provide an indication of vulnerability, such as the 70% threshold used to represent 'low income' by the Department for Work and Pensions.⁴⁹ An 80% threshold can also be useful in demonstrating when pensioners are nearing low income.

Against these thresholds, the likelihood of incomes going below the 'low income' thresholds (defined as 70% or 80% median income) is much reduced for someone buying an annuity than any other path. The next path that best protects against falling below the line is the 'Cautious Australian' (0.875%) path; but this path gives lower average incomes overall. This path would deliver even lower incomes were the 'Notional Incomes' rules to be applied because shortfall in private income would not be made up fully by means-tested benefits. Figure 13 shows that even a man with a larger pension pot (approaching £70,000) is likely to drop below the 70% low income threshold 18 years after retirement if he follows one of the faster drawdown paths. This is well before life expectancy. In contrast, someone following the annuity path remains above the 80% threshold until 22 years into retirement (life expectancy); the 'Cautious Australian' drops below the 80% threshold earlier but remains above the 70% threshold. These findings are broadly similar for the '90th percentile man', with an even larger pension pot of £184,787.

Figure 13: Median AHC income for 70th percentile man for each drawdown path (pension pot of £69,813)



For an individual with a median pension pot, if the ‘Quick-spending Australian’ path is taken then income rapidly drops below the 70% low income threshold (around 10 years into retirement) and if the ‘Typical American’ path is followed, income drops below the 70% threshold after 18 years of retirement. Both the annuity path and the slow decumulation path keep income above the 70% low income threshold, even after 29 years of retirement (see Annex 2).

For a woman with a small pension pot of just £6,705 the situation is quite different, however. This woman is a renter and has an incomplete National Insurance record so does not qualify for the full state pension. Because of the very small size of the pension pot, and low level of income that can derive from it, state benefits – including Pension Credit – make up a large proportion of total income. The decumulation path followed makes little difference to this person’s retirement income relative to state benefits.⁵⁰

Differences between single people and couples

Whilst our modelling was executed on the basis of single person households, consideration should also be given to how risks differ between single people and couples because many retirees have partners. Couples may plan their finances jointly, and are assessed as one unit for means-tested benefits. Two factors are particularly worthy of consideration. First, single pensioners are generally at greater risk of poverty in retirement than pensioners in couples, especially when they live alone.⁵¹ Second, there may be situations in which a couple is particularly disadvantaged. Where both partners have very low levels of pension wealth and have incomplete National Insurance records they are at risk of falling below the 60% poverty threshold (whereas single pensioners in a similar situation are not). This is because the guaranteed minimum income provided by Pension Credit is set at around £150 per week for single pensioners, but only £230 for couples. If this is a couple's only source of income, it will mean they fall below the 60% AHC poverty line of approximately £250 per week for a pensioner couple. The AHC poverty line for single pensioners is around £145. However, being part of a couple increases the likelihood that at least one partner will have an income source.

4. MEANS-TESTED BENEFITS AND FISCAL RISKS ASSOCIATED WITH DIFFERENT DECUMULATION STRATEGIES

This section sets out the risks and potential consequences faced by the state depending on the decumulation paths adopted by consumers. Government policy already recognises this risk. Individuals can be denied means-tested benefits on the basis that they have ‘deliberately deprived’ themselves by reducing their private income unreasonably⁵² – although this is unenforceable politically and practically.

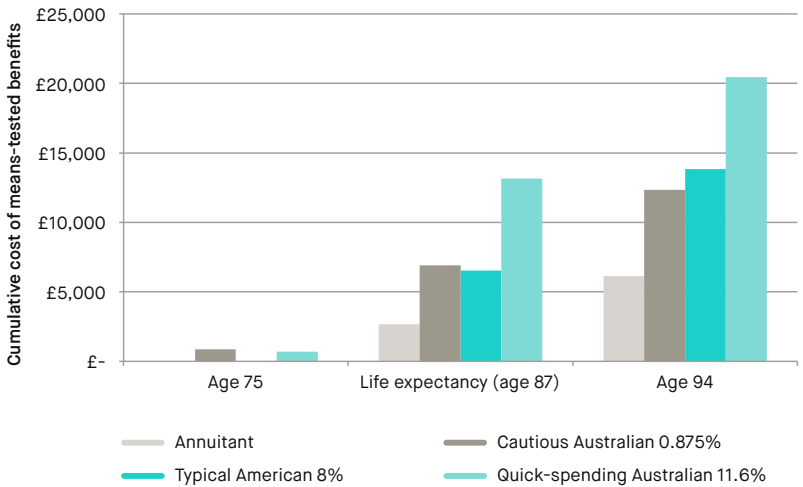
With the introduction of the New State Pension from 2016, Pension Credit is being reformed. Pension Credit currently consists of two elements: Guarantee Credit and Savings Credit. Savings Credit is being phased out entirely; whilst Guarantee Credit – a means-tested income guarantee – is being retained. In practice this means that future retirees will have a guaranteed income of no less than around £150 per week for single people, and £230 per week for couples, if their income from other sources falls below this amount. In this case, Pension Guarantee Credit will top up their income to this level.⁵³ For retirees with a full National Insurance record this will not apply, since the New State Pension will ensure their income is sufficient. In addition, retirees with low incomes can be eligible for support with their council tax and housing benefit if renting.

Reliance on means-tested benefits grows during retirement irrespective of which decumulation path is taken (see Annex 3). However, Figure 14 illustrates that the state is exposed to very different costs depending on the decumulation strategy adopted (in this case by someone with a pension pot of around £185,000). In the early years, costs to the state are relatively low and there is minimal variation. By average life expectancy, however, the decumulation path chosen makes a huge difference to state spending: £2,651 in costs to the state for the annuitant compared with £13,166 for the ‘Quick-spending Australian’, In most cases driven by increased eligibility for Council Tax Reduction.” so this reads “the Quick-spending Australian, in most cases driven by increased eligibility for Council Tax Reduction. In other words, those decumulating their private

pension pots quickly cost the state five times more than annuitants. By age 94, compared with the annuitant, the ‘Quick-spending Australian’ has cost more than three times as much.

This demonstrates that even those with large pension pots can place a significant burden on public resources if they don’t make efficient use of their private pension savings. The same is true for the ‘Cautious Australian’. Our modelling illustrates that by life expectancy, the ‘Cautious Australian’ has already cost the state significantly more than both the annuitant and marginally more than the ‘Typical American’ path. By age 94, the ‘Cautious Australian’ has cost the state more than twice as much over the course of their retirement. However, it should be noted that the Government’s ‘Notional Incomes’ rules if applied fully would reduce this risk as means-tested benefits would be assessed against the actual private income and a notional income (equivalent to an annuitised income).

Figure 14: Cumulative costs to the state of means-tested benefits (90th percentile man) at different ages (pension pot of £184,787)



Somewhat counterintuitively, this story does not hold for people with small pension pots, with the state facing almost identical costs whatever the decumulation path taken. This is because the retiree remains very reliant on means-tested benefits as their private income is not high enough to lift them above the means-test threshold. This is demonstrated by the fact that, for the 'median man' (with a pot of £29,000), the annuitant brings 3% higher costs to the state by age 94 compared with the 'Quick-spending Australian'. However, trends towards increased DC saving should, over time, ensure a greater proportion of pensioners have larger pots; and for these people the risks to the state illustrated in Figure 14 do apply.

It should be noted that, in addition to the means-tested benefits discussed above, the state may find that rapid decumulation of pension pots also increases eligibility for means-tested social care support and the costs associated with this.

5. SUB-GROUP CHARACTERISTICS, VULNERABILITIES AND RISKS

As well as assessing the distribution of scenarios for a range of drawdown patterns, our modelling also tested how different groups fared and whether the vulnerability to detrimental outcomes varied depending on the characteristics of the retiree. Below we discuss in more detail how the risks vary and we explore other factors relating to household circumstance that may increase or reduce the risk exposure of different groups.

Gender

Gender is a hugely-important differentiating factor encapsulating as it does a wide range of labour market, demographic and other characteristics, many of which affect pensions. The most obvious reflection is that the median pension for a woman (£15,083) is little more than half that of the median man (£29,046) due to less time in the labour market and lower average pay. The consequence is that women have less to start with and lower private pension incomes.

Women are currently exposed to more acute longevity risks than men. Women's average age of retirement (63.3 years) is significantly earlier than that for men (64.7 years).⁵⁴ Average life expectancy is also much higher for women (89 at age 63) than for men (87 at age 65). Combined, these mean that a woman retiring in 2016 needs her pension to last for four additional years just to reach average life expectancy compared to a man.

Financial decision-making in couples may also affect the vulnerability of women.⁵⁵ Evidence from the USA and Australia illustrates the fact that households that divorce experience big asset declines.⁵⁶ Death or separation may also leave the woman (whose life expectancy is longer than a man's) to pick up the pieces financially. Indeed, given that women typically outlive their husbands and men typically spend longer in the labour market building up a pension, a wife is particularly vulnerable if, for example, the husband has bought a single rather than a joint-life annuity.

DC pension pot size

Our modelling explored a range of different pension pot sizes. A surprising finding is that speed of decumulation may affect those with larger pension pots as severely – and indeed in some circumstances more acutely – than those with small pensions. This is true when looking at both individual risks and fiscal risks.

Further, other research shows that the value of a very small private pension income to an individual on a low income may be subordinate to the equivalent sum of capital. Research from the Strategic Society Centre has suggested that guaranteed income boosts wellbeing amongst many retirees to a greater degree than possession of wealth.⁵⁷ This finding, however, inverts for those on low incomes. In other words, possessing a pot of capital boosts wellbeing for low income individuals in retirement to a greater extent than possessing an equivalent annuitised income, likely because the possession of buffer savings is more valuable than a modest increase in regular income.

More generally, whilst our modelling has illustrated the significant risks to which those with larger pension pots are exposed, this should not downplay the importance of pension wealth to those with smaller DC pots. As indicated above and as Age UK research has shown, the decisions of these individuals can influence their security in later life, whether it is through the purchase of an annuity, paying down high-cost credit or retaining some buffer savings.⁵⁸ It might be noted that for the poorest fifth of the population (in wealth terms), DC pensions constitute a comparatively large proportion of their total wealth.

Homeownership status and assets

Homeownership status affects retirement risks facing both the individual and the state. First, renters may become more reliant on housing benefit depending on their decumulation path. Second, more generally, retirees may be protected against the risks identified above if they have other wealth or are likely to receive it in the future. Private pension wealth constitutes 47% of household wealth, but net property wealth makes up 33% and (non-pension) financial wealth constitutes 11% of all wealth.⁵⁹ However, the story is more complicated given that those with large pension pots are much more likely to have other sources of wealth (such as liquid wealth).⁶⁰ For instance, around a quarter of DC savers aged 55-64 have neither a non-pension savings account nor an ISA.⁶¹

Inheritances may also protect some retirees against the risk factors associated with running down their pension pots (or of having insufficient savings to start with). However, inheritances are often received by those who are already wealthy.⁶² Furthermore, other indicators of advantage are associated with the receipt of inheritances, with those with higher educational attainment, home-owners, and those with other wealth being more likely both to receive an inheritance and for the value of the inheritance to be larger.⁶³

DC or DB

Just as with sources of financial and housing wealth, other pension wealth can also affect vulnerability. While our modelling looks at individuals that only hold DC savings, many individuals possess both DB and DC pensions. Possession of even a modest DB scheme can raise an individual significantly out of the risk categories discussed above.⁶⁴

Analysis by the PPI shows the coincidence of DB and DC schemes amongst the population aged over 50 as well as the size of pension pots so as to provide an indication of the groups of savers who will face the most important decumulation decisions at retirement. While it suggests that government should worry about all those with DC savings, various factors may affect the level of vulnerability:

- Those with no DB or small rather than large DB pots are more vulnerable.
- As discussed in our modelling, those with very small DC savings decisions are likely only to have a marginal effect on retirement income (though, as noted above, this should not be overstated).
- For those with no DB savings but large DC pots, decumulation decisions will be important, but ultimately the large amount of capital available to them may act as a cushion against some poor decisions as may the other assets that they are likely to hold and the tendency within this group to seek financial advice.
- Those with medium DC pots and no DB savings are particularly vulnerable. At present this group numbers 694,000 people or 12% of people aged 50 to SPA in 2014⁶⁵, and it is likely to grow significantly in coming years as a result of auto-enrolment and the wider shift from DB to DC pension provision.

State Pension entitlement

An incomplete National Insurance record results in a lower State Pension entitlement in retirement. However, even under the New State Pension individuals will receive a means-tested top-up (via Pension Credit) if their income is low to ensure that it reaches a certain threshold. The result is that an incomplete NI record does not lead to a reduced State Pension income for someone unless they also have a sizeable private pension. It is likely that large numbers of people (as many as two thirds) will find themselves ineligible for the full pension either because of contracting out or years spent out of work.⁶⁶ Neither the total income nor the composition of income changes substantially between decumulation paths when the pot size is so small to begin with.

Early retirement

Early retirees should be considered particularly at risk of long-term detrimental outcomes. The effect of early retirement is twofold. First, it means that the pension pot is smaller than it would have been had the person continued in work to the State Pension Age or for longer. Second, it means that the pension pot has to last more years if the person is to have private income throughout retirement. Some individuals may exit the labour market early and use their pension savings to fund the years leading up to retirement before they receive any State Pension. It might be noted that early retirement is not spread evenly across the population with lower skilled and manual workers much more likely to leave employment early than professionals.⁶⁷

Early access to pension pot

The Australian experience suggests that early access to pension pots is not uncommon. Indeed, 15% of the population exhaust their pension entirely by the age of 65, many having started decumulating it from age 55.⁶⁸ The effect is similar to early retirement, although individuals remaining in the labour market may continue to build up retirement savings even whilst they are drawing down on their pension pot. Other evidence also suggests that individuals from the age of 55 may feel pressure to assist their children through university or onto the housing ladder.

Taking a lump sum

Our modelling is premised on decumulating the entire pension pot rather than taking a tax-free lump sum. A typical strategy in the UK is to take a 25% lump sum (the maximum level that is tax free). The purpose of this withdrawal varies significantly: investments in equities or second homes; saving cash in a bank account; handing money over to relatives; and consumption (such as cars or holidays). If consumed this represents a significant diminution of the available retirement resources. Clearly this would lead to lower private incomes but may also contribute to higher costs to the state through claims for means-tested benefits.

Australian evidence on use of lump sums suggests that the money is put to a wide range of purposes including investment in the primary property (one third) and buying a car (one fifth). While lump sums used for investment could provide additional private income in later years, cash spent on cars, holidays or property improvements is money unavailable to fund income later in life.

SUMMARY AND CONCLUSIONS

The modelling described above has drawn on typical behaviours exhibited by retirees in Australia and the USA to understand what the potential long-term consequences may be for UK retirees and society.

Table 4: Summary of modelling outcomes

	Risk of pot exhaustion	Private pension incomes	Total retirement incomes and remaining pension wealth	Replacement rates	Risks of poverty	Risks to the state
(1) Level annuity	<ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • Smooth and steady – not exposed to investment or longevity risk. • Higher income than Path (2), especially later in retirement • Lower incomes than Paths (3) & (4) early in retirement; higher later • Incomes may vary due to inflation risk 	<p>Very high cumulative incomes if living into 90s, but lower if not; no wealth to pass on as bequest (although alternative annuity products can offer means to protect capital)</p>	<ul style="list-style-type: none"> • The steadiest path • Replacement rates early in retirement are lower than Paths (3) & (4); higher later in retirement • Replacement rates higher than Path (2), especially later in retirement 	<ul style="list-style-type: none"> • No risk of falling below 60% poverty for homeowners • For those living to life expectancy and above, generally the lowest risk of being below 70% or 80% poverty lines 	<ul style="list-style-type: none"> • The lowest risks to the state: those with medium and large pots are less likely to claim housing benefit or Council Tax Reduction by life expectancy • Those with small pots are likely to need support from benefits regardless of decumulation path
(2) 'Cautious Australian'	<ul style="list-style-type: none"> • Almost none • Retirees would have to live nearly 50 years after retirement age to have any realistic chance of exhausting pot 	<ul style="list-style-type: none"> • Depends heavily on investment returns: very high if returns are good, but paltry if returns are poor • Because of this incomes typically are very uncertain and may fluctuate wildly from year-to-year 	<ul style="list-style-type: none"> • Moderate cumulative incomes if living into 90s; but low cumulative incomes if dying at a younger age • Substantial wealth to pass on as bequest • May have lower incomes due to 'Notional Incomes' rule' 	<ul style="list-style-type: none"> • On average, lower than (1), but only slightly lower early in retirement • On average, lower than (3) & (4) early in retirement, but much higher later • May have lower replacement rates due to 'Notional Incomes' rule' 	<ul style="list-style-type: none"> • No risk of falling below 60% poverty for homeowners • Slightly higher risk of 70% or 80% poverty than Path (1); Lower than Paths (3) and (4) • May be drawn closer to poverty line due to 'Notional Incomes' rule' 	<ul style="list-style-type: none"> • Lower risk to the state than Paths (3) or (4), but higher than Path (1) as under-consuming • Those with small pots are likely to need support from benefits regardless of decumulation path • 'Notional Incomes' rule may protect these risks if fully applied

Table 4: Summary of modelling outcomes (cont)

	Risk of pot exhaustion	Private pension incomes	Total retirement incomes and remaining pension wealth	Replacement rates	Risks of poverty	Risks to the state
(3) 'Typical American'	<ul style="list-style-type: none"> High risk of exhausting pot: exhaustion after 17 years of retirement on average Huge variation 	<ul style="list-style-type: none"> High income early in retirement No income at all later in retirement – after 17 years on average 	<ul style="list-style-type: none"> High cumulative incomes if living until average life expectancy No wealth left 17 years into retirement, on average 	<ul style="list-style-type: none"> High replacement rates in early and middle retirement years Low replacement rates later 	<ul style="list-style-type: none"> No risk of falling below 60% poverty for homeowners High risk of 70% or 80% poverty later in retirement 	<ul style="list-style-type: none"> Fairly high risk to the state – through additional benefit spending – especially for those with large pots Those with small pots are likely to need support from benefits regardless of decumulation path
(4) 'Quick-spending Australian'	<ul style="list-style-type: none"> Pension pot is exhausted by end of year 10 on average Significant variation driven by investment returns 	<ul style="list-style-type: none"> Very high income early in retirement No income at all later in retirement – after 11 years on average 	<ul style="list-style-type: none"> Very high cumulative incomes if dying young (in 70s) No wealth left 11 years into retirement, on average 	<ul style="list-style-type: none"> Very high replacement rates in early retirement years Low replacement rates in middle and late retirement 	<ul style="list-style-type: none"> No risk of falling below 60% poverty for homeowners High risk of 70% to 80% poverty in middle and later years of retirement 	<ul style="list-style-type: none"> Very high risk to the state, especially for those with large pots Those with small pots are likely to need support from benefits regardless of decumulation path

A number of conclusions can be drawn from the modelling.

First, the speed of decumulation significantly affects replacement rates in retirement by putting those who over-consume onto much lower rates in later life than individuals that follow a more even path of consumption (for instance through an annuity).

Second, it is possible to under-consume with the intention of preserving a large part of the initial pension pot - but this typically comes at the cost of lower replacement rates throughout retirement and sub-optimal use of retirement resources.

Third, for any individual using a drawdown solution, investment returns and inflation risks result in huge variation of incomes in retirement and of the age at which income from DC pension savings runs out. This can mean running out of money by the end of the tenth year of retirement or the pot surviving into a retiree's late 80s. For someone seeking to preserve their DC pension savings, the consequence is felt more directly in terms of unpredictable and variable private pension income. The effect of inflation is also clearly observed across all four decumulation paths.

Fourth, decumulation paths also affect fiscal risks associated with means-tested benefits. Over-consumption paths drive up the cost to the Exchequer compared with guaranteed income for life options such as an annuity. This may also be the case for the under-consumption path depending on how the 'Notional Incomes' rule is applied.

Finally, these risks are present for a wide range of pension pot sizes. Developing norms of behaviour therefore matter. Specific sub-groups may also be particularly vulnerable either because of their characteristics or because of the behaviours they exhibit, as recognised by the FCA in their Consumer Spotlight model.⁶⁹ Such sub-groups include: women; early retirees; non-homeowners and those without any buffer savings or assets; and, those with only DC savings.

CHAPTER 5: POLICY RESPONSE

Chapter 4 showed that if UK retirees respond to pension freedoms in the same way as retirees in other countries, then the long-term consequences for consumers themselves and the state could be damaging. Consequences could include: lower replacement rates in later life; closer proximity to poverty; pension pot exhaustion; and larger benefit bills for the government. These long-term risks are relevant to many of individuals retiring with DC savings. Specific sub-groups face heightened risks or more severe outcomes because of their characteristics or likely behaviours.

With this backdrop, this chapter proposes measures that would enable government to prevent these long-term detrimental outcomes materialising. It asks the question: How can we help retirees make the best long-term decisions for retirement?

1. WHY POLICYMAKERS NEED TO BE ALERT

Retirement decisions are amongst the most significant financial decisions that an individual will make: the sums of money dwarf most other financial transactions; the consequences of the decision will live with the individual for the rest of their lives; the decisions are hugely complex; and, the breadth of factors that may need to be considered wide-ranging. Retirement products and decisions are also unfamiliar to retirees who cannot draw on past experiences as they would when re-mortgaging, renewing insurance policies or managing investments.

Beyond these factors that make retirement decisions unique, a number of characteristics and behaviours of retirees prompt additional policy concern.

Lack of preparation for retirement

Not only are the issues complex and fundamentally important to retirement outcomes, but many consumers are poorly prepared for the experience. Survey evidence shows that only one third of consumers feel well-prepared for retirement. One fifth report that they are put off retirement planning

for fear that they will make the wrong decision,⁷⁰ but delaying retirement planning can have detrimental outcomes if plans change dramatically due to ill-health or redundancy.⁷¹ Research for the FCA showed that consumers often only start planning in the few months ahead of retirement and that many do not think through their likely outgoings in the years ahead.

Low financial literacy

The ability to understand financial concepts along with numerical ability is associated with retirement planning, more sophisticated investment strategies, better knowledge of pensions rules and fees and more internally consistent choices of products. Experimental evidence suggests that those with lower financial literacy and numeracy are less likely to choose the optimal product.⁷² The most comprehensive study to date concluded that ‘financial literacy appears to be highly influential in helping older households equip themselves with longevity risk protection in retirement’.⁷³

However, evidence shows that financial literacy is weak across the general population. The old are particularly vulnerable: they rate themselves highly, yet score poorly on basic financial questions. Academics have suggested that this may explain their susceptibility to scams.⁷⁴ The lack of understanding and knowledge is exemplified by the fact that one in five of UK consumers that are retired are unsure what pension product they purchased.⁷⁵ Meanwhile, more than half of people surveyed believed that income drawdown offers a guaranteed income in retirement and nearly one-quarter believed drawdown to be risk-free.⁷⁶ Financial literacy also affects the likelihood of consumers shopping around rather than sticking with their existing pension provider for their annuity.⁷⁷ Thus it may affect both decumulation strategies and outcomes in the market.

Low and varied financial capability

A number of studies have illustrated significant variation across the population in terms of whether individuals successfully manage their financial resources and deploy financial knowledge in practice. Of the five metrics relevant to financial capability, a recent study based on the Wealth and Assets Survey found that the general population performs worst on

'planning ahead', a key criteria for effective retirement decision-making.⁷⁸ It should also be noted that those with mid-sized DC schemes but no DB – for whom decumulation strategies are extremely important (because their pension could make a substantive difference to their retirement incomes in the absence of other sources of guaranteed private income) – score poorly on indicators of financial skill and knowledge and are less likely than people in some other groups to use independent advice.⁷⁹

Behavioural biases affecting decumulation strategies

A large number of behavioural factors affect the decisions that individuals make in retirement. While economic theory would predict that individuals would select an annuity as their retirement product of choice, take-up in voluntary markets is very low. This can partly be explained by rational factors – such as the bequest motive and loss of liquidity. Consumers may also have a high personal discount rate – and prefer to consume more of their resources earlier in retirement and less in late retirement.

However, behavioural biases also steer people away from collective insurance towards individual risk. In focus groups in both the USA and the UK, retirees have displayed short-sightedness and an over-reliance on intuition.⁸⁰ Experiments in Australia show that when an annuity product is framed by its features rather than its traditional name ('annuity'), the concept of longevity insurance is popular.⁸¹ UK-based research by the International Longevity Centre has shown that only a minority express a desire to buy an annuity when described in this term – yet nearly 70% said that they wanted their pension pot to be used to generate a guaranteed income to pay regular bills in retirement.⁸² IFS analysis found that in England people aged 50–60 on average underestimate their life expectancy – men by two years, women by four years.⁸³ Other evidence shows that consumers think that inflation proofing is important at the theoretical level, but are unwilling to pay for it in practice. Meanwhile, loss aversion means that consumers worry more about the loss of the capital versus the gain of annual income.

All this evidence suggests that the way that retirement decisions are framed may have a significant effect on how retirees consume their pension savings. In March 2015, the FCA acknowledged these facts and

committed to improving the way information is framed to customers; and it is redesigning and behaviourally trialling the information consumers receive from their providers in the run up to retirement.⁸⁴

Behavioural biases affecting market outcomes

During the retirement process, behavioural biases also affect market outcomes. The FCA in its *Retirement Income Study* summarised the factors and why the poor outcomes happen.

1. Consumers miss out on a higher income because they do not shop around for the best deal.⁸⁵ More than half of annuities bought in 2012 were purchased from the original pension provider. The FCA found that 80% of these consumers could have got a better deal if they had tested what other providers would offer, rising to 91% for people with medical conditions or lifestyle factors which could qualify them for improved rates.⁸⁶

Consumer inertia is not helped by pre-retirement communication processes including lengthy and complex provider wake-up packs which are known to deter retirees from engaging with their options. In particular, provider communications do not convey the benefits or importance of shopping around.

2. This tendency to purchase from the savings provider weakens competition in two ways: incumbents feel less pressure to offer competitive rates to their existing customers; and new challenger firms find it harder to attract a critical mass of customers.
3. Many retirees do not buy the best annuity to suit their circumstances. The annuity rate that an individual can be offered varies significantly for actuarial reasons. For those with certain medical conditions or lifestyle characteristics, annuity providers may be able to offer an impaired annuity or an enhanced annuity respectively. These individuals who are estimated to have shorter life expectancy receive higher annual incomes as a result by specialist providers. The increase can be significant. Someone smoking 20 cigarettes per day can get a quarter more than the lowest standard annuity; someone with heavy

impairment can receive up to 50% more.⁸⁷ Such individuals are at risk of achieving significantly poor risk-adjusted rates if they do not seek out the best and most appropriate annuity deal. The same applies to consumers purchasing single-life annuities rather than joint-life annuities where a partner does not have secure retirement income of their own.

As the FCA has acknowledged, the pension reforms may exacerbate these market problems. Greater choice of products for consumers will bring advantages but may add to complexity and, therefore, further reduce the confidence and appetite of consumers to shop around. Confusion and the removal of the decision trigger (previously attainment of an individual's selected retirement date and/or the requirement to annuitise by age 75) may leave people more inert than ever.

When combined with the potential risks discussed in the previous chapter, the vulnerabilities described above suggest that policymakers cannot simply wait and see. Policymakers need to be active and alert to the possibility of poor decision-making and low financial capability driving bad outcomes from the pension reforms, and must ensure that the market is functioning well. The lessons are also clear from abroad: the Murray Inquiry in Australia has recommended a new default retirement path for retirees. In this case, after 20 years under a freedom and choice framework, growing concern over state costs and sub-optimal individual outcomes has triggered proposals for change. The Australian Government has recently accepted the Murray Review's recommendation.

2. DEVELOPING AN 'EARLY WARNING SYSTEM'

The risks identified in Chapter 4 illustrate why it is important for policymakers and regulators to monitor closely what retirees do with their pension resources. By the time the outcomes are fully manifested – ten, twenty or thirty years' time – it will be too late for these individuals to be helped or to amend or undo their decisions. Identifying the early warning signals, however, could help the government make sure that the market is functioning effectively, that support systems are appropriate and that individuals are helped to make the decisions that are in their long-term interests. As the

Work and Pensions Select Committee argued, the outcomes of freedom and choice “remain highly uncertain. The full picture of eventual consumer outcomes will emerge over many years.” It argued therefore that outcomes “must be monitored closely”.

As it stands, there is little monitoring taking place. The FCA routinely collects data on a dozen metrics of consumer behaviour relating to retirement decisions. The comparison with mortgage lending is stark. In the latter case, spurred on by insufficient regulatory oversight prior to 2008 and resulting financial damage to consumers and the wider economy, rigorous risk assessments and data capture are now carried out. There is interest, however: the FCA has announced its plans to monitor the progress of the Pension Wise service, including take-up, and to consult on how best to frame retirees’ decisions to ensure the service achieves the best possible outcomes.⁸⁸ The FCA has also reiterated its intention to track market developments, consumer behaviour and outcomes in its latest report *Pension reforms – proposed changes to our rules and guidance*.

For these reasons, the Government should develop an ‘Early Warning System’. This would monitor closely what retirees do with their pension savings and identify risks both to groups of individuals and to the state. It would allow government to alter policy to reflect consumer behaviour and also to target support at specific at-risk groups.

Our ‘Early Warning System’ comprises two parts: a ‘Retirement Risk Dashboard’ to understand prevalence of emerging risks at a system level to inform new policy from government; and, ‘Personal Pension Alerts’ to identify and help individuals at risk of detrimental outcomes.

Recommendation 1: ‘Early Warning System: Retirement Risk Dashboard’

The purpose of this part of the ‘Early Warning System’ would be to allow the government to identify emerging risks at an aggregate level, thus prompting and facilitating policy intervention where necessary. In setting the objectives for the ‘Retirement Risk Dashboard’, pension policy and retirement outcomes for individuals must be paramount, but government

is also likely to wish to understand more fully the long-term fiscal risks associated with potentially higher benefit bills.

At an individual level there may be good reason to decumulate at a quicker or slower rate or to make other personal choices tailored to one’s own needs and other resources, such as if individuals face immediate care costs due to ill-health. Notwithstanding this, effective monitoring at an aggregate level would be a powerful device to ensure policy keeps track with behaviours and that policymakers can react to early signs of detrimental outcomes, such as individuals exhausting their pension pots.

The output from this process would be a quarterly and annual dashboard illustrating the prevalence of different risk metrics for the retired population, for different cohorts of retirees and for specific sub-groups. In approaching such a task, we must recognise that retirement is increasingly a journey rather than simply an initial product choice.

What should be monitored?

Chapter 4 described a wide range of factors that could affect long-term outcomes. Table 5 builds on this to set out potential metrics to be tracked on the dashboard.

Table 5: Risk indicators for ‘Early Warning System: Retirement Risk Dashboard’

Indicator	Why important	Potential source
Age of retirement and of pension access		
Large proportion of retirees taking early retirement (five years or more ahead of SPA)	Leads to lower levels of pension savings and higher risk of pot exhaustion	Labour Force Survey
High proportion of individuals accessing their pensions before the age of 60	Leads to higher risk of pot exhaustion. Australian evidence suggests that some groups will act in this way	Industry data

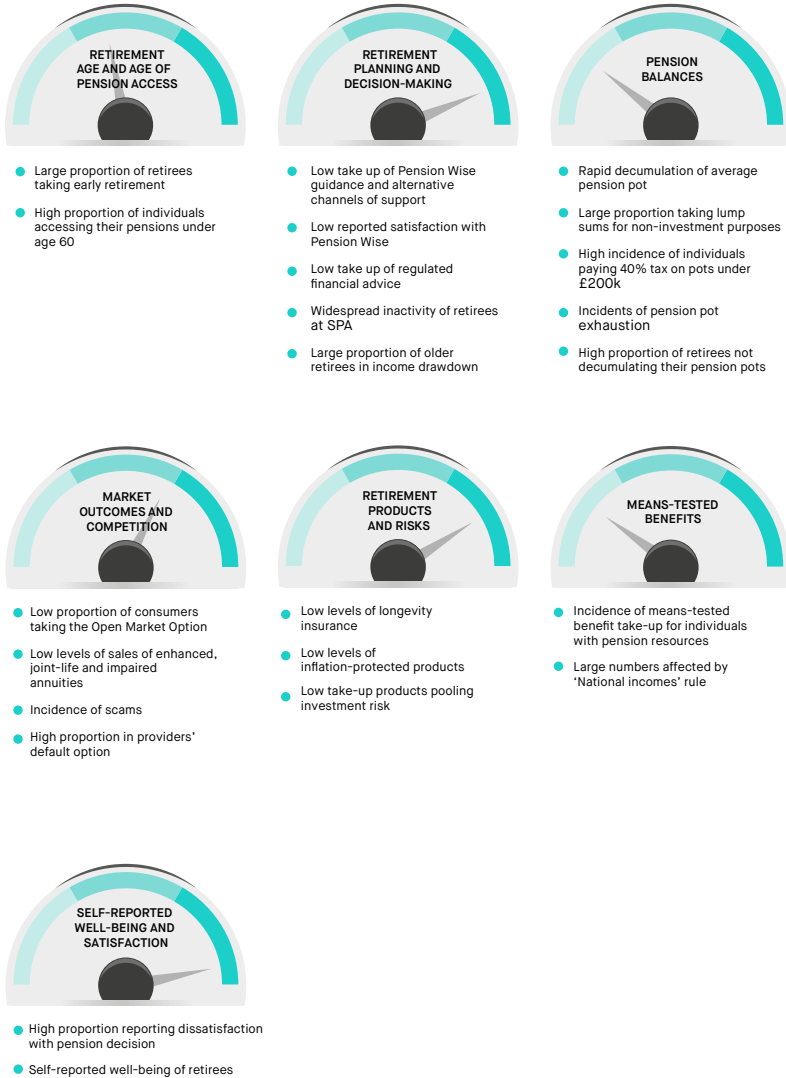
Retirement planning and decision-making		
Low take up of Pension Wise guidance and alternative channels of support	Pension Wise is the principal scheme to aid retirement decisions and counteract known poor levels of engagement and awareness. There has been some concern (for instance in the Work and Pensions Select Committee inquiry) that many retirees have not used Pension Wise guidance	HMT and DWP
Low reported satisfaction with Pension Wise	Pension Wise is the principal scheme to aid retirement decisions	HMT and DWP
Low take up of regulated financial advice	Individuals taking advice report greater likelihood of being prepared for retirement	Industry data
High levels of retirement decision inertia	Individuals often simply postpone retirement decisions in the face of complexity but this may not be in their best interests	New data; FCA / TPA analysis
Large proportion of older retirees in income drawdown	Older people may face cognitive decline and lower financial capability thus putting them at higher risk of poor decisions ⁸⁹	Industry data
Pension balances		
Rapid decumulation of average pension pot	Modelling illustrates long-term risks of pot exhaustion and low incomes	Industry data
Large proportion taking lump sums for non-investment purposes	Likely to lead to lower retirement incomes	Industry data and new data
High incidence of individuals paying 40% tax on pots under £200k	Inefficient decision for the individual. Particularly inefficient for those with smaller pots	HMRC
Incidents of pension pot exhaustion	Likely to lead to lower retirement incomes	Industry data
High proportion of retirees not decumulating their pension pots	May indicate widespread under-consumption	Industry data

Market outcomes and competition		
Low proportion of consumers shopping around to compare retirement options	Leads to poor value for money and / or inappropriate product outcomes	Industry data
Low levels of sales of enhanced, joint-life and impaired annuities among eligible consumer groups	Indicates individuals are opting for inappropriate products	Industry data
Incidence of scams	Leads to low incomes and bad outcomes for retirees. Early evidence suggests that the risk of scams is real ⁹⁰	Industry data; new survey data.
High proportion in providers' default option	Indicates consumer inertia and low market engagement	Industry data
Retirement products and risks		
Low levels of longevity insurance	Insurance can protect people against risks associated with longevity	Industry data
Low levels of inflation-protected products	Modelling illustrates inflation risks for those buying a level annuity	Industry data
Low take up of products pooling investment risk	Indicates that individuals are not protected from poor outcomes or above average longevity, increases risk of under-consumption	Industry data
Means-tested benefits		
Incidence of means-tested benefits take up for individuals with pension resources	Indicates under-consumption	DWP / HMRC
Large numbers affected by 'Notional Incomes' rule'	Indicates under-consumption from private pensions and likely to be associated with low incomes for retirees	DWP
Self-reported wellbeing and satisfaction		
High proportion reporting dissatisfaction with pension decision	Indicates concerns at decisions	New survey data / ELSA
Self-reported wellbeing of retirees	Indicates whether retirement decisions have bolstered or undermined wellbeing	ELSA

For each of these data items, it will be important to gather additional background information that may help identify whether consumers are adopting paths and products appropriate to their circumstances. These should include: pension wealth, existence of DB pension, health, non-pension wealth, homeownership status and marital status.

Much of the necessary data is already collected in one way or another: by providers themselves, membership bodies such as the Association of British Insurers, the guidance and regulated advice sector, the FCA, the Treasury and the Department for Work and Pensions. The exercise therefore is primarily one of coordination and comprehensiveness, once the appropriate data inputs have been identified and collected. This may be an appropriate job for the Treasury given its responsibilities as well as its interests across Whitehall. It is important that this exercise is refreshed regularly and that consumer groups such as Age UK, the Financial Services Consumer Panel and Independent Age are able to reflect emerging risks and concerns. It will also be important to ensure that social research data helps contribute to our understanding of retirement decisions. We recommend that future waves of the English Longitudinal Study of Ageing (ELSA) should contain questions on what individuals over 50 expect to do (or have done) with their pension savings and whether they save for the purpose of bequest or a secure income in retirement.

Figure 16: Monitoring points and risk factors for ‘Early Warning System: Retirement Risk Dashboard’



This 'Retirement Risk Dashboard' would form a key measure within the Early Warning System and cover the whole eligible population. But, it would also be replicated for specific sub-groups to monitor these risks for those who might be affected most severely by their retirement decisions and those most vulnerable. Such groups would include:

- Different retirement cohorts
- Women
- Those without any DB entitlements
- Individuals with health conditions or lifestyle factors that may shorten their life expectancy
- Groups known to have low financial capability

RECOMMENDATION 2: 'EARLY WARNING SYSTEM: PERSONAL PENSION ALERTS'

Motivation and purpose

The 'Early Warning System' could also be used to assess the risks to which retirees may be exposed at an individual level and to intervene where appropriate with at-risk groups through 'Personal Pension Alerts'. As the FCA has argued in its recent paper, *Pension reforms – proposed changes to our rules and guidance*, people may require on-going guidance. It noted that "firms should also be mindful of our guidance proposals on the provision of ongoing product information to consumers, in particular regarding information to the customer about the sustainability of income over time".

Different sub-groups face different risks associated with retirement funding. These relate to their starting position and characteristics (e.g. gender, pension pot size, health, financial wealth, retirement age and homeownership status); financial capability and their propensity to consume in certain ways; and, the severity of the risk to which they will be exposed. Policymakers should be particularly concerned where these risks coincide.

The warning system would be used as a route to identify sub-groups of the population who may need additional support or to spot early specific behaviours that may lead to long-term detrimental outcomes. Some characteristics which suggest an individual is at greater risk are difficult to observe, like financial capability, so the system would rely on proxies for these, like take-up of financial advice, and more obvious characteristics like pension pot size. Below we describe some of the additional support that these alerts might trigger. In each case, the underlying principles should be that any new policies must not limit a consumer's freedom and choice over pension wealth; nor bring direct costs to the consumer.

1. Exploiting trigger points

As described above, a large part of the population does not plan properly for retirement. This is particularly the case for those with pension pots of under £50,000 and for those who do not take financial advice.⁹¹ Where it does take place, planning is often triggered by life events such as a partner retiring, paying off a mortgage and reaching the maturity date of a pension.⁹² This may have two implications: first, an opportunity to exploit these trigger events as a route to stimulating retirement planning among the sub-groups less well-prepared for retirement; second, policymakers may be able to create new triggers that replicate some of the natural prompts to which individuals typically respond.

Creating new triggers and prompts for retirees to engage could include:

- Receipt of state benefits
- Completion of mortgage repayments
- Leaving employment

There may also be opportunities to make linkages across to other initiatives designed to boost consumer engagement. These include the 'Pensions Dashboard' project being led by the ABI which aims to bring all information on an individual's retirement savings together into a single platform to encourage engagement with saving and retirement planning, and related decisions.

2. Targeted support and advice

There are very low levels of comprehension about pensions and retirement products. Those with higher net wealth are much more likely to seek financial advice and therefore to have a better chance of emerging with solutions that have been chosen or recommended to suit their individual wants and needs.⁹³ However, there is a significant cost barrier to taking advice. The absence of advice may make individuals more likely to follow the norm; behaviours may converge around the average rather than be specific to the needs of the individual. Meanwhile, low levels of confidence may enhance the advantage of incumbent providers who are known to savers.⁹⁴ These deficiencies have recently motivated the Treasury to launch the Financial Advice Market Review, so as to understand the advice gap more fully and the barriers to access.⁹⁵

It is unclear how far the Government's Pension Wise guidance will fulfil its purpose of protecting consumers from bad outcomes. Early evidence submitted to the Work and Pensions Select Committee suggests that recipients of the advice have been satisfied with the service, though take up has been comparatively low.⁹⁶ While it is hard to target advice at those with low financial capability – as it is difficult to assess levels of financial knowledge out of the decision-making context – there is a strong case to target any additional guidance or advice at those who are likely to be unable to afford advice or sub-groups that typically display lower financial capability. The warning system should be used to create data from which policymakers can develop suitable advice processes, and considered on this basis as part of the Financial Advice Market Review launched in August 2015 by the Treasury.

3. More tailored risk warnings

In March 2015 the FCA introduced regulations requiring pension providers to offer a set of basic retirement risk warnings. These require firms involved in the sale of products to give additional warnings to their customers.⁹⁷ As noted earlier, the FCA is considering requiring firms to provide more tailored, additional and on-going risk warnings about products.

This is a good development. But, the regulator could go further and has indicated its readiness to monitor their effect and update the risk warnings if necessary. There would be scope to make risk warnings more personalised, for instance for early retirees, those with health conditions or other circumstances that make their decisions at retirement complex or different from the average. A similar scheme is proposed in South Africa, where many retirees use default drawdown products. Providers will be required to ensure that retirees are warned when default products are unsuitable and may place them at risk.⁹⁸

4. Make people think twice

As noted above, retirees may be exposed to significant detrimental outcomes. For instance, withdrawing the entire pension pot in year one of retirement for consumption purposes is unlikely to be the best long-term decision for most individuals; in addition such a step would expose many individuals to a much higher marginal rate of tax than if they withdrew their money more gradually.

The government already treats specified behaviours and groups as high risk. For instance, individuals wishing to capitalise their DB payments must seek regulated financial advice in advance of taking this step. The rationale is that the decision is complex, the advantages of a secure income through DB significant and the risk of scams is high and growing.⁹⁹ There may be ways of applying these lessons more broadly to ensure consumer protection and to enhance long-term outcomes by encouraging retirees to pause and reflect on their decisions before proceeding. The requirements made of retirees could be heavier or lighter depending on the severity of the risk. For instance, individuals wishing to cash in their whole pension pot could be required to go through Pension Wise guidance as could those drawing down at a certain rate (e.g. over 20% pa).

5. Market prompts: Encouraging consumer activism

The pension freedom reforms were framed in part as a move to free retirees from poor-value retirement options. Ironically, the reforms are likely if anything to exacerbate some of the underlying behaviours and

dynamics that led to failures in the market and uncompetitive rates for many consumers. Uncertainty, complexity and the absence of a trigger point may lead to even greater inactivity among consumers, who are likely to emerge with uncompetitive or unsuitable products or low yield investment strategies. People may simply procrastinate when faced with this level of unfamiliarity and complexity.

Subsequent to its inquiries, the FCA is developing a requirement for providers to offer an annuity quotation comparison within its range of remedial activity in the retirement market. But, this is unlikely to be a sufficient nudge to disturb inert consumers.

Part of the answer may lie simply in the ease of the process. Across a range of consumer markets, complexity breeds inertia and inactivity. The 'Pensions Passport', conceived by the Pension Income Choice Association and being tested by the Behavioural Insights Team, aims to address this inertia by reducing the burden on the consumer to collate and present relevant personal information when they go to the market and consider the available options.¹⁰⁰ Instead, each retiree is presented with a single sheet of paper describing their characteristics (such as age and pension wealth). The individual can then use this document to obtain quotes from product providers. This data and process could be digitised so that the personal data could easily be loaded into comparison sites.

An additional benefit is that innovations such as the 'Pensions Passport' could also be used to prompt consumers to consider the type of benefits required as well as the rate, for instance, whether a joint-life annuity is more appropriate than a single-life annuity, in the case of individuals who need to protect dependants' interests.

Incidence of 'shopping around' should be measured through the Retirement Risk Dashboard as a core proxy for market outcomes. Depending on the data that emerges, the FCA should not be afraid to introduce more nudges to prompt people to look around the market for the best deal or appropriate product option. For instance, consumers could be required to demonstrate that they have sought at least three quotes before purchasing their retirement product or have to purchase their product on the open market via authorised comparison sites.

6. Mid-retirement financial health check

Retirement decisions are unlikely in the future to be one-off but recurrent for those individuals who drawdown their retirement resources each year. Lessons could be learned from other policy areas. The NHS has recently introduced a ‘midlife MOT’ for those aged 40 to 74. Those aged over 75 are encouraged to have an annual health check. In a similar vein, the ‘Career Review’ initiative acts as a prompt for older workers (aged 50 to 55) to consider how they can continue in work for longer.

Given that non-annuitants will have to make multiple financial decisions into very old age, there may be value in inventing a similar review tool, prompting people at age 75 to re-consider their financial position and plan financially for the remainder of their lives. This may also have the benefit of addressing concerns associated with cognitive decline in older age by encouraging individuals to put in place mechanisms for the management of their retirement resources in old age. This may also be a route to help individuals consider their assets – such as housing equity – in the round to help them resource their retirement.

3. LONGER-TERM REFORMS

Finally, drawing on the ‘Early Warning System’ and the metrics set out above, government will also be in a better position to shape longer-term decumulation policy. Below we consider some of the possible options for the future.

Defaults

The importance of defaults in savings policy is widely recognised, but there are similar dynamics at play in relation to retirement decisions. For instance, an Australian experiment involved individuals allocating savings between account-based pensions and annuities. The study found that the distribution of allocations was strongly clustered around the pre-selected allocations.¹⁰¹ For such reasons, both Australia and South Africa are actively considering introducing default retirement products.

As it stands, providers already run default retirement options even if they are not labelled as such – the investment strategies into which inert retirees are placed. Given low levels of engagement, these default funds or strategies will be an important feature of the market – and as these products are designed by providers, there may be concerns that providers create defaults which are good value for them, but which do not necessarily represent the best deal for inactive customers who are unlikely to challenge them. The question, given this risk, is how far government should intervene in prescribing the features of these defaults. A number of options are set out below:

- a) **Government could prescribe a single default.** In Australia, concern at the risks associated with income drawdown, and consequential under-consumption and over-consumption, led the Murray Inquiry to propose a preselected option which would combine a stable income stream, longevity risk and flexibility. The design could vary with the characteristics of the retiree (e.g. their pension pot).¹⁰² The Australian Government recently accepted this proposal and is consulting on how best to implement it. A similar model has been proposed by the Strategic Society Centre for the UK.
- b) **Government could require that consumers be informed of ‘rule of thumb’ withdrawal rates.** Without undermining the freedoms inherent in the new rules, the Government could prescribe what consumers are informed of as a ‘normal’ or ‘rule of thumb’ withdrawal rate which would result in a reasonable income in retirement along with a reasonable chance of the pot lasting beyond life expectancy.
- c) **‘Minimum’ and ‘maximum’ withdrawal rates could also be regulated so as to provide additional boundaries for consumption.** The South African government has recently taken the decision to set maximum annual withdrawal rates for default drawdown products, on the basis that the complexity of existing options means many pensioners get a poor deal.¹⁰³
- d) **Government could require transparency.** An alternative strategy would simply be to require providers to display their default strategy

transparently and to identify its features. Some such work is already underway, with NEST undertaking a process to establish a default path for its members.¹⁰⁴ This may not go far enough, however, if customers who would take the default are unable to adequately assess these features and take an active decision on whether the default being offered by their provider is right for them.

- e) **Government could put a statutory duty on firms to monitor the suitability of default option for individuals and to inform consumers where they are facing unsuitable risks.** This would be similar to the fiduciary duty and place the onus on firms to develop a suitable default fund and inform customers appropriately.

In adopting one of these paths, given the potential vulnerability of some retirees and the high levels of inertia (likely to worsen subsequent to the introduction of auto-enrolment), an important criterion for any new default option is that it does not promote or allow provider capture of inactive consumers.

Pre-commitment devices

As noted above, 'loss aversion' affects take up of annuities because consumers notice more the loss of the capital than the equivalent gain of annual income. Pre-commitment devices could be designed to help reduce this loss aversion at the point of retirement. Such a policy would have limited effect on individuals retiring in the near future but may help frame decisions better for future cohorts.

Pre-commitment devices enable individuals to make decisions now in relation to future decisions, so as to improve outcomes at the later decision-making point.

Pre-commitment devices are being explored in the accumulation phase, such as Save More Tomorrow in the USA, in which individuals pledge to save more of their earnings in future years when earnings rise. In Denmark, decisions on annuitisation are made earlier in the lifestage, during the accumulation stage with savers buying an annuity multiple times through their working lives.

Such a product could be replicated in the UK. This could be directed at those accumulating savings during their working lives as well as consumers in the early phases of retirement. PPI focus group research has indicated that an annual insurance-style product could be popular with retirees putting a sum a year into an insurance pot.¹⁰⁵ At the very least, the Government should seek to encourage the market to offer products that allow individuals to apportion part of their savings to a 'Guaranteed Retirement Income Pot' during the accumulation phase. Making use of this mental accounting device would smooth the costs of an annuity over a longer period of time and reduce the power of loss aversion.

Minimum Income requirements

The modelling illustrated that rapid and slow decumulation of pensions may lead to lower standards of living for retirees and potentially higher costs of means-tested benefits.

As noted above, the Government already uses a 'Notional Income' rule whereby, if a retiree chooses not to buy an annuity, an amount of 'notional' income will be taken into account when benefit entitlement is calculated. These rules protect the Treasury from some of the fiscal risks associated with under-consumption by retirees.

However, they do not act to promote quality of life considerations for individuals. As research in Australia has shown, under-consumption leads to lower standards of living in retirement than are necessary. Therefore, if the 'Early Warning System' indicates that under-consumption is excessive and prevalent and that many are foregoing retirement income to preserve capital in their pension pots, the government could consider introducing a minimum guaranteed income policy. Such policies apply in countries such as Ireland where an individual must have a secured income of £10,000 before they have flexible access to their pension pots. This could be introduced at a low figure, such as £1,000 or £2,000 of guaranteed private income.

Further consideration should also be given to 'deliberate deprivation' policy. Under this policy, individuals that are considered to have divested their assets with the intention of receiving means-tested state benefits can be denied access to these transfers. The first step should be making this policy more transparent at the point of decision-making so that retirees recognise that the choices they make may render them ineligible for means-tested benefits.

SUMMARY AND CONCLUSIONS

This report argues that the Government should develop an ‘Early Warning System’ to monitor closely what retirees do with their pension savings, and to identify risks both to groups of individuals and to the state. This ‘Early Warning System’ would comprise two recommended activities:

- **Recommendation 1: ‘Early Warning System: Retirement Risk Dashboard’.** The ‘Retirement Risk Dashboard’ would allow the Government to identify and monitor emerging risks at an aggregate level, allowing it both to understand whether there are groups of retirees particularly at risk, and also whether there are long-term fiscal risks associated with the aggregate decisions retirees are making. These range from monitoring pension balances, take-up of guidance and advice, and early access of pensions through to take-up of various product outcomes, investment risk decisions and consumer behaviours at and in retirement.
- **Recommendation 2: ‘Early Warning System: Personal Pension Alerts’.** Alongside the ‘Retirement Risk Dashboard’, the report suggests that a more personalised monitor could be created to assess the risks to which retirees may be exposed at an individual level and so enable policymakers to intervene promptly where appropriate with these sub-groups. The report also details arrange of interventions and support that this might facilitate, including: targeted advice; making the most of contact points with retirees to engage them in retirement planning; encouraging shopping around for retirement products; initiatives to encourage people to think twice before making very large pension withdrawals; and, a ‘Mid-Retirement Financial Health Check’ to encourage older people to reconsider their financial position.

The ‘Early Warning System’ would also over time help government evolve its thinking in regard to defaults and pre-commitment devices that could overcome prevalent behavioural biases and ensure the sustainability of the new system.

Following the huge reforms that we have witnessed, we are unlikely to see a one-off policy solution in the short-term. The FCA and the Treasury have initiated their own processes for refining the support that retirees receive. The Work and Pensions Select Committee has put forward its own recommendations for improvements that could be made to advice and guidance. But, armed with better insight into what is going on and the long-term risks we face as individuals and as a country, we will be much better-placed to reform policy in the future.

ANNEX 1: MODELLING ASSUMPTIONS

Assumptions must be made in any modelling exercise of this type to ensure the number of variables in play remains tractable, to allow clear conclusions to be drawn. Our assumptions are listed in full below.

Pension pot sizes

- The pension pots for each representative individual were determined using data from the fifth iteration (wave) of the ELSA survey, collected in 2010/11. Pension pot size at retirement was estimated by taking everyone aged 50 to the State Pension age (SPA) and projecting their DC pension pot until they reach SPA. We assume they continue to contribute at the same level as stated in the ELSA dataset. The data is then discounted back to 2016 terms.
- Individuals were only included if they had a DC scheme and no DB entitlement, in line with our exclusive focus on outcomes for pensioners reliant on DC pension savings.
- Our modelling focused on pension savings (rather than financial wealth, physical wealth and / or housing wealth). This was so as to facilitate comparability with the international evidence we drew on with two of our three international behaviours relating to decumulation of pension savings. Also, the new pension freedoms affect directly the use of pension wealth rather than other forms of wealth. It should be noted that financial wealth is typically small compared with pension wealth.

Investments and investment returns assumptions

- The median return on equities is assumed to be 7%¹⁰⁶ and the median return on gilts is assumed to be 3%¹⁰⁷, in line with current market expectations of long-term returns.
- The pension pot is assumed to be invested 70% in gilts and 30% in equities, based on the findings of previous research by the PPI.¹⁰⁸

- Volatility of these returns is based on historical data used to generate stochastic scenarios.
- We assume that a charge of 0.75% is paid on drawdown – the level at which such charges are currently capped.

Retirement age

- The individuals are assumed to retire at their State Pension age (aged 63 for females and 65 for males) in the year 2016. To reduce complexity we have not modelled situations where individuals take early retirement, or continue to work after drawing down their pension, but we are able to discuss both these possibilities qualitatively.

State Pension and other non-means-tested benefits

- The individual is assumed to receive the New State Pension from the year she retires. The additional State Pension part, which prevents retirees losing what they would be entitled to in the old system, has been removed to reduce complexity and ensure our results are reflective of the experience of a broader group of future retirees, rather than just the current cohort.
- The State Pension is assumed to increase by the triple lock – in line with whichever is highest from CPI inflation, earnings or a set growth rate of 2.5%.¹⁰⁹
- The retiree receives the Christmas Bonus and Winter Fuel Allowance. The former is assumed to be constant, but the Winter Fuel Allowance increases once the retiree reaches age 80.
- Our modelling does not include applying the 'Notional Incomes' rule, although we discuss this qualitatively in the report.

Inflation assumptions

- The median earnings and CPI increase is assumed to be 4.4% and 2.0% respectively, in line with current projections from the Office for Budget Responsibility (OBR).¹¹⁰
- The average life expectancy is taken from the Office for National Statistics (ONS) cohort mortality for males (aged 65) and females (aged 63) for 2016.¹¹¹
- For drawdown, the rate is assumed to be the percentage of the initial pot.

Decumulation paths

- The annuity modelled is a standard single-life annuity, based on current market rates without any inflation protection.
- For the 0.875% drawdown rate, it is assumed the individual draws down 0.875% of the initial pension pot plus any investment returns in that year.
- For the 8% drawdown rate, it is assumed that the retiree draws down 8% of the initial pension pot in each year.
- To replicate the finding that Australians who consume their pension pot aggressively run out of capital by age 75, we calculated the drawdown rate needed to ensure the average pension pot would run out after this time – found to be 11.6% of the initial pot per annum.
- The full pension pot is assumed to go through drawdown (no lump sum is taken). As some of the international drawdown paths modelled are averages which include lump sum withdrawals, to assume that UK retirees take a lump sum then follow these average drawdown paths would imply a form of double counting. Additionally, the way a retiree uses their lump sum will have a significant impact on how it affects their future wealth and wellbeing and, at present, there is very little data available on this which would allow us to model it effectively. For example, the consequences to long-term financial wellbeing of taking a lump sum to invest in property are very different to those

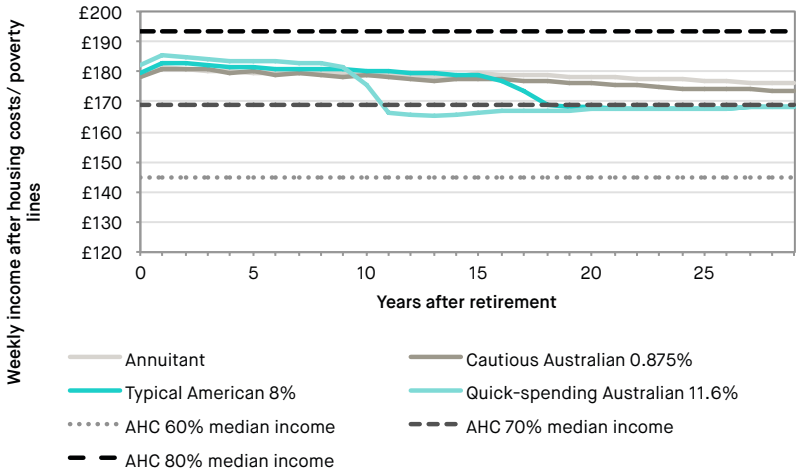
of a lump sum used to fund a holiday. To avoid these complications, we decided to use the simplifying assumption that no lump sums are taken in the modelling and to discuss the implications of taking a lump sum qualitatively.

Means-tested benefit assumptions

- The rent figure used to estimate housing benefit and after housing costs poverty is obtained from the Living Costs and Food Survey, the source of official national statistics on household expenditure.¹¹² We assume that this increases in line with earnings.
- Council tax is assumed to be £20 a week and increases in line with earnings.
- For the individual who receives less than the full State Pension, it is assumed they have a break of 10 years in their contribution record, providing them with 90% of the State Pension.
- All modelling is based on single-person households, to reduce complexity. Including couples would have required significant assumptions to be made about the income of the second person, and in the absence of suitable data to base these assumptions on we have decided to focus on single people and discuss how results would differ for those in couples in a more qualitative way.

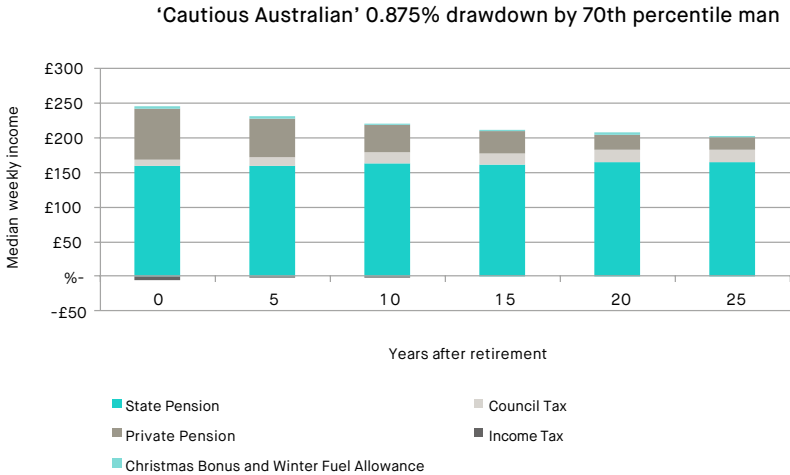
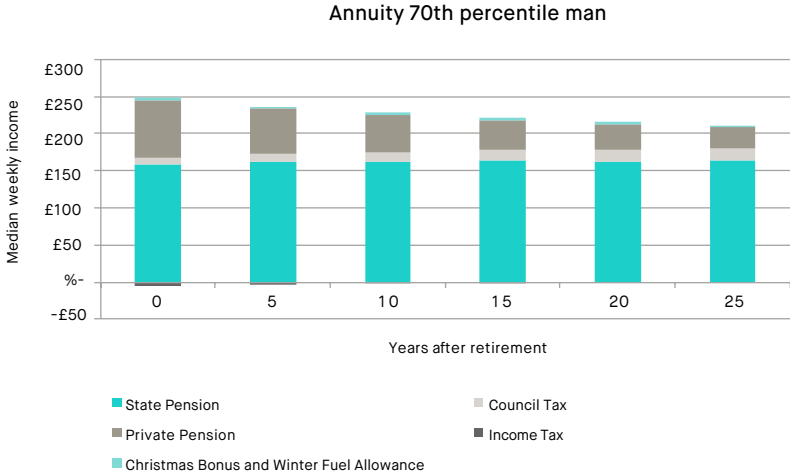
ANNEX 2: MEDIAN AHC INCOME FOR 'MEDIAN MAN' FOR EACH DRAWDOWN PATH

Figure 17: Median AHC income for 'median man' for each drawdown path (Pension pot of £29,046)

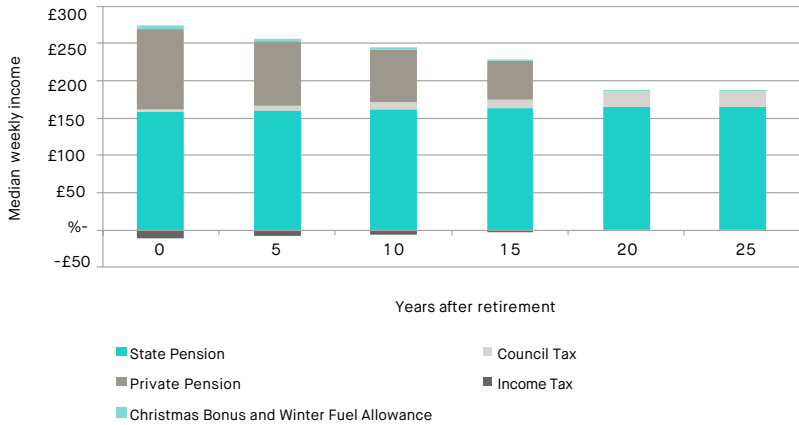


ANNEX 3: BREAKDOWN OF TOTAL INCOME

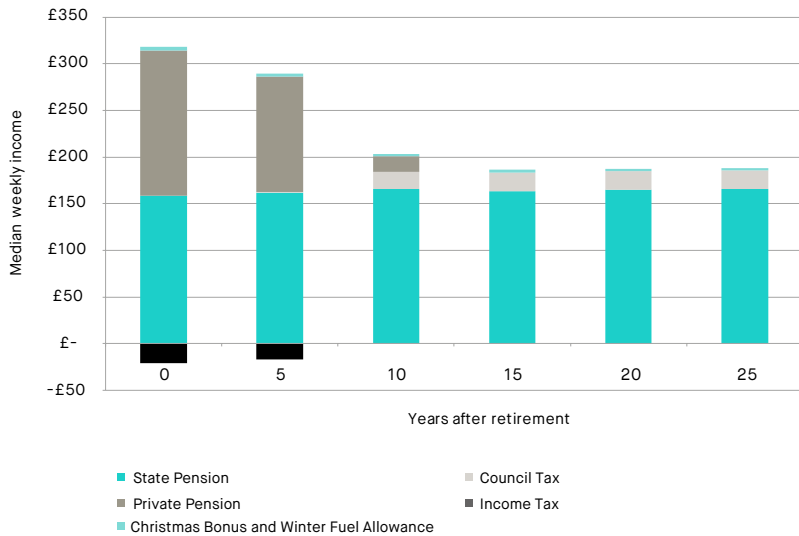
Figure 18: Breakdown of median total income for 70th percentile man (£69,813) along each decumulation path



'Typical American' 8% drawdown by 70th percentile man



'Quick-spending Australian' 11.6% drawdown by 70th percentile man



ENDNOTES

1. For many individuals there was an effective requirement to buy an annuity although the Government had already (ahead of 2014) introduced 'Flexible drawdown', permitting those with a guaranteed income of over £20,000 per year access to pension savings in a more flexible manner. See HM Treasury, *Freedom and choice in pensions* (March 2014)
2. Retirees with less than the 'trivial commutation limit' – of £30,000 between April 2014 and April 2015, and £18,000 before that – were allowed to withdraw their pension savings without facing the punitive 55% tax rate.
3. PPI, *Freedom and Choice in Pensions: comparing international retirement systems and the role of annuitisation. Briefing note number 66* (2014)
4. However, under the new system the tax rates applicable to the withdrawal of pension savings are now the same as those applicable to income from other, non-pension, sources.
5. http://www.napf.co.uk/PressCentre/Press_releases/0477-Pension-savers-with-smallest-pension-pots-still-struggling-for-Freedom-and-Choice-says-NAPF.asp
6. HM Treasury, *Strengthening the incentive to save: a consultation on pensions tax relief* (2015)
7. John Hills, *Good Times, Bad Times*, (2015)
8. HM Treasury, *Strengthening the incentive to save: a consultation on pensions tax relief* (2015)
9. HM Treasury, *Freedom and choice in pensions* (March 2014)
10. FCA, *Thematic Review: Annuities sales practices* (2014); FCA, *Retirement income market study: Final report* (2015)
11. Ignition House, *Exploring Consumer decision making* (2014)
12. House of Commons Work and Pensions Committee, *Pension freedom guidance and advice* (2015)
13. Age UK, *Age UK Evidence Review: Poverty in Later Life* (2014)
14. Most recent figures available, 2012/13. Department for Work & Pensions, *Social security expenditure in the United Kingdom, including Scotland*, April (2014)
15. <https://www.gov.uk/pension-credit/overview>
16. FCA, *Pension reforms – proposed changes to our rules and guidance* (2015)
17. HM Treasury, *Budget 2014: policy costings* (2014)
18. PPI, *Freedom and Choice in Pensions: comparing international retirement systems and the role of annuitisation*. PPI Briefing note number 66.
19. FCA, *The value for money of annuities and other retirement income strategies in the UK* (December 2014)
20. IFS, 'UK State Pensions' http://www.ifs.org.uk/economic_review/fp184.pdf
21. Edmund Cannon and Ian Tonks, *Annuity Markets: Welfare, Money's Worth and Policy Implications* (Bath University, Network for Studies on Pensions, Aging and Retirement Panel Paper, 2011)
22. This information is drawn from: Oxera, *The retirement income market: Comparative international research. Prepared for Financial Conduct Authority* (2014); PPI, *Freedom and Choice in Pensions: comparing international retirement systems and the role of annuitisation. Briefing note number 66* (2014); PPI, *How might the UK pensions landscape evolve to support more flexible retirements?* (2015).

23. PPI, *How might the UK pensions landscape evolve to support more flexible retirements?* (2015)
24. One other country worthy of note is New Zealand. KiwiSaver (introduced in 2007) has no rules around the use of lump sums, aside from an access age restriction of being 65 or over. Regulation of the accumulation phase and deregulation of decumulation phase bear similarities to the UK. However, given the recentness of the KiwiSaver reforms, clearer lessons can be drawn from the Australian and USA data
25. The Australian Government the Treasury, *Financial System Inquiry – final report* (2014), Chapter 2
26. H. Bateman and J. Piggott, *Too Much Risk to Insure? The Australian non-market for annuities* (UNSW, Centre for Pensions and Superannuation, 2010)
27. Challenger, *Retirement Income Research* (April 2012)
28. The Australian Government the Treasury, *Financial System Inquiry – final report* (2014), Chapter 2
29. Susan Thorp, Hardy Hulley, Rebecca McKibbin and Andreas Pedersen, 'Means-tested income support, portfolio choice and decumulation in retirement', *The Economic Record*, Vol. 89, March 2013, 31–51
30. Alexandra Spicer, Olena Stavrunova & Susan Thorp. *How Portfolios Evolve After Retirement: Evidence from Australia*, (UTS Business School Working Paper 11, 2013)
31. Shang Wu, Anthony Asher, Ramona Meyricke and Susan Thorp, *Age Pensioner Profiles: a longitudinal study of income, assets and decumulation* (ARC Centre of Excellence in Population Ageing Research, Working Paper 2015/17, 2015)
32. Shang Wu, Anthony Asher, Ramona Meyricke and Susan Thorp, *Age Pensioner Profiles: a longitudinal study of income, assets and decumulation* (ARC Centre of Excellence in Population Ageing Research, Working Paper 2015/17, 2015); Jonathan Robbie Bray, *In the Red and Going Grey? Wealth and Debt as Australians Approach Age Pension Eligibility Age and Retirement* (2013)
33. Alexandra Spicer, Olena Stavrunova & Susan Thorp. *How Portfolios Evolve After Retirement: Evidence from Australia*, (UTS Business School Working Paper 11, 2013)
34. Jonathan Robbie Bray, *In the Red and Going Grey? Wealth and Debt as Australians Approach Age Pension Eligibility Age and Retirement* (2013)
35. Shang Wu, Anthony Asher, Ramona Meyricke and Susan Thorp, *Age Pensioner Profiles: a longitudinal study of income, assets and decumulation* (ARC Centre of Excellence in Population Ageing Research, Working Paper 2015/17, 2015)
36. Taleitha O'Meara, Aakansha Sharma and Aaron Bruhn, 'Australia's piece of the puzzle – why don't Australians buy annuities?', *Australian Journal of Actuarial Practice*, Vol. 3, 2015, 47–58
37. David A. Love, Michael G. Palumbo, and Paul A. Smith, *The Trajectory of Wealth in Retirement* (Federal Reserve Board, Washington, D.C, 2008)
38. James Poterba, Steven Venti, and David Wise, *The Drawdown of Personal Retirement Assets: Husbanding or Squandering?* (2013)
39. James Poterba, Steven Venti, and David Wise, *The Composition and Draw-Down of Wealth in Retirement* (NBER Working Paper 17536, 2011)
40. James Poterba, Steven Venti, and David Wise, *The Composition and Draw-Down of Wealth in Retirement* (NBER Working Paper 17536, 2011)
41. See media stories based on early Treasury figures on pension decumulation behaviour. <http://www.mirror.co.uk/news/uk-news/blingo-pensioners-blow-5billion-after-5878776>

42. Michael Drew and Adam Walk, *How safe are safe withdrawal rates in retirement?* (2014)
43. ABI, *Retirement 2050* (2015)
44. Shang Wu, Anthony Asher, Ramona Meyricke and Susan Thorp, *Age Pensioner Profiles: a longitudinal study of income, assets and decumulation* (ARC Centre of Excellence in Population Ageing Research, Working Paper 2015/17, 2015);
45. HMT, *Autumn Statement* (2014), para 2.66; DWP, *Pension flexibilities and DWP benefits* (March 2015)
46. PPI, *What level of pension contribution is needed to obtain an adequate retirement income?* (2013)
47. Looking at incomes After Housing Costs (AHC) rather than Before Housing Costs (BHC) in calculating a poverty line is most appropriate for our purposes because AHC incomes reflect the value of homeownership to living standards. Many pensioners are homeowners, and AHC incomes reflect the value of a home for those that own one. For those who rent, showing BHC poverty rates would be misleading since BHC incomes include housing benefit. Since renters need their housing benefit to pay for housing costs, BHC incomes would show renters to have disproportionately high incomes compared to homeowners. AHC incomes therefore allow comparison of poverty rates between renters and homeowners in a much more equal and consistent way. Using AHC for pensioner incomes is also consistent with the DWP's Household Below Average Income analysis.
48. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/437246/households-below-average-income-1994-95-to-2013-14.pdf
49. Here we assume full take-up of state benefits. However, given we know that some retirees do not take their full benefit entitlements; poverty rates are likely to be higher for some retirees than illustrated here.
50. Age UK http://www.ageuk.org.uk/Documents/EN-GB/Campaigns/end-pensioner-poverty/how_we_can_end_pensioner_poverty_campaign_report.pdf?dtrk=true
51. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/417473/pension-flexibilities-dwp-benefits.pdf
52. IFS, *A single-tier pension: what does it really mean?* <http://www.ifs.org.uk/comms/r82.pdf>
53. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/389260/DWP-mid-year-report-2014-2015.pdf
54. Debora Price, *Key Findings from the Project 'Behind Closed Doors: Older Couples and the Management of Household Money* (2011)
55. James Poterba, Steven Venti, and David Wise, *The Composition and Draw-Down of Wealth in Retirement* (NBER Working Paper 17536, 2011)
56. Strategic Society Centre, *Do pensions matter? Income security and a good retirement* (2015)
57. Age UK, *Dashboards and jam-jars* (2014)
58. <https://www.nestpensions.org.uk/schemeweb/NestWeb/includes/public/docs/Cox-Private-pension-wealth,PDF.pdf>
59. James Lloyd, *Early Access to Pension Saving* (SMF, 2010)
60. James Lloyd and Chris Lord, *Defined Capability: Pensions, financial capability and decision making among retirees* (JRF, 2015)

61. ONS, *Inheritance in Great Britain, 2008/10* (2013); John Hills et al, *Wealth distribution, accumulation, and policy* (CASE, 2013)
62. John Hills et al, *Wealth distribution, accumulation, and policy* (CASE, 2013)
63. This is despite the fact that DB pension holders are now allowed to 'cash-in' their DB income for a capital sum: survey evidence suggests that very few DB holders are likely to do this.
64. PPI, *How complex are the decisions that pension savers need to make at retirement?* (2015)
65. <http://www.themoneypages.com/features/just-a-third-of-retirees-will-get-full-state-pension-after-2016-reform/>
66. See forthcoming report by the SMF and Ipsos MORI in association with JRF.
67. Jonathan Robbie Bray, *In the Red and Going Grey? Wealth and Debt as Australians Approach Age Pension Eligibility Age and Retirement* (2013)
68. Growth from Knowledge (GfK), *At Retirement: Consumer Research - exploring changes in the retirement landscape* (FCA, 2015)
69. FCA/HM Treasury, *Financial Advice Market Review: Call for Input (2015)* <http://www.fca.org.uk/static/documents/famr-cfi.pdf>
70. Ignition House, *Exploring Consumer Decision Making and Behaviour in the At-Retirement Landscape* (FCA, 2014)
71. Hazel Bateman et al, *Disengagement: a partial solution to the annuity puzzle*
72. Annamaria Lusardi and Olivia S. Mitchell, 'The economic importance of financial literacy: theory and evidence', *Journal of Economic Literature*, 52(1), 2014, 5–44
73. Annamaria Lusardi and Olivia S. Mitchell, 'The economic importance of financial literacy: theory and evidence', *Journal of Economic Literature*, 52(1), 2014, 5–44
74. Growth from Knowledge (GfK), *At Retirement: Consumer Research - exploring changes in the retirement landscape* (FCA, 2015)
75. James Banks, Rowena Crawford and Gemma Tetlow (forthcoming), "Annuity choices and income drawdown: evidence from the decumulation phase of defined contribution pensions in England", *Journal of Pension Economics and Finance*.
76. National Association of Pension Funds, *82% positive about pension freedoms but many worried about risks*, April 2015 http://www.plsa.co.uk/PressCentre/Press_releases/0461-82-per-cent-positive-about-pension-freedoms-but-many-worried-about-risks.aspx
77. Andrea Finney and David Hayes, *Financial capability in Great Britain, 2010 to 2012* (ONS, 2015)
78. PPI, *How complex are the decisions that pension savers need to make at retirement?* (2015)
79. Bonnie-Jeanne MacDonald et al, *Research and Reality: a literature review on drawing down retirement financial savings* (2011)
80. Hazel Bateman et al, *Disengagement: a partial solution to the annuity puzzle*
81. ILC, *Making the system fit for purpose: How consumer appetite for secure retirement income could be supported by the pension reforms* (2015)
82. Rowena Crawford and Gemma Tetlow, *Expectations and experience of retirement in Defined Contribution pensions: a study of older people in England* (IFS, 2012)
83. FCA, *Retirement income market study: Final report – confirmed findings and remedies*, March 2015.

84. FSCP, *Annuities: Time for Regulatory Reform*, December 2013,
85. FCA, *Retirement income market study: Interim Report Provisional findings and proposed remedies* (2014)
86. Data from Just Retirement
87. FCA, *Retirement income market study: Final report – confirmed findings and remedies*, March 2015.
88. See for instance, K. Chandaria, *Short Changed: Protecting People with Dementia from Financial Abuse* (Alzheimer's Society, 2011)
89. <http://www.ft.com/cms/s/0/b5bc71a0-3091-11e5-8873-775ba7c2ea3d.html#axzz3h53CIUj4>
90. Growth from Knowledge (GfK), *At Retirement: Consumer Research - exploring changes in the retirement landscape* (FCA, 2015)
91. Ignition House, *Exploring Consumer Decision Making and Behaviour in the At-Retirement Landscape* (FCA, 2014)
92. Mark Hoban, *Retirement Saver Service* (Reform, 2015)
93. Ignition House, *Exploring Consumer Decision Making and Behaviour in the At-Retirement Landscape* (FCA, 2014)
94. <https://www.gov.uk/government/news/major-new-review-to-radically-improve-access-to-financial-advice-launched>
95. FCA, *Retirement income market study: Final report – confirmed findings and remedies*, March 2015.
96. House of Commons Work and Pensions Committee, *Pension freedom guidance and advice* (2015)
97. National Treasury, Republic of South Africa, Press release "Retirement reform: lowering charges and improving market conduct", 22 July 2015 http://www.treasury.gov.za/comm_media/press/2015/2015072201%20-%20Draft%20default%20regulations%20press%20release.pdf
98. Age UK, *Only the tip of the iceberg: Fraud against older people Evidence review* (2015)
99. Pension Income Choice Association, *Optimising Value In Retirement* (2009)
100. The Australian Government the Treasury, *Financial System Inquiry – final report* (2014), Chapter 2
101. The Australian Government the Treasury, *Financial System Inquiry – final report* (2014), Chapter 2
102. National Treasury, Republic of South Africa, Press release "Retirement reform: lowering charges and improving market conduct", 22 July 2015
103. James Lloyd, *Default Reform* (Strategic Society Centre, 2015); NEST, *The future of retirement: a retirement income blueprint for NEST's members* (2015)
104. PPI, *Supporting DC members with defaults* (2015)
105. JP Morgan (2014), *Long-term capital market return assumptions: 2015 estimates and the thinking behind the numbers*
106. PPI calculation based on existing annuity rates from <http://www.ft.com/personal-finance/annuity-table>

107. Pensions Policy Institute (2015), "Transitions to Retirement: How might the UK pensions landscape evolve to support more flexible retirements?", Pensions Policy Institute (2015), "Supporting DC members with defaults and choices up to, into and through retirement: Qualitative research with those approaching retirement."
108. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/181231/single-tier-pension-executive-summary.pdf
109. Office for Budget Responsibility, *Economic and fiscal outlook* – March 2015
110. ONS, Period and cohort life expectancy tables, 2010-based. Table D1: 2010-based cohort expectation of life, 1981-2060, Principal Projection, United Kingdom (Excel sheet 209Kb). <http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcM%3A77-227587>
111. <http://www.ons.gov.uk/ons/rel/family-spending/family-spending/2014-edition/index.html>

Golden Years?

What freedom and choice will mean for UK pensioners

Since April 2015, people aged over 55 have been able to spend their pension savings however they want. This overturns almost a century of policy stability in which there was an expectation that retirees would annuitise the larger part of their pension savings.

The ‘freedom and choice’ pension reforms were introduced to hand control over to pension savers who if prudent enough to save for retirement could be expected to be prudent in how they use their pension savings. However, alongside the possible advantages, the reforms come with significant potential long-term risks: to individuals, who may consume their pensions too quickly or too slowly; and to the state, which may be left picking up the pieces through the costs of increased claims of means-tested benefits by retirees.

This research uses modelling to assess the implications for UK retirees were they to follow similar paths to those exhibited by individuals in Australia and the United States of America, countries where they have similar pension freedoms. It concludes with policy recommendations to help ensure the long-term sustainability of the reforms, including an ‘Early Warning System’ to identify emerging risks.

Kindly supported by

