THE DECISION CITIZENS

Exploring the Retirement Challenges Facing Future Generations

WHITE PAPER

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Commissioned by ROYAL LONDON

EXECUTIVE SUMMARY

DECISIONS, DECISIONS, DECISIONS...

More than ever before, retirement revolves around having to make decisions - how much to save, how best to save, and when to save? There is no reprieve from the decision making; personal situations evolve, investment markets fluctuate and government policies change. Important decisions need be revisited and revised as life unfolds.

The recent Freedom and Choice pension reforms together with the shift from defined benefit to defined contribution pension schemes have moved the responsibility for ensuring adequate retirement income further towards the individual. Today, workers need to decide, largely for themselves, when and how to save for retirement without any guarantee as to how much money they might end up with when they get there. Building up a sufficient pension pot is a lifetime's work and for future generations of retirees, the responsibility of making the right decisions starts decades before they can call themselves 'retired'. But when retirement is 20, 30 or 40 years away and life is expensive, it is no surprise that many do not necessarily spend sufficient time, or indeed money, preparing for retirement.

"A GOAL WITHOUT A PLAN IS JUST A WISH"

Antoine de Saint-Exupery

Retirement means different things to different people. However, in all cases, the key to meeting expectations is effective planning and proactive decision making. To understand the implications of people's decision making in relation to retirement planning, Milliman's actuarial team carried out a comprehensive study to build up a picture of how the decisions people make over their working lives can significantly impact how much they can afford to spend at the point of retirement.

We developed a range of representative example households using Financial Strategy Segment data from Experian. Each household contains adults aged 30 to 60 and has different compositions, wealth levels, different types of employment and different attitudes to financial matters.

For each of these households, we explore their journey to retirement examining how behaviour, circumstances, and choices might affect their financial position when they arrive at retirement. To do this, we project their salaries, pension contributions and pension fund investment returns, as well as other assets such as non-pension savings and house values. We also consider their spending and how this changes throughout their lives factoring in their changing social and living situations such as becoming homeowners, becoming parents, working part time and adult children moving out or continuing to live at home.

To establish if our households would have sufficient income at retirement, we compare all of our example households' retirement income (pension income and state pension) to their spending levels the year before they retired (as proxy for spending at the point of retirement).

OVERALL PICTURE

Across all of the households we studied, over three quarters would have to cut back at retirement to some degree. Two of our families were unable to meet even their basic needs (essentials and housing) and are estimated to have to work full-time for at least seven years longer to be able to afford to retire.

In addition, many families will be dependent on the new State Pension for a large proportion of their retirement income. On average across our households, the new State Pension represents over half of households' retirement income after tax. This suggests that future generations of retirees will struggle all the more if the state cannot afford in the future to be as generous as it is today. Although many people continue to believe that they will be able to rely on the state to take care of them in retirement, as the proportion of retirees to working people increases and the costs of state pension provision mount, it is possible that state provision may be lower in the future.

Given that our households are based on profiles which are derived from actual household data, our research suggests most people are not currently doing enough to provide an adequate retirement income. However, when we examined the choices our households were making we saw that, encouragingly, a comfortable retirement need not be a pipe dream if households make informed decisions along the way and are willing to see retirement provision as a priority for today rather than for tomorrow.

CHANGING THE FUTURE

Our research shows that taking a more active interest and making better decisions could significantly change the prospects of many individuals. We illustrate the effect of these decisions with case studies of our households' journeys throughout the paper.

- **Your future, your responsibility**
  Individuals need to more readily accept that they themselves have a central role to play in securing a comfortable retirement.

- **Enrolment is not the same as engagement**
  Following the introduction of auto-enrolment in the UK, a significant majority of the working population[1] are now enrolled in a workplace pension scheme. The case study for Gavin and Kirsty shows the significant impact of being enrolled into a pension scheme.

1 Department Work and Pensions (2016). 66% of employees in a workplace pension scheme.

The importance of being enrolled – Gavin and Kirsty (aged 30)

With a large mortgage and young children, Gavin and Kirsty don't have much money to spare. They didn't have a pension until they were auto-enrolled into their workplace pension scheme. In 2019, when their contributions increased to 5% of their gross salaries, they wondered if it was the best use of their limited resources. Our analysis shows that, if they stop contributing in 2019 and only start contributing again at age 55, their total retirement income after tax would have dropped by 25% and so in retirement they would have to cut back on their spending levels considerably.

If Gavin and Kirsty keep contributing, they can cover almost all of their essential spending in retirement without reliance on the state, but – if they stop contributing and re-enter later they cannot.

Below: Gavin and Kirsty's annual net retirement income and expenditure (In today's money)

However, being enrolled is not the same as being engaged, and many people in workplace pension schemes only contribute a minimal or the initial 'default' amount. Our analysis shows that this is not necessarily sufficient to build up an adequate retirement pot.

Similarly, contributing a little bit more earlier on might be a much more effective approach than deferring pension savings towards the end of a career, as we see with Tomasz in the case study below.

The importance of engaging with enrolment – Gavin and Kirsty (aged 30)

Although auto-enrolment was key to Gavin and Kirsty building up a retirement pot, it wasn't necessarily enough to guarantee a comfortable retirement. Our results show that if Gavin and Kirsty contribute the minimum pension contribution (5% of gross salary for an auto-enrolment scheme) they'd have to cut their spending by almost 20% or work for five years longer before retiring.

Our analysis shows that, if they had contributed 6.5% more than the minimum each year then they wouldn't have to work any additional years. This roughly translates that every extra 1.3% pension contribution means 1 less year they would have to work.

The importance of timing – Tomasz and Agata (aged 30)

Tomasz and Agata contribute 3% to their workplace pension scheme and their employer contributes 6%. At 65, they finally pay off their mortgage and decide that they can 'afford' to increase their pension contributions. If they don't make a change they will have to cut their spending by almost a quarter in retirement or work for four extra years to maintain pre-retirement spending levels. To avoid doing either of these, they would have to contribute 75% of their salary to their pension for the remaining five years of their working life – which is clearly unrealistic. However, the same result could have been more easily achieved by increasing their contribution from 3% to 7.75% from when they were thirty.

Below: Tomasz's and Agata's annual net retirement income and expenditure (in today's money)

- **Make your money work harder**
  Even those who are on track to have sufficient money to retire comfortably could optimise and enhance their situation by making their money work harder. There are many financial products available that are likely to provide customers with improved returns on their savings relative to investing in cash, but for many this remains the sole or predominant asset class in which non-pension savings are invested.

  In deciding on the right savings vehicles for them, each customer will need to consider a range of factors including not only the expected investment return, but also the complexity, riskiness, tax treatment, and charges on each product.

- **You can't predict the future but you can protect it**
  Whilst products such as term assurance and income protection are more typically thought of in the context of providing protection over the working life, our research shows that the absence of insurance can have a significant adverse effect on the retirement story.

  Buying protection can help people get back on their feet after unfortunate circumstances but, for some, there might be a trade-off between buying protection and contributing more to savings.

RECOGNISING THE CHALLENGES

Whilst contributing more to saving for retirement might appear to be good advice, the personal nature of finances means that following generic advice may not be the best course of action. There are many factors which make saving for retirement very difficult.

Credit card debt is at record highs, a rising proportion of people will have to accept renting in retirement, and younger generations are weighed down with student debt that they may never be able to pay off. At the same time, there are households whose budgets must stretch to financially support their children for longer, their parents sooner, or both simultaneously. All of these financial pressures will have a significant impact on the ability to save for retirement.

In addition, having enough in retirement to cover regular outgo is only one part of the story. Funding for long-term care will become an increasingly significant consideration, and so deciding whether to financially support adult children and parents, or leave an inheritance behind, will need to be weighed against the effect on one's own retirement. Only three of our 16 example households had enough non-pension savings at the point of retirement to cover current long-term care costs[2].

"AN INVESTMENT IN KNOWLEDGE PAYS THE BEST INTEREST" Benjamin Franklin

Future generations of retirees have been handed the responsibility of retirement planning. Our research shows that the decisions they choose to make can significantly influence their retirement outcomes; however it also highlights the difficulties individuals are facing. The good news is that a comfortable retirement is within reach of most of our example households, though the choices required to make this a reality are not necessarily simple or easy to make.

The importance of making the right decisions at the right times reinforces the value of expert advice throughout retirement planning. When the retirement decisions that people make today have life-changing results tomorrow, it is crucial that these decisions are informed.

2 Care cost figures from: Institute and Faculty of Actuaries, Pensions and the funding of long-term care

INTRODUCTION

When it comes to planning for retirement, the stakes are high. This research aims to understand the implications of people's decision making in relation to retirement planning, both considering the current norm and the impact of making different decisions.

We aim to answer three key questions:

- Are future generations adequately preparing for retirement based on current behaviour?
- How can future generations improve their retirement situation?
- What are the challenges that future generations face in trying to improve their retirement situation?

MEET OUR EXAMPLE HOUSEHOLDS

To fully understand the current situations and behaviours of households in the UK, we have developed a range of 16 representative example households, containing adults aged 30 to 60 with different personal and financial situations[3]. For each of these households, we then project their journeys to retirement to examine how their behaviour, circumstances, and choices might affect their position when they arrive at retirement.

In each age band we consider four socio-economic groups:

- **Limited Choices** – These households are in full-time employment but have below average salaries. Their financial choices are limited as their income barely covers their essential spending.
- **Squeezed** – These households are financially stretched. Their earnings are modest but give them some amount of financial freedom to make choices about how their money is spent.
- **Manageable** – These households have sufficient income to cover their expenditure and some leisure pursuits. They have good levels of financial freedom and so they have scope to make choices regarding the best use of their money.
- **Comfortable** – This is the most affluent group in our study. These households earn high salaries and have high levels of financial freedom to make choices about their future.

Let's meet them all briefly now. We will then meet them again and see how their futures evolve in the course of the rest of the paper.

3. These example households are based on households from Experian's Financial Strategy Segments (FSS 4, released in 2017) and we have grouped them into the four socioeconomic groups named 'Limited Choices', 'Squeezed', 'Manageable' and 'Comfortable'.

	Limited Choices	Squeezed	Manageable	Comfortable
Age 30	**William** *Not content with standard of living but saving is a struggle* Self-employed food courier Salary: £15,000 No pension fund and no savings Single and renting	**Gavin and Kirsty** *Stretch limited disposable income sometimes use credit cards/loans* Caretaker and sales assistant Household salary: £35,000 Pension fund: £1,400, Savings: £100 Large mortgage and young children	**Tomasz** *Care-free and enjoying his pay cheques: homeownership feels distant* Project manager Salary: £33,000 Pension fund: £7,000, Savings: £4,000 Single and renting	**Charlotte** *Highly paid with a highs-stress job and high levels of disposable income* Lawyer Salary: £85,000 Pension fund: £75,000, Savings: £35,000 Single and renting
Age 40	**Jenny** *Trying to stick to a budget and raise a child alone* Telephone sales person Salary: £17,000 Pension fund: £680 and no saving Single and renting	**Gareth and Hayley** *Determined to be homeowners they have stretched themselves to get a mortgage* Administration assistant and store manager Household salary: £54,000 Pension fund: £34 ,000, Savings: £1,000 Large mortgage and young children	**Jason and Paula** *Good progress paying off mortgage but little savings* Librarian and pharmacist dispenser Household salary: £54,000 Pension fund: £100,000, Savings: £10,000 Mortgage	**Christopher and Joanna** *High-earning couple who balance career with children's needs* Accountant and business development manager (part-time) Household salary: £97,000 Pension fund: £50,000, Savings: £20,000 Mortgage and school age children
Age 50	**Phil & Angela** (Callum & Natasha) *Children live at home, as can't afford to move out; they have little cash to spare so saving is a struggle* Cashier & waiter Household Salary: £20,000 Pension fund; £800 and no saving Renting with adult children	**Gordon and Yvonne** *Economical habits with low incomes; Gordon retired early due to ill health* Dental nurse and gardener (retired) Household salary: £14,000 (previously £31,000) Pension fund: £20,000 Savings: £300 Mortgage and children have moved out	**Anthony** *Working hard to build financial stability after going through a divorce* Advertising account manager Household salary: £34,000 Pension fund: £40,000 Savings: £41,000 Significant mortgage and divorced	**Rajesh, Manjit** (Nikhil & Nisha) *Good salaries but savings affected by helping their children* Pharmacist and architect Household salary: £78,000 Pension fund: £570,000 Savings: £29,000 Mortgage with adult children
Age 60	**Victor, June** (Glyn & Samantha) *Live within their means despite low wages, but money is tight* Florist and catering assistant Household salary:£20,000 Pension fund: £800 and no savings Paid-off mortgage and adult children	**Elaine** *Lives alone on modest salary; sadly her husband died recently* Pensions clerk Household salary: £22,000 Pension fund: £100,000 Savings: £110,000 Small mortgage (going to pay this off with life insurance)	**Vincent and Lynne** *Comfortable income but unsure if can maintain quality of life in retirement* Office supervisor and personal assistant Household salary: £44,000 Pension fund: £320,000, Savings: £140,000 Small mortgage	**Martin and Janet** *Saved carefully over their lives with healthy pension pot* Own accountancy firm Household salary: £72,000 Pension fund: £520,000 Savings: £110,000 Paid-off mortgage

OUR ANALYSIS

In order to understand if our households are adequately preparing for retirement, we project their financial situation to the point of retirement. We project their salaries, pension contributions and pension fund investment returns, as well as other assets such as non-pension savings and house values. However, finances are highly dependent on the life events that our households will experience. Therefore, we also consider their changing social and living situations such as becoming homeowners, becoming parents, working part time and adult children moving out or continuing to live at home.

We calculate the households' future potential retirement income as the state pension plus the income from their workplace pension fund after tax. The income from the workplace pension fund is defined as the level of sustainable income that could be withdrawn from their fund based on prevailing interest rates, the household's age at retirement and their age now. We assume that our example households will receive a full state pension of £8,000 a year (per adult of retirement age) in today's money. We project all households to their state pension age and we also assume that all workplace pension contributions are continuous over this period.

Retirement means different things to different people and so examining retirement income alone does not provide a full picture as to whether retirement (from a financial perspective) has met the expectations of the household in question.

Income replacement ratios, a commonly used metric to assess retirement income, can be hard to understand or relate to and do not always provide much direct insight into the extent to which someone may have to change their spending habits in retirement. Pre and post-retirement tax situations may also be different which can complicate matters. In this paper we therefore consider retirement income not in isolation but in relation to the levels of spending expected at the beginning of retirement.

We estimate retirement spending with reference to the level of expenditure expected in the period immediately prior to retirement, which we calculate by projecting the development of the spending and saving habits of our households throughout their lives. This approach provides us with a much more meaningful metric for comparison because it allows us to evaluate how much of a household's spending can be sustained in retirement. Our definition of an 'adequate retirement income' flows naturally from this as one which avoids the need to significantly change spending habits at the point of retirement.

Figure 1 (next page) shows the approach that we have taken to consider whether retirement income is adequate.

In order to create realistic household and financial behaviour we base our households' current composition, salaries, pension fund and non-pension savings levels on Experian's Financial Strategy Segments data. We model employer and employee defined contribution ('DC') pension contributions for those not in an auto-enrolled scheme based on averages reported in Office of National Statistics ('ONS') data. Our future financial performance assumptions for the assets in which non-pension savings and pension funds are invested are based on historical data available for each asset class and are defined with reference to the projected future risk-free rates which are based on the implied interest rates from the UK Government bond curve.[4]

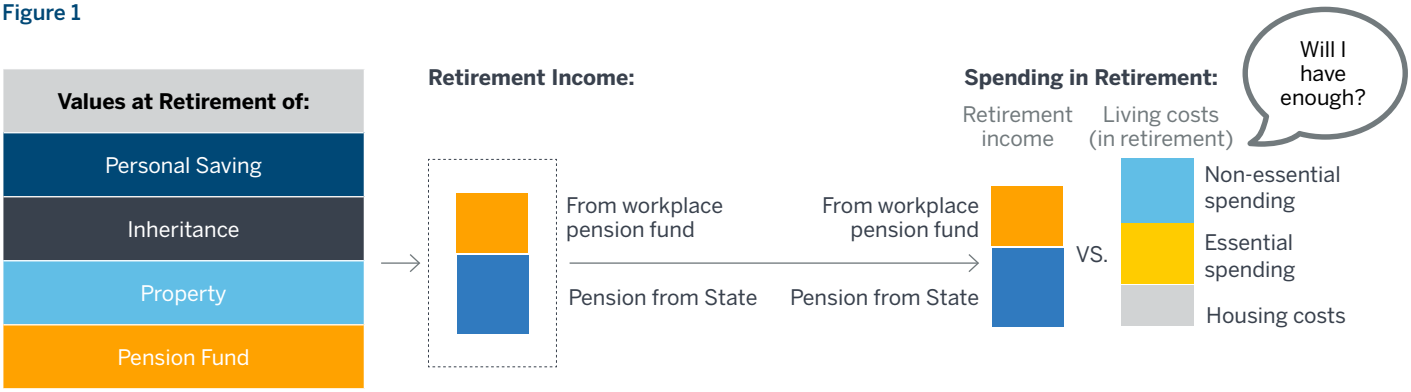
In determining the initial level of retirement income, we do not include non-pension savings or other assets, such as the value of the household's home. However, we consider these assets to be an important part of the retirement story and in some cases it is relevant to evaluate the size of these assets. For example when considering the cost of long-term care or the potential need for equity release or downsizing.

We model future spending and savings habits based on the current spending and saving habits reported in ONS data. The conversion of at-retirement pension savings into an income is consistent with projected interest rates and longevity estimates. We also assumed that all tax thresholds and state benefits increase in line with inflation and remain otherwise unchanged.

Further details of the modelling assumptions used in our review can be found in Appendix E. In the next section we set the scene with an introduction to one of our example households.

4 UK government bond curve defined at 31 December 2015

Figure 1



Meet Gareth and Hayley
A determined young family who have stretched themselves to get a mortgageon a family home.

Age: 40

Current joint income: £54,000

Current joint pension fund: £34,000,

Current joint non-pension savings: £1,000

Administration assistant and store manager

Gareth and Hayley are both 40 years old with twin girls at primary school. They live together in a small family home which Gareth and Hayley stretched themselves to buy. With little spare money, savings and pension take a back seat compared with providing a good life for their children.

We follow Gareth and Hayley's lives through until retirement considering how their situations change and how this affects their spending habits and financial priorities.

To assess their position at retirement, we project their salaries, spending, level of saving and pension contributions throughout their lives and compare the income (which their expected retirement fund might then provide) to their spending levels in retirement.

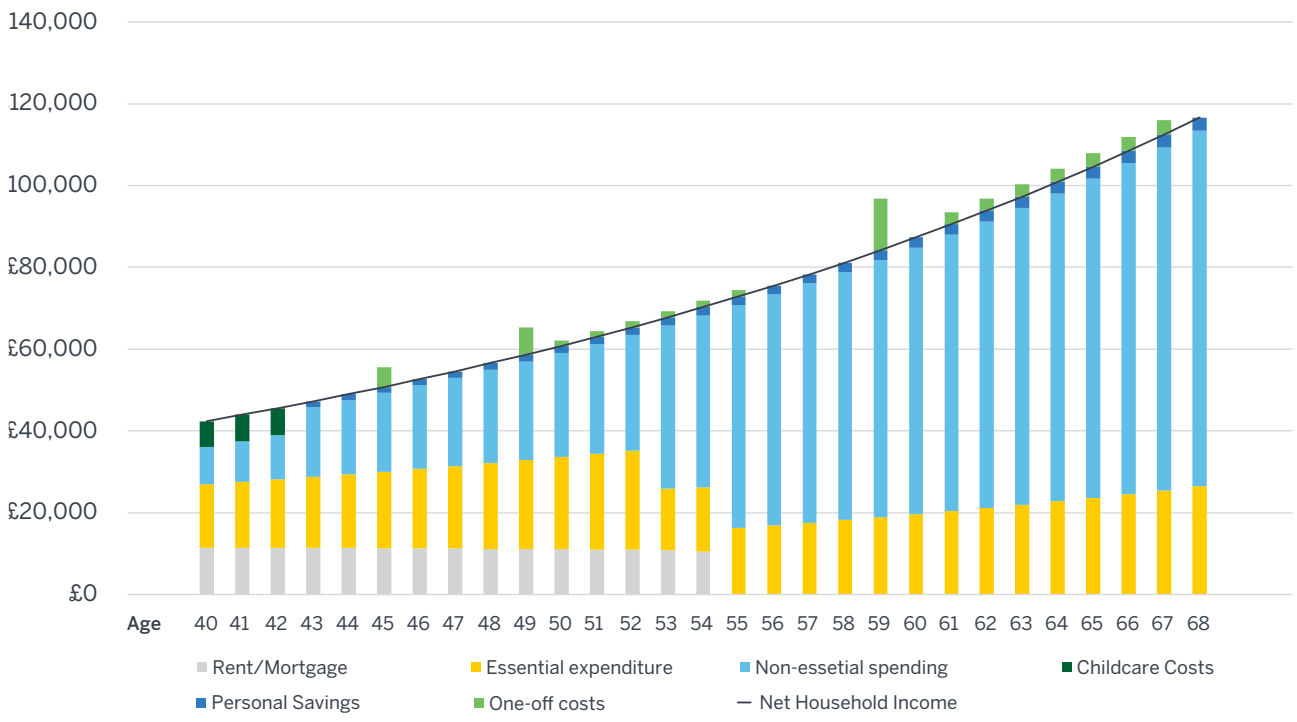
To understand in more detail what kind of retirement our households might be heading for we split their everyday spending into a few broad categories:

- Rent/mortgage
- Essential spending (includes food, electricity, transport)
- Non-essential spending (includes clothes, alcohol, pets and holidays)

During their working lives, everyday spending places constraints on households' ability or willingness to commit more of their income to retirement saving. In retirement, continuing to cover housing costs and essential spending is critical, so retirement incomes that are expected to achieve that offer some comfort. But people are still likely to be disappointed if their overall quality of life suffers as a result of a fall in income once they retire. In addition to everyday spending, we projected their non-pension savings and pension fund separately.

Figure 2 shows that the first few years are difficult, with childcare costs pushing their spending to the limit. However, as the children get older, the family has more money to spend and also some left over to save. At 45, Gareth and Hayley use some of their savings to take their children on a special family holiday. As they reach their late 40s, Gareth and Hayley also start to treat the family to a new car and some more expensive holidays. By the time Gareth and Hayley reach their mid-50s, the mortgage is paid off and their children have moved out. Spending on essentials has fallen as Gareth and Hayley have their house to themselves.

Figure 2: Gareth and Hayley's annual net household income and expenditure



RETIREMENT

Gareth and Hayley contribute 3% of their gross salaries to their workplace pension scheme throughout their lives. Their employers also contribute a further 6% each. By the time they retire, Gareth and Hayley have between themselves built up a pension pot of £320,000 in today's money. Based on projected interest rates and mortality assumptions, this could provide a sustainable fixed level of income of £15,700 a year after tax. We assume that Gareth and Hayley will both be eligible for the new State Pension and so this will provide a further £8,000[5] a year each. In total they have a joint retirement income of £31,700[6] in today's money.

Unfortunately, Gareth and Hayley will be used to spending £48,100 a year at the point they retire and so Figure 3 shows that they will have to cut their spending by over a third in retirement. This will mean a significant change in their spending. Whilst certain economies may be relatively easy to make these may nevertheless have an adverse impact on their lifestyle.

Alternatively, they could choose to work for longer[7] to continue building up their pot (and reduce the retirement period over which it is spread). We estimated that they would need to work full-time for eight years longer to be able to fully maintain their spending habits in retirement.

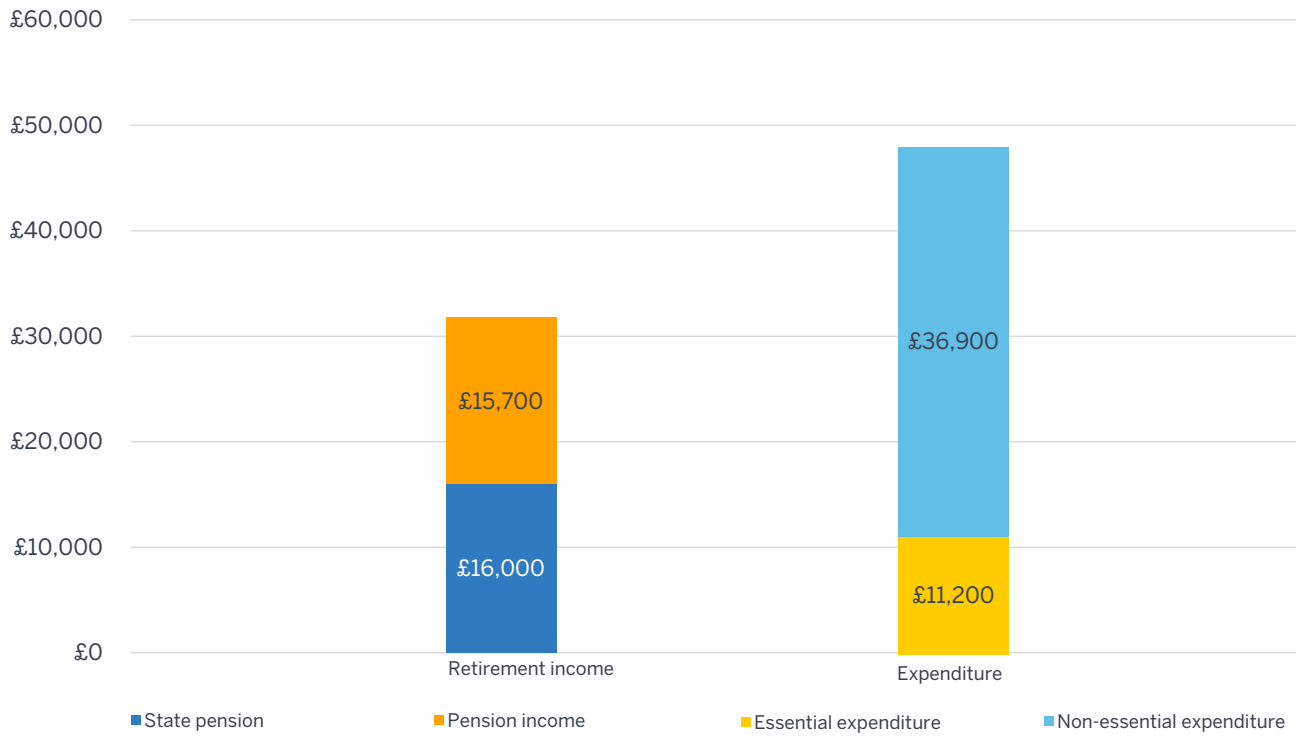
In practice a household may not choose just one or the other of these options, but rather a combination of both. However, whichever decisions they make at this stage, Gareth and Hayley face having to make difficult and potentially unpleasant choices at the point at which they expect to retire.

5 This is a rounded value

6 £15,700 + 2 x £8000

7 For simplicity the working longer statistics do not include an uplift to state pension income for households who defer taking the state pension, if an uplift were to be applied then households may have to work fewer additional years than our analysis indicates

Figure 3: Gareth and Hayley's annual net retirement income and expenditure (in today's money)



ARE FUTURE GENERATIONS ADEQUATELY PREPARED FOR RETIREMENT?

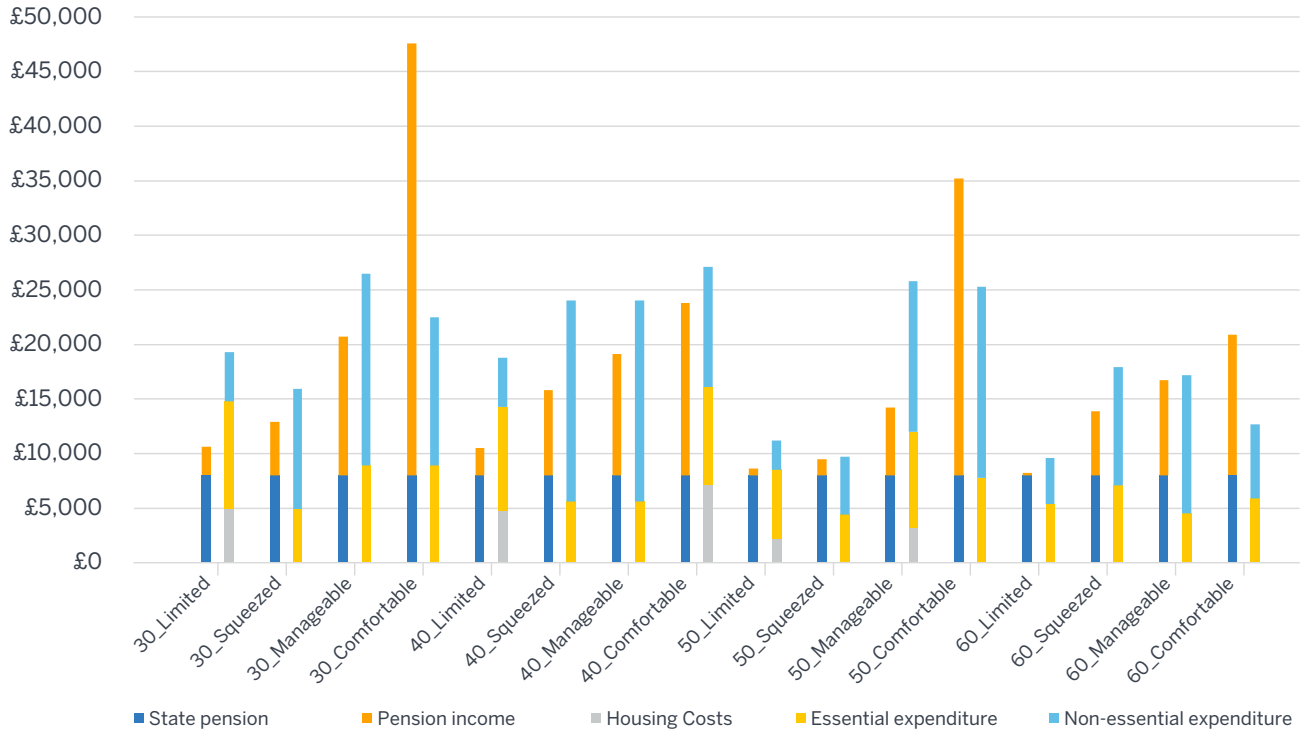
OVERALL PICTURE

Gareth and Hayley are just one of the sixteen example families we studied. Their story shows that their retirement planning is currently not sufficient if they want to maintain their spending habits in retirement. This is not uncommon; based on our projections, more than three-quarters of our future retirees would have to reduce their spending in retirement.

Figure 4 shows the comparison of total retirement income to the combined outgo from essential expenditure, housing and non-essential expenditure per person in today's money for each of our 16 households.

Whilst all of the comfortable households can match their pre-retirement spending, for most of the other households their retirement income is not sufficient. On average, of those who will have to cut back their spending, their retirement income only covers three-quarters of their pre-retirement spending. This ranges from some households, such as the aged 50 Squeezed couple Gordon and Yvonne, whose net retirement income covers 99% of their spending and so will have to make only minor adjustments to their spending habits to other households such as Anthony, 50 Manageable, whose retirement income only covers 55% of his expenditure.

Figure 4: Comparing annual net retirement income to expenditure (in today's money, per retiree in the household)



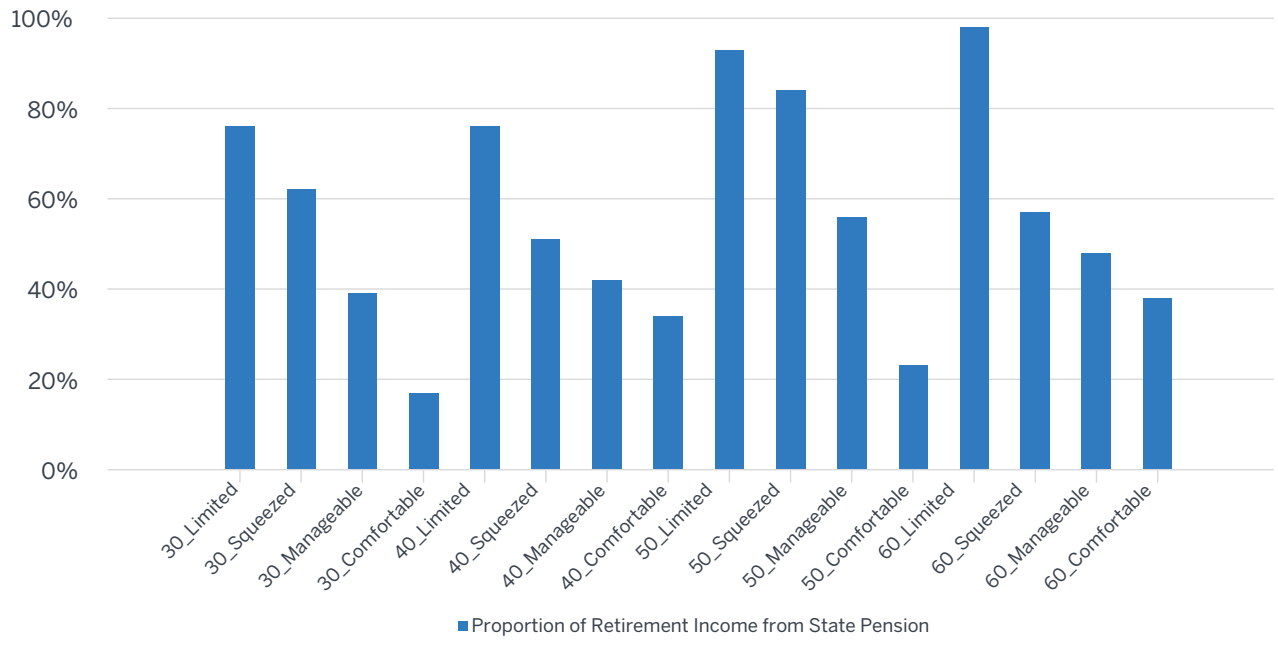
Luckily in Anthony's case, he can still afford his basic costs on this reduced income. However, this is not the case for everyone. Neither William nor Jenny (30 and 40 Limited respectively) can afford their housing and essential spending with their projected retirement income. More details on all of our households' position at retirement can be found in Appendix C.

Figure 5 shows the proportion of projected retirement income which comes from the state pension.

On average, 53% of households' retirement income comes from the state pension. Worryingly, half of the households we studied were unable to cover their essential spending and housing costs without the state pension. Even today there is significant speculation as to the future of the state pension in its present form, and over the longer term for those potentially up to 40 or more years away from retirement the uncertainty over state provision is even greater. So it is concerning that so many of our example households are expected to be so reliant on a source of income that may not be as certain or as stable as it is today.

Having studied how our households' current behaviour will translate into their retirement position, it is clear that personal provision is not sufficient for most of the households in our study.

Figure 5: Proportion of net retirement income made up by the state pension



HOW CAN FUTURE GENERATIONS IMPROVE THEIR RETIREMENT SITUATION?

IF YOU'VE LEFT IT TOO LATE, WHAT CAN YOU DO?

For our retirees who do not have sufficient retirement income to cover their current spending habits, the most likely options open to them at the point of their intended retirement are:

- Working longer, thereby deferring their retirement to an older age to provide more opportunity for saving and to shorten the period over which their income needs to last. However, some households may even struggle to work until their state pension age let alone for longer.
- Releasing value from their home, if they own one, to provide additional income.
- Cutting down on spending in retirement and accepting that they are able to do less than they might have expected or hoped for.

Working longer

Some people may want to work beyond their state retirement age due to high job satisfaction and to avoid the lifestyle 'shock' that retirement may bring. However, for others, it may not be enjoyable but is a necessary step to ensuring that they have enough money to retire on. We modelled how much longer our households would need to work in order to maintain their pre-retirement level of expenditure in retirement and, for those households who are struggling, how much longer they would need to work to cover their basic costs. However, some households may even struggle to work until their state pension age let alone for longer.

Our poorest households aged 30 and 40 would both need to work for an extra seven years[8] just to cover their basic costs in retirement as the state pension combined with their pension contributions isn't enough. In both cases their costs in retirement are pushed up by having to pay rent.

Other households would need to work anywhere up to an extra 11 years in order to maintain their spending habits in retirement (taking non-essential expenditure into account). More details on all of our households' position at retirement can be found in Appendix C.

But working longer won't be possible for everyone. Even if someone wants to work for longer this does not necessarily mean the option will be available for them. Older workers are already more likely to suffer from loss of work than younger workers and may find it harder to find a new job[9].

Ill health could also prevent individuals from being able to continue working, especially for those working in physically demanding jobs. One in 11 people aged between 50 and 65 in Great Britain receive Employment and Support Allowance (ESA), a benefit for people who are unable to work due to illness or disability[10].

In addition, some people will simply not want to work for longer, even if this decision means having to accept lower income in retirement.

Releasing value from the home - Downsizing

Around 3 million people of working age in the UK plan to sell their primary residence to fund their retirement[11]; but is downsizing actually a viable 'move'?

Whilst owning a house can be a substantial asset, there are numerous challenges that might present difficulties in actually 'cashing in' on it.

- Difficult economic conditions, high house prices and a trend towards older parenting may mean that children have not moved out by the point of retirement. Downsizing will only provide a source for additional income if the family is able to move to a less expensive house, which would typically mean that it needs to be a smaller property or change in location.

- There is also the risk that the mortgage won't be paid off by the time people hit retirement. In 2016, it was reported that the age of first-time buyers increased from 30 to 33 and that the median mortgage term for first-time buyers had lengthened to 30 years from 25 years a few years prior[12]. If the mortgage has not been paid off - Having less equity in the family home will restrict the amount of money that can be released as well as limiting the type of property that can be bought.

- Working beyond retirement age may prevent those planning on downsizing from being able to relocate.

- Downsizing as a retirement plan exposes the household to the volatility of house prices. Having a concentrated exposure to this asset may thwart retirement plans if there is a fall in house prices at or around the time of retirement. Even if the market falls for both the property being sold and bought, the fall is likely to work against the individual who is downsizing.

- There may not be a suitable property for households to downsize into, which may delay or even cancel their plans to downsize.

- Psychological barriers such as 'using up' the inheritance or moving out of the family home may also make downsizing more difficult.

- There are associated transaction costs with moving house including advice, estate agent fees, legal fees and the costs of moving.

8 For simplicity the working longer statistics do not include an uplift to state pension income for households who defer taking the state pension, if an uplift were to be applied then households may have to work fewer additional years than our analysis indicates

9 A New Vision for Older Workers (2015), Retain, Retrain, Recruit, Report to Government by Dr Ros Altmann CBE, Business Champion for Older Workers

10 Department of Work(2015), ESA claimant count from DWP Stat-Xplore and population figures ONS (mid-2015)

11 Royal London Policy Paper 6, The 'Downsizing Delusion'

12 Council of Mortgage Lenders (2016)

Releasing value of home – Equity release

Whilst downsizing is a more traditional way of releasing the value of a home, there are alternatives. Equity release products allow homeowners to access the value of their home whilst continuing to live there.

Equity release products can provide additional income or sums of money whilst avoiding some of the issues associated with downsizing. The approach doesn't require the owners to relocate which avoids the problems regarding having to move to a smaller property or change location.

However, certain issues will remain:

- If the mortgage has not been paid - Having less equity in the family homes will restrict the amount of money that can be released.
- House price volatility - Changes in property values could still significantly impact the amount of money that homeowners are able to release.
- There are costs involved with using an equity release product which include advice, property valuation and legal fees.
- Just like downsizing, releasing some of the value in the family home for retirement typically means that there will be less to pass down via inheritance.

There are also some additional considerations regarding equity release products:

- The terms or pricing of the product may be more expensive than for other property loans.
- Equity release products may also restrict households from being able to move somewhere smaller or more suitable for their needs at a later date.
- The equity release provider will expect the homeowner to maintain their home to a reasonable structural standard. Maintenance costs can be difficult to meet for those on a limited budget.
- For many, equity release is likely to remain less familiar and less well understood compared with buying and selling houses.
- If there are children or other family members still living in the home they may be forced to vacate when the owners die in order to repay the equity release provider.
- The structure, pricing, and availability of equity release products over the longer term is very difficult to predict and so this may not be an option to future generations of retirees.

Of course, downsizing and equity release are only possibilities if a household actually owns its own home at the point of retirement. Many households could struggle to get on the housing ladder at all.

Victor and June – Is downsizing the right move?

Victor, June (Glyn & Samantha) (60 limited)

With low incomes, the 'here and now' has always been more important than the future.

Current joint salary: £20,000
Current joint pension fund: £800, No savings
Personal life: Own house outright where adult children also live

Money has always been tight but Victor and June have always managed to get by. When auto-enrolment was introduced at their workplaces two years ago, it was the first time they had started to save a little for retirement. However, with only six years to go until retirement, their pension pot won't be large enough to provide much additional income above the state pension.

They did, however, manage to pay off the mortgage on their house, which is now worth £100,000, and they had hoped that owning their own home would make up for lack of savings.

At the point at which they reach retirement their adult children, Glyn and Samantha, are still living with them because they can't afford to move out. Victor and June realise that if they do decide to downsize, they will still need to find somewhere big enough for the whole family, as they want to support their children if they can.

Figure 6 shows the results if they were to sell their home when they retire and move to a more modest house that they could all fit into worth 70% of the value of their original home. After costs and fees associated with moving house they would have 25% of the home value left over. We calculated the effect of this additional money if it were to be used to top up their pension income.

Figure 6 shows that the family would only be a fixed £1,300 a year (£108 a month) better off in today's money in their retirement. Although they are closer to being able to maintain their pre-retirement spending habits, having downsized they would still have to cut back spending by almost 10%. They may therefore not feel that the benefit is worth such a large upheaval.

Appendix D has some more details on how much more someone would have to contribute to their pension to avoid having to downsize in retirement.

Figure 6: Victor's and June's annual net retirement income and expenditure (in today's money)

Cutting down on spending in retirement

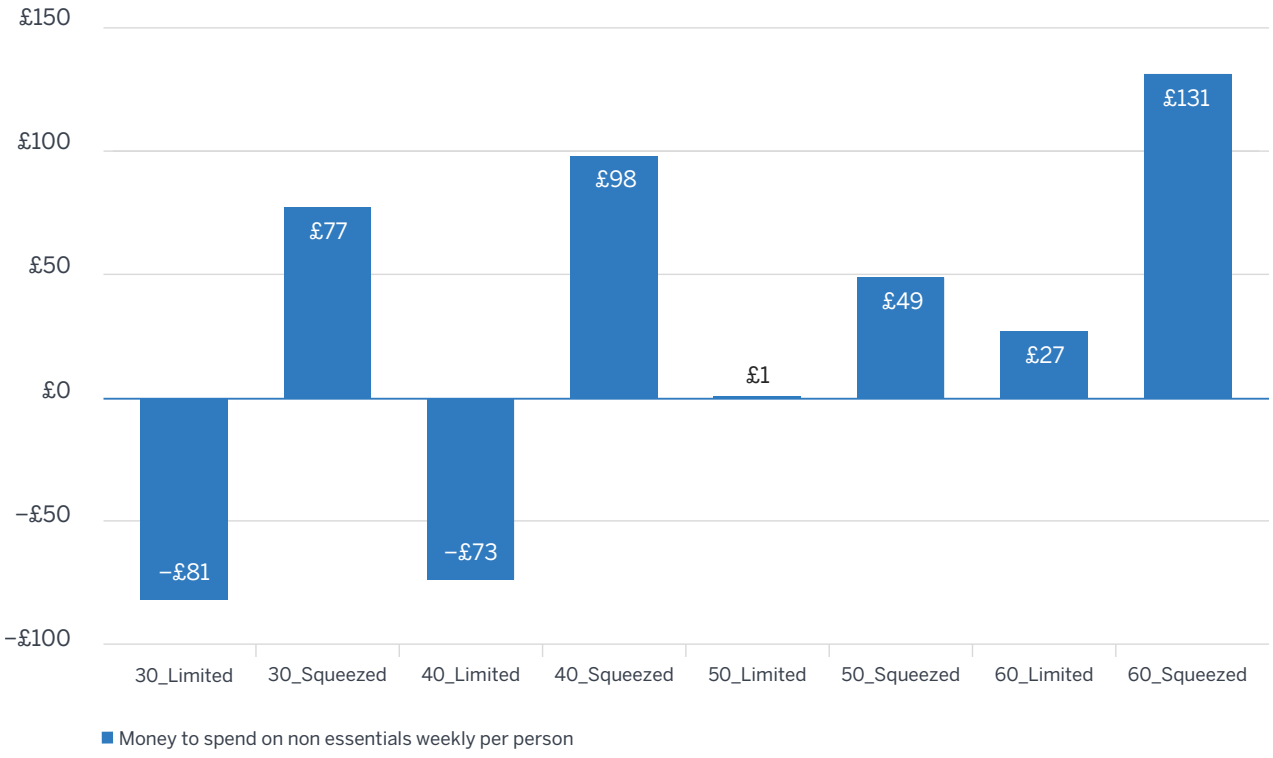
'Cutting your coat to suit your cloth' is perhaps the most obvious answer to not being able to maintain current spending habits in retirement.

However, looking in more detail at the results presented earlier, this isn't an easy or possible option for everyone. Cutting back is only possible to a certain extent. If retirement income barely covers housing and essentials then retirees will be unlikely to be able to cut back by enough. Figure 7 shows how much spare money the Limited Choices and Squeezed households have once housing and essentials have been taken care of.

It is clear from Figure 7 that, once the basics have been paid, for many there is very little income left for non-essentials. Two households can't afford the basics on their retirement income and so it isn't a case of having to cut back on non-essentials but rather to forgo them entirely. In total five households have less than £50 a week per person left once the basics are paid for. Their retirement income is not large enough to sustain a moderately comfortable income and so cutting back to the level that their income can sustain will be challenging.

In practice, if they defer addressing the problem until retirement, households are likely to combine the three options that are available to them as appropriate. However, a better solution would be to start taking steps prior to retiring. As one gets closer to retirement, the ability to change circumstance and options available narrows. Over the course of this paper we will consider the important decisions that could have changed the outcomes for our households.

Figure 7: Spare money to spend on non essentials weekly in retirement (in today's money, per retiree)



CHANGING THE FUTURE

We have seen that, based on current behaviour, retirement income will not be enough to maintain pre-retirement lifestyles for many of our households. It is also clear that if they arrive at retirement in this situation there are very few options available to them and these may be difficult to endure.

However, the good news is that for many of our households this future is not fixed. Making changes to their current behaviour could improve their at-retirement situations. We examine what our households could do to ensure a more comfortable retirement.

YOUR FUTURE, YOUR RESPONSIBILITY

Individuals need to more readily accept that they themselves have a central role to play in securing a comfortable retirement.

Not understanding

The retirement system in the UK is complicated and has undergone significant changes in recent years. This, along with the shift in the workplace pension space from defined benefit ('DB') to DC schemes, has increased the number of complex decisions that individuals should be considering and has removed many of the guarantees around retirement income levels that previous generations of retirees could rely on. This increasing complexity brings the potential for increasing misunderstanding among households which could ultimately cause households to make decisions, whether actively or passively, that are misinformed.

There is also a difference between expectations and reality when it comes to how much money people think that they will need to fund their retirement, how long they may need to make this money last, and the age at which they may retire. This means that many people do not have a realistic view on retirement and are therefore unlikely to plan adequately for it. Priorities and decisions made during someone's working life to protect their financial future may have to be lived with for a long time. It is crucial that individuals understand how important these decisions are, and that the spectrum of choices they have for remedial action narrows down with age.

Another exacerbating factor which may lead individuals to misunderstand the decisions that they are making or to shy away from making decisions actively in the first place is financial literacy. Awareness of the importance of personal pension provision may be difficult to grasp if individuals lack a grasp of financial basics.

It is therefore very important for people to get up-to-date advice tailored to them by people with a good understanding of the current playing field. This is where advisers are well-placed to help both with wider education and providing individuals with tailored advice.

"Money is something you got to make in case you don't die"

Max Asnas

The state safety net

Another barrier to saving for retirement is an assumption that people can rely on the state to take care of them in retirement, but the future state pension is uncertain.

When a larger proportion of the population is retired, a larger proportion of public spending will be needed to cover the cost of supporting them. However, there is a limit to the amount that can be spent before governments would have to significantly cut back other services or increase taxes. There are already concerns that over time the state pension may become less generous, for example via a switch to a means-tested system and / or reduced protection from inflation.

ENROLMENT IS NOT THE SAME AS ENGAGEMENT

Auto-enrolment has certainly boosted the number of people who are now making the first steps towards saving for their own retirement. By October 2016, 10 million workers were estimated to be newly saving or saving more as a result of automatic enrolment[13]. This could mean that more households will be less dependent on the state pension in their retirement if the state pension becomes a smaller proportion of their retirement income.

Whilst this is a notable achievement, this is not the end of the retirement problem. For a start, one in 10 of those eligible for the auto-enrolment have opted-out[14]. Households who are self-employed and those with multiple part-time jobs are being left behind and might have to pay at least twice as much into a pension scheme to match the benefits of someone who is auto-enrolled as they won't have the benefit of employer contributions.

In addition, there is a risk that opt-out rates amongst those that are enrolled may increase in 2019 once the employee auto-enrolment rates are fully-phased.

Opting out of auto-enrolment may be a tempting quick-fix for families to boost their spending power today. But, our analysis shows that the future cost of doing this can be very high.

13 Department of Work and Pensions (2016), Workplace pensions: Update of analysis on Automatic Enrolment

14 Institute of Actuaries (2015), 'Saving for retirement' policy briefing

Gavin and Kirsty (30 squeezed)

Stretch limited disposable income sometimes use credit cards/loans

Current joint salary: £35,000

Current joint pension fund: £1,400
Current joint non-pension savings £100

Personal life: Homeowners with a large mortgage and two young children

Gavin and Kirsty – The importance of remaining enrolled

Gavin and Kirsty are 30 year-olds and are auto-enrolled in their workplace pension scheme. They have young children and childcare costs form a large part of their expenditure. Whilst pension contributions at the auto-enrolment default rates were manageable for them at first, by the time that the contributions reached 5%, they would only have 1% of their income left to spend on non-essentials.

At this point they decide to opt-out so that they can spend more on treats for the family. However, they only see an extra 3% of their salary as some of the 'gain' from no longer making contributions to the workplace pension scheme would be offset by an increase in tax and National Insurance contributions (NI).

When Gavin and Kirsty hit 55, they realise that they have not provided much for their retirement and re-enrol in their pension schemes. This is more affordable for them now that their mortgage is paid off. However, Figure 8 shows that, by having opted out for this period of their working life, the total net income they receive in retirement could be 24% lower than if they had remained enrolled in their workplace pension scheme. This means that they would have to cut their annual non-essential spend by almost £13,000 in retirement in order to make ends meet which represents more than half of their non-essential spending.

Gavin and Kirsty had felt that their pension contributions, once they hit 5%, were a drag on their finances. However, the sobering picture of their retirement if they do decide to opt out may make them consider whether they can really afford not to contribute more.

Figure 8: Gavin and Kirsty's annual net retirement income and expenditure (in today's money)

William: Self-employed workers left behind

Auto-enrolment has helped many begin to build up a nest egg for retirement but it doesn't cover the self-employed. This is pertinent for the 4.6 million self-employed individuals in the UK[15] who won't have benefitted from auto-enrolment. It is a particular problem for those in the 'gig economy' where wages are generally low and so it is difficult for workers to accumulate non-pension savings, let alone supplement any pension contributions with 'missing' employer contributions. Our analysis shows that gig economy workers are in danger of being wholly dependent on the state pension in their retirement.

William is self-employed in the gig economy and, whilst the flexibility of the work suits him, it is not highly paid and does not provide any workplace benefits. He doesn't have the spare cash to save for emergencies let alone think about making personal pension provisions.

After 10 years of working in the gig economy, William moves to an employed position with a similar salary to his previous work. The benefit of this is that he is now covered by auto-enrolment and so he begins to accumulate a pension pot at the age of 40.

Figure 9 shows that William's move into an employed role 10 years later will boost his retirement income by a quarter compared with if he had remained in the gig economy. If William had remained working in the gig economy throughout his life he would be wholly dependent on the state pension.

William (30 limited)

Not content with standard of living but saving is a struggle

Current salary: £15,000

No pension fund, No savings

Personal life: Single who rents for his whole life

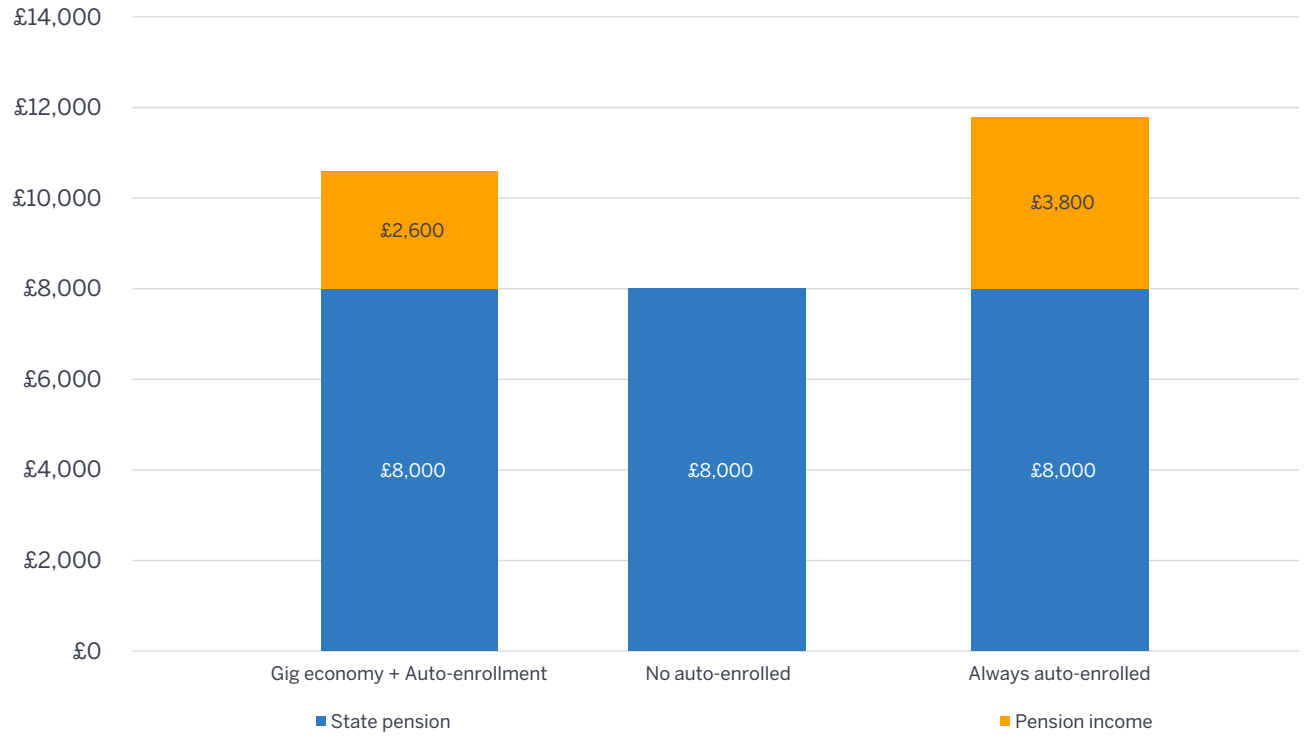
Employment: Self-employed in 'gig economy'. After 10 years of working in the gig economy, William moves to an employed position.

Figure 9 also shows that if he had always been employed in a job that offered him access to an auto-enrolment scheme then his position at retirement would have been even better. If William had been auto-enrolled throughout his 30s, his income in retirement would have been 12% higher than if he had started his pension saving at age 40.

It is crucial that the self-employed realise that they could be entirely dependent on the state pension unless they make their own provision.

15 Office of National Statistics, Trends in self-employment in the UK: 2001 to 2015

Figure 9: William's annual net retirement income in today's money



Gavin and Kirsty (30 squeezed)

Stretch limited disposable income sometimes use credit cards/loans

Current joint salary: £35,000

Current joint pension fund: £1,400
Current joint non-pension savings £100

Personal life: Homeowners with a large mortgage and two young children

Contributing more and contributing earlier

Our results show the significant impact that being enrolled in part of a scheme can make on retirement income. However, contributing the minimum amount will not necessarily ensure the type of retirement that individuals expect or want.

This is why it is important to engage with the process rather than make passive decisions, such as contributing at the default rate. Individuals should consider and revise their contributions on a regular basis to ensure they are appropriate.

Gavin and Kirsty – The importance of engaging

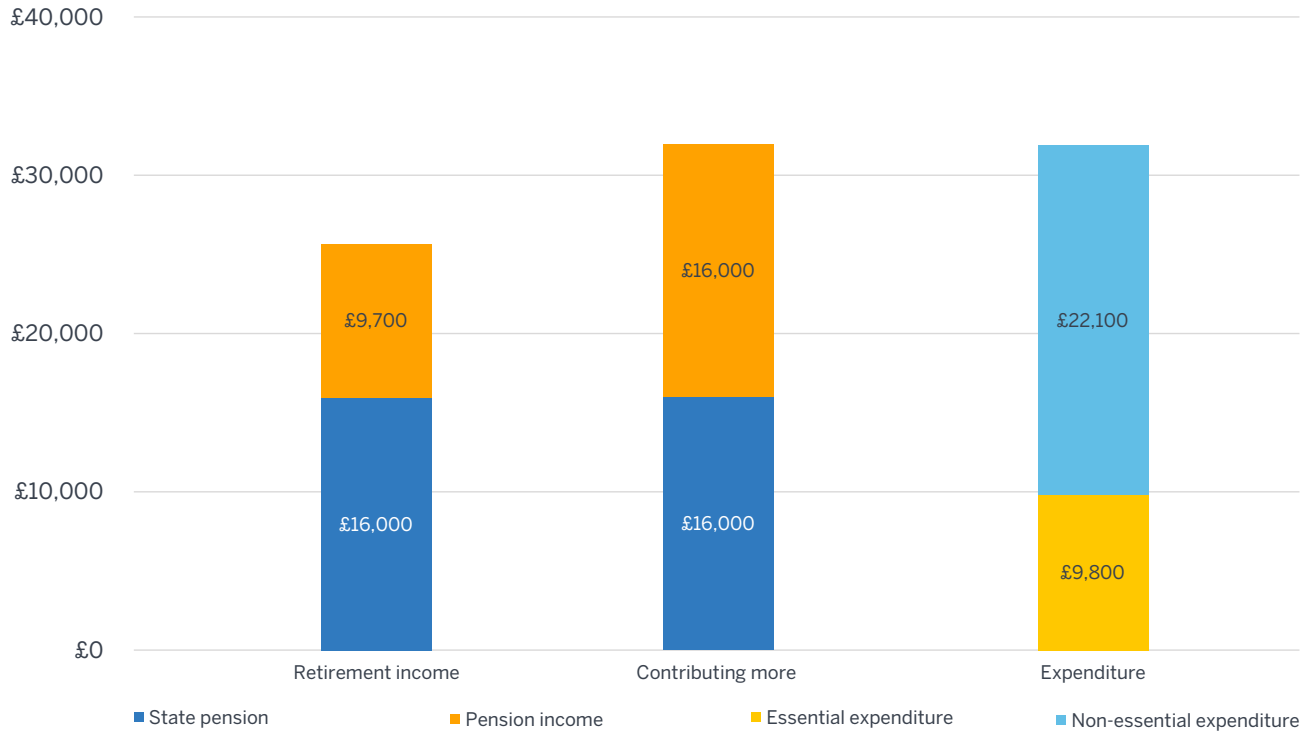
Let's look again at Gavin and Kirsty. Although auto-enrolment was key to them building up a retirement pot, it wasn't necessarily enough to guarantee a comfortable retirement. Our results show that if Gavin and Kirsty contribute the minimum pension contribution (5% for an auto-enrolment scheme) they would have to work full-time for five years longer before retiring (at the age of 75) to ensure that they wouldn't have to change their spending habits in retirement.

It is perhaps unlikely that they would want to work for too much longer (if at all) and so they may settle for just having to cut back rather than working for longer. However, our analysis (see Figure 10) shows that if they could have managed to increase their pension contributions by 6.5% (from 5% to 11.5%) then they would have eliminated the need to work for longer than expected. This roughly translates into an extra 1.3% pension contribution for one less year they would have to work.

Contributing early enough

Pensions are a long-term investment, and so increasing contributions earlier will make more of a difference than increasing contributions in later life. Not only do additional contributions made earlier on have a longer period over which to grow but pensions investments often follow a higher-return, higher-risk strategy earlier on in a person's working lifetime so are likely to benefit from higher investment returns as well.

Figure 10 : Gavin and Kirsty's annual net retirement income and expenditure (in today's money)



Tomasz (30 manageable)

Care-free and enjoying his pay cheques.

Current salary: £33,000

Current pension fund: £7,000

Current non-pension savings: £4,000

Personal life: Rents in London until he's 40 when he buys a property in London with help from parents

Meets and marries Agata at 38 and has two children

Tomasz - The importance of timing

Tomasz and Agata earn good wages but life is expensive nonetheless. They contribute 3% to their workplace pension scheme and their employer contributes 6%.

They know that contributing more to their pension would be a good idea but there never seems to be time where they have the spare money. At 65, they finally pay off their mortgage and decide that now money is less tight they can 'afford' to increase their pension contributions.

If they had carried on contributing at 3% they would have to cut their spending by almost a quarter in retirement or work for four extra years.

They want to ensure they don't have to cut back in retirement. To do this, they would have to contribute 75% of their salary to their pension for the remaining five years of their working life – which is unrealistic. However, Figure 11 shows, they could have ensured that they wouldn't have to cut back in retirement if at the age of 30 they had increased their contribution from 3% to 7.75%.

This shows that the later a decision is made, the less impact it will have. We have explored some further scenarios, investigating the impact of contributions and timing for Tomasz and Agata in Appendix A. These scenarios show how Tomasz and Agata could increase their non-state pension income by up to 40% by making small changes to their pension contributions.

Figure 11: Tomaz's and Agata's annual net retirement income and expenditure (in today's money)

Making the most of workplace schemes

Whilst 64% of FTSE 350 schemes have some element of matching employee contributions[16], not all employees maximise the benefit of this and choose not to contribute to a level which would maximise the contributions from their employer. Of course, some households may simply not be able to afford to make the extra contributions for their employer to then match. For those who can afford additional contributions, failing to make the most of workplace matching schemes could be viewed as 'throwing away free money'.

16 Willis Towers Watson (2017), FTSE 350 study

Jason and Paula (40 manageable)

Good progress paying off mortgage but little savings and no interest in personal finance

Current joint salary: £54,000

Current joint pension fund: £100,000

Current joint non-pension savings: £10,000

Personal life: Married homeowners without children

Jason and Paula – The importance of engaging

Meet Jason and Paula. They are a married couple aged 40 who enjoy their child-free lifestyle. They spend just over half of their pay on holidays, trips to the theatre and the latest technology.

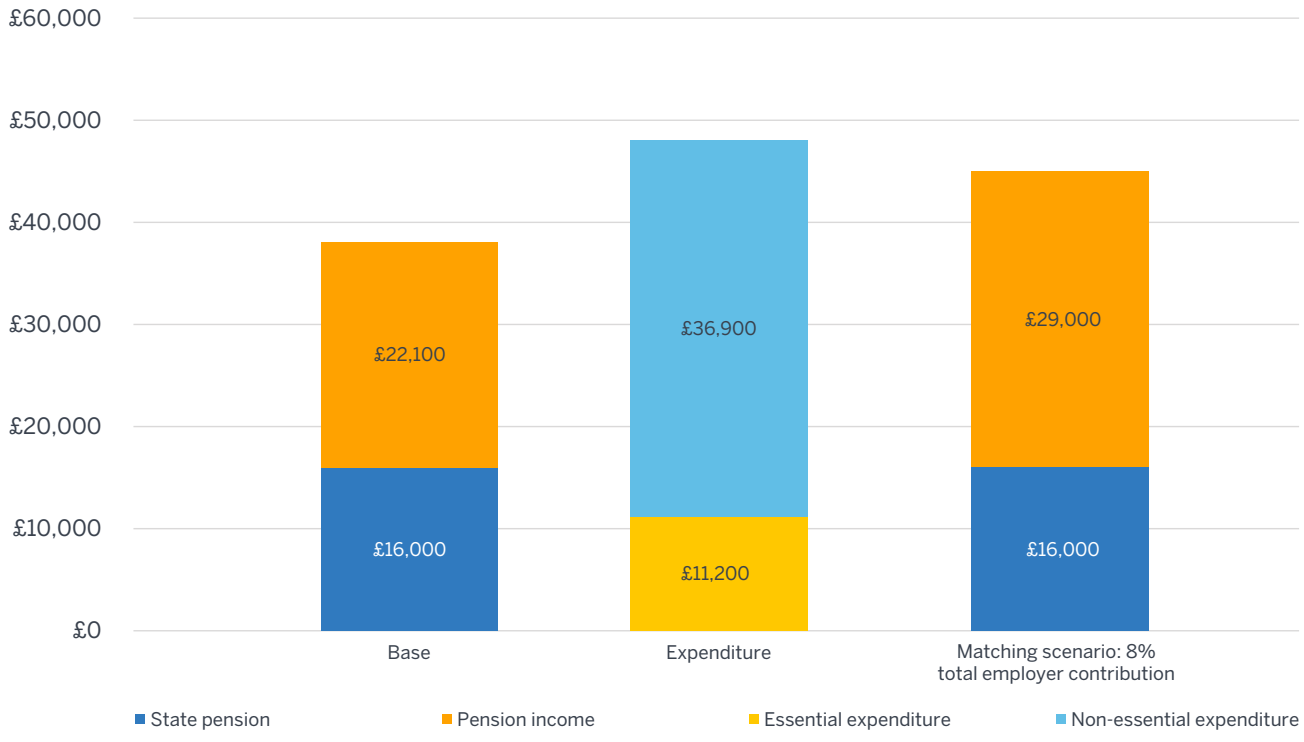
Jason and Paula contribute to their pension scheme and feel reassured that they are making some provision for their retirement. The minimum rate of contribution is 3% for an employee at their workplaces and 5% for the employer. In addition their employer will match further contributions up to 3%.

The couple don't really want to give up any more of their income than they have to and so contribute the minimum rate of 3%. But what would the difference be if they took full advantage of the employer matching?

The additional 3% salary contribution to their pension scheme is a £90-a-month deduction to their net salary. To afford this increased pension contribution they would have to reduce their non-essential expenditure slightly but some of the cost would be offset against the tax-relief given to pension contributions.

Figure 12 shows that a decision from Jason and Paula to increase their pension contribution by 3% would lead to almost a 20% increase in retirement income: The couple would have an extra fixed income of £6,900 a year in retirement. This means that Jason and Paula would be much closer to being able to sustain their pre-retirement level of spending.

Figure 12: Jason and Paula's annual net retirement income in today's money



Most people will require encouragement to review their pension contributions. Making changes to pension contributions could have a significant impact but many will need help exploring the difference that additional contributions could make to retirement income and how much of a lifestyle change would be needed to accommodate this.

Reviewing at key milestones

Reviewing pension contributions at key milestones is important. Both personal and professional changes can impact the ability and necessity for individuals to save for retirement. For example, moving jobs will most likely result in a change of pension scheme including changes to contribution levels and other options. This could be a good opportunity for individuals to ensure that their contributions are on track and that their future contributions will maximise the schemes benefits.

MAKING YOUR MONEY WORK HARDER FOR YOU

The UK savings ratio is now the lowest since records began[17]. Given the low levels of savings, it makes sense that any money that is saved should be done so in the most effective way possible. The most effective saving vehicle will depend on several different factors:

- Purpose of the saving
- Level of contributions
- Investment return
- Charges
- Tax treatment

Most workplace pension schemes have default investment options that will go some way to ensuring that pension contributions are invested appropriately. For example, a varying mix of equity and bonds aiming to deliver reasonable returns over the long term but de-risk as the individual approaches retirement.

However, when it comes to non-pension savings, for many the automatic default investment strategy appears to be cash; more than 10 million cash ISAs have received contributions in each of the last 10 years[18]. Whilst it is cheering that people are using ISA products to save and benefiting from the tax advantages provided, it also may suggest that many are using cash for long-term non-pension savings.

Whilst some households may perceive non-cash savings as too risky, the reality is that the value of their savings could be eroded in real terms if held in cash over the long term. In the UK, recent experience tells us this can be a realty - over last 10 years cash returns haven't even kept pace with inflation[19].

Similarly, many may be unaware of the long-term benefit on their savings from investing in higher return assets, such as a stocks and shares ISA, rather than cash. For a 40-year-old investing in a mix of bonds and equities over a 30-year period until they retire, non-pension savings could be almost five times higher compared with investing in cash based on historical returns.

Of course, it should never be as simple as picking a product or investment solely based on which is expected to provide the highest return. During their working lifetime, individual's also need to consider their appetite for increased risk and their capacity to cope with losses over the short-term.

However, for those who plan on arriving at retirement with non-pension savings in addition to the retirement pot provided by their workplace pension scheme, a greater consideration of savings vehicles that offer an attractive return over the long term could yield real benefits later in life.

17 Financial Times (March 2017), 'UK household saving rates hit record lows in 2016'

18 Royal London Policy Paper 10 - The Curse of Long Term Cash

19 Ten year averages of 1.64% for cash and 2.90% for inflation (RPI); figures from Royal London policy paper: 'The Curse of Long Term Cash'

THE FUTURE IS IMPOSSIBLE TO PREDICT BUT YOU CAN PROTECT IT

Many people worry about their financial future but do little to protect it. Three in four families have no financial plan for dealing with lost income due to ill health and 68% of families have no plan for dealing with the financial consequences of death[20].

While many assume the worst will not happen to them, figures from the Association of British Insurers show that 1 million workers a year find themselves unable to work due to serious illness or injury. More than one in four families have experienced a loss of income due to death of a long-term partner, serious injury or illness[21].

As well as the immediate impact that not having insurance has on households trying to cover their day-to-day bills, it is also likely to have longer-term consequences in terms of a household's retirement and non-pension savings.

20 Aviva (2017), Protecting Our Families.

21 ABI (August 2015), Protection insurers help more families than ever before with 350 payouts every day. Accessed May 25, 2017, at https://www.abi.org.uk/news/news-articles/2015/08/protection-insurers-help-more-families-than-ever-before-with-350-payouts-every-day/

Elaine (60 squeezed)

Lives alone on modest salary. Sadly her husband died recently

Current salary: £22,000

Current pension fund: £100,000

Current non-pension savings: £110,000

Personal life: Recently widowed homeowner who pays off outstanding mortgage with life insurance

Elaine: Life Insurance

Elaine is a 60-year-old and lives alone now that her husband, Leslie, has passed away. Elaine and Leslie earned modest salaries throughout their lives. Elaine always contributed a little to her pension fund when she could but Leslie didn't have one. They didn't have a huge amount of other savings, but Leslie did have life insurance which meant that when he died, Elaine had some money to fall back on.

As a result of Leslie's death, Elaine received £100,000. This simple decision to take out the insurance policy has left Elaine with significantly more savings. She uses some to pay off her outstanding mortgage (£18,000) and the rest she can use to supplement her income in retirement.

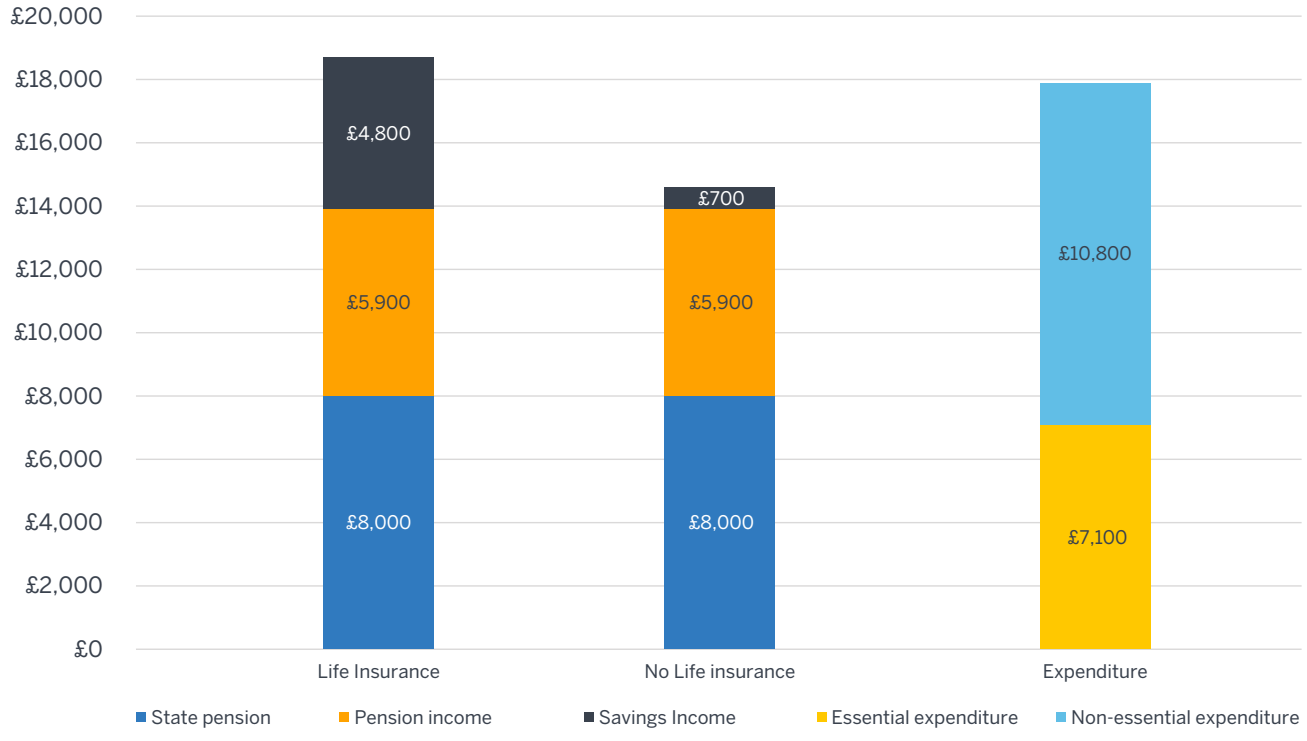
Figure 13 shows that Elaine's retirement income would be more than 20% lower if she had not had the insurance pay out following Leslie's death. She would have had to cut back her non-essential spending by 30% in retirement, whereas with the money from the life insurance she wouldn't have to cut back at all.

For some, there may be a trade-off between contributing more to their pension and buying life insurance. We consider the impact if a 30 year old, non-smoking couple earning £60,000 a year chose to forgo purchasing a term assurance and instead contributed the money to their pension. For a 30 year term product, with a £120,000 sum assured, the premium would be £145p.a.[22]. This would result in an additional 0.36% pension contribution for their first year.

If they contributed the cost of the product for 30 years this would increase their pension pot by £10,800 when they retire at age 70. Whether this trade-off is worthwhile will depend on the individual circumstances and appetite to risk. Deciding how best to use limited finances is a difficult decision and so guidance and advice may be required to fully understand the benefits and risks involved. More details of this analysis are included in Appendix D.

22 Figure supplied by Royal London

Figure 13: Elaine's annual net retirement income and expenditure (in today's money)



Gordon and Yvonne (50 squeezed)

Current joint salary: £14,000 (previously £31,000)

Current joint pension fund: £20,000

Current joint non-pension savings: £300

Personal life: Married homeowners with a small mortgage outstanding

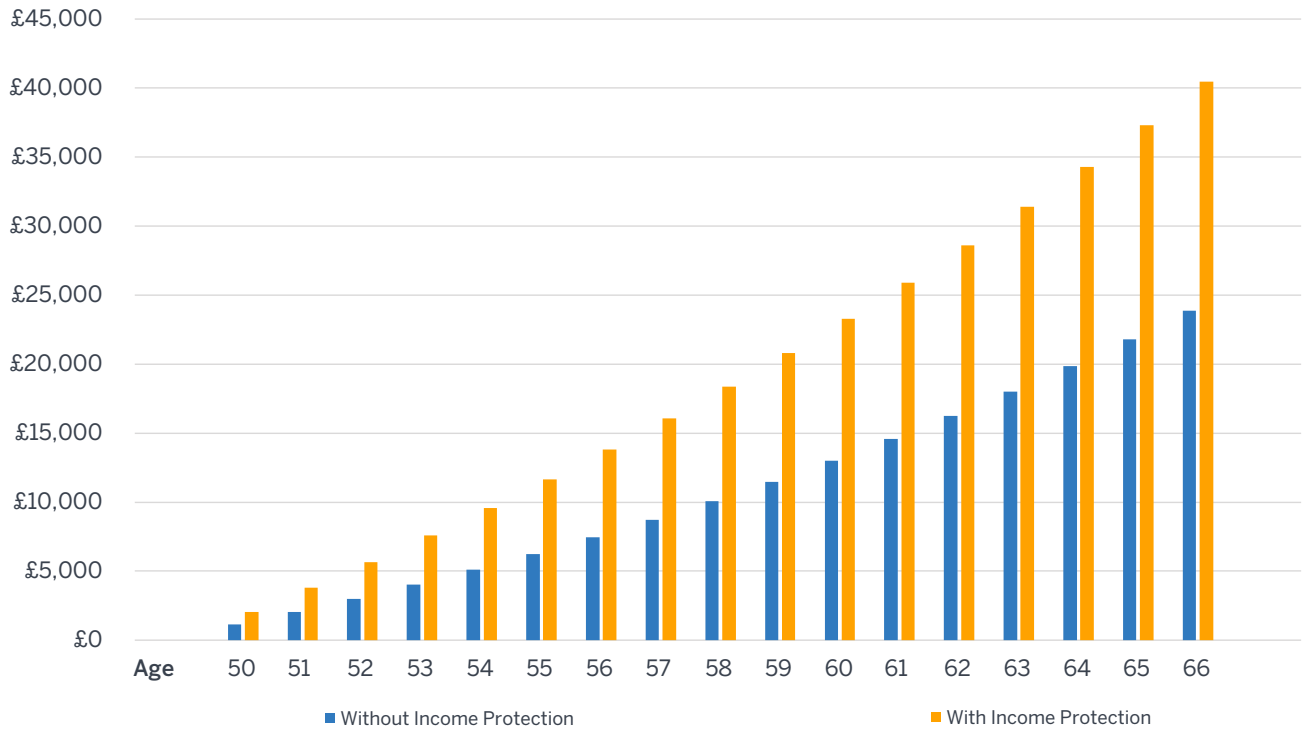
Gordon and Yvonne: Income Protection Insurance

Gordon and Yvonne are 50 and they have always led economical lives. When Gordon had to give up his job as a gardener due to ill health earlier this year, their household salary halved overnight. As well as making money much tighter for day-to-day spending, this affects their ability to save for the future.

We explored what would have happened if Gordon had purchased an income protection product that provided 60% of his income in the event that he was unable to work.

Figure 14 shows that with income protection, Gordon and Yvonne can afford to save more into their non-pension savings. This is important because although Yvonne would still be contributing to her pension pot, Gordon is unlikely to have continued to contribute into his workplace pension and his employer would have stopped contributing too. Personal non-pension savings are therefore all the more important for securing their future lifestyles.

Figure 14: Gordon and Yvonne's savings



For some, there may be a trade-off between contributing more to their pension and buying income protection. We consider the impact if a 40 year old earning £30,000 a year chose to forgo income protection and instead contributed the money to their pension. For a 25 year term product, offering a £15,000 p.a level benefit, the premium would be £340 p.a.[23]. This would result in an additional 1.67% pension contribution for their first year.

If they contributed the cost of the product for 25 years, this would increase their pension pot by £15,100 when they retire at age 69. Whether this trade-off is worthwhile will depend on the individual circumstances and appetite for risk. Understanding the trade-off between purchasing an income protection product and saving more is not straightforward and so guidance and advice may be required to fully understand the benefits and risks involved. More details of this analysis are included in Appendix D.

Many people hope that the worst simply won't happen, but an 'ostrich approach' to planning for the future is not appropriate. In the right circumstances, insurance protection is an important tool in managing and protecting personal finances. Whilst insurance products are more typically thought of in the context of the financial protection they provide in the here and now if the worst happens, households may benefit from also factoring in the potential impact on their or their loved one's retirement position. As in our examples, this could be the benefit from a term assurance contract that can be used to supplement retirement income, or it could be the benefit from an income protection product which might allow an individual to continue making at least some provision for retirement.

23 Figure supplied by Royal London

WHAT ARE THE CHALLENGES THAT FUTURE GENERATIONS FACE IN TRYING TO IMPROVE THEIR RETIREMENT SITUATION?

There are significant challenges to being able to make and fulfil the decisions we have covered. The next sections cover some of the personal circumstances that will affect the retirement story and the decisions households are prepared to make.

AS SAFE AS HOUSES?

In 2012, three-quarters of households over 55 owned their own home (most owning them outright)[24]. Outright homeownership in retirement has significant benefits because it reduces the amount of essential spending that retirement income needs to cover. However, future generations of retirees are less likely to be in this enviable position.

Figures from the Council for Mortgage Lenders show that half of those born in the 1960s were homeowners by the age of 30 – but barely a third of those born in the 1980s will achieve the same[25]. This is expected to drop even further for those born in the 1990s, with only a quarter managing to buy before they are 30.

Rising house prices are the main obstacle for first-time buyers. The average property price is currently 7.6 times the average income[26] in the UK (although there is significant regional variation) and this has led to the average age of first-time buyers increasing from 30 to 33[27]. Becoming a homeowner later in life increases the likelihood of entering retirement with an outstanding mortgage. This is also compounded by the growing trend of purchasing mortgages with longer repayment terms. The median length of a mortgage has recently lengthened from 25 years to 30 years[28].

Of those that do manage to buy, there is a marked increase in having to rely on getting financial help from family members. The Social Mobility Commission found that the percentage of first-time buyers turning to family for financial help had increased from 20% in 2010 to a historical high of 34%[29].

Those that never own their own home will have to continue renting in retirement. This could put them in a vulnerable position if the cost of renting increases significantly. Also, not having any housing wealth to draw on in retirement means that equity release or downsizing will not be an option for these households.

24 Pannell, J., Aldridge, H. & Kenway P. (2012), Older people's housing: choice, quality of life, and under-occupation

26 Council of Mortgage Lenders (2015), Recent trends in numbers of first-time buyers: a review of recent evidence (report), Office of National Statistics (2016)

27 English Housing Society (2016)

28 Council of Mortgage Lenders (2015), Recent trends in numbers of first-time buyers: a review of recent evidence (report)

29 Social Mobility Commission (2017), First-time buyers relying on parents to get onto housing ladder

Tomasz (30 manageable)
Care-free and enjoying his pay cheques.

Current salary: £33,000

Current pension fund: £7,000,

Current non-pension savings: £4,000

Personal life: Rents in London until he's 40 when he buys a property in London with help from parents. Meets and marries Agata at 38 and has two children

Tomasz: The housing ladder

Tomasz struggles throughout his 30s to save enough money to buy somewhere to live. At 39, he and Agata have their first child and then providing sufficiently for their children becomes their first priority. Seeing the family's financial struggles, Tomasz's parents give him and Agata a gift of £75,000.

Tomasz and Agata decide to use this money as a deposit for their first house and become part of the lucky third of first-time buyers who get onto the property ladder with help from the 'Bank of Mum and Dad'. However, money is tight: Once the basics and childcare are paid for they only have 12p in every pound they earn left over. They could have easily decided to keep this money to alleviate some of their financial pressures on their day to day spending.

Figure 15 below shows how their retirement story would differ if they had decided not to use the money for a house. Whilst their retirement income is unaffected by the decision, their retirement expenditure is markedly different. Having to pay rent in retirement means that their basic costs have increased by 82%. The amount of money they have left over once the basics are taken care of has fallen from a fixed level of £23,600 a year to £9,000 fixed per year.

Whilst Tomasz and Agata will have sufficient money to cover their basic needs, having no housing costs in retirement will have a significant impact on how much they can enjoy their retirement without having to think about costs. They also will not have to worry about the risk of rent increases, and will have more of a buffer if essential costs increase.

Figure 15: Tomasz' and Agata's annual net retirement income and expenditure (in today's money)

PERSONAL FINANCES REQUIRE PERSONAL PLANNING

Other than homeownership, there are many other personal circumstances which will affect households' abilities to plan for retirement. The personal nature of people's financial situation means that financial planning needs to be tailored to their own situations. We explored some situations where personal circumstances would affect financial priorities.

Personal debt

Debt is a serious problem for many people. Almost one in five people aged between 35 and 44 say that they borrow simply to make ends meet[30]. Servicing debt is a serious barrier to saving.

Exacerbating the problem, credit card interest rates have hit record highs at 22.8% a year[31], making being in debt more and more expensive. The average credit card debt is £2,493; using average interest rates, it would take 25 years and 11 months to repay this using minimum payments[32].

Under spiralling debt, planning for retirement is likely to be the last thing on anyone's mind and so a more careful balance needs to be found between prioritising paying down debt in the short term and preparing as best as possible for retirement.

Student debt

Student debt levels are at unprecedented levels. A recent string of tuition fee increases as well as replacing student grants with maintenance loans has meant that the average student now graduates with £44,000 of student debt[33].

In addition the interest rate on student debt has increased; It varies from between RPI to RPI+3% depending on salary. This means that, despite the low interest rate environment, interest rates on student debt can be up to 6.1% a year currently.

The Financial Times has estimated that as a result of the increased levels of debt and the high interest rates, two-thirds of students will not be able to repay their loans in full before the loan value is wiped off after 30 years[34].

Repaying student debt is often a passive decision – the minimum repayment automatically comes out of monthly pay cheques and individuals may believe this is enough. Paying off more than the minimum amount requires an active decision, and whether to prioritise paying off student debt as opposed to contributing to a pension scheme, non-pension savings or a mortgage will depend on the graduate's situation and aspirations.

For example, if they expect to earn enough to pay off the debt then it might be better to pay down earlier in light of the increased interest rates ahead of pension or personal saving. If they don't expect to ever fully repay the debt then making extra payments may not make sense as this would only serve to reduce the amount that is written off.

It is also something that should be reviewed frequently; life may unfold differently than expected and so financial priorities and targets may change with time. Appendix B includes a scenario demonstrating the effect of student debt on savings

Family matters

Debt is just one of the reasons that households might be unable to make saving for the future a priority. There are multiple times in households' lifetimes when other priorities come ahead of saving. Sometimes it is other people's financial circumstances that cause personal saving to be put on hold. Providing financial support to loved ones is another example of how personal circumstance can affect financial plans.

30 The Guardian (March 2015). Average UK household to be £10,000 in debt by end of 2016. Accessed May 25, 2017, at https://www.theguardian.com/money/2015/mar/23/average-uk-household-owe-10000-debt-by-end-2016.

31 https://moneyfacts.co.uk/news/credit-cards/credit-card-interest-hits-new-record-high/

32 The Money Charity (April 2017). The Money Statistics. Accessed May 25, 2017, at http://themoneycharity.org.uk/media/April-2017-Money-Statistics.pdf.

33 Financial Times (April 2016).Two-thirds of UK students 'will never pay off debt.'

34 Financial Times (April 2016), Two-thirds of UK students 'will never pay off debt'

Anthony (50 manageable)
Working hard to build financial stability after going through a divorce

Current salary: £34,000

Current pension fund: £40,000

Current non-pension savings: £41,000

Personal life: Recently divorced with significant outstanding mortgage

Anthony – Family costs

A few years ago Anthony was financially on track and he had almost paid off his mortgage and accumulated a healthy amount of savings and pension pot. But a costly divorce has meant that, at 50, he has far less financial security than he ever anticipated. He has £70,000 outstanding and 20 years left on the mortgage on the house he that bought after the divorce.

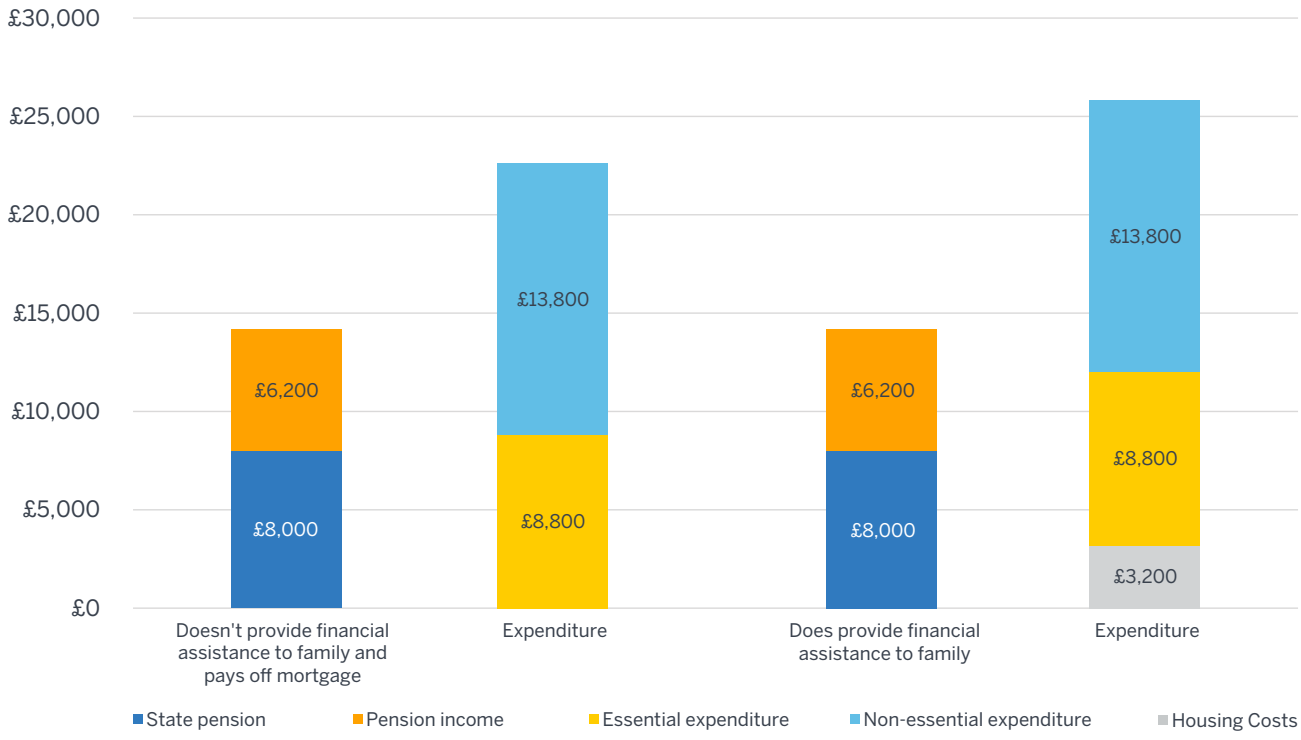
Whilst he has a well-paid job, he realises there is a lot of work to do to ensure that his financial future is secure. However, Anthony is also keen to provide for his family where he can. His only daughter, Robyn, is currently 25 and he wants to be able to help her out with buying a flat in a few years' time. Anthony is also aware that his parents are becoming increasingly frail and he is worried how they will afford good-quality care.

We explored how Anthony's retirement position would change if he tries to provide additional financial support to his daughter and parents. He wouldn't have been able to afford to provide for them completely but he does what he can and so he uses up all of his non-pension savings in the process (which would have amounted to £52,600 by the time he retires).

Figure 16 below shows that Anthony's net fixed retirement income is £14,200 a year with over half of this income coming from the state pension. If he had chosen to provide financial support to his family, he would still have four years left on his mortgage and so he can only just cover his housing and essential costs in the first few years of his retirement. He would have to cut back significantly on non-essentials to stay within his budget. If he hadn't put his non-pension savings towards his child's deposit or parents' care fees and instead had chosen to pay-off his mortgage, then his retirement income (though still low) would cover a much higher proportion of his spending. In addition, he would have some savings left over to supplement the retirement income.

The choice might not always be as stark as using up all of a person's non-pension savings to provide support or choosing not to support at all. However, Anthony's scenario highlights the importance of taking time to consider how much financial support is sustainable. If individuals do not consider their own financial situations then they are just in danger of shifting the problem to their children, the state, or to themselves to deal with further down the line. Making informed and considered decisions should help to ensure the best outcome for everyone.

Figure 16: Anthony's annual net retirement income and expenditure (in today's money)



IT'S NOT ALL ABOUT INCOME

Long-term care

If persuading people to save adequately for retirement is difficult, persuading people to save for retirement homes is perhaps even more problematic. Unlike retirement, which may have positive connotations for some, going into a care home is often seen as a last resort and so people don't want to think about it or simply assume it just won't happen to them.

Some barriers to households not saving enough for care are as follows:

- People don't think they have to pay for care – Government figures show that four in 10 people are unaware that they might need to pay for care and support in later life[35].
- People don't plan how they will pay for care – six in 10 people have hardly thought about how to pay for social care and seven in 10 people say have not started to prepare[36].
- People don't understand or underestimate the cost of care – Surveys show that half the public don't know the cost and those that think they do underestimate the figure. In a 2013 study, the mean estimate was £140 a week which was far below the average weekly figure of £531[37].
- People underestimate the chances of them needing care – Half of people believe that the probability of needing any type of social care is s under 40%. Whereas in reality, a 65–year-old man has a 68% chance of needing some type of care at some point in their life and a 65-year-old woman has an 85% chance[38].
- People think they'll beat the odds – many people suffer from an optimism bias in which they perceive that negative events are more likely to occur for others than themselves. So even when confronted with the odds, many expect to beat them[39].

35 Department of Health, Caring For Our Future

36 Ipsos MORI (December 2012 wave), Public Perceptions of the NHS and Social Care: An ongoing tracking study conducted for the Department of Health

37 Lloyd,J (September 2013), Right Care, Right Price: A discussion paper exploring the way in which the price of care is determined and its implications for social care policy, Strategic Society Centre

38 Grant,K (September 2013), 'Public "unaware" of care-home costs – and of probability they will need care themselves', Independent,,

39 Demos (February 2014), Unlocking the potential

The government has previously pledged to cap care costs at £72,000 as of 2020. Whether the cap will be implemented in its current form is under speculation. However, were it to be implemented in its current form it only covers care costs and so excludes the living costs associated with residential care. The Institute and Faculty of Actuaries has estimated that someone would still pay £140,000 of their own money before the cap was applied[40]. Additionally, the cost of care is likely to rise, given that people are living longer but spending more time ill.

Given the enormity of the cost, it is unlikely that retirement income alone would be able to cover care home provision and so other savings may have to be used to fund care. We looked at whether our households would, at the point of retirement, have sufficient savings to fund £140,000 per person of long-term care if they needed to.

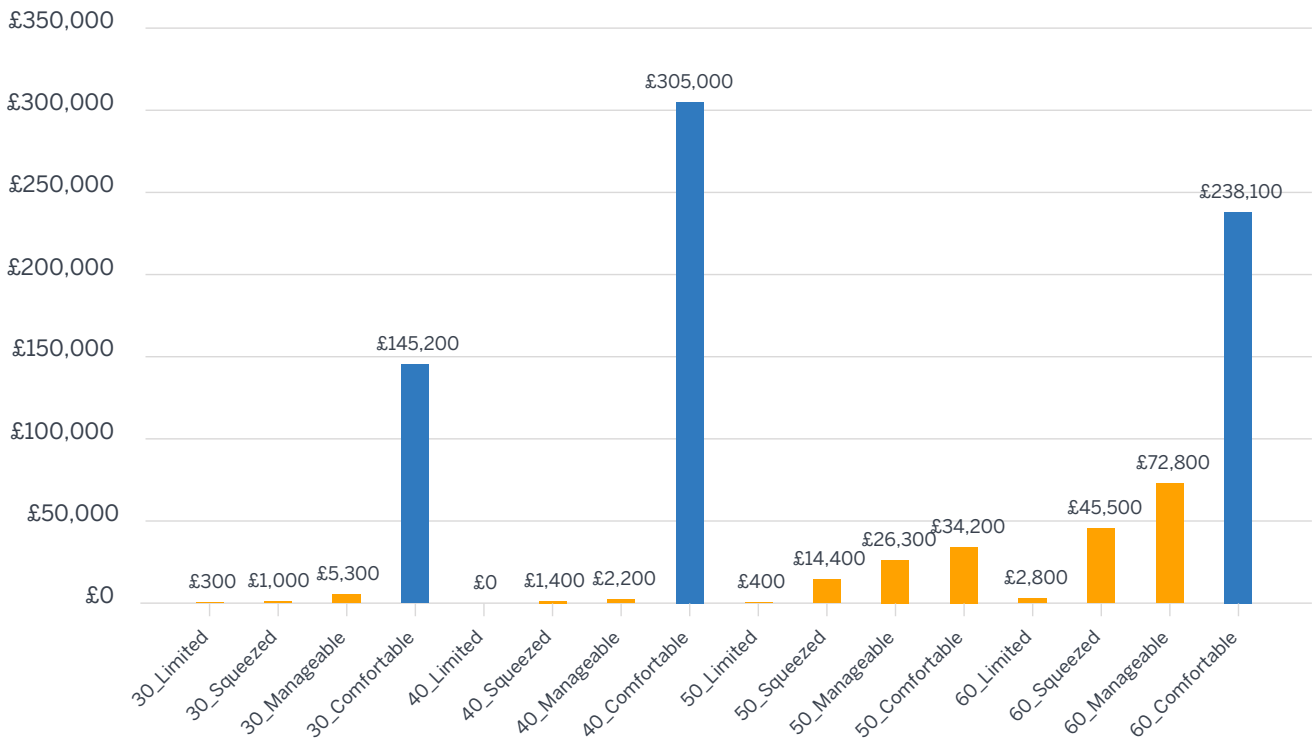
Figure 17 shows that only three households have sufficient savings at the point of retirement to cover their own long-term care.

Whilst these results present a bleak future, for some there may be scope for their savings to grow over retirement if invested. However, they may also dwindle as people use their money to supplement their retirement income.

The advantage of Freedom and Choice reforms means that pension funds do not have to be annuitised which allows the potential for retirees to access larger lump sums from products such as drawdown. However, our households may not have sufficient funds remaining at the point that they need to provide for their long term care needs.

40 Institute and Faculty of Actuaries (August 2015). IFoA comments on the Government's explanation for delaying the cap on long term care costs. Accessed May 25, 2017, at https://www.actuaries.org.uk/news-and-insights/media-centre/media-releases-and-statements/ifoa-comments-governments-explanation

Figure 17: Who has enough savings for long-term care? (in today's money, per retiree)



Many may not pro-actively save for long-term care but hope that selling their homes will fund any care that they require. If there are still family, a spouse or children living at home, then this may not be a feasible option. Additionally, going forward using housing to fund long-term care may be an option for fewer and fewer people given the struggle that many households now face regarding getting on the property ladder.

Currently, the market for long-term care insurance or savings products is not well developed. For the reasons stated above, insurers are struggling to find a market a long-term care saving product.

The burden of responsibility, and level of public funding, for funding long-term care is a contentious and hotly debated topic. The level of care costs which people will have to fund themselves may change as a result of developments to government policies.

Educating the public on the realities of long-term care is an important first step to ensuring that people are making proactive and informed decisions for long-term care provision.

Appendix D has some more details on how much more someone would have to contribute to their pension to cover their potential long-term care costs.

Leaving money to the next generation

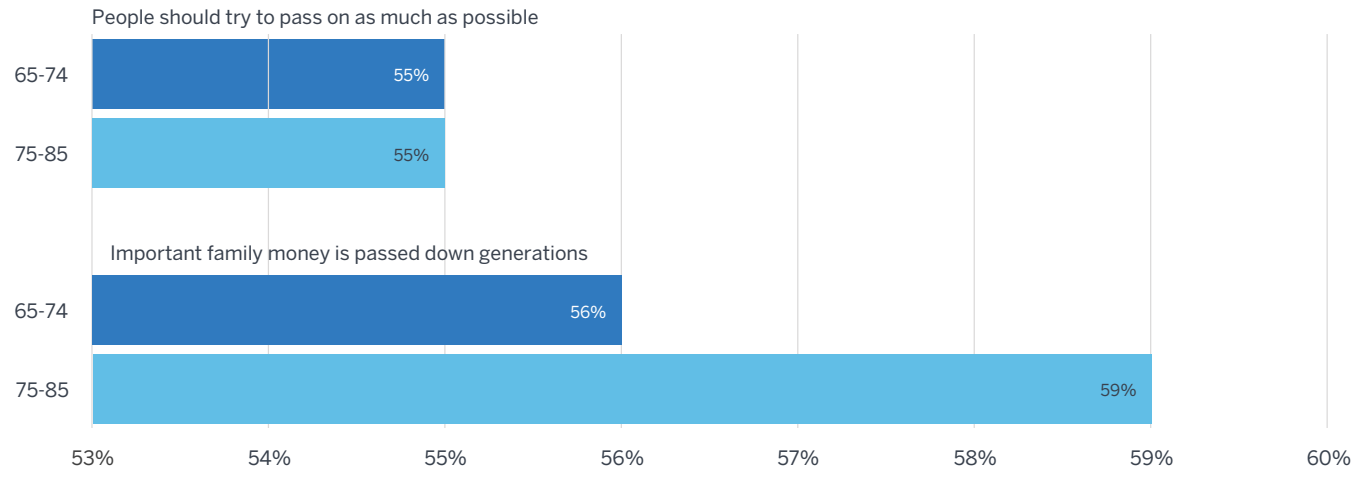
The majority of today's retirees feel that leaving money to the next generation is important to them (see Figure 18). The desire to pass on wealth is stronger amongst older people. From April 2017, the inheritance tax rules in the UK changed again[41] which will be likely to affect the wealthier households in our study who are the most likely to have accumulated assets at retirement. The 'comfortable' households in our review have significant wealth tied up in their properties, large retirement pots and non-pension savings at the point of their retirement. Transferring wealth to children and grandchildren tax efficiently requires careful planning, and so the trade-off between spending this money to fund their own retirement and saving it to bequeath to future generations is one that may benefit from advice.

Some people may wish to give money while they are still alive, in which case they will also need to seek guidance and advice on how much is sustainable as well as the best way to do this.

41 For deaths from April 2017 onwards an additional inheritance tax free 'residence nil rate band' will be available which will increase annually until 2021. The band is available where the deceased leaves a property in which they have lived at some point to their direct descendants

42 1. Royal London – Attitudes to Inheritance Research Jan-Feb 2017 Base (2011 45-64s | 2047 65-74s | 1037 75-85s)

Figure 18: Attitude towards inheritance (percentage of people who agree)[42]



APPENDIX A – ADDITIONAL PENSION CONTRIBUTIONS SCENARIOS

This appendix includes three scenarios focussing around changes that Tomasz and Agata could make to their pension contributions. Their current behaviour is to contribute 3% throughout their working lifetime. In addition their employer contributes 6%.

Tomasz (30 manageable)

Care-free and enjoying his pay cheques.

Current salary: £33,000

Current pension fund: £7,000

Current non-pension savings: £4,000

Personal life: Rents in London until he's 40 when he buys a property in London with help from parents

Meets and marries Agata at 38 and has two children

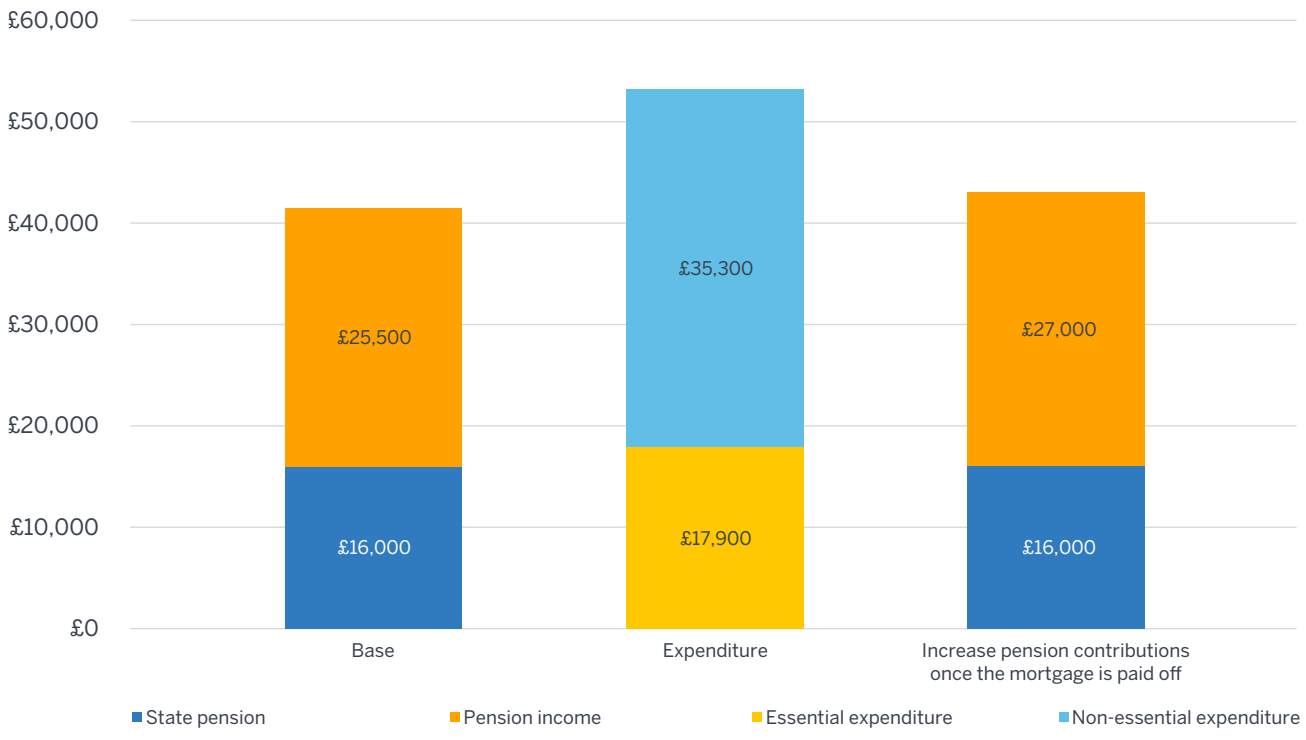
1. Tomasz: Don't leave reviewing contributions until it's too late

Tomasz and Agata earn good wages but life is expensive nonetheless. They contribute the minimum to their scheme 3% (their employer contributes 6%). They know that contributing more to their pension would be good idea but they never seem to have the spare money. At 65, they finally pay off their mortgage and decide to use the money they were spending on the mortgage to increase their pension contributions. This equates to 12% of their salaries, which they pay for the last five years of their working lives.

The graph shows that this has only led to a 5.9% increase in income from their pension scheme. Whilst 12% is a large salary contribution, Tomasz and Agata only increased their contributions five years before retirement. If they had contributed this amount earlier or even a lower amount, it would have likely had more of an impact.

Making large changes to contributions can be difficult and so it is better if an individual frequently reviews their contributions to see if they can afford to increase them just a little.

Figure 19: Tomasz and Agata's net annual income (in today's money)



2. Tomasz: Contributing earlier

As an alternative to increasing their contributions from 3% to 12% of their salary once their mortgage is paid off five years before retirement, we consider how Tomasz and Agata would have found themselves if they had contributed just a little more each year throughout their working lives.

The timeline shows how they vary their contribution during their working lives as they become able to. Their employer contributes a flat 6% throughout their employment.

The result of these small but early increases is almost a 20% increase in non-state pension income. This is greater than the effect of contributing at 12% for the last five years of their working life and goes to show that 'every little helps' when it comes to putting money away for retirement when young.

Figure 20

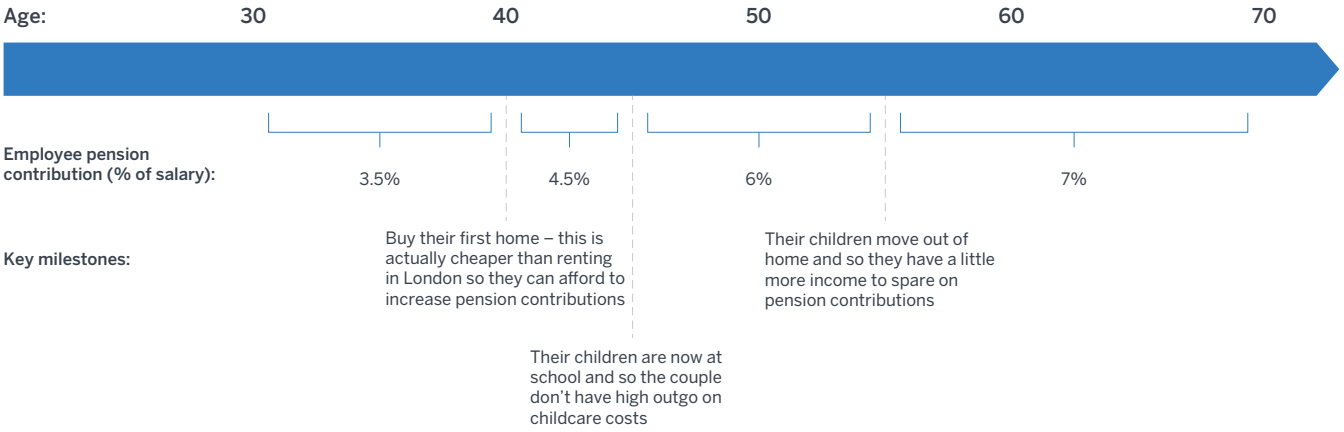


Figure 21: Tomasz and Agata's net annual retirement and expenditure (in today's money)

3. Tomasz: The 1% Challenge

Tomasz has been challenged by one of his friends, who works in the insurance industry, to increase his pension contribution by 1% of salary each year. The rationale is that by increasing by 1% each year, which will result in less than a 1% reduction in his take home pay due to tax/NI, will mean that he doesn't notice a large change in his income but could be in for a big boost in retirement.

Tomasz currently contributes 3% per year to his workplace pension scheme but next year will contribute 4%, the following year 5% and so on until he reaches 8%. We consider how things look for him if he takes his friend up on the challenge.

By taking his friend up on the challenge that she posed, Tomasz's and Agata's total retirement income increases by a quarter, which means that Tomasz and Agata will be able to spend more in their retirement than if they hadn't taken the friend up on their challenge.

Figure 22: Tomasz and Agata's net annual retirement and expenditure (in today's money)

APPENDIX B– STUDENT DEBT

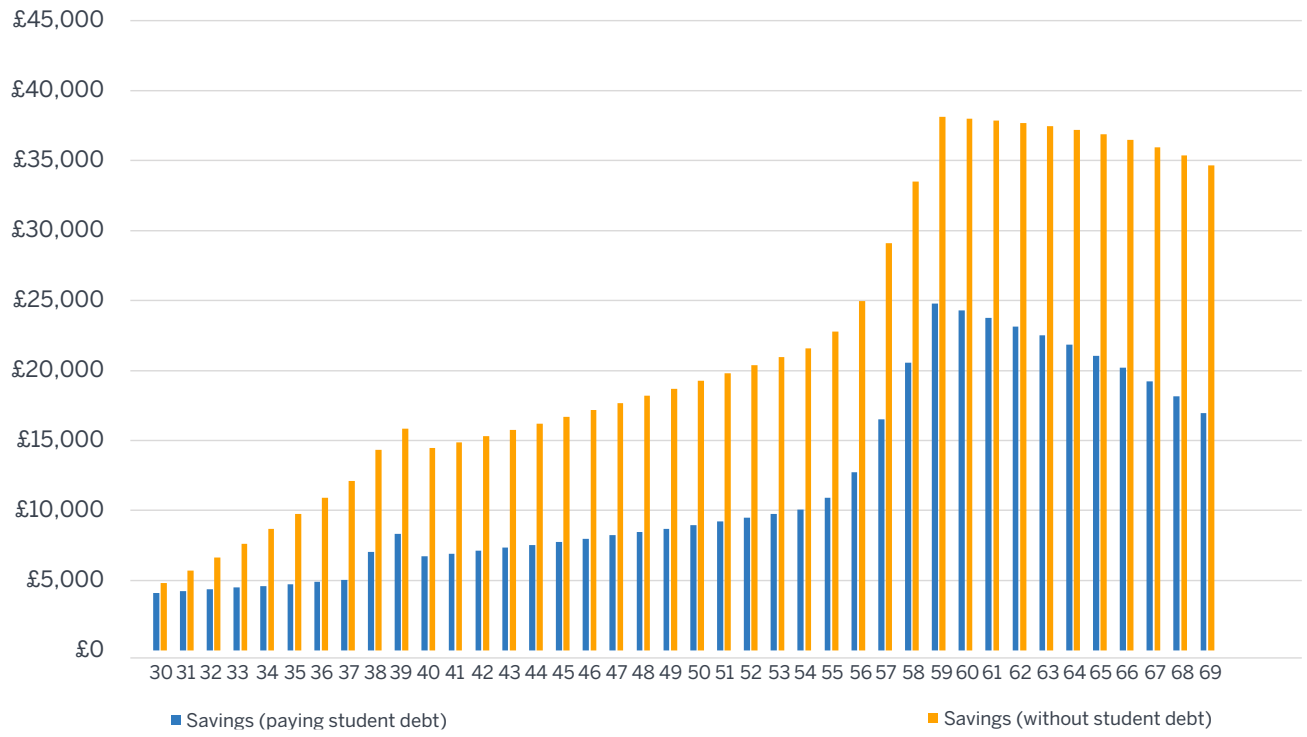
This appendix explores the effect of student debt on Tomasz's ability to save.

We explore the impact on Tomasz and Agata's finances if Tomasz had a student loan equivalent to the level that many students at university face today. In this scenario we have assumed that Tomasz pays the minimum loan repayments. Whilst his loan was only £44,000 when he graduated, because of the higher interest rate charged on this generation of loans it has inflated to £73,000 by the time that he is 30.

Whilst student loan debt gets wiped after 30 years, so Tomasz shouldn't worry about retiring with significant student loan debt, repaying the loan may be a drain on his day to day spending and affect his ability to save outside of his pension. Whilst Tomasz remains in his workplace pension scheme, many may choose not to until they've paid off their debt.

Tomasz never actually pays off his student loan – he makes repayments of over £38,000 but the debt gets wiped after 30 years. It is clear that paying off this debt impacts his ability to save. Therefore, he ends up with less than half of his personal savings at the point of retirement compared to if he had not had the student debt.

Figure 23: How does student debt impact Tomasz's ability to save

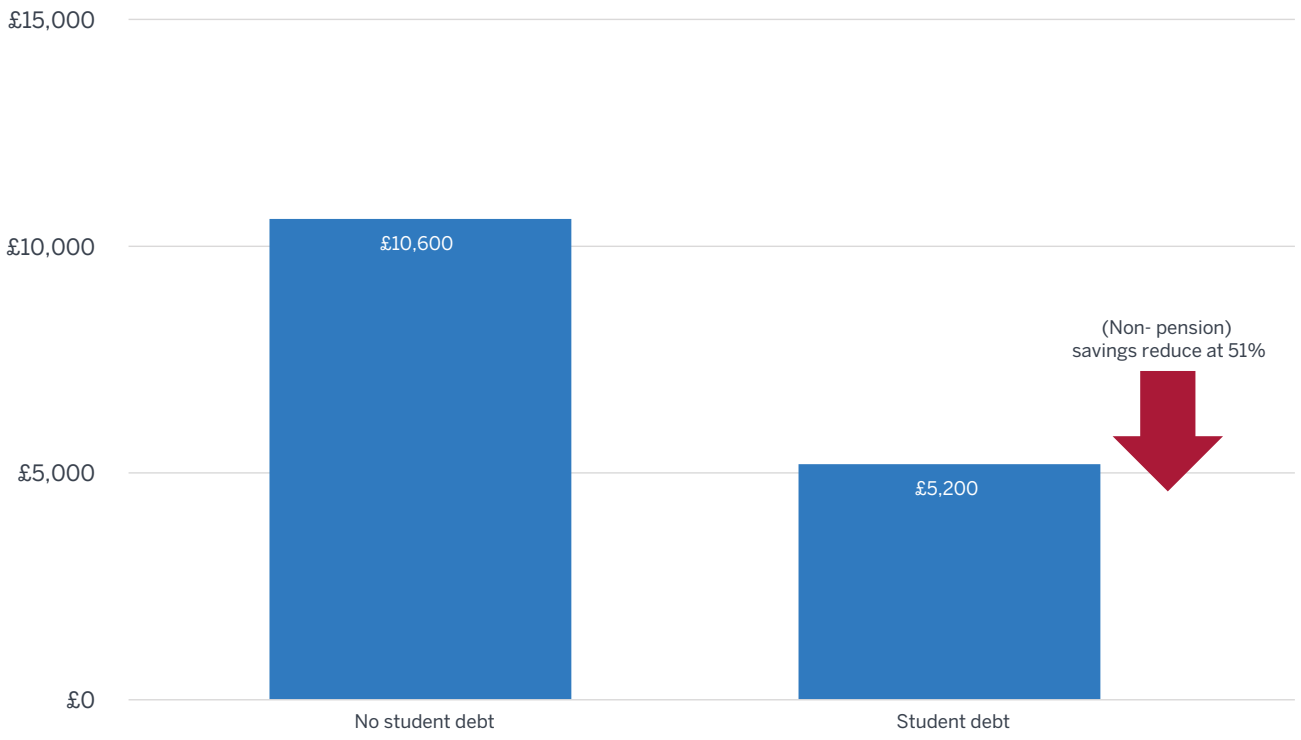


Tomasz (30 manageable)

Household salary now: £33,000

Student debts: £44,000 when he graduated at age 21, which has escalated to £73,000 by the time that he turns 30

Figure 24: Tomasz's and Agata's personal saving at retirement (in today's money)



APPENDIX C – OVERALL RESULTS

The table below summarises the results from our analysis for each household in its base scenario:

	Pension pot size at retirement (today's money)	Personal (non-pension) savings at retirement (today's money)	State pension (today's money)	Net personal pension (today's money)	Essential spending (today's money)	Housing costs (today's money)	Non-essential spending (today's money)	Additional years of full time work to cover all basic needs (essential spending + housing costs) [43]	Additional years of full time work to cover all spending [44]
30_Limited	£50,300	£300	£8,000	£2,600	£9,800	£5,000	£4,500	7	13
30_Squeezed	£191,700	£2,000	£16,000	£9,700	£9,800	£0	£22,100	0	5
30_Manageable	£554,500	£10,600	£16,000	£25,500	£17,900	£0	£35,300	0	4
30_Comfortable	£1,921,600	£290,300	£16,000	£79,300	£17,900	£0	£27,200	0	0
40_Limited	£47,900	£0	£8,000	£2,500	£9,500	£4,800	£4,500	7	13
40_Squeezed	£320,300	£2,800	£16,000	£15,700	£11,200	£0	£36,900	0	8
40_Manageable	£465,100	£4,300	£16,000	£22,100	£11,200	£0	£36,900	0	4
40_Comfortable	£677,900	£610,000	£16,000	£31,600	£17,900	£14,500	£22,100	0	2
50_Limited	£25,000	£800	£16,000	£1,300	£12,600	£4,400	£5,400	0	7
50_Squeezed	£58,800	£14,400	£16,000	£3,000	£8,700	£0	£10,500	0	1
50_Manageable	£124,700	£52,600	£8,000	£6,200	£8,800	£3,200	£13,800	0	11
50_Comfortable	£1,201,700	£68,500	£16,000	£54,300	£15,600	£0	£35,100	0	0
60_Limited	£6,500	£2,800	£16,000	£300	£10,700	£0	£8,400	0	5
60_Squeezed	£117,600	£91,000	£8,000	£5,900	£7,100	£0	£10,800	0	5
60_Manageable	£361,200	£145,700	£16,000	£17,500	£9,000	£0	£25,400	0	1
60_Comfortable	£548,300	£476,100	£16,000	£25,800	£11,900	£0	£13,600	0	0

43/44 For simplicity the working longer statistics do not include an uplift to state pension income for households who defer taking the state pension, if an uplift were to be applied then households may have to work fewer additional years than our analysis indicates

APPENDIX D – PENSION CONTRIBUTION COMPARISONS

This appendix includes scenarios focussing on changes that various generic households could make to their pension contributions. These households do not reflect any of the example 16 households, and are designed as generic example households, but the modelling to produce the results is identical to the approach taken for the example 16 households.

Some households may have to choose between purchasing protection products and contributing more to their pension[45]. These scenarios look at the difference this financial choice could make on retirement income. Buying protection can help people get back on their feet after unfortunate circumstances but, for some, there might be a trade-off between buying protection and contributing more to savings. Therefore getting help to understand the trade-offs of such a decision is vitally important.

We also consider how much more someone would have to contribute to cover long-term care costs and avoid downsizing in retirement.

45 Insurance premiums were provided by Royal London, May 2017

1. TERM ASSURANCE – LIFE ONLY COVER

This scenario considers the impact of contributing the cost of a term assurance (level cover, 30 year term, £120,000 sum assured, premium of £145 p.a.) into the workplace pension instead of purchasing the insurance. The household is a 30 year old couple who are non-smokers and jointly earn £60,000 a year. They currently contribute 3% p.a to their workplace pensions and their employers contributes 6% p.a.

The results below show how their pension pot and retirement income might change if they choose to contribute the money they would have otherwise spent on purchasing the term assurance.

Scenario	Δ Contribution Rate	Δ Retirement Pot	Δ Retirement Annual Income
Purchases life insurance	-	-	-
Invests insurance prem. in workplace pension	+0.36%	£10,836	+£554
Invests insurance prem. in workplace pension (+ employer matches additional contributions)	+0.36%	£21,671	+£1,108

2. TERM ASSURANCE – LIFE AND CRITICAL ILLNESS COVER

This scenario considers the impact of contributing the cost of a term assurance and critical illness cover (level cover, 20 year term, £60,000 sum assured, premium of £640 p.a.) into the workplace pension instead of purchasing the insurance. The household is a 40 year old couple who are non-smokers and jointly earn £60,000 a year. They currently contribute 3% p.a to their workplace pension and their employer contributes 6% p.a.

The results below show how their pension pot and retirement income might change if they choose to contribute the money they would have otherwise spent on purchasing the term assurance.

Scenario	Δ Contribution Rate	Δ Retirement Pot	Δ Retirement Annual Income
Purchases life and critical illness insurance	-	-	-
Invests insurance prem. in workplace pension	+1.56%	£25,795	+£1,351
Invests insurance prem. in workplace pension (+ employer matches additional contributions)	+1.56%	£51,590	+£2,702

3. INCOME PROTECTION COVER

This scenario considers the impact of contributing the cost of income protection cover (non-smoker, £15,000 benefit per year, level income, 26 week deferred period, premium of £340 p.a) into the workplace pension instead of purchasing the insurance. The household is a single 40 year old who earns £30,000 a year. She currently contributes 3% p.a to her workplace pension and her employer contributes 6% p.a.

The results below show how her pension pot and retirement income might change if she choose to contribute the money she would have otherwise spent on purchasing income protection cover.

Scenario	Δ Contribution rate	Δ Retirement pot	Δ Retirement income
Purchases income protection insurance	-	-	-
Invests insurance prem. in workplace pension	+1.67%	£15,104	+£791
Invests insurance prem. in workplace pension (+ employer matches additional contributions)	+1.67%	£28,966	+£1,517

4. LONG TERM CARE

This scenario considers how much more a household would have to contribute to their pension pot so that it would not only cover retirement income but also cover an average amount of long-term care costs. This household is a couple both aged 30.

We have assumed that they would require £78,000 each in today's money (or £156,000 in total). This is based on the 2015-2016 UK average care fees of £600 per week per person and an average length of care rounded to 2.5 years per person[46].

46 http://www.which.co.uk/elderly-care/financing-care/financing-a-care-home/381597-care-home-fees

Scenario	Δ Contribution Rate	Δ Retirement Pot	Δ Retirement Income (if LTC not required)
Save only for retirement	-	-	-
Save only for retirement + LTC (no employer matching on additional contributions)	+3.1%	£156,000	+£7,974

5. DOWNSIZING

This scenario considers how much more a household would have to contribute to their pension pot so that they could enhance their retirement pension pot to avoid downsizing. The household we consider are a 30 year old couple with a joint salary of £60,000. Their house is worth £200,000 at retirement and we assume that if they downsize they could release an extra £40,000 in today's money. We consider how much more they would have had to contribute to increase their pension pot by the same amount – which would have meant that they didn't have had to downsize in retirement.

Scenario	Δ Contribution rate	Δ Retirement pot	Δ Retirement income
Downsize / Equity Release Mortgage	-	£40,000	+£2,045
Additional contributions to avoid downsizing / ERM (no employer matching on additional contributions)	+0.8%	£40,000	+£2,045
Additional contributions to avoid downsizing / ERM (+ employer matches additional contributions)	+0.4%	£40,000	+£2,045

APPENDIX E – MODELLING ASSUMPTIONS

The modelling that underpins many of the findings within this paper allows us to assess the expected financial position at the point of retirement for each household. These projections have been based on each household's starting position, earnings and spending behaviour over its working lifetime, and expected future economic and market conditions. This appendix explains our approach to each of these areas in further detail. For further information on the model parameters and assumptions used, please contact Milliman.

The modelling complies with TAS D and TAS M. This white paper complies with TAS R.

Overview of analytical approach

We modelled each households' financial position at retirement by projecting the values of: salary, tax and National Insurance, essential and non-essential expenditure, workplace pension fund, non-pension savings, house price where relevant, and outstanding mortgage. Calculating these enabled us to build up a retirement pot which was then used to derive a retirement income level broadly consistent with income levels we would expect to be sustainable given the interest rates and longevity expectations at the point of retirement.

Throughout the analysis, we have based future financial performance on historical performance and derived implied interest rates based on the UK government bond curve as at 31 December 2015. Households' current composition, salaries, pension fund and non-pension savings levels are based on FSS Experian data. We model future spending and savings habits based on the current spending and saving habits reported in ONS data. Tax and state benefits are all assumed to increase in line with RPI inflation.

FUTURE ECONOMIC CONDITIONS

To capture the expected future economic conditions we took the mean average results from 1,000 scenarios of a stochastic model. The scenarios for the future economic conditions were captured using the following approach:

- To determine how much a 'risk-free' asset earns on average, we projected the UK's government bond curve from its level at 31 December 2015. The cash-rate modelled is an average of the 1-year interest rate implied by the UK government bond curve over a 40-year projection period. As the long term average bond yields are higher than today's level, the cash-rate modelled is higher than current market rates.

- To determine how much risky assets (equity, property, high-yield bonds and corporate bonds) earn in excess of the risk-free return we used an objective approach and based our calibration upon all the historical data available for each individual asset class. The expected returns on all asset classes have been derived using the mean returns from our economic scenario generator. This information was used to project investment returns on the pension funds and non-pension savings modelled.

- The annual modelled return on each asset class is summarised in the table below.

- We also note one limitation of this deterministic model is that it does not account for the volatility of asset returns over time, and the impact that can have when combined with cashflow timings.

- We have assumed average expected future RPI inflation of 3.0% p.a.

Corp 5Y	Corp 10Y	Corp HY	Gov Bond 10Y	IL Bond 10Y	Equity UK	Equity Global	Property	Cash	1 yr yield	10 yr yield
5.5%	6.2%	6.9%	3.9%	3.9%	7.8%	8.8%	6.8%	2.9%	2.8%	3.8%

Mortgage rates

Where households have a mortgage the rate of interest on their mortgage is modelled as 2% above the Bank of England base rate which we model as identical to the cash return projections stated above. This has been set with respect to typical standard variable mortgage rates.

Wage inflation

We have modelled individuals' salaries to move in line with ONS data over the period from 1995 to 2015. These rates are consistent with recommended forward predictions to the FCA regarding policyholder projections for retirement which were between 3.5% and 5% in nominal terms. The wage inflation per income decile has been set as follows (none of our households had incomes in the lower three income deciles):

The income decile and hence the wage inflation of each household is set based on the initial salaries.

House price growth

We have assumed that the current earnings to house price ratio will be maintained in the long term. Therefore we would expect that, over the long term, residential house prices would grow in line with salaries and so we model house prices to grow with average nominal wage inflation.

This is consistent with PWC forward predictions that house prices should grow in line with earnings inflation[47].

47 Financial Services Authority (April 2012). Rates of return for FSA prescribed projections. Report of PricewaterhouseCoopers and peer reviewers' comments. Accessed May 25, 2017, at https://www.pwc.co.uk/assets/pdf/fsa-report-april-2012.pdf.

Decile	4th	5th	6th	7th	8th	9th	Top	Average
Household salary (2014)	10,677	17,352	22,912	29,629	37,256	46,047	77,771	
Wage inflation	4.2%	4.3%	3.5%	3.2%	3.3%	3.6%	4.3%	3.8%
Real wage inflation (subtract historic RPI of 2.8%)	1.4%	1.5%	0.7%	0.4%	0.5%	0.8%	1.5%	1.0%
Nominal wage inflation (using forecasted RPI assumption of 3%)	4.4%	4.5%	3.7%	3.4%	3.5%	3.8%	4.5%	4.0%

OUR EXAMPLE HOUSEHOLDS

We defined 16 example households with reference to Experian's Financial Strategy Segments & Analysis ('FSS'). The financial position of each household was defined at outset as were their spending and savings habits.

Spending

Households' spending has been derived by splitting spending between 'essential' and 'non-essential' expenditure based on an expert judgement allocation of the different categories of spending (taken from ONS Family Spending 2016 survey) as set out in the table below.

Essential spending	Non Essential spending
Food and non-alcoholic drinks	**Alcoholic drink, tobacco and narcotics**
Clothing and footwear (50%)	**Clothing and footwear (50%)**
Housing (net), fuel and power	**Recreation and culture** (includes TV and subscriptions, holidays, pets, cinema etc)
Household goods and services (includes furniture, appliances, kitchen utensils, tableware etc)	**Education**
Health (includes prescriptions, medicines, glasses)	**Restaurants and hotels**
Transport (includes car purchase, petrol, public transport fares)	**Miscellaneous goods and services** (includes personal care, moving house, bank charges, insurance)
Communication (includes postal services, telephone and internet)	**Other expenditure items**

This allocation was then used to derive the proportion of income spent on essentials, non-essentials and rent (where applicable) differentiated by income decile (based on the ONS Family Spending Survey):

Decile (2016)	2	3	4	5	6	7	8	9	10
Estimated average gross income Annual	£12,922	£17,784	£22,698	£28,470	£35,152	£42,822	£52,390	£68,146	£114,234
Essential spending	39.6%	30.9%	26.2%	24.9%	23.2%	20.5%	17.3%	16.3%	10.4%
Non-essential spending	29.9%	24.9%	22.5%	25.2%	24.4%	21.1%	20.2%	18.7%	15.8%
Rent	20.1%	17.8%	17.9%	19.7%	17.5%	16.4%	14.0%	14.9%	13.9%

Other characteristics of households' spending have been modelled as follows:

- We have capped the amount of essential spending (in £ terms) at £11,900 per person rising with inflation (this cap is based on the absolute amount of essential spending that the wealthiest decile incur). This does not include housing costs such as rent or mortgage repayments which are calculated separately.

  We have then made some further assumptions about how this will change if the household increases. If the individual has a partner an extra £6,000 is added to this cap and £3,900 is added per child to the cap.

- When a single individual gets married, for simplicity, we assume that they marry someone with an identical salary, level of savings and pension pot as them.

- Where households are home owners, we calculate their annual mortgage repayment based on their loan amount, their mortgage term and the mortgage rate of interest at each time period.

- Where, in this white paper, we reference 'basic needs' we deem this to be the sum of their essential expenditure and their housing costs (whether that is rent or mortgage repayments).

Other expenditure assumptions

Households experience one-off expenditure items in addition to their regular spending. Examples of such expenditure include: special holidays, new cars, home renovation/redecoration, childcare, financial support of parents (care home and residential home), financial support for children (school-fees, university, weddings, and deposits). The amount spent on these one-off expenditure items have been determined in line with national averages and with reference to the relevant sources listed below.

- Independent schools council census, January 2016
- Money Advice Service, Average childcare-costs
- Bristol University, advice on living costs
- Which?,Care-home fees, February 2017
- Social Mobility Commission, The impacts of family support on access to homeownership for young people in the UK, March 2017
- ONS, Inheritance in great Britain 2008-10
- Financial Times, Best of Money: Wedding day bliss without the financial hangover, May 2016
- Booking.com
- Which? Kitchen cost research, 2016
- HouseholdQuotes.co.uk, Price Guide

Pension savings

The pension contributions modelled vary by household as follows (employer rates include tax relief):

Group	Employer Contribution Rate	Employee Contribution Rate
30 Limited	Auto-enrolled	
30 Squeezed	Auto-enrolled	
30 Manageable	6%	3%
30 Comfortable	6%	3%
40 Limited	Auto-enrolled	
40 Squeezed	6%	3%
40 Manageable	5%	3%
40 Comfortable	6%	3%
50 Limited	Auto-enrolled	
50 Squeezed	6%	3%
50 Manageable	6%	3%
50 Comfortable	12%	6%
60 Limited	Auto-enrolled	
60 Squeezed	6%	3%
60 Manageable	6%	3%
60 Comfortable	Self-employed-n/a	

For the 3% employer and 6% employee rates this is based on an average over 2000 to 2013 based on ONS 2014 Pension Trends.

Auto-enrolled households contribute at the prescribed auto-enrolment rates (gross salary)

Households that would be in auto-enrolled schemes were identified as those that had no pension savings in Experian data, which suggests that they were not in a workplace pension scheme prior to the introduction of auto-enrolment.

Year of modelling (1 = 2017)	Employee	Employer
1	1%	1%
2	3%	2%
3+	5%	3%

Households that already had pension funds were assumed to contribute in line with the average DC employer and employee contribution rates (3% and 6%)[48]. There are two exceptions to this:

- 40 Manageable have a lower base employer contribution of 5% to reflect the fact that this household is in a pension scheme where employers have additional contribution matching above a lower base amount. This is based on insight on typical schemes of this nature provided by Royal London.

- 50 Comfortable have a higher employer and employee rates (12% and 6% respectively) because historic DC pension funds were more generous than current levels. This is based on insight on typical schemes of this nature provided by Royal London.

48 Office of National Statistics (2014). Pension Trends, Table 8.1

Households' pension contributions will be invested into a mix of assets depending on their number of years until retirement to reflect typical asset mix 'lifestyling'. The split between asset classes has been modelled as follows:

We assume that an individual will keep contributing to their pension even once they have reached their lifetime and/or annual limit.

We anticipate that these limits will affect only one example individual (the richest, youngest individual). We have ignored the tax implications of this at their retirement for simplicity (i.e. income on any lump sum or salary drawn from their pension).

We assume that the charge on all pension savings is the same for all households at 0.75% p.a.

	Corp 10Y	Gov Bond 10Y	IL Bond 10Y	Equity UK	Equity Global	Cash
15 years+	15%			21%	64%	
10 -14 years	23%		8%	18%	53%	
9-5 years	48%		13%	12%	28%	
4-0 years		75%				25%

Non-pension savings

Where households earn enough to meet their essential expenditure plus housing costs after tax and pension contributions, they have enough income to save into a non-pension savings account.

We have capped the rate at which all but the 'comfortable' households can save at the level of the median UK savings ratio (6.75% of their household net income including pension contributions). Any net income that they have over this has been modelled as extra non-essential spending. This reflects that, in the Experian data, the Limited, Squeezed and some Manageable households tended to have no or low savings so we can deduce that they do not have the means to save significantly and/or are not in the habit of saving over the long term. We have therefore assumed that they are unlikely to save more than the historic average savings ratio. The Comfortable households do not have a cap applied to the rate at which they save.

Before investing in other assets, households keep six months' of gross salary in cash (a cash account for the Limited households, and a cash ISA for other households). For savings beyond this level, the Manageable and Squeezed households only invest in cash but do use ISA products. This reflects their lower levels of financial knowledge inferred from the Experian data than the Comfortable households who invest in a stocks and shares ISA because they are assumed to have a good understanding of financial products and can make informed decisions regarding the most appropriate level of risk and reward that they should invest in. The Limited households have low levels of financial knowledge and so we have assumed that they use (non-ISA) cash accounts to save.

The table below summarises where each type of household keeps its savings:

Group	Where do households keep their savings?
Limited	In a non-ISA cash account
Squeezed	In a cash ISA (up to the ISA limit, thereafter in a non-ISA cash account)
Manageable	In a cash ISA (up to the ISA limit, thereafter in a non-ISA cash account)
Comfortable	Keep six months' savings in a cash ISA, and thereafter invest in a stocks and shares ISA

We have considered the tax relief on investment return on savings, including the impact of ISAs and the Personal Savings Allowance – the limits of these are modelled to inflate with RPI.

The cash ISA's rate of return is the same as the median cash rate from our economic model. The composition of the stocks and shares ISAs that Comfortable households invest in varies with age: The household's age is used to determine the proportion of their stocks and shares ISA portfolio held in bond funds (with the return set to the same as the corporate 10-year-bond), and the remainder receives the same return as UK equity in that year.

Tax

We assume that all tax and NI bands increase with RPI inflation at 3% a year.

Retirement age

We have used the current state retirement ages for individuals aged 50 and 60. We have estimated the retirement age for households aged 30 and 40 based on the current trend of retirement ages increasing and the findings of government commissioned reports. The retirement ages are as follows (based on government reports: "Periodic review of rules about state pension age", "Independent review of the state pension age smoothing the transition"):

Age now	Retirement Age
30	70
40	69
50	67
60	66

State pension and other benefits

The level of state pension provision when each household retires is approximated as £8,000 per person in real terms and rises with RPI (3% p.a.). We have ignored the 'triple lock' for purposes of simplicity. We assume all of our households receive the full state pension, i.e. that there is no means testing or that certain households don't claim the state pension. We do not model any of the households as receiving housing benefit or any other state benefit.

Other pension income

In order to estimate a sustainable income level at the point of retirement that could be accessed from each households' workplace pension savings we have calculated annuity rates based on the expected interest rates and longevity assumptions at the point. This gross income level is then taxed at the appropriate level.

Annuity rates were based on an internally developed annuity pricing model and benchmarked to typical industry assumptions, which allows for future improvements in mortality and likely Solvency II capital costs. The rates are based on a single life annuity. The interest rates used are derived from our internal economic scenario generator. Mortality assumptions were PNXA00 with CMI 2013 and 1% long-term improvement rate. We assumed 40% female and 60% male base.

This approach is not intended to imply that the households should or would buy an annuity with their retirement and other savings. Rather, this is our chosen method by which to convert a retirement fund into a conservative level of income for comparison with expected expenditure at the point of retirement.

In the main, we do not convert households' non-pension savings into an income by this method and where we do we have explicitly referenced this in the text.

We do not assume that any household enters into any equity release arrangement upon retirement unless otherwise stated.

Costs in retirement

Where we have compared households' income in retirement against their spending levels, the spending levels have been defined as the level of spending that they make in their last year of their working life (split between essential and non-essential spending and housing costs).

APPENDIX F– THE MILLIMAN TEAM

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APPENDIX G- ABOUT MILLIMAN

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Experts: Milliman is one of the leading life actuarial practice in Europe and Asia and the largest life actuarial practice in the United States. Our financial risk management practice is a global leader in the retirement savings industry. Established in 1998, it pioneered hedging and risk management techniques for the US life insurance industry, and now provides investment advisory, hedging and consulting services on more than $164 billion in global assets (as of March 31, 2016), through its hedging operations in Chicago, London and Sydney. The majority of our clients use these services to support the types of retirement guarantee products discussed in this paper.

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