

# Who leaves their pension after being automatically enrolled?

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# Executive summary

## Key findings

**Automatic enrolment has boosted workplace pension participation in the UK through two key mechanisms.** The first is increasing the number of employers that offer pensions and the second is defaulting employees into them. Both have been important in driving up pension participation, with the former being more important among smaller employers which typically prior to automatic enrolment were not offering a workplace pension.

**Automatic enrolment has substantially reduced the gaps in pension participation between different types of employees – for example, between old and young and between high and low earners.** Before automatic enrolment, only 20% of eligible 22- to 25-year-olds participated in a workplace pension, compared with 88% afterwards. For eligible 51- to 55-year-olds, the increase in pension participation has been from 55% to 93%.

**Under automatic enrolment, the pension participation rate of eligible employees who are behind on multiple bills (89% in a pension) is almost indistinguishable from that of those who are up to date with them (92%).** Before automatic enrolment, those behind on multiple bills were much less likely to save in a workplace pension (23% in a pension) than those who were up to date (49%).

**Among the eligible employees who are most financially secure, 95% are in a workplace pension, up from 72% before automatic enrolment was introduced.** It seems likely that there are very few among this group who are leaving their pension scheme but who would be better off remaining in it. Much of the increase in overall pension participation under automatic enrolment comes amongst people who are relatively financially secure.

**Pension participation amongst the least financially secure 3% of the eligible workforce is still 90%, up from just 22% before automatic enrolment.** It is likely that there are significant numbers in this group who would be better off leaving their pension, at least temporarily, to have higher disposable income. Practically all of these employees have less than £1,500 in liquid savings, and could potentially benefit from a 'rainy day' fund.

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# 1. Introduction

Since 2012, automatic enrolment has led to a substantial boost in the number of employees saving for their retirement in a workplace pension plan in the UK. This policy, first suggested by the Pensions Commission in 2005, and legislated for in 2008, has transformed the private pensions landscape, with 10 million employees automatically enrolled by 2019. Estimates from the Department for Work and Pensions (2017) suggested that by 2019–20, an additional £17 billion per year would be saved into workplace pensions as a direct result of automatic enrolment.

Automatic enrolment obliges employers to enrol their eligible employees into a workplace pension scheme (with at least certain minimum contributions), which employees can then decide to leave if they want. The policy was gradually rolled out from the largest employers (who had to introduce it by October 2012) to the smallest employers, with all employers nationwide obliged to do so by early 2018.

Employees can leave their pension scheme into which they have been automatically enrolled at any time. Precise estimates of exactly how many people do so differ slightly depending on the source. For example, Cribb and Emmerson (2019a) analyse employer-reported data from the Office for National Statistics (the Annual Survey of Hours and Earnings) and find around 12% of eligible employees leave their pension scheme. Research from the National Employment Savings Trust (2019) finds that just over 7% of its scheme members subsequently choose to stop saving in a workplace pension.<sup>1</sup> Where automatic enrolment has been introduced elsewhere (e.g. by selected employers in the United States), research has found similar opt-out rates of around 10%.<sup>2</sup>

It is currently unclear why around 10% of affected employees are actively choosing not to save for their retirement in a workplace pension. In this report, we seek to understand what the drivers of participation (or non-participation) in a workplace pension plan are in an environment of automatic enrolment. This is particularly interesting because an alternative policy that the UK government could have introduced would have been ‘compulsory enrolment’, with minimum compulsory contributions from the employer and/or employee. Instead, automatic enrolment explicitly gives employees the opportunity not to save if they wish, which would lead to higher take-home pay, although this can come at the cost of forgoing any employer contribution.

In this context, it is therefore worth asking a second question regarding pension participation under automatic enrolment. Are the ‘right’ people leaving their pension scheme after being automatically enrolled? Are there some people who are leaving their pension scheme (and therefore neither contributing themselves nor receiving an employer contribution) who would be better off remaining in their pension scheme in order to boost their retirement resources? If so, policymakers might want to consider whether it is possible to target these people in order to encourage them to continue to

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<sup>1</sup> Note that the 7% opt-out rate calculated by NEST only includes employees who leave the workplace pension scheme that they were automatically enrolled into within the first month of enrolment. The 12% opt-out rate (Cribb and Emmerson, 2019a) additionally covers automatically enrolled employees who leave their workplace pension scheme after the first month of being enrolled and therefore would be expected to be higher.

<sup>2</sup> Madrian and Shea, 2001; Choi et al., 2004; Choukhmane, 2019.

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participate in their pension scheme, beyond the current policy of automatic re-enrolment every three years.

On the other hand, there may be people who, for a variety of reasons, may be better off not saving, at least at the moment, but who remain in a workplace pension. For example, their current financial situation might be precarious, due to high indebtedness or very low income on which to fund their daily living expenses. Leaving their pension, which would boost take-home pay, might be a good idea for many who are struggling to make ends meet, particularly if they can then return to saving if and when they are in better financial shape. If so, public policymakers and pension providers might want to consider whether changes could be made to make it easier for those in these situations to leave their workplace pensions.

In this report, using rich household survey data, we therefore aim to identify people for whom it is likely that they should currently be saving for retirement in a workplace pension, and those for whom it is more likely that they should consider leaving their scheme, at least temporarily. The extent to which pension participation is high or low amongst these groups will help to guide policymakers when they are thinking about changes that they could introduce to the automatic enrolment system to help improve outcomes both in working life and in retirement.

Section 2 of this report briefly sets out the key policy background regarding the introduction of automatic enrolment in the UK. Section 3 then describes the data – from the Family Resources Survey (FRS) – which we draw upon in this report. It sets out how we not only examine pension participation under automatic enrolment, but we also compare this participation rate with that seen among otherwise-equivalent employees in 2011 and 2012 when automatic enrolment was not yet in place. In this, we distinguish between employees who, prior to automatic enrolment, were and were not offered the opportunity to join a workplace pension scheme.

Section 4 provides descriptive analysis of pension participation under automatic enrolment, and how it compares with that for equivalent employees prior to automatic enrolment. We examine the patterns of participation by employer size, age, job tenure, earnings, and whether or not the individual reports being able to keep up with their bills.

Section 5 sets out our methodology to give an indication of whether there are many people who leave their pension scheme when they might be better off remaining, and conversely whether there are many who remain in their scheme when they might be better off not saving at that point in time. We argue that the vast majority of employees who are financially secure will want to transfer income to retirement, and therefore should be saving in a workplace pension scheme. In contrast, many (but not all) of those who have much greater financial difficulties may be better off with higher take-home pay now, even though it would likely mean lower private resources in retirement. We use the rich survey data from the FRS to categorise employees into groups based on how financially secure they are, and compare their pension participation rates, and we also show how the observed patterns differ from those seen prior to automatic enrolment being introduced.

Section 6 examines whether one reason for high rates of pension participation among those with financial difficulties is that they have strong financial incentives to save in a

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pension due to increased means-tested benefits partially offsetting any reduction in take-home pay. Section 7 investigates the extent to which members of a couple make similar decisions to each other regarding pension participation. Finally, we provide conclusions and some discussion of potential policy options in Section 8.

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## 2. Policy background

In this section, we briefly describe the policy background related to the introduction of automatic enrolment in the UK.

Due to the relatively low level of the UK state pension – £168.60 per week in 2019–20, equivalent to just under 30% of median full-time earnings<sup>3</sup> – income from private pensions is an important source of income in retirement for many UK retirees. However, in 2012 (prior to the introduction of automatic enrolment), only 36% of private sector employees participated in a workplace pension scheme.<sup>4</sup> This compares with 50% in 1997; thus the UK had experienced a steep decline in workplace pension membership.<sup>5</sup>

In 2005, motivated by the falling fraction of employees saving in a pension and by concern about widespread undersaving for retirement, the UK government introduced the Pensions Act 2008 as recommended by the independent Pensions Commission (2005). This obliged employers to enrol most of their employees into a workplace pension scheme<sup>6</sup> and set out a minimum level of contributions. Automatic enrolment was introduced gradually, starting in 2012, and led to two key changes in the UK workplace pension schemes landscape. First, employers that previously did not have to provide or arrange a workplace pension scheme now had to do so for most employees. Second, employers were now required to enrol most employees automatically, i.e. being enrolled in a workplace pension scheme became the default. Here we set out a few of the details of the policy that are relevant for our empirical strategy, which is presented in the next section.

Under automatic enrolment, eligible employees are enrolled automatically into a workplace pension scheme, which they can then choose to leave if they wish. If they leave within one month of enrolment, employee contributions are directly returned to the employee. If they leave after one month from enrolment, contributed funds remain invested. The UK government terms leaving within one month of enrolment ‘opt out’ and it terms leaving after one month of enrolment ‘cessation’ (of contributing to their pension scheme). In this report, due to data constraints, we do not distinguish between these two forms of leaving a pension scheme, but simply examine the pension membership rates of those who have been automatically enrolled.

Employees who leave their employers’ pension scheme would be automatically re-enrolled either on moving to another employer or, if they remain with the same employer then, every three years.<sup>7</sup>

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<sup>3</sup> Median full-time weekly earnings in April 2019 were £585 per week (Office for National Statistics, 2019a).

<sup>4</sup> Prior to the introduction of automatic enrolment, employers with at least five employees were required by law to facilitate an employee’s participation in a pension scheme, if it was requested by an employee, with employees’ contributions directly being deducted from their pay packets. However, there was no obligation for such employers to make any contributions to a scheme.

<sup>5</sup> Cribb and Emmerson, 2016.

<sup>6</sup> A workplace pension scheme is a scheme facilitated by the employer, but is not necessarily run by the employer.

<sup>7</sup> Note that only employees who left their workplace pension scheme at least 12 months before their re-enrolment date are automatically re-enrolled into the scheme after three years.

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Once automatic enrolment has been introduced by an employer, employees are eligible to be automatically enrolled if they (a) are aged at least 22 but below the state pension age, (b) earn above a given earnings threshold (£10,000 in 2019–20) and (c) have worked for their current employer for at least three months. We refer to these three conditions as the age, earnings and tenure thresholds, respectively.

The obligation for employers to enrol their eligible employees automatically was rolled out gradually between 2012 and 2018. Each employer in the UK was given a 'staging date' by when they had to start introducing automatic enrolment (although they were able to postpone enrolment by up to three months from this staging date). An employer's staging date was determined by the number of employees – defined as the number of employees on its Pay-As-You-Earn tax scheme – that the organisation had employed in April 2012. Employers with at least 120,000 employees were affected first, with a staging date of 1 October 2012. Automatic enrolment was subsequently rolled out to affect progressively smaller employers. By February 2018, all employers had reached their staging dates. Once an employer reached its staging date, it was required to enrol all its eligible employees into a workplace pension scheme.

Employers subject to automatic enrolment are obliged to enrol their eligible employees into a workplace pension with (at least) minimum total contributions (sum of employee and employer contributions). Employers are obliged to contribute (at least) a minimum of the total required contribution. Up until March 2018, minimum total contributions were 2% of qualifying gross earnings, with at least 1% of qualifying earnings having to be contributed by the employer. Minimum contributions rose in both April 2018 and April 2019, and since April 2019 these have been 8% of qualifying earnings in total, with at least 3% of qualifying earnings having to be contributed by the employer. The respective minimum employee contribution – i.e. the difference between minimum total and actual employer contributions – will depend on how much the employer contributes relative to the total minimum. In 2019–20, qualifying earnings were those between £6,136 and £50,000 per year.

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### 3. Data and methodology

The analysis in this report uses data from the Family Resources Survey (FRS), a long-running survey of around 20,000 households a year, which contains detailed information on different sources of income, housing tenure, health, financial circumstances and living standards of each person in the household and, in recent years, on workplace pension provision. We additionally use derived household income measures from the 'Households Below Average Income' (HBAI) data set which are derived from the FRS by the UK government's Department for Work and Pensions (DWP).<sup>8</sup> The FRS/HBAI data are available for the years from 1994–95 to 2017–18. We restrict our analysis to the years 2011–12 to 2017–18, as the FRS only contains a measure of employer size from 2011–12 onwards.

In order to determine who is leaving their pension scheme after being automatically enrolled, we assemble a representative sample of employees who have been automatically enrolled into a workplace pension scheme. Using the FRS data, we determine (a) whether individuals work at an employer that is at least three months past its staging date and (b) whether they are eligible for automatic enrolment (based on their age, job tenure and earnings).

The employer's staging date is determined by how many employees the employer has. From 2011–12 on, all employees in the FRS were asked about the total number of staff at the organisation where they work.<sup>9</sup> Respondents were asked to indicate the relevant banded range (50–99 employees, 100–249 employees, etc.); thus we do not observe the exact number of employees for each employer. However, as automatic enrolment was first rolled out to larger employers and then gradually to progressively smaller employers, we can define a date by which all employers within a banded range will definitely have become subject to automatic enrolment. This is done by taking the staging date of the smallest employer within the band and adding three months to it (see Table A1 in the appendix for a list of these dates).<sup>10</sup>

Next, we determine whether employees in the FRS are eligible for automatic enrolment, by checking whether they are aged between 22 and the state pension age, whether they earn over £10,000 per year (or above the equivalent earnings threshold in previous years), and whether they have been employed for at least three months by their employer.<sup>11</sup> All this information is available in the FRS. We focus on private sector employees (so exclude the self-employed and employees working in the public sector) in our analysis, as the self-

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<sup>8</sup> These 'HBAI' derived data underlie the UK government's official statistics on the income distribution.

<sup>9</sup> When determining the size of employer as well as job tenure, earnings and pension membership of employees, we only look at first jobs. Given that in 2017–18 only 3% of employees had two or more jobs, including second jobs would not make a material difference to our findings.

<sup>10</sup> Note that as we are confined to using self-reported information on employer size, there is likely to be slight measurement error due to respondents' answers being inaccurate.

<sup>11</sup> Technically, employees are not required to have been employed for at least three months in order to be eligible for automatic enrolment. However, given that employers are able to postpone automatic enrolment for up to three months, it is only after three months of employment that we can determine with certainty that eligible employees will have been automatically enrolled.

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employed are not subject to automatic enrolment and many public sector workers were already automatically enrolled into a workplace pension scheme prior to 2012.<sup>12</sup>

There are three questions on workplace pension participation in the FRS. First, employees are asked whether their employer runs a pension scheme for employees. Second, respondents are asked whether they were eligible for that pension scheme. They are only asked whether they are a member of a workplace pension scheme if they state that their employer runs a workplace pension scheme and that they are eligible for it.<sup>13</sup> We can use these answers to determine whether respondents are participating in a workplace pension scheme.

We are interested in the pension participation of three groups of eligible private sector employees. First, we construct a sample of private sector employees who are eligible for automatic enrolment, and are working for an employer that is three months past its staging date. These are the employees who by law will have been automatically enrolled. We term this our '**AE**' sample.<sup>14</sup>

We want to compare the 'AE' sample with groups that are not automatically enrolled. Therefore, we choose a sample of employees in the FRS who were observed prior to the onset of automatic enrolment, who are similar to our sample of people who were automatically enrolled – respondents who are eligible private sector employees but who are observed between April 2011 and September 2012.

Of those who were not automatically enrolled, we additionally want to distinguish between those who were, and those who were not, offered the opportunity to join a workplace pension scheme. We construct a sample of private sector employees who would have been eligible under automatic enrolment had it already been introduced at the time they were interviewed.<sup>15</sup> From these, we then select employees who indicate that they were offered a workplace pension scheme by their employer that they were eligible for. This gives us our '**pre-AE: offered**' sample.

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<sup>12</sup> We also exclude employees working for employers with fewer than five employees, as prior to the introduction of automatic enrolment, such employers, unlike larger employers, were not obliged to facilitate participation in a pension scheme where employees' contributions could be deducted directly from employees' pay packages, even if requested to do so by an employee.

<sup>13</sup> We therefore do not observe the pension membership of employees who respond that their employer does not offer a workplace pension scheme that they are eligible for, even if we know that they must have been automatically enrolled in one (based on the year and their employer size, age, earnings and tenure). We exclude these employees from our analysis. Our results, however, do not differ in any substantial way if we include these individuals and set their membership to 'not opting out' under automatic enrolment (which is most plausible, seeing as they do not know of a scheme and as under automatic enrolment one actively has to opt out).

<sup>14</sup> Under automatic enrolment, any employees who opt out must be automatically re-enrolled by their current employer every three years or on moving to a different employer. We do not differentiate between employees who have never been re-enrolled and those who have.

<sup>15</sup> The age and tenure thresholds for determining the eligibility of employees who are observed prior to the onset of automatic enrolment remain the same as those set in October 2012. However, we must assume that the earnings thresholds would have been the same (but adjusted for inflation) as the one set for October 2012 (when the first employers passed their staging date) had automatic enrolment been introduced earlier.

Third, we construct a sample of private sector employees who would have been eligible under automatic enrolment had it already been introduced by the time of observation, no matter whether they say they were offered a pension scheme or not. This sample therefore includes all employees in the ‘pre-AE: offered’ sample as well as those employees who were not offered the opportunity to join a workplace pension scheme. We name this sample ‘**pre-AE: all**’.

The reason for having two pre-automatic-enrolment samples is that it allows us to shed light on two of the mechanisms by which automatic enrolment can push up average workplace pension participation rates: (a) the fact that **more employers offered their employees the opportunity to join a pension scheme** and (b) the **default option changed** for eligible employees so no action is required of individuals to join.<sup>16</sup> Carefully comparing the ‘AE’ sample and the ‘pre-AE: all’ sample can provide an estimate of the total effect of automatic enrolment on pension participation. A comparison between the ‘AE’ sample and the ‘pre-AE: offered’ sample, however, can provide an estimate of the effect of the ‘default option’ mechanism. The difference between these two effects is the impact from more employers offering a pension scheme.<sup>17</sup> Table 1 presents the workplace pension participation rates for the three samples as well as the sample sizes.

**Table 1. Sample sizes and workplace pension participation rates for pre-AE and AE samples**

Sample	Participation rate	Number of observations
AE	92%	22,869
Pre-AE: offered	71%	8,042
Pre-AE: all	47%	12,452

Note: Eligible private sector employees only.

Source: Authors’ calculations using the FRS, 2011–12 to 2017–18.

Workplace pension participation rates vary substantially across the three samples, with the participation rate under automatic enrolment (92%) being nearly twice as high as that before automatic enrolment (‘pre-AE: all’ sample, 47%). The 92% participation rate under automatic enrolment is very similar to the 88% found in employer-reported data by Cribb and Emmerson (2019a) and in other pension-industry data. It is also consistent with the fact that in 2018–19, only 7.4% of NEST members – the workplace pension scheme established by the government – opted out of the pension scheme after having been automatically enrolled.<sup>18</sup> The participation rate of the ‘pre-AE: offered’ sample is, by construction, higher than that of the ‘pre-AE: all’ sample, as it only includes employees who were offered the opportunity to participate in a workplace pension scheme even prior

<sup>16</sup> Studies of the effect of automatic enrolment in the United States focus on employers that already offer pensions (e.g. Madrian and Shea, 2001). However, as Nunes (2017) finds, the mechanism of more employers offering pensions may be important too.

<sup>17</sup> We reweight the three samples to obtain the same employer-size distribution across the samples. The employer-size distribution we use to reweight is the one observed amongst eligible employees in the latest data (2017–18). The original and reweighted employer-size distribution of the samples is presented in Figures A1 and A2 in the appendix.

<sup>18</sup> National Employment Savings Trust, 2019.

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to the onset of automatic enrolment. The 'pre-AE: offered' sample also differs from the others in terms of other characteristics, as those offered a workplace pension scheme prior to automatic enrolment are naturally a more selected group – for example, they tend to be older, have longer job tenures and earn more than the average employee.<sup>19</sup>

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<sup>19</sup> Table A2 in the appendix presents some summary statistics on various observed characteristics of the individuals in the three samples as well as the differences between them. Differences between the 'AE' and 'pre-AE: all' samples are relatively small and mostly statistically insignificant. The 'pre-AE: offered' sample differs more across these characteristics.

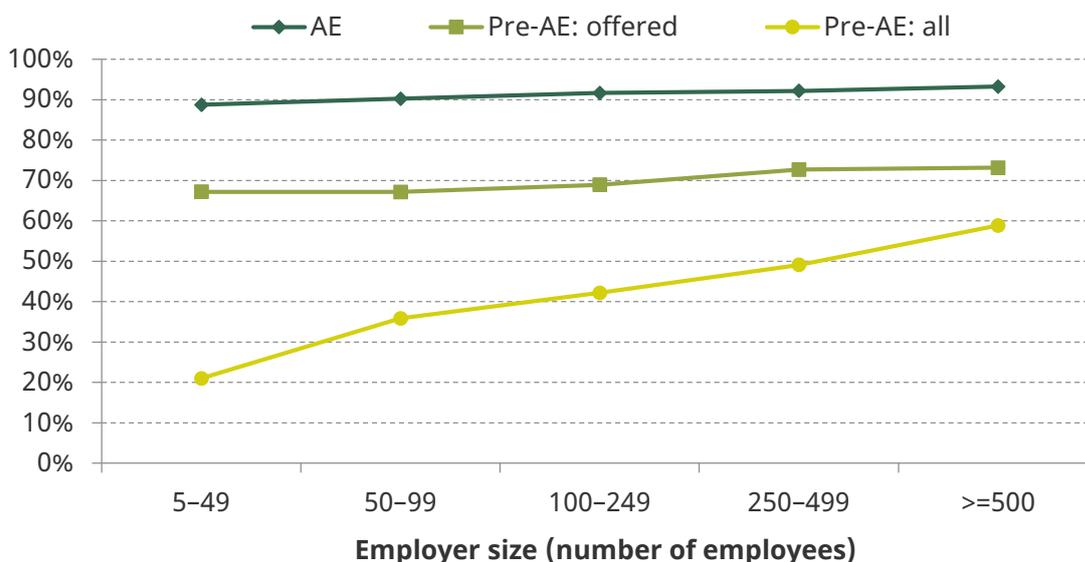
## 4. For whom and how does automatic enrolment boost membership?

This section presents descriptive evidence on who chooses to leave their workplace pension scheme under automatic enrolment and how these employees differ from those who were not members of (so did not join) a workplace pension scheme prior to the onset of automatic enrolment.

Figure 1 presents workplace pension participation rates by employer size for each of the three samples (indicated by the three different lines and shades of green). It shows that the pension participation rates for eligible private sector employees prior to the introduction of automatic enrolment (the 'pre-AE: all' sample) differed substantially by employer size, with only 21% of all eligible employees working at employers with 5–49 employees being a member of a workplace pension scheme prior to automatic enrolment compared with 59% of individuals working at employers with at least 500 employees.

Differences in participation rates across employer sizes, however, are notably less stark when looking at employees who were offered the opportunity to join a workplace pension scheme prior to automatic enrolment ('pre-AE: offered' sample) and for all eligible employees who were automatically enrolled ('AE' sample), with rates being, respectively, 67% and 89% for the 5–49 group and 73% and 93% among the 500+ employees group.<sup>20</sup> This implies that a key reason for the pension participation gradient by employer size was smaller employers' lower rates of offering a pension scheme. In contrast, the 'default' mechanism, which has also pushed up participation rates substantially, appears not to have done so differentially across employer sizes.

**Figure 1. Workplace pension membership by employer size and sample**

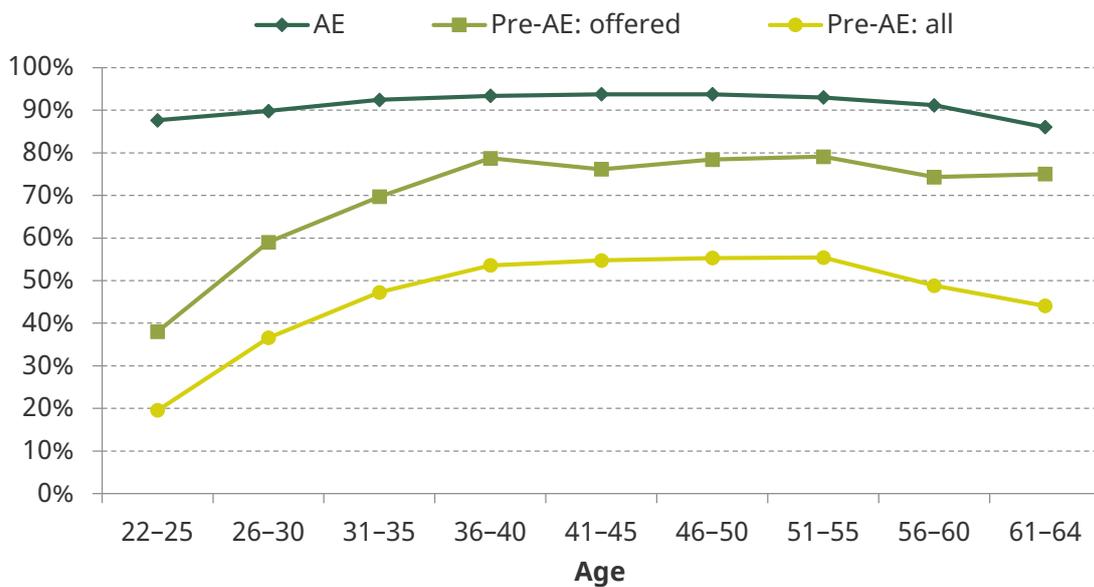


Note and source: As for Table 1.

<sup>20</sup> Cribb and Emmerson (2019b) also find higher participation for eligible employees at large employers than for those at smaller employers, although the gradient (by employer size) found in their data is greater than found here.

Figure 2 shows the equivalent to Figure 1, except that participation rates are presented by age groups for each sample. It paints a slightly different picture from Figure 1. The age gradient in pension participation was much steeper before automatic enrolment than after. But in both the 'pre-AE' samples, average participation rates differ by age to a much larger extent than they do in the 'AE' sample. The fact that the 'pre-AE: offered' line is parallel to (but above) the 'pre-AE: all' line suggests that while the 'more people offered' mechanism of automatic enrolment brought more people of all ages into workplace pension schemes, it is the 'default' mechanism that really pushed up the participation rates of younger employees (those aged 22–35).

**Figure 2. Workplace pension membership by age**



Note and source: As for Table 1.

Figure 3 demonstrates a similar pattern for job tenure. Both the 'more people offered' and 'default' mechanisms of automatic enrolment pushed up average participation rates for all tenures, though it is the 'default' mechanism that had the biggest impact on those with low job tenure, making the differences in participation rates between people with different lengths of job tenure much smaller. This is again implied by the fact that the lines connecting the participation rates by job tenure for the two 'pre-AE' samples are parallel and the one for the 'AE' sample is much less steep. Indeed, for those employees who have worked for their current employer for more than 20 years, all of the increase in pension membership from automatic enrolment appears to be through the 'being offered' channel rather than the 'default' mechanism.

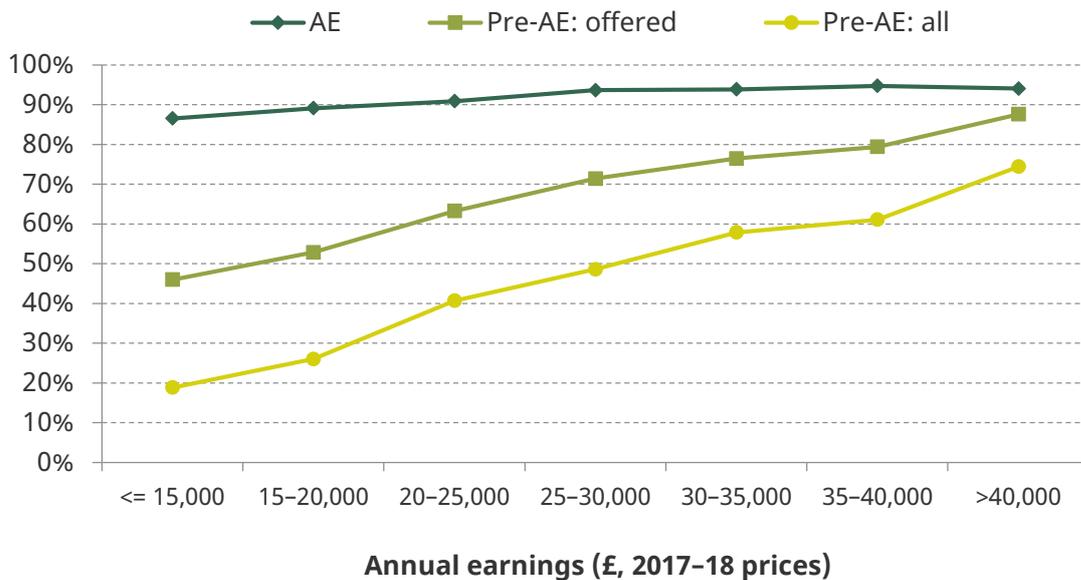
**Figure 3. Workplace pension membership by job tenure**



Note and source: As for Table 1.

Figure 4 presents workplace pension participation rates by annual earnings. Again a similar pattern is observed to that in Figures 2 and 3 for age and job tenure. Prior to the onset of automatic enrolment, workplace pension participation rates for those at the lower end of the earnings distribution of eligible employees were quite low, at 19% for those earning up to £15,000 (but above the relevant earnings threshold) in the 'pre-AE: all' sample and 46% for the 'pre-AE: offered' sample. Automatic enrolment has pushed up participation rates across the board, with the differences in pension membership rates across the earnings bands narrowing mainly through the 'default' mechanism.

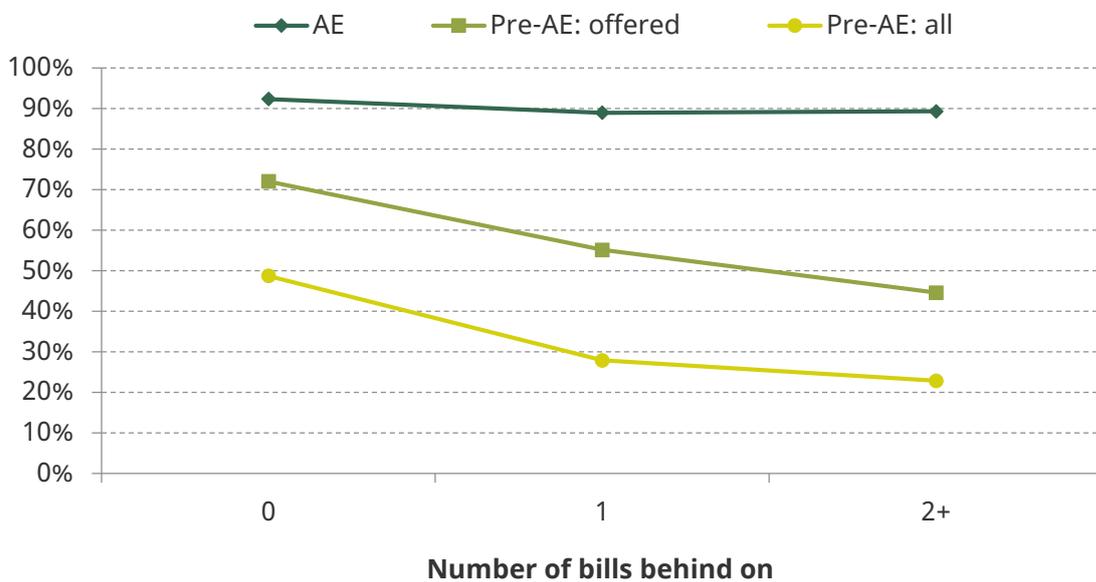
**Figure 4. Workplace pension membership by earnings**



Note and source: As for Table 1.

The FRS contains questions regarding whether families are behind on paying certain bills. Thirteen different types of bills are covered, including electricity, gas, water, telephone, internet and hire-purchase agreements. Overall, around 96% of individuals report not being behind on any bills, while 2% report being behind on one bill and 2% report being behind on two or more bills. Figure 5 demonstrates that while individuals who were behind on two or more bills prior to automatic enrolment have low workplace pension participation rates (23% in the 'pre-AE: all' sample and 45% in the 'pre-AE: offered' sample) relative to those who are behind on one or no bills, this is no longer true under automatic enrolment. Again, the parallel slopes of the lines for the samples prior to automatic enrolment suggest that it is the 'default' mechanism, and not the fact that more people are being offered participation in a pension scheme, that has resulted in a much smaller gap in participation rates between those behind on no bills and those behind on many bills.

**Figure 5. Workplace pension membership by number of bills behind on**



Note and source: As for Table 1.

Finally, Figures A3, A4, A5 and A6 in the appendix show some additional patterns of workplace pension participation by education, housing tenure, whether employed full- or part-time and whether individuals are single or in a couple. In all cases, both the 'more people offered' and the 'default' mechanism of automatic enrolment pushed up participation rates substantially. Consistent with Figures 1–5 and with Department for Work and Pensions (2017), the groups that on average had comparatively low workplace pension participation rates prior to automatic enrolment (such as low-educated individuals, renters, part-time employees and single employees) saw the largest increases in their participation rates. Therefore, automatic enrolment also largely narrowed the gaps in participation rates between different groups of employees.

In summary, workplace pension participation rates amongst employees differed substantially by various characteristics prior to the onset of automatic enrolment. However, since the onset of automatic enrolment, participation rates vary much less, ranging from 85% to 95% for all groups examined. Furthermore, both mechanisms of the

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policy drove up participation rates of each individual group, though the 'default' mechanism seems to have pushed up the rates the most for those who had the lowest rates prior to the onset of automatic enrolment. One exception examined is employees of small employers – their more substantial increase in workplace pension participation compared with that of employees of larger employers seems to have been achieved more through the 'being offered' mechanism. This difference likely relates to the fact that this characteristic is about the employer, whereas the other characteristics we compare relate to the employee.

Many of the characteristics we examined above are highly correlated. For example, older employees have, on average, higher job tenure, while those with higher levels of education have, on average, higher earnings. To see how much of this is driving the results presented above, we therefore additionally use regression analysis (see the first three columns of Table A4 in the appendix) to identify the characteristics that are predictive of an employee's participation in a workplace pension when holding their other characteristics constant. We conduct this analysis for each sample separately and find that while higher earnings, education, job tenure, age and employer size, as well as country of origin being the UK and being female, are significantly predictive of being more likely to participate in a workplace pension among all three samples, the magnitudes are much larger for the two 'pre-AE' samples than they are for the 'AE' sample. This means that each of these characteristics, holding constant other characteristics, is much less predictive of pension participation under automatic enrolment than they were prior to AE being introduced.<sup>21</sup>

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<sup>21</sup> We also repeated the analysis for females and males separately to see whether the way that characteristics affect participation in a workplace pension scheme differs by sex, but did not find much evidence for this. However, on average and across all samples, women have a slightly higher participation rate (conditional on other characteristics), with the difference by sex being closed slightly by the onset of automatic enrolment.

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## 5. Pension participation by financial security and difficulties

As set out in the introduction, it is important for policymakers and those interested in the success of automatic enrolment to look beyond by how much automatic enrolment has increased overall workplace pension participation rates and ask questions such as ‘Are there some people who have remained in their pension scheme who might be better off if they had left?’ and ‘Might some of those who have left in fact be better off remaining in their workplace pension?’. Taken together, ‘Are the “right” 8% (in our data) of eligible employees leaving their workplace pension scheme after having been automatically enrolled?’.

This section explores these questions, with the first subsection describing the methodology we use and the second presenting our results.

### Methodology

In order to answer the first question of interest – ‘Are there some people who have remained participating in a pension scheme who might be better off if they had left?’ – we need to consider what potential reasons there are to not participate in a pension scheme.

In general, for most people who are of working age and financially secure, it makes sense to transfer wealth to later life as their current earnings will likely be larger than their future receipt of state pension. However, people who are financially insecure may not wish to. Circumstances under which it may be better for employees to leave a pension scheme include having high current spending needs or very low current material standards of living. People who are indebted with high-interest loans or are in arrears with bills, such as rent, mortgage or council tax, that may have legal consequences if not paid in due time may also be better off forgoing an employer pension contribution in favour of paying these off first. Alternatively, leaving a pension scheme may be sensible if one has a very low lifetime income and the state pension would provide adequate income replacement, particularly if there is only a very modest employer contribution.

On the flip side, there are also obviously bad reasons for not participating in a pension scheme, such as believing that the state pension alone will provide adequate income, when for most it would not. Some might inappropriately give in to the temptation to spend more now or may just be underestimating how much they will require in retirement due to unrealistic life expectations or false beliefs regarding the ability to work at older ages. Others might have a lack of understanding that the employer also makes a contribution, or just a general lack of understanding of compound interest and the related value of contributions made early in one’s career for retirement income.

It is very difficult to say exactly whether it is optimal for any individual to remain in a pension scheme or to leave. We do not know all their current circumstances, their expectations about the future, and the degree of certainty around these, or exactly what they are offered (in particular, how big their potential employer contribution is). However, those who are in severe financial difficulty (e.g. living on a very low income when they also have very low levels of financial assets) are much more likely to be better off if they do not

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currently save for a pension (and instead use the money to boost their current consumption, pay off high-interest debts, or save a small amount in an accessible form for a rainy day), than those who are already enjoying a higher standard of living and who are much more financially secure.

We define a set of four potential indicators of severe financial difficulty that, if met, suggest that opting out of a workplace pension scheme may be preferable.<sup>22</sup> We refer to these as ‘financial difficulties’ and describe each in the following bullet points:

- **Lowest household income decile, after deducting housing costs:** A first ‘financial difficulty’ condition is being in the lowest tenth of the distribution of working households’ equivalised AHC income.<sup>23</sup> All of these people will be defined as living in ‘in-work poverty’ based on the government’s own headline absolute poverty measures.<sup>24</sup> The idea is that this will capture people who either temporarily have low income or have a permanently low income, both potentially good reasons not to remain in a workplace pension scheme. A childless couple observed in 2017–18, for example, would require a weekly household income below £216 to meet this ‘financial difficulty’ condition.
- **High material deprivation score:** The second condition we include is having an adult ‘material deprivation’ of 30 or higher (this is approximately equivalent to being in the most materially deprived tenth of eligible employees).<sup>25</sup> The ‘material deprivation’ score in the FRS is measured by how many of a list of ‘essential’ things a family cannot afford, such as being able to keep accommodation warm, afford household contents insurance, repair broken electrical goods or save £10 a month or more. Although material deprivation is a more subjective measure of low living standards than income, it does not suffer from the one problem that income has as a measure of low living standards, in which those with the lowest incomes do not always have the lowest living standards on other measures, such as expenditure.<sup>26</sup>
- **Having less than £1,500 in liquid savings:** A third condition is having (in combination with one’s partner, where relevant) less than £1,500<sup>27</sup> in liquid savings. Families with such low levels of liquid savings might find it harder to adjust to adverse shocks such as unemployment, falls in earnings, the need to replace durable goods, or other unexpected rises in the cost of living. People without such a safety net may want to consider saving for a small ‘rainy day’ fund before they try to fund their retirement.

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<sup>22</sup> Note that these circumstances (meeting a financial condition) need not be permanent and may fluctuate over an individual’s lifetime. For example, young people may currently have low liquid assets but have high earnings in the future. While the data do not allow us to take this into account in our analysis, we argue that in both cases – short-term and permanent financial difficulties – individuals could potentially benefit from opting out of a workplace pension scheme even if just temporarily.

<sup>23</sup> Household income after housing costs have been deducted. Equivalisation refers to the notion of rescaling incomes to take into account the fact that households of different sizes and compositions have different needs.

<sup>24</sup> See Bourquin et al. (2019) for more details.

<sup>25</sup> For more information on the material deprivation index, see Bourquin et al. (2019).

<sup>26</sup> See Brewer, Etheridge and O’Dea (2017).

<sup>27</sup> The threshold is set at £1,500 as this is the lowest threshold available in the data.

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- **Having a long-standing, limiting health issue:** Finally, the fourth condition we include is having a long-standing health issue that limits daily activities. This condition alone may not necessarily be a good reason not to remain in a workplace pension (unless it means that one expects not to survive to retirement), but in combination with other ‘financial difficulty’ indicators it could be important, as having bad health can imply having particularly high spending needs.

The four ‘financial difficulty’ measures defined above will be positively correlated. For example, individuals who are in the bottom AHC household income decile of working households have lower savings on average than those who are not. However, these correlations are not as strong as one might expect. For example, the correlation between ‘being in the bottom income decile’ and ‘having less than £1,500 in liquid savings’ is just +0.12 in our ‘AE’ sample observed in the latest year of data (2017–18). In fact, the highest correlation (+0.36) (again measured in our ‘AE’ sample) is between ‘having a high material deprivation score’ and ‘having less than £1,500 in liquid savings’.<sup>28</sup> The correlations between the remaining combinations of ‘financial difficulty’ measures range from just +0.05 to +0.17.

We now describe how we go about answering the second question posed: ‘Might some of those who are leaving their pension scheme in fact be better off remaining?’. The underlying presumption is that individuals who are financially secure should only rarely choose not to remain in a workplace pension.<sup>29</sup> In general, individuals who are financially secure will want to transfer resources to retirement and not forgo employer contributions and tax-favoured pension saving. In order to look at which people may be opting out when they (by assumption) should not, we define a set of conditions that, if *all* are fulfilled, suggest they are financially secure. These include:

- having liquid financial assets of at least £8,000 (combined with a partner, where relevant);
- not currently being behind on any bills;
- belonging to the top half of the distribution of working households’ equivalised AHC income. A childless couple observed in 2017–18, for example, would require a weekly household income of at least £507 to meet this requirement;
- belonging to the top half of the individual gross earnings distribution of employees. Employees observed in 2017–18, for example, would require weekly gross earnings of at least £422 to meet this requirement.

Note that unlike the ‘financial difficulty’ conditions, which we look at in isolation in addition to in combination with each other, we only categorise individuals as being ‘financially secure’ if they fulfil all of the conditions described.

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<sup>28</sup> The reason for this is that the amount of savings individuals have directly feeds into the calculation of the material deprivation score.

<sup>29</sup> One reason for high-income/high-wealth individuals to leave their pension scheme would be if their private pension assets are in excess of, or approaching, the lifetime allowance (£1,055,000 in 2019–20; <https://www.gov.uk/tax-on-your-private-pension/lifetime-allowance>).

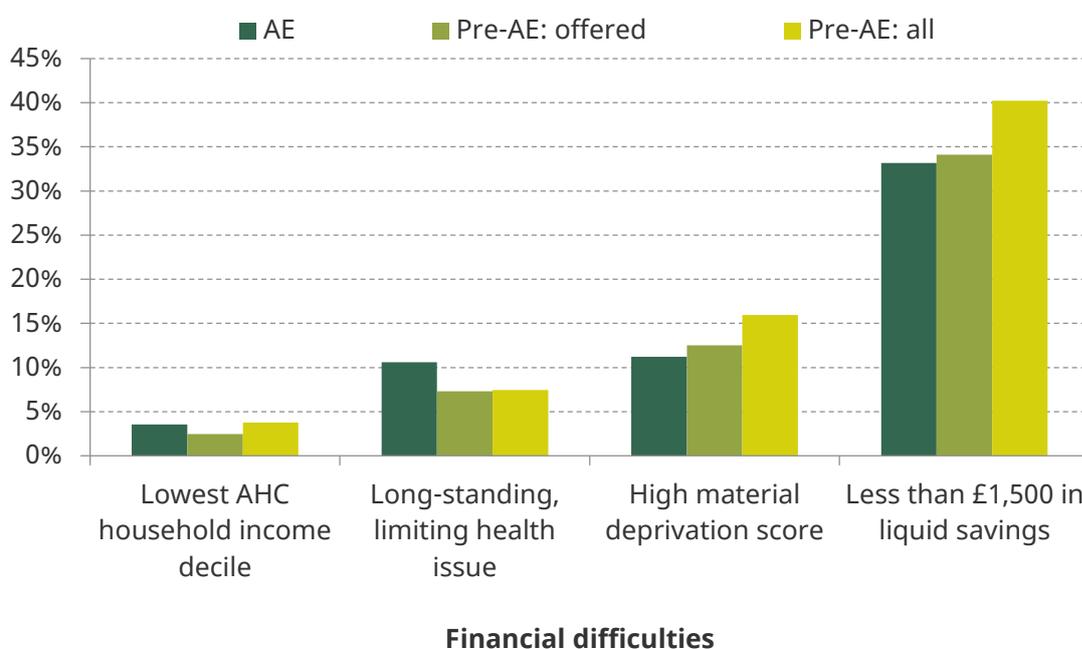
## Results

In this subsection, we first look at what percentage of each sample meet the ‘financial difficulty’ conditions we set out above and at the workplace pension participation rates for employees who meet each of these. We then present the participation rates for those who meet the ‘financially secure’ condition as well as for a combination of the two sets of conditions.

### Potential financial difficulties

Figure 6 presents the percentage of each sample that meets each of the ‘financial difficulty’ conditions. While only around 11–16% have a high material deprivation score and just 2–4% are in the lowest decile of AHC household income (amongst all working households), 33–40% of the eligible employees in the three samples have less than £1,500 in liquid savings (combined with their partner).

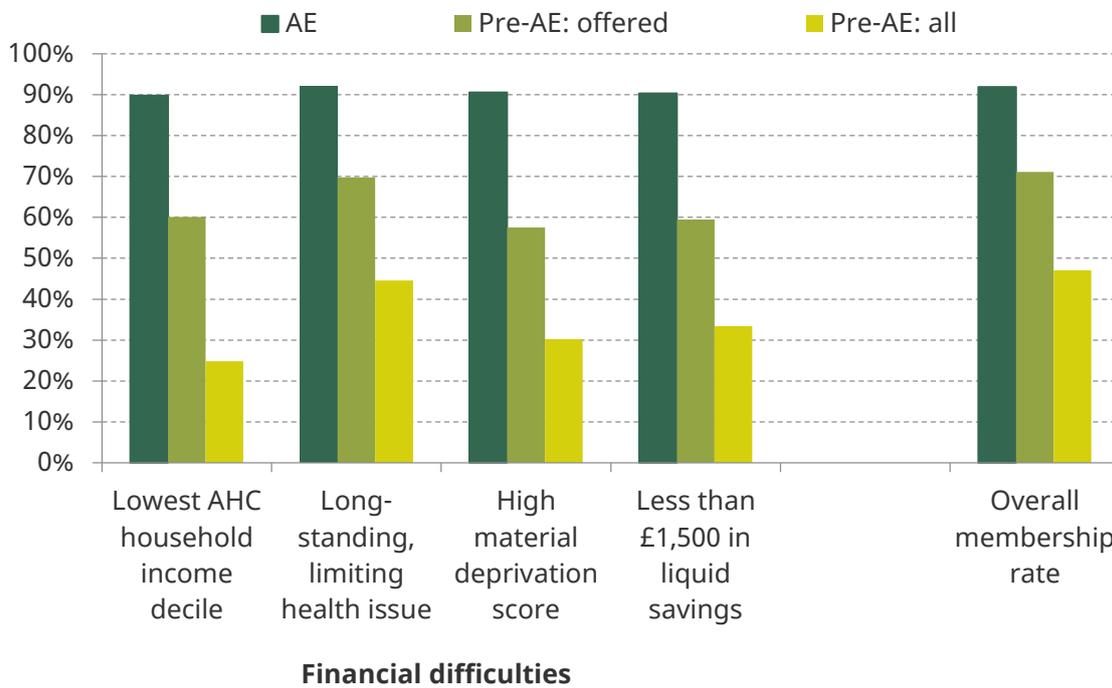
**Figure 6. Percentage of eligible employees with each financial difficulty, by sample**



Note and source: As for Table 1. Financial difficulties are defined in the text in this section.

Figure 7 presents workplace pension participation rates for the subgroup of each sample that meets each ‘financial difficulty’ condition. The bars on the right-hand side of the chart present the overall pension memberships for each sample. Participation rates for all eligible employees observed prior to the onset of automatic enrolment who meet ‘financial difficulty’ conditions (the ‘pre-AE: all’ sample) are significantly lower, by 14–22 percentage points, than the overall participation rate of 47%, except for those who report a long-standing health issue that limits daily activities (participation rate: 45%).

**Figure 7. Workplace pension participation amongst those with financial difficulties, by sample**



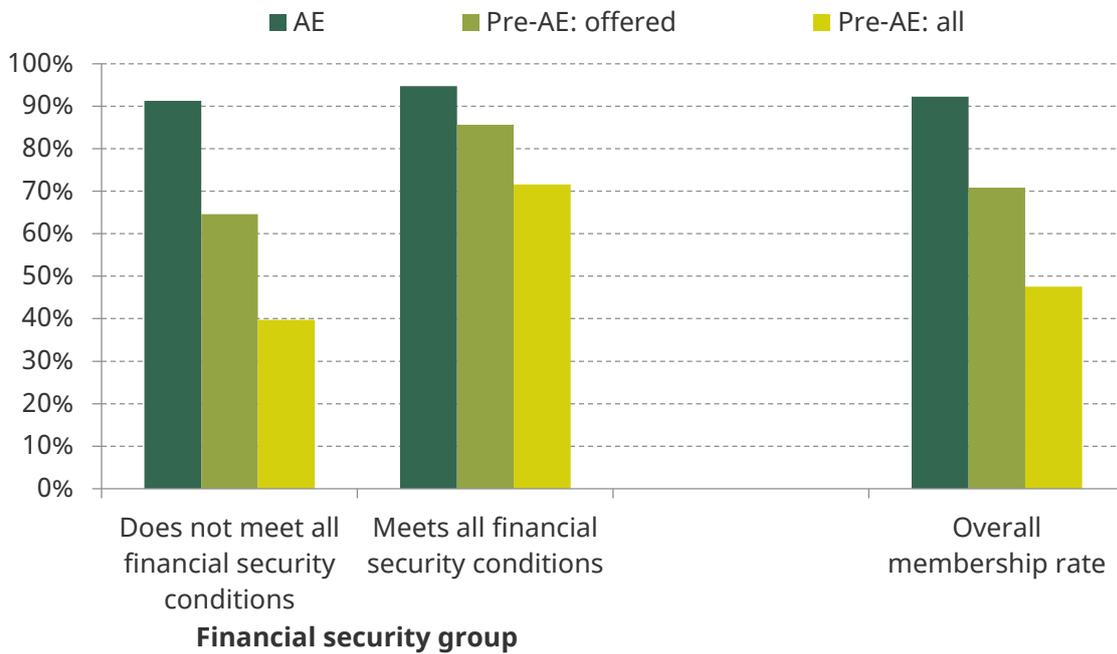
Note and source: As for Table 1. Financial difficulties are defined in the text in this section.

The same is true for those observed prior to the onset of automatic enrolment who were offered a scheme they were eligible for (the ‘pre-AE: offered’ sample): the participation rates of those who have a ‘financial difficulty’ were 58–60%, compared with the overall rate of 71%; again, those having a health issue have a rate similar to the overall one, namely 70%. However, all rates for automatically enrolled employees (the ‘AE’ sample) who meet the respective ‘financial difficulty’ condition (90–92%) are very close to the overall contribution rate of 92%.

### Financially secure

The percentages meeting all four of the ‘financially secure’ conditions defined in the previous subsection (i.e. are not behind on any bills *and* are in the top half of the working households’ income distribution *and* are in the top half of the individual earnings distribution *and* have a relatively substantial amount of savings) are 27% of the ‘AE’ sample, 30% of the ‘pre-AE: offered’ sample and 24% of the ‘pre-AE: all’ sample. Figure 8 presents workplace pension participation rates for those who meet, and those who do not meet, all the conditions for each sample. Prior to the onset of automatic enrolment, 72% of eligible employees who were financially secure were enrolled in a workplace pension scheme. Considering only employees who were offered the opportunity to join a scheme they were eligible for, 86% of those who were financially secure were participating. Of the employees who were automatically enrolled and were financially secure, 95% were participating.

**Figure 8. Workplace pension participation by whether financially secure and by sample**



Note and source: As for Table 1. Financial security groups are defined in the text in this section.

### Levels of financial security and difficulty

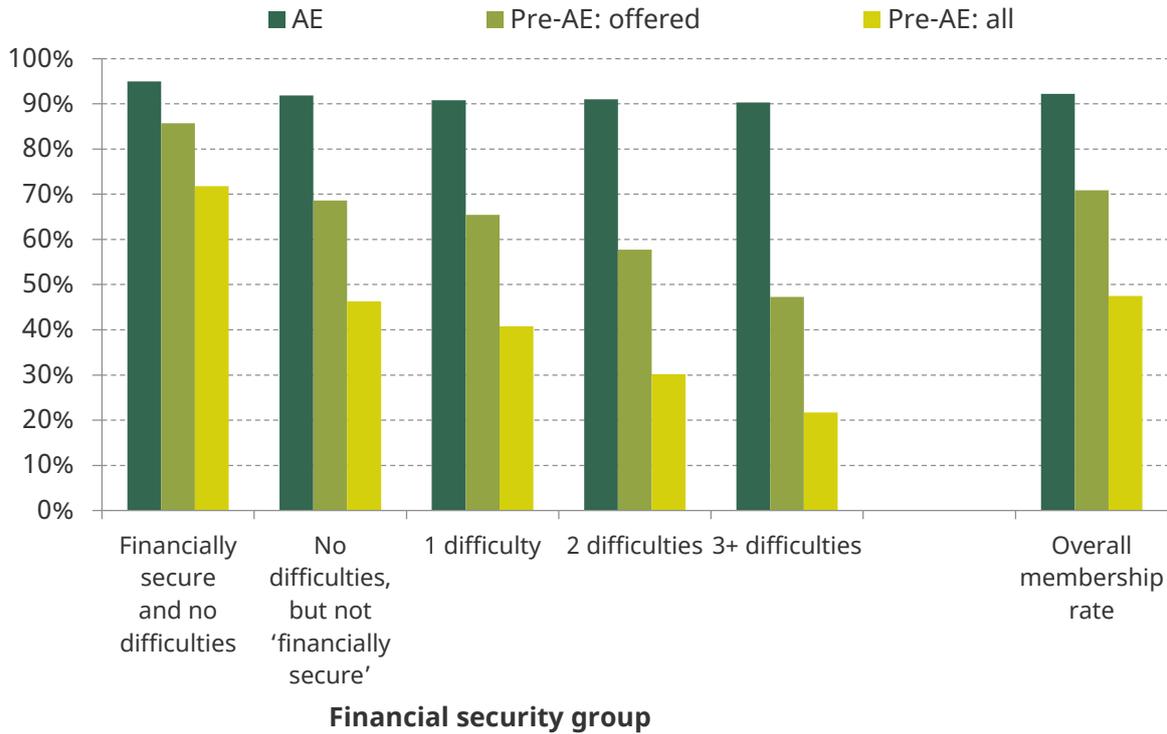
We now go a step further and combine our ‘financial difficulties’ indicators and our ‘financial security’ condition, in order to see what the two mechanisms of automatic enrolment have done to the workplace pension participation rates of (a) those who look as if they do not have a reason to be opting out and (b) those who look as if they could potentially benefit from opting out. We create five groups as defined below, ordered from most to least financially secure:<sup>30</sup>

- Meet the ‘financial security’ condition and have none of the ‘financial difficulties’ (25% of the AE sample).
- Do not meet ‘financial security’ condition, but have none of the ‘financial difficulties’ (33% of the AE sample).
- Have one ‘financial difficulty’ (28% of the AE sample).
- Have two ‘financial difficulties’ (11% of the AE sample).
- Have at least three ‘financial difficulties’ (3% of the AE sample).<sup>31</sup>

<sup>30</sup> Figure A7 in the appendix presents the percentage of people who fall in each of the five groups by sample. 23–28% are in the most financially secure group, while 2–3% are in the most financially insecure group.

<sup>31</sup> As a result of the fact that the most prevalent financial difficulty – as shown in Figure 6 – is not having £1,500 of liquid savings, essentially all of those with three or more difficulties do not have £1,500 in liquid savings.

**Figure 9. Workplace pension participation by financial security and by sample**



Note and source: As for Table 1. Financial security groups are defined in the text in this section.

Figure 9 presents the workplace pension participation rate for the five groups for each sample separately. Notably, participation rates varied greatly across the different groups prior to the onset of automatic enrolment, both when we consider all eligible employees and when we only consider eligible employees who were offered the opportunity to join a workplace pension scheme they were eligible for. Participation rates are much more similar when we look at those who have been automatically enrolled into a pension scheme.

We observe that participation rates for all groups have been pushed up by both mechanisms of automatic enrolment. When looking at the groups on the left-hand side of Figure 9, who we think are financially secure and most likely should be saving for their retirement, this is a notable achievement.

For example, only 72% of all eligible employees who are financially secure and have none of the financial difficulties were in a workplace pension scheme prior to the onset automatic enrolment. This increased to 95% under automatic enrolment. The fact that only 5% of this seemingly very financially secure group of employees now opts out of a pension scheme is likely a good thing. We do not expect the participation rate of this group to be 100%, as there are some things that may sensibly drive the decision to choose to leave a workplace pension that we cannot observe – for example, if someone has already exceeded the lifetime allowance for pension assets. But given that automatic enrolment was intended to drive up pension participation rates, the extent to which the increase in participation comes from pushing up membership among those who appear to be more clearly able to save more at the moment for their retirement is a good thing.

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On the flip side, among those who are most financially insecure (to the right in Figure 9), only 22% of all eligible employees prior to automatic enrolment ('pre-AE: all') were a member of a workplace pension scheme, compared with 90% of those automatically enrolled. Thus, while automatic enrolment has pushed up the participation rates for those who are financially secure, it has also pushed up the participation rates the most for the group of people with the lowest financial security. The latter is potentially worrying, as it is exactly these individuals who may benefit from opting out of their pension scheme (at least temporarily) and forgoing employer contributions in favour of being more financially secure now.<sup>32</sup>

In the period for which the 'AE' sample is observed (2013–14 to 2017–18), minimum total contribution rates were quite low (2% of qualifying earnings, with at least 1% of qualifying earnings being contributed by the employer). It is therefore possible that automatically enrolled employees in financial difficulty who are not opting out are contributing very little to their workplace pension scheme. If this is true, then opting out of a workplace pension scheme in favour of more take-home pay might make little difference to their financial difficulties. For 11% of our 'AE' sample of workplace pension members with three or more financial difficulties, we find that they in fact do not make an employee contribution to their pension, and therefore would not see their take-home pay increase were they to leave their scheme. However, there are some cases of non-negligible amounts being contributed: 11% of them contribute over 5% of total earnings to their workplace pension; and the mean employee contribution – at 2% of total earnings (or 3% of qualifying earnings) – is well above what they would be contributing under the least generous scheme arrangements.<sup>33,34</sup>

Minimum total contribution rates rose in both April 2018 and April 2019, and since April 2019 have been 8% of qualifying earnings in total, with at least 3% having to be contributed by the employer. Contribution rates of automatically enrolled employees with financial difficulties are therefore likely to have increased. In fact, using an alternative data set that covers more recent years – the Annual Survey of Hours and Earnings (ASHE)<sup>35</sup> – we find that around 77% of automatically enrolled employees who were in the bottom 5% of the earnings distribution in 2018 contributed more than 2% of total earnings. This compares with 56% of the same group one year earlier (in 2017, when the minimum total contribution rates were lower). Though employees in the bottom 5% of the earnings distribution are not the same group as the '3+ difficulties' group that we focus on, they are likely to be a similar one.

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<sup>32</sup> We additionally split the most financially insecure group into those who are homeowners (only 28% in the 'AE' sample) and those who are not, to see whether the high participation rate of this group under automatic enrolment is driven by homeowners. We do not find any evidence that this is the case: opt-out rates are still only 10%, even for those who are not homeowners.

<sup>33</sup> In order to verify these results, we look at the distribution of contribution rates of automatically enrolled employees in a likely similar group (the bottom 5% of the earnings distribution) using an alternative data set – the Annual Survey of Hours and Earnings (ASHE) – and find that the mean contribution rate for this group was 2% of total earnings in 2017.

<sup>34</sup> See Table A3 in the appendix for the full distribution of employee contributions by financial security condition for 'AE' sample employees who did not opt out of their workplace pension scheme.

<sup>35</sup> Office for National Statistics, 2019b.

Table 2 presents the distribution of the types of financial difficulties that employees in the 'AE' sample have by financial security group.<sup>36</sup> Among employees with one financial difficulty, 70% have less than £1,500 in savings and around 21% have a long-standing limiting health issue. Figure 9 shows that 91% of employees in this group remain in the workplace pension scheme that they were automatically enrolled in. The high participation rate for this group under automatic enrolment might be considered desirable given that these individuals 'only' have one of the above-defined financial difficulties and may benefit more from the employer contributions and potential tax reliefs associated with employee pension contributions, than from higher take-home pay in the short term. However, for the group with three or more difficulties, where nearly all have liquid savings under £1,500 as well as a high material deprivation score and additionally either are in the lowest household income decile or have a long-standing limiting health issue, the high participation rate (90%) is potentially more worrisome.

**Table 2. Distribution of financial difficulties in 'AE' sample**

	1 difficulty	2 difficulties	3+ difficulties
Lowest household income decile	3%	12%	49%
Long-standing, limiting health issue	21%	28%	68%
High material deprivation score	6%	66%	95%
Less than £1,500 in liquid savings	70%	94%	99%
Average number of difficulties	1.00	2.00	3.11

Note and source: As for Table 1. Financial difficulties are defined in the text in this section.

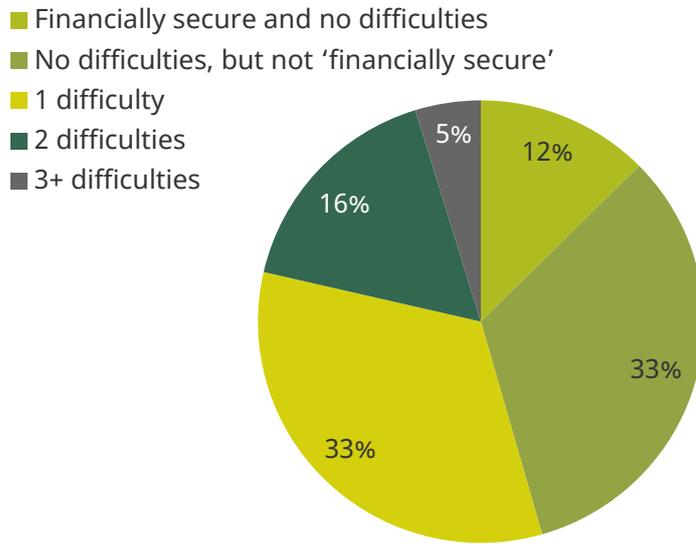
Those who are very financially insecure (i.e. have three or more financial difficulties, as defined above) are, however, quite a small group – just 3% of eligible employees under automatic enrolment. The financially secure groups, for whom the increase in participation rates is more likely to be beneficial, are much larger: the two most secure groups together make up 58% of eligible employees under automatic enrolment.<sup>37</sup> Considering this with the evidence provided above that the increase in participation rates was much larger for those who are financially insecure (as opposed to those who are not), it is interesting from a policy perspective to investigate what fraction of the overall increase in participation rate is caused by each of our five groups. This is what Figure 10 shows, focusing on the overall change in membership due to automatic enrolment (i.e. comparing the 'pre-AE: all' and 'AE' samples).

Our data suggest that the onset of automatic enrolment was associated with an increase in pension participation rates of 45 percentage points from 47% to 92%. Of this substantial increase, 45% came from the two most financially secure groups and 21% was driven by the two most financially insecure groups. Thus, much of the increase in participation rates is being driven by increases in participation rates of the 'right' kind of groups, though a non-negligible amount is also being driven by groups we may be more worried about.

<sup>36</sup> The distribution of the types of financial difficulties that employees of the financial security groups have is similar for both 'pre-AE' samples.

<sup>37</sup> See Figure A7 in the appendix.

**Figure 10. Contribution of each group to overall change in membership ('pre-AE: all' to 'AE')**



Note: As for Table 1. Financial security groups are defined in the text of this section. Percentages do not sum to 100 due to rounding.

Source: Authors' calculations using the FRS, 2011-12 to 2017-18.

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## 6. Pension participation and benefits

In this section, we look at whether the low proportion choosing to leave their workplace pension among the most financially insecure group under automatic enrolment could be rationalised through individuals being in receipt of means-tested in-work benefits. When eligibility for means-tested benefits and the amount received are determined by assessing income net of employee pension contributions, as is the case for working tax credit (WTC), child tax credit (CTC), housing benefit (HB),<sup>38</sup> council tax support (CTS) and universal credit (UC), recipients may have a relatively strong up-front financial incentive to stay in their employee pension scheme. This is because the fall in net earnings from making pension contributions would boost their entitlement to these benefits and tax credits, thereby at least partially cushioning the extent to which they would have lower disposable income.

This is not an incentive that is unique to automatic enrolment, as even prior to the onset of automatic enrolment, income for the purposes of means-tested benefits was assessed net of employee pension contributions.<sup>39</sup> So we can use our 'pre-AE' samples to investigate whether there is any evidence prior to the onset of automatic enrolment of people on benefits choosing to save more in a pension.

Figure 11 presents the percentage of eligible employees of each financial security type and for each sample who are receiving means-tested benefits.<sup>40</sup> As is to be expected, the more financially secure individuals belonging to our three samples are, the less likely they are to be in receipt of benefits. Fewer than 1% of those we categorise as financially secure receive means-tested benefits (as defined above), while in contrast 35–36% of those who are in the most financially insecure group are in receipt of benefits.

As we might be most concerned about the high workplace pension participation rates of the financially insecure group under automatic enrolment, we now look at whether this is driven by those who receive means-tested benefits. Figure 12 presents participation rates for the most financially insecure – that is, those with three or more financial difficulties – for each sample by whether they are in receipt of benefits as defined above. We see that the participation rates for those receiving and those not receiving benefits are very similar and that this is the case for all three samples.

Thus there is no evidence that those receiving means-tested benefits are less likely to leave their pension scheme than people who are not in receipt of such benefits. Therefore, the potentially worrying low rates of individuals choosing to leave their workplace pension among the financially insecure group do not appear to be explained by individuals for whom the impact of increased pension contributions on their net income would be cushioned by increased receipt of means-tested benefits.

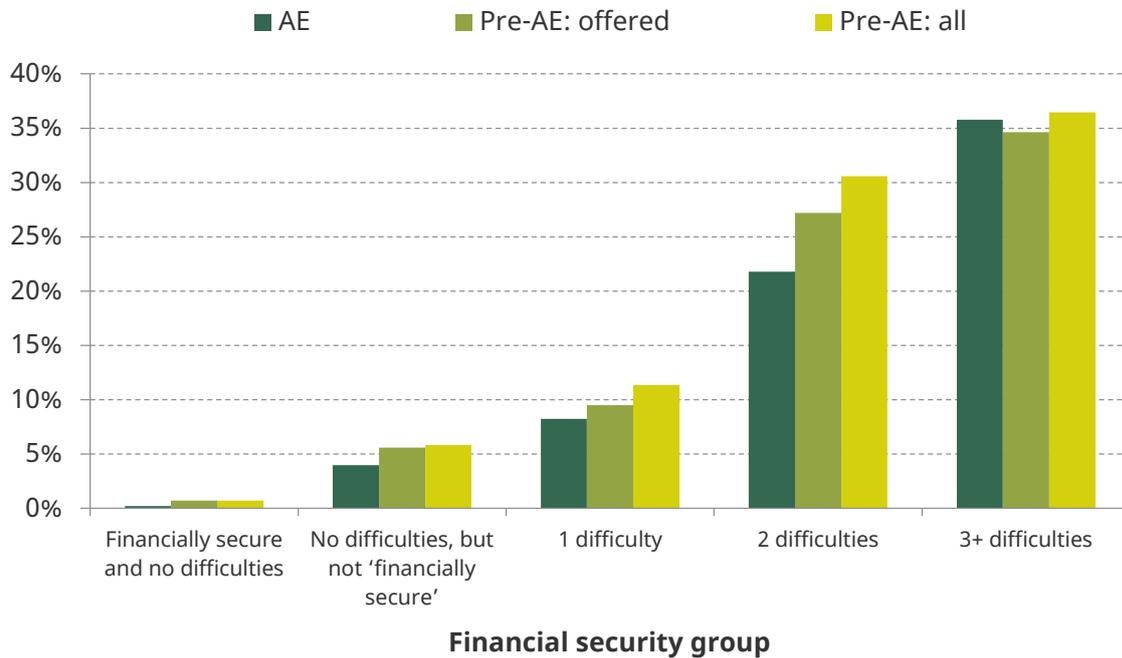
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<sup>38</sup> In determining eligibility for housing benefit and the amount received, only half of any contribution made towards a personal or occupational pension scheme was deducted from income.

<sup>39</sup> See Blundell, Emmerson and Wakefield (2006).

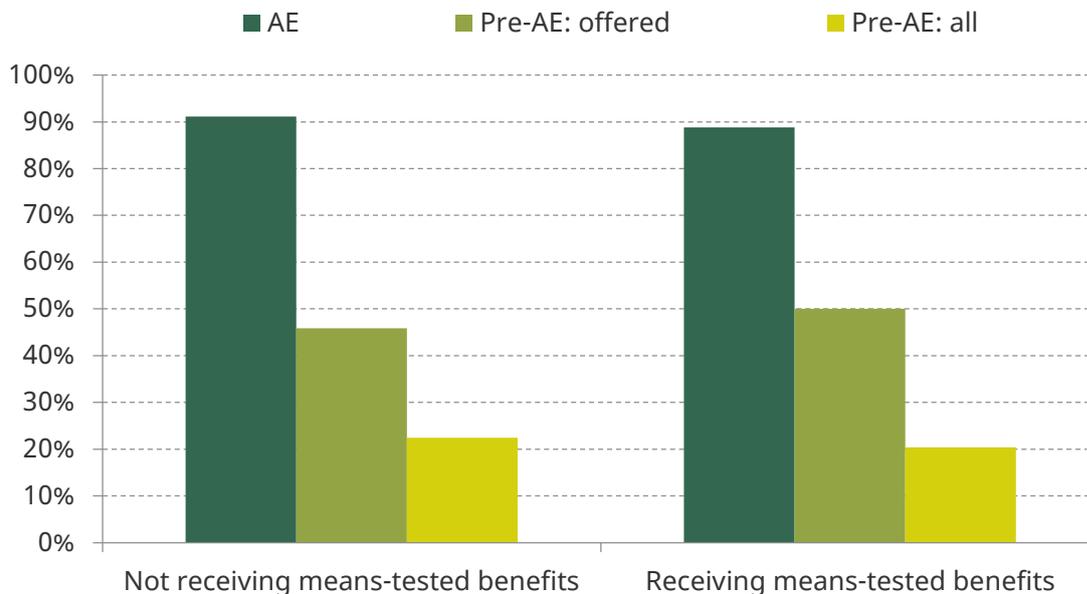
<sup>40</sup> We exclude those on very low levels of means-tested benefits (£12 a week or less). This is because we want to remove those who were previously eligible to only the family element of child tax credit, which was tapered away when income reached £40,000 (2011–12).

**Figure 11. Percentage of employees receiving in-work means-tested benefits, by financial security group and by sample**



Note and source: As for Table 1. Employees are defined as receiving means-tested benefits if they receive any working tax credit, child tax credit, housing benefit, council tax support or universal credit in excess of £12 per week.

**Figure 12. Workplace pension participation among those deemed financially insecure, by whether or not in receipt of means-tested benefits and by sample**



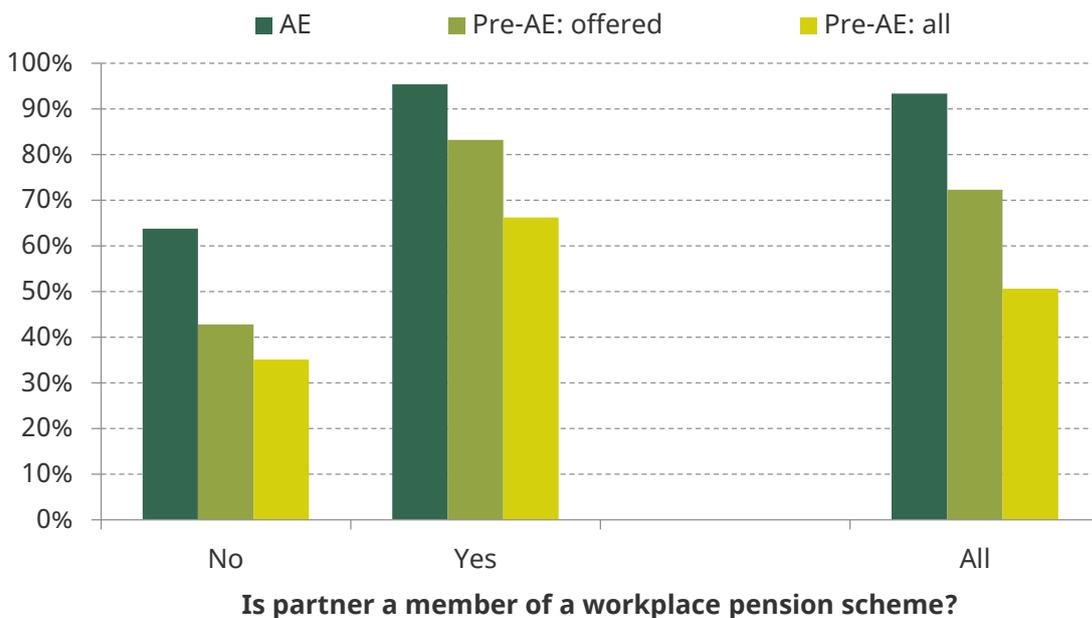
Note and source: As for Figure 11. 'Those deemed financially insecure' are those with three or more financial difficulties.

## 7. Couples' pension participation

We now turn to examine the workplace pension participation rates of a particular group of eligible employees, i.e. those with partners. We take eligible employees in the FRS who have partners who are in the same 'sample' as they are. For example, for someone in the 'AE' sample to be considered in the following analysis, they must have a partner who is also in the 'AE' sample, so who has also been automatically enrolled.

Figure 13 presents workplace pension participation rates for those with partners who are members and for those with partners who are not members of a pension scheme. It shows that employees under all three samples are significantly more likely to be in a workplace pension if their partner is as well. For example, of those who were automatically enrolled and have partners who were also automatically enrolled and remained in their pension scheme ('AE, Yes' in the chart), 95% participated in a workplace pension scheme, compared with 64% of those who had partners who opted out ('AE, No'). We observe similar patterns prior to the onset of automatic enrolment.

**Figure 13. Workplace pension participation by whether or not partner is a member of a workplace pension**



Note: Samples are constructed as described in Section 3. Eligible private sector employees only. In this figure, we only include people with partners who are in the same sample.

Source: Authors' calculations using the FRS, 2011-12 to 2017-18.

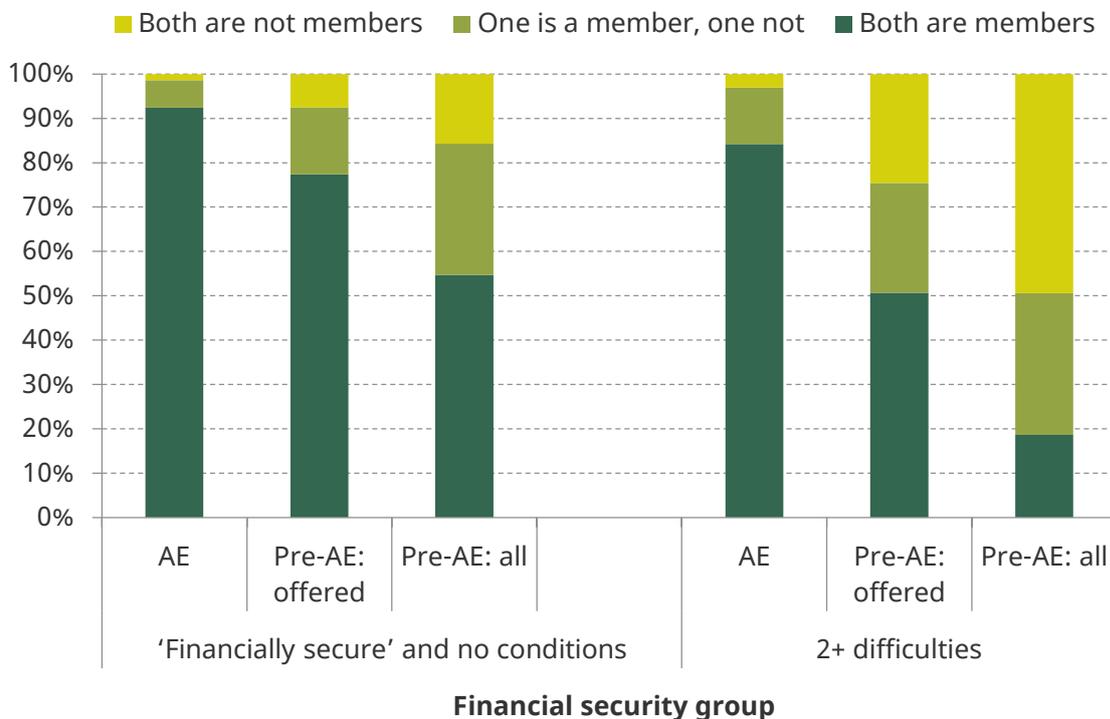
Notably, the participation rate for automatically enrolled employees who have partners who were automatically enrolled but left their pension scheme, at 64%, is the lowest observed for any group of automatically enrolled workers. None of the characteristics, such as earnings or age, explored in Section 4 brought about any statistically significant variation in participation rates under automatic enrolment. Evidently, there will be other things correlated with having a partner that are driving these results. In the last three columns of Table A4 in the appendix, we present regression results for each sample that

demonstrate whether one’s partner’s pension participation is associated with one’s own participation, holding a rich set of other observed characteristics fixed. We find that one’s partner choosing to leave a workplace pension is highly correlated with one’s own decision to leave (after automatic enrolment, with the equivalent being true prior to automatic enrolment), even after controlling for a rich set of one’s own characteristics as well as the education and age of one’s partner.

Figure 14 presents pension membership for couples in the most financially secure, as well as for couples in a more financially insecure group (two or more difficulties), for all three samples. After the onset of automatic enrolment, 84% of individuals with two or more financial difficulties had both members of the couple participating in their pension scheme (and just 3% had no member of the couple in a workplace pension). In contrast, for individuals with two or more difficulties prior to automatic enrolment (in the ‘pre-AE: all’ sample), only 19% had both members of the couple participating in a workplace pension scheme (and 49% had no member of the couple in a workplace pension).

On the flip side, of the financially secure individuals in the ‘AE’ sample, 92% of couples were both members of a workplace pension scheme (and only 1% had no member of the couple in a workplace pension), whereas prior to automatic enrolment only 55% of couples that were financially secure were both members and 16% had no member of the couple in a workplace pension.

**Figure 14. Workplace pension membership among couples for those who are most financially secure and for those with at least two financial difficulties, by sample**



Note: Samples are constructed as described in Section 3. Eligible private sector employees only. In this figure, we only include people with partners who are in the same sample. The financial security groups are as defined in Section 5.

Source: Authors’ calculations using the FRS, 2011–12 to 2017–18.

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In summary, there are striking differences between the workplace participation rates of employees whose (employed and eligible) partner is participating in their workplace pension scheme and those whose partner has left the scheme. The difference is far larger than the variation in participation seen by age, earnings, tenure or other economic demographic variables studied in Section 4.

In a key way, this finding supports our previous conclusions about people making the 'right' decisions regarding opting out of their pension scheme. Not only do most people who are financially secure remain in their pension scheme; for those with eligible partners, the vast majority (92%) are *both* saving for retirement in a workplace pension, and in only 1% of cases is neither saving in one. The results also suggest a potential concern about the very high pension participation rates of those with at least two financial difficulties: for 84% of couples where both members are eligible, both of them are remaining in their pension scheme. This compares with only 19% prior to automatic enrolment, and in only 3% of cases do both members of more financially insecure couples choose to leave their workplace pension after the onset of automatic enrolment.

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## 8. Conclusion

Automatic enrolment is automatic for employees, not compulsory. They are able to stop saving in a workplace pension scheme at any point, although this may lead to them forgoing an employer contribution and potentially tax relief, and they would in general be re-enrolled at least every three years. Given that employees have the option to cease their participation, it is both interesting and important to understand the determinants of doing so, and whether there are many people whose resulting saving outcomes look potentially unwise.

In this report, we have documented variation in workplace pension membership by employee characteristics – and employer size – both before and after the introduction of automatic enrolment. For those employees observed before automatic enrolment, we have looked both at all employees and at those who were previously offered the opportunity to join a workplace pension scheme.

We find that workplace pension participation rates were pushed up through a combination of two different mechanisms: more employers now offer schemes and employees are now defaulted into those schemes. The evidence also suggests that the closing of gaps in participation rates between some groups (such as those with low and high job tenure or young versus older employees) was mostly driven by the ‘defaulting’ mechanism. The reverse is true for those working at smaller versus larger employers, because fewer small employers offered a workplace pension scheme prior to automatic enrolment, meaning much of the boost to pension coverage among their employees from automatic enrolment actually comes from simply having the chance to be in such a scheme.

We have examined whether there are many employees who are leaving their pension scheme who might be better off staying in, and conversely whether there are many who remain in their pension scheme who might be better off not contributing and instead having higher disposable income. Though it is difficult to know for certain who should leave a pension scheme they were automatically enrolled into and who should not, we can construct an index of financial difficulties that is indicative of this. The most financially secure employees have a participation rate of 95% under automatic enrolment, compared with 72% prior to automatic enrolment (AE). With such high workplace pension participation rates in the post-AE environment, it is not clear that there are lots of financially secure people leaving their scheme who would be better off remaining in it. Much of the increase in workplace pension participation as a result of automatic enrolment occurs for those who are not in financial difficulties, which is a key success for the policy.

We also find that automatic enrolment has led to the vast majority of those who appear to be in financial difficulties remaining in a workplace pension. Among those with three or more financial difficulties, we find post-AE workplace pension coverage rates of 90%, only slightly lower than the rate for those who were more financially secure. This is up from only 22% prior to automatic enrolment. We provide evidence that this is not likely to be driven by those receiving means-tested benefits, who can have much stronger financial incentives to save in a workplace pension.

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While it is the case that much of the boost to workplace pension membership delivered by automatic enrolment is not from those with obvious financial difficulties, the high participation rate of the groups who do appear to have several financial difficulties raises the issue of whether, at least for some, making the opt-out process easier and/or more prominent could be beneficial. One possible option would be to include a reminder to those with low earnings, when they are informed about having been automatically enrolled, that it is likely to be worth clearing costly debts (such as a credit card debt or being behind on certain bills) before saving for their retirement.

A key finding from this work is that around a third of all employees eligible for automatic enrolment have very low liquid savings (less than £1,500 between them and their partner). This creates some financial insecurity as it is harder for them to adjust to adverse shocks, such as job loss, a cut in their pay or hours, a sudden rise in the cost of living or the need to replace a durable good. In this context, it is good to see that NEST is examining whether a 'sidecar' savings product (where employees save into an accessible 'rainy day' / emergency fund) alongside pension saving is a way to improve financial resilience.<sup>41</sup>

Of course, potential changes to pension policies are only one, small part of the set of government policies that affect people's financial resilience. Most notably, a key aim of a well-functioning social security system is to help families at times of financial difficulty, such as job loss or falling unwell and being unable to work. That being said, it is always worth policymakers considering potential effects of policies that might not have been intended. It would therefore be worth monitoring more closely the outcomes of potentially more vulnerable employees who have been automatically enrolled to see whether there is cause for concern.

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<sup>41</sup> <http://www.nestinsight.org.uk/nest-insight-launches-sidecar-trial/>.

# Appendix

**Table A1. Derived dates by which employers, will definitely have passed their staging date plus three months, by banded employer size**

No. of employees	Date from which an employer is definitely subject to automatic enrolment
5-49	1 July 2017
50-99	1 July 2015
100-249	1 July 2015
250-499	1 May 2014
>=500	1 February 2014

Note: These dates are derived by looking at the staging date for the smallest employers within the given band and adding on three months (as employers were able to delay introduction of automatic enrolment by three months beyond their staging date). Automatic enrolment was first rolled out to larger employers and then progressively to smaller employers. Therefore, by the time the smallest employer in a group has become subject to automatic enrolment, all other employers will be as well. We do not show the date for employers with fewer than five employees, as we do not include their employees in our analysis.

Source: Authors' calculations using the official staging dates, <https://www.1 April gov.uk/government/news/new-timetable-clarifies-automatic-enrolment-starting-dates>.

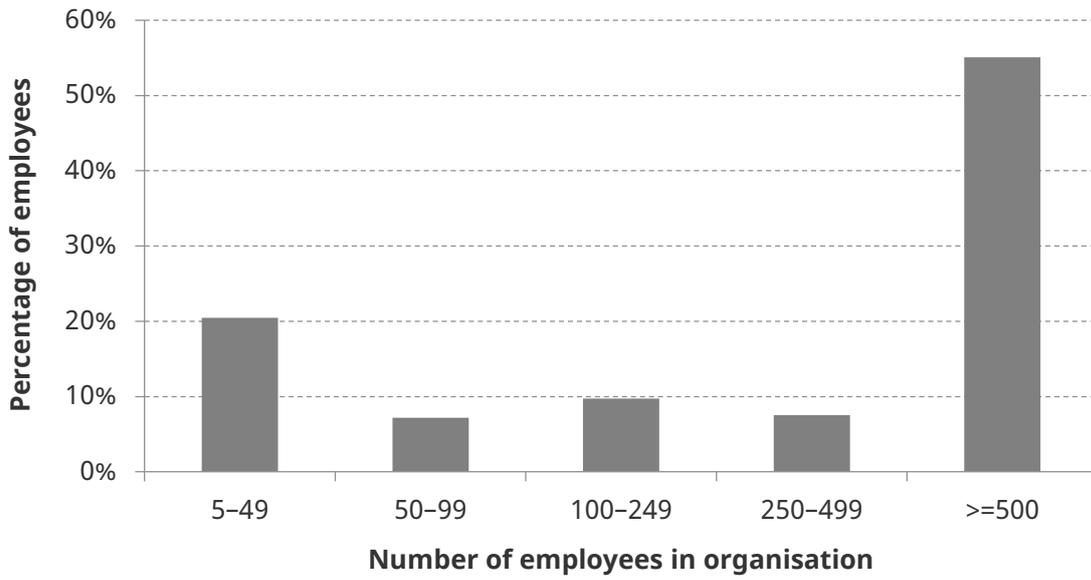
**Figure A1. Employer-size distribution by sample**



Note: Samples are constructed as described in Section 3. Eligible private sector employees only.

Source: Authors' calculations using the FRS, 2011-12 to 2017-18.

**Figure A2. Employer-size distribution used to reweight samples**



Note: The sample contains all eligible employees in the last year available of the FRS (2017-18).

Source: Authors' calculations using the FRS, 2017-18.

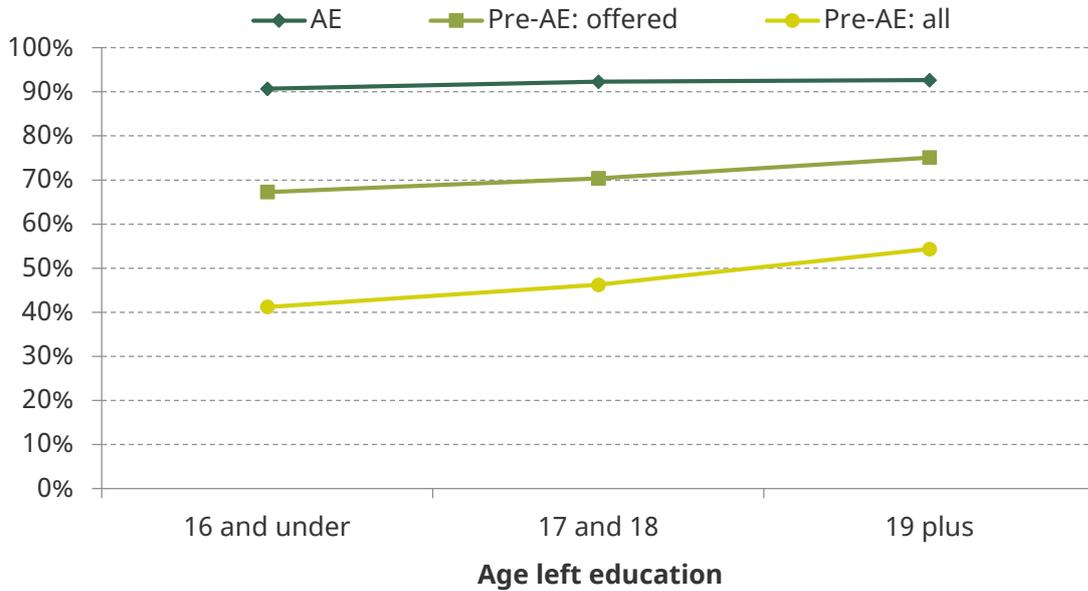
**Table A2. Summary statistics of employees by sample**

	AE	Pre-AE: offered	Pre-AE: all	Difference in means, 'AE' and 'pre-AE: offered'	Difference in means, 'AE' and 'pre-AE: all'	Difference in means, 'pre-AE: offered' and 'pre- AE: all'
Female	39%	40%	39%	0.01*	0.00	-0.01
White	90%	92%	90%	0.01***	0.00	-0.02***
Degree	40%	36%	32%	-0.04***	-0.08***	-0.04***
Part-time	8%	9%	9%	0.00	0.01***	0.01
Gross individual earnings	728	790	720	62.00***	-7.60	-69.61***
Single	25%	24%	25%	-0.02***	0.00	0.02**
Dependent child	36%	39%	37%	0.02***	0.01	-0.01*
Age (years)	41	41	41	-0.04	-0.65***	-0.61***
Job tenure (years)	8.8	9.7	8.6	0.93***	-0.13	-1.07***
Equivalent AHC household income (£/week)	691	704	651	13.24	-39.63***	-52.87***
Sample size	22,869	8,042	12,452			

Note: Samples are constructed as described in Section 3. Eligible private sector employees only. \*\*\* indicates that the effect is statistically different from zero at the 1% level, \*\* at the 5% level and \* at the 10% level.

Source: Authors' calculations using the FRS, 2011-12 to 2017-18.

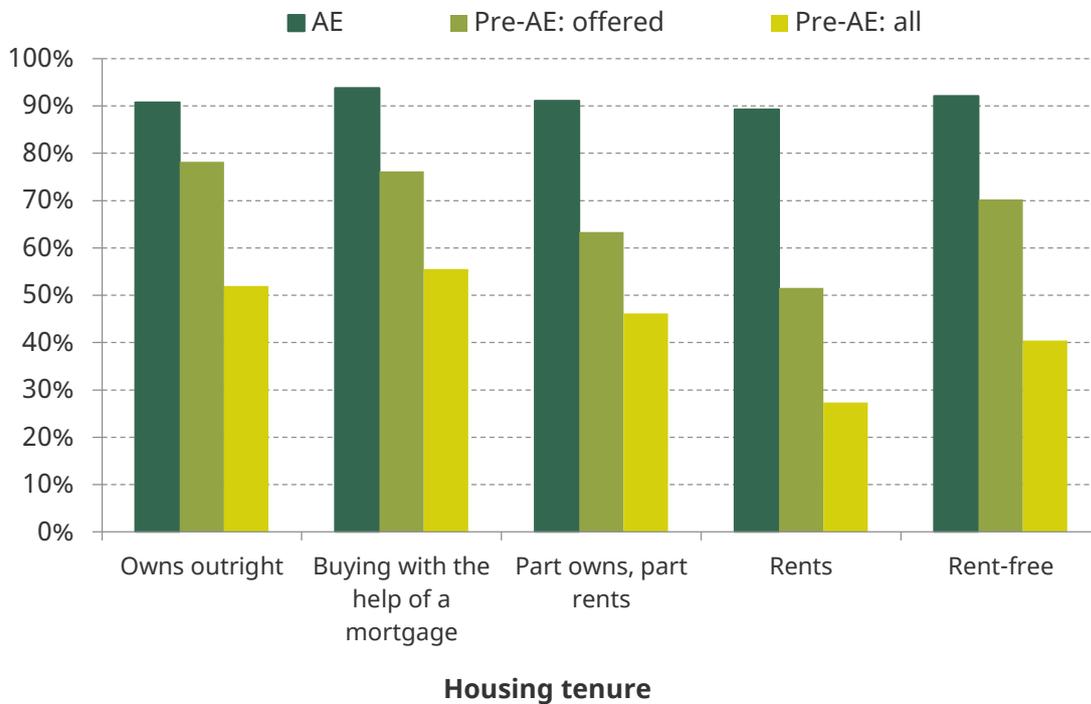
**Figure A3. Workplace pension membership by age left full-time education**



Note: Samples are constructed as described in Section 3. Eligible private sector employees only.

Source: Authors' calculations using the FRS, 2011-12 to 2017-18.

**Figure A4. Workplace pension membership by housing tenure**



Note: Samples are constructed as described in Section 3. Eligible private sector employees only.

Source: Authors' calculations using the FRS, 2011-12 to 2017-18.

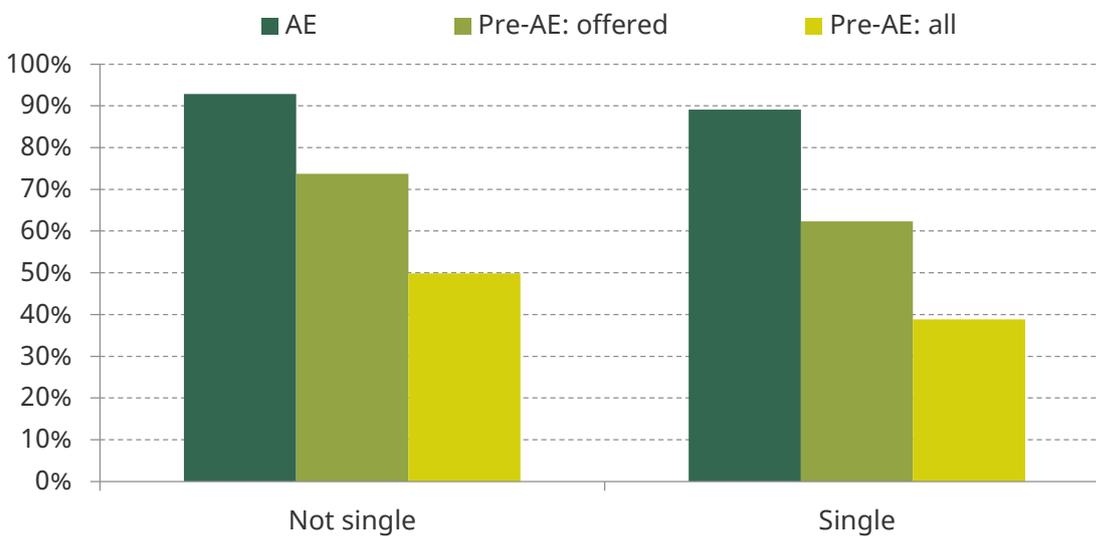
**Figure A5. Workplace pension membership by whether full-time or part-time employee**



Note: Samples are constructed as described in Section 3. Eligible private sector employees only.

Source: Authors' calculations using the FRS, 2011–12 to 2017–18.

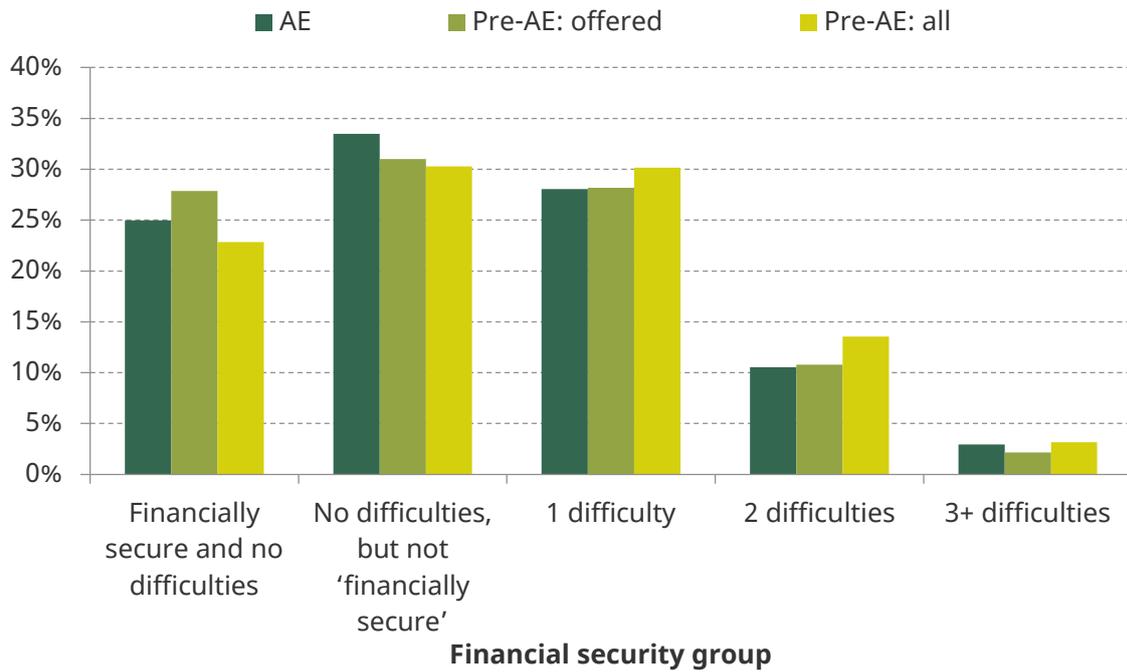
**Figure A6. Workplace pension membership by whether single or not**



Note: Samples are constructed as described in Section 3. Eligible private sector employees only. 'Not single' includes married couples and individuals who are cohabiting.

Source: Authors' calculations using the FRS, 2011–12 to 2017–18.

**Figure A7. Percentage of people meeting financial security conditions, by sample**



Note: Samples are constructed as described in Section 3. Eligible private sector employees only. The financial security groups are defined in Section 5.

Source: Authors' calculations using the FRS, 2011-12 to 2017-18.

**Table A3. Distribution of employee pension contribution rates (as a percentage of total earnings) for 'AE' sample pension members, by financial security group**

	Pension contribution rate					
	0%	0-1%	1-2%	2-3%	3-5%	>5%
Financially secure and no difficulties	17%	14%	8%	9%	19%	34%
No difficulties but not 'financially secure'	14%	24%	11%	11%	18%	22%
1 difficulty	13%	29%	12%	11%	16%	20%
2 difficulties	10%	39%	12%	9%	14%	16%
3+ difficulties	11%	44%	10%	11%	12%	11%

Note: Eligible private sector employees who remain in a workplace pension that they were automatically enrolled into. The financial security groups are defined in Section 5.

Source: Authors' calculations using the FRS, 2012-13 to 2017-18.

**Table A4. Employee pension participation regressions**

<i>Dependent variable: Is a member</i>	Full sample			Employees with partner in relevant sample		
	AE	Pre-AE: offered	Pre-AE: all	AE	Pre-AE: offered	Pre-AE: all
Single	-0.02*** (0.01)	-0.03* (0.01)	-0.01 (0.01)			
Female	0.02** (0.01)	0.04*** (0.01)	0.06*** (0.01)	0.00 (0.01)	0.04* (0.02)	0.07*** (0.02)
White	0.02** (0.01)	0.01 (0.03)	0.05*** (0.02)	0.03* (0.02)	-0.03 (0.05)	0.05 (0.03)
Country of origin is UK	0.03*** (0.01)	0.06** (0.02)	0.07*** (0.02)	0.01 (0.01)	0.12*** (0.03)	0.08*** (0.03)
Part-time	-0.01 (0.01)	0.08*** (0.02)	0.07*** (0.02)	-0.01 (0.02)	0.05 (0.04)	0.09*** (0.03)
Has a degree	-0.00 (0.01)	0.10*** (0.02)	0.11*** (0.01)	-0.03* (0.01)	0.07** (0.03)	0.11*** (0.02)
<b>Age left full-time education (reference: &lt;=16)</b>						
17 or 18	0.02** (0.01)	0.05*** (0.01)	0.06*** (0.01)	0.01 (0.01)	0.03 (0.03)	0.04** (0.02)
19+	0.03*** (0.01)	0.03* (0.02)	0.05*** (0.01)	0.05*** (0.02)	0.02 (0.03)	0.03 (0.02)
<b>Number of employees (reference: &gt;=500)</b>						
5-49	-0.05*** (0.01)	-0.03* (0.02)	-0.29*** (0.01)	-0.04** (0.02)	-0.05 (0.03)	-0.27*** (0.02)
50-99	-0.03*** (0.01)	-0.05** (0.02)	-0.18*** (0.02)	-0.03 (0.02)	-0.09** (0.04)	-0.19*** (0.04)
100-249	-0.01** (0.01)	-0.04* (0.02)	-0.13*** (0.02)	-0.03*** (0.01)	-0.08** (0.04)	-0.13*** (0.03)
250-499	-0.01 (0.01)	-0.01 (0.02)	-0.08*** (0.02)	-0.01 (0.01)	0.02 (0.03)	-0.04 (0.03)
<b>Individual gross earnings quintile (reference: bottom quintile)</b>						
2nd	0.03 (0.03)	0.04 (0.04)	0.07*** (0.02)	-0.04 (0.03)	0.10 (0.09)	0.16*** (0.04)
3rd	0.05** (0.03)	0.17*** (0.04)	0.21*** (0.02)	-0.00 (0.03)	0.21** (0.09)	0.31*** (0.04)
4th	0.08*** (0.03)	0.27*** (0.04)	0.32*** (0.02)	0.01 (0.03)	0.31*** (0.09)	0.41*** (0.04)
5th	0.07*** (0.03)	0.33*** (0.05)	0.40*** (0.03)	0.01 (0.03)	0.34*** (0.09)	0.47*** (0.05)
Dependent children in benefit unit	0.01 (0.01)	0.03* (0.01)	0.04*** (0.01)	-0.00 (0.01)	0.03 (0.03)	0.04** (0.02)
<b>Quintile of AHC household income (reference: bottom quintile)</b>						
2nd	-0.02 (0.01)	0.00 (0.03)	0.02 (0.02)	-0.03 (0.03)	0.09 (0.08)	0.02 (0.05)
3rd	0.00 (0.01)	0.01 (0.03)	0.04** (0.02)	-0.03 (0.03)	0.08 (0.07)	0.02 (0.05)
4th	-0.02* (0.01)	0.01 (0.03)	0.04** (0.02)	-0.03 (0.03)	0.07 (0.07)	-0.00 (0.05)
5th	-0.01 (0.01)	0.03 (0.03)	0.07*** (0.02)	-0.03 (0.03)	0.06 (0.08)	0.01 (0.05)

<i>Dependent variable: Is a member</i>	Full sample			Employees with partner in relevant sample		
	AE	Pre-AE: offered	Pre-AE: all	AE	Pre-AE: offered	Pre-AE: all
<b>Age (reference: 22-25)</b>						
26-30	0.01 (0.01)	0.11*** (0.03)	0.05*** (0.02)	0.03 (0.03)	0.08 (0.06)	0.08** (0.04)
31-35	0.02 (0.01)	0.15*** (0.03)	0.08*** (0.02)	0.03 (0.04)	0.15** (0.06)	0.12*** (0.04)
36-40	0.03* (0.02)	0.20*** (0.03)	0.09*** (0.02)	0.05 (0.04)	0.13** (0.06)	0.07* (0.04)
41-45	0.03* (0.02)	0.18*** (0.03)	0.10*** (0.02)	0.05 (0.04)	0.11 (0.07)	0.11** (0.05)
46-50	0.03* (0.01)	0.20*** (0.03)	0.11*** (0.02)	0.06 (0.04)	0.10 (0.08)	0.09* (0.05)
51-55	0.02 (0.02)	0.21*** (0.03)	0.12*** (0.02)	0.05 (0.05)	0.11 (0.08)	0.13** (0.06)
56-60	0.01 (0.02)	0.17*** (0.03)	0.07*** (0.02)	0.04 (0.05)	0.07 (0.10)	0.01 (0.06)
61-64	-0.04* (0.02)	0.17*** (0.04)	0.01 (0.03)	0.00 (0.07)	0.13 (0.11)	0.03 (0.08)
<b>Job tenure (reference: 3-6 months)</b>						
7 months – 1 year	0.05** (0.02)	0.07 (0.05)	0.05** (0.03)	-0.00 (0.03)	0.13* (0.08)	0.14*** (0.05)
1-2 years	0.05*** (0.02)	0.08* (0.04)	0.09*** (0.02)	-0.01 (0.03)	0.05 (0.07)	0.11*** (0.04)
2-5 years	0.06*** (0.02)	0.16*** (0.04)	0.16*** (0.02)	0.01 (0.02)	0.14** (0.06)	0.18*** (0.03)
5-10 years	0.07*** (0.02)	0.21*** (0.04)	0.22*** (0.02)	0.01 (0.02)	0.18*** (0.06)	0.24*** (0.03)
10-20 years	0.08*** (0.02)	0.32*** (0.04)	0.35*** (0.02)	0.03 (0.02)	0.27*** (0.06)	0.37*** (0.03)
>20 years	0.09*** (0.02)	0.40*** (0.04)	0.46*** (0.02)	0.02 (0.03)	0.35*** (0.06)	0.50*** (0.04)
Partner did not opt out				0.30*** (0.03)	0.29*** (0.03)	0.17*** (0.02)
Partner has degree				0.00 (0.01)	0.04* (0.02)	0.03* (0.02)
Age of partner				-0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Constant	0.79*** (0.08)	0.09 (0.18)	-0.26** (0.10)	0.75*** (0.06)	-0.11 (0.16)	-0.55*** (0.20)
No. of obs.	22,869	8,042	12,449	5,961	2,104	3,951

Note: Standard errors in parentheses. \* p<0.1, \*\* p<0.05 and \*\*\* p<0.01  
Samples are constructed as described in Section 3. Eligible private sector employees only. In the last three columns, only people with partners who are in the same sample as the individual are included.

Source: Authors' calculations using the FRS, 2011-12 to 2017-18.

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