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Automatic Enrolment Review 2017:

Analytical Report

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Executive summary

This report is the analytical companion to the Automatic Enrolment Review 2017 Report. It sets out in more detail the analysis conducted to inform the review including methodological approaches taken. The report also addresses our commitment to publish an annual evaluation of the effects of Workplace Pension reforms and the delivery of those reforms as set out in the original evaluation strategy (2011)[1] and the updated evaluation strategy (2017).

Analysis presented in the report highlights our main findings against key analytical questions, including:

- To what extent do the Workplace Pension reforms increase the number of individuals saving into workplace pensions? To what extent do the Workplace Pension reforms increase the amount being saved into workplace pensions?
- How many individuals save at or above the minimum contribution rates? Of those employees contributing above the minimum, how many have their contributions matched or exceeded by their employers?
- How many ineligible employees are participating in a workplace pension? How does this differ across ineligible groups?
- What is the current level of undersaving for retirement, including for eligible and ineligible employees? Which groups are undersaving? How does this compare to previous analyses of undersaving?
- What measures exist for assessing adequacy of retirement saving and what are the pros and cons of the different measures?
- What are the impacts of changes to the 1) earnings trigger; 2) Lower Earnings Limit (LEL); and 3) age criteria on the eligible target group and associated costs and benefits?
- At what point in their career/life are people self-employed? For how long are they self-employed? What proportion are self-employed at the same time as being a paid employee/an eligible paid employee? What proportion are self-employed following/before a career as an employee?
- How many employees are multiple job-holders and what is the associated demographic split? How many multiple job-holders are eligible for automatic enrolment? What proportion of multiple job-holders are paying pension contributions?

In addition, analysis has been conducted to test the impact of proposals to a) remove the Lower Earnings Limit (LEL) and b) to change the lower age limit to 18 (from 22)

[1] Department for Work and Pensions (2011) *Workplace Pension reforms evaluation strategy.* At: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/214545/rrep764.pdf

as well as analysis against the statutory requirements (Alternative quality requirements for Defined Benefit (DB) schemes; and Certification of Defined Contribution (DC) and Money Purchase schemes). Existing evidence has also been reviewed regarding the role of engagement in supporting automatic enrolment policy outcomes.

Key findings

The impact of automatic enrolment and wider trends

- Seventy-eight per cent of eligible employees (16.2 million people) participate in a workplace pension (2016), up from 55 per cent of eligible employees (10.7 million) in 2012 before the reforms were introduced. Participation rates were highest amongst the largest employers, those employees earning the most, older employees and were slightly higher amongst women when compared to men. However, the biggest increases in participation have been amongst younger people, those with lower earnings and those working for smaller employers.

- The 2017 Employers' Pension Provision Survey (EPP 2017) found that the average opt-out rate was nine per cent - the same as the previous survey (EPP 2015). Opt-out rates were higher for small and micro employers (an average of 12% and 10% respectively) than for medium and large employers (an average of 9% and 8% respectively).

- EPP 2017 found that cessation rates for all employers stood at 16 per cent and figures were the highest for medium and large employers. Of those employers who had employees who had ceased saving, the majority (67%) had ceased due to leaving their job.

- Employers were adopting levelling down strategies[2] for ten per cent of eligible employees in 2016 - up from six per cent in 2012. However, there is no evidence that this is a result of automatic enrolment and it is likely that other factors have driven employers to try and make savings on their pension costs. Emerging findings from EPP 2017 suggest that employers are primarily absorbing increased contribution costs as part of their 'other overheads'[3] (cited by 70 per cent of employers).[4]

Delivery of reforms

[2] In order to manage the costs of automatic enrolment, some employers may choose to reduce the generosity of contributions or outcomes for existing pension scheme members. This is known as 'levelling down'.

[3] We do not have any additional detail from respondents as to what exactly they meant by absorbing as part of 'other overheads.' It is therefore not clear whether this reflects, for example, cuts to other expenditure.

[4] This proportion may differ from full final survey findings, which will be published in 2018.

- By the end of November 2017, over 9 million workers had been successfully automatically enrolled, with more than 938,000 employers having completed their declaration of compliance over the same period.
- Moreover, by the end of June 2017, the regulator had concluded more than 60,000 cases investigating possible non-compliance by employers.
- Spontaneous awareness of automatic enrolment among employers yet to stage remained strong, with especially strong awareness among those employers expected to stage soon – over 85 per cent of 'early stagers' (employers staging between January and April 2017) were aware of automatic enrolment. 'Early stagers' also tended have a fairly strong understanding of their duties under automatic enrolment, with a rate of just under 70 per cent.
- Across the board, awareness and understanding was strongly linked to staging date – employers with staging dates sooner tended to be more aware of both automatic enrolment itself, and their subsequent duties.

The effect of automatic enrolment on contribution levels and amounts saved

- By 2019/20 an additional £19.7 billion will be contributed to pensions annually as a result of automatic enrolment.
- In 2016, the majority of employees were contributing at a higher rate than the minimum (of one per cent contributions[5]) and were receiving employer contributions at higher rates than currently required by automatic enrolment. Over 5.6 million eligible employees (54 per cent of eligible employees) saving into a workplace pension had a contribution rate of band earnings of two per cent or above and over 6.6 million eligible employees (64%) saving into a workplace pension received an employer contribution of two per cent or above.
- The vast majority of employers matched higher contribution rates made by their employees: in 2016, nearly 94 per cent of automatically enrolled employees in private sector DC schemes contributing over three per cent, received a matching (or higher) employer contribution rate.
- There has been an increase in ineligible employees and their respective employers saving into pensions, with peaks in contributions occurring at the minimum contribution levels. Furthermore, fewer employees, in 2016, contributed nothing, or received zero employer contributions, to a workplace pension than was the case in 2012. In 2016, 813,000 (7.7%) eligible employees with a workplace pension made zero pension contributions, down from one million eligible employees (17.9%) who made zero contributions in 2012. Similarly, in 2016, 165,000 (1.6%) eligible employees with a workplace

[5] Although the mandatory minimum for employees is one per cent of contributions, this can be covered by employers if they choose to pay all contributions for their employees.

pension received zero pension contributions from their employer, down from 196,000 (3.5%) in 2012.

- Median employee contribution rates among workplace pension members in the private sector decreased from 4.5 per cent in 2012 to 2.4 per cent in 2016. Similarly, median employer contribution rates among workplace pension members in the private sector also decreased from ten per cent in 2012 to four per cent in 2016. This is because many of the employees and employers that are newly saving are likely to be making the current minimum contributions specified under automatic enrolment rules - this influx of new savers has therefore brought the overall average rates observed among all savers down.

Undersaving analysis

- Using existing undersaving methodologies and based on existing automatic enrolment rules on coverage and contributions, it is estimated that the introduction of automatic enrolment reduced undersaving from 14 million (45%) to 12 million (38%) individuals. Of the 12 million currently undersaving, around 1.6 million (13%) fell into the bottom two pre-retirement earnings bands (earning less than £25,000 a year in today's earnings terms) while more than half of all undersavers are earning more than £34,500 in the run up to retirement.
- Of the 1.6 million undersavers in the two lower earnings bands, just over half (around 800,000) were within 20 per cent of their target pension income. Therefore, extra saving in this group, e.g. by starting pension saving younger, could effectively reduce undersaving for this group.
- In the absence of automatic enrolment, an estimated 48 per cent of the youngest cohorts would have been undersaving, significantly greater than the 33 per cent amongst the oldest cohorts. The introduction of automatic enrolment has substantially closed that gap to 36 per cent undersaving amongst the youngest cohort.

Review directions analysis

- In 2016, over three-quarters (78%) of workers met both the age and earnings criteria to be eligible for automatic enrolment. An additional seven per cent met the age criteria and had earnings between the LEL and the trigger, so were entitled to employer contributions if they opted in. Similarly, an additional two per cent were aged 18-21 or 65-74 and had earnings over the LEL but below the trigger, so could also opt in with entitlement to employer contributions.
- Removing the LEL would create an additional £2.6 billion in annual pension savings through an additional £1 billion in employer contributions, £1.2 billion in employee contributions and £0.4 billion in income tax relief on individuals' pension contributions in 2020/21.
- Lowering the lower age limit from 22 to 18 increases the eligible target group by 0.9 million individuals and total annual pension savings by £770 million in 2020/21.

- The combined additional pension saving associated with removing the LEL and lowering the age limit to 18 are just over £3.8 billion in 2020/21, comprised of £1.4 billion in additional employer pension contributions, £1.8 billion in additional employee pension contributions and just under £0.6 billion in upfront tax relief on individuals' pension contributions.
- Case studies were used to assess the impact of the proposals (reducing the lower age to 18 and removing the LEL) on individuals:
    - For a National Living Wage earner with a full work history, the proposals would result in: an estimated two per cent reduction in annual net pay (-£235 per year); a 76 per cent increase in annual pension contributions (£470 per year); an 82 per cent increase in pot size at retirement (£40,400); and an 18 per cent increase in annual net pension income (£2,300 per year).

    - For a median earner with a full work history, the proposals would result in: an estimated one per cent reduction in annual net pay (-£235 per year); a 27 per cent increase in annual pension contributions (£470 per year); a 43 per cent increase in pot size at retirement (£55,900); and an 18 per cent increase in annual net pension income (£3,100 per year).

Self-employed transition analysis

- The median length of time until an individual's first period of self-employment is ten years. Just over seven per cent of individuals with a period of self-employment start out as self-employed. The median age at which somebody becomes self-employed is 32.

- The majority (nearly 75%), who had at least one year self-employed, had spent less than half of their working age years with self-employment denoted as the main activity. Around a third (35%) had spent 15 per cent or less of their working-age years with self-employment as their main activity. Only a small proportion (four per cent) had remained self-employed across all years.
- Many of the self-employed had previously spent time in employment: the vast majority (around 88%) of individuals who had had at least one year self-employed also had at least one year where employment was their main activity. Over 47 per cent had more than half of their years with employment as main activity.
- Evidence from analysis of transitions and flows between self-employment, employment and other activity suggest that the flows have increased with each successive generation: for example, approximately 12 per cent of the millennial cohort (aged 20-38) flowed from employment to self-employment each year compared to six per cent of baby boomers (those aged 51 to 69).

Multiple job-holders

- As at the end of the March 2017 tax month, there were approximately 1.11 million people with multiple jobs. The majority of multiple job-holders (MJHs)

(over 70%) were already eligible for automatic enrolment as they earned £10,000 or more in all or at least one of their jobs.

- Of the 1.11 million multiple job-holders, around 975,000 (88%) were aged between 22 and State Pension age (SPA). There were around 78,000 (7%) MJHs between the ages of 18 and 21 and a further 41,000 (4%) greater than SPA.

- Approximately 64 per cent of the MJH population are female - more than the gender split of overall employments where only around 47 per cent of employments belong to female workers.

- Approximately 517,000 (53%) multiple job-holders, between the ages of 22 and SPA, were paying pension contributions, as at March 2017. Furthermore, some of those ineligible for automatic enrolment were making workplace pension contributions: 43 per cent of those ineligible for automatic enrolment despite having a combined income over the £10,000 per year trigger and 32 per cent of those not entitled to receive employer contributions despite having a combined income over the LEL were contributing to a pension.

- Widening the age criteria would increase the overall number of MJHs eligible for AE by around 28,000 individuals aged 18 to 21.

- The proposed removal of the LEL would mean all workers subject to automatic enrolment would pay contributions from £1 of earnings. This would mean MJHs who earned under the earnings trigger in any of their employments could choose to opt in and would automatically be entitled to employer contributions. MJHs earning above the earnings trigger in one or more of their jobs would be entitled to increased employer contributions (from £1).

Engagement analysis

- The 'Automatic Enrolment: Life Journeys' map highlights key findings which may be useful in designing initiatives to support engagement, as follows:
    - Segments at greater likelihood of opting out are mostly concentrated towards the lower end of the income distribution. Therefore initiatives which are designed to reflect their circumstances, capabilities and preferences are likely to have greatest impact.
    - Life transitions or changes which could increase the risk of cessation or opt out interact with re-enrolment. Re-enrolment itself, whether by an existing employer every three years, or at the point when an individual changes job, provides a 'teachable moment' when engagement activity may contribute to an individual remaining enrolled rather than opting out again.

- Younger age groups tend to learn more easily[6], suggesting that information and communications aiming to reinforce inertia, for example by emphasising social norms, may best be targeted at younger age groups. As these people then age, those learned messages may then, over time, create cultural norms and beliefs right across the age spectrum which help to support the default of automatic enrolment and minimise opt out.

Statutory requirements analysis

- Since automatic enrolment was introduced, certification under the alternative quality requirements would have delivered at least as good an outcome for over 90 per cent of jobholders.

[6] Lührmann, M., Serra-Garcia, M. and Winter, J. (2014) 'Teaching teenagers in finance: Does it work?' *Journal of Banking and Finance,* **54,** pp.160-174. In: PPI (2017) *Consumer engagement: the role of policy through the lifecourse.* Available here: http://www.pensionspolicyinstitute.org.uk/publications/reports/consumer-engagement-the-role-of-policy-through-the-lifecourse

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The Authors

Lucy Allen	Research Officer, Department for Work and Pensions
Alex Babb	Assistant Economist, Department for Work and Pensions
Lucy Booth	Principal Research Officer, Department for Work and Pensions
Demi Champney	Assistant Statistician, Department for Work and Pensions
Claire Frew	Senior Principal Research Officer, Department for Work and Pensions
Romeena Masood	Assistant Economist, Department for Work and Pensions
Craig Mitchell	Assistant Economist, Department for Work and Pensions
James Rees	Principal Scientific Officer, Department for Work and Pensions
Ben Savage	Principal Research Officer, Department for Work and Pensions
Stephen Stack	Assistant Economist, Department for Work and Pensions
Dan Sturman	Assistant Statistician, Department for Work and Pensions

List of abbreviations

AE	Automatic enrolment
ASFA	Association of Superannuation Funds of Australia
ASHE	Annual Survey of Hours and Earnings
BAME	Black, Asian, and Minority Ethnic
BSAS	British Social Attitudes Survey
CPI	Consumer Price Index
DB	Defined Benefit
DC	Defined Contribution
DWP	Department for Work and Pensions
EPP	Employers' Pension Provision (Survey)
EQ	Evaluation Question
FCA	Financial Conduct Authority
FRS	Family Resources Survey
HMT	Her Majesty's Treasury
HMRC	Her Majesty's Revenue and Customs
IFA	Independent Financial Adviser
IFS	Institute for Fiscal Studies
JRF MIS	Joseph Rowntree Foundation Minimum Income Standard
L2	Lifetime Labour Market Database
LEL	Lower Earnings Limit
LISA	Lifetime Individual Savings Account
MAS	Monday Advice Service
MJH	Multiple job-holder
NEST	National Employment Savings Trust
NI	National Insurance
NIRS2	National Insurance Recording System
NMW	National Minimum Wage
OBR	Office of Budget Responsibility
ONS	Office for National Statistics
OPSS	Occupational Pension Schemes Survey
PAYE	Pay As You Earn

PPI	Pensions Policy Institute
RTI	Real Time Information
SPA	State Pension age
TPAS	The Pensions Advisory Service
TPR	The Pensions Regulator (also referred to as ‘the regulator’)
UEL	Upper Earnings Limit

Glossary of terms

Active member	Individuals currently contributing to a pension scheme, or having contributions made on their behalf.
Automatic enrolment	The Government introduced a law designed to help people save more for their retirement. This requires all employers to enrol their eligible jobholders into a workplace pension scheme if they are not already in one. In order to preserve individual responsibility for the decision to save, workers have the right to **opt out** of the scheme.
Career average	A **Defined Benefit** (DB) scheme that gives individuals a pension based on their salary times the accrual rate in each year of their working life. Entitlements that are built up each year are revalued in line with inflation or earnings.
Ceasing active membership	If an eligible jobholder chooses to stop paying into an automatic enrolment scheme after the end of the opt-out period, they are said to cease active membership.
Cessation	When a worker has **ceased active membership.**
Contract-based pensions	Pensions where the legal contract is between the individual and the pension provider, usually an insurance company. Also known as **personal pensions**.
Contributions	The amount (often expressed as a percentage of earnings) that a worker and/or employer pays into a pension.
Defined Benefit	A type of occupational pension scheme. In a DB scheme the amount the member gets at retirement is based on various factors. These could include how long they have been a member of the pension scheme and earnings. Examples of DB pension schemes include **final salary** or **career average** earnings-related schemes. In most schemes, some of the pension can be taken as a tax-free lump sum. The rest is then received as regular income, which might be taxable.
Defined Contribution	A type of pension scheme. In a DC scheme a member's pension pot is put into various investments such as shares (shares are a stake in a company).The amount in the pension pot at retirement is based on how much is paid in and how well the investments have performed. The pension can usually be accessed from age 55. These are also known as 'money purchase' schemes.

Eligible jobholder A worker (sometimes referred to as an employee) who is 'eligible' for automatic enrolment. An eligible jobholder must be aged at least 22 but under **State Pension age**, earn above the earnings trigger for automatic enrolment, and work or usually work in the UK and are not already a member of a **qualifying pension** scheme.

Employer size Employer size is determined by the number of employees. For the purpose of staging dates, The Pensions Regulator categorises employer size based on number of employees in Pay As You Earn (PAYE) schemes as follows:

Micro = 1 to 4 employees

Small = 5 to 49 employees

Medium = 50 to 249 employees

Large = 250+ employees

If any alternative definitions of employer size are used, they will be defined in the report.

Entitled worker A **worker** who is aged at least 16 and under 75; works, or ordinarily works, in the UK; and earns below the lower earnings level of qualifying earnings (£5,876 for the 2017/18 tax year**).** Entitled workers are not eligible for **automatic enrolment**, although they can choose to join a **workplace pension**. Their employer is not required to make a contribution if they do so.

Group Personal Pension A type of **personal pension** scheme set up by an employer on behalf of its workers. Although the scheme is arranged by the employer, each pension contract is between the pension provider and the worker. The employer may also pay into the scheme, adding money to each worker's pension pot.

Group Stakeholder Pension An arrangement made for the employees of a particular employer, or group of employers, to participate in a stakeholder pension on a group basis. This is a collective arrangement only; the contract is between the individual and the **pension provider**, normally an insurance company.

Hybrid pension scheme A private pension scheme which is neither purely a DB nor DC arrangement. Typically a hybrid scheme is a DB scheme, which includes elements of DC pension design.

Implementation Refers to the period in which employer duties are being introduced. This will take place between October 2012 and April 2019 by size of employer (from large to small). See also **staging** and **phasing**.

Levelling down	Strategies employers might use to reduce the generosity of contributions or outcomes for existing pension scheme members.
Lower Earnings Limit (LEL)	Individuals pay contributions on a band of earnings – between the Lower Earnings Limit (LEL) and the Upper Earnings Limit (UEL). Where an individual earns over the trigger of £10,000 and they are aged between 22 and State Pension age (SPA), they will automatically be enrolled into a pension and pay contributions on this band of earnings. The 2017/18 levels for the LEL and UEL are £5,876 and £45,000 respectively, reviewed annually.
Master trust	A multi-employer **trust-based pension** scheme, which is promoted to and used by a range of unconnected employers.
NEST	National Employment Savings Trust (NEST). A trust-based workplace pension scheme, established by legislation, to support automatic enrolment and ensure that all employers have access to a quality, low-cost pension scheme with which to meet the employer duties.
Non-eligible jobholder	A worker who is not eligible for automatic enrolment but can choose to 'opt in' to an automatic enrolment scheme and will be entitled to a mandatory employer contribution should they do so. If they do opt in, their employer must still make a contribution. Non-eligible jobholders are in either of the following two categories: a worker who is aged at least 16 and under 75 and earns above the lower earnings level of qualifying earnings but below the earnings trigger for automatic enrolment; or is aged at least 16 but under 22, or between **State Pension age** and under 75; and earns above the earnings trigger for automatic enrolment.
Occupational Pension scheme	A type of workplace pension organised by an employer (or on behalf of a group of employers) to provide benefits for employees on their retirement and for their dependants on their death. In the private sector, occupational schemes are trust-based. Types of occupational scheme include DB, DC and hybrid schemes.
Opt in	**Eligible jobholders** can choose to join the pension scheme nominated by the employer for automatic enrolment during the postponement period, where applicable. **Non-eligible jobholders** and **entitled workers** have the right to do the same at any time.

Opt out	Where a jobholder has been automatically enrolled, they can choose to 'opt out' of a pension scheme. This has the effect of undoing active membership, as if the worker had never been a member of a scheme on that occasion. It can only happen within a specific time period, known as the 'opt-out period'.
Opt-out period	A jobholder who officially becomes a member of a pension scheme under the automatic enrolment provisions has a period of one calendar month during which they can opt out and get a full refund of any contributions made. This 'opt-out period' starts from whichever date is the later of the date active membership was achieved or the date they received a letter from their employer with their enrolment information. After this opt-out period a jobholder can still choose to leave the scheme at any time, but will not usually get a refund of contributions, which will be held in their pension until they retire.
Pensim2	A dynamic microsimulation model to simulate the income of pensioners
Pension provider	An organisation, often a life assurance or asset management company, that offers financial products and services relating to retirement income.
Pension scheme	A legal arrangement offering benefits to members.
Personal pension	An arrangement where the pension is set up directly between an individual and a pension provider. This could be set up by an employer (see Group Personal Pension) or by an individual (sometimes referred to as an Individual Personal Pension). The individual pays regular monthly amounts or a lump sum to the pension provider who will invest it on the individual's behalf. The fund is usually run by financial organisations such as insurance companies or asset managers. Personal pensions are a form of DC pension. See also Contract-based pensions.
Phasing	The Government has set a minimum amount of money that has to be put into the pension by an employer and in total (i.e. employer and worker's contribution). Currently the total minimum contribution is two per cent of the worker's salary of which the employer must contribute at least one per cent and 0.2 per cent comes from the state in tax relief. From 6 April 2018, the minimum contribution rises to five per cent of which the employer must contribute at least two per cent and the state contributes 0.6 per cent in tax relief. On 6 April 2019, the contribution rate rises again to a total of eight per cent of which the employer must contribute at least three per cent and the state contributes one per cent through tax relief.

Postponement	An additional flexibility for an employer that allows them to choose to postpone automatic enrolment for a period of their choice of up to three months. Postponement can only be used for a worker on the employer's staging date; the first day of worker's employment; or on the date a worker employed by them meets the criteria to be an eligible jobholder. If an employer chooses to use postponement, they must provide written notice of this to their workers. This is also called 'deferral'.
Protected groups	Under the Equality Act 2010, protected groups share a particular characteristic against which it is illegal to discriminate. These include race, disability, age and gender.
Qualifying scheme	To be a qualifying scheme for automatic enrolment, a pension scheme must meet certain minimum requirements, which differ according to the type of pension scheme. DC scheme requirements are based on the contribution rate and require a minimum total contribution based on qualifying earnings, of which a specified amount must come from the employer. The minimum requirements for DB schemes are based on the benefits a jobholder is entitled to under the scheme. Hybrid pension schemes contain elements of DB and DC and, depending on what type of hybrid they are, will have to meet either the same, or a modified version of, the minimum requirements for DB or DC pension schemes or a combination of both.
Real Time Information (RTI)	Under RTI, information about tax and other deductions (including pension contributions) under the PAYE system is transmitted to HMRC by the employer every time an employee is paid.
Re-enrolment	Every three years, staff who were automatically enrolled but opted out of or ceased active membership of a pension scheme more than 12 months before an employer's re-enrolment date must be automatically re-enrolled into the scheme. Again, they have the choice to opt out. This prompts them to revisit their initial decision to opt out.
Staging	Refers to the staggered introduction of the new employer duties, starting with the largest employers, based on PAYE scheme size, in October 2012, to the smallest in 2017. New PAYE schemes from April 2012 will stage last, in 2017 and 2018.
Staging date	The date on which an employer is required to begin automatic enrolment. This date was determined by the total number of employees in an employer's largest PAYE scheme on 1 April 2012.

Stakeholder pension	A type of personal pension arrangement introduced in April 2001 which could be taken out by an individual or facilitated by an employer. Where an employer had five or more staff and offered no occupational pension and an employee earned over the lower earnings limit, the provision of access to a stakeholder scheme, with contributions deducted from payroll, was compulsory. Stakeholder pensions are usually a **contract-based** pension scheme, subject to government regulations, which limited charges and allowed individuals flexibility about contributions and transfers, introduced in April 2001. These ceased to be mandatory after the Workplace Pension reforms were introduced.
State Pension age (SPA)	The earliest age at which an individual can claim State Pension.
The Pensions Regulator	Referred to as 'the regulator' and is the UK regulator of workplace pension schemes, including limited aspects of workplace personal pensions. It is responsible for ensuring employers are aware of their duties relating to automatic enrolment, how to comply with them and enforcing compliance. It uses a programme of targeted communications and a range of information to help employers understand what they need to do and by when. TPR is also responsible for regulating occupational pension schemes, including master trusts.
Trust-based pensions	Pension schemes set up under trust law by one or more employers for the benefit of workers. In a trust-based scheme a board of trustees is set up to run the scheme. Trustees are accountable for making decisions about the way the scheme is run, although they may delegate some of the everyday tasks to a third party. See also **Occupational pension scheme** and **Master trust**.
Upper Earnings Limit (UEL)	Individuals pay contributions on a band of earnings – between the Lower Earnings Limit (LEL) and the Upper Earnings Limit (UEL). Where an individual earns over the trigger of £10,000 and they are aged between 22 and State Pension age (SPA), they will automatically be enrolled into a pension and pay contributions on this band of earnings. The 2017/18 levels for the LEL and UEL are £5,876 and £45,000 respectively, reviewed annually.
Waiting period	A type of **postponement**, where new workers or newly eligible workers may have their automatic enrolment delayed for up to three months.

Worker	An employee or individual who has a contract to provide work or services personally and is not undertaking the work as part of their own business.
Workplace pensions	Any pension scheme provided as part of an arrangement made for the employees of a particular employer.
Workplace Pension reforms	The reforms introduced as part of the Pensions Acts 2007, 2008 (and updated as part of the Pensions Act 2011 and 2014). Starting in 2012, the reforms include a duty on employers to automatically enrol all eligible jobholders into a qualifying workplace pension scheme.

1 Introduction

This report is the analytical companion to the Automatic Enrolment Review 2017 Report. It sets out in more detail the analysis conducted to inform the review including methodological approaches. The report also addresses the Government's commitment to publish an annual evaluation of the effects of the Workplace Pension reforms and the delivery of those reforms as set out in the original evaluation strategy (2011)[7] and the updated evaluation strategy (2017).[8]

1.1 Background

Automatic enrolment (AE) requires employers to enrol their employees into a workplace pension scheme if they meet certain age and income thresholds (eligibility criteria). Currently employers have to automatically enrol anybody aged between 22 and the State Pension Age (SPA – age 65 in 2017) who earns £10,000 or more a year. Those that are aged 16-21 and SPA to 74 are entitled to opt into their workplace pension and would be eligible for employer contributions if they earn above the Lower Earnings Limit (£5,876 in 2017/18).

The automatic enrolment policy was first introduced in 2012. There has long been an intention to review the policy in 2017 alongside carrying out the formal review process required by the Pensions Act 2008. In December 2016, the Department for Work and Pensions (DWP) announced the scope of the 2017 Review.[9] This announcement highlighted that the main focus of the review would be to ensure that automatic enrolment continues to meet the needs of individual savers and employers into the future. This would be achieved through an examination of three main strands of the review: 1) **Coverage**: reviewing existing coverage of the policy and considering the needs of those not currently benefiting from automatic enrolment (e.g. multiple job-holders earning below £10,000 per annum in any one job). It also committed to consider how the self-employed could be supported to save for their retirement; 2) **Contributions:** strengthening the evidence around appropriate future contributions into workplace pensions and 3) **Engagement:** exploring how engagement with individuals can be improved so that savers have a stronger sense of personal ownership and are better enabled to maximise savings.

[7] Department for Work and Pensions (2011) *Workplace Pension reforms evaluation strategy.* At: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/214545/rrep764.pdf

[8] https://www.gov.uk/government/collections/workplace-pension-participation-and-savings-trends

[9] http://www.parliament.uk/business/publications/written-questions-answers-statements/written-statement/commons/2016-12-12/hcws339/

Also within the scope of the review was the opportunity to consider whether the technical operation of the policy was working as intended. In addition, the scope included reviewing the requirements set in legislation relating to the statutory review of the alternative quality requirements for DB schemes (section 23A of the Pensions Act 2008) and for the certification requirements for money purchase schemes (section 28 of Pensions Act 2008).

The automatic enrolment review work has been led by a DWP team and supported by an external advisory group. The analysis conducted to inform the review has been led by the DWP team, with support from the external advisory group and other stakeholders.

1.2 Overview of the analytical report

This report will jointly present the analysis conducted as part of the 2017 review of automatic enrolment and the annual evaluation report that updates key findings on the delivery of the Workplace Pension reforms[10] and the impact of automatic enrolment.

The purpose of the evaluation sections of the report (Chapter 2: Impact of automatic enrolment and wider trends; and Chapter 3: Delivery of reforms) is to summarise the evidence on automatic enrolment implementation and progress throughout the year, structured using the 2011 evaluation strategy questions.[11]

A refresh of the Automatic Enrolment evaluation strategy[12] has also been published alongside this report that has been informed by the analysis undertaken for the 2017 Review. Future annual reports (from 2018) will use the updated evaluation questions to monitor progress and the effects of automatic enrolment.[13]

1.2.1 Approach to analysis

Our approach to the analysis was to agree a set of research and analytical questions, broadly against the main themes of the review: Coverage, contributions and engagement (see questions presented in section 1.3 – Report Structure). To answer these questions, a range of primary and secondary analyses was conducted,

[10] Workplace Pension reforms are the reforms introduced as part of the Pensions Acts 2007, 2008 (and updated as part of the Pensions Act 2011 and 2014). Starting in 2012, the reforms include a duty on employers to automatically enrol all eligible employees into a qualifying workplace pension scheme and to make a minimum contribution.

[11] Department for Work and Pensions (2011) *Workplace pension reforms evaluation strategy.* At: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/214545/rrep764.pdf

[12] https://www.gov.uk/government/collections/workplace-pension-participation-and-savings-trends

[13] Due to the staged approach and employer rollout timetable for AE, the evaluation sections of this report have been structured using the original 2011 strategy questions in order to assess the evidence to date. Future evaluation reports will use the updated questions, which have been informed by the findings presented in this report.

including use of a range of existing datasets (e.g. internal modelling on levels of undersaving; Her Majesty's Revenue and Customs (HMRC) Real Time Information (RTI) on multiple job-holders) as well as a review of existing evidence. More detail on the methodology used for the analysis is presented in the Methodology Annexes.

1.3 Review Directions

As presented in the Review Report, the analysis and wider consultation have helped inform proposals for changes to automatic enrolment policy. These are:

a) **Removing the Lower Earnings Limit (LEL)**

Currently (December 2017), the Lower Earnings Limit (LEL) is set at £5,876. This means that, where an individual earns over the trigger of £10,000 and they are aged between 22 and State Pension age (SPA), they will automatically be enrolled into a pension and pay contributions on their earnings between the LEL (£5,876) and the Upper Earnings Limit (UEL – currently £45,000). In addition, anybody earning over the LEL but below the trigger has the option of opting into their workplace pension scheme and will receive mandatory contributions from their employer along with their own contributions.

The 2017 review of automatic enrolment **proposes that the LEL should be removed**. This would mean that employers and employees contributing to pensions through automatic enrolment (those that are earning above the trigger and fulfil the age criteria) will make contributions across an increased band of earnings – they would contribute from the first pound of their earnings (rather than from £5,876) up to the UEL. In addition, this proposal will increase the number of people who are eligible to receive employer contributions as those earning below £5,876 will now be entitled to employer contributions if they choose to opt in.

b) **Changing the lower age limit**

At present anybody aged between 22 and the SPA (65 in 2017) earning above £10,000 a year have to be automatically enrolled into a pension. Those who are aged 16-21 and SPA to 74 are entitled to opt into their workplace pension but would not be eligible for employer contributions unless they earn £5,876 or above.

The 2017 review of automatic enrolment **proposes to change the lower age limit to 18** (while maintaining the upper age limit at SPA). This would mean that those aged between 18 to SPA would be automatically enrolled into their workplace pension scheme if they earned above £10,000 a year. Those aged 16-18 and over SPA would remain eligible to opt into their workplace pension scheme.

Our analysis has sought to test these proposals. The report therefore presents the findings of our analysis against the main research and analytical questions as well as testing the impact of proposed changes to the eligibility criteria of automatic enrolment.

1.4 Report Structure

The first two chapters of the report will address evaluation strategy[14] questions, building on analysis included in the 2016 evaluation report.[15] These chapters and the remaining chapters in the report will cover analysis conducted to inform the 2017 review of automatic enrolment. The structure of the report is as follows:

1.4.1 Evaluation report: Impact of automatic enrolment and wider trends

This chapter builds on analysis included in the 2016 evaluation report,[16] pension participation trends analysis undertaken by the Institute of Fiscal Studies (IFS)[17] as part of the Retirement Savings Consortium, together with relevant DWP analysis to explore the impact of automatic enrolment.

This relates to the following evaluation strategy questions (as included in the 2011 evaluation strategy):[18]

> To what extent do the Workplace Pension reforms increase the number of individuals saving into workplace pensions? (EQ4)
>
> To what extent do the Workplace Pension reforms increase the amount being saved into workplace pensions? (EQ5)

1.4.2 Evaluation report: Delivery of Reforms

This chapter updates key findings from research and analysis by DWP, the Pensions Regulator (TPR) and the National Employment Savings Trust (NEST). This relates to the following evaluation strategy questions:

[14] DWP, Workplace Pension Reforms Evaluation Strategy (2011): https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/214545/rrep764.pdf

[15] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/576227/automatic-enrolment-evaluation-report-2016.pdf

[16] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/576227/automatic-enrolment-evaluation-report-2016.pdf

[17] https://www.ifs.org.uk/uploads/publications/wps/wp1619.pdf

[18] DWP, Workplace Pension Reforms Evaluation Strategy (2011): https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/214545/rrep764.pdf

Were the Workplace Pension reforms delivered to the planned timescales? (EQ1)

Does NEST accept all employers who choose the scheme, while offering low costs to members and remaining financially viable? (EQ2)

Do employers know about, understand and comply with their employer duties? (EQ3)

1.4.3 The effect of automatic enrolment on contribution levels and amounts saved

This chapter builds on analysis presented in Chapter 2 to present additional findings on what has been achieved, highlighting trends in contributions to workplace pension schemes. This includes analysis of eligible and ineligible employees and employers contributing above the minimum contribution rates and assesses the extent to which employers are matching higher employee contribution levels.

The chapter also presents analysis to address the question of 'what is the problem that the introduction of AE is trying to solve?'. This primarily includes findings from DWP analysis of undersaving and the extent to which levels of undersaving have changed overall and across different demographic groups. It also assesses the amount of additional pension saving as a result of AE.

The chapter will also present findings on adequacy, including how an adequate retirement income is defined in the literature.

This section relates to the following research and analytical questions:

Additional saving

How much has been saved through additional pension contributions as a direct result of AE?

Contributions

How many individuals save at or above the mandatory minimum contribution levels?

How many employers pay above the statutory minimum contribution rates?

Of those employees contributing above the minimum, how many have their contributions matched or exceeded by their employers?

How many ineligible employees are participating in a workplace pension? How does this differ across ineligible groups?

Undersaving

What is the current level of undersaving for retirement, including for eligible and ineligible employees?

Which groups are undersaving?

How does this compare to previous analyses of undersaving?

Adequacy

What measures exist for assessing adequacy of retirement saving and what are the pros and cons of the different measures?

1.4.4 Review Directions

This section presents analysis to assess the impact of changes to automatic enrolment policy as described in section 1.2.2.

In this section, the impact of the eligibility criteria is reviewed, and changes to those criteria (including the proposed package of options) on the eligible population and associated costs and benefits. In addition, the 'pays-to-save' analysis presents case studies to demonstrate the impact of the package of options.

This section relates to the following research and analytical questions:

What are the impacts of changes to the 1) earnings trigger; 2) Lower Earnings Limit (LEL); and 3) age criteria on the eligible target group and associated costs and benefits?

What do case studies tell us about the impact on savings relative to a baseline of:

- changing the lower age criteria to 18 (from 22) and removing the LEL
- changing the upper age criteria to 75 and removing the LEL

1.4.5 Coverage analysis – Ineligible groups

The analysis also reviews existing coverage of the policy and considers the needs of those not currently benefiting from automatic enrolment (e.g. multiple job-holders earning below £10,000 per annum in any one job). It also provides analysis to support the review of how the self-employed could be supported to save for their retirement.

In the transitions analysis section, transitions and flows from employee to self-employed status are assessed, including an analysis of trends over time. Real Time Information (RTI) data from HMRC are also used to look at evidence on employees working in more than one job (multiple job-holders).

This section relates to the following analytical questions:

- At what point in their career/life are people self-employed?
- For how long are they self-employed?
- What proportion are self-employed at the same time as being a paid employee/an eligible paid employee?
- What proportion are self-employed following/before a career as an employee?
- How many employees are multiple job-holders and what is the associated demographic split?
- How many multiple job-holders are eligible for automatic enrolment?
- What proportion of multiple job-holders are paying pension contributions?

1.4.6 Engagement analysis

This chapter reviews existing evidence regarding the role of engagement in supporting automatic enrolment policy outcomes. The focus is on workplace pension saving as an individual employee behaviour, and behavioural theory is used to help interpret the evidence. Within this context, engagement is something that can influence behaviour, and can include:

- Whether and how individual employees think and feel about their workplace pension, including their knowledge and attitudes; and
- Initiatives designed to change how individual employees think and feel about their workplace pension, for example by helping people to increase their knowledge of pensions issues or by emphasising social norms.

1.4.7 Statutory requirements

This section presents the analysis used to inform the statutory review of the alternative quality requirements for UK Defined Benefit schemes (section 23A of the Pensions Act 2008) and the certification requirements for money purchase, Defined Contribution personal pension schemes and hybrid schemes (section 28 of Pensions Act 2008).

2 Evaluation report: The impact of automatic enrolment and wider trends in workplace pension saving

This chapter builds on analysis included in the 2016 evaluation report,[19] pension participation trends analysis undertaken by the Institute of Fiscal Studies (IFS)[20] as part of the Retirement Savings Consortium, together with relevant DWP analysis to explore the impact of automatic enrolment.

Summary

- Seventy-eight per cent of eligible employees (16.2 million people) participated in a workplace pension (2016).
- Workplace pension participation was highest in the public sector, amongst the largest employers, employees earning the most, older employees and was slightly higher amongst women when compared to men. However, the biggest increases in participation were amongst younger people, those with lower earnings and those working for smaller employers.
- The average opt-out rate was nine per cent - the same as the previous survey (EPP 2015). Opt-out rates were generally higher for smaller employers.
- Cessation rates for all employers stood at 16 per cent and figures were the highest for medium and large employers. The majority (67 per cent) of employees had ceased due to leaving their job.
- The majority of employees (77 per cent) in 2016 were continuing to save persistently (in at least three out of a period of four years) - up one percentage point from 2010.

[19] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/576227/automatic-enrolment-evaluation-report-2016.pdf

[20] https://www.ifs.org.uk/uploads/publications/wps/wp1619.pdf

- Employers were adopting levelling down strategies for ten per cent of eligible savers in 2016 - up from six per cent in 2012. However, there is no evidence that this is a result of automatic enrolment and it is likely that other factors have driven employers to try and make savings on their pension costs. Emerging findings (EPP 2017) suggest that employers are primarily absorbing increased contribution costs as part of their 'other overheads' (cited by 70 per cent of employers).

- Total membership of occupational pension schemes (eligible and ineligible employees) in the UK was at its highest recorded level in 2016, with 39.2 million people members of schemes– an increase of 42 per cent from 2012 (from 27.6 million).

- Charges in qualifying schemes (schemes used for automatic enrolment) had been lowered to the level of the charge cap or below. On average, all member charges were lower than the 0.75 per cent charge cap, except for non-qualifying contract-based schemes.

2.1 Workplace pension participation statistics

This section looks at measures to indicate the effects of automatic enrolment on increasing the number of savers involved in workplace pensions. DWP analysis of the Office for National Statistics (ONS) Annual Survey of Hours and Earnings (ASHE) data estimates the pension participation trends of eligible employees[21][22] over time; this is broken down according to public and private sector employment, employer size, employee earnings, age and gender.[23] The DWP Family Resources Survey (FRS)[24] provides specific characteristic breakdowns that are not included in ASHE.

Together these annual surveys can be used to monitor shifts in workplace pension participation since the reforms were introduced. The most recent ASHE data[25] were collected with reference to April 2016, showing significant increases in participation and pension saving. The FRS data were collected throughout the 2015/16 financial

[21] Throughout this report *eligible employees* are defined as employees who meet the automatic enrolment age (currently 22 to SPA) and earnings criteria (currently over £10,000 p.a.), and includes employees already a member of a workplace pension scheme.

[22] ASHE collects information from employers on employee jobs, although they are referred to as 'employees.'

[23] For additional breakdowns consult DWP (2017). *Official statistics on workplace pension participation and saving trends for eligible employees*. At: https://www.gov.uk/government/collections/workplace-pension-participation-and-savings-trends

[24] FRS data for 2015/16 was collected between April 2015 and March 2016 and published 16 March 2017. At: https://www.gov.uk/government/statistics/family-resources-survey-financial-year-201516

[25] Statistical bulletin: 2016 Annual Survey of Hours and Earnings: Summary of Pensions Results published on 2 March 2017. At: https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/workplacepensions/bulletins/annualsurveyofhoursandearningspensiontables/2016provisionaland2015revisedresults

year. Therefore any impact of automatic enrolment is likely to be understated since not all eligible employees would have been automatically enrolled due to the staged implementation approach.[26]

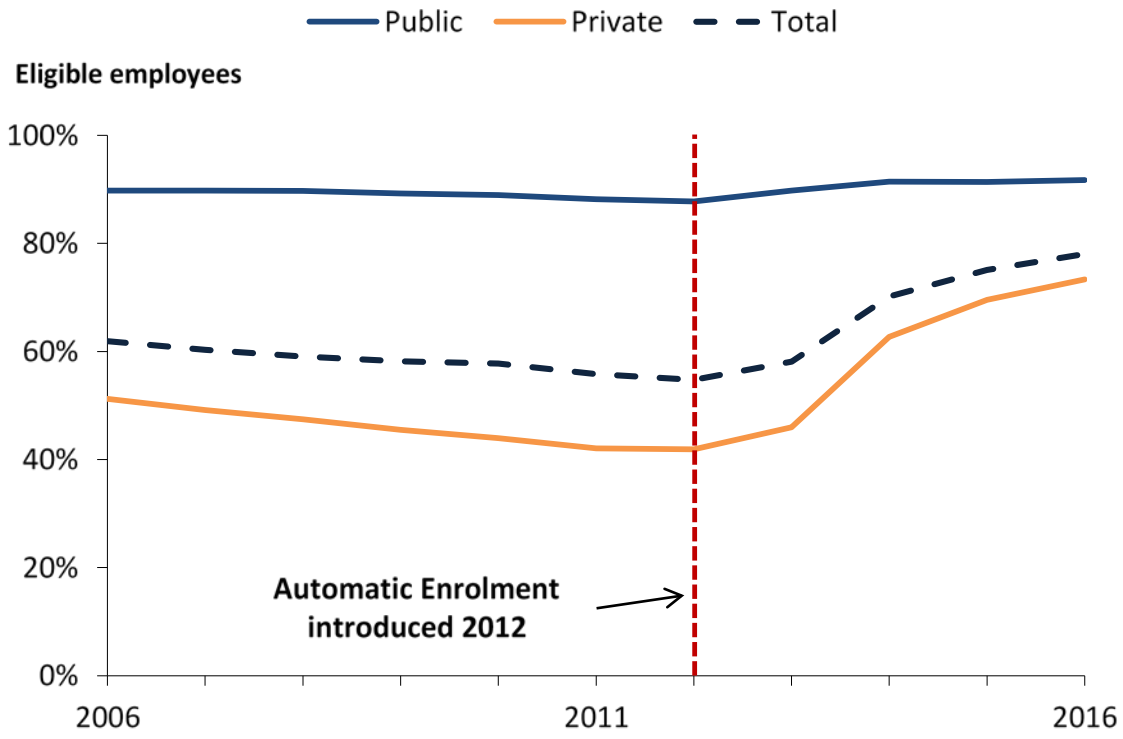
2.1.1 Overall number of savers

Between 2006 and 2012 there was a general downward trend in workplace pension participation of eligible employees, from 62 per cent (12 million) to just 55 per cent (10.7 million). However, since the reforms there has been a significant increase in the number of eligible employees participating in a workplace pension, up to 78 per cent (16.2 million) in 2016.

Figure 2.1 illustrates trends in workplace pension participation for eligible employees by sector over time. Public sector participation remained high in 2016 at 92 per cent (4.8 million employees). Whereas, in the private sector, pension participation declined from 51 per cent (7.2 million) in 2006 to 42 per cent (5.9 million) in 2012. However, since 2012 there was a rise of 31 percentage points to 73 per cent of private sector eligible employees participating (11.3 million) in 2016.

[26] By April 2016 124,487 (mainly large and medium) employers had declared compliance, and 6,214,000 eligible employees had been automatically enrolled. By November 2017 a further 813,692 employers had declared compliance and an additional 2,847,000 eligible employees had been enrolled. By the end of Feb 2018 TPR estimate that over 400,000 more employers will have declared compliance.

Figure 2.1 – Eligible Employees participating in workplace pensions, by sector

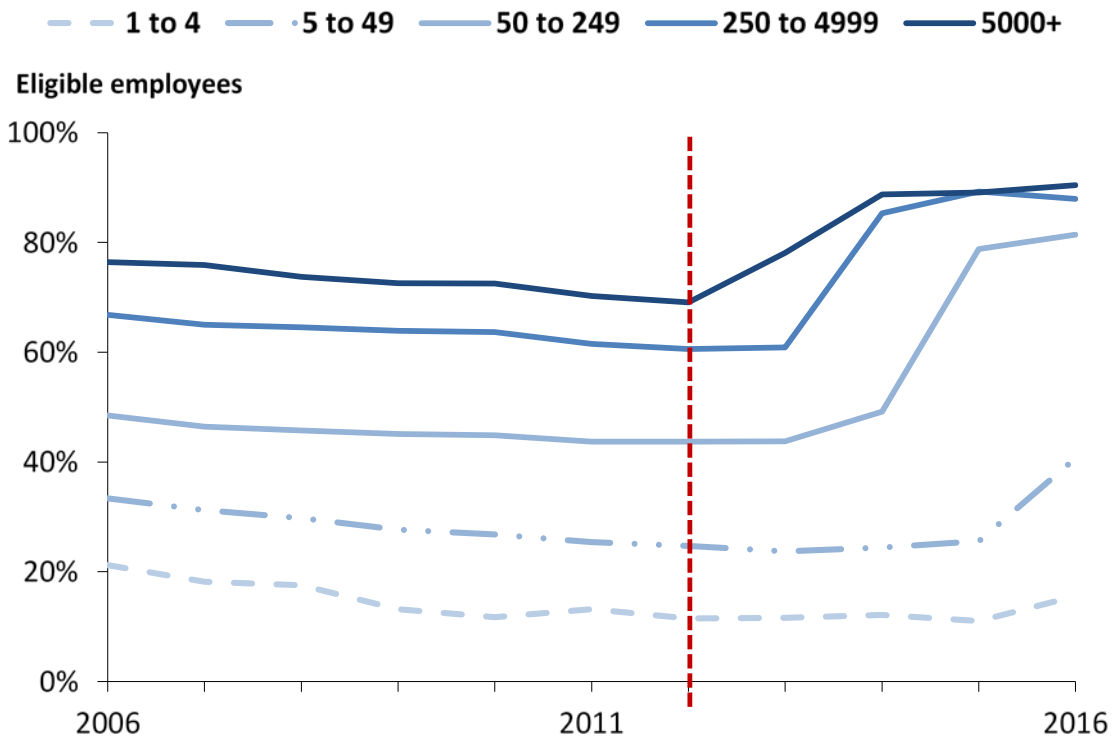


Source: DWP estimates derived from the ONS ASHE, GB, 2006–2016.

2.1.2 Employer size

Figure 2.2 presents the proportion of eligible employees participating in workplace pension schemes by employer size. The chart demonstrates the close relationship between employer size and workplace pension participation. In 2016, the highest participation levels were seen amongst the largest employers, with employers with 5,000 or more employees at 90 per cent participation, compared with just 16 per cent for micro employers (one to four employees). This may historically be explained by the high proportions of employees working for large public sector employers where participation rates have always been high, whereas, the more recent increases correspond with the staged implementation of automatic enrolment which began with large employers.

Figure 2.2 – Eligible employees participating in workplace pensions, by employer size



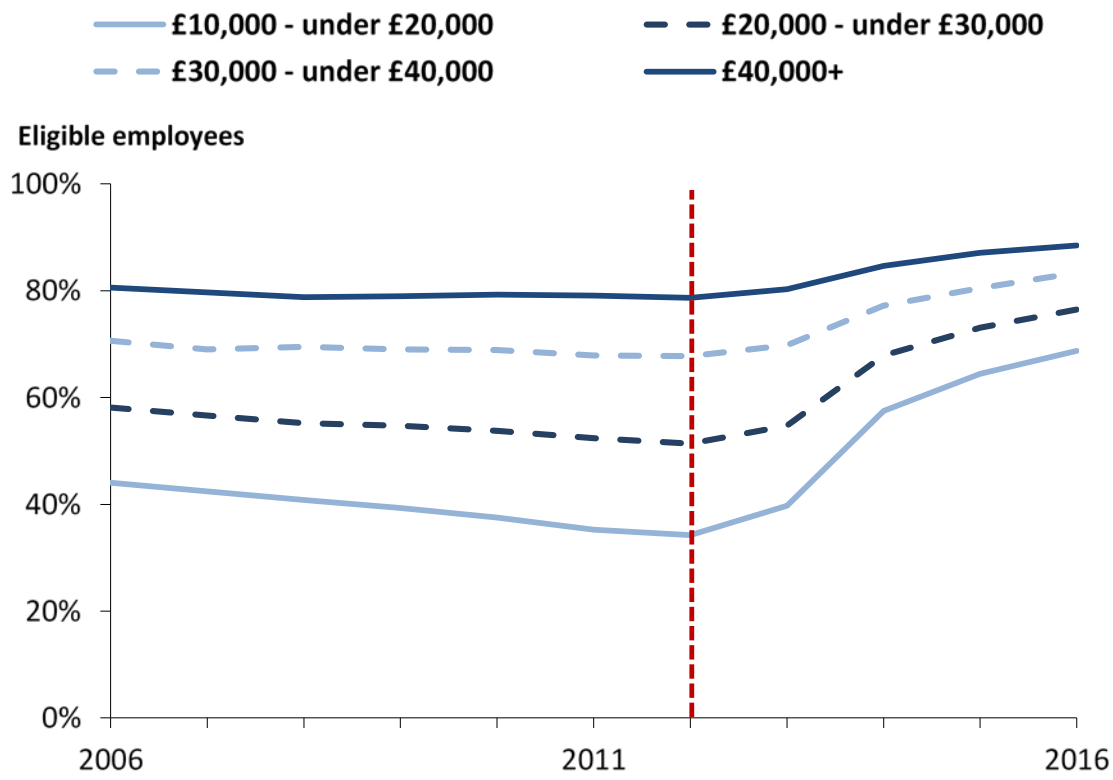
Source: DWP estimates derived from the ONS ASHE, GB, 2006–2016.

Overall, participation amongst eligible employees in 2016 was: 88 per cent for employers with 250 to 4,999 employees; 81 per cent for those with 50 to 249 employees; and 41 per cent for five to 49 employees (an increase of 15 percentage points since 2015). Increases in participation clearly align with the staging profile for implementing automatic enrolment. It is worth noting that at the time of the 2016 ASHE survey many micro and small employers would not have reached their staging date.

2.1.3 Earnings

Figure 2.3 shows the relationship between pension participation and earnings. Those who earn the most (over £40,000) also have the highest participation levels at 88 per cent. However, the introduction of automatic enrolment has seen larger increases in participation amongst lower earners. For example, those earning between £10,000 (the current earnings trigger for automatic enrolment) and £20,000 now have a participation rate of 69 per cent, an increase of 35 percentage points from 2012. As a result the differences in participation rates between earning bands have narrowed since 2012.

Figure 2.3 – Eligible employees participating in workplace pensions, by gross annual earnings



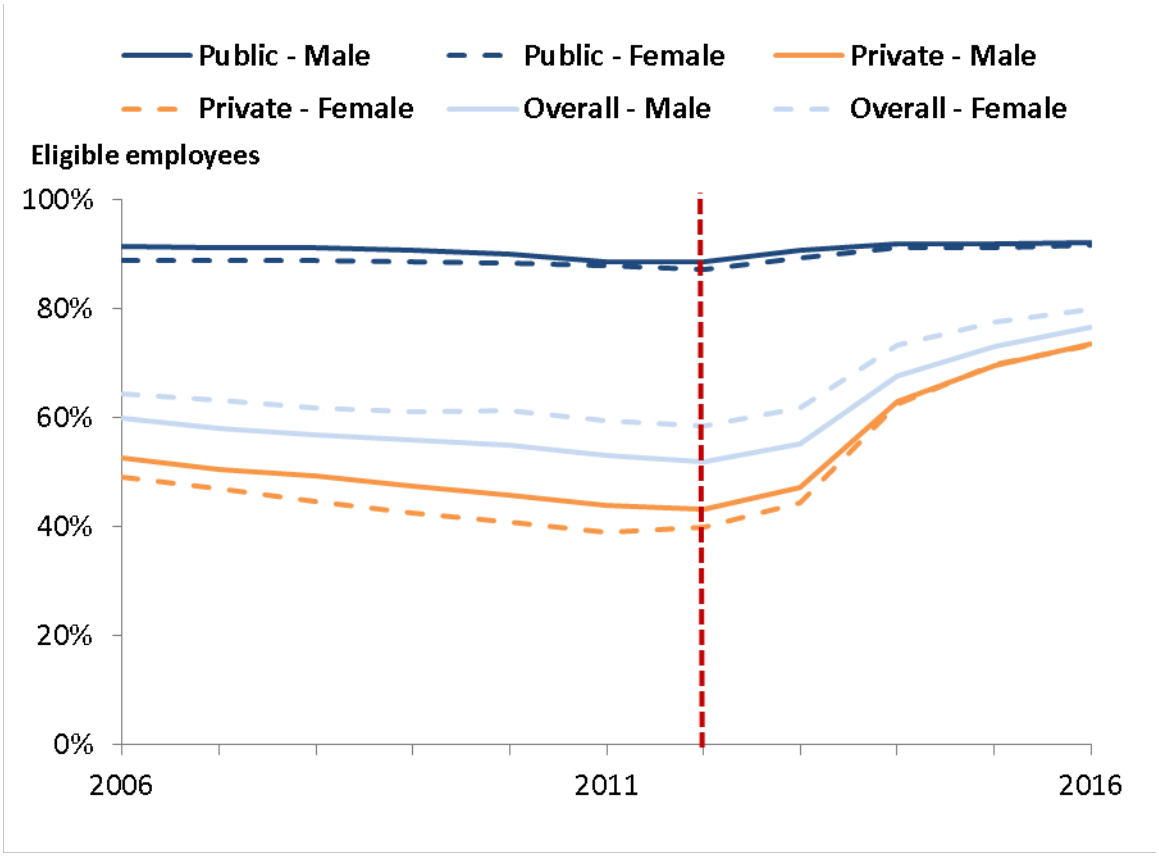
Source: DWP estimates derived from the ONS ASHE, GB, 2006–2016.

2.1.4 Gender

Figure 2.4 illustrates pension participation percentages by gender and sector. Overall, eligible women still have higher participation rates than men (80 per cent compared to 76 per cent). This can be explained by the higher proportion of women employed in the public sector where participation is much higher. In the public sector in 2016, 92 per cent of men and women participate. However, the overall gap in participation (for all men and women in the public and private sector combined) has narrowed from seven percentage points to three percentage points between 2012 and 2016.

Since the introduction of automatic enrolment, the largest increases in participation were seen in the private sector. In 2016, there was no gender gap in participation, with 73 per cent of men and women participating. This represents a 30 percentage point increase for males and 33 percentage points for females since 2012.

Figure 2.4 – Eligible employees participating in workplace pensions, by gender and sector



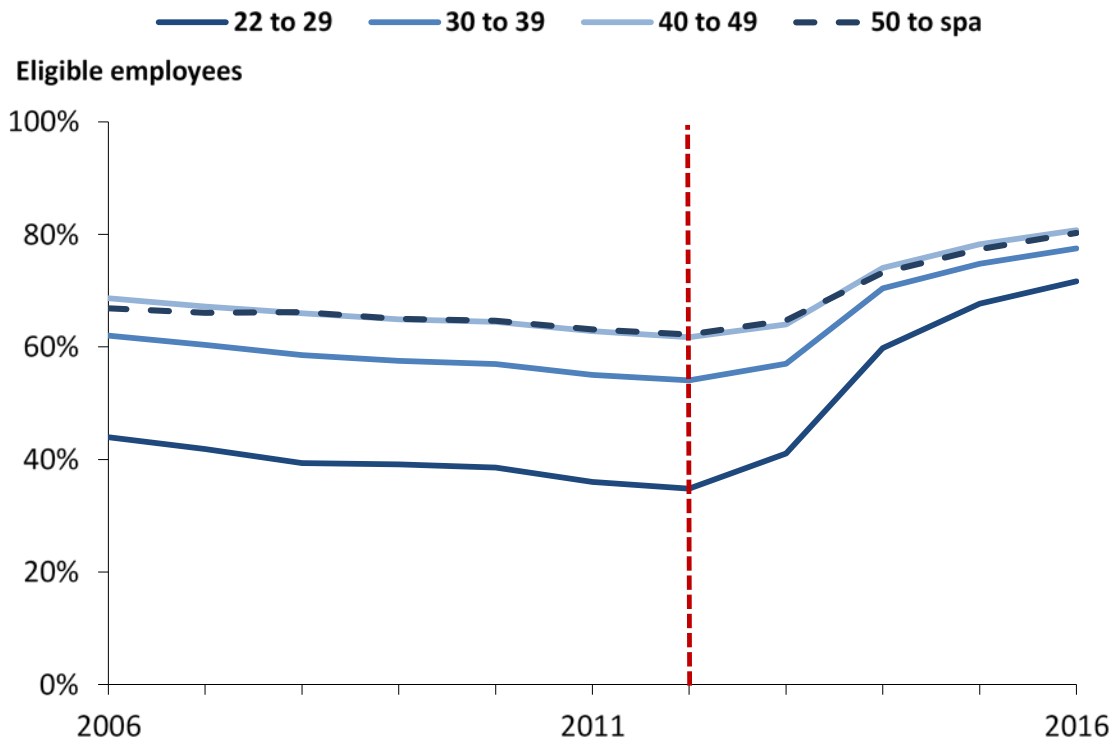
Source: DWP estimates derived from the ONS ASHE, GB, 2006–2016.

2.1.5 Age

Figure 2.5 shows pension participation of eligible employees by age group. Overall, participation remained the highest for older employees, but in recent years there have been significant increases in participation amongst younger age bands and, as a result, some convergence in participation levels between age bands.

The greatest increase between 2012 and 2016 was in the youngest age band; those aged 22 to 29 saw over a 36 percentage point increase in participation to 72 per cent. All other age groups saw an increase over the same period; ages 30 to 39 increased their participation by 23.4 percentage points to 77 per cent, 40 to 49 had a 19 percentage point increase to 81 per cent and those aged between 50 and State Pension Age (SPA) increased participation by 18.1 percentage points to 80 per cent.

Figure 2.5 – Eligible employees participating in workplace pensions, by age band



Source: DWP estimates derived from the ONS ASHE, GB, 2006–2016.

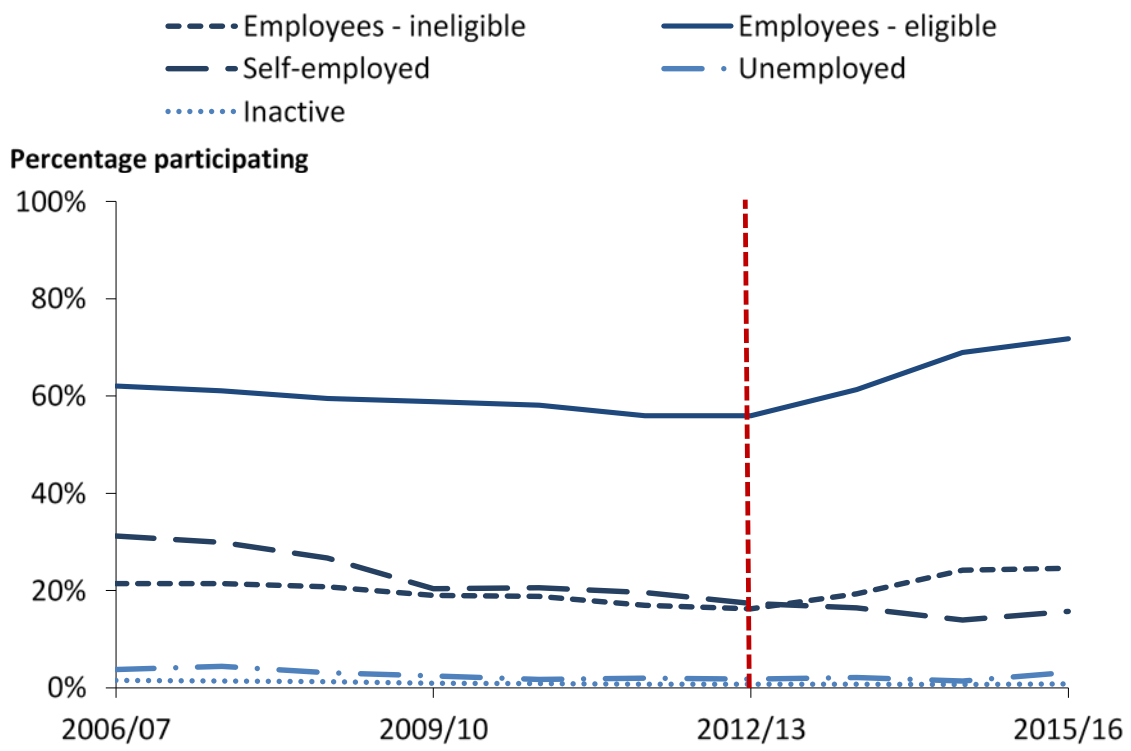
2.1.6 Economic status

Figure 2.6 shows changes to pension participation for eligible employees compared to other economic status groups. Participation of eligible employees increased from 69 per cent in 2014/15 to 72 per cent in 2015/16, reversing the decline in participation seen prior to automatic enrolment.

Participation of ineligible employees was relatively unchanged in 2015/16 at 25 per cent, eight percentage points higher than in 2012/13. Participation of self-employed workers, which had fallen to a low of 14 per cent in 2014/15, increased slightly in 2015/16 to 16 per cent. In general, self-employed workers are not captured by automatic enrolment.[27] Other categories remained relatively stable, with participation of unemployed and inactive workers extremely low as would be expected.

[27] Individuals can usually join NEST if they are self-employed or the sole director of a company that does not employ anyone else (a group known as 'single person directors'). https://www.nestpensions.org.uk/schemeweb/NestWeb/includes/public/docs/NEST-Corp-ARA_2016_2017,PDF.pdf

Figure 2.6 – Participation in all pensions, by economic status



Source: Modelled analysis derived from the Family Resources Survey, UK, 2006/07 to 2015/16.

2.2 Opt-out, cessation and opt-in

Automatic enrolment aims to harness individuals' inertia in thinking about retirement and pension saving, while preserving individual responsibility for the decision about whether to save in a workplace pension by giving people the option to opt out. Opt-out rates[28] are important in providing an early indication of whether automatic enrolment is effective in increasing participation.

[28] Opt out is defined as where a jobholder has been automatically enrolled, they can choose to 'opt out' of a pension scheme. This has the effect of undoing active membership, as if the worker had never been a member of a scheme on that occasion. It can only happen within a specific time period, known as the 'opt-out period'. Opt-out rates are the proportion of automatically enrolled employees that opted out, as captured by the Employer Pension Provision survey.

EPP 2013 and 2015 calculated opt-out rates for all employees automatically enrolled since the employer staged. EPP 2017 calculated rates for all employees automatically enrolled in the last financial year (2016-17) to ensure accuracy of data, given some employers staged several years ago.

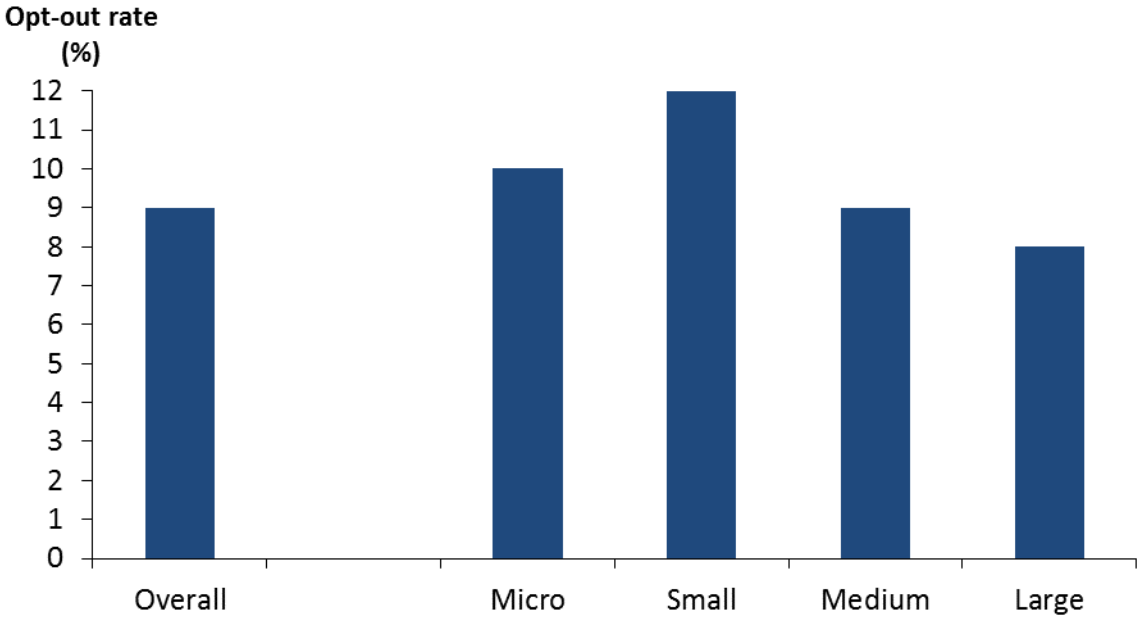
Future research on opt-out rates will be easily comparable with the rates calculated in EPP 2017

The 2015 Employers' Pension Provision (EPP) survey showed that nine per cent of automatically enrolled workers had opted out,[29] with the preceding EPP 2013 survey suggesting a rate of between nine and ten per cent.[30]

2.2.1 Opt-out rates from 2017

EPP 2017 was conducted between July and October 2017, by which time many small and micro employers who had been employers prior to 2012 had staged.[31] Full survey findings will be published in 2018. However, early analysis conducted for the purposes of this report, shows that across all employer sizes, the average opt-out rate was nine per cent. Figure 2.7 shows that slightly higher than average opt-out rates (ten to 12 per cent) were typically associated with micro and small employers.

Figure 2.7 – Average (mean) opt-out rates – overall and by employer size



Source: Employers' Pension Provision Survey 2017

EPP 2017 was conducted at the same time as another DWP survey aiming to quantify the findings from qualitative research with small and micro employers, for which full findings will also be published in 2018. A considerable difference was found between opt-out rates for micro employers in these two surveys: ten per cent in EPP 2017, compared to 23 per cent in the small and micro employer survey.

[29] DWP (2016). *Employers' Pension Provision survey 2015.* At: https://www.gov.uk/government/publications/employers-pension-provision-survey-2015

[30] DWP (2014). *Employers' Pension Provision survey 2013.* At: https://www.gov.uk/government/publications/employers-pension-provision-survey-2013

[31] Estimates regarding the volumes of employers staging in each quarter are available in a series of 'Commentary and Analysis' reports by The Pensions Regulator, here: http://www.thepensionsregulator.gov.uk/doc-library/research-analysis.aspx#s16194

This difference can be explained by the difference in populations surveyed. The small and micro employer survey was aimed specifically at employers who had only just implemented automatic enrolment (staged between September 2016 and March 2017) – so will all have been enrolling workers for the first time. EPP 2017 is likely to have included a sizeable proportion of micro employers that enrolled workers some time ago (staging began in July 2015), so will have been enrolling only new workers during the period being measured.

There may therefore be a difference in culture between the two groups – for new workers coming into an environment where pension saving has been established as normal (producing lower opt out rates), compared to one where established employees might notice a drop in their pay during the initial staging of automatic enrolment (leading to higher opt out rates).

EPP 2017 also investigated opt-out rates for workers who had been automatically re-enrolled, having been enrolled by the same employer but opted-out or ceased saving. Emerging findings suggest that opt-out rates following re-enrolment are around 38 per cent for medium employers and 55 per cent for large employers.[32] This therefore means that 62 per cent of workers who were re-enrolled by medium employers and 45 per cent of workers re-enrolled by large employers remained in saving.

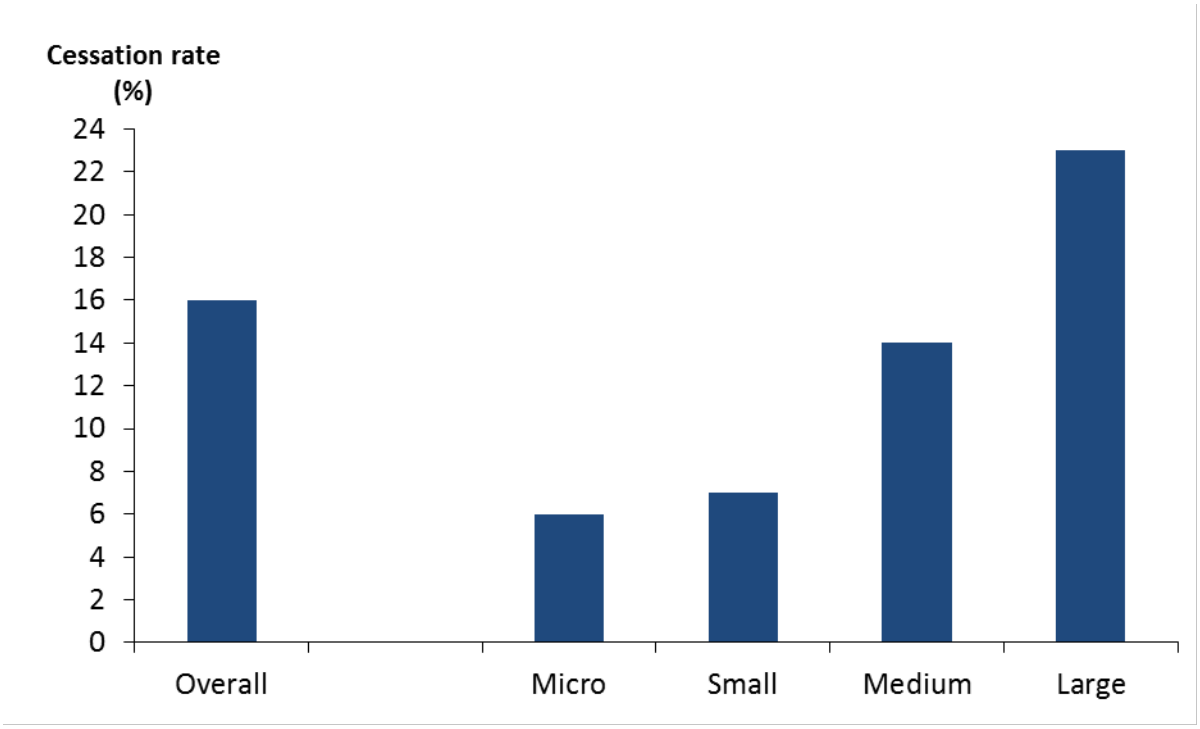
2.2.2 Cessation rates from 2017

The cessation rate refers to the proportion of automatically enrolled workers that have left the scheme following the one month opt-out period. In EPP 2017, employers were asked: 'How many workers who were automatically enrolled in the last financial year have ceased active membership of the scheme-that is left the scheme after one month?'.[33] Responses to this question show that the average cessation rate across all employers for the last financial year (2016-17) stood at 16 per cent. This includes employees who ceased active membership due to leaving their job. Figure 2.8 shows cessation rates by employer size.

[32] These proportions may differ from full final survey findings, which will be published in 2018.

[33] EPP 2013 and 2015 calculated cessation rates for all employees automatically enrolled since the employer staged. EPP 2017 calculated rates for all employees automatically enrolled in the last financial year (2016-17), whether the employer had staged in that year or not, to ensure accuracy of data and allow comparability with future research.

Figure 2.8 – Average (mean) cessation rates – overall and by employer size



Source: Employers' Pension Provision Survey 2017

Around four in ten (41 per cent) of employers said that the majority of employees who had ceased had done so between one to three months after automatic enrolment.[34]

Employers who said that at least some employees had ceased in the last financial year were then asked how this broke down between employees ceasing active membership due to leaving their job, versus those who stayed with their employer but decided to stop saving. On average, employers said that around two thirds (67 per cent) of employees who had ceased did so due to leaving their job.

2.2.3 Opt-in rates from 2017

The opt-in rate for EPP 2017 has been calculated as the number of ineligible workers who were enrolled into the scheme(s) used for automatic enrolment in the last financial year, as a percentage of the number of workers who were not eligible for automatic enrolment immediately before starting to implement automatic enrolment.

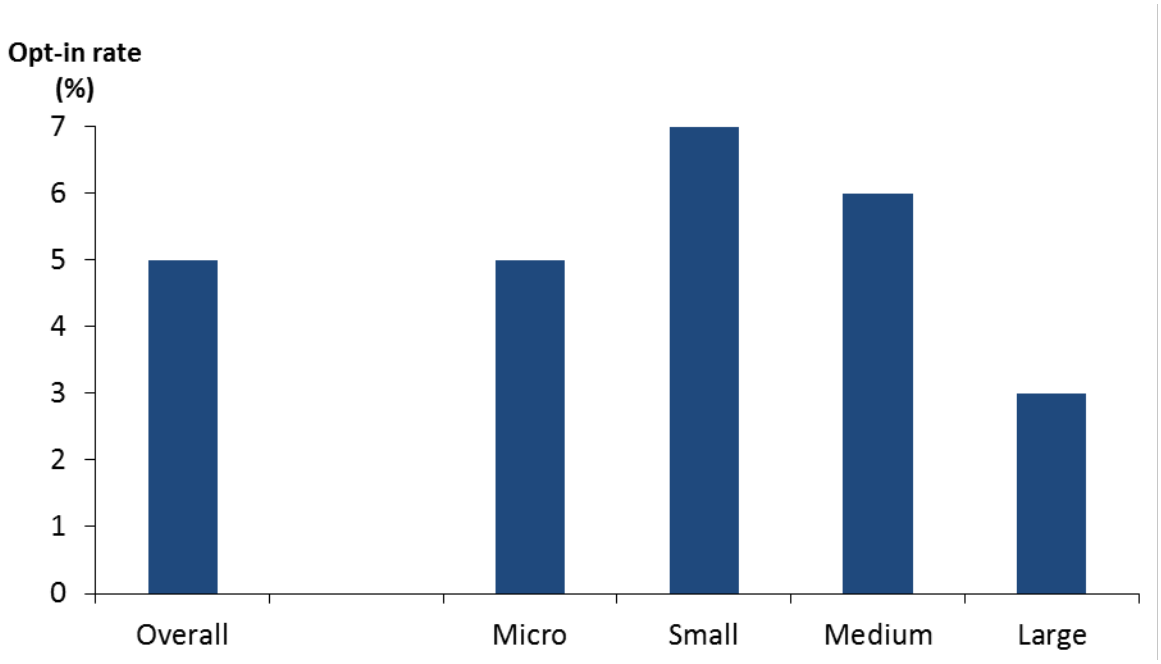
The opt-in rate is calculated only for those employers that had at least one scheme used for automatic enrolment, and who had at least some ineligible employees immediately prior to starting automatic enrolment.

Employers who reported that some ineligible employees had opted in, but did not know how many, have been excluded. Employers who did not know if any ineligible workers had opted in have been excluded, as have those for whom the number

[34] A substantial proportion of respondents (38 per cent) said 'don't know' to this question, most commonly those based at large employers.

opting in was greater than the number of ineligible workers immediately prior to starting automatic enrolment. Figure 2.9 shows opt-in rates by employer size.

Figure 2.9 – Average (mean) opt-in rates – overall and by employer size



Source: Employers' Pension Provision Survey 2017

Figure 2.9 shows some slight variation in mean opt-in rates by employer size. The average (mean) overall opt-in rate was five per cent for all employers; five per cent for micro employers; seven per cent for small employers; six per cent for medium employers; and three per cent for large employers.

Emerging findings from EPP 2017 suggested that some employers were choosing to contractually enrol ineligible employees. When asked why ineligible workers were enrolled into a pension scheme in the last financial year, nearly a quarter of employers (23 per cent) said that it was the company policy to enrol everyone on a pension scheme.[35]

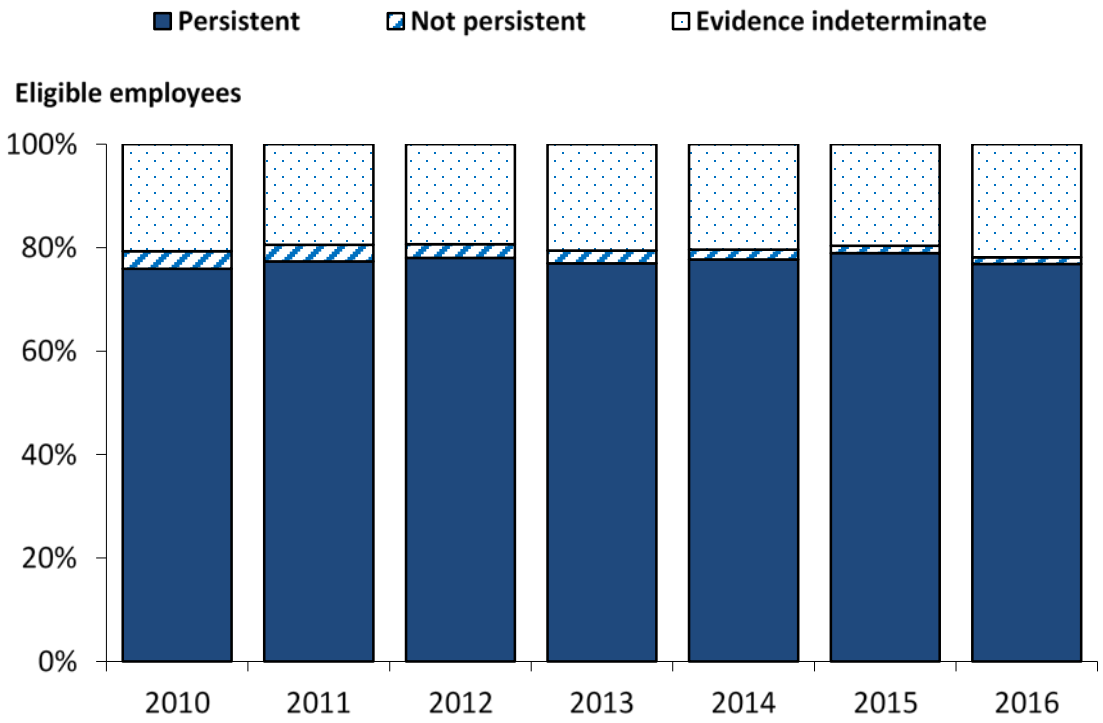
2.3 Persistency

In this report, persistency of saving is defined as saving into a pension in at least three out of a period of four years and was calculated using ONS ASHE data. Figure 2.10 shows the estimates of persistency based on the number of years an eligible saver had been saving in a four-year period. This means the 2016 estimate is based on the number of years an employee has been saving between 2013 and 2016 and

[35] This proportion may differ from full final survey findings, which will be published in 2018.

this measure will be slow to reflect the effect of the increasing trend in workplace pension participation.[36]

Figure 2.10 – Persistency of eligible employees participating in workplace pensions



Source: DWP estimates derived from the ONS un-weighted longitudinal ASHE, GB, 2010–2016.

Note:
1. This analysis shows the persistency measure from 2010, as the ASHE sample was cut in the 2007 and 2008 surveys and resulted in employees for these years moving into the evidence indeterminate group due to a lack of data.
2. An eligible employee can disappear from the cohort either through stopping saving, leaving the labour market, staying with or moving to an employer who does not return the ASHE questionnaire.

Figure 2.10 illustrates that, overall, eligible employees are continuing to save persistently, at 77 per cent in 2016, a slight fall from 78 per cent in 2012. The proportion of eligible savers not saving persistently was one per cent in 2016, and for the remaining 22 per cent there is an indeterminate amount of evidence to categorise them as either persistent or non-persistent.

It was the case pre-automatic enrolment that employees typically chose to be in a workplace pension and, naturally, those who did tended to remain in. Automatic enrolment has brought an increasing number of employees into saving who previously may not have been offered a pension, or may not have chosen to save,

[36] To see a breakdown of persistency of saving by sector, consult DWP (2017). *Official statistics on workplace pension participation and saving trends for eligible employees.* At: https://www.gov.uk/government/collections/workplace-pension-participation-and-savings-trends

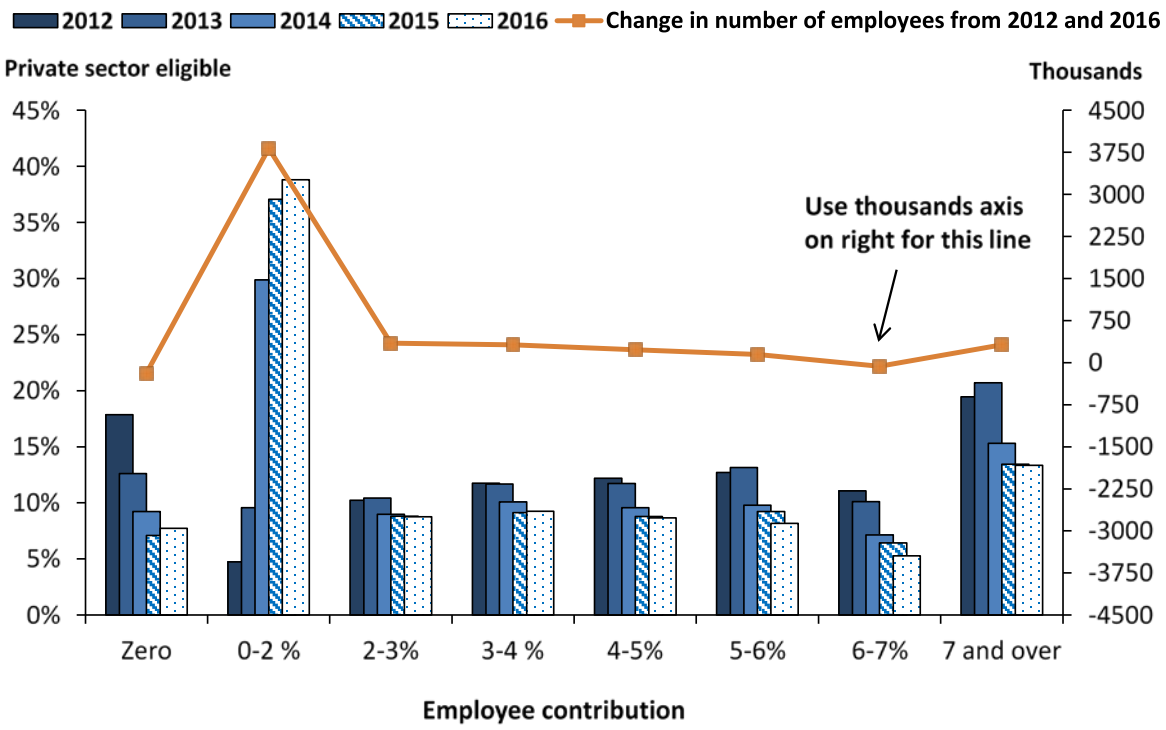
some of whom are likely not to be naturally persistent savers. It is still early days to be looking at persistency post-automatic enrolment but the evidence that does exist provides no indication that there is a reduction in persistency among those in workplace pensions. This is despite bringing in employees who might have been likely to be more marginal savers.

2.4 Contribution rates

This section outlines trends in employer pension contributions over time, using data from ASHE 2016 to explore how employer contributions have changed.

Looking at ASHE 2016, Figures 2.11 and 2.12 show the levels of workplace pension participation for eligible employees in the private sector from 2012 to 2016, broken down by employee and employer contribution rates respectively. The two figures show a considerable increase in the proportion of private sector employees contributing above zero and below two per cent, and their employers contributing above zero and below two per cent on their behalf, which is highly likely to be a result of automatic enrolment where the legal minimum for employer contributions is currently set at one per cent. There was a slight increase from 2015 in the number of employees contributing above two per cent and receiving contributions above two per cent.

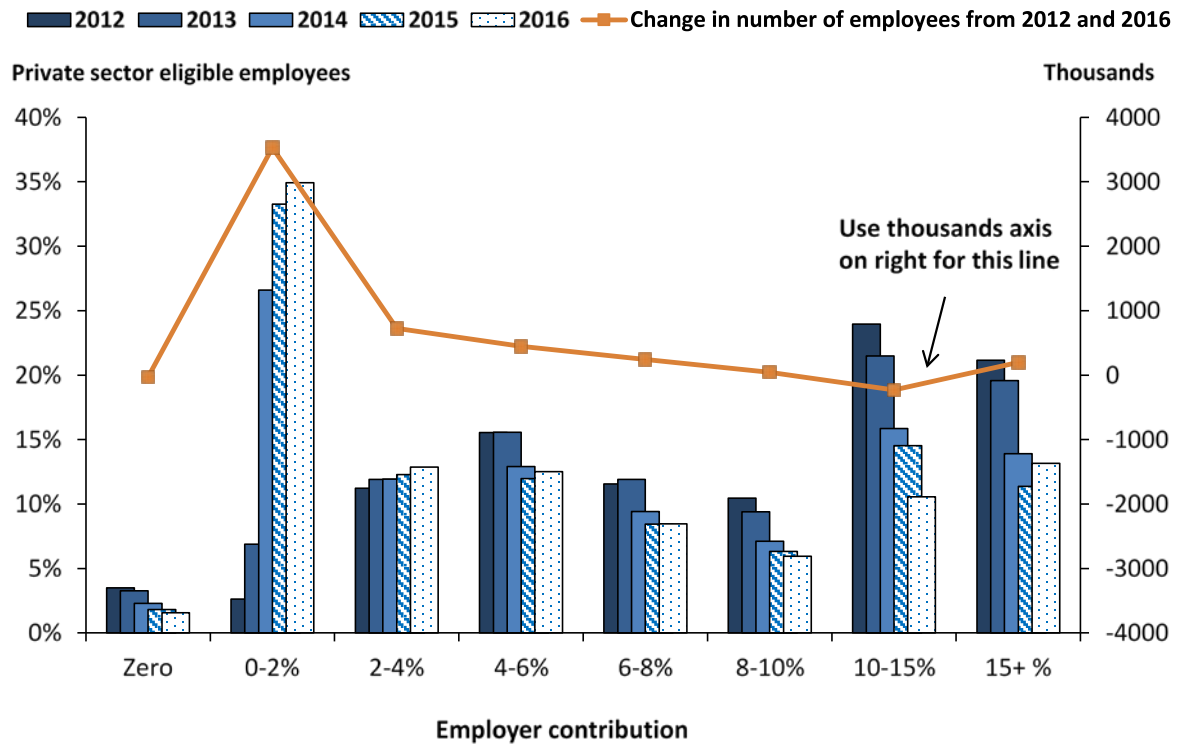
Figure 2.11 – Private sector eligible employees with workplace pensions: percentages by banded rate of employee contribution, 2012-2016



Source: DWP estimates derived from the ONS ASHE, GB, 2012–2016.

Note: Figures for number of employees are for indicative purposes only and should not be considered an accurate estimate of employee job counts.

Figure 2.12 – Private sector eligible employees with workplace pensions: percentages by banded rate of employer contribution, 2012-2016



Source: DWP estimates derived from the ONS ASHE, GB, 2012–2016.

Note: Figures for number of employees are for indicative purposes only and should not be considered an accurate estimate of employee job counts.

Figure 2.12 shows that while the absolute numbers of employees contributing at the higher levels (above two per cent) have broadly remained constant over time, the number of employers contributing at the higher contribution levels have shown a slight decrease over time in some bands.

Looking at EPP 2017 findings, the overall median contribution rate across all employers was one per cent of earnings.[37] Breaking this down by employer size, the median contribution rate was also one per cent of earnings for micro and small employers, rising to two per cent and four per cent among medium and large employers respectively.

EPP 2017 also found that in 24 per cent of schemes used for automatic enrolment, employers were contributing at least three per cent to worker pensions from the start of automatic enrolment. Breaking this down by employer size, the proportion of schemes where minimum three per cent contributions had been made from the start was 36 per cent for large employers, 26 per cent for medium employers, 17 per cent for small employers and 30 per cent for micro employers.

[37] Please note, to avoid confusing EPP survey respondents, the question used to collect this information simply referred to earnings rather than attempting to differentiate between pensionable earnings versus overall earnings.

2.4.1 Levelling down

In order to manage the costs of automatic enrolment, some employers may choose to reduce the generosity of contributions or outcomes for existing pension scheme members. This is known as 'levelling down'. The evaluation aims to monitor the extent to which this happens as a result of automatic enrolment; however, it is important to note these data suggest that at least some forms of levelling down (see Box 2.1) were already taking place before the introduction of automatic enrolment.

EPP 2017 asked employers whether the introduction of automatic enrolment had resulted in an increase in the total pension contributions that their organisation has to make. Emerging findings show that 61 per cent said yes, with 30 per cent saying no.[38] Within this, large employers were the most likely to say it had increased their total pension contributions (82 per cent) with micro employers being the least likely to say so (47 per cent).[39]

EPP 2017 asked employers who said that automatic enrolment had increased their total pension contributions, what their organisation had done to absorb this cost. Emerging findings suggest that only around one in nine (11 per cent) had implemented lower wage increases, with nearly half (48 per cent) saying they had taken a reduction in profits and 11 per cent saying they had increased prices. Most (70 per cent) said they had absorbed it as part of 'other overheads'.[40][41]

Box 2.1 shows nine different levelling down strategies that employers could use. In analysing these data, eligible employees who are existing members of a workplace pension can be placed in one of six 'destinations' as described in Box 2.2.

[38] In comparison, one third of employers stated that they offered pensions before AE in EPP 2011.

[39] These proportions may differ from full final survey findings, which will be published in 2018.

[40] Note that proportions do not sum to 100% since employers may use more than one strategy to absorb costs. These proportions may differ from full final survey findings, which will be published in 2018.

[41] These were the top four reported strategies by respondents (reduction in profits; increased prices; lower wage increases; and absorbed as part of 'other overheads'). We do not have any additional detail from respondents as to what exactly they meant by absorbing as part of 'other overheads.' It is therefore not clear whether this reflects, for example, cuts to other expenditure.

Box 2.1 Strategies employers could use to level down contributions

a) Lower employer contributions for a qualifying scheme for existing members as well as new members.
b) Change definition of pensionable pay to adjust the amount of contribution paid.
c) Lower employer contributions by paying contributions as a lump sum, rather than as a proportion of earnings.
d) Increase employee contributions to offset reduction in employer contributions.
e) Freeze the level of pensionable pay for employees.
f) Defined Benefit (DB) schemes could be changed from final salary to career average or hybrid schemes, or to a Defined Contribution (DC) scheme.
g) Accrual rates of DB schemes could be lowered.
h) Operate a different scheme for new scheme joiners with lower employer contributions.
i) Operate a different scheme to certain employees with different contribution rates. For example, higher contributions restricted to management grades.

Box 2.2 Employee destinations for ASHE analysis of levelling down

No levelling down: These employees show no evidence of levelling down of employer contributions.

Levelling down: These employees show evidence that levelling down has taken place.

Evidence indeterminate: There is not enough evidence available to make a judgement about whether levelling down has occurred or not.

Pension saving stopped: Employees in this group must be saving in a workplace pension in Year 1 and must not be saving in a workplace pension in Year 2.

Pension type switched: Employees in this group must be saving in a workplace pension in Year 1 and saving in a different type of workplace pension in Year 2 (e.g. from DB to DC scheme).

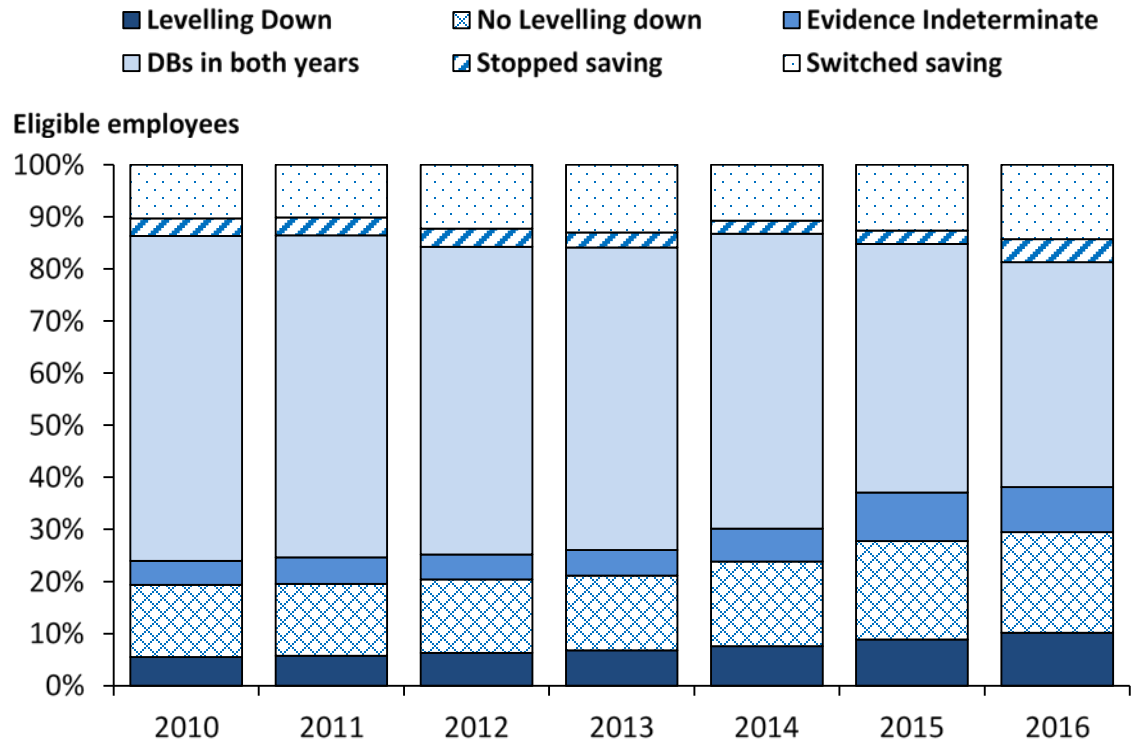
DB: DB schemes in both years. This includes public sector DB schemes.

2.4.2 Levelling down for all eligible savers

In this analysis each year shown represents the difference between that year and the previous year. For example, 2016 shows the difference between 2015 and 2016.

Figure 2.13 shows the rate of levelling down, as defined here, over time from 2010. These data suggest that prior to 2012, employers were adopting levelling down strategies (see Box 2.1) for around six per cent of eligible savers. This rose to ten per cent of eligible savers in 2016. The largest change was observed in the proportion of eligible savers with DB schemes in both years which fell from 62 per cent in 2010 to 43 per cent in 2016.

Figure 2.13 – Levelling down: Eligible savers' employer contributions to a workplace pension



Source: DWP analysis of the ONS un-weighted longitudinal ASHE, 2009-2016

Whilst this analysis shows that the rate of levelling down, as defined, has increased slightly since 2012, the most recent analysis by the IFS does not find any evidence that this is a result of automatic enrolment.[42] It is likely that other factors have driven employers to try to make savings on their pension costs.

2.4.3 Trends in occupational scheme provision

The Occupational Pension Schemes Survey (OPSS) is an annual survey of occupational pension schemes in the UK that is run by the Office for National Statistics (ONS).[43] Unlike much of the analysis in this report, the OPSS covers all employees and not just those eligible for automatic enrolment.[44]

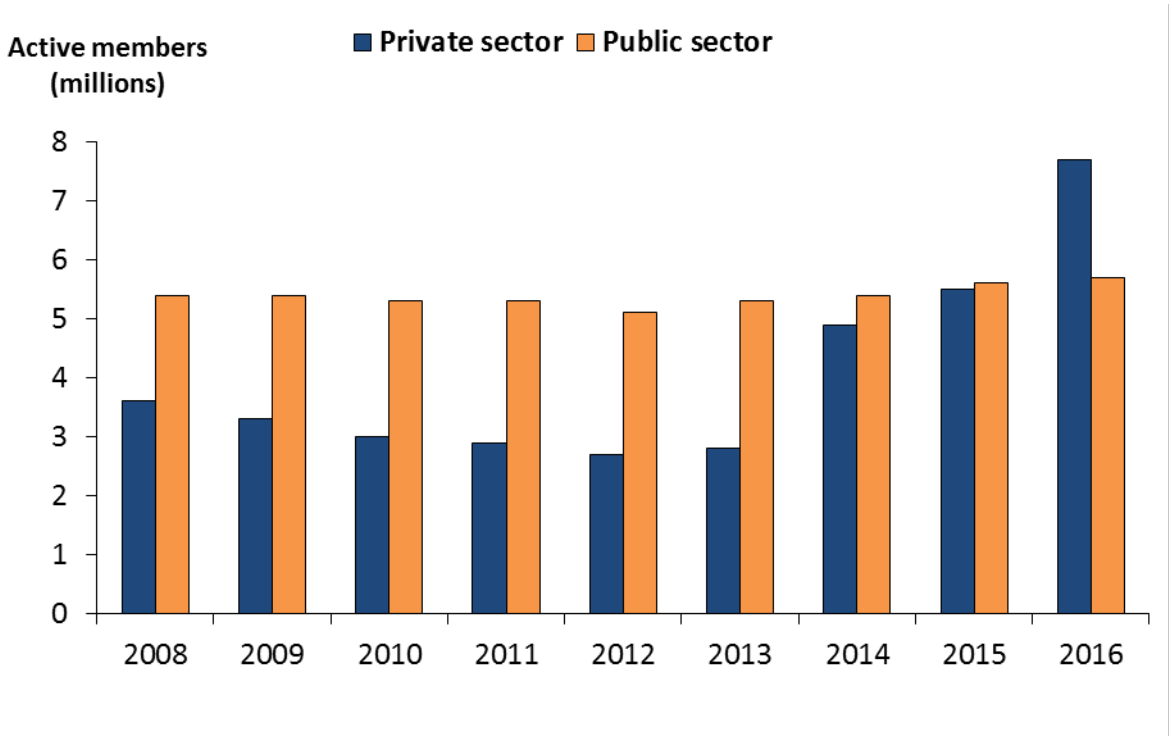
[42] Cribb, J. and Emmerson, C. (2016) *What happens when employers are obliged to nudge? Automatic enrolment and pension saving in the UK.* Institute for Fiscal Studies. At: https://www.ifs.org.uk/publications/8733

[43] ONS (2017). *Occupational Pension Schemes Survey, UK: 2016.* At: https://www.ons.gov.uk/peoplepopulationandcommunity/personalandhouseholdfinances/pensionssavingsandinvestments/bulletins/occupationalpensionschemessurvey/uk2016

[44] However, the OPSS does not include state pensions or personal pensions, the latter being based on individuals entering into a contract with a pension provider. OPSS does not cover group personal

Overall, the survey suggests that the total membership[45] of occupational pension schemes in the UK is at its highest recorded level, with 39.2 million people being members. This represents an increase of 17.1 per cent from the previous year's figure (33.5 million). As illustrated by Figure 2.14, active membership[46] of occupational pension schemes was 13.5 million in 2016, split between the private (7.7 million) and public sector (5.7 million).

Figure 2.14 – Active membership of occupational pension schemes by sector



Source: Office for National Statistics

Looking specifically at private sector occupational pension membership by type of scheme, the survey suggests that active membership of private sector DC schemes, which remained around one million from 2008 to 2012 (Figure 2.15), rose to 3.2 million in 2014, 3.9 million in 2015, and 6.4 million in 2016, following the roll-out of automatic enrolment.[47] In contrast, active membership of private sector DB schemes

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pension (GPP) arrangements, such as stakeholder and self-invested personal pensions, where the contract is facilitated by the employer(s).

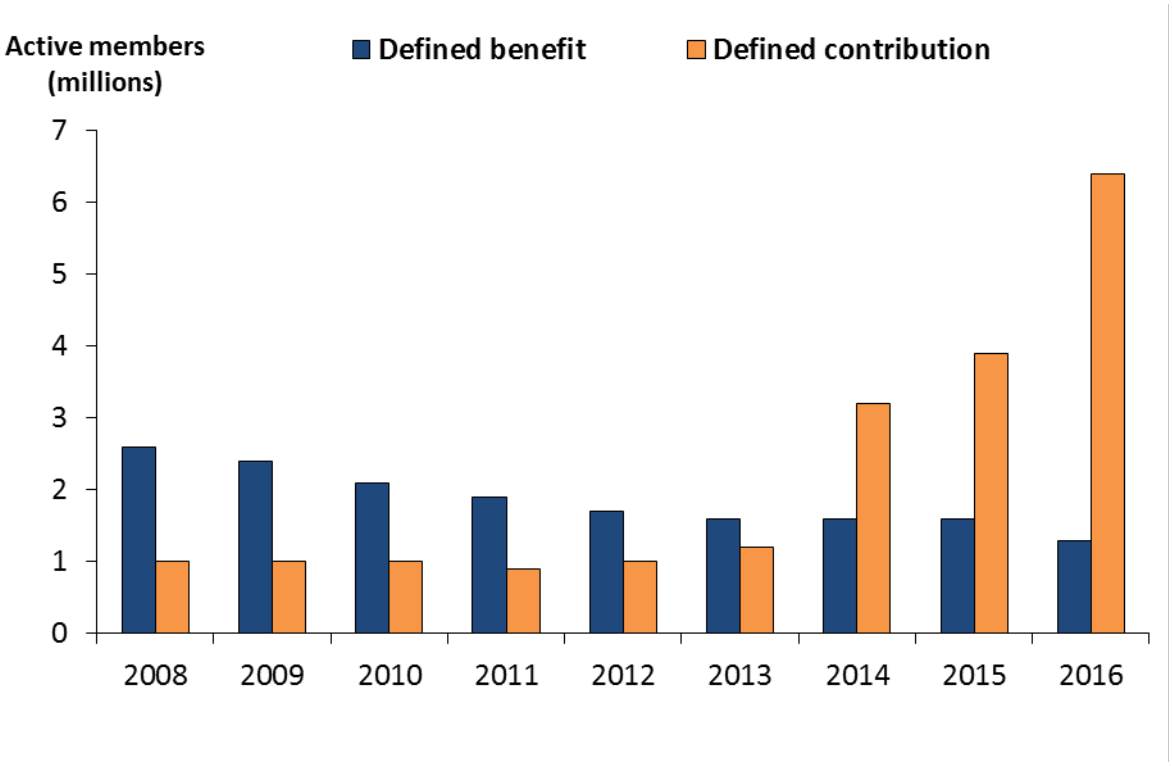
[45] Total membership of occupational pension schemes consists of: 1) active members (current employees who are currently contributing to the scheme, or having contributions made on their behalf; 2) pensioner members (those receiving pension payments); 3) members with preserved pension entitlements (members who are no longer actively contributing into the scheme but have accrued rights that will come into payment at some point in the future).

[46] Active members of an occupational pension scheme are those who are contributing to the scheme, or having contributions made on their behalf. They are usually current employees of the sponsoring employer.

[47] It should be noted that AE will lead to a bigger increase in memberships than the numbers of individual savers because over time people will have multiple pots.

remained at around 1.6 million between 2013 and 2015, before falling to 1.3 million. While employers could use DB schemes for automatic enrolment, the minimum requirements for a qualifying scheme focus on DC provision.

Figure 2.15 – Active membership of private sector occupational pension scheme by benefit structure



Source: Office for National Statistics

2.5 Pension Charges Survey results

The Government introduced a series of measures in 2015 to protect workers automatically enrolled into DC workplace pension schemes.

The DWP Pension Charges Survey 2016[48] provides recent data on the full range of charges that were applied to DC workplace pension schemes open to new members in the period after April 2016. The survey was designed to measure the impact of the charges measures by comparing charges in the year leading up to their implementation (April 2015) to charges in the period after they had been fully implemented (April 2016). Table 2.1 shows the average annual ongoing charges for members and the percentage of members whose charge falls within the cap, by scheme type, while Table 2.2 shows the like-for-like change in the average ongoing charge by scheme type and size.

[48] DWP (2017). *Pension Charges Survey 2016*. At: https://www.gov.uk/government/publications/pension-charges-survey-2016-charges-in-defined-contribution-pension-schemes

Table 2.1 – Average annual ongoing member charges, and percentage of members whose charge was within the 0.75 per cent cap, by scheme type

Scheme size	Qualifying schemes (mean ongoing charge)				Non-qualifying schemes (mean ongoing charge)			
	Contract-based	Master trust	Trust-based	Unbundled trust-based	Contract-based	Master trust	Trust-based	Unbundled trust-based
Average annual ongoing charge	**0.54%**	**0.48%**	**0.38%**	**0.42%**	**0.86%**	**0.65%**	**0.70%**	**0.72%**
Percentage of members within cap	*98%*	*100%*	*99%*	*96%*	*21%*	*53%*	*50%*	*71%*

Table 2.2 – Like-for-like change in the average ongoing charge pre-April 2015 to post-April 2016

Scheme size	Qualifying schemes (change in mean ongoing charge)			Non-qualifying schemes (change in mean ongoing charge)		
	Contract-based	Master trust	Trust-based	Contract-based	Master trust	Trust-based
Total	**-0.07%**	**(No change)**	**-0.09%**	**-0.02%**	**-0.05%**	**-0.03%**
1-5	-0.20%	-	-0.18%	+0.01%	-	+0.01%
6-11	-0.20%	-	-0.17%	+0.01%	-	+0.01%
12-99	-0.16%	-	+0.05%	+0.02%	-	+0.05%
100-999	-0.07%	-	-0.14%	-0.03%	-	-0.04%
1,000+	-0.03%	-	-0.09%	-0.07%	-	-0.05%
Percentage of members within cap	*+21ppt*	*(No change)*	*+11ppt*	*(No change)*	*-1ppt*	*+1ppt*

Charges in qualifying schemes (schemes used for automatic enrolment) had been lowered to the level of the cap or below. On average, all member charges were lower than the 0.75 per cent charge cap (including unbundled schemes, measured for the first time in 2016), except for non-qualifying contract-based schemes. Among qualifying scheme members, the members of the smallest pension schemes benefitted the most: their ongoing charges fell by 0.2 percentage points on average.

3 Evaluation report: Delivery of Reforms

This chapter updates key findings from research and analysis by DWP, The Pensions Regulator (TPR) and the National Employment Savings Trust (NEST). This relates to the following evaluation strategy[49] questions:

Were the Workplace Pension reforms delivered to the planned timescales? (EQ1)

Does NEST accept all employers who choose the scheme, while offering low costs to members and remaining financially viable? (EQ2)

Do employers know about, understand and comply with their employer duties? (EQ3)

Summary

- Once fully implemented, an estimated ten million workers will be newly saving or saving more in a workplace pension as a result of AE.
- By the end of November 2017, over 9 million workers had been successfully automatically enrolled, with more than 938,000 employers having completed their declaration of compliance over the same period.
- Moreover, by the end of June 2017, the regulator had concluded more than 60,000 cases investigating possible non-compliance by employers.
- Spontaneous awareness of automatic enrolment among employers yet to stage remained strong, with especially strong awareness among those employers expected to stage soon – over 85 per cent of 'early stagers' (employers staging between January and April 2017) were aware of automatic enrolment. 'Early stagers' also tended have a fairly strong understanding of their duties under automatic enrolment, with a rate of just under 70 per cent.
- Across the board, awareness and understanding was strongly linked to staging date – employers with staging dates sooner tended to be more aware of both automatic enrolment itself, and their subsequent duties.

[49] DWP (2011), Workplace Pension Reforms Evaluation Strategy: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/214545/rrep764.pdf

3.1 Eligible target group

DWP estimates that there are 11 million workers in the eligible target group[50] for automatic enrolment.[51] Of these, ten million workers are estimated to be newly saving or saving more by 2018 because of automatic enrolment.

3.2 Role of The Pensions Regulator

The role of the regulator is to maximise compliance with the employer duties and safeguards set out in pensions regulation, using a risk-based approach to deter, prevent or address non-compliance. It also plays a key role in regulating trust-based occupational pensions used for automatic enrolment.

3.2.1 Employer staging forecast

The regulator published an updated forecast of employers who are expected to stage until the end of 2019-2020 in its 2017 'Automatic enrolment: Commentary and analysis' report.[52] This is a forecast, so the data are presented as a range of how many employers are due to stage and have AE duties, as illustrated by Figure 3.1. As an example, the forecast suggests that between April and June of 2018 (Q1 of 2018/2019), there are between 57,000 and 71,000 small and micro employers with eligible staff due to stage.

The forecast is, by its nature, uncertain and it does not account for future economic factors, such as threshold changes or the effect of the National Living Wage, to give a few examples. Please note, the forecast does not account for:

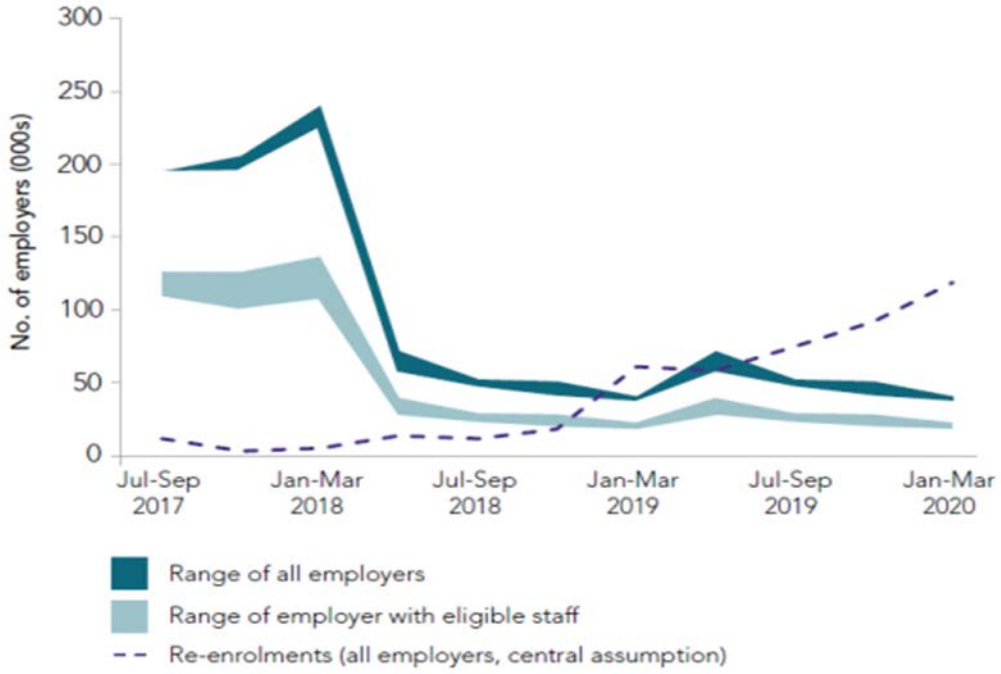
- cases where employers may come into existence or cease to exist as a result of changes to financial or legal status; or
- instances where ineligible employees may have either chosen to opt in or may have been contractually enrolled by their employer.

[50] The eligible target group is defined as workers who are aged between 22 and State Pension age, earning over £10,000 in at least one job and either (i) not currently saving in a workplace pension scheme; or (ii) saving in a workplace pension scheme where the employer contributions are less than 3% of the worker's salary, and is not a DB scheme.

[51] DWP (2016). *Workplace pensions: Update of analysis on Automatic Enrolment 2016*. At: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/560356/workplace-pensions-update-analysis-auto-enrolment-2016.pdf

[52] TPR (2016). *Automatic Enrolment Commentary and analysis: April 2015 – March 2016*. At: http://www.thepensionsregulator.gov.uk/docs/automatic-enrolment-commentary-analysis-2016.pdf

Figure 3.1 – Quarterly forecast of employers due to comply with automatic enrolment



Source: TPR (2017) Automatic Enrolment Commentary and Analysis: April 2016 – March 2017[53]

Figure 3.1 shows a spike in the number of employers expected to enrol their staff automatically in January to March 2018, with a sharp decline in the following quarter (April to June 2018). After this, the level of employers enrolling their staff automatically into workplace pensions is projected to plateau. This is explained by the timings of the staging process for automatic enrolment which is due to come to an end in April 2018, by which time small/micro employers and '2012-2017 newborns'[54] will have been enrolled. Any subsequent automatic enrolment will be the result of businesses/individuals newly becoming employers and/or their employees becoming eligible for automatic enrolment. Additionally, the dashed line shows the number of forecast re-enrolments, expected to increase steadily over time. This is because those employees already automatically enrolled but who subsequently opted out or ceased saving, are re-enrolled every three years. Therefore, given the extensive rollout of automatic enrolment in recent years, it could be expected that these re-enrolment volumes would increase.

[53] TPR (2017). *Automatic Enrolment Commentary and Analysis: April 2016 – March 2017.* At: http://www.thepensionsregulator.gov.uk/docs/automatic-enrolment-commentary-analysis-2017.pdf

[54] 'Newborns' are employers whose businesses were launched or who newly hired eligible employees between 2012 and 2017.

3.2.2 Monthly declaration of compliance data

The regulator publishes monthly information about the number of employers who have complied with their duties by completing their declaration of compliance ('registration') and reporting on the number of eligible jobholders automatically enrolled. Since July 2012, up to the end of November 2017,[55] 938,179 employers had registered their compliance with the duties, with over 9.06 million workers automatically enrolled.[56]

The data also show that 10.7 million workers were not automatically enrolled because they were already active members of a qualifying workplace pension scheme or had DB or hybrid scheme transitional arrangements applied to them. A further 8.06 million workers were not automatically enrolled as they did not meet either the earnings or age criteria at the time (e.g. a worker who earner over £10,000 per year, but was aged under 22 years old would not be automatically enrolled).

With regards to re-enrolment, 36,284 employers had confirmed that they had completed their re-declaration of compliance, with 542,000 workers having been automatically re-enrolled.[57]

Additional detailed analysis of declaration of compliance data is available in the regulator's 2017 'Automatic enrolment: commentary and analysis' report.[58]

3.2.3 Communicating reforms to employers and their advisers

The regulator (TPR) aims to help employers understand what they need to do, and when, in order to meet their automatic enrolment duties. TPR operates an integrated communications strategy based on direct engagement with employers, and through their intermediaries, which involves writing (via emails and letters) at key intervals on the approach to their staging date, and to their declaration of compliance deadline. In addition, these communications were accompanied by an integrated multi-channel advertising campaign (including television, radio, and social media advertising) which sought to raise levels of awareness of the workplace pensions reforms among small and micro employer audience by referring them to the TPR website. The website was

[55] TPR (2017). *Automatic enrolment Declaration of compliance report July 2012 – end November 2017.* At: http://www.thepensionsregulator.gov.uk/docs/automatic-enrolment-declaration-of-compliance-monthly-report.pdf

[56] Please note, the volumes of enrolments refer to instances of enrolment rather than specific individuals. Therefore, it is possible for the same individual to be counted more than once, for example if they change jobs.

[57] Employers have a duty to conduct automatic re-enrolment every three years after their staging date. More information is available at: http://www.thepensionsregulator.gov.uk/docs/detailed-guidance-11.pdf

[58] TPR (2016). *Automatic Enrolment Commentary and analysis: April 2015 – March 2016*. At: http://www.thepensionsregulator.gov.uk/docs/automatic-enrolment-commentary-analysis-2016.pdf

updated in 2017 to include a 'duties checker tool', which allows employers to identify their specific duties by answering a number of triage questions.

The earlier phases of the advertising campaigns targeted employers and employees separately; however the most recent campaign which launched in October 2017 takes a unified approach, reflecting the demographic of employers yet to meet their duties. The previous campaign which ran from October 2015 to October 2017 was targeted almost exclusively at small and micro employers, to reflect the key audience at that point in the staging timetable.

In research commissioned by TPR,[59] it was shown that the employer-facing advertising campaign had been effective, especially for those with an upcoming staging date. Seventy-six per cent of respondents with an imminent staging date, for example, said they recalled seeing or hearing any workplace pensions advertising without any prompting. Even those with a January 2018 staging date had a 54 per cent unprompted recall rate. Of all the various advertising channels used, television was by far the most effective.

Figure 3.2 shows that in the 12 months to October 2016, the regulator's website received over one million unique visitors to its automatic enrolment page for employers and a further one million unique visitors to the AE webpage for business advisers. 378,000 employers used the recently added Duties Checker tool, whilst 300 speaking events were conducted across the UK.

Figure 3.2 – Engagement and support in 2016-2017 between employers and The Pensions Regulator

Source: TPR (2017) Automatic Enrolment Commentary and Analysis: April 2016 – March 2017[60]

[59] TPR (2017). *Employers' awareness, understanding and activity relating to automatic enrolment and evaluation of communications campaign, April 2017.*
At: http://www.thepensionsregulator.gov.uk/docs/employer-automatic-enrolment-research-autumn-2016.pdf

[60] TPR (2017). *Automatic Enrolment Commentary and Analysis: April 2016 – March 2017.*
At: http://www.thepensionsregulator.gov.uk/docs/automatic-enrolment-commentary-analysis-2017.pdf

3.2.4 Compliance and enforcement

The regulator's approach is always to educate and enable in the first instance, but where it encounters non-compliance, the regulator uses its powers to help ensure that employers comply with their legal obligations. Its approach to maximising compliance is set out in its compliance and enforcement strategy[61] and policy.[62]

The regulator publishes information on a quarterly basis about its cases and the powers it has used relating to automatic enrolment and associated employer duties.[63] By the end of June 2017, the regulator had concluded 62,074 cases investigating possible non-compliance by employers. Between July and September 2017, the regulator continued to use its powers often: it served 13,752 compliance notices in the July-September 2017 quarter, with most employers subsequently complying when given this prompt to remind them of their duties.

3.3 Employer awareness, understanding and activity

In order to be able to comply with their duties, employers need to be aware of and understand how to discharge them. Employers' awareness and understanding of automatic enrolment was assessed in a recent TPR-commissioned report[64] at three levels:

- Spontaneous awareness of changes to workplace pensions;
- Knowledge of the key requirements of automatic enrolment; and
- Knowledge of their staging date (when automatic enrolment applies to them).

Some of the key findings of the report included:

- Spontaneous awareness of recent changes to workplace pensions varied by staging date, but remained almost universal for those closest to staging. More

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[61] TPR (2016). *Compliance and enforcement strategy for employers subject to automatic enrolment duties*.
At: http://www.thepensionsregulator.gov.uk/docs/pensions-reform-compliance-and-enforcement-strategy.pdf

[62] TPR (2016). *Compliance and enforcement policy for employers subject to automatic enrolment duties.* At: http://www.thepensionsregulator.gov.uk/docs/pensions-reform-compliance-and-enforcement-policy.pdf

[63] TPR (2017). *Compliance and enforcement: Quarterly bulletin July to September 2017.*
At: http://www.thepensionsregulator.gov.uk/docs/compliance-and-enforcement-quarterly-bulletin-july-to-september-2017.pdf

[64] TPR (2017). *Employers' awareness, understanding and activity relating to automatic enrolment and evaluation of communications campaign, April 2017.*

At: http://www.thepensionsregulator.gov.uk/docs/employer-automatic-enrolment-research-autumn-2016.pdf

than four in five (84%) of 'early stagers'[65] were spontaneously aware of recent changes to workplace pensions.

- Awareness levels of automatic enrolment, more specifically, were good – with awareness again tending to increase as companies neared their staging date. 'Early stagers' had a spontaneous awareness level of 86 per cent, for example, compared to just 65 per cent for those with a (later) January 2018 staging date.
- Understanding of automatic enrolment – admittedly the most demanding of the criteria – was lower than the above two measures, but again exhibited the characteristic of increasing closer to the staging date. Sixty-eight per cent of 'early stagers' were classed as understanding automatic enrolment, with 46 per cent of later stagers being classed as such.
- Finally, and following the above pattern of those closer to staging tending to be more knowledgeable, those employers who were closest to their staging date had a better idea of their staging date than those with staging dates further in the future. In autumn 2016, 75 per cent of 'early stagers' were able to accurately recall their staging date, whilst fewer than ten per cent of those staging in January 2018 could do so.

In a further report commissioned by TPR[66], understanding of the actual responsibilities of employers was measured. There are five ongoing duties for employers, which are as follows:

- Keeping records of all automatic enrolment activities;
- Monitoring the ages and earnings of new and existing staff every time you pay them to check whether they are eligible to join the pension scheme;
- Enrolling staff and writing to them to let them know you have done this as they become eligible to join the scheme;
- Managing requests to join or leave your pension scheme; and
- Paying contributions into your employees' pension scheme.

Awareness of each individual duty was very high (at least 92 per cent) across all employer sizes. However, it should be noted that you could expect employers who are less aware of their responsibilities to be less likely to participate in such a study; this figure may therefore inflate the overall levels of awareness across employers.

[65] 'Early stagers' were defined by TPR as those staging between January and April 2017.

[66] TPR (2017). *Ongoing duties survey – July 2017.*
At: http://www.thepensionsregulator.gov.uk/docs/employer-automatic-enrolment-ongoing-duties-survey-2017.pdf

3.4 Intermediaries' awareness, understanding and activity

The regulator published research in May 2017 measuring awareness and understanding of automatic enrolment among key intermediaries who support employers. This group is predominantly comprised of financial advisers, payroll administrators, accountants, and bookkeepers.[67] Key findings include:

- Awareness of automatic enrolment was almost universal among key intermediaries, and around three quarters were also aware of employers' ongoing duties.
- Additionally, awareness of the planned increases to minimum contribution levels was almost universal. Knowledge of specific dates and amounts was varied, however, particularly for increases planned for April 2019.
- Most intermediaries had previously supported small business clients with automatic enrolment, but this did vary by intermediary type – around 90 per cent of IFAs, accountants, and payroll administrators reported that they had supported clients with automatic enrolment, but only 79 per cent of bookkeepers and half of HR professionals could say the same.
- Most intermediaries had either faced, or expected to face, challenges when responding to clients and offering automatic enrolment services. The most common challenge reported by each intermediary type was that intermediaries thought it was too complicated, whilst the second was that the clients were '*unwilling to pay what was required for their services*.'

3.5 NEST

The National Employment Savings Trust (NEST) is a workplace pension scheme established in 2010 with a primary purpose to support the introduction of automatic enrolment. It is a trustee-governed automatic enrolment qualifying scheme. In 2011, NEST began on a voluntary basis in preparation for the first wave of employer duties from September 2012. It is subject to Public Service Obligation (PSO) to accept all employers wanting to join the scheme to fulfil their AE duties.

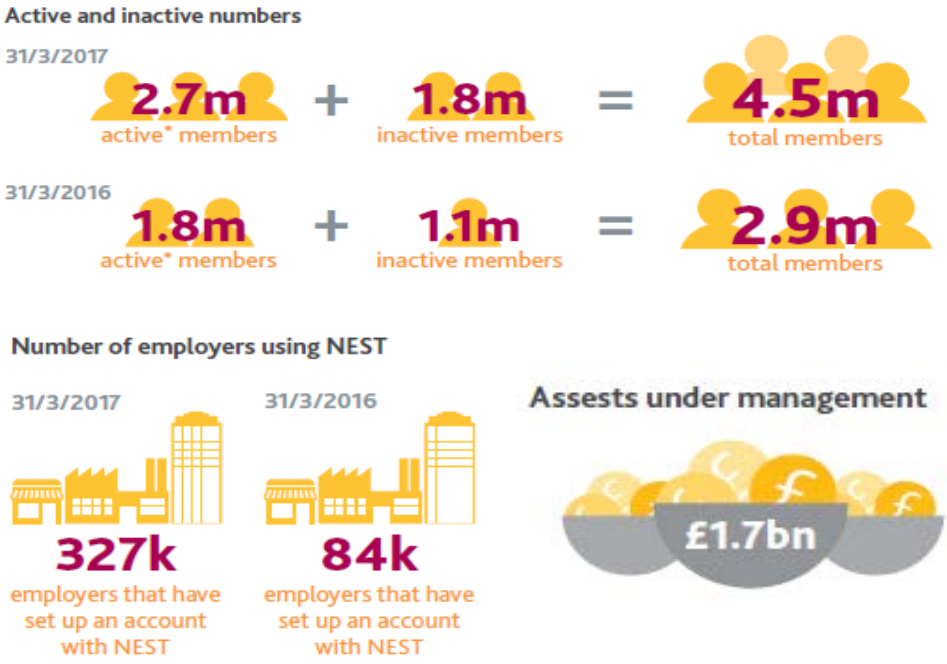
The NEST Corporation's annual report for 2016/17[68] outlined what NEST had achieved over the year from April 2016 until the end of March 2017 (Figure 3.3). Significant achievements, correct as at 31st March, included:

[67] TPR (2017). *Intermediaries' understanding, and activity relating to automatic enrolment and ongoing duties Intermediary Survey Summary Report May 2017.*
At: http://www.thepensionsregulator.gov.uk/docs/intermediary-automatic-enrolment-research-autumn-2016.pdf

[68] NEST (2017). *National Employment Savings Trust Corporation annual report and accounts 2016-17.* At:

- NEST's membership had risen to over 4.5 million members and over 327,000 employers, compared to approximately 2.9 million members and just under 85,000 employers at the time of the 2015/16 NEST annual report. There were 1.8 million inactive members at March 2017.[69] Whilst 1.8 million inactive members seems high, it should be noted that this figure will include 'job churn' – e.g. people who are between jobs – and as such will be inflated.
- At the end of March 2016, NEST managed around £1.7 billion in assets, compared to approximately £830 million at the end of March 2015.

Figure 3.3 – Information on NEST membership, number of employers using NEST and assets under management of NEST



Source: NEST (2017) National Employment Savings Trust Corporation annual report and accounts[70]

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/576227/automatic-enrolment-evaluation-report-2016.pdf

[69] Active members are either having NEST contributions managed by their employer or are self-employed. This excludes members that may have either left the employer that enrolled them, chosen to stop contributing or been transferred to a different provider by their employer (inactive members).

[70] NEST (2017). *National Employment Savings Trust Corporation annual report and accounts.* At https://nestpensions.org.uk/schemeweb/NestWeb/includes/public/docs/NEST-Corp-ARA_2016_2017,PDF.pdf

4 The effect of automatic enrolment on contribution levels and amounts saved

This chapter builds on analysis presented in Chapter 2 to present additional findings on progress, highlighting trends in the contributions made to workplace pension schemes. This includes analysis of eligible and ineligible employees and employers contributing above the minimum contribution rates and assesses the extent to which employers are matching higher employee contribution levels.

The chapter also examines the effectiveness of AE in ensuring as many of the working age population can accumulate pension saving whilst working, therefore contributing to tackling the undersaving issue that was initially set out by the Pensions Commission.[71] This report updates this analysis, demonstrating the extent to which there have been changes in levels of undersaving since earlier analysis and across different groups.

This primarily includes findings from DWP analysis of undersaving and the extent to which there have been changes in levels of undersaving since earlier analysis and examines changes across different demographic groups.

The chapter will also present a discussion of 'adequacy' in retirement.

4.1 Additional saving due to automatic enrolment

Summary

- By 2019/20 an additional £19.7 billion will be contributed to pensions as a result of automatic enrolment.

71 https://www.webarchive.org.uk/wayback/archive/20070802120000/http://www.pensionscommission.org.uk/publications/2004/annrep/index.html

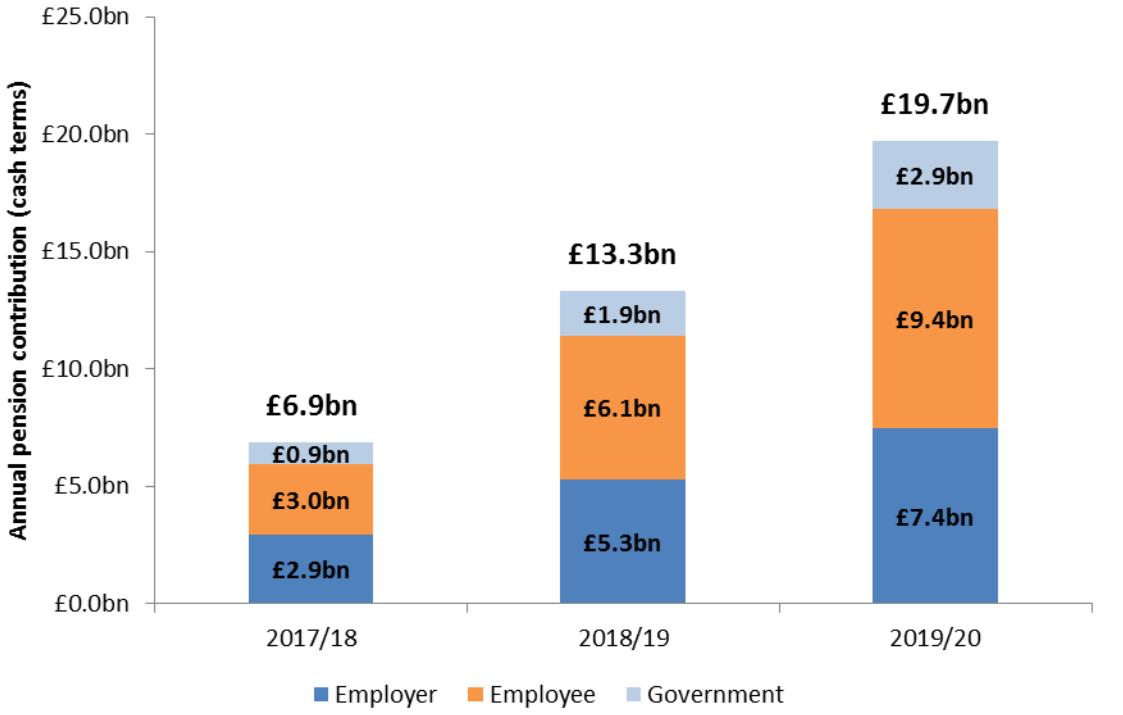
As discussed in section 3.1, DWP estimates that there are 11 million workers in the eligible target group for automatic enrolment. Of these, ten million workers are estimated to be newly saving or saving more by 2018 because of automatic enrolment. At present the minimum contributions are two per cent of qualifying earnings (of which one per cent must come from the employer). In April 2018, minimum contributions will increase to five per cent of qualifying earnings (two per cent from the employer) and in April 2019 they rise again to eight per cent (three per cent from the employer). Most employee's contributions also benefit from income tax relief.[72]

Figure 4.1 shows DWP's latest estimates of the additional saving as a result of automatic enrolment between 2017/18 and 2019/20. The figures refer to contributions on behalf of eligible employees only, so exclude those individuals who are not eligible to opt into their employer's pension scheme or who are contractually enrolled into a pension by their employer.[73]

[72] Employees that use Net Pay Arrangements will have their pension contributions deducted before tax. Some schemes use Relief at Source in which all employees are automatically credited with an additional payment (equivalent to basic rate income tax relief) directly into their pension,

[73] We assume that all employees are members of schemes that use Net Pay Arrangements. In practice some schemes use Relief At Source.

Figure 4.1 – Estimated additional pension contributions on behalf of eligible employees as a result of AE by source



Source: DWP modelling

In 2017/18 an estimated £6.9 billion extra was saved into workplace pensions than would have been the case without automatic enrolment. In 2018/19 this increases to £13.3 billion, largely as a result of the increase in minimum contribution rates to five per cent, although there will also be an increase in the number of savers as the final employers enrol their staff late in 2017/18. Similarly, additional contributions rise to £19.7 billion in 2019/20 as minimum contribution rates increase again to eight per cent.

Previously published figures estimated that around £17 billion extra would be saved into workplace pensions as result of automatic enrolment by 2019/20.[74] These estimates assumed that employers and employees would make contributions based on the employee's qualifying earnings i.e. any earnings between the Lower Earnings Limit (£5,876 in 2017/18) and the Upper Earnings Limit (£45,000 in 2017/18).

This assumption has since been improved by interrogating April 2016 data from the ONS Annual Survey of Hours and Earnings (ASHE). The analysis of ASHE data found an estimated 70 per cent of eligible employees in the private sector were actually contributing from the first £1 of earnings, rather than the LEL. Therefore, the employee and their employer were making contributions on nearly £6,000 per year

[74] DWP (2016). *Workplace pensions: Update of analysis on Automatic Enrolment 2016*. At: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/560356/workplace-pensions-update-analysis-auto-enrolment-2016.pdf

more than we had previously assumed. For more information on those contributing from the LEL see section 5.1.2.

4.2 Analysis of employer and employee contributions

Summary

- In 2016, over 5.6 million eligible employees (54 per cent of eligible employees) saving into a workplace pension had a contribution rate of two per cent or above.
- In 2016, over 6.6 million eligible employees (64 per cent) saving into a workplace pension received an employer contribution of two per cent or above and over half (5.3 million) were receiving an employer contribution of four per cent or above.
- Employees contributing at higher levels tended to be older employees and from the highest earnings bracket. Employers contributing above the minimum tended to be large employers (70 per cent of all employers contributing above the minimum were large or very large).
- The vast majority of employers matched higher contribution rates made by their employees.
- There has been an increase in pension saving amongst ineligible employees and their employers, with peaks in contributions occurring at the minimum contribution levels. Furthermore, fewer employees, in 2016, contributed nothing, or received zero employer contributions, to a workplace pension than was the case in 2012. In 2016, 813,000 eligible employees (7.7%) were making zero pension contributions, down from one million eligible employees (17.9%) making zero contributions in 2012. Similarly, in 2016, 165,000 (1.6%) eligible employees were receiving zero pension contributions from their employer, down from 196,000 (3.5%) in 2012.
- The median employee contribution rate in the private sector decreased from 4.5 per cent in 2012 to 2.4 per cent in 2016. Similarly, the median employer contribution rate in the private sector decreased from ten per cent in 2012 to four per cent in 2016. This is because many of the employees and employers that were newly saving were likely to be making the current minimum contributions specified under automatic enrolment rules - this influx of new savers has therefore brought the overall median rates down.

In this section, analysis of contribution rate trends of eligible and non-eligible employees are presented across a range of variables such as age, sex, and earnings band.

This analysis is based on the Annual Survey of Hours and Earnings (ASHE) from 2010-2016 and covers workplace pensions in Great Britain.[75] The ASHE survey relates to a reference period of April each year. Data relating to April 2016 are the most recent.

Key research questions covered in this section include:

- How many individuals save at or above the minimum contribution rates?
- How many employers pay above the statutory minimum contribution rates?
- Of those contributing above the minimum, how many have their contributions matched or exceeded by their employers?
- How many ineligible employees are participating in a workplace pension? How does this differ across ineligible groups?

4.2.1 Employee contributions of eligible employees participating in workplace pensions

Contribution rates for employees and employers tend to be higher in the public sector where participation rates tend to be high (as highlighted in Chapter 2) and the majority of schemes are DB. In the private sector, where contribution rates tend to be lower, DB schemes are relatively less common. With the introduction of automatic enrolment, private sector membership of DC schemes has increased significantly. As the impact of automatic enrolment has mostly been in the private sector the analysis in this chapter particularly focuses on this area.

It should also be noted that the level of contributions alone does not provide a measure of pension adequacy (see Chapter 4.3 for a more detailed discussion of adequacy in retirement). In defined contribution schemes, also known as money purchase schemes, the pension is determined by the level of contributions, the investment returns received and level of charges paid while the contributions are invested in a pension fund, by the available annuity rate if an annuity is purchased, or by longevity if no annuity is purchased. In defined benefit schemes, the scheme rules determine the amount of pension that will be received in retirement, based on the accrual rate, length of service and salary.

[75] In ASHE there are questions asked about pensionable pay and employee/employer contribution amounts which are converted into contribution rate estimates. It should be noted that employers may have different scheme rules, particularly if they have not yet staged, so the definition of pensionable pay for employees across employers could vary i.e. it may not be on an automatic enrolment type qualifying earnings basis. ASHE asks specific questions on scheme rules.

Following the introduction of automatic enrolment, total contributions to workplace pensions are increasing, as more people are contributing, but median contribution rates of savers are lower as those employees newly saving are likely to be making the current minimum contributions specified under automatic enrolment rules. This has resulted in a decrease in the overall median contribution rates for pension savers. This lower percentage contribution rate picture is likely to change as automatic enrolment proceeds and the minimum level of contributions required increases with phasing.

Tables 4.1 and 4.2, below, show the percentage and number of eligible employees with workplace pensions, in the private sector, by banded rate of employee contribution.

The data show that in 2016 over 5.6 million eligible private sector employees saving into a workplace pension made a contribution of two per cent or above. Around 4.7 million were contributing three per cent or above and over 2.8 million were contributing an employee rate of five per cent or above, in 2016. This therefore shows that a significant number of eligible employees are already saving at the higher rates to be phased in from April 2018.

Table 4.1 – Percentages of eligible employees with workplace pensions: by banded rate of employee contribution in the private sector, 2010 to 2016, Great Britain

Great Britain							*Percentages*
Banded contribution rate	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
Zero	17.3%	17.9%	17.9%	12.6%	9.2%	7.1%	7.7%
0-2 %	5.0%	5.0%	4.7%	9.6%	29.9%	37.1%	38.8%
2-3%	10.4%	10.0%	10.2%	10.4%	9.0%	8.8%	8.8%
3-4 %	11.8%	12.4%	11.7%	11.7%	10.1%	9.1%	9.3%
4-5%	12.7%	12.2%	12.2%	11.7%	9.6%	8.8%	8.7%
5-6%	12.8%	12.8%	12.7%	13.1%	9.8%	9.2%	8.2%
6-7%	15.8%	16.0%	11.1%	10.1%	7.1%	6.4%	5.3%
7 and over	14.2%	13.6%	19.5%	20.7%	15.3%	13.4%	13.4%

Source: DWP estimates derived from the ONS ASHE, GB, 2010–2016.

Note:
1. Percentages may not sum to 100 per cent due to rounding.

2. An employee contribution may be zero if: the employer hasn't staged and doesn't offer provision; the employer is choosing to cover the full contribution required under automatic enrolment; or the individual has opted out or ceased saving.

Table 4.2 – Number of eligible employees with workplace pensions: by banded rate of employee contribution in the private sector, 2010 to 2016, Great Britain

Great Britain							*Number of employees in thousands*
Banded contribution rate	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
Zero	978	981	1,000	798	804	712	813
0-2 %	281	277	265	606	2,606	3,719	4,083
2-3%	590	549	572	660	784	884	921
3-4 %	670	678	658	740	880	917	974
4-5%	716	671	683	743	835	882	912
5-6%	726	701	711	832	853	927	860
6-7%	894	878	619	640	623	645	556
7 and over	801	744	1,090	1,310	1,336	1,349	1,406

Source: DWP estimates derived from the ONS ASHE, GB, 2010–2016.

4.2.2 Employer contributions of eligible employees participating in workplace pensions

Tables 4.3 and 4.4, below, show the percentage and number of eligible employees with workplace pensions, in the private sector, by banded rate of employer contribution.

Table 4.3 – Percentages of eligible employees with workplace pensions: by banded rate of employer contribution in the private sector, 2010 to 2016, Great Britain

Great Britain							*Percentages*
Banded contribution rate	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
Zero	4.7%	3.8%	3.5%	3.3%	2.3%	1.8%	1.6%
0-2%	2.8%	2.7%	2.6%	6.9%	26.6%	33.3%	34.9%
2-4%	10.9%	10.9%	11.2%	11.9%	11.9%	12.3%	12.9%
4-6%	16.5%	16.0%	15.5%	15.6%	12.9%	12.0%	12.5%
6-8%	11.1%	11.6%	11.6%	11.9%	9.4%	8.4%	8.5%
8-10%	8.9%	9.4%	10.5%	9.4%	7.1%	6.3%	6.0%
10-15%	21.1%	23.2%	23.9%	21.5%	15.8%	14.5%	10.6%
15+ %	24.0%	22.5%	21.2%	19.6%	13.9%	11.4%	13.1%

Source: DWP estimates derived from the ONS ASHE, GB, 2010–2016.

Note:
1. Percentages may not sum to 100 per cent due to rounding.

2. An employer contribution may be zero if the employer hasn't staged and doesn't offer provision; or the individual has opted out or ceased saving.

Table 4.4 – Number of eligible employees with workplace pensions: by banded rate of employer contribution in the private sector, 2010 to 2016, Great Britain

Great Britain							*Number of employees in thousands*
Banded contribution rate	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
Zero	266	206	196	207	199	182	165
0-2%	156	148	147	435	2,319	3,338	3,676
2-4%	616	599	628	753	1,041	1,233	1,355
4-6%	934	877	870	985	1,125	1,202	1,316
6-8%	630	635	647	753	820	848	891
8-10%	504	514	585	594	620	635	627
10-15%	1,192	1,268	1,341	1,360	1,382	1,459	1,112
15+ %	1,358	1,229	1,185	1,239	1,212	1,141	1,384

Source: DWP estimates derived from the ONS ASHE, GB, 2010–2016.

In 2016 over 6.6 million eligible private sector employees saving into a workplace pension received an employer contribution of two per cent or above, exceeding the current automatic enrolment minimum requirement; 5.3 million received an employer contribution of four per cent or above. As with employee contributions a significant number of eligible employees in 2016 were already receiving employer contributions at higher rates than currently required by automatic enrolment.

4.2.3 Characteristics of eligible employees and employers contributing above minimum

As stated above, there are a significant number of eligible employees and employers paying contributions above the rates currently required by automatic enrolment. The following tables break down the characteristics of those eligible employees who are contributing two per cent or above by age and earnings band, and those employers who are paying eligible employees an employer contribution of two per cent or above are split by employer size. While the data can tell us the characteristics of those making higher contributions, it is not possible to determine whether this is due to individuals making additional voluntary contributions or whether this is due to a more generous (default) scheme from their employer.

Table 4.5 and Table 4.6 show the proportion and numbers (respectively) of eligible private sector employees paying contributions above the AE minimum between 2010 and 2016, by age band.

Table 4.5 – Distribution of eligible employees paying contributions above the minimum, by age band, in the private sector, 2010 to 2016, Great Britain

Great Britain							*Percentages*
Age band	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
22 to 29	10.4%	10.2%	10.4%	11.4%	12.6%	12.6%	13.2%
30 to 39	26.3%	25.8%	25.1%	25.2%	25.7%	25.3%	25.5%
40 to 49	34.4%	34.1%	33.7%	32.2%	31.1%	30.2%	28.9%
50 to spa	28.9%	29.9%	30.7%	31.2%	30.6%	31.9%	32.3%

Source: DWP estimates derived from the ONS ASHE, GB, 2010–2016.

Note: Percentages may not sum to 100 per cent due to rounding.

Table 4.6 – Number of eligible employees paying contributions above the minimum, by age band, in the private sector, 2010 to 2016, Great Britain

Great Britain							*Thousands*
Age band	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
22 to 29	459	431	451	562	669	704	745
30 to 39	1,156	1,089	1,090	1,239	1,362	1,419	1,437
40 to 49	1,511	1,438	1,461	1,585	1,653	1,692	1,627
50 to spa	1,271	1,264	1,332	1,539	1,627	1,788	1,820

Source: DWP estimates derived from the ONS ASHE, GB, 2010–2016.

As might be expected, Table 4.5 and Table 4.6 show that it is the older age bands who were most likely to be contributing at rates of two per cent or above. Around a third (32.3 per cent) of those paying two per cent or above are in the 50 to SPA age band; however, since 2010 there has also been an increase in the proportion of those saving at a higher rate in the youngest age band (22 to 29).

Table 4.7 and Table 4.8 show the proportion and numbers (respectively) of eligible private sector employees paying contributions above the AE minimum between 2010 and 2016, by earnings band.

Table 4.7 – Distribution of eligible employees paying contributions above the minimum: by earnings band, in the private sector, 2010 to 2016, Great Britain

Great Britain							*Percentages*
Earnings band	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
£10,000 - under 20,000	12.8%	13.0%	13.9%	14.2%	14.5%	14.6%	15.6%
£20,000 - under 30,000	24.0%	23.4%	23.8%	24.0%	25.5%	25.6%	25.4%
£30,000 - under 40,000	23.1%	23.2%	23.1%	22.4%	22.6%	22.7%	22.3%
£40,000 plus	38.9%	39.2%	38.1%	38.1%	37.3%	37.1%	36.7%

Source: DWP estimates derived from the ONS ASHE, GB, 2010–2016.

Note: Percentages may not sum to 100 per cent due to rounding.

Table 4.8 – Number of eligible employees paying contributions above the minimum: by earnings band, in the private sector, 2010 to 2016, Great Britain

Great Britain							*Thousands*
Earnings band	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
£10,000 - under 20,000	561	548	601	699	770	817	877
£20,000 - under 30,000	1,056	990	1,032	1,183	1,354	1,435	1,430
£30,000 - under 40,000	1,017	980	1,000	1,103	1,198	1,270	1,254
£40,000 plus	1,710	1,654	1,650	1,876	1,979	2,082	2,067

Source: DWP estimates derived from the ONS ASHE, GB, 2010–2016.

Table 4.7 and Table 4.8 show that savers who contribute at rates above two per cent are more likely to be from the highest earnings bracket. Whilst the distribution across all earnings bands has remained fairly stable since 2010, it appears there has been a slight increase in the proportions earning £10,000 to £20,000 contributing above the minimum earnings band, mirrored by a similar fall in the £40,000 plus bracket.

Table 4.9 and Table 4.10 show the proportion and numbers (respectively) of eligible private sector employees paying contributions above the AE minimum between 2010 and 2016, by employer size.

Table 4.9 – Distribution of eligible employees paying contributions above the minimum, by employer size, in the private sector, 2005 to 2016, Great Britain

Great Britain							*Percentages*
Employer size	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
1 to 4	0.8%	0.9%	0.7%	0.7%	0.6%	0.6%	0.6%
5 to 49	11.8%	11.3%	10.9%	10.3%	9.3%	9.8%	11.2%
50 to 249	16.8%	16.9%	16.6%	16.1%	15.3%	18.1%	18.5%
250 to 4999	41.6%	42.3%	44.0%	43.6%	45.7%	45.5%	43.5%
5000+	29.0%	28.6%	27.7%	29.3%	29.0%	26.0%	26.3%

Source: DWP estimates derived from the ONS ASHE, GB, 2010–2016.

Note: Percentages may not sum to 100 per cent due to rounding.

Table 4.10 – Number of eligible employees paying contributions above the minimum, by employer size, in the private sector, 2005 to 2016, Great Britain

Great Britain							*Thousands*
Employer size	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
1 to 4	39	44	38	39	36	37	36
5 to 49	592	554	555	566	556	610	719
50 to 249	844	829	845	884	920	1,127	1,184
250 to 4999	2,089	2,080	2,238	2,401	2,742	2,840	2,790
5000+	1,455	1,408	1,411	1,614	1,741	1,623	1,685

Source: DWP estimates derived from the ONS ASHE, GB, 2010–2016.

Table 4.9 and Table 4.10 show that the majority of employers, nearly 70 per cent in 2016, who were paying eligible employees two per cent or more were either large

(250 to 4,999 employees) or very large (5,000 employees plus) employers. Only a very small proportion, less than one per cent, were micro employers (one to four employees). However, larger employers are more likely to have existing pension provision which could explain the high proportion paying on total earnings.

It is interesting that in 2016 there was an observed increase in the share of the small employers (5 to 49) paying contributions above the minimum. It is possible that this reflects the staging profile, which has now reached the small employers and that those staging more recently are setting up schemes already compliant with the phased contribution increases.

4.2.4 Do employers match employee contributions?

The proportion of employers matching employee contributions at rates above the current automatic enrolment minimum can be assessed using the latest ASHE 2016 data.

Table 4.11 shows the proportion of automatically enrolled[76] employees who were receiving at least a matching contribution rate from their employer at different contribution levels.

Table 4.11 – Percentages of automatically enrolled employees receiving a matching employer contribution, by banded rate, in the private sector, 2016, Great Britain

Great Britain	*Percentages*
Employee contribution band	Employees receiving a matching contribution or more
2-3%	94.5%
3-4%	93.9%
4-5%	93.6%
5-6%	92.1%
6-7%	87.1%
7-8%	89.3%
8-9%	86.1%
9-10%	76.0%
10% plus	64.3%

Source: DWP estimates derived from the ONS ASHE, 2016.

Note:
1. Employees flagged as automatically enrolled.
2. Private sector DC schemes only.

The data suggest that the vast majority of employers were matching higher rates of contributions made by employees. For example, in 2016, nearly 94 per cent of

[76] The ASHE 2016 questionnaire included a new question asking if the employee had been automatically enrolled into a workplace pension. However, as this is the first time the question has been included any results should be treated as provisional.

automatically enrolled employees in private sector DC schemes contributing over three per cent received a matching (or higher) employer contribution rate.

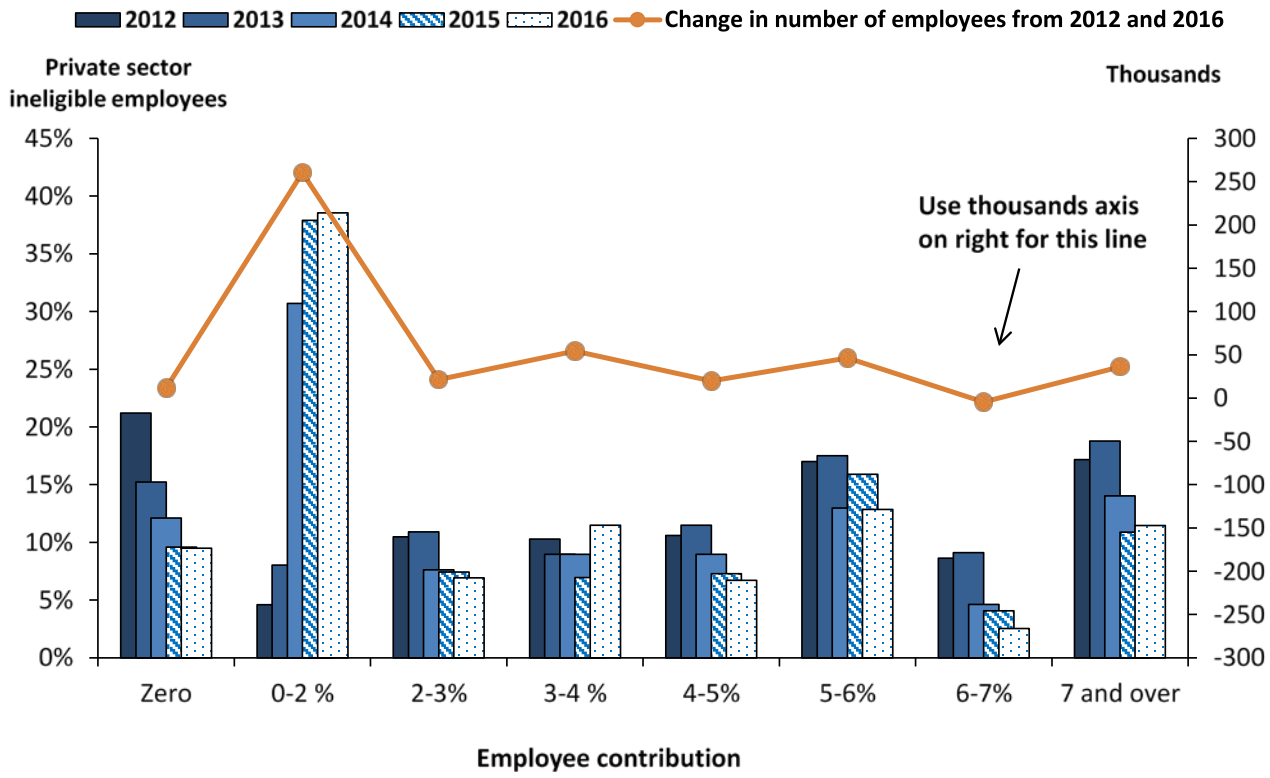
The data cannot tell us why this is the case. It is not necessarily the case that if employees were to continue to increase their contributions that this would be matched. It is also not possible to determine from the data how the willingness to contribute at higher levels is split by those employers who did and did not offer pension provision prior to 2012 (when the reforms were introduced). However, the data do suggest, particularly when viewed alongside the data in Table 4.11 above on employer contribution rates, that there is a willingness from many employers to contribute more than the levels currently required with automatic enrolment.

4.2.5 Contribution trends of ineligible employees

The observed trends in contribution rates of those eligible for automatic enrolment have also been mirrored within the ineligible[77] group. Whilst the volumes are smaller, since 2012, the same increase in ineligible private sector employees contributing at automatic enrolment minimums can be observed as with eligible employees (see Figure 4.2). This may reflect ineligible employees choosing to opt into a scheme, or employers choosing to contractually enrol ineligible employees.

[77] Defined as those not meeting the age criteria and/or the earnings trigger

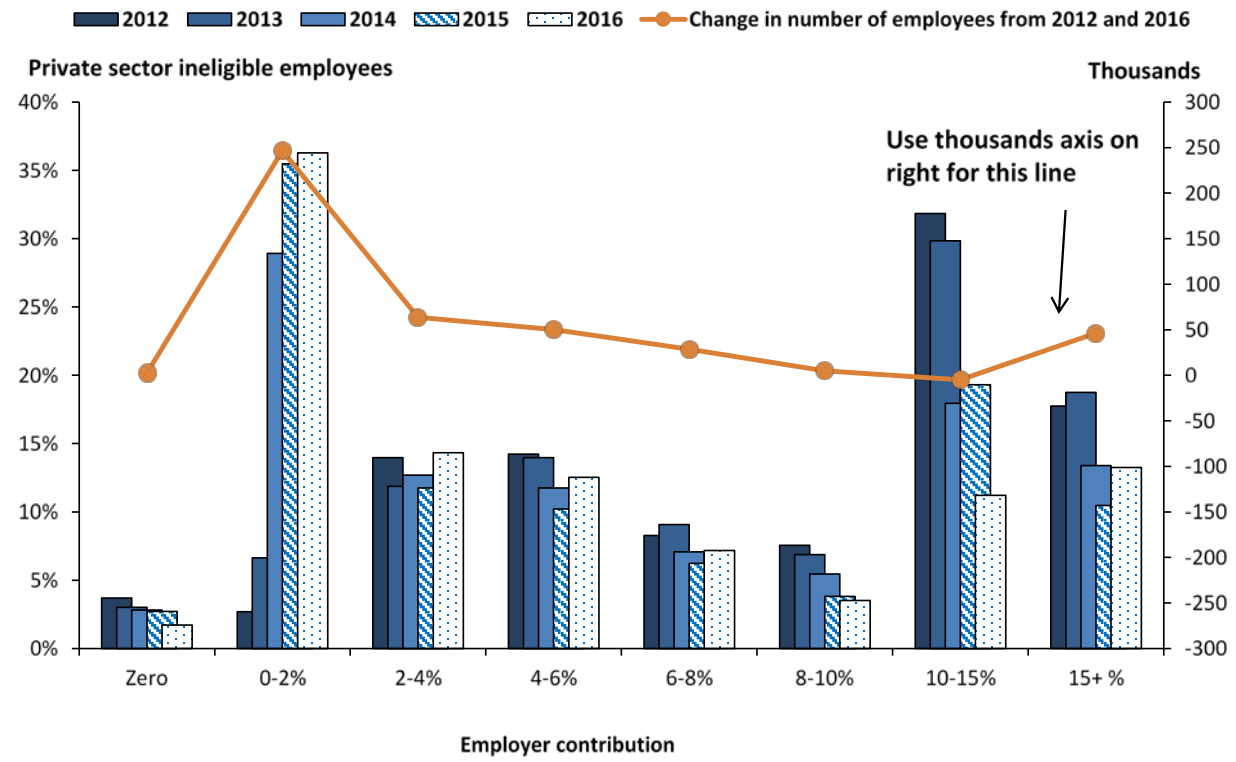
Figure 4.2 – Private sector ineligible employees with workplace pensions, percentages by banded rate of employee contribution, 2012-2016, Great Britain



Source: DWP estimates derived from the ONS ASHE, GB, 2012–2016.

This has also been reflected in an increasing number of ineligible employees receiving employer contributions at minimum levels too (see Figure 4.3). A possible explanation for this is that some employers could be contractually enrolling all employees into a qualifying pension scheme in order to simplify current and future payroll processing, or because they want to offer a more attractive package of employee benefits.

Figure 4.3 – Private sector ineligible employees with workplace pensions, percentages by banded rate of employer contribution, 2012-2016



Source: DWP estimates derived from the ONS ASHE, GB, 2012–2016.

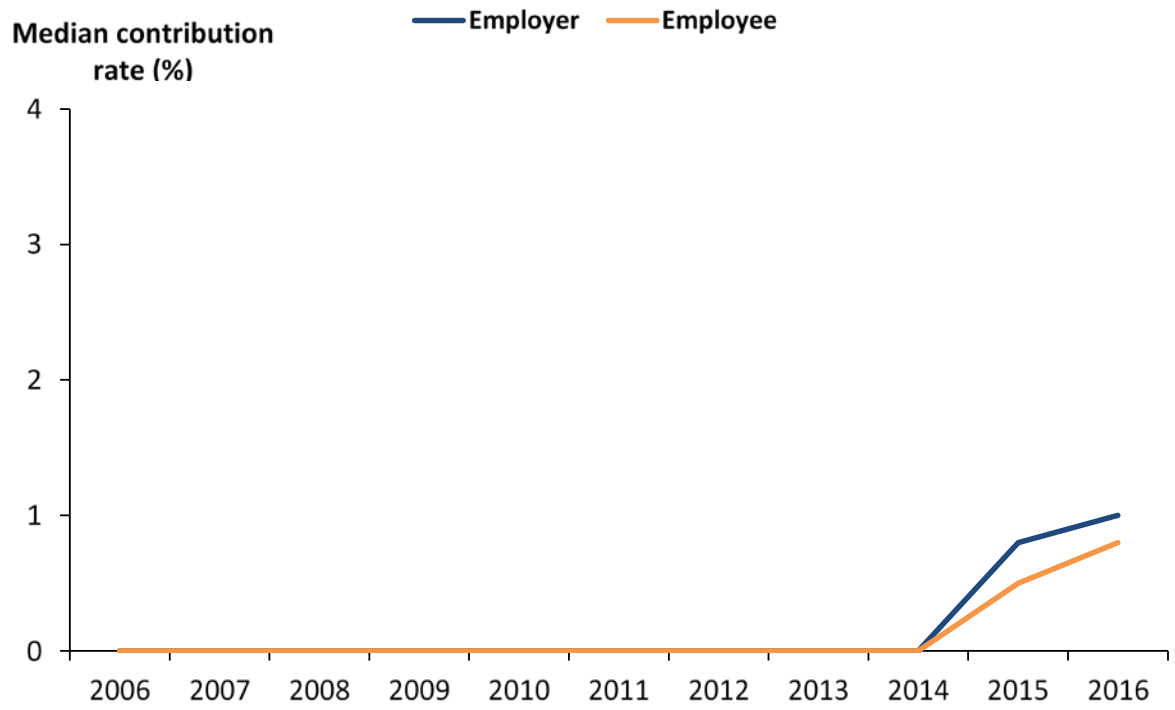
4.2.6 The changing distribution of workplace pension contributions

The introduction of automatic enrolment in 2012 has changed the landscape of private sector workplace pension saving. The charts below show employee and employer median contribution rates of **all**[78] private sector employees and the distribution of employee and employer contribution rates. This highlights how automatic enrolment has brought people into pension saving.

Figure 4.4 shows that the private sector median contribution rate for all employees has increased since the introduction of automatic enrolment.

[78] The charts show data for *all* employees, not just *eligible* employees as per previous charts. Includes those employees who are saving and those who are not saving into a workplace pension.

Figure 4.4 – Private sector median contribution rates to workplace pensions, 2006-2016, Great Britain (all employees)



Source: DWP estimates derived from the ONS ASHE, GB, 2006–2016.

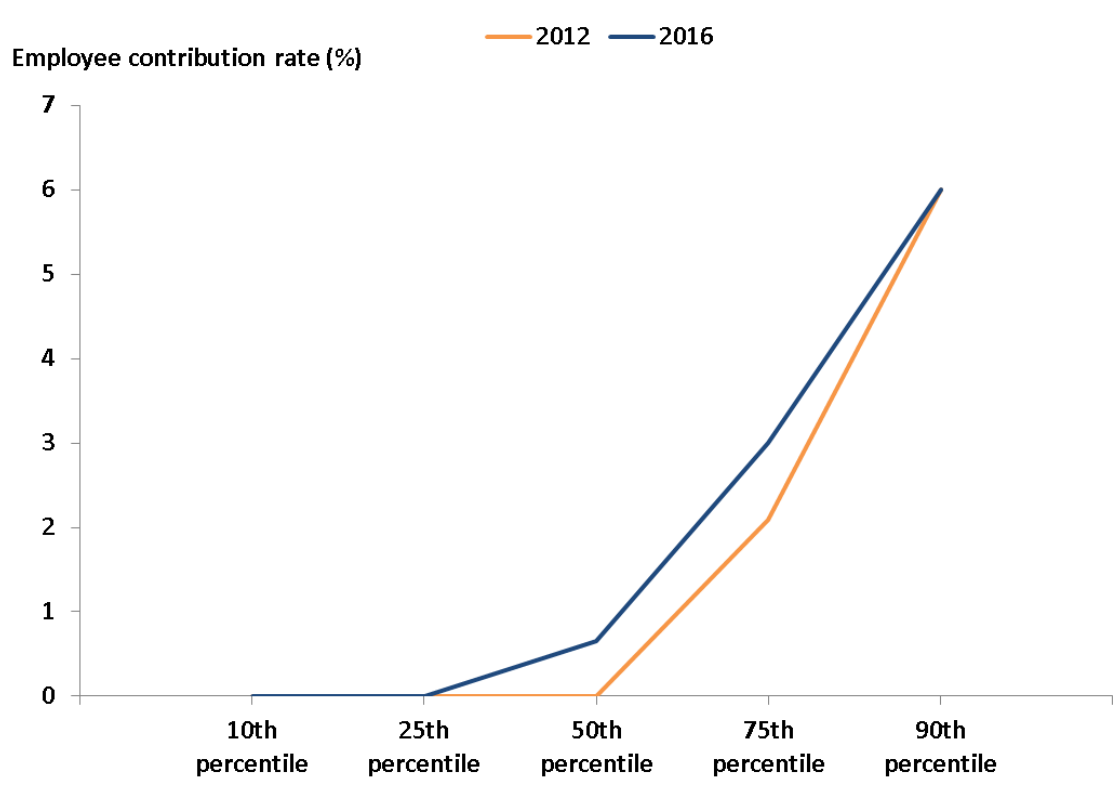
Figure 4.4 shows that the median contribution rate for employees and employers was zero between 2006 and 2014. Between 2014 and 2016, the median contribution rate increased to one per cent contribution rate for employers and to just under one per cent (0.8 per cent) for employees.

This change since 2012 is further highlighted in Figure 4.5 and Figure 4.6 below. By 2016, employee contribution rates were higher at both the 50th and 75th percentiles[79] than they were in 2012 (Figure 4.5). Similarly, employer contribution rates, up to the 75th percentile, were higher in 2016 than in 2012 (Figure 4.6).

This reflects that more employees were receiving an employer contribution in 2016 than they were in 2012, before automatic enrolment.

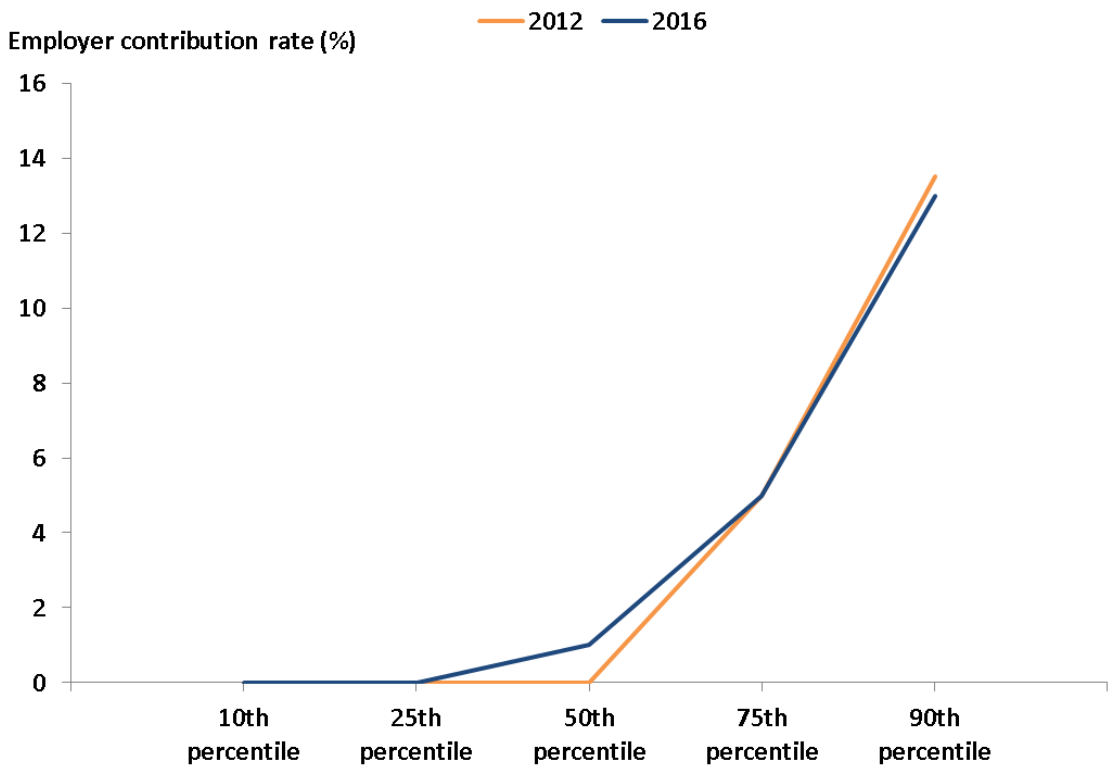
[79] A percentile is a measure indicating the value (in this case a contribution rate) below which a given proportion of observations in a group of observations fall.

Figure 4.5 – Distribution of private sector employee contributions, 2012 and 2016, Great Britain (all employees)



Source: DWP estimates derived from the ONS ASHE, GB, 2012 and 2016.

Figure 4.6 – Distribution of private sector employer contributions, 2012 and 2016, Great Britain (all employees)



Source: DWP estimates derived from the ONS ASHE, GB, 2012 and 2016.

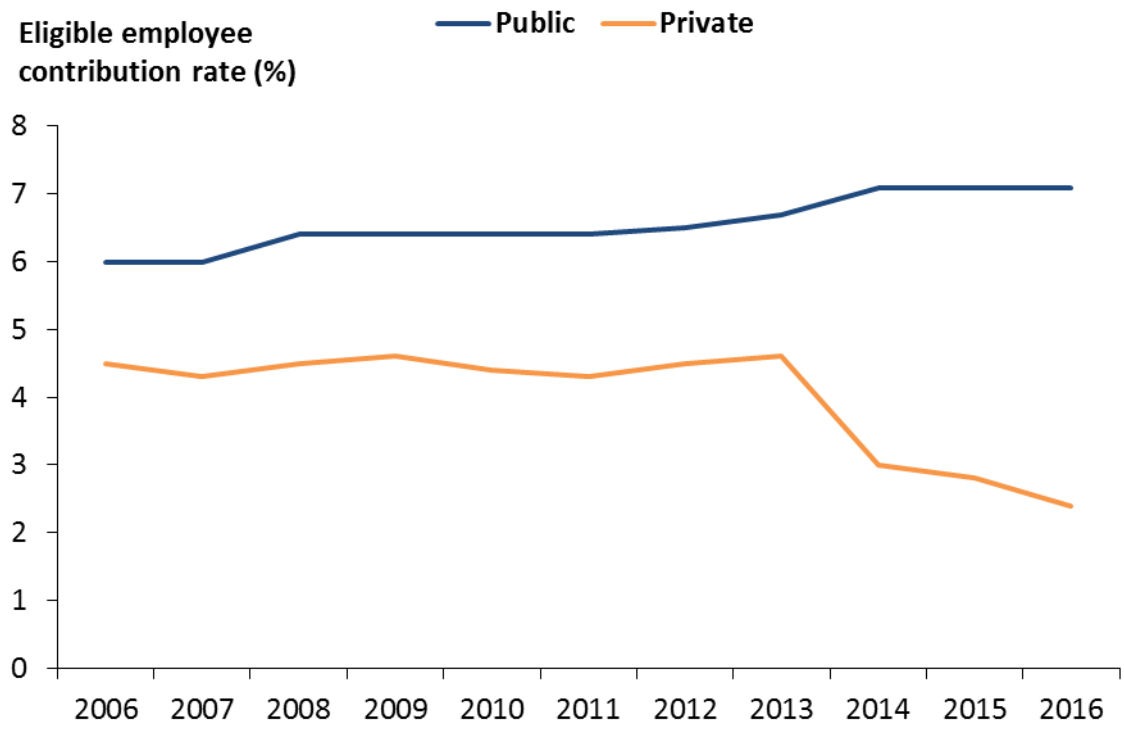
As discussed in previous sections, the concerns around levelling down of contributions for those who were contributing at higher rates have largely not materialised. The similarity of the employer contribution distribution at the 75th and 90th percentiles further supports this view.

4.2.7 Contribution rates of savers into workplace pensions

Whilst the number of people contributing to a workplace pension, and therefore total contributions, has increased since the introduction of automatic enrolment, the median contribution rates *of those saving* in the private sector are now lower. This is because many of the employees who are newly saving are likely to be making the current minimum contributions. This has had the effect of decreasing overall median contribution rates. However, this picture is expected to change as automatic enrolment proceeds and the minimum level of contributions required increases from April 2018.

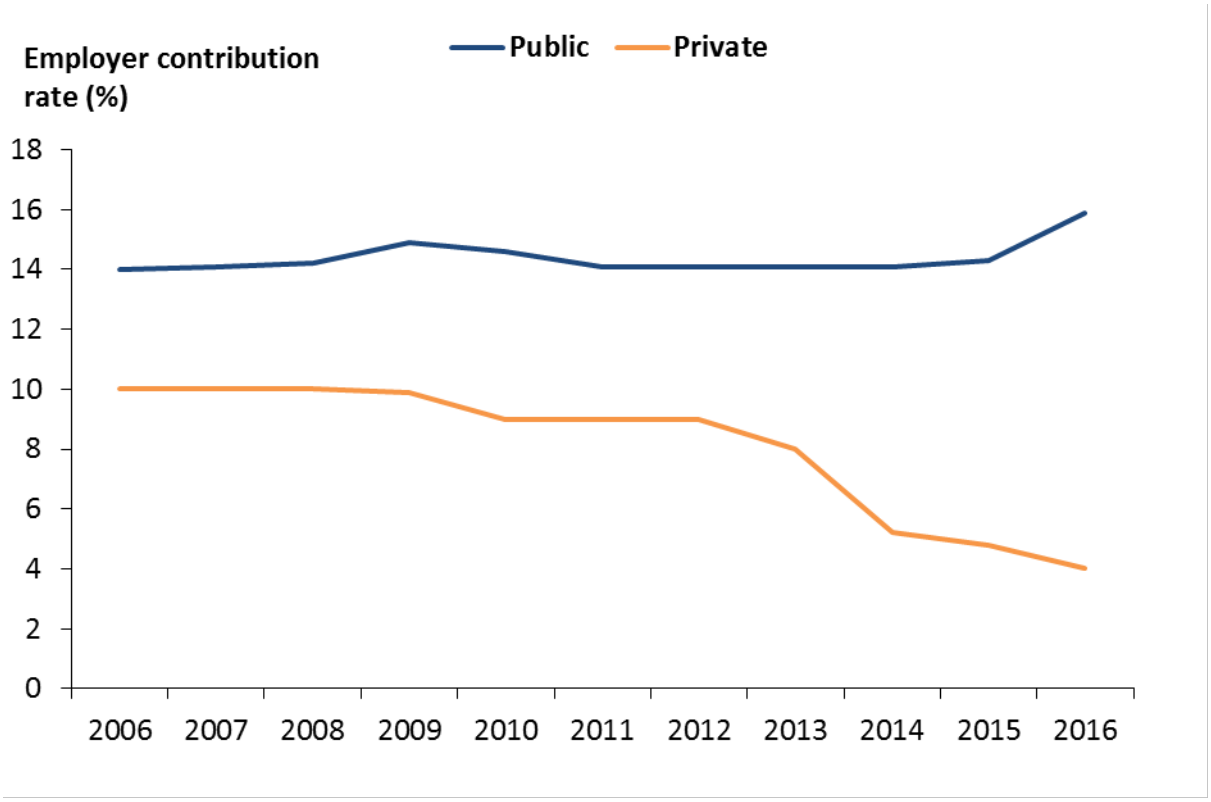
Figures 4.7 and 4.8 show the effect of increasing workplace pension membership, mainly in private sector DC schemes, has had on contribution rates for eligible employees.

Figure 4.7 – Median eligible employee contribution rates to workplace pensions by sector, 2006-2016, Great Britain



Source: DWP estimates derived from the ONS ASHE, GB, 2006–2016.

Figure 4.8 –Median employer contribution rates to workplace pensions by sector, 2006-2016, Great Britain

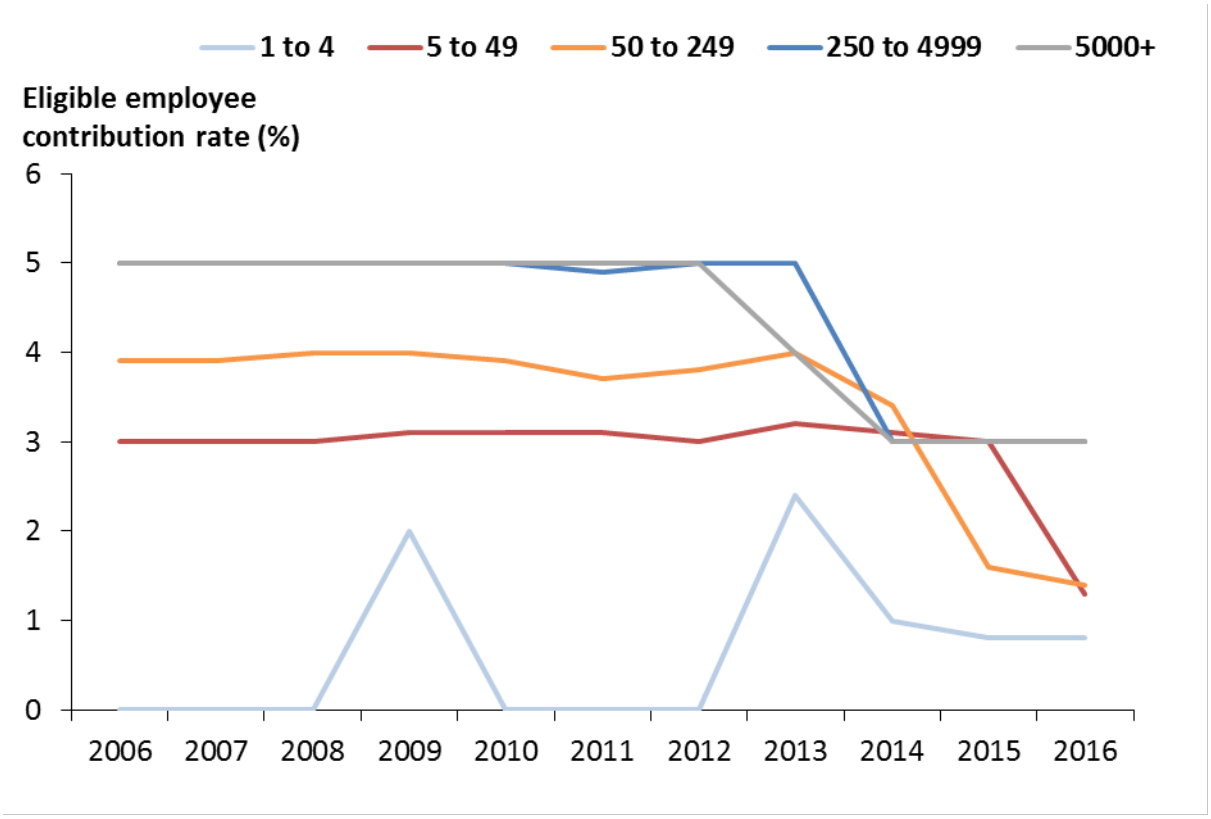


Source: DWP estimates derived from the ONS ASHE, GB, 2006–2016.

The trend in median contributions split by employer size highlights the effect of the staged introduction of automatic enrolment through increasing membership but at the minimum contribution rates.

Figures 4.9 and 4.10 show private sector median eligible employee and employer contribution rates to workplace pensions by employer size.

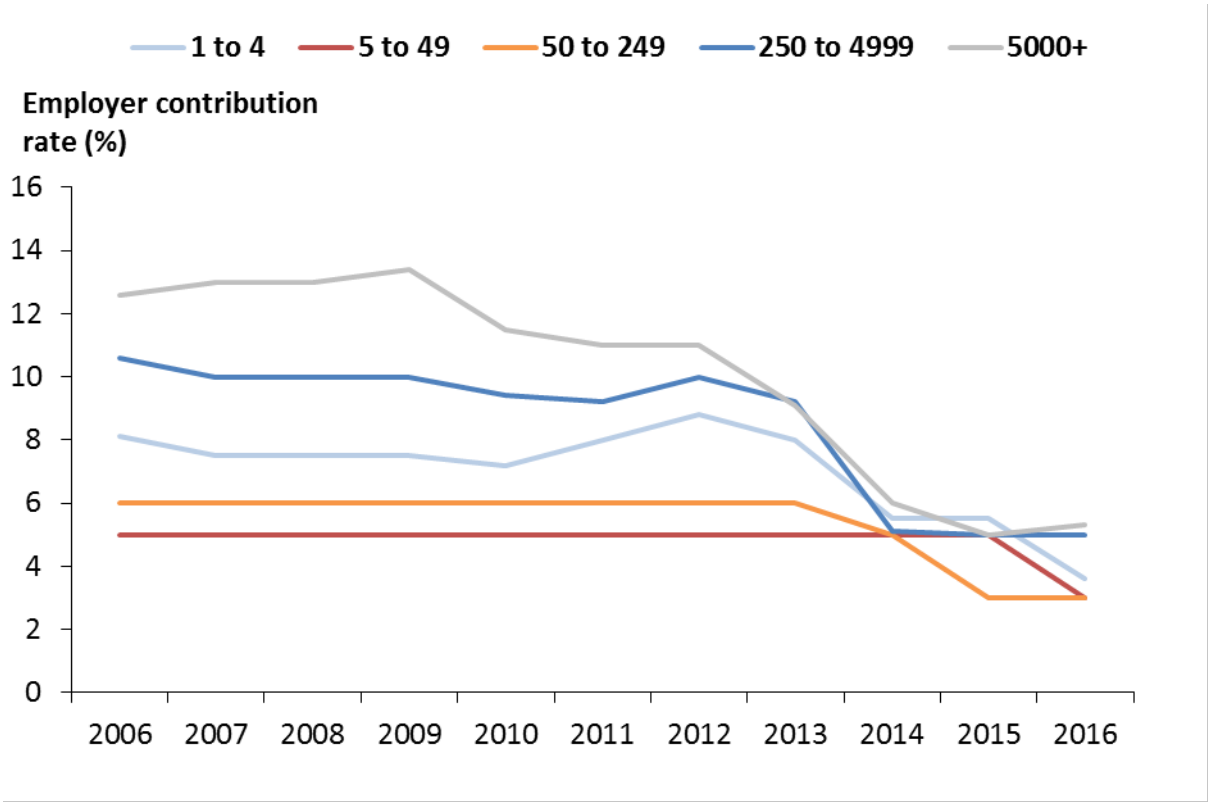
Figure 4.9 – Private sector median eligible employee contribution rates to workplace pensions by employer size, 2006 to 2016, Great Britain[80]



Source: DWP estimates derived from the ONS ASHE, GB, 2006–2016.

[80] The reason for the increase in employee contribution rates amongst those working for micro employers in 2009 is not known.

Figure 4.10 – Private sector median employer contribution rates to workplace pensions by employer size, 2006 to 2016, Great Britain

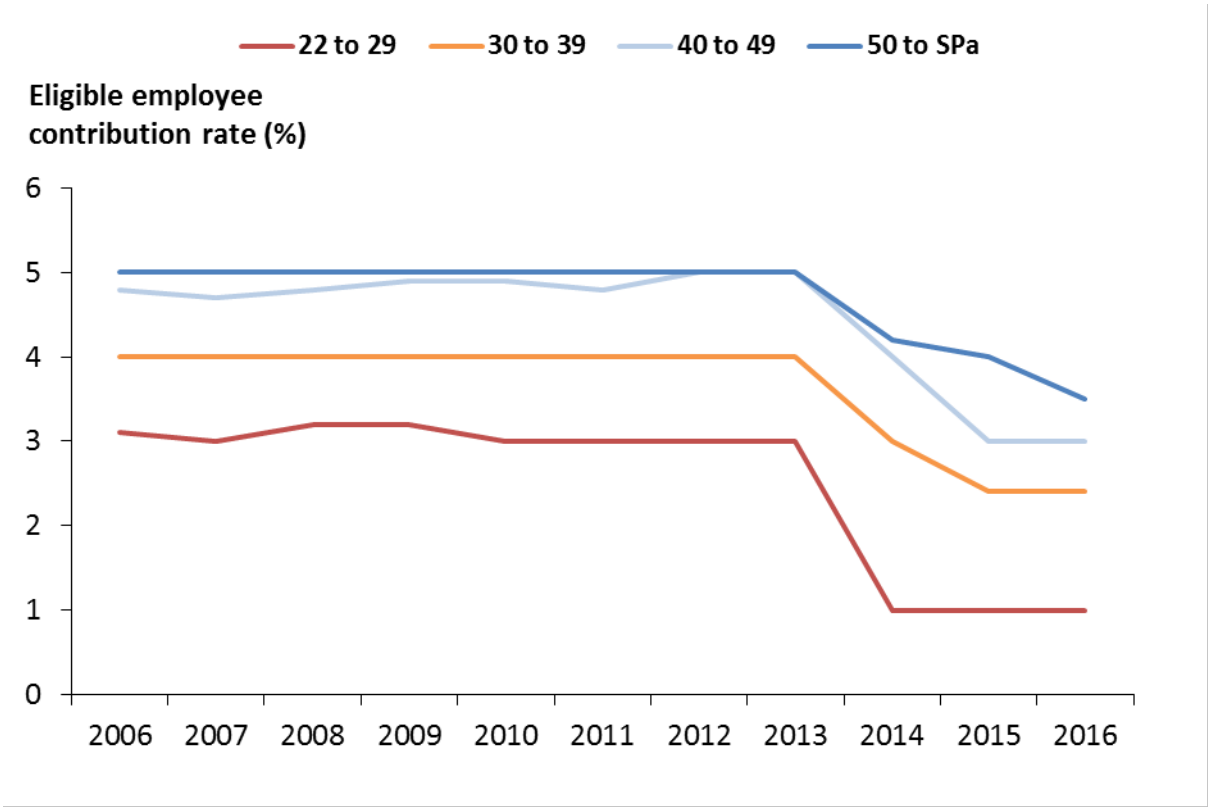


Source: DWP estimates derived from the ONS ASHE, GB, 2006–2016.

Private sector employer median contribution rates for employers with 5,000 or more employees were fairly flat until 2012, then fell from five per cent in 2012 to three per cent by 2016. For private sector employers with 250 to 4,999 employees, the decline in employer contribution rates occurred after 2013. This is the pattern that would be expected given the timing of the staged introduction of automatic enrolment. It should also be said that this isn't a measure of levelling down, as has been stated these figures reflect the increase in new savers at lower contribution rates and not changes to existing saving rates over time.

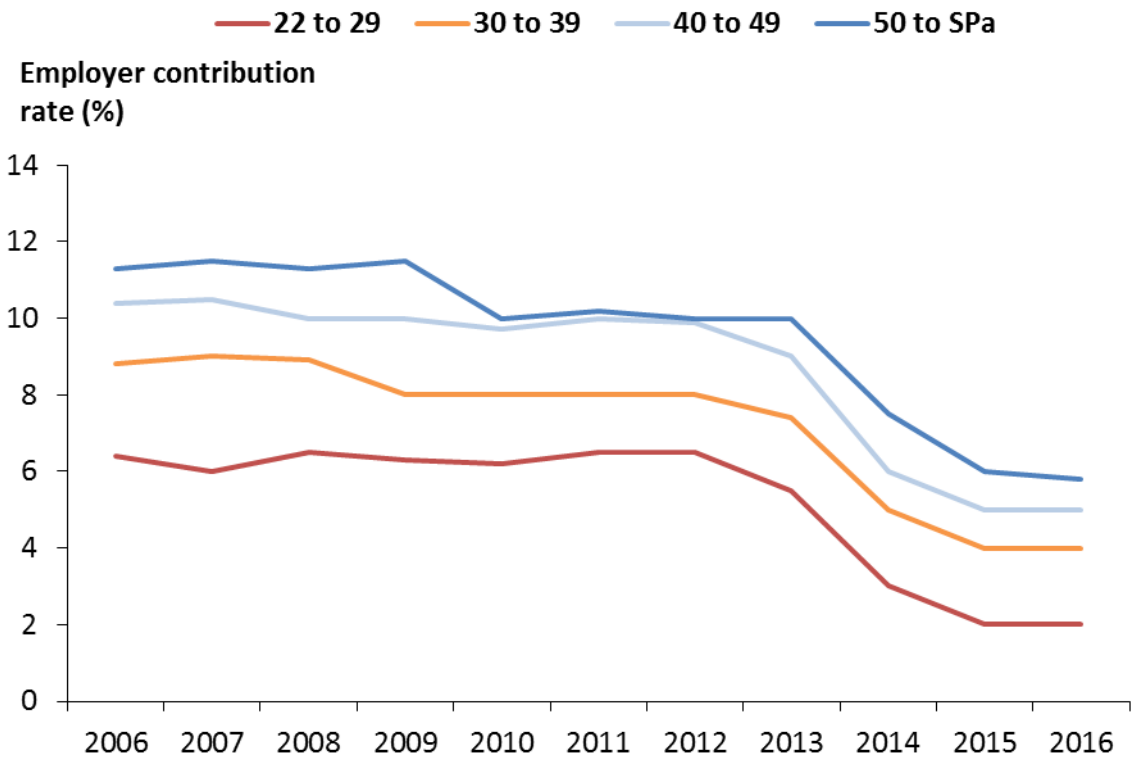
Similarly, private sector median eligible employee contribution rates across age groups were flat from 2006 to 2013 (Figures 4.11 and 4.12). However, they have all fallen since 2013, particularly in the 22 to 29 age band where the contribution rate was three per cent in 2013 and one per cent in 2016. This fall in the 22 to 29 age band is likely to be because there has been the largest increase in membership in that age band, following automatic enrolment implementation, with those new members often starting at the minimum contribution level.

Figure 4.11 – Private sector median eligible employee contribution rates to workplace pensions by age group, 2006 to 2016, Great Britain



Source: DWP estimates derived from the ONS ASHE, GB, 2006–2016.

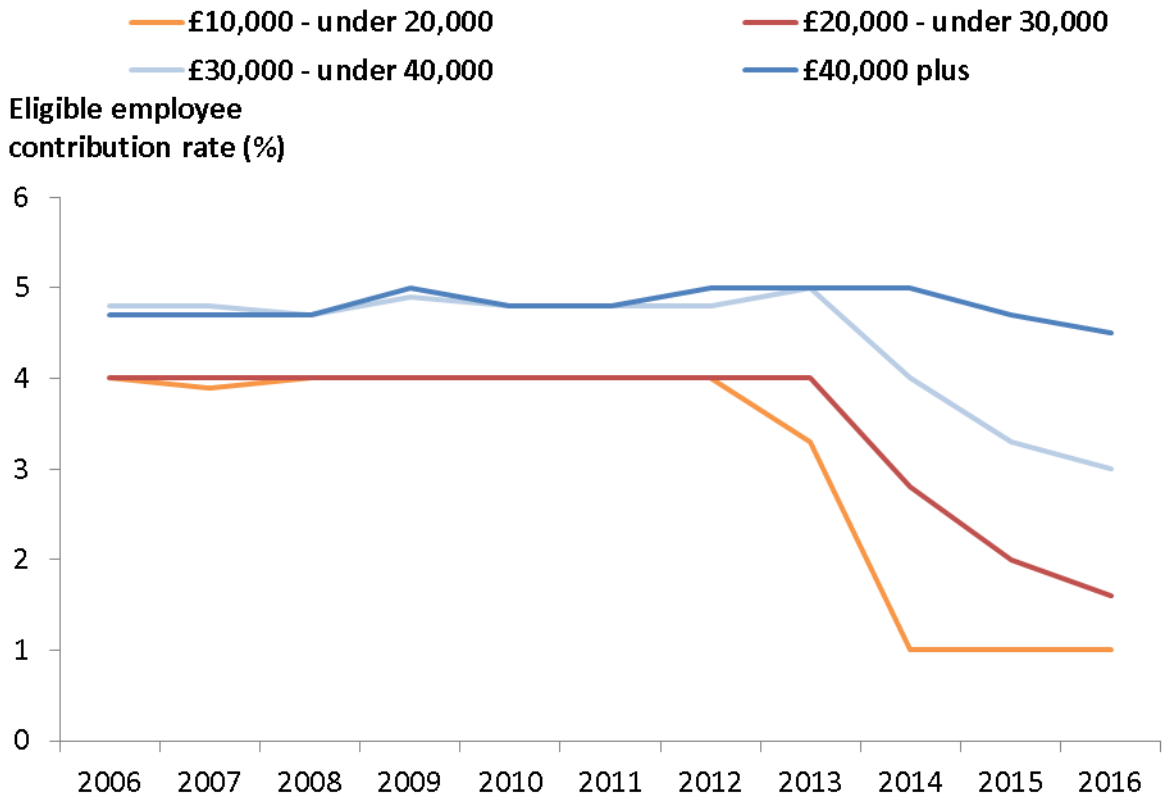
Figure 4.12 – Private sector median employer contribution rates to workplace pensions by age group, 2006 to 2016, Great Britain



Source: DWP estimates derived from the ONS ASHE, GB, 2006–2016.

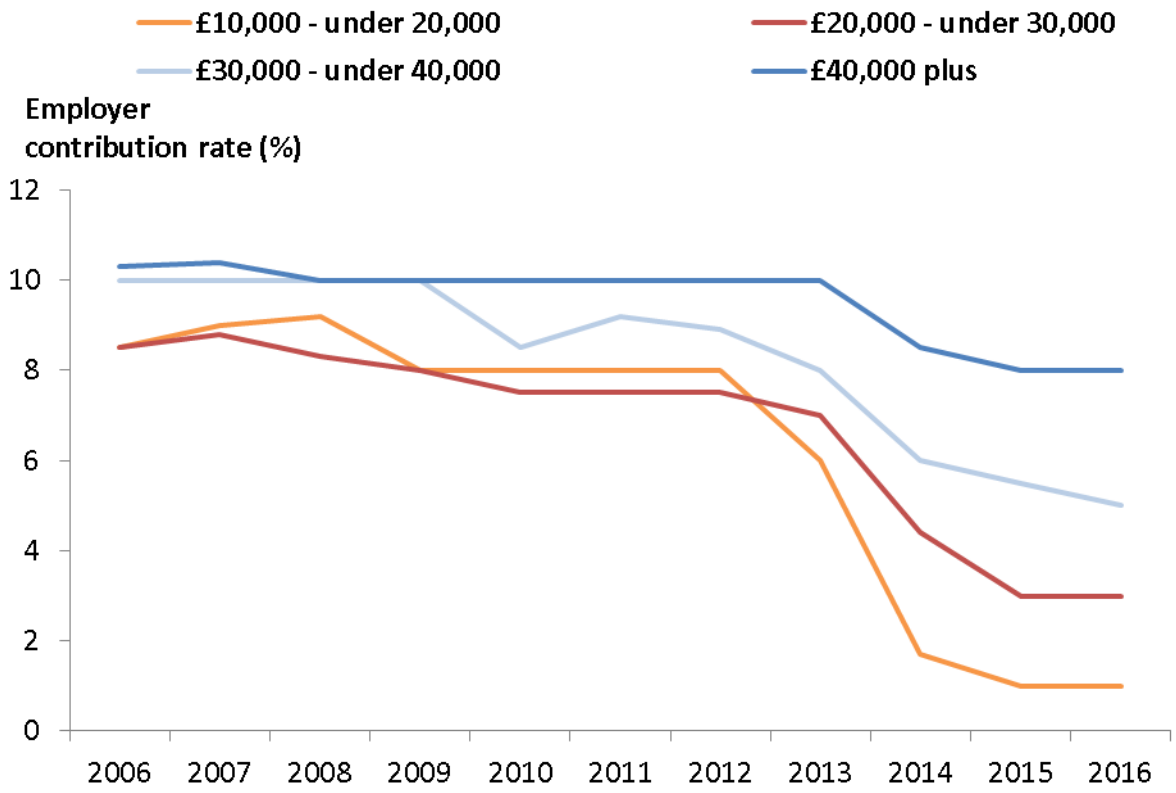
Figures 4.13 and 4.14 show private sector median eligible employee and employer contribution rates to workplace pensions by earnings band.

Figure 4.13 – Private sector median eligible employee contribution rates to workplace pensions by earnings band, 2006 to 2016, Great Britain



Source: DWP estimates derived from the ONS ASHE, GB, 2006–2016.

Figure 4.14 – Private sector median employer contribution rates to workplace pensions by earnings band, 2006 to 2016, Great Britain



Source: DWP estimates derived from the ONS ASHE, GB, 2006–2016.

For employees earning more than £40,000, there was little change in private sector employee median contribution rates, staying around five per cent in each year. This is to be expected as those in the highest earnings band already had high participation rates prior to introduction of automatic enrolment. In contrast, for employees earning between £10,000 and £20,000, contribution rates fell from four per cent in 2012 to one per cent in 2014. The decrease in median contribution rates for this band was driven by the largest increase in membership since 2012.

The staged nature of automatic enrolment, and the phased introduction of contribution rates starting at the minimum level, is the main explanation for the decrease in median contribution rates in all other employee earning bands.

4.3 Undersaving analysis

Summary

- Using existing undersaving methodologies and based on existing AE rules on coverage and contributions, it is estimated that the introduction of AE reduced undersaving from 14 million (45%) to 12 million (38%) individuals. Of the 12 million currently undersaving, around 1.6 million (13%) fell into the bottom two pre-retirement earnings bands (earning less than £25,000 a year in today's earnings terms) while more than half of all undersavers are earning more than £34,500 in the run up to retirement.
- Of the 1.6 million undersavers in the two lower earnings bands, just over half (around 800,000) were within 20 per cent of their target pension income. Therefore, extra saving in this group, e.g. by starting pension saving younger, could effectively reduce undersaving for this group.
- In the absence of AE, an estimated 48 per cent of the youngest cohorts would have been undersaving, significantly greater than the 33 per cent amongst the oldest cohorts. The introduction of AE has substantially closed that gap to 36 per cent undersaving amongst the youngest cohort.

This section presents analysis to show the problem that AE seeks to solve. This primarily includes findings from DWP analysis of undersaving and the extent to which the level of undersaving has changed overall and across different groups. This section relates to the following analytical questions:

- What is the current level of undersaving for retirement, including for eligible and ineligible employees?
- Which groups are undersaving (and by how much)?
- How does this compare to previous analyses of undersaving?

4.3.1 Measuring 'undersaving'

The first report of the Pensions Commission[81] published in 2004 discussed the concept of an 'adequate' pension and what role the state should take to ensure pensioners reach an adequate income. On the assumption that a pensioner would want to maintain a certain standard of living in retirement that they had during their working life, he or she would need to maintain a level of pension income related to their pre-retirement earnings. Changing patterns in consumption as people get older

81 https://www.webarchive.org.uk/wayback/archive/20070802120000/http://www.pensionscommission.org.uk/publications/2004/annrep/index.html

suggests their pension income can be somewhat lower than their pre-retirement earnings to achieve the desired standard of living. They also suggest that those with lower earnings need to achieve a higher replacement rate than higher earners.

The Pensions Commission adopted the concept of a target 'replacement rate' (see Box 4.1) that differs based on the individual's pre-retirement earnings.

Box 4.1 – Replacement rates

Fundamentally a replacement rate compares an individual's pre-retirement income with their post-retirement income. The exact replacement rate calculation will depend upon what exactly it is intended to represent and may need to account for the available data or modelling.

To illustrate a replacement rate calculation, consider a man who is about to retire and start receiving his State and private pension. If he earns £28,000 per year (before tax) immediately before retirement and receives a State pension of £8,300 and private pension of £10,000 per year on retirement, his replacement rate could be calculated to be (£8,300 + £10,000) divided by £28,000 i.e. a replacement rate of 65 per cent.

The above definition uses gross pre-retirement earnings and compares it with gross pension income and so can be described as a 'gross' replacement rate. An alternative could be to use a 'net' replacement rate which compares net pre-retirement earnings with net pension income. Based on 2017/18 income tax and National Insurance thresholds, and depending upon his pension contribution, his net pre-retirement earnings would be around £21,000 and his net pension income would be around £17,000. Therefore, his 'net' replacement rate would be 81 per cent.

There are therefore two different definitions giving two different replacement rates and each approach has its advantages. The 'gross' replacement rate is easier to calculate which is useful when attempting to estimate replacement rates for the entire population many years into the future. On the other hand the 'net' replacement rate may be considered more representative of an individual's actual experience by contrasting disposable income before and after retirement. An improved 'net' measure might include in-work and retirement benefits (e.g. Winter Fuel Payment).

This example shows that there are nuances in the definition of a replacement rate for just one individual. In this chapter we aim to estimate replacement rates for a range of individuals. Some will work part-time in the run up to 'retirement', some may be in relationships with someone with much higher or lower income, and some will rent homes while others will own theirs outright. The ideal replacement rate measure would be able to account for such differences in individual circumstances. The target replacement rates set by the Pensions Commission were based on the 'gross' replacement rate, so in this report we have used a gross measure that allows for some of the differences in individual circumstances outlined above. A detailed description of the methodology can be found in Annex 2.

DWP has used this definition as the basis for an estimate of the number of people in the working age population who are undersaving for their retirement. These estimates use Pensim2, DWP's long-term model of pensioner incomes. Pensim2 simulates State and private pension contributions and incomes for the British population until the year 2100. This enables estimation of the replacement rate for the simulated individuals; if they do not reach their target replacement rate they are defined as undersavers (see Annex 2 for more detail on Pensim2 and undersaving methodology).

Over the last few years, DWP has published a number of estimates of the number of people undersaving for their retirement. By their nature the estimates are sensitive to assumptions on the size and age structure of the population and long-term economic growth, as well as more detailed assumptions around State and private pensions. These assumptions have changed as organisations such as the Office of National Statistics and Office of Budget Responsibility (OBR) have revised their population projections and long-term economic assumptions respectively. Furthermore, DWP's evidence of the impact of automatic enrolment has grown over the period, allowing us to create a more refined estimate of its impact on undersaving.

In addition to changing assumptions, the methodology used has changed over the years. For example, more recent estimates 'equivalise' incomes to reflect the fact that a couple can achieve a given standard of living without requiring twice the income of a single person (e.g. a couple doesn't need to spend twice as much on heating).

In 2012 DWP published estimates of the number of people facing inadequate retirement incomes.[82] The report showed that around 38 per cent of the working age population (10.7 million people) were undersaving, but the report did not include the impact of automatic enrolment.

Following this, the 'Framework for the analysis of future pension incomes' (2013)[83] made a number of refinements to the methodology, including equivalisation of income and estimates of housing costs in order to better differentiate between renters and home-owners. They also modelled automatic enrolment. Under this methodology they estimated that 44 per cent (12.2m) were undersaving. They also used a conservative estimate of automatic enrolment opt-out rates to estimate that around one million people would no longer be undersaving as a result of AE and the new State Pension.

In 2014 DWP published 'Scenario analysis of future pension incomes'[84] which estimated that 43 per cent (11.9m) were undersaving. It also contained some 'what if?' scenarios looking at the impact of various changes in policy assumptions on the

[82] DWP (2012): Estimates of the number of people facing inadequate retirement incomes: https://www.gov.uk/government/statistics/estimates-of-the-number-of-people-facing-inadequate-retirement-incomes

[83] https://www.gov.uk/government/statistics/framework-for-the-analysis-of-future-pension-incomes

[84] https://www.gov.uk/government/publications/scenario-analysis-of-future-pension-incomes

estimate of undersaving. It also looked in more detail at the concept of 'depth' of undersaving.

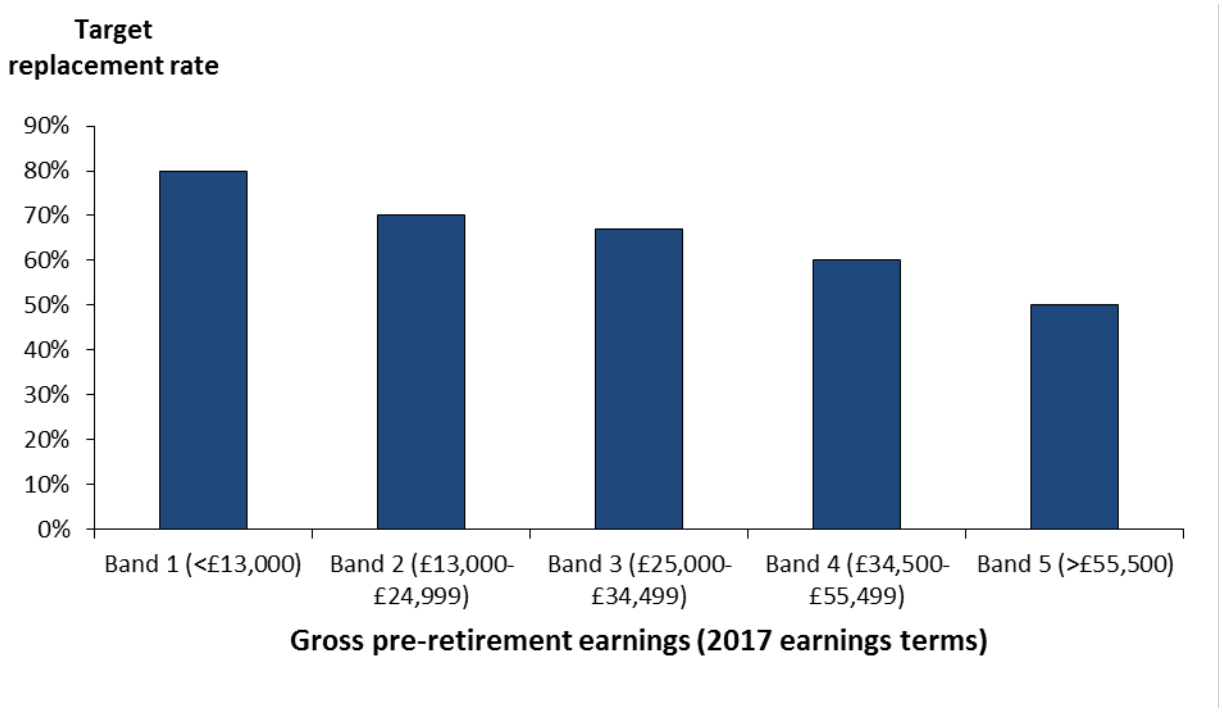
This brief history of undersaving modelling in DWP shows that even such broadly similar calculations can lead to differing results and, as such, only give one broad indication of the state of pension saving in the country.

The work undertaken for the 2017 AE review is based on the methodology established under these earlier publications, but uses a more up-to-date version of the Pensim2 model. Annex 2 discusses the Pensim2 model, undersaving methodology and some of the areas of uncertainty in the estimates.

4.3.2 Latest estimates of undersaving

Figure 4.15 shows the target replacement rates used in this report to determine whether or not someone is undersaving for their retirement. The earnings bands are based on those used by the Pensions Commission but increased in line with average earnings growth to be consistent with 2017/18 earnings levels. An individual earning less than £13,000 per year in the years before reaching their SPA needs to achieve a replacement rate of 80 per cent to be deemed as saving enough. For those earning more than £55,000, the target is to reach half of their pre-retirement earnings. Target replacement rates for gross pension income by gross pre-retirement earnings are illustrated in Figure 4.15.

Figure 4.15 – Target replacement rates for gross pension income by gross pre-retirement earnings



Source: Pensim2 modelling

A full State Pension for someone reaching SPA in 2017 is £159.55 per week, or nearly £8,300 per year. Therefore, a full State Pension alone could be considered to constitute an adequate pension income for someone earning £10,400 or less immediately before SPA. However, some private saving would still be required for many people in the lowest earnings band.

The Office of National Statistics estimates[85] that the median full-time gross earnings of a man aged over 60 in 2016 was £558 per week. If he worked the entire year he would earn £29,000 which would put him in the middle of Band 3 and a target replacement rate of 67 per cent. A full State Pension alone (around £8,300 per year in 2017/18) would lead to a replacement rate of 29 per cent. He would need an additional £11,100 annual income from his private pension to reach his target replacement rate and so have an adequate income in retirement.

Therefore, when interpreting our estimates of undersaving it is important to bear in mind that State Pension plays an important role, with private pension building on top of that. The relative importance depends upon earnings before retirement. In the real world, people may also have other sources of income in retirement, such as non-pension saving and earnings; however, these are not included in our estimates.

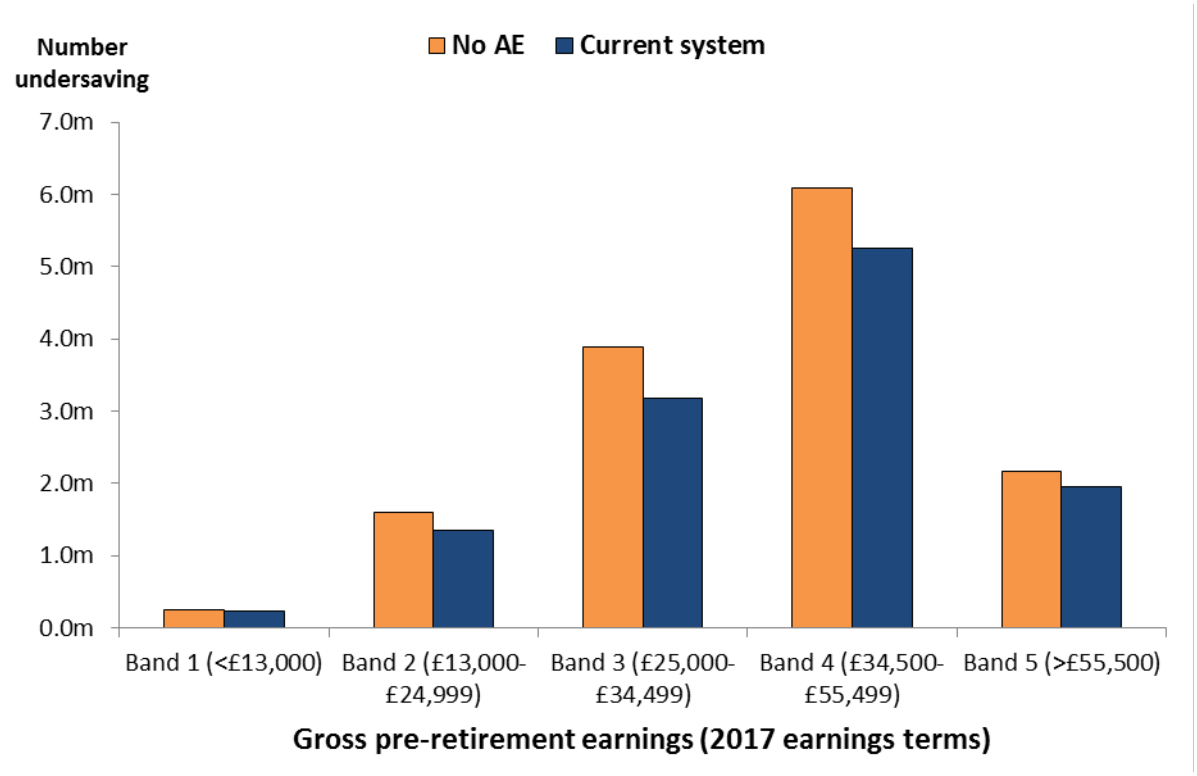
Updated modelling has been used to provide revised figures on the numbers of people estimated to be undersaving. Based on Pensim2 modelling, it is estimated that 38 per cent of people currently aged between 22 and State Pension Age are not saving enough for their retirement. This equates to 12 million people who are not expected to meet their target replacement rates based on the Pension Commission definitions.

Analysis has also considered the effect AE has had on the numbers of undersavers. Using existing undersaving methodology and based on existing AE rules on coverage and contributions, it is estimated that AE will reduce undersaving from 14 million (45%) to 12 million (38%). Therefore, while AE has made a substantial contribution to reducing undersaving, there is still work to be done.

Figure 4.16 shows how the undersavers are distributed based on their pre-retirement earnings band under the current system and without the introduction of automatic enrolment. Of the 12 million currently undersaving, around 1.6m (13%) fall into the bottom two pre-retirement earnings bands (earning less than £25,000 a year in today's earnings terms) while more than half of all undersavers are earning more than £34,500 in the run-up to retirement.

[85] Figure 14, Annual Survey of Hours and Earnings:2016 provisional results, ONS https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/earningsandworkinghours/bulletins/annualsurveyofhoursandearnings/2016provisionalresults#earnings-by-age-group

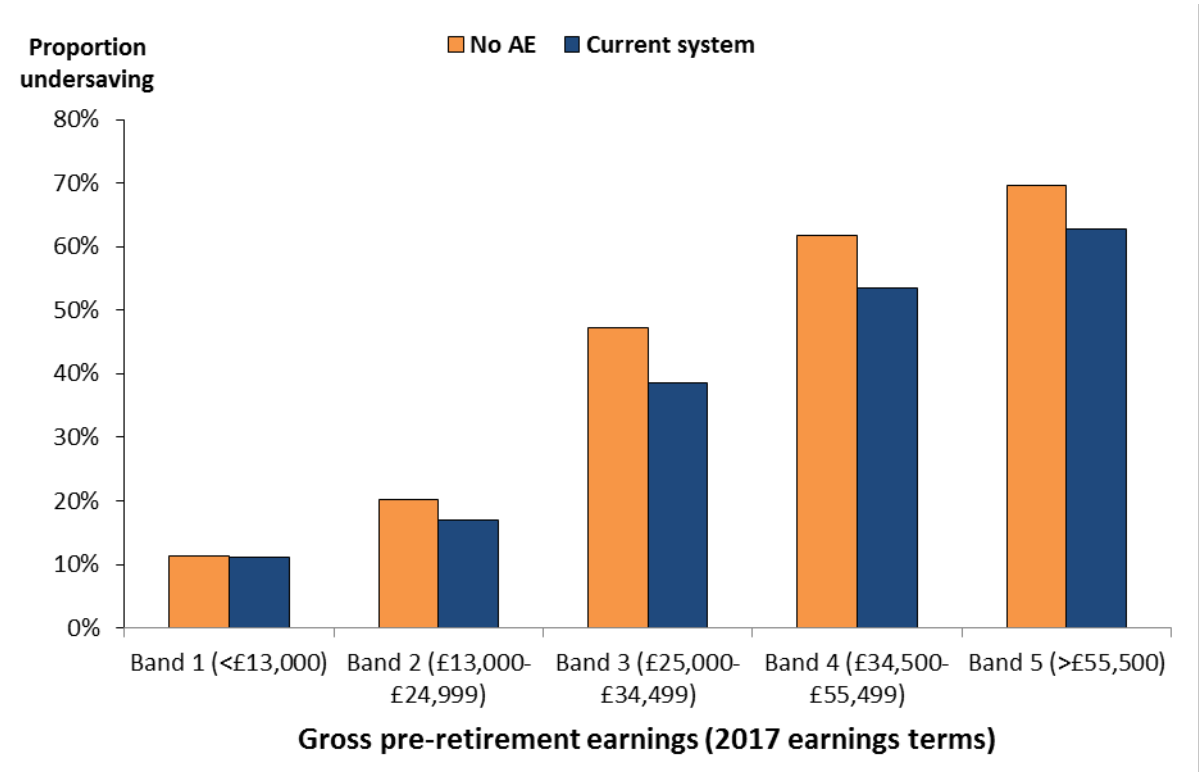
Figure 4.16 – Number of people projected to undersave without AE and under the current system by pre-retirement earnings band



Source: Pensim2 modelling

Figure 4.17 shows the proportion of people in each earnings band that are projected to be undersaving. It shows that, under the current system, around 11 per cent of those with lowest pre-retirement earnings (less than £13,000 gross earnings per year) are at risk of undersaving compared to 63 per cent in the top band of earnings (more than £55,000 per year).

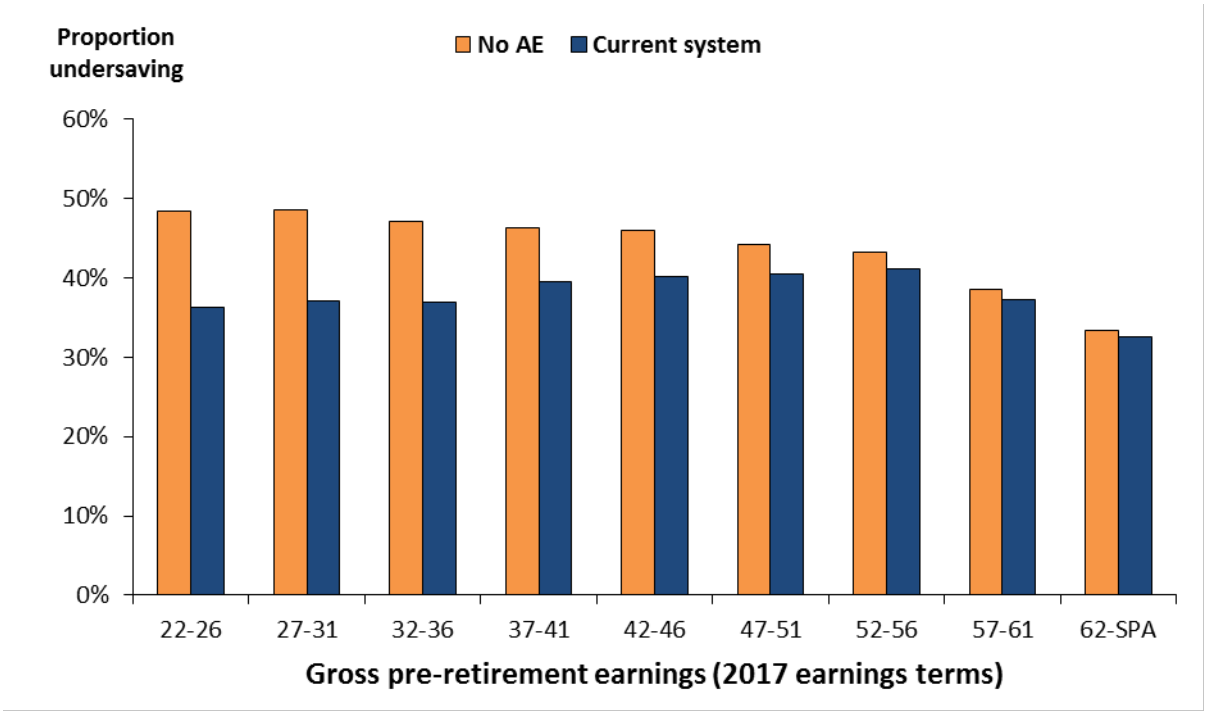
Figure 4.17 – Proportion of people projected to undersave without AE and under the current system in each pre-retirement earnings band



Source: Pensim2 modelling

By its nature automatic enrolment will tend to have the largest effect on those who will be enrolled into a pension for longer. Figure 4.18 shows the impact AE has had broken-down by cohort, based on current state and private pension policies (see Annex 2 for details on the assumptions).

Figure 4.18 – Proportion of people projected to undersave without AE and under the current system by age in 2017



Source: Pensim2 modelling

In the absence of AE, an estimated 48 per cent of the youngest cohorts would have been undersaving, significantly greater than the 33 per cent amongst the oldest cohorts. The introduction of AE has substantially closed that gap to 36 per cent undersaving amongst the youngest cohort.

4.3.3 Depth of undersaving

The question of whether or not someone is undersaving based on a target replacement rate is binary. In the context of this review, it is useful to understand how far people are from reaching an adequate pension income.

Each individual has a target pension income that is based on their replacement rate. For someone with pre-retirement earnings of £10,000 per year, their target pension income will be £8,000 per year while someone earning £30,000 per year will have a target income of £20,000 per year.

Figure 4.19 shows how target pension income varies with pre-retirement earnings, based on the Pensions Commission replacement rates. It clearly shows one of the peculiarities of the replacement rate methodology; while target income generally increases with pre-retirement earnings, there is a 'step-change' between earnings bands. At higher earnings levels this step can be quite significant: the step between the fourth and fifth earnings bands is over £5,000 in 2017/18 earnings terms.

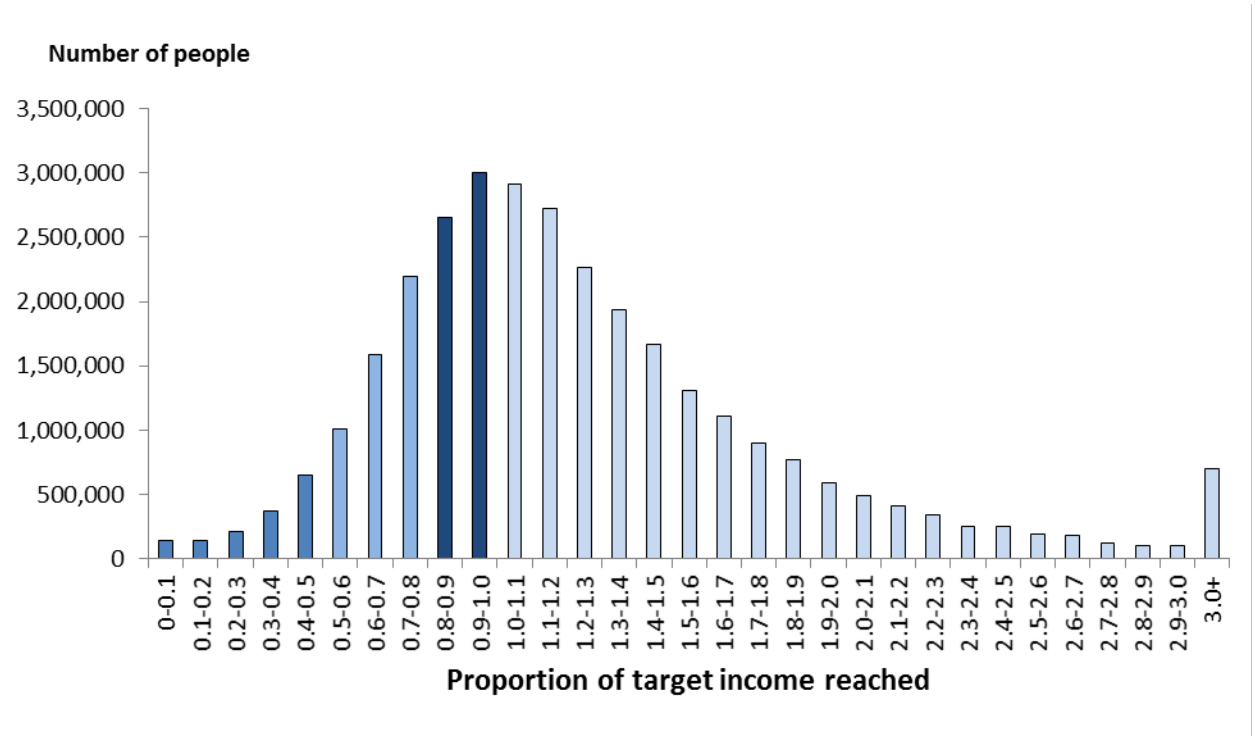
Figure 4.19 – Target pension income by pre-retirement earnings

Source: DWP calculations

To measure depth of undersaving, the proportion of an individual's target pension income achieved is calculated; if this is less than one they are considered to be undersaving, more than one and they are considered to be adequately saving.

Figure 4.20 shows the proportion of target pension income achieved for all people aged 22 to SPA. The lighter bars to the right are the estimated 19.3 million people who are projected to have at least adequate saving because they have exceeded their target pension income. The darker bars to the left of the figure are the 12 million undersavers.

Figure 4.20 – Distribution of the proportion of target income reached (all people aged 22 to SPA)



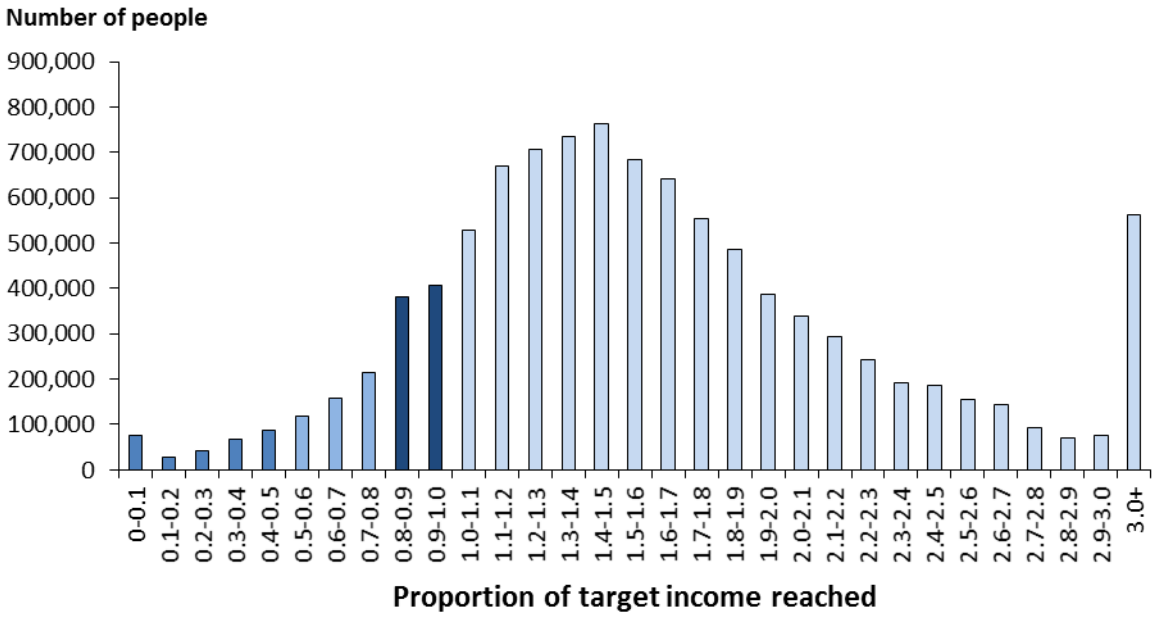
Source: Pensim2 modelling

This shows a wide range of outcomes for pensioners, but the bulk of outcomes are relatively near their estimated target pension income: about a third of all people are estimated to get between 80 per cent and 120 per cent of their target pension income. Of the 12 million people undersaving, nearly half (5.7 million) reach more than 80 per cent of their target income.

However, as previously seen, undersavers are predominantly those with higher pre-retirement earnings. The risk of undersaving in the lower earning groups is somewhat lower, so might also be expected to be reflected in the depth of undersaving.

Figure 4.21 shows the depth of undersaving amongst those with pre-retirement earnings in the lower two bands (earnings below £25,000).

Figure 4.21 – Distribution of the proportion of target income reached (just those in the lower two pre-retirement earnings bands)



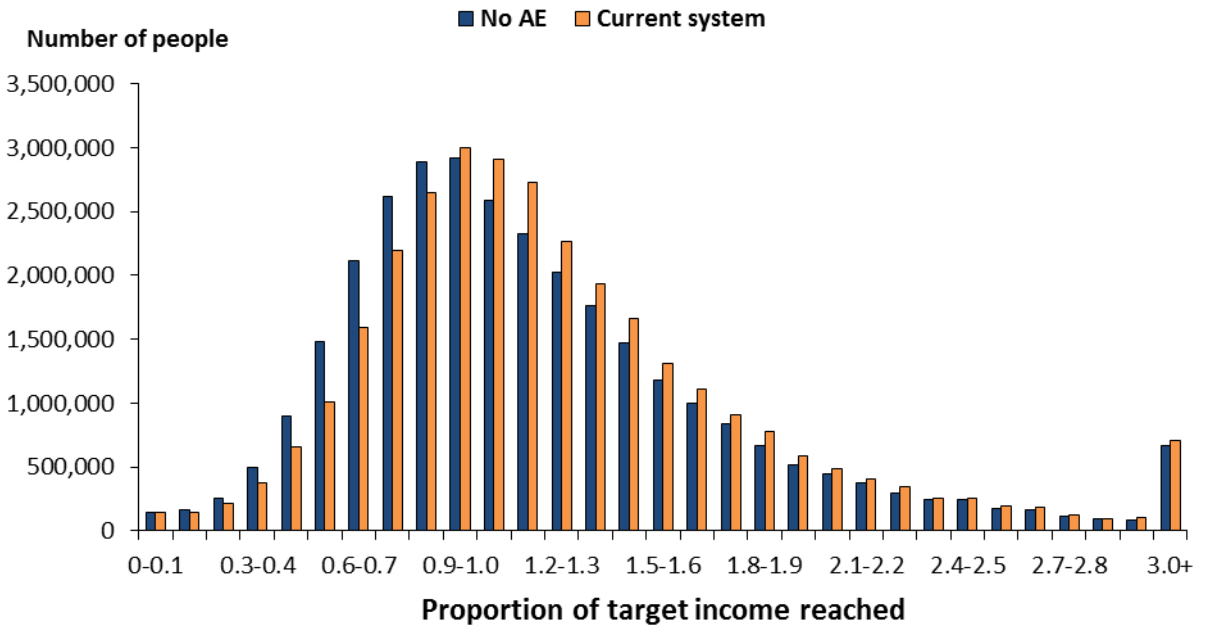
Source: Pensim2 modelling

Of the 1.6 million undersavers in the two lower earnings bands, just over half (around 800,000) are within 20 per cent of their target pension income. So extra saving in this group, for example by starting pension saving younger, could be relatively effective in reducing the number of people undersaving.

Section 4.3.1 showed that AE has reduced the number of people undersaving by an estimated two million (i.e. moving them from below their target income to above) (See Annex 10.2 for additional detail on the approach and analysis.). However, that hides much more change in pension income amongst those below and above their target pension income.

Figure 4.22 shows the distribution of target pension income achieved in the absence of AE and under the current AE rules (i.e. reflects current levels of undersaving with and without AE). It shows a substantial reduction in the numbers of people reaching 40 to 90 per cent of the target income with a corresponding increase in those reaching at least their target income.

Figure 4.22 – Proportion of target income reached without AE and under the current system



Source: Pensim2 modelling

Figure 4.22 shows the difference in the distribution of target income achieved with and without AE but it doesn't show how individuals are affected.

Each individual is categorised within the modelling into one of four 'depth' of undersaving categories: those who are modelled as achieving less than 50 per cent of their target pension income ('substantial' undersavers); those reaching 50-80 per cent ('modest' undersavers); those reaching 80-100 per cent ('mild' undersavers); and those over their target pension income. Doing this separately for each individual with and without AE allows us to get a feel for the numbers of people who are better off, even if they are still undersaving. Table 4.12 summarises the effect AE has had on the numbers of individuals modelled as being in each undersaving category.

Table 4.12 – People moving between undersaving categories as a result of AE

Without AE	With AE				Total
	'Substantial' < 50%	'Modest' 50-80%	'Mild' 80-100%	Over target	
'Substantial' <50%	1.5m	0.4m	0.1m	<0.05m	2.0m
'Modest' 50-80%		4.4m	1.4m	0.4m	6.2m
'Mild' 80-100%			4.2m	1.6m	5.8m
Over target				17.3m	17.3m
Total	1.5m	4.8m	5.6m	19.4m	31.3m

Source: Pensim2 analysis

The two million people no longer undersaving as a result of AE consist of around 1.6m who were 'mild' undersavers and another 0.4m who were 'modest' undersavers.

In addition to those no longer undersaving, there are another 1.9m people who have moved between undersaving categories. While still classed as undersaving, they may therefore see a large proportional increase in their pension income as a result of AE.

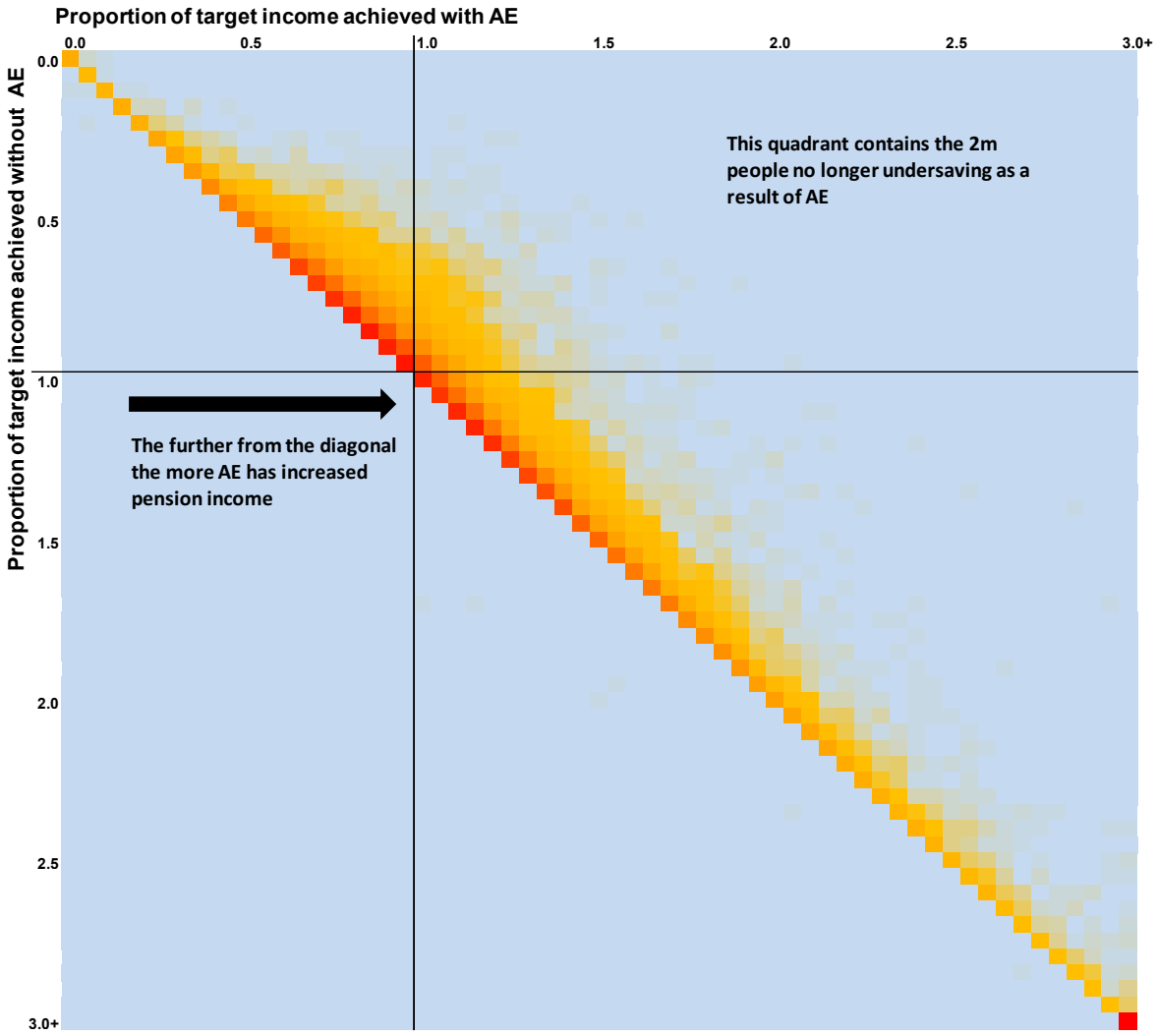
Figure 4.23 gives a more detailed breakdown of changes in pension income as a result of AE. It is a heat-map showing the proportion of target income achieved without AE and the proportion achieved with AE). Red indicates relatively large numbers of people fading to pale yellow indicating relatively few.

The diagonal line running across the figure are those people unaffected by AE. These are people who may be eligible for automatic enrolment but would have been saving at least the minimum contributions into a pension even without AE and so are not modelled as making any changes to their pension provision. For other people, the impact of AE is indicated by their horizontal distance from the diagonal.

The colour in the upper-right quadrant indicates the two million people no longer undersaving as a result of AE. The distance above the diagonal shows that some of those have been moved from a long way below their target income.

The upper-left quadrant consists of those who are still undersaving despite AE. While they are not modelled as reaching their target income some will see substantial improvement relative to what they would have received in the absence of AE.

Figure 4.23 – Heat-map comparing the proportion of target income achieved for people with and without AE



Source: Pensim2 modelling

4.4 Measuring adequacy

This section presents findings relating to pension adequacy, addressing the question: how is an adequate retirement income defined in academic and specialist literature. We know that people will be saving more through AE but analysis on adequacy will consider whether people are saving enough.

The determination of whether an individual has sufficient resources throughout retirement is a complex task. There are two broad approaches that can usually be taken when assessing the adequacy of an individual's retirement resources. The first is to define adequacy by looking at whether retirement incomes are above a minimum poverty threshold. An alternative approach is to look at whether individuals'

savings allow them to smooth their consumption over time and maintain the same living standards in retirement.

In relation to the first approach, pensioners in the UK are increasingly less likely to be in absolute and relative low income households compared to previous years.[86] The proportion of pensioners in absolute low income after housing costs has reduced from 29 per cent in 2002/03 to 14 per cent in 2015/16. This has been caused by an increase in average pensioner incomes: typical pensioner net household disposable income after housing costs has risen in real terms from £319 per week in 2002/03 to £413 per week in 2015/16.[87] There has also been a decrease in the proportion of pensioners in relative low income after housing costs. This has reduced from 24 per cent in 2002/03 to 14 per cent in 2014/15, although there was a slight rise to 16 per cent in 2015/16.[88] The general decline has been caused by pensioners' incomes increasing faster than the rate of working age incomes. It can be seen that, with regards to adequacy measured in terms of low income, the situation for UK pensioners has been broadly improving over time.

This report focuses on the second approach: measuring the ability for an individual to maintain their standard of living in retirement. To do this, the income replacement rate methodology described earlier is used. The theoretical foundations of this come from the lifecycle model of consumption and saving. This essentially refers to individuals smoothing consumption across their lifecycle. The empirical foundations come from the First Report of the Pensions Commission in 2004.[89] This report looked at a range of evidence including international comparisons, analysis of expenditure trends, actual replacement rates observed and people's stated expectations and preferences to determine how this could be measured. The report concluded that individuals could maintain their current consumption in retirement with less than 100 per cent income replacement and that lower income individuals require (and desire) higher replacement rates. The outcome being that income replacement rates should be less than 100 per cent and target replacement rates should decrease as working age income increases.[90]

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[86] **Absolute low income** sets a threshold as a proportion of the UK average (median) income in a given year (2010/11) and moves each year in line with inflation. The percentage of individuals in absolute low income will increase if lower income individuals' incomes rise by less than inflation.

Relative low income sets a threshold as a proportion of the UK average (median) income and moves each year as average income changes. The percentage of individuals in relative low income will increase if either lower income individuals' incomes rise by less than the average; or if average incomes fall but lower income individuals see their incomes fall by more than average incomes.

[87] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/600091/households-below-average-income-1994-1995-2015-2016.pdf

[88] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/600091/households-below-average-income-1994-1995-2015-2016.pdf

[89] https://www.webarchive.org.uk/wayback/archive/20070717120000/http://www.pensionscommission.org.uk/index.html

[90] A replacement rate can be less than 100 per cent and maintain living standards through two predominant reasons: retirees pay less tax and National Insurance, and retirees save less. The

Given that the fundamental purpose of pension systems is to replace income in retirement, a starting point for analysis is to look at income to assess the adequacy of saving. The majority of individuals would not be satisfied with simply receiving a basic minimum level of income, so it is important to estimate what level of income allows people to maintain the same standard of living in retirement. Those with low income in working life could consider themselves to be better off in retirement, whereas those who have seen a drop in income could see themselves as worse off in retirement.[91] This evidence naturally lends itself to an income replacement rate measure. This methodology has stood the test of time and variations are used by a range of institutions (European Union, 2012[92]; Organisation for Economic Development, 2015[93]; Pensions Policy Institute, 2013[94]; Aviva, 2016[95]; Resolution Foundation, 2017[96]).

4.4.1 Alternative Measures of Adequacy

There are alternative methods that could be used to assess adequacy. However, it is important to highlight that there are variations within the income replacement rate methodology that could reasonably be made. The income replacement rate is expressed as post-retirement income as a proportion of pre-retirement income. There are various ways that post- and pre-retirement income can be defined and different time periods which pre- and post-retirement income can cover.

In terms of the time period, this report defines pre-retirement income as the average earnings between the ages of 50 and SPA and post-retirement income is taken as an average of income across retirement from SPA until death.[97] However, it is possible to use any time period between working age and retirement to define pre-retirement income; and, unless earnings are constant in real terms, then this will change the replacement rate given a fixed post-retirement income. The same can be said for post-retirement income (between State Pension age/retirement and death and given a fixed pre-retirement income).

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required replacement rate needs to be higher for lower income individuals as it is more likely that these individuals will be closer to the minimum acceptable standard of living and the savings effect is greater for higher income individuals (higher income individuals are likely to be saving a greater proportion of their income throughout their working lives and therefore can maintain consumption with lower replacement rates).

[91] DWP, 2006, *Understanding Older People's Experiences of Poverty and Material Deprivation*

[92] http://ec.europa.eu/social/BlobServlet?docId=7805&langId=en

[93] http://www.keepeek.com/Digital-Asset-Management/oecd/social-issues-migration-health/pensions-at-a-glance-2015_pension_glance-2015-en#page15

[94] http://www.pensionspolicyinstitute.org.uk/publications/reports/what-level-of-pension-contribution-is-needed-to-obtain-an-adequate-retirement-income

[95] https://www.aviva.com/newsroom/public-policy-items/aviva-s-auto-enrolment-pre-review-2016/

[96] https://www.intergencommission.org/wp-content/uploads/2017/11/Pensions.pdf

[97] For a detailed discussion of the methodology please refer to annex 2 (section 10.2).

In terms of pre- and post-retirement income, this report defines pre-retirement income as gross earnings; however it would be possible to include working-age benefits in this calculation. For post-retirement, it assumes that all pension and financial wealth is annuitised; alternative sources of wealth such as property could also be included. It is evident that there were a number of different ways in which the methodology could be changed, including to look at retirement income options other than annuities and that any differences would result in a different replacement rate for any given individual. This means that it may not be appropriate to compare results between different reports unless the methodology is clear and the implications of any differences are understood.

In addition, when comparing outcomes of individuals over time, replacement rates may only give part of the picture. If a given cohort needs to spend more during retirement than another cohort, then, although they may have the same replacement rate on paper, they could have very different experiences in retirement: one cohort would have less disposable income and so, potentially, a worse experience in retirement. For example, the need for housing may vary over time with a significant decline in homeownership at the age of 30[98] – therefore those in younger cohorts could experience higher housing costs in retirement than those in older cohorts which would impact on their levels of disposable income.

The ratio of wealth to income at a certain age is a similar way to measure adequacy. For example, Aon Hewitt (2012)[99] refers to a benchmark of 11 times pay at age 65 and the National Institute on Retirement Security (2015)[100] benchmarks eight times income at age 67. This keeps a relative to pre-retirement income aspect but is based on a target level of wealth. An income replacement rate implicitly does this too, but having the benchmark as target wealth may mean that it is easier to adapt the methodology to account for the changing retirement environment. For example, it may be possible to set varying wealth to income targets for different age milestones. It may be possible to develop this methodology into an effective way to measure whether individuals are drawing down retirement resources at an appropriate rate. However, it may be practically difficult to implement this given the difficulty in modelling individual wealth decumulation patterns.

4.4.2 Moving away from pre-retirement income

There are methodologies which depart from the income replacement rate framework and do not consider pre-retirement income. In general, the academic literature explores a number of different options, whereas policy institutions tend to use a more limited number of alternative methods. Generally, beyond using an income replacement ratio, the more policy-oriented alternative measures look at:

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[98] http://www.resolutionfoundation.org/publications/the-generation-of-wealth-asset-accumulation-across-and-within-cohorts/

[99] http://www.aon.com/human-capital-consulting/thought-leadership/retirement/survey_2012_the-real-deal.jsp

[100] http://laborcenter.berkeley.edu/pdf/2015/RetirementSavingsCrisis.pdf

- Sufficiency to cover forecast living expenses; and
- Minimum needs as defined by a threshold or a series of thresholds.

The most common 'minimum' needs threshold is the Joseph Rowntree Foundation Minimum Income Standard (JRF MIS). This is based on the types of goods and services a sample of the population determine is required for a socially acceptable minimum standard of living. However, the JRF MIS may not be considered as adequate for individuals that have enjoyed a higher level of consumption pre-retirement.

It is possible to define standards that go beyond minimum acceptable standards. NEST (2014) research[101] suggests that the threshold for comfort and financial stability in retirement is around £15,000 per year regardless of how much they earned when they were working. It suggests that emotional and financial well-being rises steeply between £15,000 and £20,000 per year and improves more gradually from there. Although the NEST research is not intended to define an adequacy benchmark, it provides interesting insight and is a similar approach to that adopted in Australia.

In 2004, the Association of Superannuation Funds of Australia (ASFA) launched a set of retirement standards that outlined the annual budget needed by the average Australian to fund both a modest and comfortable standard of living, for both couples and singles.[102] This was defined by the types of lifestyle that would be possible under each budget: for example, the type of car that somebody could afford or the affordability of eating out at restaurants.

In 2015, ASFA launched a new Retirement Standard for older retirees to build upon this method. This reflected the changing expenditure needs of pensioners as they age. In the UK, the Pensions and Lifetime Savings Association advocated this approach in developing 'national retirement income targets' in a consultation paper published October 2017.[103] This budget approach is not based on pre-retirement earnings and simply looks at what amount of savings individuals would need to be able to finance a basic to comfortable retirement. The intention is that this could be used as a tool in the accumulation phase, but a similar framework could be used to assess the level of living standards individuals have in retirement.

Other studies analyse whether individuals would be able to finance their pre-retirement consumption. For example, Hurd and Rohwedder (2012)[104] estimated consumption trajectories based on pre-retirement consumption data. This analysis looked at whether individuals had enough resources to maintain consumption and

[101] http://www.nestpensions.org.uk/schemeweb/NestWeb/includes/public/docs/NEST_Retirement_Realities_2014,pdf.pdf

[102] https://www.superannuation.asn.au/resources/retirement-standard

[103] https://www.plsa.co.uk/Policy-and-Research-Document-library-Hitting-the-target-delivering-better-retirement

[104] Hurd, M. and Rohwedder, S. (2012), 'Economic Preparation for Retirement', *Investigations in the Economics of Aging, pp.77-113,* the National Bureau of Economic Research; University of Chicago Press.

bequeath wealth. This method can be reported in terms of numbers of years prior to death that the consumption path can be maintained or can give a level of consumption shortfall in each year.

Analysis in the AE 2017 review uses the income replacement rate methodology as it is a good approximation of the continuation of living standards. However, the income replacement rate methodology may not be sufficient to capture adequacy for the variety of different pathways that are likely to arise as the nature of patterns of work and retirement diversify in the future.

4.4.3 The Changing Nature of Retirement

The state of retirement is changing in response to changes in demography, increased life expectancy, and policy reforms introduced in response to these changes. Three changes in particular may affect the nature of retirement and income replacement rate calculations: greater longevity; fuller and longer working lives; and the introduction of pension flexibilities which allow greater individual choice about the use of retirement income savings.

From 1985 to 2009 (before the change to State Pension Age for women), life expectancy increased for females and males by 4.5 years and 5.8 years respectively. Over the same period, the average age of exit from the labour market increased by 1.8 years for females and by 1.0 year for males over the period of 1985 to 2009.[105] Longevity increasing faster than the rate of labour market exit age means that individuals have to fund a longer period of retirement. Given a fixed pension pot size, this will result in a lower annual retirement income.

There is some evidence that maintaining attachment to the labour market by working fewer hours in the run-up to retirement is seen as increasingly desirable. Polling conducted by DWP in 2015 showed that of people aged over 50 who had not yet retired, 39 per cent stated that part-time work or flexible work would be the best way to retire.[106] In addition, analysis of fuller working lives questions placed in the 2015 British Social Attitudes Survey (BSAS) revealed that, when currently employed people aged 50 and over were asked what their employer could do to help them stay in work later in life, 47 per cent said flexible hours, 46 per cent said part-time working and 30 per cent said that their employer could facilitate them taking on a less demanding role.[107]

Finally, the introduction of pension freedoms means that individuals can access their private pensions from age 55 and have greater flexibility to purchase non-annuity decumulation products. According to the Financial Conduct Authority's (FCA) Retirement Outcomes Review Interim Report, 71 per cent of pots that had been

[105] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/648979/fuller-working-lives-evidence-base-2017.pdf

[106] Attitudes of the over 50s to Fuller Working Lives

[107] https://www.gov.uk/government/publications/attitudes-to-working-in-later-life-british-social-attitudes-2015

accessed in 2017 were by those aged 55-64 (FCA, 2017).[108] This finding is based on a very limited amount of data and cannot be seen as indicative of likely future outcomes; however it still provides an early indication of how pension freedoms may be used by individuals before reaching SPA.

New pathways into retirement are becoming increasingly common. There is an increase in the number of people taking a phased retirement and a decrease in the number of people buying annuities. In light of this, it is important that how adequacy is measured and accounted for, be considered within the changing nature of the pensions landscape and individual's lives.

[108] https://www.fca.org.uk/publication/market-studies/retirement-outcomes-review-interim-report.pdf

5 Review Directions

This chapter presents analysis to assess the impact of changes to automatic enrolment policy as described in section 1.3.

In this section, the impact of the eligibility criteria is reviewed, and changes to those criteria on the eligible population and associated additional pension contributions.

It is the Government's ambition to implement the proposed changes to the automatic enrolment framework in the mid-2020s. This will be subject to discussions with stakeholders around the detailed design in 2018/19, finding ways to make the changes affordable, and followed in due course by formal consultation with a view to introducing legislation. However, in this chapter we have chosen to illustrate the impact of changes to automatic enrolment through estimates based on 2020/21 projections. This allows us to show the magnitude of the impact in the first full year after the phased increases to contribution rates.

To provide context: an estimated additional £20.5 billion in pension contributions will be made annually as a result of AE in 2020/21. Table 5.1 shows how this estimate is split by employee, employer and government (in the form of upfront tax relief on individuals' pension contributions).

Table 5.1 – Estimated additional pension contributions as a result of AE by source

	Employer	Employee	Government	Total
2017/18	£2.9bn	£3.0bn	£0.9bn	**£6.9bn**
2018/19	£5.3bn	£6.1bn	£1.9bn	**£13.3bn**
2019/20	£7.4bn	£9.4bn	£2.9bn	**£19.7bn**
2020/21	£7.8bn	£9.7bn	£3.0bn	**£20.5bn**

Source: DWP modelling

As noted in section 4.2, the growth in expected contributions between 2017/18 and 2019/20 are largely due to the phased increase in minimum contributions. The more modest increase between 2019/20 and 2020/21 is largely due to earnings growth.

5.1 Thresholds analysis

Summary

- In 2016, over three-quarters (78%) of private sector employees met both the age and earnings criteria to be eligible for automatic enrolment. An additional seven per cent met the age criteria and had earnings between the LEL and the trigger, so were entitled to employer contributions if they opted in. Similarly, an additional two per cent were aged 18-21 or 65-74 and had earnings over the LEL but below the trigger, so could also opt in with entitlement to employer contributions.
- Removing the LEL would create an additional £2.6 billion in annual pension savings through an additional £1.0 billion in employer contributions, £1.2 billion in employee contributions and £0.4 billion through income tax relief.
- Lowering the lower age limit from 22 to 18 increases the eligible target group by 0.9 million individuals and total annual pension savings by £0.8 billion in 2020/21.

This section presents analysis to assess the impact of changes to automatic enrolment as described in section 1.3.4. Similar analysis can be found in the annual review of the automatic enrolment earnings trigger and qualifying earnings band for 2018/19 (Annual Threshold Review), which has been published alongside the 2017 AE Review. The annual threshold review focuses on the statutory requirement to review and recommend the levels of the automatic enrolment thresholds each year; as such, it presents analysis for levels of the thresholds in 2018/19 only, in contrast to the longer term focus of the 2017 AE Review.

The key research question for this section of this report is:

- What are the impacts of changes to the 1) earnings trigger; 2) Lower Earnings Limit (LEL); and 3) age criteria on the eligible target group and associated costs and benefits?

Currently, individuals are eligible for automatic enrolment if they are at least 22 years old and under State Pension age, earning over the earnings trigger (£10,000 a year in 2017/18) in at least one job and work, or usually work, in the United Kingdom.

If an employee does not meet the above criteria, but earns between the LEL (£5,876 in 2017/18) and the earnings trigger, and is aged 16-75, then they are eligible to opt in to automatic enrolment and receive contributions from their employer.

Table 5.1 breaks down UK workers by age and earnings band using 2016 ONS ASHE data.

Table 5.1 – Age and earnings breakdown of UK private sector employees, 2016

Age	Earnings				Total
	Below £5,876	£5,876 - £10,000	Below £10,000	£10,000 +	
18-21	3%	2%	5%	4%	9%
22-29	1%	2%	3%	17%	20%
30-39	1%	2%	3%	20%	23%
40-49	1%	2%	3%	20%	23%
50-59	1%	2%	3%	17%	19%
60-64	0%	1%	1%	4%	5%
22-64	**4%**	**7%**	**11%**	**78%**	**89%**
65-74	0%	0%	1%	1%	2%
75+	0%	0%	0%	0%	0%
Total	7%	10%	17%	83%	100%

Source: DWP estimates derived from the ONS Annual Survey of Hours and Earnings (2016)
Note: due to rounding, the figures in the table may not sum exactly to the totals

In 2016, over three-quarters (78%) of employees met the age and earnings criteria to be eligible for automatic enrolment. An additional seven per cent met the age criteria and had earnings between the LEL and the trigger, so were entitled to employers' contributions if they opted in. Similarly, an additional two per cent were aged 18-21 or 65-74[109] and had earnings over the LEL but below the trigger, so could also opt in with an entitlement to employer contributions.

5.1.1 Earnings trigger

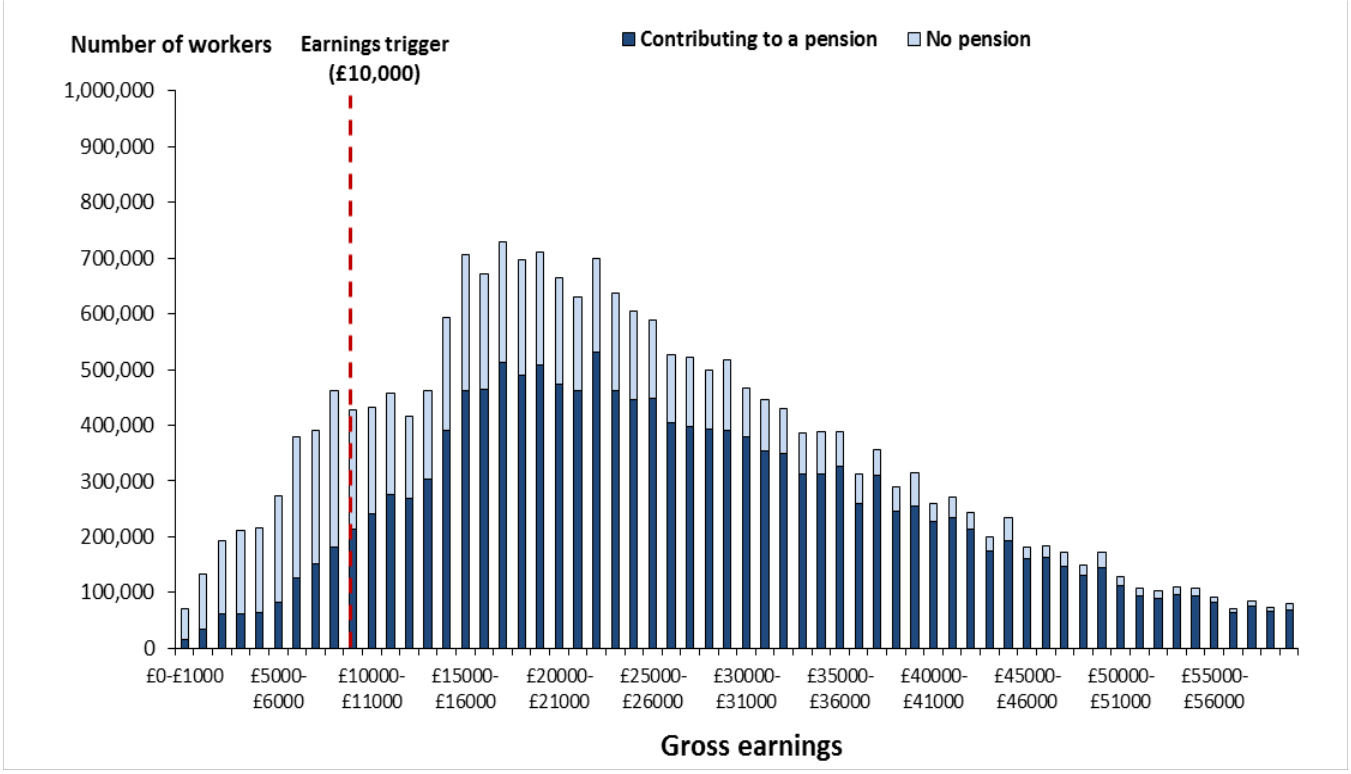
The earnings trigger sets the annual earnings level at which an individual becomes eligible to be automatically enrolled into a qualifying workplace pension. The majority (78%) of employees aged 22-64 earn above the earnings trigger.

If a worker earns above the LEL but below the earnings trigger, they are eligible to opt into a workplace pension and receive contributions from their employer. One-quarter (27 per cent) of workers aged 22 to SPA and earning below the earnings trigger were contributing to a pension in 2016. This figure was around ten per cent for workers aged below 22 (11%) and above SPA (10%).

Figure 5.1 gives a full earnings distribution by pension participation for age-eligible UK employees in 2016, and Figure 5.2 gives the same distribution for 2012. In 2012, 56 per cent of employees earning above the trigger were saving in an occupation pension; in 2016 this figure was 77 per cent.

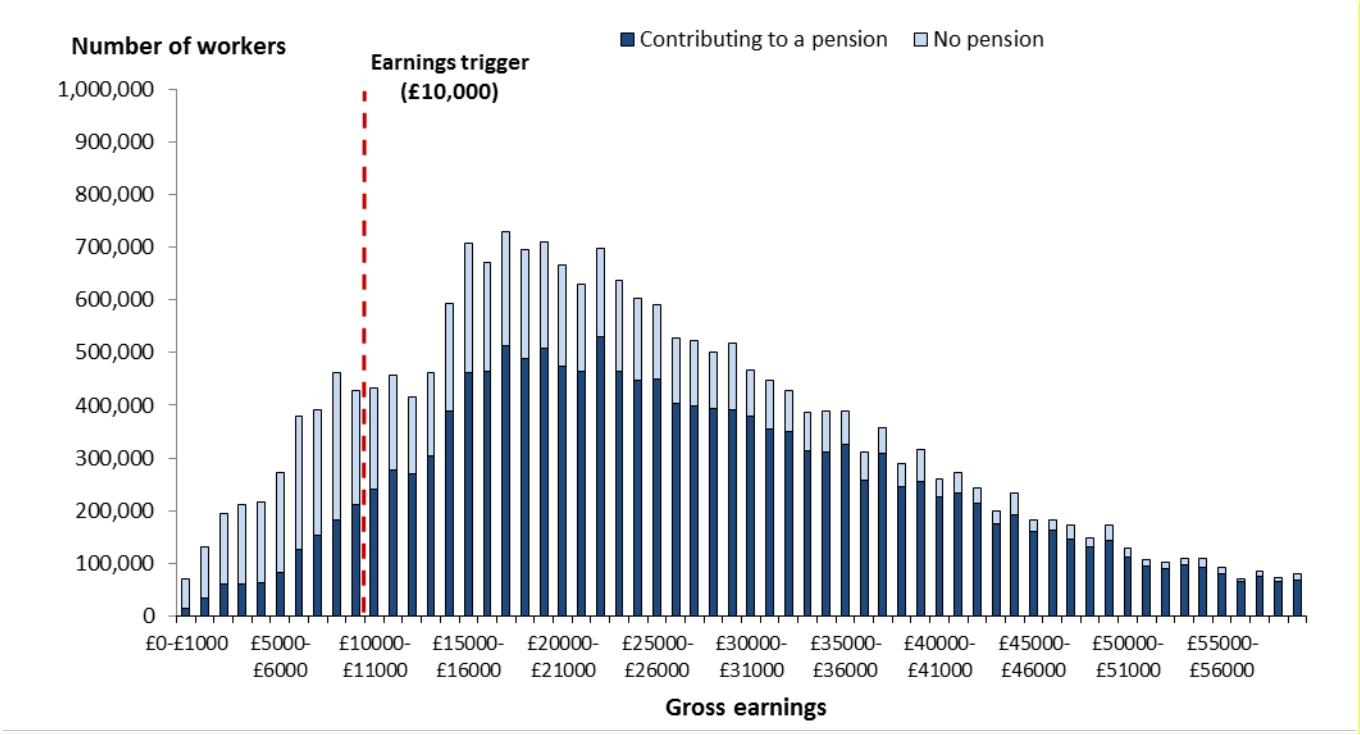
[109] Very few employees (below 0.5%) are aged 65-74 and earning between the LEL and the trigger, and so are rounded to 0% on Table 5.1.

Figure 5.1 – April 2016: Pension participation of UK employees aged 22 to SPA by earnings



Source: DWP analysis derived from ONS Annual Survey of Hours and Earnings (2016)

Figure 5.2 – April 2012: Pension Participation of UK employees aged 22 to SPA by earnings



Source: DWP analysis derived from ONS Annual Survey of Hours and Earnings (2012)

Several options have been considered for changing the earnings trigger. Table 5.3 presents the changes in eligible target group, additional costs, and demographic information on affected individuals for five options.

The five options are:

i. Freezing the trigger at £10,000;

ii. Setting the earnings trigger at the National Insurance LEL;

iii. Setting the earnings trigger at the National Insurance Primary Threshold;

iv. Uprate the current earnings trigger by the consumer price index (CPI);

v. Uprate the earnings trigger by earnings growth; and

vi. Align the earnings trigger with the personal tax allowance

Table 5.3 – Contributions and equalities impacts of changes to the earnings trigger in 2020/21

Earnings Trigger	Factor	Eligible Target Group (people)	Employer Contributions (£)	Individual Contributions (£)	Tax Relief (£)	Total Contributions (£)	% Female	% BME	% Disability
	Overall pop						43%	10%	14%
£10,000	**Baseline (Freeze)**	11.3m	£7,800m	£9,700m	£3,000m	£20,500m	38%	10%	13%
£6,337	**NI LEL**	+1.2m	+£76m	+£96m	+£30m	+£201m	78%	15%	14%
£8,805	**NI Primary Threshold**	+0.4m	+£42m	+£53m	+£16m	+£111m	76%	15%	17%
£10,696	**Uprate by CPI**	-0.2m	-£23m	-£30m	-£9m	-£60m	77%	13%	14%
£10,785	**Uprate by earnings growth**	-0.2m	-£26m	-£34m	-£10m	-£70m	77%	12%	14%
£12,500	**Personal Income Tax Allowance**	-0.7m	-£97m	-£123m	-£38m	-£260m	73%	14%	17%

Source: DWP modelling

* The rate of personal income tax allowance has been assumed to be set at £12,500 in 2020/21

Notes:
Estimates are expressed in 2020/21 earnings terms
Scenarios are presented as the change in contributions and eligible target group compared to the baseline
Equalities impacts of options are in terms of the demographic split of the affected group only i.e. those individuals who are newly saving due to changes in the earnings trigger.
Contributions are rounded to the nearest £1m, and eligible target group changes are rounded to their nearest 100,000 employees.
The OBR's March 2017 Economic and Fiscal Outlook is used for CPI and earnings growth forecasts.
The level of pensions saving is the sum of tax relief, employer contributions, and individual contributions.

As shown in Table 5.3 above, lowering the earnings trigger increases the eligible target group and total pension contributions. For example, setting the trigger at the National Insurance LEL (£6,337) is estimated to bring an additional 1.2 million people into the eligible target group and raise total contributions by £201m in 2020/21.

Conversely, raising the earnings trigger decreases the size of the eligible target group and decreases total contributions. For example, raising the trigger to the personal income tax allowance would make 0.7 million fewer people eligible and decrease contributions by £260 million in 2020/21, as compared to the baseline.

The demographic figures presented for the options in Table 5.3 present the splits for the affected group only (e.g. only those newly eligible due to changes in the earnings trigger). Because of this, those affected tend to be those groups whose earnings are clustered around the trigger.

There are three observed demographic effects. First, for all options, those affected tend to be disproportionately female (73-78%) compared to the proportion of females in the overall population of private sector employees (43%).

Second, the affected groups are a small but consistently higher proportion of BAME (12-15%) than the overall private sector population (10%).

Third, the proportion of those affected with disabilities (14-17%) tends to be similar to that of the underlying private sector population (14%).

These groups (females, individuals with a BAME background and those affected with disabilities) are more likely to be affected by the proposed changes to the earnings trigger as they tend to have lower earnings.

The 2018/19 Annual Thresholds Review proposes to freeze the trigger at £10,000 in 2018/19 to ensure stability during the remaining implementation period, and to maximise coverage for those for whom it pays to save while minimising burden on employers. The trigger level is reviewed annually to ensure that it is set at the most appropriate level. The analysis included in this report on potential options for 2020/21 is illustrative only and does not pre-empt the annual review process for later years.

The findings presented here represent preliminary analysis of the policy options, as required under the Public Sector Equality Duty. A full and detailed analysis of the equality impacts of any final policy proposals will be informed by consultation and as part of a full and published impact assessment on the policy options.

5.1.2 Lower Earnings Limit (LEL)

The LEL is used to define both the minimum contributions that the employee and employer should make under automatic enrolment and the minimum earnings at which someone aged 16 to 75 can opt into a pension scheme and be entitled to receive a contribution from their employer.

The minimum contributions required under AE are calculated as a proportion of annual ‘qualifying earnings’ i.e. any earnings between the LEL (£5,876 per year in 2017/18) and the UEL (£45,000 per year in 2017/18). This means that employees and employers are currently not required to pay pension contributions on the first £5,876 of earnings.

Consider a median earner, with gross earnings of £28,213 per year, who contributes five per cent of qualifying earnings and their employer who contributes three per cent

per year. She would make a contribution of £1,117 per year on her own behalf (including tax relief) and their employer would add £670 per year for a total contribution of £1,787 per year.

Suppose she and her employer were to contribute from the first £1 of earnings, instead of the LEL. She would contribute £1,411 per year and her employer £846 for a total contribution of £2,257 per year; an extra £470 in pension contributions every year. Over a working life of 22 to SPA that could lead to an additional £2,000 pension income per year.

The AE review proposes to remove the LEL, so that every saver makes pension contributions from their first pound of earnings. However, while employers and employees are not obliged to make pension contributions on earnings outside of the qualifying band, evidence from ASHE 2016 shows that around 70 per cent of employees with occupational pensions are already contributing on their full band of earnings, paying pension contributions on earnings below the LEL.[110]

Table 5.4 gives an estimate of the annual additional pension contributions from employees, employers and the government as a result of removing the LEL. This table adjusts for the percentage of employees who are known from ASHE 2016 to already be contributing from their first pound of earnings. This estimates an additional £2.6 billion in annual pension savings.

Table 5.4 – Estimated additional annual contributions as a result of removing the LEL

Options	Employer contributions	Individual contributions	Tax Relief	Total Contributions
Removal of the LEL only	+£1.0bn	+£1.2bn	+£0.4bn	+£2.6bn

Source: DWP modelling

Note: The figures presented here are adjusted for the percentage of employees who are known from ASHE 2016 to already be contributing from their first pound of earnings.

Under current rules, those earning below the LEL may opt into their employer's pension scheme, but are not entitled to employer contributions. Removing the LEL additionally means that everyone aged 16-74 would be entitled to employer contributions if they opted in.[111] It could be hypothesised that entitling this group to more employer contributions could encourage more of them to opt in (although this is not modelled).

[110] This figure could be higher than for the overall population of employees as large and medium employers that have already staged are more likely to already have pension provision than smaller employers and to be paying from the first pound. The proportion paying on the full band of earnings could therefore decrease following staging as small and micro employers yet to stage may not have pension provision and may choose to pay minimum contributions. The Department intends to monitor this closely as more recent data become available.

[111] http://www.thepensionsregulator.gov.uk/opting-in-and-joining.aspx

Currently, as Table 5.5 shows, pension participation for those earning below the LEL is not negligible. Removing the LEL for this group can increase savings for this existing stock, by entitling them to employer contributions on top of their own.

Table 5.5 – Pension participation by earnings level for private sector workers, Great Britain

Earnings bands	Contributing to a workplace pension	Not contributing to a workplace pension
Below LEL	22%	78%
LEL - Trigger	35%	65%
Above Trigger	75%	25%

Source: DWP estimates derived from the ONS Annual Survey of Hours and Earnings (2016)

The proposed removal of the LEL will provide benefits to those saving into a workplace pension through automatic enrolment.

More specifically, it has generally positive effects through two means. The first is that it increases the band of earnings on which an individual pays pension contributions, thereby increasing their levels of pension savings. Since the individuals who are automatically enrolled are earning above the earnings trigger, higher levels of pension savings equate to higher post-retirement income, thereby enhancing the positive effects of automatic enrolment.

Second, the removal of the LEL entitles all workers in occupational pension schemes to employer contributions. Under current rules, if an individual earns under the LEL, they can choose to opt into their employer's pension scheme, but are not entitled to any employer contributions. Removing the LEL entitles all individuals who opt into their employer's pension scheme to employer contributions, thereby enhancing their level of pension saving.

As mentioned above, in April 2016, 70 per cent of those in private sector occupational pension schemes were already saving from their first pound of earnings; this means that the remaining 30 per cent of private sector pension savers will be impacted by this reform. Table 5.6 and 5.7 present the gender and age breakdowns respectively for this group. Of this group, 42 per cent are female and 59 per cent are aged between 22 and 41.

Table 5.6 – Gender breakdown for private sector occupation pension savers not already saving from the first pound of earnings

	Per cent
Male	58%
Female	42%

Source: DWP estimates derived from the ONS Annual Survey of Hours and Earnings (2016)

Table 5.7 – Age breakdown for private sector occupation pension savers not already saving from the first pound of earnings

Age Group	Per cent
16-21	1%
22-31	34%
32-41	25%
42-51	23%
52-61	17%
62-SPA	2%

Source: DWP estimates derived from the ONS Annual Survey of Hours and Earnings (2016)

Evidence from the DWP Pensioners' Incomes series illustrates differences by ethnicity. For example, Black pensioner households had the lowest average weekly income (£370) compared to White British pensioner households (£513) and those from the Other ethnic group (£520).[112]

As described above, the removal of the LEL would be expected to have a positive impact for all groups, including BAME savers, through increasing pension contributions and, therefore, overall levels of pension saving.

To be able to provide a more comprehensive analysis of the effect of removing the LEL on disabled and BAME savers who are not currently saving from their first pound of earnings (and therefore impacted), a data-source which 1) can identify the band of earnings on which pension contributions are being made, and 2) has the required demographic information is required.

Currently, DWP does not have access to a data source which collects sufficient pension and demographic information to make such an assessment, or a data source which could be matched onto another to satisfy these criteria.

While ASHE has the most detail on pension contributions, and allows the identification of the band of earnings on which an employee makes pension

[112] https://www.ethnicity-facts-figures.service.gov.uk/work-pay-and-benefits/pay-and-income/pensioner-income/latest

contributions, it contains only demographic information on age and gender and cannot be matched to other DWP datasets.

The Family Resources Survey (FRS) and the Labour Force Survey (LFS) contain demographic information, but do not contain sufficient information on pension contributions to be able to accurately determine on which band of earnings individuals are making pension contributions.

In terms of steps forward to obtain further data, there are two primary options. The first is to look at existing survey data collection to investigate the possibilities of collecting more in-depth information on the bands of earnings on which individuals make contributions. For example, options could be to introduce questions to the DWP biennial Employers' Pension Provision Survey, or to request more detailed pension contributions information in individual level surveys like the FRS. However, there would be cost and time implications associated with this approach that would have to be assessed.

The second is to look more closely at existing data sources to derive proxy measures for earnings bands, or to achieve better data matching. The strengths and weaknesses of the different approaches will be assessed as part of the ongoing monitoring of automatic enrolment.

Furthermore, the findings presented here are preliminary analysis of the policy options. A fuller analysis, including of the equality impacts of any final policy proposals will be informed by consultation and as part of a full and published impact assessment on the policy options.

5.1.3 Changing the age limits

The age limits define the ages at which an individual is eligible to be automatically enrolled by their employer into a qualifying pension scheme if they satisfy the earnings criteria. Currently it is set at 22 to SPA. While those aged 16 to 21 and SPA to 75 are currently not eligible to be automatically enrolled, they can opt in to a workplace pension provided they earn above the lower earnings limit, and thereby be entitled to employer contributions.

The 2017 AE review proposes to lower the age limit to 18 while keeping the upper age limit at SPA.

Table 5.8 shows pension participation for all private sector employees – eligible and ineligible for automatic enrolment - across different age groups. The 16-21 age group contains 1.5 million private sector employees, or about nine per cent of all private sector employees. The 65+ group is smaller, making up 0.4 million, or two per cent of private sector employees.

Note that since the following estimates of pension participation among ineligible individuals is based on ASHE 2016, not all individuals will be working for employers who have staged. This means that the estimates of participation by age group or earnings level, may change if these characteristics are related to firm size e.g. if

workers aged under 21 are more likely to work in small and micro employers who would not have been staged in April 2016.

Table 5.8 – Occupational pension membership for private sector workers by age, Great Britain

	Contributing to a workplace pension	Not contributing to a workplace pension
16-17	11%	89%
18-21	17%	83%
22-64	66%	34%
65+	22%	78%

Source: DWP estimates derived from the ONS Annual Survey of Hours and Earnings (2016)

Compared to the current 22-64 eligible group, pension participation among these currently non-eligible groups is low, particularly for those aged below age 22: 89 per cent of 16-17 year-olds, 83 per cent of 18-21 year olds and 78 per cent of 65+ year-olds do not have an active pension into which they are making pension contributions compared to 34 per cent of 22-64 year-olds.

Table 5.9 gives the earnings distribution of those under 22 years and their pension membership. While 46 per cent of this group earn above the earnings trigger, only 22 per cent are members of occupational pensions.

Table 5.9 – Occupational pension scheme membership for private sector UK employees under 22 by earnings band

	Employees	Contributing to a workplace pension	Not contributing to a workplace pension
Below LEL	510,000	10%	90%
LEL - Trigger	290,000	12%	88%
Above trigger	660,000	22%	78%

Source: DWP estimates derived from the ONS Annual Survey of Hours and Earnings (2016)

Similarly, Table 5.10 presents the same analysis for those over SPA. Comparatively, there are higher levels of pension saving for those earning over the trigger in the SPA+ group than in the under-22 group.

Table 5.10 – Occupational pension membership for private sector employees over SPA by earnings band, Great Britain

	Number	Contributing to a workplace pension	Not contributing to a workplace pension
Below LEL	100,000	7%	93%
LEL - Trigger	100,000	15%	85%
Above Trigger	290,000	33%	67%

Source: DWP estimates derived from the ONS Annual Survey of Hours and Earnings (2016)

Table 5.11 shows the proportion of 16-17 year olds and 18-21 year olds in full-time education and employment. It should be noted that education participation rates vary across the UK, given different requirements in the devolved nations in relation to staying in full time education between the ages of 16-18. It also provides a breakdown of the proportion earning through employment and the proportion earning above the earnings trigger.

Table 5.11 – Employment and earnings status of those aged 16-21[113]

Age	Total	FT education only	Employment only	Both	Neither	Earning	Earning over trigger
16-17	1.5m	69%	6%	19%	7%	25%	2%
18-21	3.2m	32%	36%	16%	16%	52%	25%

Source: ONS mid-year population estimates and the Labour Force Survey

According to the Labour Force Survey those aged 16-17 were disproportionately more likely to be in full-time education than those aged 18 to 21 and they were much less likely to be earning over the earnings trigger. Nearly nine out of ten (88%) of those aged 16 & 17 were in full-time education (of which 19 per cent were also working). By contrast, 48 per cent of those aged 18 to 21 were in full-time education (of which 16 per cent were also working). Only two per cent of those aged 16 and 17 were observed to be earning over the £10,000 trigger compared to 25 per cent of those aged 18-21.

Table 5.12 presents the additional contributions and equalities impacts for three options for changes to the age criteria: lowering the lower age limit from 22 to 18, lowering it to 16 and increasing the upper age limit from SPA to 75. Lowering the lower age limit from 22 to 18 increases the eligible target group by 0.9 million individuals and total annual pension savings by £0.8 billion in 2020/21. Lowering it from 22 to 16 increases the eligible target group by another 30,000 and increases pension contributions by less than £30m per year.

[113] Numbers of individuals are based on ONS mid-year population estimates for 2016. Those in full-time education and employment are derived from the Labour Force Survey. They were calculated as the average over the period April 2014 to September 2017 to smooth out peaks in employment during Summer holidays. Those in 'neither' category may be unemployed or currently inactive.

At the other end, raising the upper age limit from SPA to 75 increases the eligible target group by 0.4 million individuals and increases total savings by £0.5 billion.

On the demographic effects, note that the results presented for the two options are for the affected individuals i.e. the 16-21, 18-21 and SPA-75 year olds who are newly saving as a result of these reforms. In raising the upper age limit to 75, the affected group are less likely to be female (28 per cent in the affected group compared to 43 per cent in the private sector as a whole), less likely to be BAME (four per cent compared to ten per cent), and more likely to be disabled (23 per cent compared to 14 per cent).

In lowering the lower age limit to 18, the affected group are roughly as likely to be female (43 per cent in the affected group compared to 43 per cent in the private sector as a whole), less likely to be BAME (six per cent compared to ten per cent), and less likely to be disabled (seven per cent compared to 14 per cent).

Table 5.12 – Additional contributions and equalities impacts of changes to the age criteria in 2020/21

Age limit	Eligible Target Group (people)	Employer Contributions (£)	Individual Contributions (£)	Tax Relief (£)	Total Contributions (£)	% Female	% BAME	% Disability
Private Sector Workers						43%	10%	14%
SPA - 75	400,000	£192m	£241m	£75m	£508m	28%	4%	23%
18 - 21	910,000	£287m	£364m	£113m	£765m	43%	6%	7%
16 - 21	940,000	£297m	£376m	£117m	£790m	44%	6%	7%

Source: DWP modelling

Notes:

1 - Estimates are expressed in 2020/21 earnings terms.

2 - Scenarios are presented as the change in contributions and eligible target group compared to the baseline.

3 - Equalities impacts of options are in terms of the demographic split of the affected group only e.g. 16-21 year olds who are newly saving due to changes in age eligibility rules.

3 - Contributions are rounded to the nearest £1m, and eligible target group changes are rounded to their nearest 100,000 employees.

4 - The OBR's March 2017 Economic and Fiscal Outlook is used for CPI and earnings growth forecasts.

5 - The level of pensions saving is the sum of tax relief, employer contributions, and individual contributions.

6 - This estimate is based solely on those eligible to be automatically enrolled. Therefore, it does not adjust for the possibility that some of the 16-21 or SPA-75 year olds may already be pension saving through opt-in or contractual enrolment, and therefore be unimpacted by the reform. This means these estimates may overestimate the total impact.

In addition, the findings presented here are our preliminary analysis of the policy options, as required under the Public Sector Equality Duty. A full and detailed analysis of the equality impacts of any final policy proposals will be informed by consultation and as part of a full and published impact assessment on the policy options.

5.2 Combined effect of the package

Summary

- The combined additional pension saving associated with both removing the LEL and lowering the age limit to 18 are around £3.8 billion in 2020/21, comprised of £1.4 billion in additional employer pension contributions, £1.8 billion in additional individual pension contributions and just under £0.6 billion in upfront tax relief on individuals' pension contributions.
- Case studies were used to assess the impact of the proposals (reducing the lower age to 18 and removing the LEL) on individuals:
  - For a National Living Wage earner with a full work history, the proposals would result in: an estimated two per cent reduction in annual net pay (-£235 per year); a 76 per cent increase in annual pension contributions (£470 per year); an 82 per cent increase in pot size at retirement (£40,400); and an 18 per cent increase in annual net pension income (£2,300 per year).
  - For a median earner with a full work history, the proposals would result in: an estimated one per cent reduction in annual net pay (-£235 per year); a 27 per cent increase in annual pension contributions (£470 per year); a 43 per cent increase in pot size at retirement (£55,900); and an 18 per cent increase in annual net pension income (£3,100 per year).

This section outlines the combined impact of removing the LEL and lowering the lower age limit to 18 on pension contributions and undersaving.

The additional contributions as a result of the package are shown in the year 2020/21 to illustrate the amounts. However, our ambition is to implement the changes to the automatic enrolment framework in the mid-2020s. This is subject to discussions with stakeholders on the implementation approach during 2018/19, finding ways to make the changes affordable and taking into account evidence of the impact of the increases in statutory minimum contribution rates in April 2018 and April 2019.

Table 5.13 gives the estimated additional contributions as a result of the package. These estimates assume that the Upper Earnings Limit rises with wage growth, the earnings trigger remains frozen at £10,000, and the upper age limit remains linked to State Pension age (SPA). They also assume that opt-out rates remain consistently low following the contribution rates increases in April 2018 and 2019. The interaction effect derives from newly enrolled 18-21 year olds saving from their first pound of earnings.

Table 5.13 – Estimated annual contributions from removing the LEL and lowering the lower age limit to 18 from 22 in 2020/21

	Employer	Employee	Income tax relief	Total
Baseline contributions	**£7.8bn**	**£9.7bn**	**£3.0bn**	**£20.5bn**
Removal of LEL and Lowering age to 18	**+£1.4bn**	**+£1.8bn**	**+£0.6bn**	**+£3.8bn**
of which:				
Removing LEL	£1.0bn	£1.2bn	£0.4bn	£2.6bn
Lowering Age	£0.3bn	£0.4bn	£0.1bn	£0.8bn
Interaction Effect	£0.2bn	£0.2bn	£0.1bn	£0.4bn

Source: DWP modelling
Note: Numbers may not add up due to rounding

The estimated combined contributions associated with removing the LEL and lowering the age limit to 18 are around £3.8 billion, comprised of £1.4 billion in additional employer pension contributions, £1.8 billion in additional individual pension contributions and £0.6 billion in income tax relief on individuals' pension contributions. As our ambition is to implement of the package is an ambition for the mid-2020s, these estimates are provisional and uncertain.

Income tax relief on individual's contributions will not be the only source of cost to the government under this package. If an employer chooses to absorb the cost of any additional contributions by reducing the wages of their employees then income tax and National Insurance receipts will fall as a result. Alternatively, an employer may choose to reduce profits which could lead to lower corporation tax receipts instead. There are in fact many ways an employer might choose to absorb the costs of any extra contributions that would have an impact on government revenues.

EPP 2017 asked employers who said that automatic enrolment had increased their total pension contributions, what their organisation had done to absorb this cost. Emerging findings suggest that only around one in nine (11 per cent) had implemented lower wage increases, with nearly half (48 per cent) saying they had taken a reduction in profits and 11 per cent saying they had increased prices. Most (70 per cent) said they had absorbed it as part of 'other overheads'.[114]

Caution is urged when considering these results in the context of the proposed package. At the time the interviews were undertaken, the vast majority of employers asked this question were large or medium employers; the majority of small and micro

[114] Note that proportions do not sum to 100% since employers may use more than one strategy to absorb costs. These proportions may differ from full final survey findings, which will be published in 2018.

employers had not reached their staging dates so were unlikely to have incurred significant additional costs and may choose different strategies to manage costs.

In addition, minimum contributions from the employer were one per cent at the time. As minimum contributions increase in 2018 and 2019 employers may use different strategies. Employer responses may also differ by age and wage of affected workers, which could mean that there would be different responses for employers of young and minimum wage workers, who would be disproportionately affected by the proposals.

There is a great deal of uncertainty as to how employers might go about managing the costs of £1.4 billion additional contributions, and therefore the total cost of the package to government. It will also be important to understand the further consequences of requiring individuals to put more of their earnings into a pension and how this may impact on, for example, consumer spending.

We will monitor and review how the costs of the contribution rate increases in 2018 and 2019 are shared between individuals, business and government. This should provide an opportunity to fully understand not only the initial incidence of costs, but how those costs are then subsequently transferred throughout the economy. We will also pay careful attention to the behavioural response by individuals to contribution increases. This will enable us to ensure that any future changes we make are well targeted, well timed, and can be implemented in the most effective way for individuals and employers.

In section 4.3, it was estimated that automatic enrolment had reduced the number of people undersaving by around two million. Using the same methodology it is estimated that the proposed package would reduce undersaving by a further two hundred thousand. Table 5.14 shows how the package might affect the numbers of people at different levels of undersaving.

Table 5.14 – Change in depth of undersaving as a result of the package

Current system	Package				Total
	'Substantial' < 50%	'Modest' 50-80%	'Mild' 80-100%	Over target	
'Substantial' <50%	1.5m	<0.05m	0	0	1.5m
'Modest' 50-80%		4.7m	0.1m	0	4.8m
'Mild' 80-100%			5.5m	0.2m	5.7m
Over target				19.3m	19.3m
Total	1.5m	4.7m	5.6m	19.5m	31.3m

Source: Pensim2 analysis

Table 5.14 shows that the 0.2 million people modelled as no longer undersaving under the package would have been 'mild' undersavers (as indicated by the figure 'over target' under the package). In addition to the 0.2 million no longer undersaving another 0.1 million are moved from ''modest' to 'mild' undersaving.

5.2.1 Case Studies

This section illustrates the effect of the proposed package on the take-home pay and pension pots of some hypothetical individuals.

Take home pay

The proposed package would mean that people would be automatically enrolled from age 18 and contributions would be paid from the first pound of earnings to the Upper Earnings Limit (UEL) rather than on any earnings between the lower earnings limit and the upper earning limit. For those currently contributing from the LEL this change means that contributions would be paid on an additional £5,876 of earnings (based on the 2017/18 LEL).

The following illustrative case studies look at how the increase in pension contributions as a result of the removal of the LEL affects three individual's net pay[115]:

- A full-time employee earning the National Minimum Wage (NMW)[116]
- A full-time employee on median earnings[117].
- A full-time employee earning the NMW[118] who is not currently contributing to a pension

[115] Tax and National Insurance thresholds used in this analysis relate to the 2017/18 tax year, employee and employer contribution rates are assumed to be 5% and 3% respectively, as expected in April 2019

[116] Based on the individual working 37 hours per week earning the National Minimum Wage for a 22 year old (£7.05/hour)

[117] Based on the median earnings of a full time worker (ASHE 2016)

Table 5.15 – Removing the LEL for a National Minimum Wage (NMW) earner (£ per year)

	Current system	Proposal	Change
Gross earnings	£13,564	£13,564	
Lower earnings limit	£5,876	£0	
Qualifying earnings	£7,688	£13,564	
Employee contribution	£384	£678	£294
Employer contribution	£231	£407	£176
Take-home pay	£12,196	£11,961	-£235
Total pension contributions	£615	£1,085	£470

Source: DWP internal modelling

Table 5.15 shows that, assuming our NMW earner is currently contributing from the LEL, their take-home pay would be £12,196 per year with annual pension contributions of £615. Removing the LEL would increase pension contributions by £470 (76%) per year but their take home pay would reduce by £235 (2%).

Table 5.16 presents changes in pension contributions and take-home pay for the median earner following removal of the LEL.

Table 5.16 – Removing the LEL for a median earner (£ per year)

	Current system	Proposal	Change
Gross earnings	£28,213	£28,213	
Lower earnings limit	£5,876	£0	
Qualifying earnings	£22,337	£28,213	
Employee contribution	£1,117	£1,411	£294
Employer contribution	£670	£846	£176
Take-home pay	£21,571	£21,336	-£235
Total pension contributions	£1,787	£2,257	£470

Source: DWP internal modelling

Table 5.16 shows that, for a median earner, employee contributions would increase by £470 per year (27 per cent) but their take home pay would reduce by £235 (one per cent) following removal of the LEL.

Comparing the two examples we can see that removing the LEL increases pension contributions by £470 for both cases; a larger proportional increase in pension contributions for the lower earner.

The final example (Table 5.17) looks at a 20-year old NMW earner not contributing to a pension under the current system. By lowering the age limit for AE to 18, they would begin contributing to a pension.

[118] Based on the individual working 37 hours per week earning the NMW for a 20 year old (£5.60/hour)

Table 5.17 – Newly contributing NMW earner (£ per year)

	Current system	Proposal	Change
Gross earnings	£10,774	£10,774	
Lower earnings limit	£5,876	£0	
Qualifying earnings	£4,898	£10,774	
Employee contribution	£0	£539	£539
Employer contribution	£0	£323	£323
Take-home pay	£10,461	£9,922	-£539
Total pension contributions	£0	£862	£862

Source: DWP internal modelling

The take-home pay of a newly contributing NMW earner would be £539 lower per year as a result of lowering the age limit to 18 (five per cent less than under the current system), but our newly contributing NMW earner would have an additional £862 contributed to their pension. The effect these contributions would have on their total pension pot are estimated below.

Effect on pension outcomes

This analysis looks at the impact of the proposed package on the estimated pot size at retirement and the annual net pension income. Eight case studies are used: four career histories for each of two earnings levels.

The earnings levels are:

- Median earnings uprated each year by average earnings growth; and
- National Minimum Wage / National Living Wage depending upon their age.

The career histories are:

- Full working history: saving from age 22 to State Pension age ;
- 10 year career break: saving from age 22 to SPA except for a 10 year gap in employment from age 30;
- 5 year career break: saving from age 22 to SPA except a 5 year gap in employment from age 30; and
- Part time due to childcare: saving from age 22 to SPA except for an inactive year at age 30 then works part-time (18.5 hours per week) for the following 16 years before returning to full time employment.

To estimate the effect of a change to the lower age limit for automatic enrolment, career histories have been changed so that each individual begins saving from 18 rather than 22.

The methodology used to estimate pot sizes is described in Annex 9.6. The pot sizes and income estimates are highly sensitive to the assumptions used so these figures should be used to help understand the proportional impact of the proposed package rather than as an indication of the actual amount someone might expect to receive.

NLW Earner

Under the assumptions used for these estimates, someone working at the NLW between 22 and SPA and contributing from the LEL would build a pot of around £49,200 under the current system. If they had contributed from the first £1 of earnings they would have built a pot of £82,300. Had they contributed from age 18 rather than 22, their pot would increase to £89,500. The combined effect leads to an 82 per cent increase in their total pension pot. Table 5.18 shows the estimated pot sizes for the other NLW career histories.

Table 5.18 – Estimated pot size at retirement for NLW earner case studies

	Pot size at retirement			
	Full work history	**10 year career break**	**5 year career break**	**Part time childcare**
With LEL	£49,200	£36,500	£42,500	£29,000
Without LEL	£82,300	£61,300	£71,200	£48,900
Difference	*£33,100*	*£24,700*	*£28,700*	*£19,900*
Without LEL and saving from 18	£89,500	£68,500	£78,500	£56,100
Difference	*£7,200*	*£7,200*	*£7,200*	*£7,200*
Overall package difference	***£40,400***	***£32,000***	***£36,000***	***£27,100***
%	*82%*	*88%*	*85%*	*93%*

Source: iPEN modelling

Overall, the proposed package increased the estimated pension pot size at retirement by between 82 per cent and 93 per cent. Each hypothetical individual benefits from an additional £7,200 in their pension pot as a result of contributing to a pension from aged 18 instead of aged 22.

Table 5.19 shows the net annual pension income (including both State and private pension). The proposed package would increase the total net pension income of a NMW earner by between 14 and 18 per cent.[119] That is between £1,600 and £2,300 per year, of which £400 is due to lowering the age to 18 and the remainder due to the removal of the LEL. The hypothetical individual that goes part time due to childcare sees the smallest proportionate benefit to their net pension income. This is because the period of their career during which they worked part-time took their earnings below the earnings trigger for AE and so caused them to miss out on the benefit of the removal of the LEL for those 17 years.

[119] Note that the percentage increase in net annual pension income is similar for a NLW earner and a median earner despite the percentage increase in pot size at retirement being considerably greater. This is because State Pension makes up the vast majority of the NMW earner's annual pension income therefore increasing private pension saving has a lower proportionate impact.

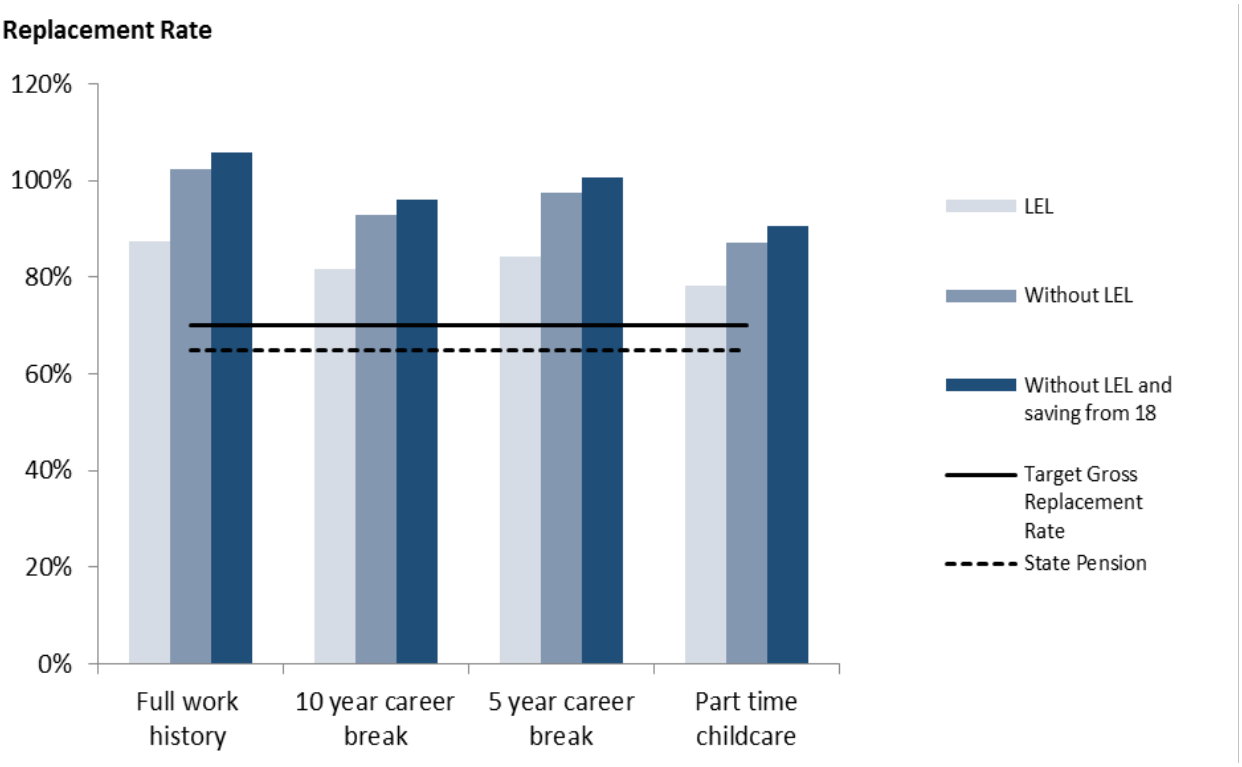
Table 5.19 – Estimated net annual pension income for NMW earner case studies[120]

	Net annual pension income			
	Full work history	**10 year career break**	**5 year career break**	**Part time childcare**
With LEL	£12,500	£11,800	£12,100	£11,300
Without LEL	£14,400	£13,200	£13,700	£12,500
Difference	*£1,800*	*£1,400*	*£1,600*	*£1,200*
Without LEL and saving from 18	£14,800	£13,600	£14,100	£12,900
Difference	*£400*	*£400*	*£400*	*£400*
Overall package difference	***£2,300***	***£1,800***	***£2,000***	***£1,600***
%	*18%*	*15%*	*17%*	*14%*

Source: iPEN modelling

Figure 5.3 shows the gross replacement rate measure as set out by the Pension Commissions First Report.[121] It shows that, under the assumptions used for these estimates, the NLW individuals would already meet the Pensions Commission target replacement rates, largely as a result of their State Pension. However, the key thing to note is that the proposed package increases the replacement rates substantially and makes them less reliant on State Pension.

Figure 5.3 – Gross replacement rates for NLW earner case studies



Source: iPEN modelling

[120] This includes income from the new State Pension.

[121] https://www.webarchive.org.uk/wayback/archive/20070802120000/http://www.pensionscommission.org.uk/publications/2004/annrep/index.html

Median Earner

Table 5.20 shows that the implementation of the proposed package would result in an increase in estimated pension pot size at retirement by between 43 per cent for a median earner with full work history and 58 per cent for a median earner that goes part time due to childcare. Each hypothetical individual would benefit from an additional £23,600 in their pension pot as a result of contributing to a pension from aged 18 instead of aged 22.

Table 5.20 – Estimated pot size at retirement for median earner case studies

	Pot size at retirement			
	Full work history	**10 year career break**	**5 year career break**	**Part time childcare**
With LEL	£129,500	£96,600	£112,200	£95,500
Without LEL	£161,900	£120,700	£140,200	£126,900
Difference	*£32,400*	*£24,100*	*£28,000*	*£31,500*
Without LEL and saving from 18	£185,400	£144,300	£163,800	£150,500
Difference	*£23,600*	*£23,600*	*£23,600*	*£23,600*
Overall package difference	***£55,900***	***£47,700***	***£51,600***	***£55,000***
%	*43%*	*49%*	*46%*	*58%*

Source: iPEN modelling

Table 5.21 shows that the proposed package would increase the net pension income of a median earner by between 18 and 21 per cent. That is between £2,700 and £3,100 per year, of which £1,300 is due to lowering the age to 18 and the remainder due to the removal of the LEL.

Table 5.21 – Estimated net annual pension income for median earner case studies[122]

	Net annual pension income			
	Full work history	**10 year career break**	**5 year career break**	**Part time childcare**
With LEL	£16,800	£14,900	£15,800	£14,900
Without LEL	£18,600	£16,300	£17,400	£16,600
Difference	*£1,800*	*£1,300*	*£1,600*	*£1,800*
Without LEL and saving from 18	£19,900	£17,600	£18,700	£17,900
Difference	*£1,300*	*£1,300*	*£1,300*	*£1,300*
Overall package difference	***£3,100***	***£2,700***	***£2,900***	***£3,100***
%	*18%*	*18%*	*18%*	*21%*

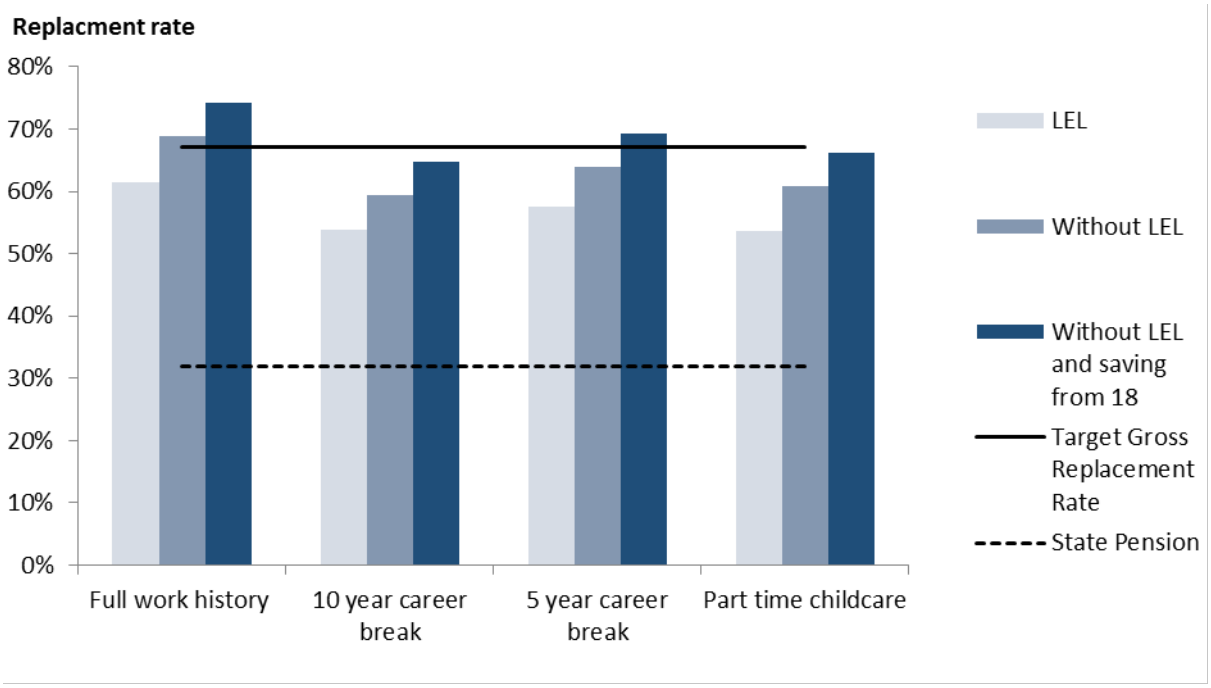
Source: iPEN modelling

In the median earner case, Figure 5.4 illustrates that the proposed package would take each hypothetical either closer to or above their gross target replacement rate. The proposed package would take both individuals with a full work history and a five-year career break above their target replacement rate of 67 per cent. It would also

[122] This includes income from the new State Pension

take the individual with a ten year career break to within two per cent and the individual that goes part time to within one per cent of their target replacement rate.

Figure 5.4 – Gross replacement rates for median earner case studies



Source: iPEN modelling

Summary

Table 5.22 summarises the results of this case study analysis. It shows that although the proposed package will result in a reduction in net pay due to higher pension contributions, the impacts on pension pot size at retirement and annual net pension income are considerable.

Table 5.22 – Summary of changes for NLW and median earners with a full work history

	Change in annual net pay	Change in annual contributions	Change in pot size at retirement	Change in annual net pension income
NLW earner	-£235 *(-2%)*	£470 *(+76%)*	£40,400 *(+82%)*	£2,300 *(+18%)*
Median earner	-£235 *(-1%)*	£470 *(+27%)*	£55,900 *(+43%)*	£3,100 *(+18%)*

Source: DWP internal modelling and iPEN modelling

6 Coverage analysis – ineligible groups

This section explores groups not currently covered by the eligibility criteria: the self-employed; and multiple job-holders that earn less than £10,000 per year in one or more jobs. In the transition analysis section, transitions and flows from employee to self-employed status are assessed, including an analysis of trends over time. HMRC Real Time Information (RTI) data are also used to look at evidence on employees working in more than one job.

6.1 The self-employed – Transition analysis

Summary

- The median length of time until an individual's first period of self-employment is ten years. Just over seven per cent of individuals with a period of self-employment start out as self-employed. The median age at which somebody becomes self-employed is 32.
- The majority (nearly 75 per cent), who had at least one year self-employed, had spent less than half of their working age years with self-employment denoted as the main activity. Around a third (35 per cent) had spent 15 per cent or less of their working-age years with self-employment as their main activity. Only a small proportion (four per cent) had remained self-employed across all years.
- Many of the self-employed had previously spent time in employment: the vast majority (around 88 per cent) of individuals who had had at least one year self-employed also had at least one year where employment was their main activity. Over 47 per cent had more than half of their years with employment as main activity.
- Evidence from analysis of transitions and flows between self-employment, employment and other activity suggest that the flows have increased with each successive generation: for example, approximately 12 per cent of the millennial cohort (aged 20-38) flowed from employment to self-employment each year compared to six per cent of baby boomers (those aged 51 to 69).

In this section, longitudinal analysis of the self-employed and their interactions with the labour market, using data from the Lifetime Labour Market Database (L2), is presented.

The Lifetime Labour Market Database (otherwise known as the L2 database) is a one per cent sample of HMRC's National Insurance Recording System (NIRS2). The type of information which is held relates to annualised National Insurance Contributions and related data items such as personal characteristics, employer information, pay details and awards of National Insurance Credits. The data are longitudinal, relating to each year from 1978 to the previous tax year (currently 2015/16). This means that L2 can be used to track individuals across years e.g. employment patterns, earnings etc.

Key research questions covered in this section include:

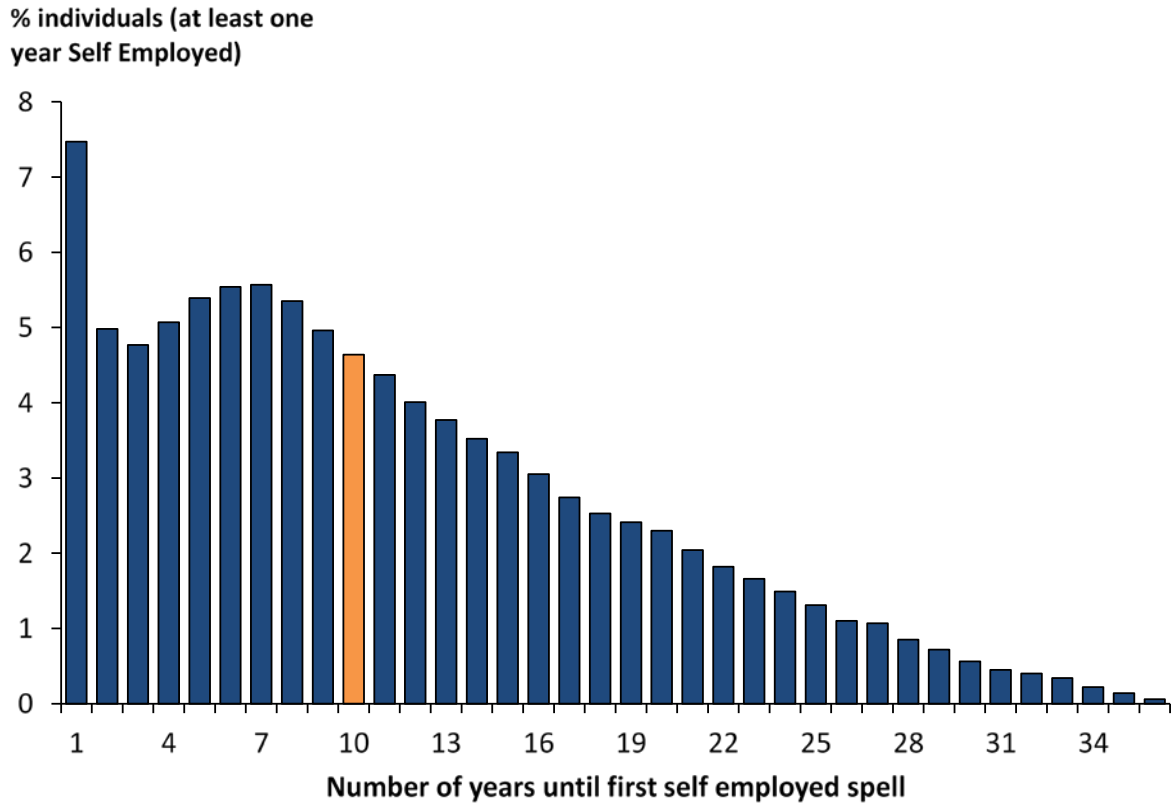
- At what point in their career/life are people self-employed?
- For how long are they self-employed?
- What proportion are self-employed following/before a career as an employee?

6.1.1 When do people become self-employed?

For individuals with at least one denoted self-employment year, the typical length of time (median) until an individual's first period of self-employment is ten years,[123] as highlighted in Figure 6.1. Just over seven per cent of these individuals started out as self-employed.

[123] In order to calculate the number of tax years between appearing in the data to first tax year as self-employed, the analysis could only include those who appeared in the data after 1978/79.

Figure 6.1 – Number of years until first year of self-employment as main activity, 1979/80 to 2015/16, United Kingdom

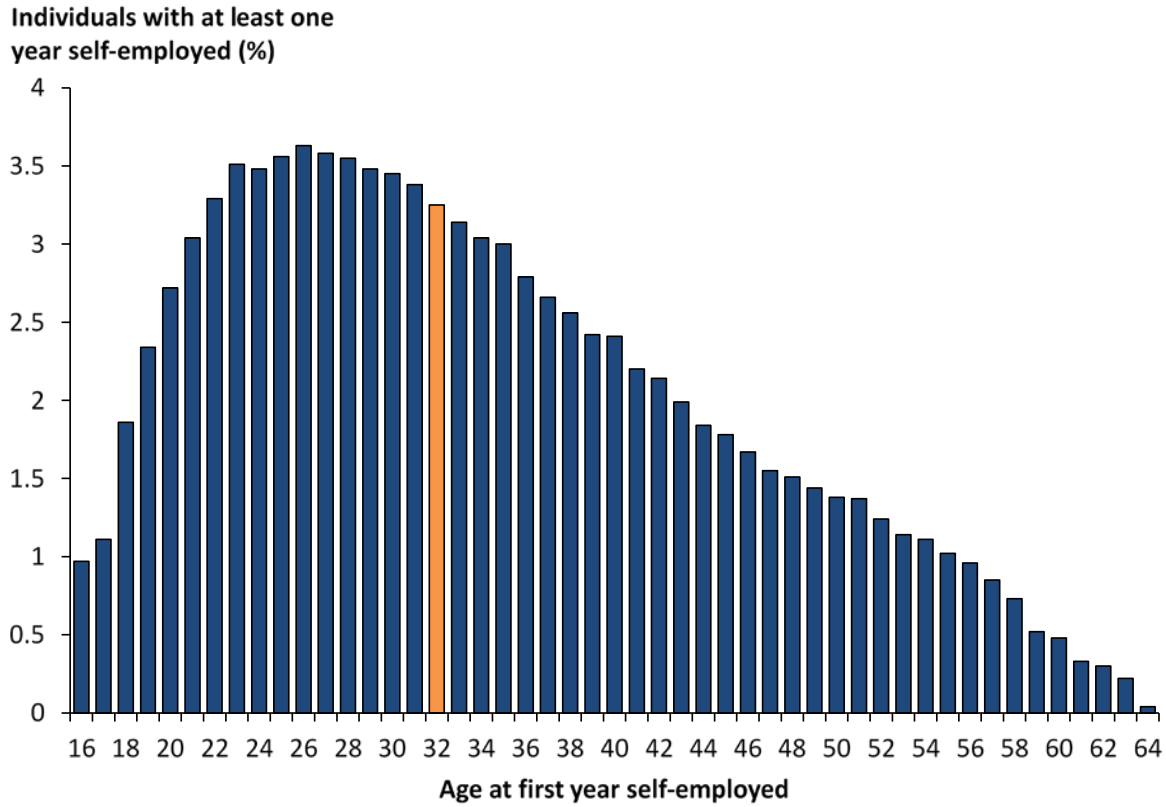


Source: DWP estimates derived from Lifetime Labour Market Database (L2)

Figure 6.2 shows the distribution of the age at which an individual becomes self-employed has a positive skew. The median age at which an individual appears as self-employed is 32.[124]

[124] Calculated for those individuals whose first self-employed year occurred after 1978/79.

Figure 6.2 – Age at first year of self-employment as main activity, 1979/80 to 2015/16, United Kingdom



Source: DWP estimates derived from Lifetime Labour Market Database (L2)

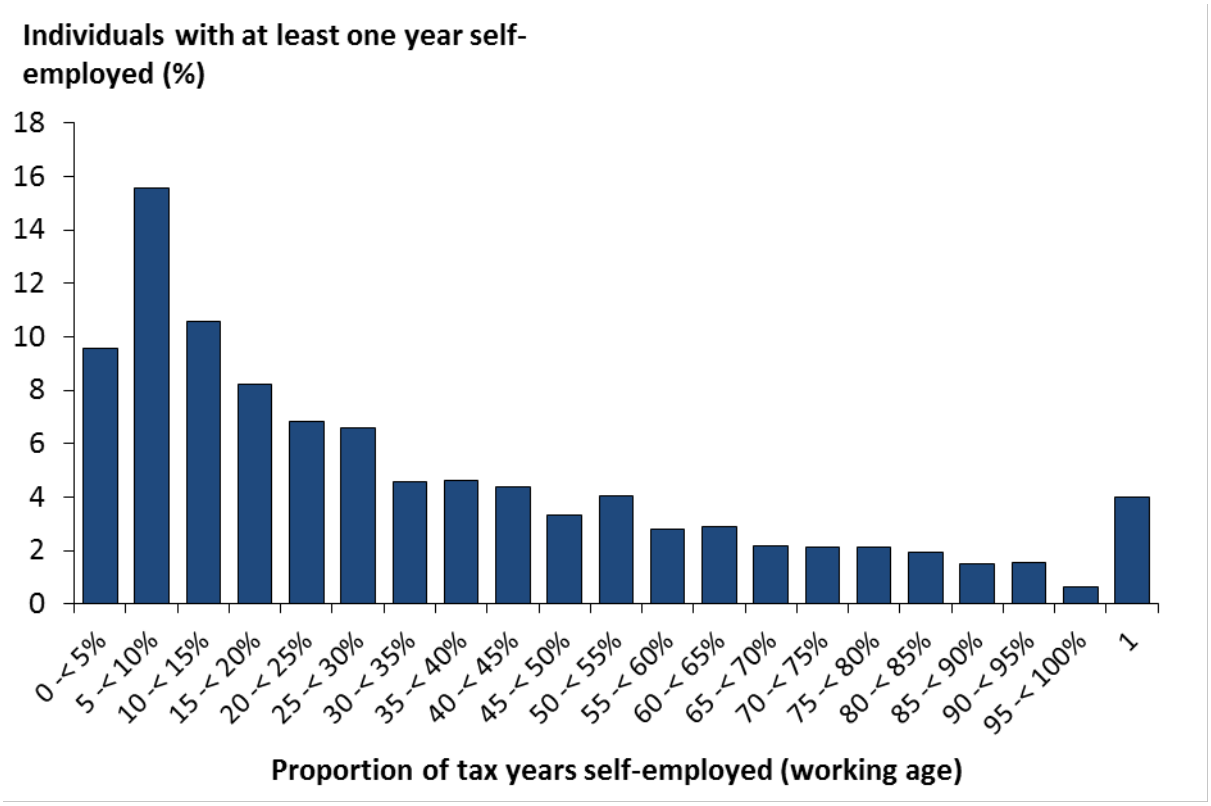
6.1.2 How long are people self-employed

Of those individuals who had at least ten tax year records in the L2 database, the majority (nearly 75 per cent), who had at least one year self-employed, had spent less than half of their working age years with self-employment denoted as the main activity (Figure 6.3).

Around a third (35 per cent) had spent 15 per cent or less of their working age years in self-employment. And only a small proportion (4 per cent) had remained self-employed across all years.

The analysis was restricted to those with over ten tax years in the data in order to remove distortions caused by individuals with only a small number of observations. For example any individual who, say, had just appeared in the data and had only 1 tax year and self-employment was the main activity would appear as 100 per cent self-employed if not excluded.

Figure 6.3 – Proportion of tax years with self-employment as main activity, 1978/79 to 2015/16, United Kingdom



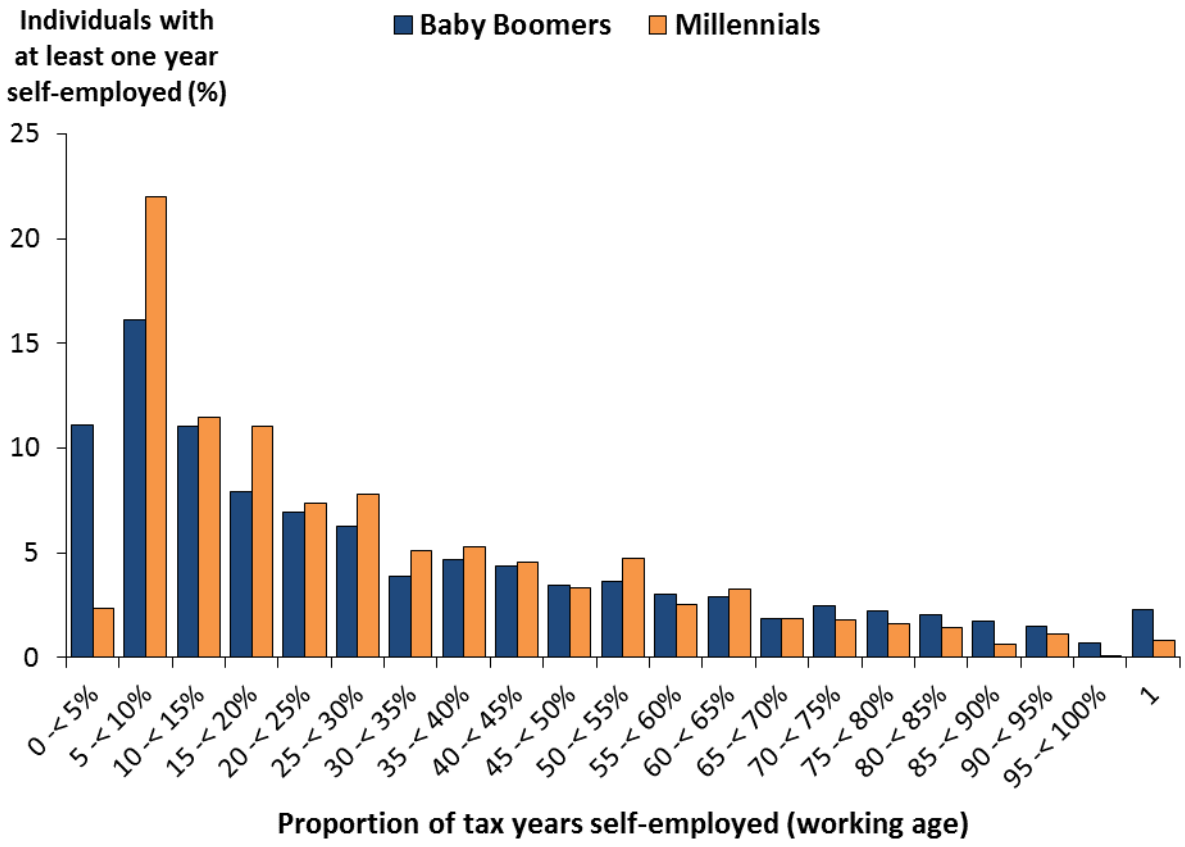
Source: DWP estimates derived from Lifetime Labour Market Database (L2)

Whilst this presents the overall picture for those self-employed since 1978, it is also of interest to examine whether there have been changes over time. One way to do this is to look at these transitions for different generations, typically those generations are frequently referred to as the Silent Generation (aged 70+), Baby Boomers (aged 51 to 69), Generation X (aged 39 to 50), and Millennials (aged 20 to 38).

Figure 6.4 contrasts the proportions of time spent in self-employment for Baby Boomers against those of the more recent Millennials cohort.

It shows that the Millennials tended to have a lower proportion of overall time spent in self-employment. In comparison, the Baby Boomers were more likely to have spent the majority (over three-quarters) of their time as self-employed.

Figure 6.4 – Proportion of tax years with self-employment as main activity, Millennials v Baby Boomers, United Kingdom

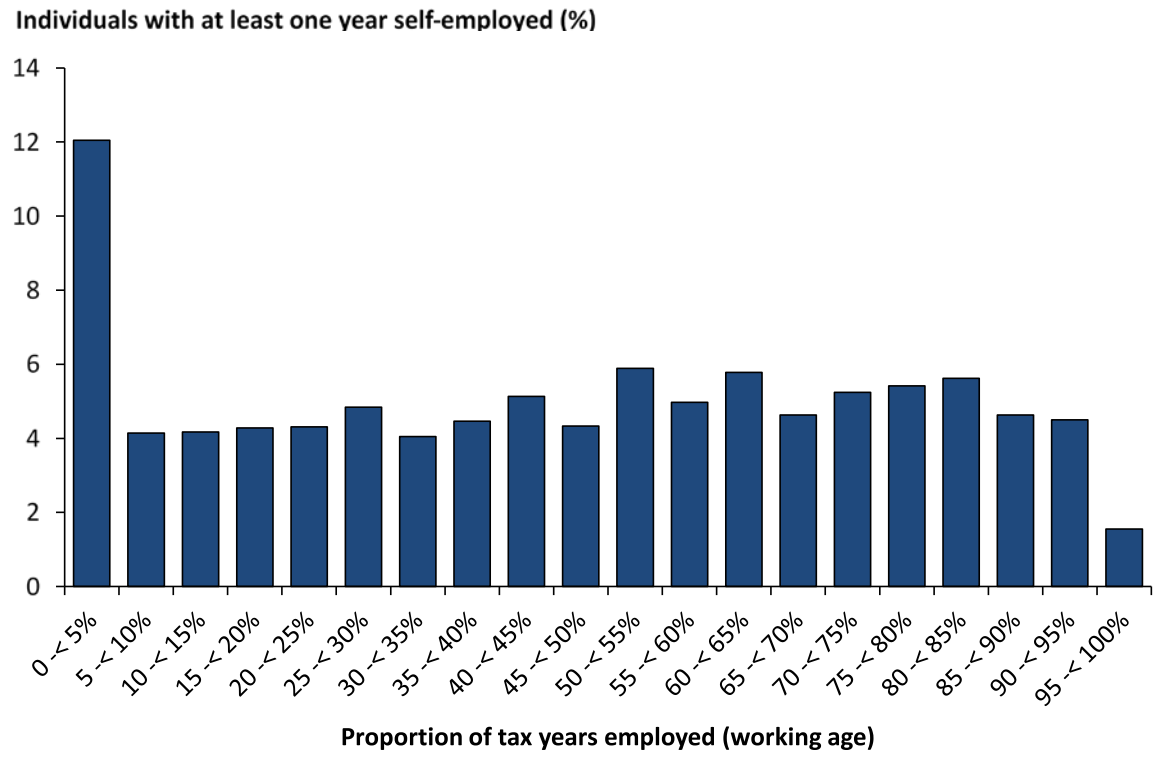


Source: DWP estimates derived from Lifetime Labour Market Database (L2)

6.1.3 Periods of employment

Figure 6.5 shows the proportion of time individuals have spent with employment as their main activity.

Figure 6.5 – Proportion of tax years with employment as main activity, 1978/79 to 2015/16, United Kingdom



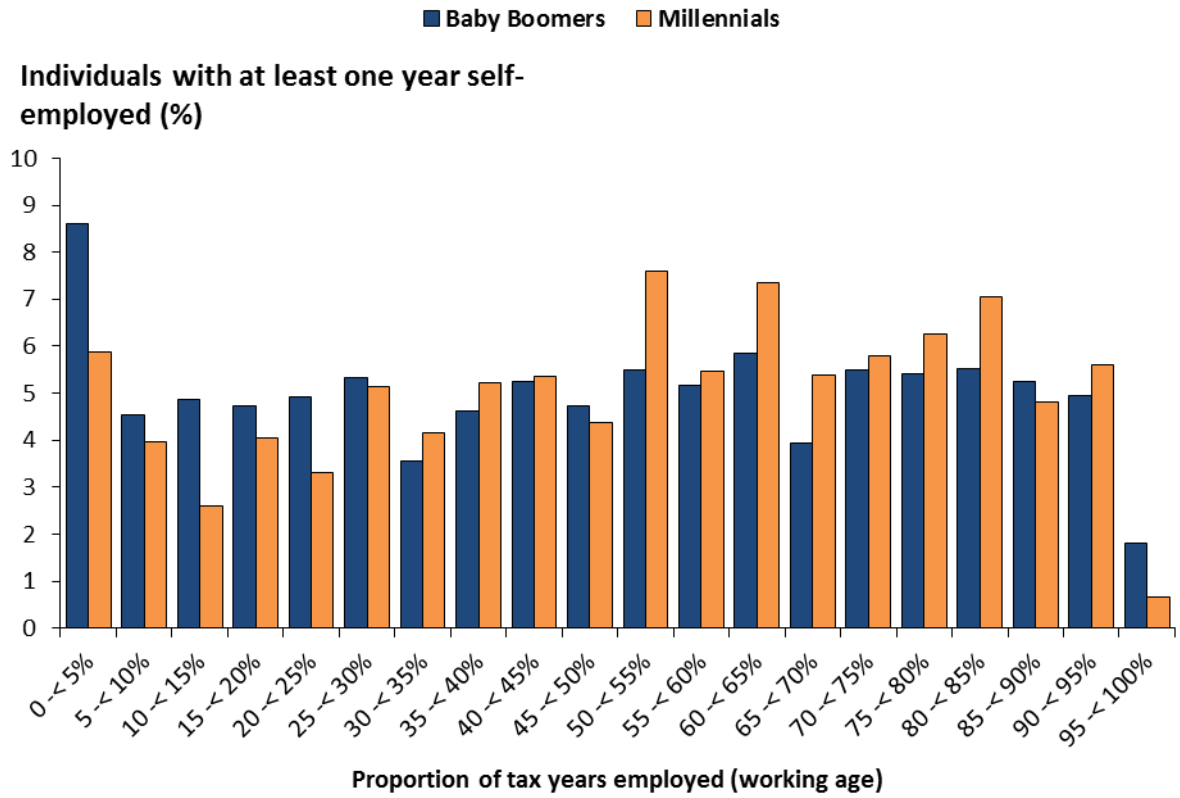
Source: DWP estimates derived from Lifetime Labour Market Database (L2)

The vast majority (around 88 per cent) of individuals who have had at least one year self-employed have also had at least one year where employment was the main activity. Over 47 per cent had more than half of their years with employment as their main activity.

As before, this analysis was restricted to include only those individuals with over ten tax years in the data in order to remove the distortions caused by individuals with only a small number of observations.

As above, analysis was carried out on the generations, and as before it shows a changing distribution. The older self-employed Baby Boomers appear more likely to have had lower proportions of employment. In contrast, the Millennials were more likely to have had higher proportions of years as employed: over half (55 per cent) had spent more than 50 per cent of years employed (Figure 6.6).

Figure 6.6 – Proportion of tax years with employment as main activity, 1978/79 to 2015/16, United Kingdom



Source: DWP estimates derived from Lifetime Labour Market Database (L2)

Further analysis of these individuals who have had both an employment and a self-employment spell, suggests that in the majority of cases (around 90 per cent) the period of employment occurred before the first period of self-employment.

6.1.4 Labour market transitions

The longitudinal nature of L2 data allows analysis of an individual's main labour market status and the changes across tax years. The rates people flow between different types of employment status, such as self-employed, employed and other labour market states such as in receipt of benefits, can be observed.

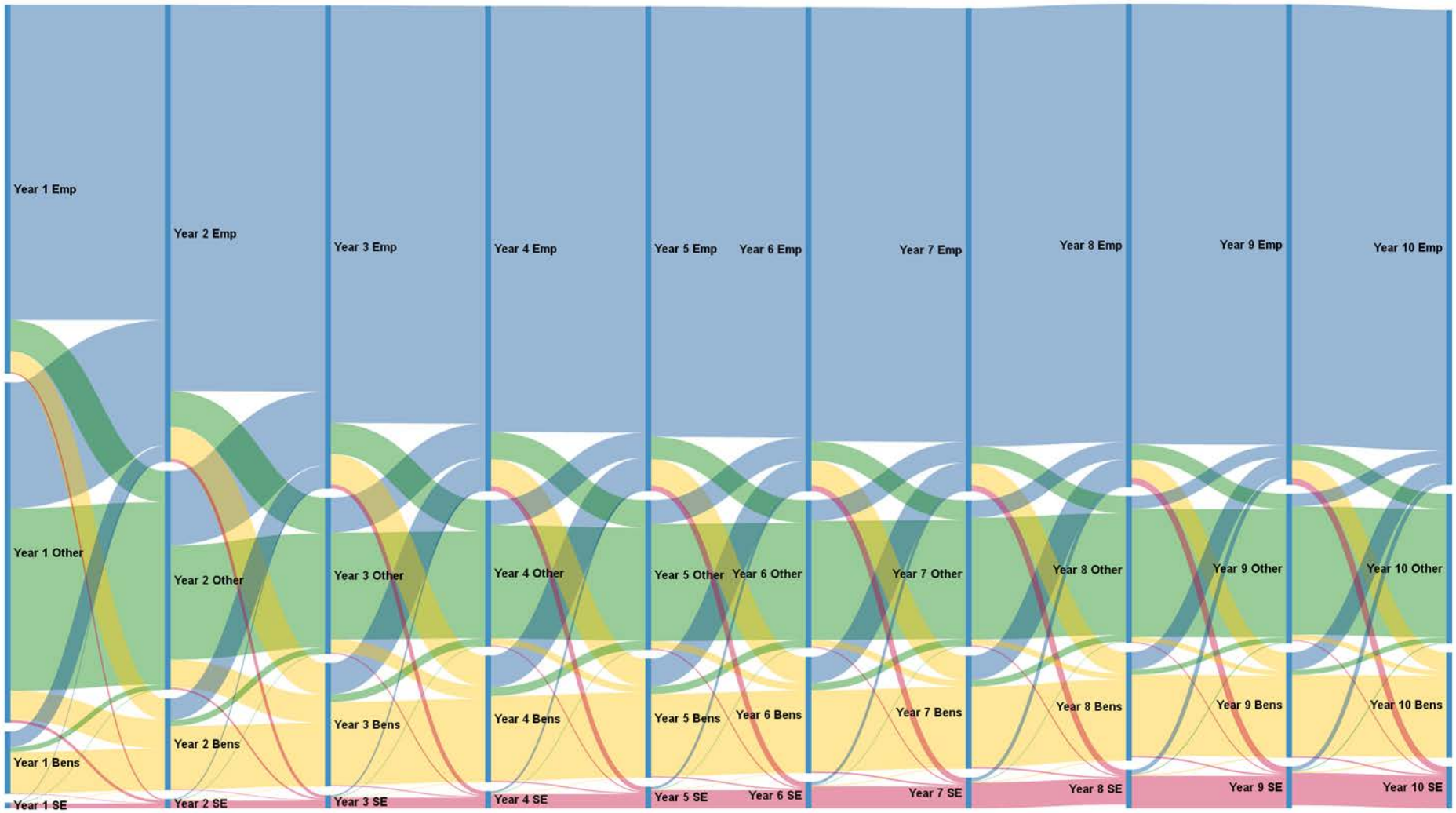
A useful representation of these flows can be captured in a Sankey diagram. This is a specific type of directional flow diagram which, in this case, captures the flows between different labour market states where the width of the arrow shown is proportional to the flow quantity. This should show how dynamic, or otherwise, periods of self-employment are.

Figure 6.7, shows the flows between employment, self-employment, benefits and other[125] across 10 tax years. The L2 data cover the tax years from 1978/79 to 2015/16. Individuals can appear in the dataset at different points in time: therefore, the first year (denoted Year 1 in the chart) for one individual could be, for example, 1979/80 whereas for a younger individual Year 1 will be a later year. Figure 6.7 includes all individuals who appeared in the L2 data between the tax years 1979/80 and 2006/07. The 2006/07 cut-off allows the observation of at least 10 years for younger workers.

Across all years there are flows, as would be expected, into and out of each employment state. In particular, consistent year-to-year flows from employment to self-employment and from self-employment to employment can be observed.

[125] In order to keep the diagram sufficiently clear the number of nodes included was limited to 4 (labelled: Emp; SE; Bens; Other) where all values in the dataset which were not either employment, self-employment or benefits were coded as other.

Figure 6.7 – Flows between labour market states, Years 1 to 10, United Kingdom



Source: DWP estimates derived from Lifetime Labour Market Database (L2), diagram created using SankeyMATIC

Looking more closely by generation suggests that the year-to-year flow between employment and self-employment, and vice versa, appears to be higher for more recent generations. This suggests that the nature of self-employment has, and is, changing. Table 6.1 shows the rate of yearly flow between employment and self-employment.

Table 6.1 – Estimated average yearly flows from employment to self-employment and self-employment to employment

United Kingdom *Percentages*

Generation	**Proportion flowing from employment to self-employment each year**	**Proportion flowing from self-employment to employment each year**
Silent generation	≈ 3%	≈ 0.5%
Baby boomer	≈ 6%	≈ 1%
Generation X	≈ 10%	≈ 1%
Millennial	≈ 12%	≈ 1.5%

Source: DWP estimates derived from Lifetime Labour Market Database (L2)

It would appear that transition rates are somewhere in the region of three to four times higher for more recent entrants to the labour market. The trends for the latest generation, so-called Gen Z / iGen / Centennials, cannot yet be observed in the data; however, given previous trends it could be hypothesised that there will be greater dynamism between employment states.

6.2 Multiple job-holders – Real-Time-Information (RTI) analysis

This section uses HMRC Real-Time Information (RTI) data to look at evidence on employees working in more than one job. For the purpose of this analysis, a multiple job holder (MJH) was defined as an individual with two or more paid employments in a given month.

Key research questions assessed in this section are:

- How many employees are MJHs and what is the associated demographic split?
- How many MJHs are eligible for automatic enrolment?
- What proportion of MJHs are paying employee pension contributions?

Summary

- As at the end of the March 2017 tax month, there were approximately 1.11 million people with multiple jobs. The majority of multiple job-holders (MJHs) (over 70%) were already eligible for AE as they earned £10,000 or more in all or at least one of their jobs.

- Of the 1.11 million multiple job-holders, around 975,000 (88%) were aged between 22 and State Pension age (SPA). There were around 78,000 (7%) MJHs between the ages of 18 and 21 and a further 41,000 (4%) greater than SPA.

- Approximately 64 per cent of the MJH population are female - more than the gender split of overall employments where only around 47 per cent of employments belong to female workers.

- Approximately 517,000 (53%) multiple job-holders, between the ages of 22 and SPA, were paying pension contributions, as at March 2017. Furthermore, some of those ineligible for AE were making workplace pension contributions: 43 per cent of those ineligible for automatic enrolment despite having a combined income over the £10,000 per year trigger and 32 per cent of those not entitled to receive employer contributions despite having a combined income over the LEL were contributing to a pension.

- Widening the age criteria would increase the overall number of MJHs eligible for AE by around 28,000 individuals aged 18 to 21.

- The proposed removal of the Lower Earnings Limit (LEL) would mean all workers subject to AE would pay contributions from £1 of earnings. This would mean MJHs who earned under the earnings trigger in any of their employments could choose to opt in and would automatically be entitled to employer contributions. MJHs earning above the earnings trigger in one or more of their jobs would be entitled to increased employer contributions (from £1).

It is widely recognised that people with multiple jobs are not as well served by the mechanisms of automatic enrolment. We have already identified that the eligibility criteria for automatic enrolment requires an employer to automatically enrol a worker who earns £10,000 per year or more and is aged between 22 and SPA. However where an individual earns an aggregate of more than £10,000 through multiple employments but does not earn more than £10,000 in each single employment, they are not subject to AE. Although individuals can choose to opt in, the power of inertia leads to many missing out on some pension contributions, and the qualifying earnings band reduces their total contributions (because they would only usually contribute on earnings above the LEL[126] in each job).

[126] Individuals pay contributions on a band of earnings – between the Lower Earnings Limit (LEL) and the Upper Earnings Limit (UEL). Where an individual earns over the trigger of £10,000 and they are

This section looks to measure the scale of the issue by assessing:

- the total number of MJHs;
- the types of MJH; and
- the impact of the proposed package on MJHs.

DWP has worked closely with HMRC and utilised their Real Time Information (RTI) data in order to produce this analysis (see annex for details).

6.2.1 Total number of multiple job-holders

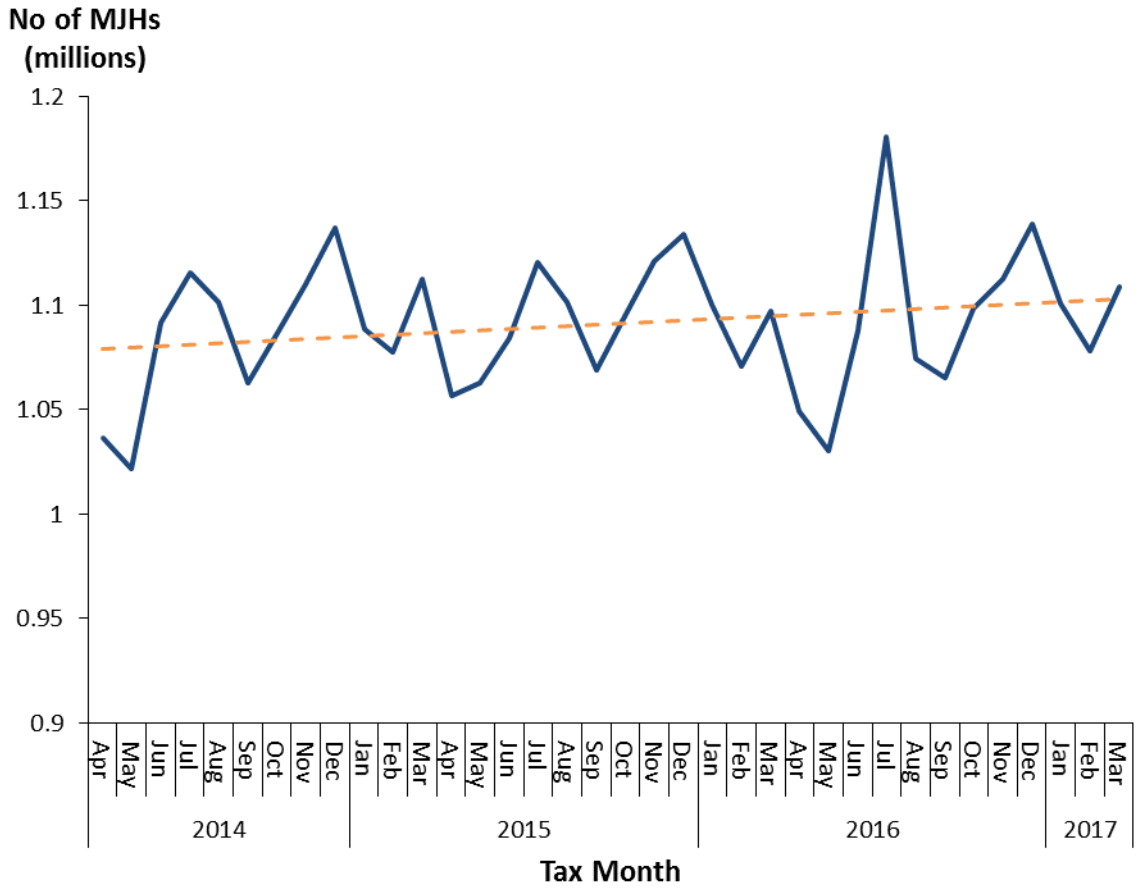
As at March 2017[127], there were approximately 1.11 million people with multiple jobs (Figure 6.9). Between April 2014 and March 2017, there was a slight upward trend in the number of people who held multiple jobs; however, the growth was slower than the increase in overall employment levels.[128]

aged between 22 and State Pension age (SPA), they will automatically be enrolled into a pension and pay contributions on this band of earnings. The 2017/18 level for the LEL is £5,876 and £45,000 respectively, reviewed annually.

[127] Tax month: run from 6th to 5th of the calendar month. All subsequent references to months in this chapter will refer to tax months.

[128] ONS Labour Market Stats: June 2017 https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/uklabourmarket/june2017

Figure 6.9 – Number of people with multiple jobs

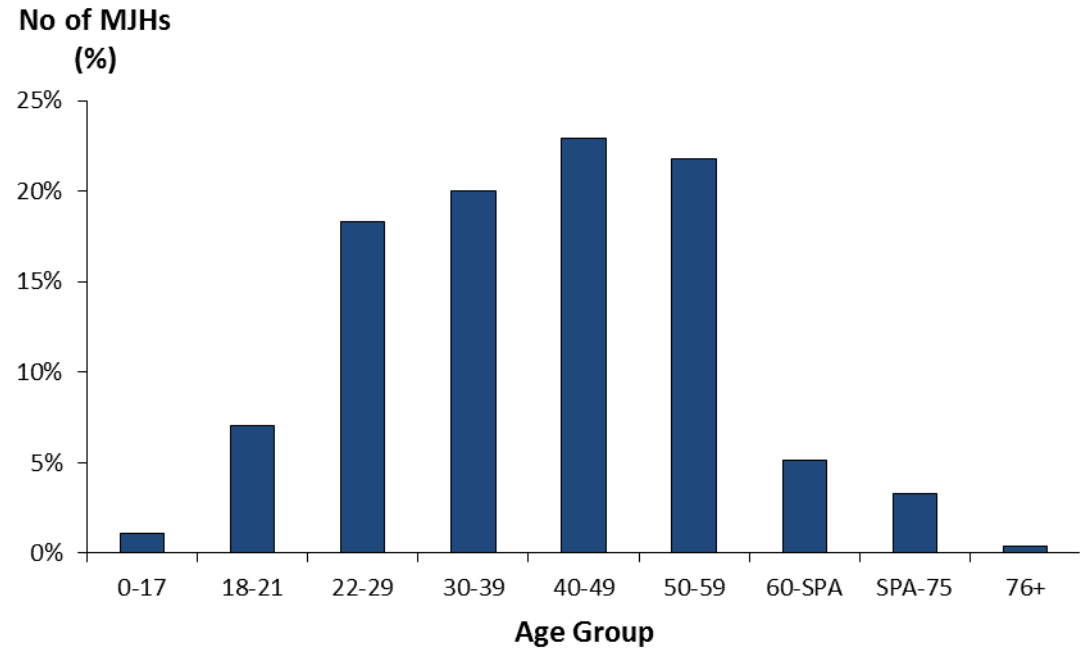


Source: DWP estimates based on HMRC RTI data.

Figure 6.10 shows that of the 1.11 million multiple job-holders, around 975,000 (88%) were aged between 22 and SPA. There were around 78,000 (7%) MJHs between the ages 18 and 21, around 12,000 below 18 (1%) and a further 41,000 (4%) greater than SPA.[129]

[129] There are a very small number of MJHs without a reported date of birth.

Figure 6.10 – Multiple job-holders at March 2017, by age

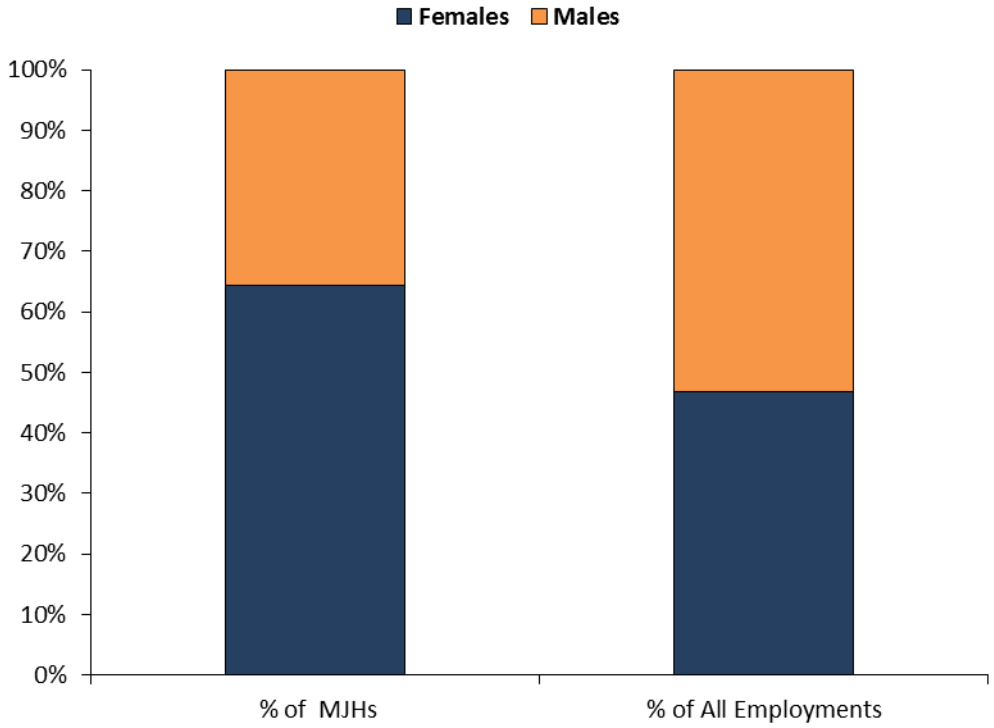


Source: DWP estimates based on HMRC RTI data.

Around half (47%) of all employments between February 2017 and April 2017 were attributable to women,[130] according to Labour Market Statisics. However, approximately 64% of the MJH population were women, according to the RTI analysis, as shown in Figure 6.11, as at March 2017.

[130] ONS Labour Market Stats: June 2017
https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/uklabourmarket/june2017

Figure 6.11 – Multiple job-holders at March 2017, by gender[131]



Source: DWP estimates based on HMRC RTI data and ONS Labour Market Statistics.

[131] There are a very small number of MJHs without a reported gender.

6.2.2 Types of multiple job-holders

For the purpose of this analysis, MJHs have been categorised into the following types:

Type A - Earn less than the LEL when all jobs are combined

This person may have two jobs earning £1,000 per year in each. They are currently ineligible for AE and, if they choose to opt-in, are not entitled to employer contributions but this would be the case even if they were a single jobholder with earnings of £2,000 per year.

Type B – Earn more than the LEL when all jobs are combined

This person may earn £4,000 in one job and £2,500 in another. Under the current policy, they are ineligible for AE and not entitled to employer contributions if they choose to opt in. However, if they were a single jobholder with earnings of £6,500 they would be entitled to employer contributions.

Type C – Earn less than the earnings trigger when all jobs are combined and earn over the LEL from one job

This person may earn £6,000 from one job and £2,000 from another. Combined earning are less than £10,000 therefore they would not be eligible for AE even if they had a single job. Under the current policy, they are entitled to opt in with employer contributions in the higher earning job as earnings in that job are more than the LEL.

Type D – Earn more than the earnings trigger only when jobs are combined and earn over the LEL in at least one job

This person may earn £8,000 in one job and £3,000 in another. They are not eligible for AE but would be if their combined earnings of £11,000 were earned in a single job. Despite this, they can still opt in with entitlement to employer contributions in the higher earning job as earnings in that job are more than the LEL.

Type E – Earn more than the earnings trigger in at least one but not all jobs

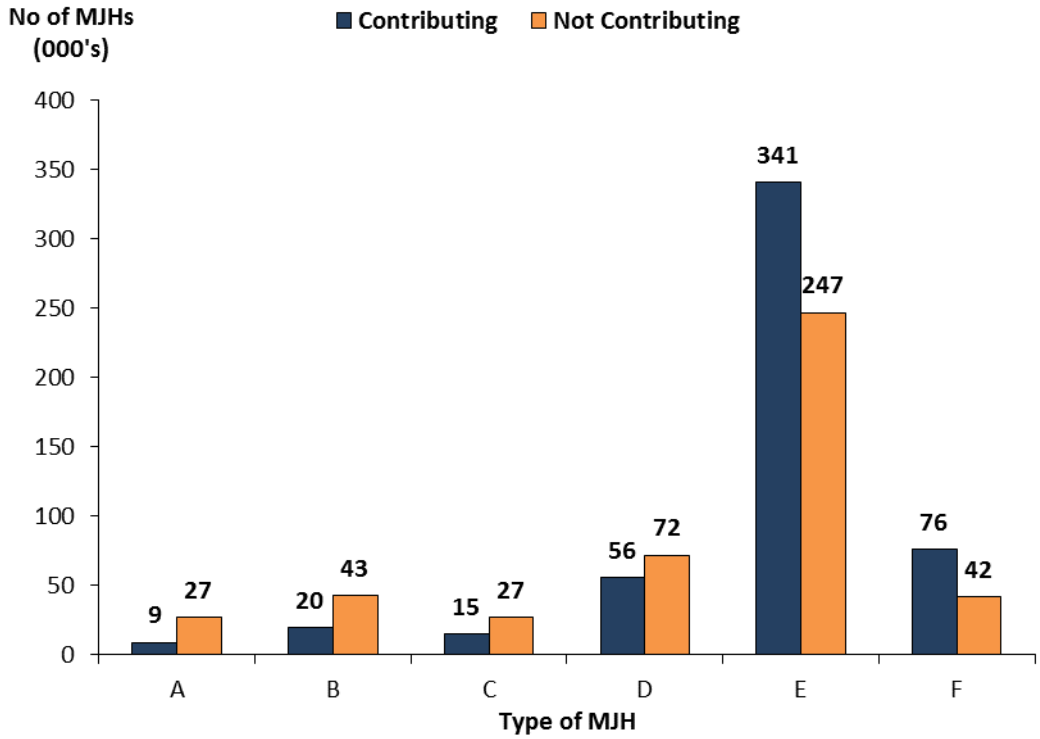
This person may earn £12,000 in one job and £6,000 in another so will be eligible for AE in the higher earning job and able to opt in with employer contributions in the lower earning job.

Alternatively, they may earn £12,000 in one job and £4,000 in another in which case they would be eligible for AE in the higher earning job but would not be entitled to opt in with employer contributions in the lower earning job as earnings in that job are below the LEL.

Type F – Earn more than the earnings trigger in each job

This person may earn £15,000 from one job and £13,000 from another. As both jobs exceed the earnings trigger, they will be eligible for AE in all of their employments.

Figure 6.12 – Types of MJH under the current policy (aged 22 to SPA) by whether employee pension contributions were being made or not, at March 2017

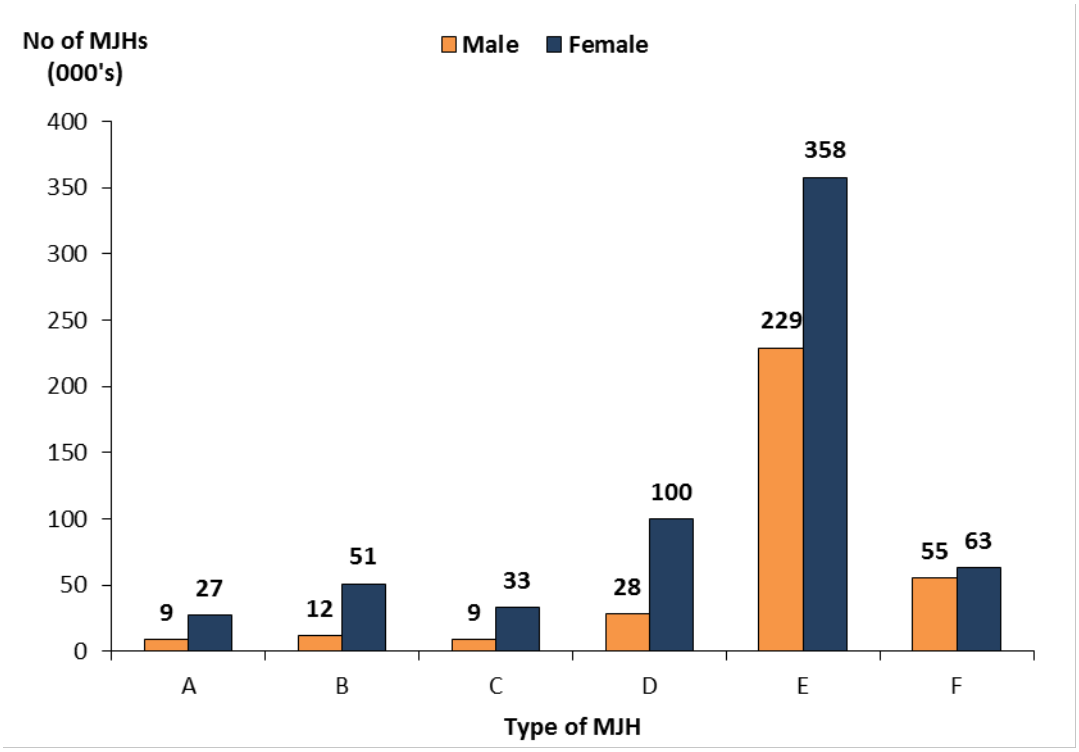


Source: DWP estimates based on HMRC RTI data.

Figure 6.12 shows that, as at March 2017, a significant majority (72%) of MJHs aged between 22 and SPA were eligible for AE in all or at least one of their jobs i.e. in MJHs of Type E and F. These individuals should be enrolled by at least one of their employers but may still miss out on contributions due to either not being enrolled by all employers or the LEL applying to all of their employments. This would result in those in these groups receiving fewer pension contributions than if they had the same earnings in a single employment.

Overall, there were approximately 517,000 (53%) MJHs, aged between 22 and SPA, paying employee pension contributions. Of these, 100,000 were not eligible for AE in any of their jobs. This could be due to them opting in, their employers contractually enrolling all workers regardless of eligibility, or they were already part of a workplace pension scheme prior to AE.

Figure 6.13 – Types of MJH under the current policy (aged 22 to SPA) by gender, at March 2017



Source: DWP estimates based on HMRC RTI data.

Figure 6.13 shows that, as at March 2017, around 632,000 (65%) MJHs were women. Around 421,000 (67%) of these individuals were eligible in at least one job.

6.2.3 Effects of the proposed package on MJHs

The proposed package consists of two elements:

1) Widening the age criteria to 18-SPA; and
2) Removal of the LEL.

1) Widening the age criteria to 18-SPA

The proposal to change the lower age limit to 18 while keeping the upper age limit at SPA would bring more people into pension saving, some of whom will be MJHs.

Widening the age criteria would increase the overall number of MJHs within the AE age criteria by around 78,000 (from 975,000 to 1,053,000). Of these, 28,000 would be eligible in at least one job (Type E and F cases).

2) Removal of the LEL

The proposal to remove the LEL would have two impacts:

- Everyone pays contributions from £1 of earnings

- All of those who earn under the earnings trigger in any of their employments could choose to opt in and would automatically be entitled to the employer contribution

The illustrative examples below show the impact of the package on each type of MJH. They use the 2017/18 earnings trigger and lower earnings limit.

Table 6.2 – Impact of the proposed package on each type of MJH

	Job 1			Job 2			Qualifying earnings	
Person	Earnings	Automatically enrolled?	Employer contributions?[132]	Earnings	Automatically enrolled?	Employer contributions?[132]	Under the current system[133] (£)	Under proposed package (£)
A	1,000	N	N	1,000	N	N	0	2,000
B	4,000	N	N	2,500	N	N	624	6,500
C	6,000	N	Y	2,000	N	N	124	8,000
D	8,000	N	Y	3,000	N	N	2,124	11,000
E	12,000	Y	Y	6,000	N	Y	6,248	18,000
F	15,000	Y	Y	13,000	Y	Y	16,248	28,000

Under the current policy, Person A earns under the LEL in each job and can opt in but is not entitled to employer contributions. This is the same as if Person A had the same earnings from a single job. Under the proposed package, if Person A chooses to opt in, employer contributions would be payable on a combined total of £2,000.

Person B is currently not entitled to employer contributions in either of their jobs. If Person B had the same earnings from a single job, they would be entitled to opt in with employer contributions which would be payable on £624. Under the proposed package, Person B would be entitled to employer contributions in both jobs and contributions would be payable on £6,500.

Person C can currently opt in with entitlement to employer contributions in Job 1 but is not entitled to employer contributions in Job 2. Employer contributions are payable on a combined total of £124. If Person C had the same earnings from a single job, they would be entitled to opt in with employer contributions which would be payable on £2,124. If the LEL was removed, Person C would be entitled to employer contributions in both jobs and contributions would be payable on a combined total of £8,000.

[132] This refers to whether the individual is entitled to employer contributions if they choose to opt in, under the current policy

[133] Qualifying earnings under the current system are calculated based on the LEL of £5876 at 2017/18

Under the current policy, Person D can opt in with entitlement to employer contributions in Job 1 but is not entitled to employer contributions in Job 2. Employer contributions are payable on a combined total of £2,124. If Person D had the same earnings from a single job, they would be entitled to opt in with employer contributions which would be payable on £5,124. Under the proposed package, Person D would be entitled to employer contributions in both jobs and contributions would be payable on a combined total of £11,000.

Under the current policy, Person E is automatically enrolled in Job 1, they are able to opt in to AE in Job 2 and employer contributions are payable on earnings from the LEL in each. Employer contributions are payable on a combined total of £6,248. If Person E had the same earnings from a single job, employer contributions would be payable on £12,124. Under the proposed package, Person E would be automatically enrolled in Job 1 and contributions would be payable from £1 of earnings. They would also be able to opt in to AE in Job 2 and receive employer contributions payable from £1 of earnings. Employer contributions would be payable on the combined total of £18,000.

Person F is currently automatically enrolled in both jobs and employer contributions are payable on £16,248 of earnings from the LEL. If Person F had the same earnings from a single job, employer contributions would be payable on £22,124. Under the proposed package, Person F would be automatically enrolled in both jobs and contributions would be payable on £28,000.

In summary, the proposed package would have a positive impact on all MJHs aged between 18 and SPA with the removal of the LEL enabling entitlement to increased employer contributions for all types. Those that are already enrolled would be entitled to employer contributions on an additional £5,876 of earnings and those with employments earning under the current LEL would be enabled to opt in to AE with entitlement to employer contributions paid from the first pound of earnings.

7 Engagement analysis

This chapter presents evidence regarding the role of engagement in supporting automatic enrolment policy outcomes. Its focus is on workplace pension saving as an individual employee behaviour. Within this context, engagement is something which can influence behaviour, and can include:

- Whether and how individual employees think and feel about their workplace pension, including their knowledge and attitudes
- Initiatives designed to change how individual employees think and feel about their workplace pension, for example by increasing their knowledge or emphasising social norms.

Prior to the implementation of automatic enrolment, evidence showed that variation in how individuals think and feel about pensions and saving for later life were not closely associated with different pension saving behaviours.[134] Rather, behaviour was more closely associated with income.[135] Furthermore, initiatives designed to change pension saving behaviour solely by changing how individuals think and feel about pensions, were found to have negligible impact on the actual, or even currently planned, savings behaviour of employees.[136] This contrasts with the subsequent success of automatic enrolment at increasing workplace pension participation (see Chapter 2).

However, engagement has an important role to play. Evidence suggests that for an initiative such as automatic enrolment, engagement can complement inertia-based approaches by influencing individuals' attitudes and beliefs to be supportive of pension saving as a behaviour. For example, engagement can reinforce the message that it is important to save for retirement, including at key points when savers have choices to make about continuing to save or save more. Indeed, recent

[134] DWP (2012) *Attitudes to Pensions: The 2012 survey.* Available here: http://webarchive.nationalarchives.gov.uk/20130402200847/http://research.dwp.gov.uk/asd/asd5/report_abstracts/rr_abstracts/rra_813.asp

[135] DWP/NEST (2009) *Individuals' attitudes and behaviours around planning and saving for later life.* Available here: https://www.nestpensions.org.uk/schemeweb/NestWeb/includes/public/docs/dwp-research,PDF.pdf

[136] DWP (2005) *Providing pensions information and advice in the workplace where there is little or no employer contribution: Pilot evaluation findings based on survey and qualitative research.* Available here: http://webarchive.nationalarchives.gov.uk/20130314010347/http://research.dwp.gov.uk/asd/asd5/rrs-index.asp

evidence suggests there may now be an association between positive attitudes towards pensions and pension saving behaviour, of a kind that was missing prior to the implementation of automatic enrolment.

For example, the youngest working age groups, who are least likely to opt out,[137] are also more likely to agree with positive attitudinal statements such as 'I believe a workplace pension is a good thing for me'.[138] In contrast, lower proportions agree among the over 50 age group, who have also been more likely to opt out. Overall, evidence from the British Social Attitudes Survey 2016 suggests employees have positive attitudes towards workplace pension saving, as follows:

- 80 per cent of employees agree 'Overall, it is worthwhile for me to save into a workplace pension'.
- Only 22 percent of employees agree 'I have more important things to spend my money on than saving into a workplace pension'.
- 78 per cent of employees agree 'It is normal for someone like me to save into a workplace pension'.

Altogether, this reflects wider evidence suggesting that behaviour is influenced by multiple factors that can be grouped into three main elements: capability, opportunity and motivation.[139] This suggests that initiatives which seek to change behaviour solely by influencing one or two of these elements may not work, because all three elements may need to be changed in order for behaviour to change. Further evidence which suggests that pension saving behaviour reflects a combination of capability, opportunity and motivation includes:

- A recent review by the Pensions Policy Institute (PPI) concluded that 'behavioural interventions' (interventions which aim to encourage people to make (or not make) decisions which result in better financial outcomes) are most effective when they take into account capability and opportunity-related factors such as prior knowledge, personal circumstances, age and income.[140]

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[137] DWP (2015) *Automatic enrolment: Qualitative research with employers staging in 2014.* Available here: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/391153/rr899-automatic-enrolment-employers-2014.pdf

[138] Ipsos MORI (2017) *Workplace Pensions: research exploring attitudes and behaviour.* Available at: https://www.ipsos.com/ipsos-mori/en-uk/workplace-pensions-research-exploring-attitudes-and-behaviour

[139] Michie et al. (2011) *The behaviour change wheel: A new method for characterising and designing behaviour change interventions.* Available at: https://www.ncbi.nlm.nih.gov/pmc/ Capability is defined as the individual's psychological and physical capacity to engage in the activity concerned. It includes having the necessary knowledge and skills. Motivation is defined as all those brain processes that energize and direct behaviour, not just goals and conscious decision-making. It includes habitual processes, emotional responding, as well as analytical decision-making. Opportunity is defined as all the factors that lie outside the individual that make the behaviour possible or prompt it.

[140] PPI (2017) *Consumer engagement: the role of policy through the lifecourse.* Available here: http://www.pensionspolicyinstitute.org.uk/publications/reports/consumer-engagement-the-role-of-policy-through-the-lifecourse

- Qualitative research with employees who had opted out of pension saving after being automatically enrolled suggested that their reasons included not being able afford contributions (opportunity); already having provision for retirement in place (motivation and capability); and, typically among those who were aged over 50, a feeling that there was not enough time left to save into a pension before retiring, to make staying in worthwhile (motivation and capability).[141]
- Predictors of joining an occupational pension have been found to include a combination of opportunity-related factors ('having money left over at the end of the week/month') alongside motivation-related factors ('being willing to delay the receipt of money').[142]
- Negative events which may undermine both motivation and opportunity to save, such as the financial downturn in 2008, have been found to negatively impact pension saving behaviour.[143]

Evidence reviewed by PPI[144] highlights how initiatives to increase engagement should be designed. The PPI review highlighted how different individuals' circumstances (e.g. income level), needs (e.g. financial capability) and preferences (e.g. which messages they will respond to) are diverse, even among specific age cohorts. PPI concluded that engagement activity therefore needs to be personalised or tailored, if it is to be effective. Nevertheless, more general intervention design principles which emerged included:

- Keep interventions and related actions and language simple and practical (e.g. use plain language and avoid complex communications which can alienate).
- Use or influence social norms to influence those, particularly 'non-engaged' people whose needs are associated with lower levels of capability and income, and who make decisions based on emotions, beliefs, biases, and social cues about what constitutes 'acceptable behaviour'.
- Implement initiatives during 'teachable moments' – defined as life transitions (e.g. changing job) when an individual may be more receptive to messages.

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[141] DWP (2015) *Automatic enrolment: Qualitative research with employers staging in 2014.* Available here: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/391153/rr899-automatic-enrolment-employers-2014.pdf and DWP (2017) *Automatic enrolment: Qualitative research with small and micro employers.* Available here: https://www.gov.uk/government/publications/automatic-enrolment-qualitative-research-with-small-and-micro-employers

[142] [Bryan, M. and Lloyd, J. (2014) *Who Saves for Retirement? 2: Eligible non-savers* http://strategicsociety.org.uk/wp-content/uploads/2014/01/Who-Saves-for-Retirement-2-Eligible-Non-savers.pdf

[143] NEST Corporation (2014) *Improving consumer confidence in saving for retirement.* London: NEST.

[144] *Consumer engagement: the role of policy through the lifecourse.* Available here: http://www.pensionspolicyinstitute.org.uk/publications/reports/consumer-engagement-the-role-of-policy-through-the-lifecourse

A further key principle emerging from existing evidence is the need to robustly test approaches and messages to avoid initiatives achieving nothing – or worse – resulting in the opposite of the intended effect. For example, while some evidence suggests that social norms can contribute to positive behaviour change,[145] other studies have found that providing individuals with information about peers' saving behaviour contributed to them decreasing their saving.[146]

7.1 Engagement life-course map

As noted by the recent PPI review,[147] the key touch points for engagement are 'teachable moments' that can occur at varying and multiple times across an individual's life, including:

- Changing or starting employment
- Buying a house
- Moving in with a partner
- Getting married or divorced
- Having children
- Onset of health problems
- Bereavement

The 'Automatic Enrolment: Life Journeys' map, set out below (Figure 7.1), aims to visualise evidence from the PPI review alongside key DWP evidence sources[148] to show 'typical' journeys and transitions within the context and design of automatic

[145] Duflo, E. and Saez, E. (2002) *The role of information and social interactions in retirement plan decisions: Evidence from a randomized experiment.* Available here: https://economics.mit.edu/files/746

[146] Beshears, J., Choi, J.J., Laibson, D., Madrian, B.C. and Milkman, K.L. (2011) *The effect of providing peer information on retirement saving decisions.* Available here: http://www.nber.org/papers/w17345.pdf

[147] *Consumer engagement: the role of policy through the lifecourse.* Available here: http://www.pensionspolicyinstitute.org.uk/publications/reports/consumer-engagement-the-role-of-policy-through-the-lifecourse

[148] Notably:

- DWP (2015) *Automatic enrolment: Qualitative research with employers staging in 2014.* Available here: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/391153/rr899-automatic-enrolment-employers-2014.pdf
- DWP (2017) *Automatic enrolment: Qualitative research with small and micro employers.* Available here: https://www.gov.uk/government/publications/automatic-enrolment-qualitative-research-with-small-and-micro-employers
- DWP/NEST (2009) *Individuals' attitudes and behaviours around planning and saving for later life.* Available here: https://www.nestpensions.org.uk/schemeweb/NestWeb/includes/public/docs/dwp-research,PDF.pdf

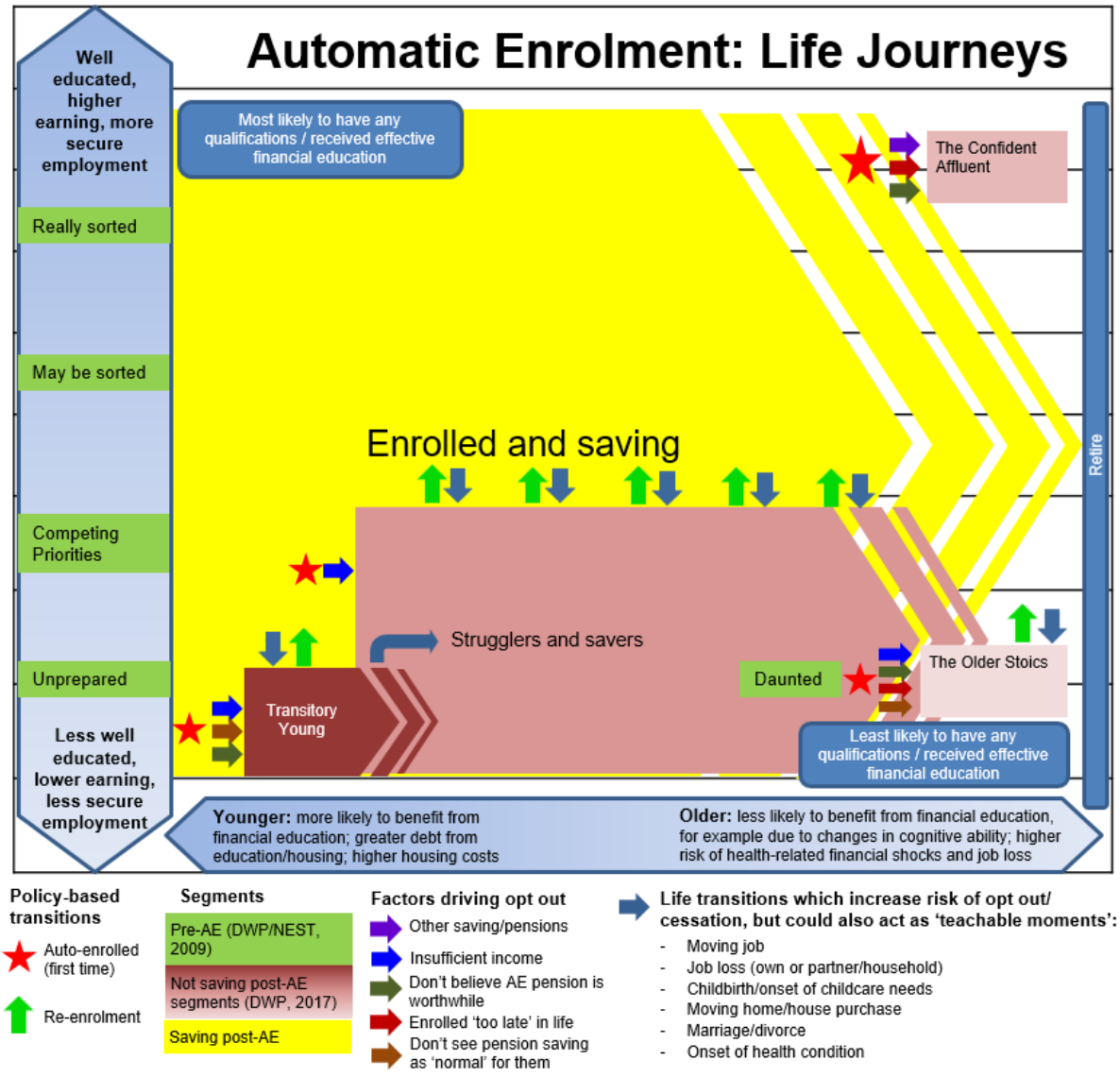
enrolment. Its basis is the segments or types of people identified by research before and after implementation of automatic enrolment. While pension saving was associated with higher income groups before automatic enrolment, following its introduction most eligible employees are automatically enrolled, and keep saving for the remainder of their working lives. Those who opt out or cease from saving, can be split into segments according to the reasons they cite for having opted out, which tend to relate to their circumstances and characteristics. The map highlights key findings which may be useful in designing initiatives to support engagement, as follows:

- Segments at greater likelihood of opting out are mostly concentrated towards the lower end of the income distribution. Therefore initiatives which are designed to reflect their circumstances, capabilities and preferences are likely to have greatest impact.
- Life transitions or changes which could increase the risk of cessation or opt out interact with re-enrolment. Re-enrolment itself, whether by an existing employer every three years, or at the point when an individual changes job, provides a 'teachable moment' when engagement activity may contribute to an individual remaining enrolled rather than opting out again.
- Younger age groups tend to learn more easily[149], suggesting that information and communications aiming to reinforce inertia, for example by emphasising social norms, may best be targeted at younger age groups. As these people then age, those learned messages may then, over time, create cultural norms and beliefs right across the age spectrum which help to support the default of automatic enrolment and minimise opt out.

Please note, while the PPI review and DWP evidence sources used to inform the map provide key relevant insights, they are by no means exhaustive evidence sources. It is likely that further existing and future research may provide additional details and insights regarding the nature and diversity of lifetime journeys and transitions, as they relate to automatic enrolment and pension saving more generally.

[149] Lührmann, M., Serra-Garcia, M. and Winter, J. (2014) 'Teaching teenagers in finance: Does it work?' *Journal of Banking and Finance,* **54,** pp.160-174. In: PPI (2017) *Consumer engagement: the role of policy through the lifecourse.* Available here: http://www.pensionspolicyinstitute.org.uk/publications/reports/consumer-engagement-the-role-of-policy-through-the-lifecourse

Figure 7.1 – Stylised map of the life-course as it relates to automatic enrolment



8 Statutory Requirements

As part of the review, a number of requirements were set in legislation; these related to the statutory review of the alternative quality requirements for Defined Benefit schemes (section 23A of the Pensions Act 2008) and for the certification requirements for money purchase schemes (section 28 of Pensions Act 2008).[150] This section presents the analysis conducted to inform the review of these requirements.

8.1 Alternative quality requirements for Defined Benefit schemes

The Department for Work and Pensions committed to conduct a post-implementation review (PIR) of the alternative quality requirements for DB schemes.

The PIR is published as part of the review report and covers the approach taken, an overview of the evidence gathered through the call for evidence and key findings and recommendations.

The key recommendation, based on the evidence and consultation responses, was to keep the alternative test for employers to check and confirm that their DB scheme meets the quality requirements for automatic enrolment.

8.2 Certification of Defined Contribution (DC) and Money Purchase Schemes

Summary

- Since automatic enrolment was introduced, certification under the alternative quality requirements would have delivered at least as good an outcome for over 90 per cent of jobholders.

This section presents the analysis used to inform the statutory review of the alternative quality requirements for money purchase occupational pension, DC and hybrid schemes (section 28 of Pensions Act 2008).

[150] The Pensions Act 2008: https://www.legislation.gov.uk/ukpga/2008/30/contents

8.2.1 Details of the alternative quality tests

Certification under alternative quality requirement is based on a three-tier test and a scheme may apply different quality requirements for different categories of job holders.

Certification requires employers to test that their chosen scheme meets at least one, or more, of three sets for the relevant job holders by requiring the corresponding level of contributions as laid out in Table 8.1 below.

Note that the minimum contribution of eight per cent of qualifying earnings is being phased in to help employers manage costs. To coincide with this, the contribution rates under the alternative quality requirements are also being phased in, as also set out in the Table below.

Table 8.1 – Alternative quality requirements[151]

Set	**Contribution levels until 5th April 2018**	**Contribution levels from 6th April 2018 - 5th April 2019**	**Contribution levels from 6th April 2019**
1	The scheme must provide for at least a 3% contribution of pensionable earnings (inclusive of at least a 2% employer contribution) for all of the relevant jobholders in the group or in the scheme. The pensionable earnings of the jobholder must be equal to, or more than the jobholder's 'basic pay'.	The scheme must provide for at least a 6% contribution of pensionable earnings (inclusive of at least a 3% employer contribution) for all of the relevant jobholders in the group or in the scheme. The pensionable earnings of the jobholder must be equal to, or more than the jobholder's 'basic pay'.	The scheme must provide for at least a 9% contribution of pensionable earnings (inclusive of at least a 4% employer contribution) for all of the relevant jobholders in the group or in the scheme. The pensionable earnings of the jobholder must be equal to, or more than the jobholder's 'basic pay'.
2	The scheme must provide for at least an 2% contribution of pensionable earnings (inclusive of at least a 1% employer contribution) for all of the relevant jobholders in the group or scheme. Total pensionable earnings of all relevant jobholders (taken in aggregate) to whom this set applies must constitutes at least 85% of their total earnings. The pensionable earnings of the jobholder must be equal to or more than the jobholder's basic pay.	The scheme must provide for at least an 5% contribution of pensionable earnings (inclusive of at least a 2% employer contribution) for all of the relevant jobholders in the group or scheme. Total pensionable earnings of all relevant jobholders (taken in aggregate) to whom this set applies must constitutes at least 85% of their total earnings. The pensionable earnings of the jobholder must be equal to or more than the jobholder's basic pay.	The scheme must provide for at least an 8% contribution of pensionable earnings (inclusive of at least a 3% employer contribution) for all of the relevant jobholders in the group or scheme. Total pensionable earnings of all relevant jobholders (taken in aggregate) to whom this set applies must constitutes at least 85% of their total earnings. The pensionable earnings of the jobholder must be equal to or more than the jobholder's basic pay.
3	Total contributions of at least 2% of the jobholder's earnings (including an employer contribution of at least 1%) for each relevant jobholder in the group or scheme.	Total contributions of at least 5% of the jobholder's earnings (including an employer contribution of at least 2%) for each relevant jobholder in the group or scheme.	Total contributions of at least 7% of the jobholder's earnings (including an employer contribution of at least 3%) for each relevant jobholder in the group or scheme.

For sets 1 and 2 pensionable earnings[152] must be at least equal to basic pay.[153]

[151] AE regs 2010 321

8.2.2 Requirements of the statutory review

The scope of the statutory review in respect of DC schemes alternative requirement is specific. The law requires that from 2017, the Secretary of State carries out a review at least once every three years, to ensure the policy is working as intended for jobholders who have been enrolled into schemes which base contributions on basic pay.

In particular, the review places a requirement to test that the vast majority, which is defined as **at least 90 per cent of jobholders**, employer and total contributions would be no less than under the relevant quality requirement.

This analysis defines job holders as those aged 16 or over and under 75 with qualifying earnings and assumes all were active members of schemes to which section 28 applies.

8.2.3 Methodology to test the alternative quality requirements

Analysis of the Annual Survey of Hours and Earnings (ASHE) data was carried out on all job holders (those aged 16 or over and under 75) with qualifying earnings to test whether at least 90 per cent of jobholders would have the same, or better, outcomes under the 3 sets of certification as they would under qualifying earnings.

ASHE was deemed the most suitable dataset to use as it is the primary data source for employee level analysis of pay and employer/employee contributions to the employee's main pension scheme.

Given that the legislation states that if set 1 or set 2 are used to self-certify *pensionable pay must be at least equal to basic pay,* then it is assumed throughout the analysis that this is the case. This is because the test is whether the self-certification process, if applied correctly, provides at least as good an outcome for at least 90 per cent of jobholders. If it was the case that self-certification was not applied correctly then the Pensions Regulator (TPR) can treat the employer's certificate as void and serve a notice requiring the employer to make up the shortfall between the actual contributions paid and those that would have been required.[154]

This ASHE data analysis will not show if the use of the certification process is, in practice, being applied correctly. However, as required by the review the analysis aims to show that the framework which was established for certification, if used

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[152] Defined in Regulation 32K of the 'Occupational and personal pension Schemes (Automatic Enrolment) Regulations 2010 Pensionable earnings as: the gross earnings on which contributions to the scheme are payable.

[153] Defined in Regulation 32K of the 'Occupational and personal pension Schemes (Automatic Enrolment) Regulations 2010 as: the gross earnings disregarding commission, bonus, shift premium, car allowances etc.

[154] AE regs 32H which deals with TPR powers

correctly, will achieve at least as good an outcome for the vast majority (over 90 per cent) of jobholders.

Also, as ASHE is a survey of employee jobs it is not possible to look at total employer aggregates for particular subsets of jobholders for an employer as laid out in set 2.

SET 1 – Example calculation*

Person A, earns £15,000, of which £10,000 is basic pay.

Employer self-certifies under SET 1 and pays 2% contributions, total contributions are 3%.

The statutory review tests Person A's total and employer contributions are at least as much as contributions under qualifying earnings.

As SET 1 we assume pensionable earnings are greater than, or equal to basic pay.

The test is to check whether contribution outcomes are at least as good as contributions using qualifying earnings:

Total contribution is £300 (i.e. 3 per cent of £10,000), of which the employer contribution is £200 (i.e. 2 per cent of £10,000).

Annual contributions using qualifying earnings would have been £182.48 (i.e. 2 per cent of £15,000 - £5,876), of which employer contribution would have been £91.24

Therefore as contributions paid at least as much as those that would have been paid using qualifying earnings then the review requirements (in respect of) Person A have been met.

* For example purposes, we have shown how the test for SET 1 is applied at an individual level; the statutory review requires that test is applied to in aggregate to all jobholders.

SET 2 – Example calculation*

Person B, earns £20,000, of which £17,000 is basic pay.

Employer self-certifies under SET 2 and pays 1% contributions, total contributions are 2%.

The statutory review tests Person B's total and employer contributions are at least as much as contributions under qualifying earnings.

As SET 2 we assume pensionable earnings are greater than, or equal to basic pay.

The test is to check whether contribution outcomes are at least as good as contributions using qualifying earnings:

Given contribution rates are equivalent for SET 2 and qualifying earnings we just have to calculate whether basic pay is at least equal to qualifying earnings.

SET 2 pensionable pay = basic pay = £17,000

Qualifying earnings = gross pay - lower earnings limit = £14,124

Therefore as SET 2 pensionable pay is at least as much as qualifying earnings then the review requirements (in respect of) Person B has been met. [Note that we cannot additionally check that the total pensionable earnings constitutes at least 85 per cent of total earnings for all jobholders with the employer that this set applies because ASHE is a sample of employee jobs only.]

* For example purposes, we have shown how the test for SET 2 is applied at an individual level; the statutory review requires that test is applied to in aggregate to all jobholders.

8.2.4 Results

The following sections present the results of the ASHE data analysis.

The ASHE data, in Table 8.2 below, show that since automatic enrolment was introduced (in 2012) certification under tier 1 would have delivered at least as good an outcome for over 90 per cent of jobholders, at any of the phased contribution levels.

Table 8.2 – Proportion of jobholders meeting the alternative quality requirement, at phased contribution levels, 2012-2016

Great Britain					*Percentages*
Alternative quality requirements	**2012**	**2013**	**2014**	**2015**	**2016**
Jobholders with 3% of basic pay from pound one at least as much as 2% of qualifying earnings	98.8%	98.9%	98.9%	99.1%	99.1%

Source: DWP estimates derived from ONS ASHE, GB, 2012-2016.

SET 2

As already stated for certification under this tier it is assumed that pensionable pay must be greater than or equal to basic pay as per the requirements of this set.

So it must follow that as over 90 per cent of jobholders, for all years 2012 to 2016, have basic pay from pound one at least as much as qualifying earnings (see Table 8.3 below), then over 90 per cent of jobholders must also have had (for the purposes of certification) pensionable earnings at least as much as qualifying earnings. This is true given the stated assumption that pensionable pay must be greater than or equal to basic pay.

Therefore it can be concluded that because contribution levels for this tier are the same under certification and qualifying earnings, then this must be delivering at least as good an outcome for over 90 per cent of jobholders as required.

But as noted, ASHE cannot tell us whether for any given individual employer the requirement that total pensionable pay of any jobholders certified under this tier is equivalent to at least 85 per cent of total pay.

Table 8.3 – Proportion of jobholders with basic pay from pound one at least as much as qualifying earnings, 2012-2016

Great Britain					*Percentages*
Alternative quality requirements	**2012**	**2013**	**2014**	**2015**	**2016**
Proportion of jobholders with basic pay from pound one at least as much as qualifying earnings	92%	92%	92%	92%	93%

Source: DWP estimates derived from ONS ASHE, GB, 2012-2016.

SET 3

It is always true that certification, under tier 3, delivers at least as good an outcome for any jobholder when this condition is met. If all (i.e. gross) earnings are pensionable from pound one, then the total contribution need only be 6.92 per cent (with a 2.6 per cent employer contribution) in order for the contribution to be equivalent to eight per cent (with a three per cent employer contribution) of qualifying earnings.

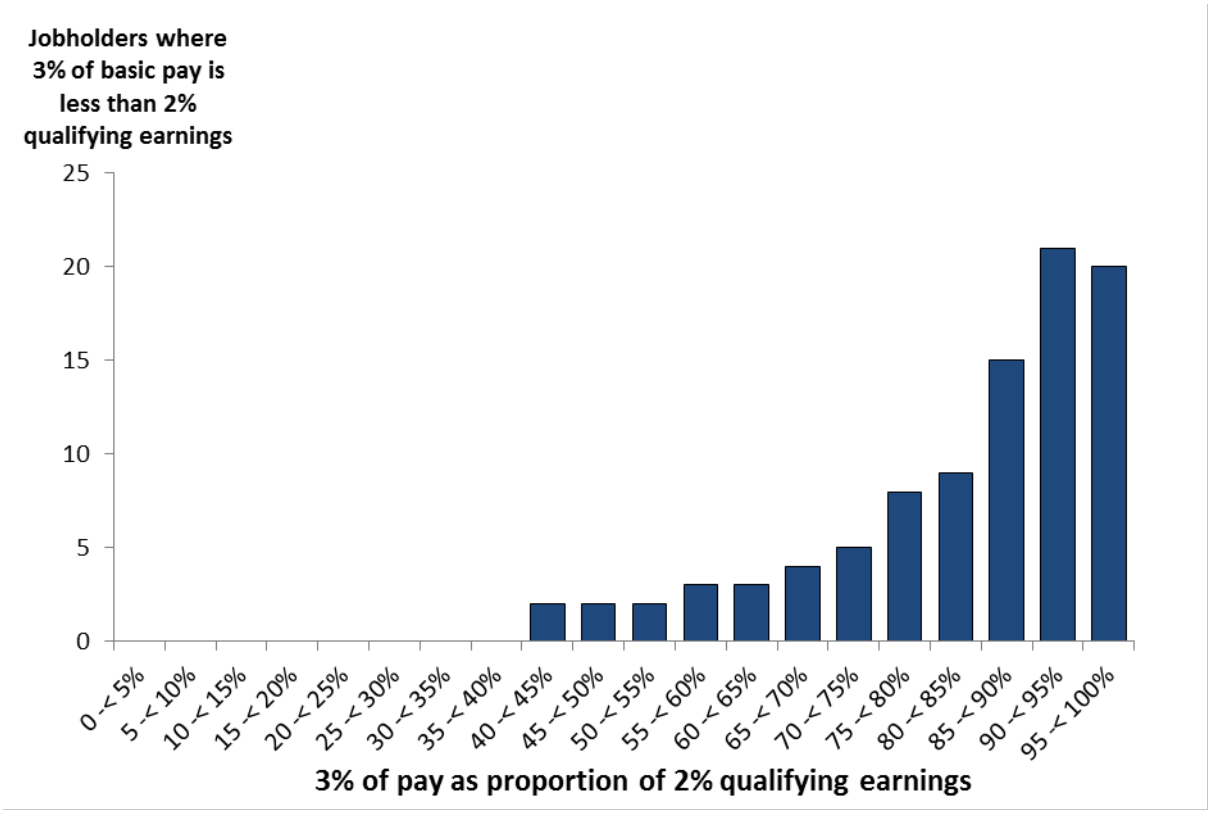
And if all earnings are pensionable from pound one, then the total contribution need only be 1.73 per cent (with a 0.87 per cent employer contribution) in order for the contribution to be equivalent to two per cent (with a one per cent employer contribution) of qualifying earnings.

8.2.5 Descriptive analysis of individuals who would not receive as good an outcome

The following analysis aims to provide further detail on the approximately one per cent of jobholders who, under set one, would not have three per cent of basic pay from £1 at least as much as two per cent of qualifying earnings.

Volumetrically, one per cent equates to only around 170,000 jobholders, out of over 18.6 million, and the majority of these are close to having three per cent of basic pay equal two per cent of qualifying earnings. Around three quarters, 125,000, have a ratio of 75 per cent or more - of three per cent basic pay to two per cent qualifying earnings (Figure 8.1).

Figure 8.1– Distribution of jobholders where 3% basic pay is less than 2% of qualifying earnings by banded ratio



Source: DWP estimates derived from ONS ASHE, GB, 2016.

Note: Numbers supressed where ASHE sample size is small (less than 20).

The following Tables compares the breakdowns - by age group; gender; earnings band; employer size; region; industry; occupation; working pattern – of the group who wouldn't get at least as good an outcome with the group that would.

All Figures below are for 2016, as the time series for each breakdown has remained relatively stable since 2012.

Table 8.4 – Distribution of jobholders by age group, 2016

Great Britain *Percentages*

Age group	**Eligible jobholders with 3% basic pay less than 2% qualifying earnings**	**Eligible jobholders with 3% basic pay greater than or equal to 2% qualifying earnings**
16 to 21	9.2%	5.8%
22 to 29	21.4%	19.6%
30 to 39	21.1%	24.0%
40 to 49	23.5%	23.3%
50 to 59	18.9%	20.2%
60 to 69	5.6%	6.8%
70 to 75	-	0.4%

Source: DWP estimates derived from the ONS ASHE, GB, 2016.

Note: Numbers supressed where ASHE sample size is small (less than 20).

Table 8.5 – Distribution of jobholders by gender, 2016

Great Britain *Percentages*

Gender	**Eligible jobholders with 3% basic pay less than 2% qualifying earnings**	**Eligible jobholders with 3% basic pay greater than or equal to 2% qualifying earnings**
Male	73.4%	57.4%
Female	26.6%	42.6%

Source: DWP estimates derived from the ONS ASHE, GB, 2016.

Table 8.6 – Distribution of jobholders by earnings band, 2016

Great Britain *Percentages*

Earnings band	**Eligible jobholders with 3% basic pay less than 2% qualifying earnings**	**Eligible jobholders with 3% basic pay greater than or equal to 2% qualifying earnings**
under £10,000	27.0%	12.7%
£10,000 - under 20,000	48.6%	33.5%
£20,000 - under 30,000	24.4%	25.5%
£30,000 - under 40,000	0.0%	12.8%
£40,000 plus	0.0%	15.6%

Source: DWP estimates derived from the ONS ASHE, GB, 2016.

Table 8.7 – Distribution of jobholders by employer size, 2016

Great Britain *Percentages*

Employer size	Eligible jobholders with 3% basic pay less than 2% qualifying earnings	Eligible jobholders with 3% basic pay greater than or equal to 2% qualifying earnings
1 to 4	-	4.7%
5 to 49	17.9%	23.2%
50 to 249	16.2%	17.3%
250 to 4999	29.4%	30.7%
5000+	34.6%	24.0%

Source: DWP estimates derived from the ONS ASHE, GB, 2016.

Note: Numbers supressed where ASHE sample size is small (less than 20).

Table 8.8 – Distribution of jobholders by region, 2016

Great Britain *Percentages*

Region	Eligible jobholders with 3% basic pay less than 2% qualifying earnings	Eligible jobholders with 3% basic pay greater than or equal to 2% qualifying earnings
North East	4.3%	3.6%
North West	12.6%	10.5%
Yorkshire & The Humber	10.4%	8.0%
East Midlands	8.8%	7.5%
West Midlands	9.5%	9.0%
South West	7.0%	8.7%
East	9.3%	9.5%
London	13.9%	16.5%
South East	11.4%	15.0%
Wales	5.1%	3.8%
Scotland	7.9%	8.0%

Source: DWP estimates derived from the ONS ASHE, GB, 2016.

Table 8.9 – Distribution of jobholders by industry, 2016

Great Britain *Percentages*

Industry	Eligible jobholders with 3% basic pay less than 2% qualifying earnings	Eligible jobholders with 3% basic pay greater than or equal to 2% qualifying earnings
Agriculture & Fishing	-	0.7%
Energy & Water	2.4%	1.9%
Manufacturing	15.1%	13.1%
Construction	10.4%	4.8%
Distribution, Hotels & Restaurants	29.1%	25.3%
Transport & Communication	18.5%	10.6%
Banking Finance & Insurance	15.0%	23.5%
Public Admin, Education & Health	7.1%	15.8%
Other Services	1.5%	4.4%

Source: DWP estimates derived from the ONS ASHE, GB, 2016.

Note: Numbers supressed where ASHE sample size is small (less than 20).

Table 8.10 – Distribution of jobholders by occupation, 2016

Great Britain *Percentages*

Occupation	**Eligible jobholders with 3% basic pay less than 2% qualifying earnings**	**Eligible jobholders with 3% basic pay greater than or equal to 2% qualifying earnings**
Managers & senior officials	5.3%	12.4%
Professional occupations	3.9%	16.0%
Associate professional & technical occupations	12.9%	14.1%
Administrative & secretarial occupations	3.6%	11.0%
Skilled trades occupations	11.3%	10.3%
Personal service occupations	7.4%	7.5%
Sales & customer service occupations	17.1%	9.8%
Process, plant & machine operatives	22.8%	7.6%
Elementary occupation	15.7%	11.3%

Source: DWP estimates derived from the ONS ASHE, GB, 2016.

Table 8.11 – Distribution of jobholders by working pattern, 2016

Great Britain *Percentages*

Working pattern	**Eligible jobholders with 3% basic pay less than 2% qualifying earnings**	**Eligible jobholders with 3% basic pay greater than or equal to 2% qualifying earnings**
Full-time	68.1%	78.1%
Part-time	31.9%	21.9%

Source: DWP estimates derived from the ONS ASHE, GB, 2016.

9 Annexes – Methodology

9.1 Annex 1 – Workplace Pension Statistics

Eligible employee: To define an eligible employee the data is restricted to capture employees who meet the automatic enrolment age and earnings criteria (see technical notes) each year, including employees already a member of a workplace pension scheme.

Staged implementation: The automatic enrolment duties are being staged in between October 2012 and February 2018 by employer size, starting with the largest employers based on PAYE scheme size, in October 2012, to the smallest in 2017. New PAYE schemes from April 2012 will be staged in last, in 2017 and 2018.

Phasing: The Government has set a minimum amount of money that has to be put into the pension by an employer and in total (i.e. employer and worker's contribution) which is increasing gradually over a number of years. Until 5th April 2018 the total minimum contribution will remain two per cent of the worker's qualifying earnings of which the employer must contribute at least one per cent and a further 0.2 per cent will come in the form of tax relief from the Government. From 6th April 2018, the minimum contribution rises to five per cent of which the employer must contribute at least two per cent and a further 0.6 per cent in tax relief from the Government. Then from April 2019 this rises again to a total of eight per cent of which the employer must contribute at least three per cent and one per cent will come in the form of tax relief from the Government.

Data source, ONS Annual Survey of Hours and Earnings (ASHE): is published by the Office for National Statistics (ONS) and is a key source of information on workplace pensions in the UK as it collects information on all types of workplace pension: occupational pension schemes, group personal pensions and group stakeholder pensions. The survey results are used widely in order to analyse pension participation and to monitor the impacts of pension reforms.

- ASHE is based on a 1% sample of employee jobs taken from HM Revenue & Customs (HMRC) PAYE records. Information is obtained from employers and treated confidentially. ASHE does not cover the self-employed nor does it cover employees not paid during the reference period.

- The 2016 ASHE data was collected with reference to April 2016.

- ASHE collects information on employee membership of the current employer's workplace pension scheme. This does not include preserved rights in any former employer's pension scheme or pensions paid by former employers.

- ASHE collects information from employers on employee jobs, although they are referred to in this Official Statistic as 'employees'.

For further information on ASHE please see the Background notes section on the ONS website.

Data source, DWP Family Resources Survey (FRS): is published by the Department for Work and Pensions (DWP), and is a survey which collects information on the income and circumstances of individuals living in a representative sample of private households in the United Kingdom. The primary objective of the FRS is to provide DWP with information to inform the development, monitoring and evaluation of social welfare policy. Detailed information is collected on respondents' income from all sources including benefits, tax credits and pensions; housing tenure; caring needs and responsibilities; disability; expenditure on housing; education; childcare; family circumstances; child maintenance.

- As the latest FRS data was collected throughout the 2015/16 financial year and is not collected with reference to a specific time period like the ASHE data, therefore the two sources are not directly comparable. In addition any potential impact of automatic enrolment may be lessened in FRS findings because fewer employees will have been automatically enrolled due to the staged implementation approach.

- The FRS does not collect information on whether individuals work in the Public or Private sectors, therefore breakdowns by sector cannot be provided.

- The impairment types used to define disability status have been changed in the 2012/13 survey to reflect new harmonised standards and therefore caution is needed where making comparisons over time.

- In October 2015, following further quality assurance of the methodology, a correction has been made to our analysis of the FRS data which impacts on the trends for 2009/10 onwards.

For further information on FRS please see the latest published report:

https://www.gov.uk/government/statistics/family-resources-survey-financial-year-201516

The data behind each of the charts can be found here.

- The analysis includes members of all workplace pension schemes: occupational pension schemes, group personal pensions (GPPs) and group stakeholder pensions (GSHPs).

- All analysis is based on eligible employees, and uprated using ONS Average Weekly Earnings (AWE) values. Gross annual earnings are derived using weekly pay, and no filter has been included for loss of pay in the pay period. The ONS Average Weekly Earnings Statistics, EARN01 (KAC3) series is used.

- Previous years' data have been adjusted to account for the annual revisions to the earnings thresholds used to determine automatic enrolment eligibility. The £10,000 threshold (in 2015/16 earning terms) has been applied in 2016. The £10,000 threshold (in 2014/15 earning terms) has been applied in 2015. The £9,440 threshold (in 2013/14 earning terms) has been applied in 2014. The £8,105 threshold (in 2012/13 earning terms) has been applied in 2013 and deflated by AWE from 2012 to 2006.

- State Pension age (SPA) began to increase from 2011. The age tables take account of this change and therefore SPA varies after 2011, these changes have also been applied when selecting employees between 22 and SPA. See this link for more information.

- Data up to 2008 is based on Standard Industrial Classification (SIC) 2003. From 2008 onwards, SIC 2007 is used, creating a slight break in the series. Therefore, care should be taken when interpreting the full time series.

- Data up to 2011 is based on Standard Occupational Classification (SOC) 2000. From 2011 onwards, SOC 2010 is used, creating a slight break in the series. Therefore, care should be taken when interpreting the full time series.

Rounding has been applied and numbers suppressed where the sample size is small.

9.2 Annex 2 – Undersaving analysis

This annex describes the methodology used to estimate the number of people facing inadequate retirement incomes (or 'undersavers'). It includes the main assumptions used, the methodological choices, and a brief description of the modelling tools.

9.2.1 Undersaving methodology

The analysis used in this review assessed the adequacy of retirement incomes by modelling replacement rates for simulated individuals. This allows the assessment of policy changes that will have impacts several decades in the future.

Replacement rates measure income in retirement as a percentage of income in work.

In the approach used, pre-retirement income is calculated as the average earnings from age 50 until State Pension Age (SPA) over the period they are employed or self-employed. Key points about the definition are:

- Income is put in constant earnings terms before averaging over 50-SPA
- Income is gross of tax, and of pension contributions
- Only income from earnings (including self-employment) is included – income from benefits, tax credits, and pensions received before SPA are excluded. The methodology is effectively looking at whether pension income will replace earnings
- Only years with positive earnings are included in the calculation of pre-retirement income. So someone who stops work at 55 will have the same average pre-retirement income as someone earning the same amount who continues to work up to SPA

- Individuals who have no earnings between 50 and SPA are excluded from the analysis
- Individuals whose average 50 to SPA income is below Guarantee Credit level are also excluded from the analysis – these individuals see their in-work income replaced by Pension Credit.

Retirement income is the income from State Pension age onwards averaged over the whole of retirement. Key points include:

- Income is in constant price terms before averaging over whole of retirement
- Income is gross of tax
- Income includes state and private pension income
- Income from means tested benefits such as Pension Credit and disability benefits is excluded
- While financial wealth is not modelled directly, an amount is imputed and then annuitised based on Wealth and Assets Survey data
- Only retirement income received after SPA is considered for the analysis
- For couples average pre-retirement income is calculated separately for both members, summed, then equivalised (see Box 9.1)
- Their retirement income is equivalised on a year-by-year basis, and then averaged across retirement for the members of the couple separately. This means that the members of a couple can have different replacement rates as they have different lengths of retirement.

Each individual's replacement rate is then compared to a benchmark to determine whether it is adequate. The benchmark from the 2004 Pensions Commission report is used, with the income thresholds which they apply adjusted for earnings growth (as outlined in section 4.4). The Pensions Commission benchmark was based on pre- and post-retirement income patterns, together with survey evidence of people's expected and desired retirement income.

Box 9.1 – Income equivalisation

Income equivalisation

When two adults live together in a couple, they usually benefit from economies of scale in their normal living costs. For example, it is expected that two adults will pay a rent or mortgage that is less than twice as much what each of them would pay if living separately. The same applies to other normal living costs (transport, utilities, etc).

Income equivalisation is a technique that recognises these economies of scale, and adjusts a couple's income accordingly. For example, in the analysis without housing costs, each individual in a couple is assigned an income equal to 67 per cent of the whole couple's income. When housing costs are subtracted, each individual in a couple is assigned an income equal to 58 per cent of the whole couple's income.

In both cases, the total income assigned to the couple exceeds 100 per cent of the actual nominal income, reflecting the fact that when in a couple, each pound 'goes further' due to economies of scale.

9.2.2 The modelling

The undersaving analysis used in this publication uses a model called Pensim2.

Pensim2 is a dynamic micro-simulation model based on a sample of synthetic individuals, reflecting the characteristics of the British population. It produces results which describe the population as a whole or subgroups, including overall numbers facing inadequate incomes.

A key issue is that this model does not reflect behavioural impacts of policy changes; for example, it does not reflect the possibility that increased pension income could lead to someone leaving the labour market earlier than would otherwise have been the case. It lacks certain 'second order' effects. For example, an increase in employer pension contributions as a result of automatic enrolment would be expected to have an impact on wages and hence earnings growth across the economy, but these are not captured within the model.

It is also limited in the interactions between different forms of saving that are modelled; for example, labour market and savings behaviour of couples is not interrelated, and the model does not reflect interaction between home ownership, pension saving and other financial saving.

Pensim2 starts from a set of base data representative of the GB household population in 2011/12. This includes detailed information on the characteristics of individuals and their employment and pension histories to date. For each subsequent year, for each individual, sets of equations are used to model the probability of certain events occurring based on estimates from current data. The calculated

probabilities are then used within the model to determine what happens to each individual in a given year up to 2100/01.

The individual labour market and pension histories generated by the model are used to calculate estimates of pensioner incomes in each year of the simulation.

Alignment processes are in place to ensure that the outcomes of particular parts of the simulation are consistent with those suggested by other sources. For example, ensuring that the number of individuals who die in the simulation in any given year is consistent with the number estimated by ONS in their population projections. Pensim2 uses external alignment for a number of variables in the simulation, including mortality and fertility rates, the employment rate, and growth in average earnings.

Within Pensim2 analysis, an adjustment is made to reflect the different costs faced by owner occupiers and renters. In 2015/16 around 23% of UK households containing at least one person over State Pension age was rented.[155]

The Pensim2 model estimates the individual's (or couple's) tenure type and their income level. Using information from the Family Resources Survey for the same income band and tenure type, housing costs net of housing benefits are deducted from income in working life and retirement.

The Pensions Commission benchmarks replacement rates are adjusted to reflect the impact of different housing costs between working life and retirement. Using the Family Resources Survey (FRS), for each earnings band average housing costs (net of housing benefits) are deducted during working life and retirement and the replacement rate is adjusted accordingly in order to obtain an 'after housing costs' set of target replacement rates, which are used for the aggregate analysis.

Effectively, this means that those who rent during retirement will be required to reach a higher replacement rate than someone with equivalent income who is an owner occupier, as the renter will need to meet higher housing costs.

9.2.3 Key assumptions

The analysis is shaped by methodological choices and the capacity of the modelling tools. This section presents key assumptions.

Assumptions about **inflation**, **earnings growth** and the **labour market** are consistent with assumptions from the Office for Budget Responsibility 2017 Fiscal Sustainability Report.

It is assumed that the proportion of pensioners with **DB pension** declines as private sector DB schemes closed to new entrants from 2018. The modelling assumes all

[155] Family Resources Survey 2015/16: https://www.gov.uk/government/statistics/family-resources-survey-financial-year-201516

private sector workers who join an occupational pension scheme go into DC type schemes from 2018.

In **DC schemes**, it is assumed that 15 per cent of those automatically enrolled who remain in their job until the end of the financial year will no longer be contributing to a pension at the end of the financial year. This assumption aims to capture those choosing to opt out and those choosing to cease saving for reasons other than leaving their job or dying. For the latest evidence on opt-out and cessation see section 2.2. Analysis presented in the 2014 publication 'Scenario analysis of future pension incomes'[156] suggests that the proportion of people undersaving is relatively insensitive to changes in this assumption. They reported that an increase from 15 per cent to 40 per cent would increase undersaving by one percentage point.

For DC pension schemes the **contribution rates** are decided on a probability distribution. The employer contribution rate ranges between 3 and 15 per cent. The employer contribution rate then feeds into deciding the employee contribution rate, which range between 5 and 10 per cent. Higher employee contributions tend to be correlated with higher employer contributions.

Annual management **charges** are derived from a probability distribution. For workplace schemes these are capped at 0.75 per cent. For the latest evidence on pension charges see section 2.5.

It is assumed that 94 per cent of **annuities** purchased are flat rate, the remaining 6 per cent are linked to the RPI. It is assumed 36 per cent of married or cohabiting individuals buy a joint annuity. The annuity rate an individual receives depends on the type of annuity they purchase, their sex, their age and the year the annuity is taken. It is assumed that as life expectancy increases, annuity rates decrease.

For the bulk of the analysis undertaken in the review DC schemes have an assumed range of investment **fund growth** from RPI + 2.2 per cent to RPI + 3.5 per cent. However, we did a test of the sensitivity of our undersaving estimates to our fund growth assumptions by reducing them by 0.7 percentage points. That led to an increase in our estimate of the numbers undersaving from 12.0m to 12.5m (from 38% to 40% of the working age population).

We have assumed that legislated increases in **State Pension** age take place and that State Pension continues to be uprated using the triple-lock of the higher of earnings, CPI and 2.5%. 'Scenario analysis of future pension incomes' modelled the impact of earnings uprating state pension and estimated that it would increase undersavers by around 1.8m.

[156] https://www.gov.uk/government/publications/scenario-analysis-of-future-pension-incomes

9.3 Annex 3 – Contributions analysis

Data source, ONS Annual Survey of Hours and Earnings (ASHE) is published by the Office for National Statistics (ONS) and is a key source of information on workplace pensions in the UK as it collects information on all types of workplace pension: occupational pension schemes, group personal pensions and group stakeholder pensions. The survey results are used widely in order to analyse pension participation and to monitor the impacts of pension reforms.

- ASHE is based on a one per cent sample of employee jobs taken from HM Revenue & Customs (HMRC) PAYE records. Information is obtained from employers and treated confidentially. ASHE does not cover the self-employed nor does it cover employees not paid during the reference period.

- The 2016 ASHE data was collected with reference to April 2016.

- ASHE collects information on employee membership of the current employer's workplace pension scheme. This does not include preserved rights in any former employer's pension scheme or pensions paid by former employers.

- ASHE collects information from employers on employee jobs, although they are referred to as 'employees.'

- Employees with no workplace pension are excluded from the analysis of contribution rates. Employees that have experienced a loss of pay in the survey reference period have also been excluded. Employees that have a workplace pension but make no contribution are included along with employees whose employer makes no contribution.

- In ASHE, contributions include one-off fixed amount payments from either the employee or employer. ASHE excludes additional voluntary contributions (AVC's) made by employees, and employer contributions which cover more than one employee, for example, deficit reduction payments to a scheme. We have therefore used median values to display average contributions as large AVCs are less likely to affect median values when compared to mean values.

- Methodology and quality information: Information is available from the Annual Survey of Hours and Earnings Guidance and Methodology section of the ONS website.

- Figures for the private sector include employees working for organisations classified as non-profit bodies.

- Contributions include employee contributions and employer contributions as collected in ASHE. Any separate contributions made through tax relief are therefore not included.

Data source, ONS Average Weekly Earnings Statistics: are a series published by ONS were used to deflate the earnings threshold for automatic enrolment prior to

2013 and also uprate annual earnings used in earnings band analysis to 2016 prices. The EARN01 (KAC3) series was used.

9.4 Annex 4 – Adequacy analysis

The majority of the literature review was conducted between June and August 2017, with content from newly published reports added from August onwards. A full and exhaustive search was not conducted at this stage. The following approach was taken:

- Review of key documents on the measurement of retirement resources in the UK – evidence from DWP publications (e.g. scenario analysis of future pensioner incomes), Pensions Commission reports and reports from research and policy institutions;
- Online search of databases (e.g. ECONLIT; Google Scholar; JSTOR) using a range of search terms and combinations (e.g. pension adequacy; retirement wealth; replacement rates; retirement adequacy; retirement outcomes);
- Checking references in documents found;
- International evidence was included in the review where relevant (e.g. the measurement of retirement outcomes in Australia).

The review is therefore not systematic or exhaustive and may not entirely present an accurate reflection of the full literature on adequacy of retirement outcomes and its measurement.

9.5 Annex 5 – Thresholds analysis

9.5.1 Modelling volumes and contributions

DWP models the additional savers and contributions as a result of automatic enrolment, and changes to automatic enrolment policies, using two distinct models. The first models volumes of savers in the eligible target group under different threshold criteria. It draws on data on numbers of staged employers from the Pensions Regulator, data on earnings from the Annual Survey of Hours and Earnings, and data on pension savings from the Employers' Pension Provision Survey. It estimates the number of employees in staged businesses who are eligible for automatic enrolment and in the 'target' group i.e. not saving or not saving the minimum.

The second model estimates the contributions associated with the above volumes estimate. It estimates additional employee contributions, employer contributions, and tax relief costs to the exchequer.

To calculate employee and employer contributions, the model uses ASHE to estimate the average 'qualifying earnings' (earnings between the lower and upper

earnings limit) on which contributions are paid, and applies the minimum AE contribution rates in 2020/21 to those estimates.

To calculate income tax relief on the employee contribution we use ASHE again to estimate the average marginal tax rate of people expected to be newly saving or saving more under AE and apply that to the pension contributions. We assume that all employees are members of schemes that use Net Pay Arrangements i.e. pension contributions are deducted before tax. In practice some schemes use Relief At Source in which all employees are automatically credited with an additional payment (equivalent to basic rate income tax relief) directly into their pension.

When initially developed, this methodology assumed that individuals only paid pension contributions on their earnings above the lower earnings limit. However, evidence from ASHE in April 2016 suggests that as many as 70 per cent of eligible employees with workplace pensions may be making contributions on their full band of earnings (although, due to staging, this mainly relates to large and medium employers as many small and micro employers were yet to stage at the time of the survey).

On this basis, the contribution estimates were adjusted to account for those who are already saving from their first pound of earnings. For employees working in firms with 50+ employees (who had already completed staging by April 2016), it is assumed that around 70 per cent of them are already saving from their first pound, and we adjust estimates of the additional contributions due to AE and due to the package on this basis. For employees working in firms with fewer than 50 employees, who had not completed staging in April 2016, it is assumed that they all save from the LEL.

Note that this estimate is based solely on those eligible to be automatically enrolled. Data from ASHE 2016 suggest that some employers are enrolling ineligible employees, and that some ineligible employees opt into their employers' pension schemes. As this group is not included in this estimate, it implies that the costings may underestimate the total impact of reforms.

9.5.2 Opt-out

The volumes and costing methodology depends upon the underlying assumptions about future opt-out rates for automatic enrolment. This poses two challenges: firstly, surveys which have asked individuals hypothetically how they would react to changes and features of automatic enrolment have tended to over-estimate actual opt-out (see for example DWP (2010)[157]).

Secondly, scheduled changes to the delivery of automatic enrolment mean that historic data on opt-out will not necessarily be good predictors of what is likely to happen to the future rate. The scheduled completion of staging in March 2018 means that the group of individuals being newly automatically enrolled will change from

[157] DWP (2010), Bourne T, Shaw A, and Butt S, 2010, *Individuals' attitudes and likely reactions to the workplace pension reforms 2009: Report of a quantitative survey*. DWP Research Report No 669.

employees working for employers who have reached their planned staging dates, to instead be individuals who have entered the labour market for the first time (or had a change of circumstances), or have changed jobs. These groups may differ in terms of labour market histories and characteristics; therefore it is unclear whether data on opt-out for the earlier stages of automatic enrolment will be a good predictor of the future rate.

Similarly, the completion of phasing means that individuals being automatically enrolled in the future will initially face different contribution rates than those enrolled at earlier stages (who will see an increase as phasing takes place). It is uncertain whether there will be an increase or decrease in the opt-out rate following phasing, as both individual and employer contribution rates will increase. Therefore, and similar to above, it is not clear whether previous data on opt-out will be a good indication of what may happen during and post-phasing.

In the absence of better evidence, we make conservative assumptions on the level of opt-out rates, consistent with those used in previous modelling. These assume ten per cent opt-out up until March 2018, 21.77 per cent opt-out up from April 2018 to March 2019, and 27 per cent opt-out rate from then on. We intend to monitor and update these assumptions as more evidence becomes available.

9.5.3 Cessation

The volumes and cost estimates similarly depend on our cessation assumptions. In view of the uncertainty about future cessation rates (for similar reasons as stated above), and the unavailability of reliable data on cessation, the central simplifying assumption we make in our methodology is that when staging is complete there is a steady state in which the outflow of individuals ceasing to save is matched by those being automatically enrolled into workplace pensions. Again, we will monitor and update these assumptions as more evidence becomes available.

9.6 Annex 6 – Case studies methodology

9.6.1 iPEN

iPEN is a model developed by the DWP that estimates the retirement income for hypothetical individuals or couples. It allows the user to assign a work history to each individual and calculates State Pension, state income-related benefits and income received as a result of saving in a private pension. The size of the private pension fund at retirement is estimated using the contributions paid by an individual and their employer along with an assumed investment return. The fund is then converted into an income stream using estimated annuity rates at retirement[158].

[158] Annuity purchase is used to indicate the income stream that could result from the private pension fund. However, individuals may choose other retirement options such as income draw-down from the fund.

A user can then amend the work profile to model different types of individual based on earnings, whether the employment is part-time or full-time, time spent in and out of work and any State Pension credits that may be received.

9.6.2 Key assumptions

The main assumptions used in iPEN applicable to this report are as follows:

- Each individual saves into a defined contribution scheme with an annual management charge of 0.3 per cent and a contribution charge of 1.8 per cent
- Each individual contributes 5 per cent and their employer contributes 3 per cent
- Each individual's fund is invested in 60 per cent equities and 40 per cent bonds with real fund growth of 4.75 per cent and 1.55 per cent respectively
- Each individual retires at State Pension age of 68
- The automatic enrolment earnings trigger, lower earnings limit and upper earnings limit increase in line with earnings over the long-term
- Each individual purchases a level annuity with internal rate of return of 4.41 per cent
- Each individual does not opt-out of pension saving
- State Pension is uprated by the triple-lock; the greater of earnings, CPI or 2.5 per cent
- From age 25 each individuals' earnings increase in-line with average earnings growth. For the minimum wage examples their pay between 16 and 25 matches the relevant National Minimum / Living Wage amount.
- Each individual works 37 hours per week unless otherwise specified (see below)

9.6.3 Methodology

There are eight case studies used in this report: four career histories for each of two earnings levels.

The earnings levels are:

- Median earnings uprated each year by average earnings growth
- National Minimum Wage / National Living Wage depending upon their age

The career histories are:

- Full working history: saving from age 22 to State Pension age
- 10 year career break: saving from age 22 to SPA except for a 10 year gap in employment from age 30
- 5 year career break: saving from age 22 to SPA except a 5 year gap in employment from age 30
- Part time due to childcare: saving from age 22 to SPA except for an inactive year at age 30 then works part-time (18.5 hours per week) for the following 16 years before returning to full time employment

To estimate the effect of a change to the lower age limit for automatic enrolment we have changed the career histories so that each individual begins saving from 18 rather than 22.

9.7 Annex 7 – Transition analysis

9.7.1 Lifetime Labour Market Database (L2) data

The DWP L2 database is based on a one per cent extract of the National Insurance & PAYE System (NPS) and various extracts from Department for Work & Pensions (DWP) benefit systems. The NPS holds records for anyone who has ever had a National Insurance Number (NINO), including both resident and non-resident people. These data are used to create the L2 UK Population file.

The L2 UK Population file is a dataset that is derived within DWP that collates information on individual activities within each tax year to enable a judgement to be made about whether a person is resident (i.e. has some L2 activity) in the UK in that year. It is necessary to assess the activity information to address the over-coverage issues that are present due to the inclusion of non-resident records.

The derived L2 UK Population file holds a record for any individual who is on the latest NPS extract and who is alive after 05 April 1978. It assesses their activities and interactions with these source systems within each tax year up to and including 2015/16 to provide a measure of the resident population in each year.

Data variables are created for each tax year and record the number of weeks of particular activities that can be observed from the NPS system or DWP benefit systems. Tax years with no observable activity still have a tax year row created, and may or may not appear as resident years depending on whether the person has met various residency rules based on the person's whole NPS/Benefit record.

9.7.2 Methodology

General

These are provisional estimates derived using the *main activity* variable. This variable sets the main activity based on the activity that accounted for the most time in the year. A hierarchy is applied if there are 2 or more activities with the same duration. Some cases are kept resident by the use of 'rules' when there is no recorded activity. These cases have main activity set depending on the rule that kept them resident.

For each individual the data is restricted to tax years up to and including the Final Relevant Year (FRY) where the FRY is the last full tax year prior to the tax year of death or State Pension Age.

Generations, where referred to, were defined to be:

- Gen Z (or iGen, or Centennials): Born 1996 and later.

- Millennials: Born 1977 to 1995.
- Generation X: Born 1965 to 1976.
- Baby Boomers: Born 1946 to 1964.
- Silent Generation: Born 1945 and before.

Time to self-employment analysis

The data is restricted to individuals with at least one tax year where self-employment denoted by main activity.

The analysis only includes those who appeared in the data from 1979/80. This is because it would not be possible to calculate when someone denoted self-employed in 1978/79 became self-employed, as the L2 data does not hold pre-1978/79 information.

The time to self-employment was calculated as the number of tax years between the first tax year and the first tax year where self-employment was the main activity. If the first self-employed tax year was the first tax year then the value assigned was one.

The median age was calculated from those individuals whose first self-employed tax year was observed after 1978/79.

Time in self-employment analysis

The data is restricted to individuals with at least one tax year where self-employment denoted by main activity.

The analysis only includes individuals with over 10 tax year records in the data. In order to remove distortions caused by individuals with a small number of observations.

The proportion of time, i.e. tax years, in self-employment was calculated for each individual from the total number of self-employed years divided by the total number of tax years.

Time in employment analysis

The data is restricted to individuals with at least one tax year where self-employment denoted by main activity.

The analysis only includes individuals with over 10 tax year records in the data. In order to remove distortions caused by individuals with a small number of observations.

Employed years defined as any tax year with main activity as employment.

The proportion of time, i.e. tax years, in employment was calculated for each individual from the total number of employed years divided by the total number of years.

Labour market transitions analysis

The data is restricted to individuals who appear in the data between the tax years 1979/80 and 2006/07. This is because 1978/79 will not in fact be Year 1 for many individuals and the 2006/07 restriction allows for observation of at least 10 tax years for younger individuals.

Year 1 represents the first tax year an individual appeared in the data. Year 2 is the second tax year consecutive to Year 1, etc. Year 1 can, by definition, represent a different tax year for different individuals in the dataset.

For each individual their main activity for the tax year was recoded into the following categories:

- Employed;
- Self-employed;
- Benefits;
- Other.

The categories Employed, Self-employed, and Benefits are all values held in the main activity variable. The category Other is a catch all for the remaining values held in the main activity variable.

9.8 Annex 8 – RTI analysis

9.8.1 Her Majesty's Revenue and Customs (HMRC) RTI Data

RTI is HMRC's reporting system for income taxed via Pay As You Earn (PAYE). Employers and pension providers are required to report to HMRC all payments to employees (or recipients of occupational pensions) on or before each payment date.

RTI includes information about the employer, the employee (or occupational pension recipient), and the payment.

However:

- If all employees of one employer are paid less than the Lower Earnings Limit (LEL) (£112 a week in 16/17, rounded to £485 per month for this analysis) a PAYE scheme is not needed, and the employer is not required to submit RTI. However, if any single employee earns more than this, the employer is required to report RTI for all employees. Please see https://www.gov.uk/paye-for-employers for further details.

- 'Digitally exempt' employers do not need to submit RTI. This may be due to religious beliefs, lack of access to an internet connection, or for other reasons. Please see https://www.gov.uk/guidance/find-out-which-employers-are-exempt-from-online-payroll-reporting for further details.

RTI **does not include** information about Self-Employment and pensions which are not associated with an employer (e.g. State Pension and pensions which an individual has arranged themselves).

9.8.2 Methodology

The aim of the analysis was to identify the numbers of individuals with more than one job (multiple job holders – MJHs), and assess the extent of any restricted access to automatic enrolment (AE) as a result of the £10,000 earnings trigger.

Employees who work in one or more jobs but who do not earn more than £10k annually in any single employment are not eligible for AE, even if they earn more than £10k annually across all their employments. This apparent disadvantage may be somewhat mitigated by the fact that anyone earning more than the Lower Earnings Limit (LEL) (£112 per week in 16/17) in any job can make voluntary pension contributions (and their employer is required to make employer contributions). This is called **'opting in' or 'opt in' with employer contributions.**

First, the number of MJHs and their taxable pay for each employment was estimated. Second, the volumes of MJHs likely to be eligible for AE, and those able to opt in with employer contributions, were calculated, by estimating earnings for each employment.

Identifying multiple job holders (MJH)

MJHs were identified by individuals' National Insurance Number (NINO) records in RTI showing payments from **two or more different employments** in the tax month (tax months run from 6th of the calendar month to the 5th of the following calendar month).

Being paid by two or more employers in a single month may not always be associated with having more than one job. For example, someone may change jobs, and be paid for both the old and the new job in the same month. To account for this, the first month for any employment was not included. This means, to be classified as an MJH, the individual must have been paid at least one other time for each employment prior to the tax month being analysed. As a result, employments that were paid in just one tax month were excluded. Most of the analysis focused on the March 2017 tax month and so the employments must have been paid in the February 2017 tax month or earlier.

Calculating earnings

The 'monthly earnings' were calculated for each employment, for each MJH. For example, if an individual was paid monthly, for two employments, two payments would have been observed in the analysed tax month. The corresponding earnings since the previous payment were recorded for each employment separately, and added together to estimate total monthly earnings. For individuals paid weekly, each weeks payments were added together to estimate earnings since the last tax month with a payment for each employment, and so on. In some cases, the amount of time since the previous payment was more than one month therefore 'monthly earnings'

maybe overestimated in a few cases. For 93 per cent of employments in the March 2017 tax month, there were 35 days or less between payments and this corresponds to being paid on the last Friday of the calendar month.

Employments which had monthly earnings less than or equal to £10 were removed from the analysis. This was to deal with employments associated with little or no monthly earnings, e.g. due to unpaid leave or submissions after an employment has ended. This may have had the effect of underestimating the total volume of MJH where these small payments were legitimate.

The main tax month of focus was March 2017 (from 6th March 2017 to 5th April 2017). If the tax month March 2017 was not typical for individuals (e.g. due to fluctuating working patterns or payment of bonuses), the amount of monthly earnings may have been either under- or over-estimated. In addition, the method used to calculate eligibility differs slightly from that used by employers.

To assess whether an individual was likely to be eligible for AE, their monthly earnings for any employment were compared against the AE criteria (see below). The comparison was also made for their total monthly earnings from all their employments to determine whether they were disadvantaged compared to someone with a single employment earning the same amount.

The criteria were as follows:

- For an individual to be eligible for AE, monthly earnings of equal to or greater than £833 in at least one job were required (as this approximates to the earnings trigger of £10K in 16/17 over 12 months)
- For an individual to be eligible to opt in with employer contributions, monthly earnings equal to or greater than £485 (as this approximates to the LEL of £5,824 in 16/17), but less than £833 in at least one job were needed.

The monthly earnings criteria and the LEL/AE triggers created six possible categories for individuals to fall into:

A. Total monthly earnings of less than £485. Ineligible for AE and not entitled to employer contributions if they chose to opt in. This also applied to single jobholders with monthly earnings of less than £485. (Person A in the main report).

B. Total monthly earnings of more than or equal to £485 but less than £833 AND monthly earnings in each employment of less than £485. Ineligible for AE and not entitled to employer contributions if they chose to opt in. However, if they were a single jobholder with monthly earnings of greater than or equal to £485, they would be eligible to opt in with employer contributions (Person B in the main report).

C. Total monthly earnings of less than £833 but at least one employment with monthly earnings of more than or equal to £485, therefore they would be able to opt in with employer contributions in at least one job (Person C in the main report).

D. Total monthly earnings of more than or equal to £833. No monthly earnings from any employment of more than or equal to £833 and at least one

employment with monthly earnings of more than or equal to £485. Therefore, they were not eligible for AE but would be if they were a single jobholder with equivalent total monthly earnings. They could still opt in with entitlement to employer contributions in at least one of their jobs (Person D in the main report).

E. Total monthly earnings of more than or equal to £833, with monthly earnings from at least one job of more than or equal to £833 AND monthly earnings from at least one employment of less than £833. Therefore the individual was eligible for AE in at least one employment and able to opt in with employer contributions in other employments if the monthly earnings value was more than or equal to £485 (Person E in the main report).

F. Total monthly earnings of more than or equal to £833 AND monthly earnings from each employment of more than or equal to £833. Therefore this person was eligible for AE in each of their jobs (Person F in the main report).

9.8.3 Key assumptions and caveats

The main assumptions used in this analysis were as follows:

- The volumes of MJHs and other figures estimated using HMRC's RTI data may differ from other estimates (e.g. survey and sampled data) because of differences in counting methodologies etc.
- Months referred to tax months, e.g. the tax month of March 2017 was 6th March to 5th April 2017.
- The terms 'employment' and 'job' are used interchangeably: 'employment' has a formal definition in HMRC and 'job' is the lay term for the same concept.
- To be considered a MJH, the individual's RTI record in a tax month needed to show payments from more than one employment, plus at least one other payment from each employment (in a tax month that was prior to the month being analysed).
- Pensions payments were excluded from the analysis. These were identified using a pensions flag developed by HMRC, and which may not always distinguish between pensions and pay from employment accurately.
- The first tax month with a payment from an employment was excluded to account for individuals changing jobs within the same month. Some genuine MJHs may have been excluded as a result.
- Where a MJH had the first payment for an employment in March 2017, this employment would not have been counted towards the total number of employments because of the caveat above.
- Temporary identification numbers are used in place of National Insurance Numbers (NINO) by HMRC systems when the NINO is not known or the individual has not been allocated one. HMRC attempts to match records for individuals to ensure that information for each person is complete. However, in some cases, individuals are not matched to all their information, or two individuals' data is merged as one.
- Some information submitted by employers for RTI is Late, Missing, or Incorrect. Central HMRC systems may also contain inaccuracies.
- The gender and date of birth used were those held on central HMRC systems. They may have differed from those submitted by the employer.

- There were a small number of cases where the gender and/or date of birth were not known. These were excluded from the corresponding analysis.
- Age was calculated at the last payment date in the tax month.
- 'Monthly earnings' were calculated based on taxable pay in each tax month, and were an estimate of the individuals' likely eligibility for AE and ability to opt in with entitlement to employer contributions.
- Taxable pay can differ from gross pay for various reasons, including the type of pension contributions and salary sacrifice (an agreement to reduce an employee's entitlement to cash pay, usually in return for a non-cash benefit).
- The value of £485 was used for the monthly values of the LEL for the 2016/17 tax year. When dividing the annual LEL figure for 2016/17 by 12 to get monthly figures, it rounded to £485, rather than £486, the value used by HMRC and DWP.
- The number of MJHs paying pension contributions was identified using employee contributions only, as employer contributions are not submitted via RTI.
- There may be some cases where individuals were categorised as non-contributing if their employer paid the entire pension contribution and the individual paid none.
- An individual was categorised as paying pension contributions if they did so in any of their employments. There was no differentiation between those who paid in all employments or just some.
- Employments relating to company directors, as defined via data item 84A in the RTI data items guide (https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/602734/RTI_Data_Item_Guide_17-18_v1-3.pdf), were removed from the analysis.
- If an individual had one employment as a company director and another as a non-director, they were not identified as a MJH. If they had one employment as a director and more than one employment as a non-director, they were identified as a MJH.
- The MJH figures in this report differ from that previously published by DWP (https://www.gov.uk/government/statistics/workplace-pensions-update-of-analysis-on-automatic-enrolment#history), which is based on ASHE data, due to different methodologies used. The aim of this analysis was not to produce a definitive estimate of the numbers of MJHs (although the estimate was considered robust), but to assess the extent of disadvantage for MJHs with respect to AE.

9.9 Annex 9 – Engagement life-course map

The 'Automatic Enrolment: Life Journeys' map (Figure 7.1) aims to visualise evidence from a PPI review of consumer engagement through the life-course, alongside key DWP evidence sources, to show 'typical' journeys and transitions within the context and design of automatic enrolment.

Please note, while the PPI review and DWP evidence sources used to inform the map provide key relevant insights, they are by no means exhaustive evidence sources. It is likely that further existing and future research may provide additional details and insights regarding the nature and diversity of lifetime journeys and transitions, as they relate to automatic enrolment and pension saving more generally.

9.10 Annex 10 – Statutory requirements analysis

Data source, ONS Annual Survey of Hours and Earnings (ASHE): is published by the Office for National Statistics (ONS) and is a key source of information on workplace pensions in the UK as it collects information on all types of workplace pension: occupational pension schemes, group personal pensions and group stakeholder pensions. The survey results are used widely in order to analyse pension participation and to monitor the impacts of pension reforms.

- ASHE is based on a 1 per cent sample of employee jobs taken from HM Revenue & Customs (HMRC) PAYE records. Information is obtained from employers and treated confidentially. ASHE does not cover the self-employed nor does it cover employees not paid during the reference period.

- The 2016 ASHE data was collected with reference to April 2016.

- ASHE collects information on employee membership of the current employer's workplace pension scheme. This does not include preserved rights in any former employer's pension scheme or pensions paid by former employers.

- ASHE collects information from employers on employee jobs, although they are referred to in this Official Statistic as 'employees'.

For further information on ASHE please see the Background notes section on the ONS website.

The analysis defines job holders as those aged 16 or over and under 75 with qualifying earnings and assumes all were active members.

It is assumed, as required in legislation, that under certification pensionable pay must be at least equal to basic pay.

These tests have only been applied at the current contribution levels i.e. until 5th April 2018. Future reviews will test at the contribution levels which apply at that time.