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An analysis of the
retirement savers in the
Wealth and Assets Survey

This report is based upon analysis of segmented Wealth and Assets Survey data. The data had been segmented under commission of the Pensions and Lifetime Savings Association.

PENSIONS AND LIFETIME SAVINGS ASSOCIATION

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Report Summary

Project purpose

The characteristics of savers have evolved alongside the pensions landscape. There have been fundamental changes to the occupational pension scheme landscape in recent time. Private sector employers have tended to withdraw Defined Benefit (DB) schemes and introduce Defined Contribution (DC) pension schemes in their place. This has placed greater uncertainty upon the outcome of retirement saving for individuals with many at risk of under-saving for retirement.

This report details observations drawn upon a segmentation of the saving population. It considers their savings and the expectations of their retirement saving. The population is derived from the Wealth and Assets Survey (WAS) Wave 4 dataset which covers survey data from interviews from 2012 to 2014. The population had originally been segmented for work commissioned by the Pensions and Lifetime Savings Association (PLSA) to inform their report Retirement Income Adequacy: Generation by Generation.¹

Key themes from the findings

Many people are concerned that they are not saving enough for their retirement, and perceptions of retirement may not be wholly realistic.

- Individuals who consider themselves to have a greater understanding are more likely to be saving for a pension.
- Approximately two and a half times as many individuals do not feel that they are saving as much as they need to for their retirement than those who do.
- 25% of individuals expect they will have to live on an income in retirement that is inadequate based upon the Turner Report criteria.
- Individuals are underestimating the length of their retirement by around 10%.
- Fewer people expect to use State Pension or private pension in retirement as a source of income than current pensioners already do. (This appears to be a misalignment of perceptions).

Pension investment faces competition from property which is perceived to represent a good value way of long-term saving.

- There is greater safety associated with saving into a pension scheme, however there is a perception that investing in property would make more money.
- Additional properties are expected to provide a source of income in retirement and a number of individuals expect to release value in their main

¹ PLSA (2016)

property through downsizing, however physical wealth is not expected to play a major part in retirement income.

Occupational schemes available to employees are gaining coverage with the roll out of automatic enrolment, however average contribution rates are dropping.

- 38% of employees are members of a DB occupational pension scheme.
 - DB pensions are less likely to be available to employees in routine and manual occupations.
- 21% of employees are members of a DC occupational pension scheme.
 - The current contribution rate of self-employed pension contributions is higher than for employees contributing to occupational DC schemes, however the coverage is lower.
 - Average contribution rates to DC pensions have declined rapidly with the staging of automatic enrolment which has a very low minimum contribution rate.

Wealth is accumulated during working life, and the self-employed have larger amounts of non-pension wealth, such as property.

- Net financial wealth increases with age as significant liabilities associated with the young are repaid.
- The median value of any property wealth for an individual is £61,500 for employees, and £90,000 for the self-employed.

Introduction

The segmentation categorises savers by criteria representing the key influences of retirement outcomes. The data is segmented by the key drivers of projected saving outcomes and the significant modelling assumptions required in the projection of these individuals.

The Wealth and Assets Survey (WAS) Wave 4 dataset² has been segmented for working age individuals who will have an outcome influenced by their long-term saving over their working life.

The purpose of the segmentation of the data commissioned by PLSA was to provide:

- Model point information to be used in Hymans Robertson's Guided Outcomes[®] methodology.
- Financial information detailing other forms of wealth and potential sources of income.

This analysis considers observations drawn from data around pension saving, wealth, and attitudes towards saving for retirement exhibited within the segmentation. The analysis included aspects of wealth, including the debts and liabilities secured against assets. The components of wealth that were included were financial wealth, physical wealth, pension wealth and property wealth:

- **Pension wealth**; composed of both Defined Contribution (DC) and Defined Benefit (DB) pension wealth. DC wealth included occupational and personal pensions. The value of Defined Benefit is calculated from the expected income to be received from the DB scheme.
- **Financial wealth, net of financial debt**; composed of savings accounts, current accounts, ISAs, national savings products (e.g. Premium bonds), shares, gilts, employee shares and options, unit and investment trusts, insurance products, children's assets and other formal and informal financial assets.
- **Physical wealth**; includes goods, collectables and vehicles. This is collected at a household level so was assigned to the main individual or split between a couple.
- **Property wealth, net of secured loans and mortgages**; includes all aspects of property including land.

² ONS (2016a)

Chapter one: pension saving of the population

Data presented within this chapter relates to individuals of working age who are either employees or self-employed. The selection and segmentation criteria was defined in the population to be segmented (Appendix one: segmentation criteria). It represents the most recent data from the Wealth and Assets Survey (WAS) dataset.

Key findings:

38% of employees are members of a Defined Benefit (DB) occupational pension scheme.

- DB pensions are less likely to be available to employees in routine and manual occupations.

21% of employees are members of a Defined Contribution (DC) occupational pension scheme.

- The current contribution rate of the self-employed pension contribution is higher than for employees contributing to occupational DC schemes, however the coverage is lower.
- Average contribution rates to DC pensions have declined rapidly with the staging of automatic enrolment which has a very low minimum contribution rate.

Employees saving into occupational pensions

The rollout of automatic enrolment pensions through employers is having a significant impact upon both the number of savers and their saving levels in workplace pensions. IFS calculations suggest that there are 4.4 million more private sector employees in a workplace pension as a result of automatic enrolment, however average saving rates have fallen.³

The proportion of active members of a pension scheme amongst employees is 58% (Table 1). This varies by age with younger employees less likely to be contributing to a pension, and by employment type with employees of routine and manual occupations less likely to be active members of an occupational pension scheme.

³ IFS (2016)

Table 1: Percentage of employees who are currently active members of an occupational pension scheme

		Occupational Classification (National Statistics Socio-economic Classification)			
		Managerial and professional occupations	Intermediate occupations	Routine and manual occupations	Total
Age band	22-34	65%	53%	26%	48%
	35-44	76%	67%	40%	63%
	45-54	76%	70%	46%	64%
	55-64	68%	60%	43%	57%
	Total	71%	62%	38%	58%

- The relevance of age is greater in routine and manual occupations.
- Employees in routine and manual occupations are less likely to be savers.

The type of pension saving is linked to the occupational classification, with the higher occupational groups being relatively more likely than the routine and manual occupation to save in a Defined Benefit scheme (Chart 1).

Assuming consistent opt-out rates, DB pensions are less likely to be available to employees in routine and manual occupations.

Chart 1



Current saving into an occupational Defined Benefit scheme by employees

Approximately 38% of employees in the sample have current membership of a DB occupational pension schemes, this amounts to a weighted sample of 8.3 million individuals. This figure includes public and private sector employees.

Younger workers are less likely to be active members of a DB pension scheme with 28% of employees aged 22-34 currently members, while the older age bands contain at least 40% of employees. Only 13% of DB schemes in the private sector remain open to new members⁴ resulting in this type of scheme not generally being available to employees who are not already members.

The calculation of the benefit level in DB schemes varies, however almost all schemes accrue benefit at a rate of either $\frac{1}{60}$ or $\frac{1}{80}$ a year. The accrual rate is linked to the occupation class. Approximately 60% of active DB scheme members accrue benefit at the higher rate of $\frac{1}{60}$ a year, however 65% of those in the lower occupational classes accrue benefit at this higher rate (Table 2). There is not such a difference when it comes to the calculation of the pensionable salary (Table 3).

Table 2: Accrual rate of DB schemes by saver

		Occupational Classification (National Statistics Socio-economic Classification)			
		Managerial and professional occupations	Intermediate occupations	Routine and manual occupations	Total
Accrual rate	$\frac{1}{60}$	59%	65%	65%	61%
	$\frac{1}{80}$	40%	34%	35%	38%
	Other	1%	1%	0%	1%

- The higher occupational class has a lower average accrual rate associated with DB pension schemes, though the majority still accrue benefit at the higher rate.

⁴ PPF/TPR (2015)

Table 3: Pensionable salary calculation of DB schemes (public and private sector)

		Occupational Classification (National Statistics Socio-economic Classification)			
		Managerial and professional occupations	Intermediate occupations	Routine and manual occupations	Total
Pensionable salary calculation	Final Salary type ⁵	78%	76%	74%	77%
	Career average type	18%	20%	23%	19%
	Other	4%	4%	4%	4%

- Public sector pension schemes are now based upon career average earnings as a result of the recommendations of the Hutton report.⁶

There is a large diversity of scheme design (including the variation of benefits structures, contributions and retirement ages) between the thousands of DB pension schemes open to further accruals.

Current saving into an occupational Defined Contribution scheme by employees

Occupational Defined Contribution pension schemes are becoming more widespread as replacements for closing DB schemes and as more employers offer a pension scheme as a result of automatic enrolment. The dataset used is derived from survey results from 2012-2014, which is during the automatic enrolment staging process. The availability of DC occupational pensions is expected to increase from the current, observed levels.

Higher rates of occupational DC saving are linked to higher salaries, with mean contribution rates approximately 2.5 times higher for the higher and additional rate tax-payers than those whose earnings fall below the personal allowance, (Chart 2). Comparison with other contribution rate statistics is complex due to the varying survey approaches and timing of the investigations. Around this time, the staging of automatic enrolment resulted in a significant reduction in average contribution rates. According to Office for National Statistics (ONS) data, the contribution rate has nearly halved from 9.1% to 4.7% over the course of a year (2013 to 2014).⁷ Different surveys have different samples and techniques:

- WAS is a sample of individuals and covers people who report being current members of an occupational pension scheme. They report higher contribution rates where it is a proportion of salary rather than an amount.

⁵ Includes calculations based upon averages of final 3 or 5 years and best 3 years in final 10.

⁶ Pensions Commission (2011)

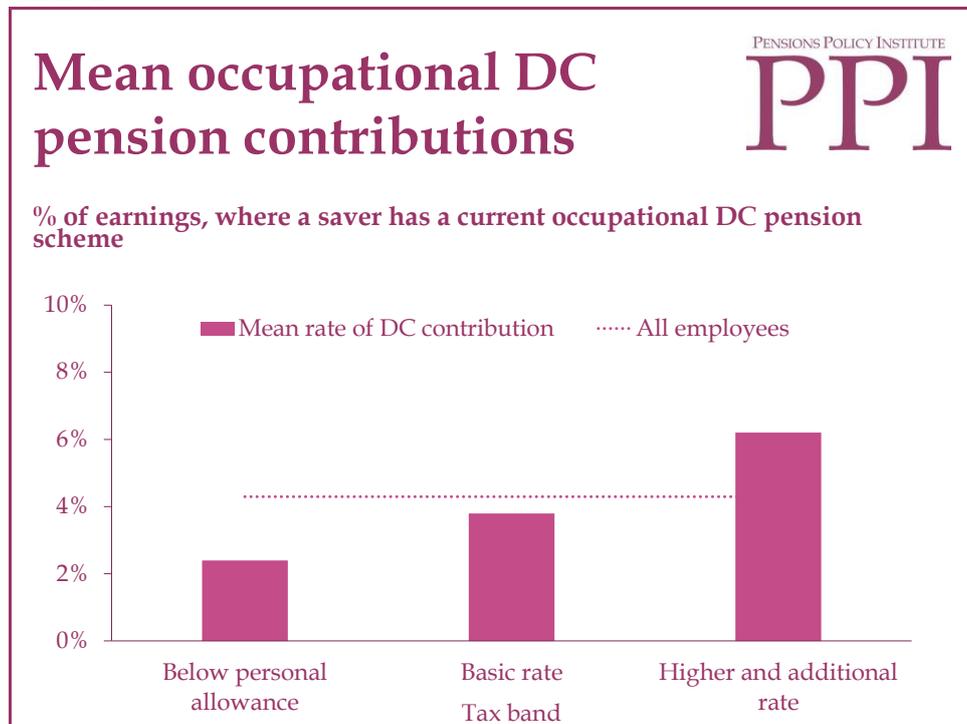
⁷ ONS (2015b)

The WAS analysis shows a mean contribution rate of 4.3% to occupational DC schemes.

- The Occupational Pension Schemes Survey (OPSS) is a sample of public and private sector occupational pension schemes and excludes arrangements such as group personal pensions (GPP) which have historically had lower contribution rates than other occupational pensions.⁸ OPSS reports a weighted average contribution rate of 4.7% for occupational DC schemes for a similar period.⁹
- The Annual Survey of Hours and Earnings is a 1% sample of HM Revenue and Customs PAYE records. This is based upon a fixed date rather than a period of time. It reports contribution rates as a proportion of pensionable, rather than total, earnings which will result in higher reported rates.

Current legislation will increase the minimum contribution rate to 8% of band earnings by 2018, Chart A2 (Appendix one).

Chart 2



Current saving into a personal pension by the self-employed

A self-employed individual does not have access to an occupational pension scheme. Self-employed individuals making pension saving into a private pension are more likely to be contributing at a higher rate as they get older and near retirement than earlier in their career (Table 4).

⁸ ONS (2016c)

⁹ ONS (2015b)

Table 4: Self-employed contributions to personal pensions

		Proportion with a personal pension	Mean rate of personal pension contribution
Age band	22-34	8%	4.1%
	35-44	26%	4.5%
	45-54	37%	5.0%
	55-64	28%	6.6%
	Total	26%	4.9%

- The self-employed are less likely to contribute to a pension than employees.
- Self-employed contributions to personal pensions are higher, on average, than employees' contributions to workplace DC pensions.

The self-employed who make pension contributions do so at a higher rate than employees contributing to occupational DC schemes, however the coverage is lower. This is influenced by the staging of automatic enrolment for employees which has vastly increased the coverage, with more than 6.1 million workers enrolled by March 2016,¹⁰ however contribution rates have fallen.

¹⁰ TPR (2016)

Chapter two: other forms of wealth and sources of income of the population

Chapter two considers the other forms of wealth individuals have accumulated by the segmentation. This wealth could potentially be harnessed to supplement income in retirement, for instance through selling assets or drawing income against housing equity.

Key findings:

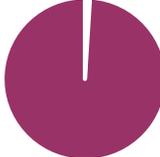
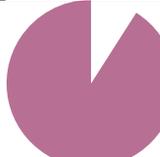
Net financial wealth increases with age as significant liabilities associated with the young are repaid.

The median value of any property wealth for an individual is £61,500 for employees, and £90,000 for the self-employed.

Other forms of wealth of the population

Current pension savings only form part of the wealth arrangements of an individual. Other forms of wealth and liability develop over the lifecycle of an individual, reflecting their saving priorities. The self-employed are more likely to have non-pension wealth than employees and the value of this wealth is greater than for employees (Table 5).

Table 5: The proportion of individuals with wealth and the median (non-zero) wealth by category of employees and the self-employed

Type of wealth	Employees	Self-employed
Financial	 <p>99% have some financial wealth Median amount: £1,400</p>	 <p>98% have some financial wealth Median amount: £1,400</p>
Property	 <p>66% have some property wealth Median amount: £61,500</p>	 <p>70% have some property wealth Median amount: £90,000</p>
Physical	 <p>88% have some physical wealth Median amount: £20,200</p>	 <p>91% have some physical wealth Median amount: £22,500</p>

Area is proportional to the value of the wealth, median values exclude those without the particular type of wealth.

- **Financial wealth;** net of financial debt; composed of savings accounts, current accounts, ISAs, national savings products (e.g. Premium bonds), shares, gilts, employee shares and options, unit and investment trusts, insurance products, children’s assets and other formal and informal financial assets.
- **Physical wealth;** includes goods, collectables and vehicles. This is collected at a household level so was assigned to the main individual or split between a couple.
- **Property wealth;** net of secured loans and mortgages; includes all aspects of property including land.

The financial debts of individuals, which are included in their financial wealth, decrease with age. More significant financial debts are accumulated early in life, such as student debt, with over 80% of individuals with liabilities against the Student Loan Company held by those aged 22-34.

Property wealth is net of mortgages (and other debt) secured against the property. The proportion of people with property wealth increases by age, most significantly at the point of being a first time buyer (Table 6). The average of a first time buyer in the UK is 31.¹¹ The net value of property wealth increases as mortgages are repaid over time.

Table 6: The proportion of individuals with property and physical wealth

		Proportion with property wealth	Proportion with physical wealth
Age band	22-34	39%	67%
	35-44	72%	96%
	45-54	80%	97%
	55-64	85%	98%
	Total	67%	88%

Physical wealth includes the value of items such as cars. However, the total value of the wealth, median of £21,000, represents a smaller proportion of an individual’s total wealth, which is dominated by property wealth.

Other expected forms of income and wealth of the population

Individuals may expect their wealth to be boosted within their lifetime from other sources, such as inheritance, which is not accounted within the projection modelling. Further, some people will not need to rely upon their own saving, as projected, and expect to have a source of income from their family or partner.

- 16% of the individuals expect to receive retirement income from a future inheritance.
- 7% of the individuals expect to receive retirement income from support from current family or partners.

¹¹ ONS (2016b)

Chapter three: attitudes towards saving

Chapter three considers the attitudes towards saving within the population considered, taken from the Wealth and Assets Survey (WAS). The chapter relates only to those individuals who have met the selection criteria for the segmentation. These individuals are of working age and are either employees or self-employed.

Key findings:

Individuals who consider themselves of greater understanding are more likely to be saving for a pension.

There is greater safety associated with saving into a pension scheme, however there is a perception that investing in property would make them more money.

Individuals are underestimating the length of their retirement by around 10%.

Approximately two and a half times as many individuals do not feel that they are saving enough as they need to for their retirement than those who do.

Fewer people expect to use the State Pension or private pension in retirement as a source of income than currently do. (This appears to be a misalignment of perceptions).

Additional properties are expected to provide a source of income in retirement and a number of individuals expect to release value in their main property through downsizing, however physical wealth is not expected to play a major part in retirement income.

25% of individuals expect to live on an income that is inadequate based upon the Turner Report criteria.

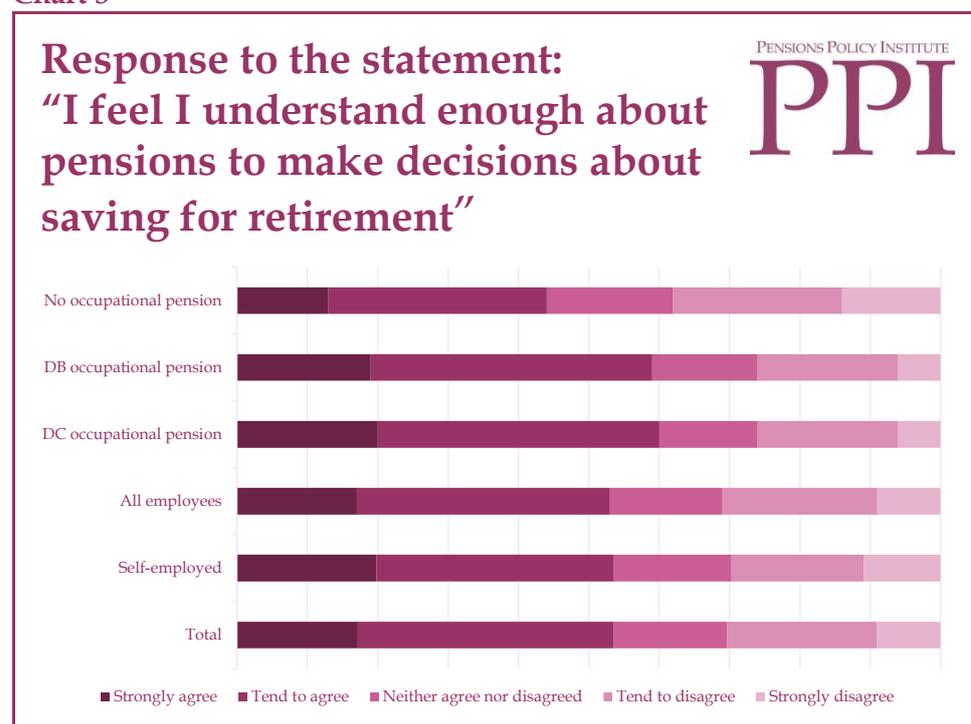
How individuals understand and view saving

Individual's attitudes and behaviour towards retirement saving is based upon many complex factors. These include their understanding of the issues involved, the availability of savings options, as well as their own capacity for saving.

31% of individuals disagree with the statement: *I feel I understand enough about pensions to make decisions about saving for retirement*

There is little difference in self-assessed understanding between employees and the self-employed (Chart 3). This is despite the competing factors of employers being a source of knowledge available only to the employed (although churn between the two groups will reduce this effect) and the greater degree of financial self-reliance associated with the self-employed.

Chart 3



Excludes those with no opinion

A higher proportion of employees who are members of a current occupational pension scheme agree with the statement when compared with employees who are not a current member of an occupational scheme (60% vs 44%). Those who consider themselves of greater understanding are more likely to be saving for a pension.

Risk versus return: there is a perceived difference between the safety of approaches to saving for retirement and making the most of one's money. While there is greater safety associated with saving into a pension scheme, there is a perception that investing in property would make more money (Table 7). This is more extreme in younger people where 18% of 22 to 34 year olds consider investing in property rather than a pension scheme. For older people aged 55-64, only 3% more consider investing in property.

Table 7: The difference between the safest way to save for retirement and the way that makes the most of your money (value)

	Age band									
	22-34		35-44		45-54		55-64		All	
	Safest	Value	Safest	Value	Safest	Value	Safest	Value	Safest	Value
Paying employer pension scheme	36%	23%	38%	26%	41%	29%	40%	28%	39%	26%
Paying into a personal pension scheme	11%	4%	10%	5%	9%	5%	10%	6%	10%	5%
Investing in property	27%	45%	30%	45%	27%	41%	24%	37%	27%	43%
Saving into an ISA	11%	7%	9%	5%	9%	7%	13%	9%	10%	7%
Other financial savings	9%	14%	7%	14%	8%	12%	8%	14%	8%	14%
Other/ Do not know	7%	6%	7%	5%	7%	5%	6%	5%	6%	5%

- Paying into a pension scheme can result in investing (potentially through a default fund) in many different asset classes. This has the tax advantages of being part of the pension system.
- After pension saving and property, ISAs are seen as both a safe method and one which makes the most money.
- Other financial savings includes stocks, shares, premium bonds and high interest accounts.

Saving within a pension scheme, will result in investments being made in a number of the assets listed in Table 7, possibly indirectly through fund investments. The differing tax treatment of the savings vehicle will impact the value derived from the investment. Clearly there are connotations around the options and the perceptions of long-term savings.

For those who do not save into a pension, their reasons are varied and related to their income. There is a greater distrust of companies and pensions amongst the higher earners who express a preference for alternative forms of saving (Table 8).

Table 8: The reasons given for not saving into a pension scheme by salary level

	Non-tax payer	Basic rate	Higher / additional rate	All
Low income / still in education	49%	32%	7%	36%
Too many expenses / bills / debts	22%	24%	16%	23%
Can't afford to (general)	37%	34%	14%	34%
Too early to start a pension	3%	4%	2%	3%
Too late to start a pension	4%	5%	3%	4%
Don't know enough about pensions	10%	12%	11%	11%
Not interested / not thought	6%	8%	11%	8%
Prefer alternative forms of saving	9%	11%	30%	11%
Not eligible	9%	13%	17%	12%
Employer's scheme not attractive	1%	2%	4%	2%
Not staying with employer	3%	4%	5%	4%
Past arrangements are adequate	3%	2%	2%	2%
Don't think I will live that long	2%	3%	2%	3%
Do not trust companies / schemes	7%	9%	17%	9%
Other	5%	6%	14%	6%
Don't know	1%	3%	2%	2%

Columns do not add to 100% as individuals can give multiple responses.

- Lack of knowledge and engagement with pensions accounts for many individuals not contributing to a pension scheme.
- Only very few individuals consider themselves to have achieved sufficient pensions saving already and are not contributing more.

How people see retirement

Currently, the average life expectancy at State Pension age (SPa) is 21.5 years for men and 25.6 years for women.¹² This is skewed by the current SPa for women being 63, 2 years lower than for men. By 2040, life expectancy at SPa (age 67) is 22.3 years for men and 24.3 for women. People have an expectation that the length of their retirement will be shorter than this (20.8 years for men and 22.1 years for women), however this includes those who expect to retire at times other than SPa (Chart 4).

Chart 4¹³



- Individuals are underestimating the length of their retirement by around 10%
 - This could lead to savings goals which are not appropriate to fund the entire period of individuals' retirement.

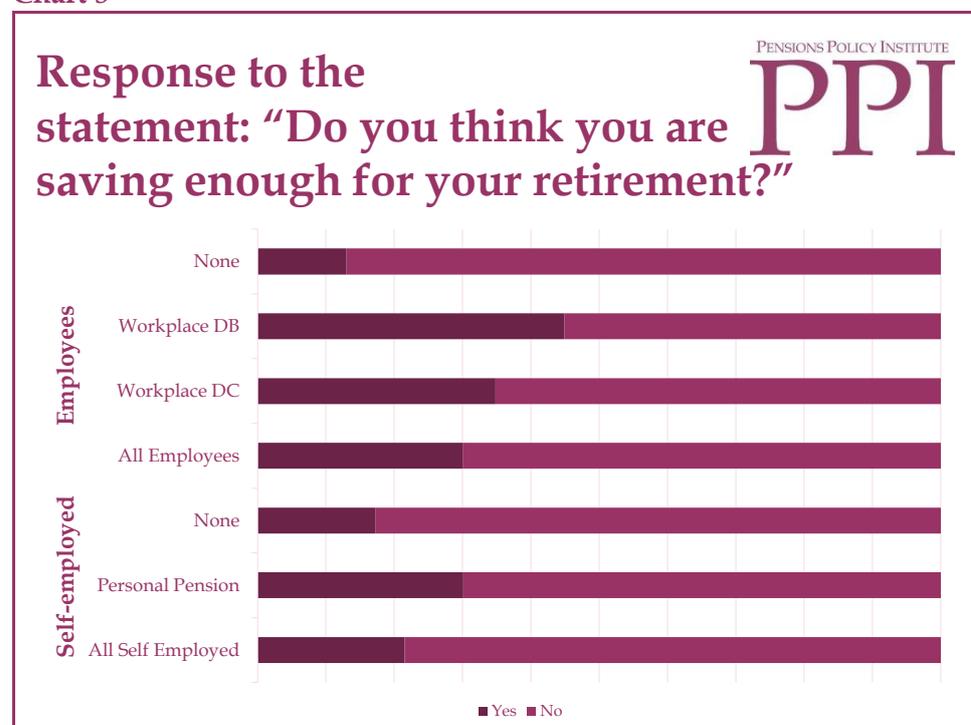
Two and a half times more individuals do not feel that they are saving as much as they need to for their retirement than those who do (Chart 5). A higher proportion of self-employed feel that they are not saving enough and they are less likely to be saving money in a pension (26% of self-employed with a personal pension against 58% of employees who are currently a member of a workplace pension). However, the self-employed are more likely to have property wealth (Table 6) which they perceive as representing a good way of making the most of their money (Table 7).

¹² ONS (2015c)

¹³ ONS (2015c)

Those who think they are saving enough for their retirement is dominated by employees who are current members of an occupational DB scheme, with little difference between those with current DC saving, either employees with an occupational DC pension or the self-employed with a personal pension.

Chart 5



Despite the number of people who do not believe that they are saving enough, 46% are confident that their household retirement income will give them the standard living they hope for which indicates they expect their pension saving to increase in the future.

The expected sources of income in retirement

The potential sources of income in retirement for individuals have remained reasonably consistent. Pension income will be derived from savings of some form and from State Pension entitlement. Income can also be derived from other savings and assets or in support from family and partners. This is supplemented by the UK benefits system.

The percentage of people in receipt of State Pension has remained at 97% over the ten years to 2014/15, however the percentage in receipt of private pension income has grown from 66% to 72% through the growth of both occupational and personal pensions. With the greater coverage of workplace pensions as a result of automatic enrolment, this proportion is expected to increase in the future. The percentage of people earning income in retirement has increased

slightly, however this is generally restricted to the early years of retirement, and there has been a drop in those receiving other state benefits.¹⁴

The expectation individuals have about what sources of income will be available to them in retirement is markedly different. Two thirds of people expect to use the State Pension to provide income in their retirement, and the number of individuals expecting to draw upon private pension income is also below the current level (Table 9). It may be that these individuals do not consider these sources of income to represent a significant part of their retirement income and as such do not consider it as a feature in their retirement income.

Those with greater property wealth, the managerial and professional occupations and the self-employed, are more likely to expect to take an income derived from their property wealth. This is generally through selling or renting out additional properties, and through downsizing their main residence. Few individuals expect to borrow against the value of their property through an equity release type arrangement. Releasing forms of physical wealth does not appear to contribute significantly to people's expected retirement income.

¹⁴ DWP(2016)

Table 9: The expected sources of income people expect to draw upon in retirement

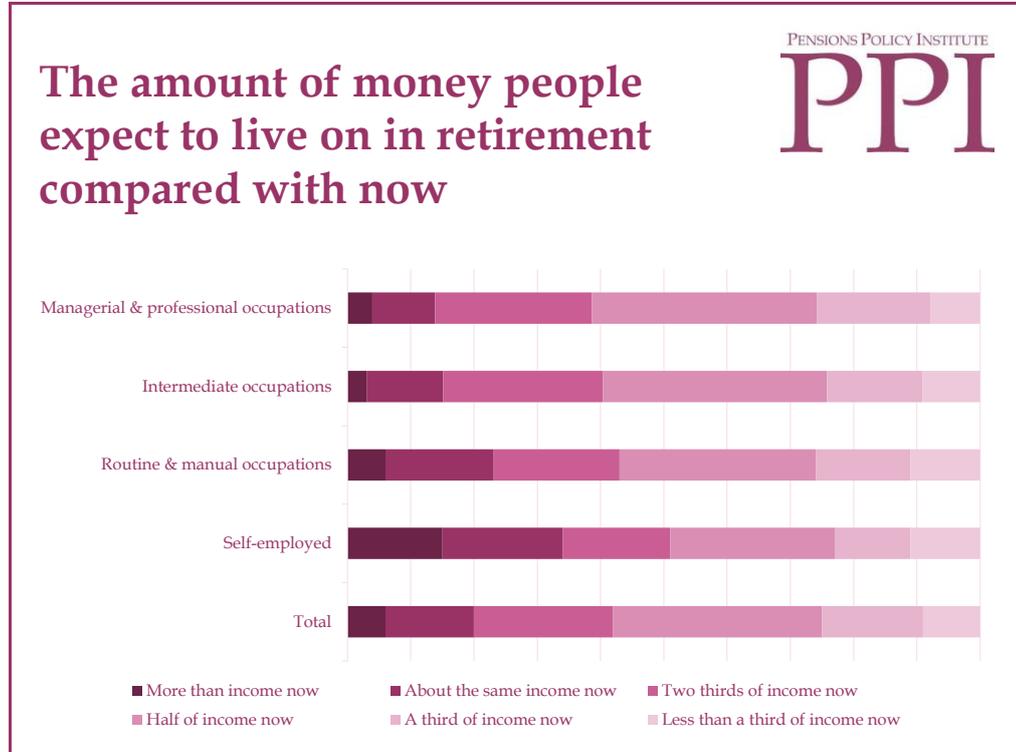
	Employees			Self-employed	Total
	Managerial & professional occupations	Intermediate occupations	Routine & manual occupations		
State Pension	68%	70%	64%	59%	67%
Occupational or personal pension	66%	62%	41%	34%	56%
Savings or investments	43%	35%	24%	28%	35%
Downsizing, less expensive home	26%	22%	13%	19%	20%
Borrowing against the value of home	2%	2%	1%	2%	2%
Renting out rooms in your home	2%	1%	2%	3%	2%
Selling or renting out another property	11%	7%	4%	11%	8%
Income from business or sale of business	5%	3%	2%	13%	3%
Sale of valuables	1%	2%	1%	2%	1%
Inheritance in the future	20%	19%	10%	14%	16%
Support from current family / partner	9%	8%	4%	7%	7%
Support from former partner or someone	1%	1%	1%	1%	1%
Earnings from work	13%	11%	8%	14%	11%
State benefits / tax credits	3%	4%	5%	4%	4%
Other	1%	0%	1%	1%	1%
Don't know / no opinion	1%	1%	4%	3%	2%

The income that people expect to have to live on when compared to their current income shows most people (55%) expect to live on half to two thirds of their current income (Chart 6). The assessment of adequacy suggested in the Pensions Commission's first report¹⁵ uses income related benchmark replacement rates

¹⁵ Pensions Commission (2004)

from 80% for the lowest earners, to 50% for the highest, with a rate of 67% corresponding to median earnings. This results in at least 25% of individuals expecting to have to live on an amount that is inadequate based upon the benchmarks of the Turner report.

Chart 6



Appendix one: segmentation criteria

This appendix details the criteria that were used to segment the saving population. The segmentation was commissioned to be appropriate to enable modelling of a projected outcome using Hymans Robertson's Guided Outcomes® methodology for the Pensions and Lifetime Savings Association (PLSA). This appendix details the considerations made when considering an appropriate segmentation for the projections. The analysis presented within this report reflects additional analysis of the segmented data.

Key considerations

- To project pension saving requires segmentation around the key modelling assumptions used in projecting the saving outcome for an individual.
- 34% of women have taken a career break for family care, whereas men do not significantly exhibit this behaviour.¹⁶
- Private sector Defined Benefit pension schemes have declined by over 55% in the ten years to 2014.¹⁷
- The proportion of self-employed who save into a pension scheme has decreased by 40% over a sixteen-year period.¹⁸
- Communication of results is aided by a simple labelling of groups.

The population to be segmented

The aim of the overarching PLSA's project is to consider the adequacy of savings in retirement for the working population. The population is taken from the Wealth and Assets Survey (WAS) Wave 4 (2012-2014) as this data includes wealth and saving data as well as weighting information against the population of Great Britain. WAS samples private individuals and households in Great Britain and is reliant upon data provided during interviews with these respondents. The PPI work carried out cross-sectional analysis of the population, to provide data for the projection of representative individuals.

Working restrictions:

The segmented population is restricted to those in paid employment who may be in a position to save into an occupational or private pension. Full-time students and the long-term unemployed are excluded as well as those employees who do not have an income (e.g. unpaid family workers) which could be directed to long-term savings.

Age restrictions:

The segmented population has been restricted to individuals aged between 22 and 65. This age restriction corresponds to those ages which are eligible for automatic enrolment.

¹⁶ Corna et al. (2016)

¹⁷ ONS (2015b)

¹⁸ Labour Force Survey Data JOBS01 Workforce Jobs, ONS (2014b) p. 16

The upper age bound eliminates those who have effectively completed their saving for retirement and have insignificant time to notably impact their saving circumstances. However, a proportion of these older individuals may already be in receipt of private pension income. There are individuals who remain working and saving beyond State Pension age (SPa), however this effect is not considered here.

Population for analysis:

After the above restrictions have been applied to the dataset, there are 17,490 individuals of interest, which, when weighted (on a cross-sectional basis) represents 25.5 million UK individuals. This corresponds to the Great Britain workforce between ages 22 and 64 who are self-employed or in remunerated employment.

The UK population in 2013 (mid-point of the WAS Wave 4 survey period) includes 29.8 million people in employment.¹⁹ The difference is due to individuals resident in Northern Ireland, outside the age range of interest, in unpaid employment or full-time students with a part-time job who would all be included in the labour force count. This is in addition to the impact of the differing survey methodologies.

Identified segmentation criteria

The data is segmented by characteristics which influence the projected pensions saving outcomes at retirement. For each segment, a synthetic individual derived from the summary information can be used to define a model point for use in Hymans Robertson's Guided Outcomes® methodology.

Metrics for other forms of wealth (e.g. property wealth) are not projected in Hymans Robertson's Guided Outcomes® methodology, however these are analysed within the PLSA report.

The following criteria have been used to segment the population under consideration. This results in a potential 1,216 permutations, of which 783 are populated. The categorisation of the data is broken down according to the features and subdivisions detailed in Table A1.1.

¹⁹ ONS (2014a)

Table A1: The criteria used to categorise the population

Category	Segments					
Gender	Male			Female		
Age band	22-34	35-44		45-54	55-64	
Retained pension rights	None	Defined Contribution		Defined Benefit	Defined Benefit and Defined Contribution	
Employment status	Employee			Self Employed		
Current pension scheme	None	Occupational pension scheme			None	Private pension
		DB	DC	DB and DC		
Occupational classification	Managerial & professional occupations	Intermediate occupations	Routine and manual occupations		n/a	
Income tax band	Non-tax payer	Basic rate		Higher / additional rate	n/a	

Occupational classification and earnings apply only to employees

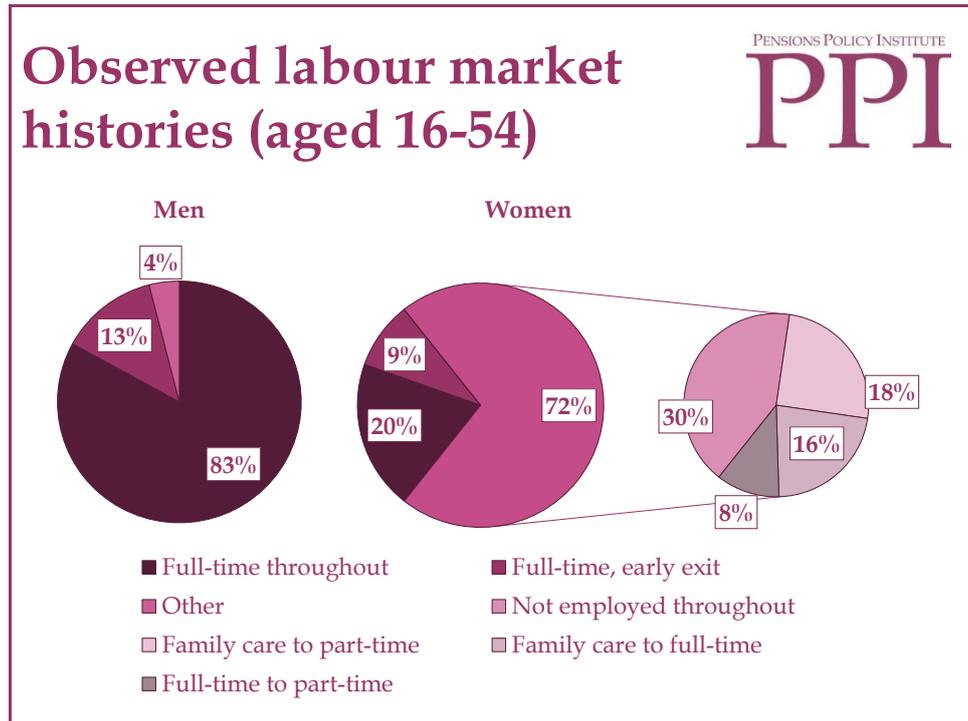
Gender

While the gender of an individual does not affect the wealth and savings directly, there is a significant correlation of pension saving between the sexes. The accumulation of future wealth and of retained pension rights are dependent upon the lifecycle experienced by the individual. Women have historically followed work patterns which are more likely to be interrupted by career breaks, impacting their pension saving. National Insurance credits are awarded to those who are claiming caring benefit, maintaining their State Pension accrual. However, where adequacy depends upon private pension saving this will be impacted from the loss of occupational pension scheme contributions.

Analysis grouping similar labour market experience over a career history from age 16 to 54 has shown that 34% of women take a career break for family care, whereas men do not significantly exhibit this behaviour (Chart A1).²⁰

²⁰ Corna et al. (2016)

Chart A1²¹



Age band

Generally, older workers have accumulated a larger amount of pensions savings as a result of the length of time available to contribute and for their pensions savings to accrue value.

The impact upon future accrual is dependent upon projected earnings over the period until retirement. Earnings patterns vary by age, with both promotional wage increases and work patterns depending upon the age of the individual.

Segmenting by age bands allows for cohort effects to be projected appropriately upon the changing pension landscape. In the private sector, active membership of Defined Benefit (DB) pension schemes has declined by over 55% in the ten years to 2014, as schemes have closed to new entrants or contributions.²² As a result, older workers are more likely to have spent a greater proportion of years accruing benefit in such schemes.

For practical reasons four age bands have been used, see Table A1.

Employment status

Occupational pension schemes have altered significantly over recent years and legislation is in place which applies a framework to occupational pension

²¹ Corna et al (2016)

²² ONS (2015b)

schemes. It is, therefore, paramount to treat those to whom occupational pensions apply separately from the self-employed.

Employees are eligible for automatic enrolment subject to meeting age and income criteria. There is no default opt-in or minimum contribution levels (comparable with the minimum level specified in automatic enrolment legislation) for personal pensions.

The self-employed are less likely to save into a pension scheme than the employed population and the proportion who save in such a way has decreased by 40% over a sixteen-year period.²³ They are excluded from automatic enrolment and typically long-term saving for the self-employed has taken a different form.

Earnings

There is a positive correlation between earnings and savings. To improve homogeneity within the sections, the population is segmented by employment earnings. This reduces the variation of pension saving within each segment.

The self-employed have not been segmented by income. This is due to the often artificial nature of declared self-employment income and the smaller sample size of self-employed individuals.

Employees' earnings have been split across three earnings bands. These are based upon the effective marginal rate of income tax payable upon their employment earnings (Table 1). The personal allowance (£11,000) is close to the current automatic enrolment trigger income (£10,000), and additional segmentation around these differing values is not practicable.

The income used to derive the split is based upon earned income only, which is the basis for pension contributions in the projection modelling. The result is that individuals may not be classified according to their actual marginal tax band, with some individuals paying a higher level of tax due to other sources of income (e.g. income from self-employment).

Occupational classification

The three class National Statistics Socio-economic Classification (NS-SEC) allows a hierarchical differentiation of employees between the categories of managerial and professional occupations, intermediate occupations, and routine and manual occupations, (Table A2).

²³ Labour Force Survey Data JOBS01 Workforce Jobs, ONS (2014b) p. 16

Table A2: The categorisation of the class versions of the National Statistics Socio-economic Classification^{24 25}

Three classes	Five classes	Eight classes
1. Higher managerial, administrative and professional occupations	1. Higher managerial, administrative and professional occupations	1. Higher managerial, administrative and professional occupations
		1.1 Large employers and higher managerial and administrative occupations <i>e.g. Chief Executive, Production manager</i>
		1.2 Higher professional occupations <i>e.g. Doctor, Barrister, Dentist</i>
		2. Lower managerial, administrative and professional occupations <i>e.g. Nurse, Actor, Journalist</i>
2. Intermediate occupations	2. Intermediate occupations	3. Intermediate occupations <i>e.g. Fireman, Photographer, Airline Cabin Crew</i>
	3. Small employers and own account workers	4. Small employers and own account workers <i>e.g. Builder, Hairdresser, Fisherman</i>
3. Routine and manual occupations	4. Lower supervisory and technical occupations	5. Lower supervisory and technical occupations <i>e.g. Train Driver, Plumber, Electrician</i>
	5. Semi-routine and routine occupations	6. Semi-routine occupations <i>e.g. Postman, Care Assistant, Shop Assistant</i>
		7. Routine occupations <i>e.g. Bus Driver, Refuse Collector, Waitress</i>
*Never worked and long-term unemployed	*Never worked and long-term unemployed	8. Never worked and long-term unemployed

Type of pension scheme, current and retained rights

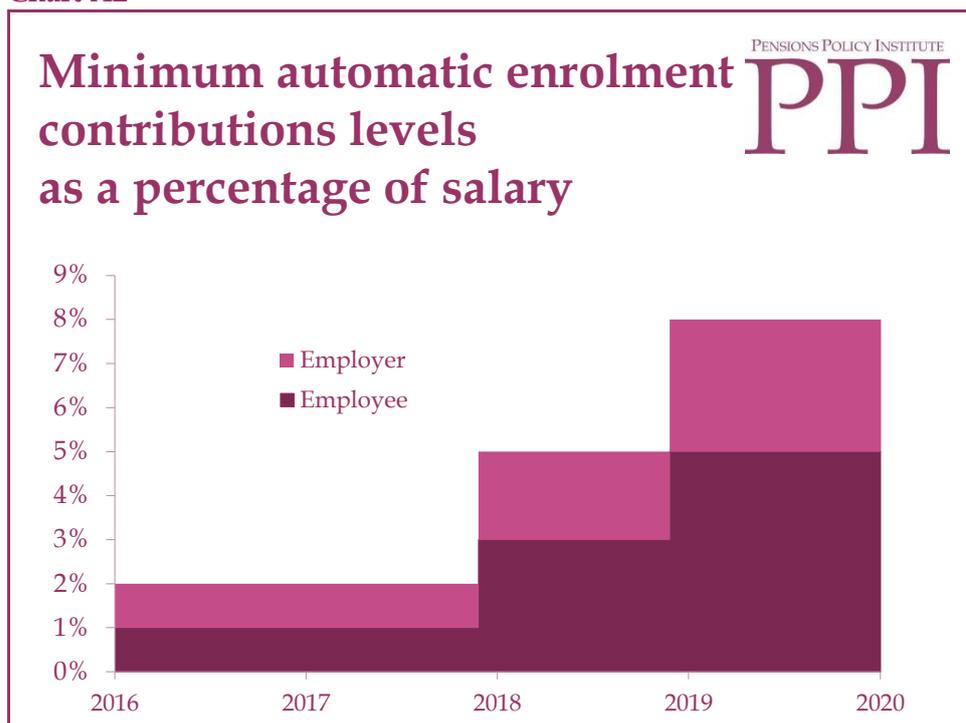
Given the differing projection methodologies of DB and DC occupational pension schemes and personal pensions, it is necessary to define the current pension saving of individuals for projection. It also informs the way that they may be impacted by current reforms or any potential future legislated changes, including:

²⁴ ONS (2010)

²⁵ ONS (2013)

- Members of occupational pension schemes will be subjected to minimum contribution rates as a result of automatic enrolment legislation. This minimum will increase after the date of the survey as higher contribution rates are phased in (Chart A2).
- Employees not currently members of an occupational workplace scheme will be potentially eligible for automatic enrolment, with the likelihood that they join an occupational pension scheme.

Chart A2



Appendix two: definitions

This appendix details the definitions used in the data analysis and maps them to the Wealth and Assets (WAS) Wave 4 2012-2014 data. This appendix should be considered in conjunction with the data dictionaries and derived variable specifications as well as the survey questionnaire.²⁶

Eligibility criteria

To define whether an individual is eligible for the analysis exclusions are placed upon age, employment status and earnings;

- **Age** - greater than or equal to 22 and less than or equal to 64. This is based upon the derived variable for integer age (DVAGEW4, only available in the restricted dataset).
- **Employment** - individuals who are not self-employed (STATW4 = 2) are only eligible where they are classified within an occupational group, thereby excluding the long-term unemployed and those who have never worked. This is performed using the three-class version of the National Statistics Socio-economic Classification identifying as either managerial & professional occupations, intermediate occupations or routine & manual occupations (NSSEC3W4 = 1 or 2 or 3).²⁷
- **Income** - employees who receive no employment income are excluded, based on employment status (STATW4) and earnings (DVGIEMPW4 & DVGISEW4).

Segmentation criteria

The following criteria are used to segment the individuals into 1216 segments.

Table A3: Segmentation categorisation is dependent upon whether an individual is an employee or self-employed

Category	Segments					
Gender	Male			Female		
Age band	22-34	35-44		45-54	55-64	
Retained pension rights	None		Defined Contribution		Defined Benefit	Defined Benefit and Defined Contribution
Employment status	Employee				Self Employed	
Current pension scheme	None	Occ. DC	Occ.D B	Occ.DB and Occ. DC	None	Private pension
Occupational classification	Managerial & professional occupations	Intermediate occupations	Routine and manual occupations		n/a	
Income tax band	Non-tax payer	Basic rate		Higher / additional rate	n/a	

²⁶ ONS (2016a)

²⁷ ONS (2010)

- **Gender:** this is taken from the individual data (SEXW4).
- **Age Band:** this is grouped from the individual age data (DVAGEW4) based upon age last birthday.
- **Retained pension rights:** this is derived from the value of retained pension rights and is grouped by those categories where the value of savings is greater than zero.
 - **Defined Contribution:** retained occupational DC wealth (DVPPFCurValW4), any AVC pension wealth (DVPAVCUVW4), and where the individual is an employee any private pension wealth (DVPPValW4). The value of AVCs, while attached to DB pension schemes is included with DC wealth owing to the style of the benefit provided.
 - **Defined Benefit:** retained occupational DB wealth (DVDBrWealthValW4). This includes additional contributions made which have been used to “buy” more years of entitlement, as the benefit purchased is of a Defined Benefit nature.
- **Employment status:** the self-employed are separated from the rest of the population through their status of employment being self-employed (StatW4 = 2).
- **Current pension scheme:** this is the current scheme to which an individual is assumed to be making pension contributions. Employees are assumed to potentially contribute to an occupational (DB or DC) pension scheme and not a personal pension scheme. The self-employed are assumed to potentially contribute to a personal pension.
 - **Defined Contribution occupational scheme:** (applies to employees only) has a current occupational DC Scheme (DVHASDCW4).
 - **Defined Benefit occupational scheme:** (applies to employees only) has a current occupational DB Scheme (DVHASDBW4).
 - **Private pension:** (applies to the self-employed only) has a private pension (DVHASPPW4).
- **Occupational classification:** (applies to employees only) taken from the three class version of the National Statistics Socio-Economic Classification (NSSEC3W4)
- **Income tax band:** (applies to employees only) this is the effective marginal income tax band payable on employment earnings (DVGIEMPW4) based upon 2012-2014 income tax threshold values (average personal allowance of £8772.50, average higher rate income threshold of £41,962.50). No consideration is given to other sources of income in this banding.

Other forms of non-pension wealth

This information covers both the values of the wealth and the distribution of key features and descriptors.

Physical wealth

- This is based on the household physical wealth (HPHYSWW4), equivalised as detailed in appendix three.

- Distribution statistics are calculated for individuals where some form of physical wealth exists (i.e. percentiles are of non-zero values).

Property wealth

- Property wealth is net of mortgages / equity release
- Total property wealth is based on the household property wealth (HPROPWW4), equivalised as detailed in appendix three.
- Property wealth is broken down into:
 - Main property (DVHValueW4 - TotMortW4)
 - Buy-to-let (DVBltValW4 - DVBltDebtW4)
 - Second homes (DVHseValW4 - DVHseDebtW4)
 - Other property wealth
- The other property wealth is from sources that are not included in the other components, and calculated as the total property wealth minus the sum of the other components.
- Distribution statistics are calculated for individuals who have some form of property wealth (e.g. second home wealth equal to zero is included where there is some other form of property wealth).

Financial wealth

- Financial wealth is taken from personal financial wealth statistics.
- Total financial wealth is the net position of assets minus liabilities (HFINW_ExcENDWW4 - HFINLW4). Endowments are excluded from individual financial assets contributing to wealth.
- Financial wealth is broken down into:
 - Financial assets (HFINW_ExcENDWW4)
 - Financial liabilities (HFINLW4)
- Distribution statistics where there is some financial wealth (e.g. liabilities equal to zero is included where there is some asset value).

Other income information

Incomes

- This is based on personal income data.
- Total employment income (gross) allowing for both employee and self-employed income for those who have both forms of income (GrsPayEmpORSEw4).
- Distribution statistics are calculated where that form of income is greater than zero.

Appendix three: analysis approach and methodology

The data for this analysis was gathered from the Wealth and Assets Survey (WAS) Wave 4 2012-2014. It took information for individuals and households. Individuals are linked to households through the household serial number (HHSERIALW4) allowing household level data to be associated with individuals.

Equivalisation of household wealth

Data that was reported at a household level has been split between the household reference person (HRP) and their spouse if they have one. The HRP is the reference individual for the household and is based on economic activity. If the HRP has a spouse then it assumed that the household wealth is split evenly between them both. This approach is consistent with maintaining the total wealth reported within the survey and representing the access to wealth of any individual.

In the case of a change of household circumstance (e.g. through marriage or divorce) household and potentially personal assets may be redistributed. The manner of this redistribution may not be equal between the parties and not evenly distributed across types of wealth.

Derivation of contribution rates

Contribution rates are calculated for both employers (equal to zero for private pensions) and employees. Contribution rates are calculated as the total contribution to the pension scheme, of fixed amounts, and fractions of salary. These are expressed as a proportion (in basis points) of earned salary. It is assumed that pension contributions will rise in line with salary growth.

The period during which the survey has been conducted pre-dates staging dates for some employers and the minimum contribution rates applicable to automatic enrolment schemes are below the long-term legislated amounts.

Weighting

The population is weighted by cross-section weight (W4xswgt). This allows for non-response and differential sampling probabilities. Weighting in WAS is controlled by grouping in age bands (5-10 year grouping for the population of interest) and region.²⁸

The base within a model point may be low and the weighting is not aligned with all the factors used to segment the data. As a result, of this statistics taken from unweighted data may not be representative of the part of the population that the scaled data would represent, particularly where data is limited and there is significant variance in the values which may not be included within the distribution for a particular segment.

²⁸ ONS (2015a)

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