

# Individuals' pension intentions in the new era of freedom

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## Abstract

In 2014 the UK government announced a surprise end to the effective compulsion to purchase an annuity with accumulated defined contribution pension saving. In this paper we use data from the English Longitudinal Study of Ageing to provide new empirical evidence on how holders of defined contribution pensions aged 50 and over plan to access their wealth. We find that many individuals do not know how they will use their pension fund, but of those who do, few now plan to buy an annuity, and a large proportion plan to withdraw their fund as a lump sum. This suggests the observed drop in annuity purchases since 2014 is set to be sustained. We examine the association of individuals' plans with characteristics that would be expected to influence annuity demand including risk aversion, discount rates, the presence of other annuitised income. We find that few individual characteristics are associated with plans, but that intentions are strongly associated with the size of the accumulated pension fund. Given the potential importance of pension draw down decisions for individuals standards of living in retirement, it will be important for policy makers to monitor how individuals plans for their pension wealth evolve over time, and how these plans translate into subsequent behaviour.

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**Keywords:**

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## 1. Introduction

*“Pensioners will have complete freedom to draw down as much or as little of their pension pot as they want, anytime they want....no one will have to buy an annuity”.*

*Chancellor Osborne, Budget Statement March 2014*

In contrast to many other countries, it has traditionally been a requirement in the UK that those with accumulated savings in a Defined Contribution pension fund use the majority of their fund to purchase a secure income stream. However, in surprise announcement in March 2014, the government removed this requirement – a policy reform now colloquially known as “pension freedoms”.

There are strong theoretical arguments that annuities yield significant welfare gains, by providing risk-averse individuals with insurance against longevity risk (Yaari, 1965). However, in practice voluntary annuity purchases in most countries are limited – the so called ‘annuity puzzle’. Many possible explanations for this have been explored by the literature, including (but not limited to) adverse selection, bequest motives, precautionary saving against health risks, and incorrect expectations. The UK has, until now, been a relative outlier in the international context, in that the requirement to purchase a secure income stream with accumulated DC pension wealth has resulted in a well developed annuity market and high rates of annuitisation.

Unsurprisingly there is considerable interest in understanding the behavioral responses to the removal of this annuitisation requirement. First and foremost, there are potentially important consequences for the welfare of the individuals involved. These need not be positive – despite the popularity of the policy among the public and the easy argument that the government has increased consumer choice. Compulsory annuitisation may offer considerable benefits to consumers through removing or reducing adverse selection, moral hazard, and administration costs, and by overcoming behavioural biases and poor information or financial acuity. Second, there is also more general interest in what individuals’ responses to this policy change can tell us about why there are low rates of voluntary annuitisation in other contexts.

The evidence from industry data so far reveals that there has been a significant fall in annuity demand since the 2014 announcement. Cannon, Tonks and Yuille (2016) illustrate around a 50% decline in the total value of annuity purchases between March 2014 and April 2015,

with more recent data (Association of British Insurers, 2017) indicating the total value of purchases stabilizing at around this lower level through to mid-2016. There was also, at least in the short term, a significant increase in the number of pension funds accessed – over 200,000 in April 2015-June 2015, compared with around 95,000 in the equivalent quarter in 2013. The Financial Conduct Authority (2017) found that between October 2015 and September 2016 more than half of pension funds accessed (53%) were fully withdrawn as a lump sum, compared to 90% of funds accessed in 2013 which were annuitized (with only 5% being fully withdrawn). But the majority of the funds fully withdrawn were relatively small, with 90% being smaller than £30,000.

In this paper we examine individuals' reported plans for how they intend to access their accumulated pension wealth after the introduction of pensions freedoms. We do so using data from the English Longitudinal Study of Ageing - a large representative household survey of population aged 50 and over in England. The advantage of this approach is that we can examine how intentions differ according to many individual characteristics and circumstances, in addition to characteristics of the pension fund. This provides a useful complement to analysis based on industry data, where information on the pension fund holders is limited.

We find that individuals' plans for use of their retirement wealth show that the holders of remarkably few defined contribution funds plan to use them to purchase an annuity – reflecting the fall in actual annuity purchases that has been recorded in industry data since the announcement of pension freedoms. We also find evidence for a link between the size of pension funds and the likelihood of planned annuitisation – the holders of smaller pots are less likely to be planning to purchase an annuity than those with larger pots. In addition, we find some evidence for the relevance of home ownership and whether a pension is employer-provided to individuals' reported plans.

The rest of the paper proceeds as follows. In Section 2 we briefly provide some more background on the UK institutional setting, and put the pension freedoms reforms in the context of the previous policy changes in this area. In section 3 we describe the data we use, and in section 4 we present some initial descriptive on the prevalence and importance of DC pension saving among the older population in England. Section 5 contains our main results and section 6 concludes.

## **2. Institutional Context**

The UK has traditionally been typified as having compulsory annuitisation of DC pension wealth. More specifically, it has historically been the requirement that at least 75% of accumulated pension wealth is used to purchase a secure income stream. Unless in poor health this can only be done after a certain age (age 50 until April 2010, age 55 since then), and until recently had to be done before age 75. Such an income stream could be secured through purchasing an annuity, or through an income drawdown arrangement (where the amounts that could be drawn down were fixed to be within certain bounds of the income that would be yielded by an annuity). Any other withdrawals from accumulated pension wealth incurred a punitive tax charge.

While in most cases this effectively mandated annuity purchase (or an equivalent level of income draw down) at some point between ages 50/55 and 75, there have been two long-running exemptions. The first is in the case of “small pots” – whereby those with very small pension funds can fully withdraw (up to 3 of) these as a lump sum. The second is “trivial commutation” whereby those with sufficiently small total pension wealth (in their DC or defined benefit pension arrangements) can take their entire pension wealth as a lump sum. In 2013/14 the small pots level was £2,000 and the limit for trivial commutation was £18,000.

However, from 2011 the requirements to annuitise were relaxed somewhat. In particular, individuals who could demonstrate that they had a secured income until death of at least £20,000 (excluding any state pension income) were able to access their pension wealth flexibly once they reached age 55, with tax payable at the individuals’ marginal rate of income tax. The policy reforms also simplified the rules on the level of income that could be taken through drawdown arrangements, and removed the requirement to have secured an income stream by age 75 (but at the same time increasing the tax charge on pension funds held at death).

The March 2014 announcements were a step change: from April 2015 individuals would be able to access their entire pension wealth as cash withdrawals whenever they chose after age 55, subject to their marginal income tax rate. (There were also transitional arrangements announced for 2014/15, with higher limits for small pots and trivial commutation, and increased flexibility in income drawdown rules.) However, they were continuing a direction of travel for policy in this area.

In summary, the pension freedoms reforms did remove any degree of compulsion for individuals in the UK to purchase an annuity with accumulated DC pension wealth. But it is

worth bearing in mind that those with very small pots or low overall pension wealth could already withdraw their funds as a lump sum, as could (more recently) those with high levels of other secured pension income. Income drawdown products also pre-existed these reforms, as a potential alternative to annuities, but the amounts that could be withdrawn through these forms had previously been fixed around the levels of income that would have been yielded by an annuity.

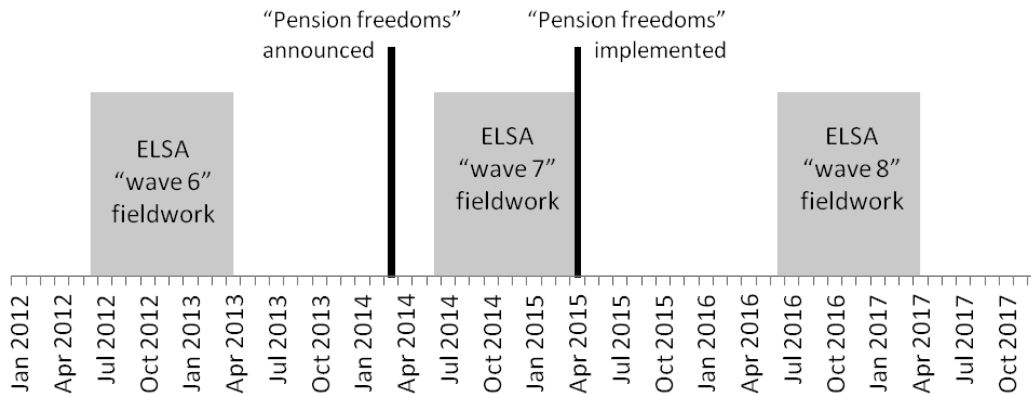
### **3. Data: the English Longitudinal Study of Ageing**

We use data from the English Longitudinal Study of Ageing (ELSA) to examine individuals' intentions with respect to their accumulated DC pension funds, and how these intentions vary systematically with individuals' characteristics.

ELSA is a household panel survey, broadly representative of the population aged 50 and over. It began in 2002/03, with a sample of around 12,000 individuals, and has been conducted every two years since. ELSA collects a vast array of information on individuals' demographics, household circumstances, labour market activity, health (both objectively and subjectively measured, and on many dimensions), and their income, wealth and pension situation.

The timing of the ELSA fieldwork, and how that compares to announcement and introduction of pension freedoms, is illustrated in Figure X. The policy change was announced between waves 6 and 7 of the survey, and implemented around the end of the wave 7 fieldwork period. This means that individuals would be unaffected by the reform when observed in wave 6, be affected by the announcement but not the implementation in wave 7 (which could affect expectations, or behavior through anticipation effects), and to have been affected by the introduction of the policy by the time they are observed in wave 8.

#### **Figure 1. Timing of ELSA fieldwork with respect to “pension freedoms”**



The detail of the ELSA survey is such that each pension that an individual has is separately tracked over time and asked about each wave. This means that it is in theory possible to observe when an individual stops contributing to a pension, and when/how they decide to start accessing their accumulated wealth. In particular, each wave an individual is asked whether they have started to receive an income from any previously reported DC pensions – and if so, whether that income is in the form of an annuity or income drawdown.

In addition, in wave 8 new questions were added to the survey to try and understand how individuals were responding to, or were likely to respond to, the new flexibilities. Specifically, questions were added on:

- (i) How the individual planned to access each DC pension fund held;
- (ii) Whether any lump sum withdrawals had been made from each DC pension fund held since the individual was last interviewed;
- (iii) If so, what the individual had done with the lump sum.

In this paper we focus on responses to the first of these new questions. The question asked is:

*“What do you plan to do with [your pension fund]?”*

- *Purchase an annuity*
- *Draw a regular income*
- *Make a single lump sum withdrawal*
- *Make multiple lump sum withdrawals*
- *Haven't decided yet”*

(and the respondent can choose multiple responses).

Since this question was added for the first time in wave 8, we cannot compare how intentions have changed pre- and post- the announcement or implementation of pension freedoms. However, we can examine individuals' intentions in light of the new flexibilities, and how these vary systematically with individual characteristics and circumstances. This question will continue to be included in subsequent waves of ELSA, so in future it will also be possible to examine how these intentions change over time.

While it is also clearly of interest to examine how individuals' behavior, with respect to how they are accessing their accumulated pension wealth, has changed since the announcement and implementation of pension freedoms, such analysis is hampered by small sample sizes. Only a small proportion of individuals start drawing on their accumulated pension wealth in any given two year period. The wave 8 data therefore contains relatively few observations of individuals who have started accessing their pension funds in a 'post pension freedoms' environment.

#### **4. DC pension holding among the older population**

Before examining how individuals report planning to access their accumulated defined benefit contribution wealth, we start by providing context on the prevalence and importance of such wealth among the current older population.

Table 1 shows that the proportion of people with any form of DC pension (whether simply retained, to which they are still contributing, or from which they are receiving income) is about 60% among those aged between 50 and 64, and begins to fall among older age groups. A similar pattern of prevalence (higher among later cohorts) was demonstrated using earlier waves of ELSA data in Banks et al (2015).

The proportion receiving income from their DC funds is progressively higher in each age group, although there is little difference between those aged 65-69 and those over 70. This is broadly in accordance with the findings of Cannon et al (2016) that the vast majority of annuities are purchased at ages 60 and 65. Although this data was collected in 2016-17, after the pension freedoms reform, most of those receiving income from DC pensions represented in the table below will have accessed their pension before freedoms were in place. Furthermore, in a post pension freedoms environment we may still see this pattern persist in terms of the ages at which people access their pension pots, regardless of what they do with

them. Indeed the table shows that only 1% of people aged 70 or over in our sample were still holding a DC fund from which they were not receiving income.

**Table 1: Prevalence of DC pension funds**

Proportion with:	Aged:				
	50-54	55-59	60-64	65-69	70+
DC fund, from which not receiving income	61.4	52.6	36.4	10.6	1.6
<i>Of which:</i>					
Contributing to	38	35.4	22.9	4.5	0.8
Not contributing to	36.8	29.3	20.1	6.8	0.9
DC pension income	0.3	10.1	26.6	48.5	51.4
Any form of DC pension	61.7	58.7	57.9	56.3	52.3
N	337	673	1,290	1,319	2,607

Notes: The proportions contributing to and not contributing to DC funds sum to greater than the overall proportion with an unaccessed DC fund. This is because some people have more than one DC fund, and may be contributing to one and not to another. The proportion with unaccessed DC funds and the proportion receiving DC pension income do not sum to the proportion with any form of DC pension for the same reason.

As explained in the note to Table 1, many of the current older population have multiple pension pots. Of the 6,363 individuals in our sample, 2,890 (45%) have two or more funds, and 931 (15%) have three or more.

## 5. How individuals plan to access their accumulated pension wealth

Individuals' reported intentions with respect to their DC pension funds are described in Table 2. The first column shows that across all funds held by someone aged 50 or over, strikingly individuals only reported planning to purchase an annuity with 3.9% of them. This reflects the stark drop in annuity demand since the introduction of pension freedoms that has been found by work looking at industry data, as described above. The majority of funds (62.2%), individuals reported not having decided how they would access them. A single lump sum was expected to be drawn from 14.2% of funds.

Table 2 also shows that the holders of some funds, 3.6% of all funds, reported multiple intentions. The additional columns show the proportion of funds for which individuals report each combination of multiple intentions – cells on the diagonal show the proportion of funds for which individuals have only one intention. Most notably, for a small number of funds



from which individuals plan to draw a regular income, individuals also report planning to withdraw the fund as one lump sum. Presumably, those reporting intentions in this way intend to withdraw a one-off lump sum from their pot and subsequently draw a regular income from the remainder. Funds with this combination of intentions reported represent 1.8% of all funds, equal to 9% of all funds intended for the drawing of regular income and 13% of all funds that individuals plan to withdraw as a lump sum.

**Table 2. Reported plans for accessing DC pension wealth**

	<b>All funds</b>	<b>Of which, holder also intends:</b>				
		Purchase an annuity	Draw regular income	Withdraw as one lump sum	Withdraw multiple cash sums	Haven't decided or d/k
Purchase an annuity	3.9	3.0	0.2	0.6	0.0	0.1
Draw regular income	19.1	0.2	16.7	1.8	0.2	0.1
Withdraw as one lump sum	14.2	0.6	1.8	11.5	0.1	0.1
Withdraw multiple cash sums	3.8	0.0	0.2	0.1	3.4	0.1
Haven't decided or d/k	62.2	0.1	0.1	0.1	0.1	61.8
<i>Sample size</i>	<i>1,758</i>	<i>69</i>	<i>336</i>	<i>249</i>	<i>67</i>	<i>1,093</i>

Individuals' reported intentions for their DC pension funds are broken down by age groups in Table 3. It shows that reported intentions are fairly consistent across age groups. In particular, the proportion of funds with which individuals report planning to purchase an annuity is consistently low across all age groups. Among funds held by those aged between 50 and 54, a lower proportion of individuals than in other age groups report not knowing how they will access their pension – perhaps a surprising result given these are the individuals on average furthest away from retirement.

**Table 3. Reported plans for accessing DC pension wealth, by holder's current age**

	All funds	Proportion of funds held by someone aged:			
		50-54	55-59	60-64	65-69
Purchase an annuity	3.9	3.9	2.5	4.8	5.4
Draw regular income	19.1	27.2	17.8	16.5	18.7
Withdraw as one lump sum	14.2	18.1	12.6	14	13.3
Withdraw multiple cash sums	3.8	2.9	2.3	4.8	6.6
Haven't decided or d/k	62.2	52.4	66.3	63.5	60.2
<i>Sample size</i>	<i>1,758</i>	<i>309</i>	<i>523</i>	<i>666</i>	<i>166</i>

### ***Characteristics association with pension intentions***

In this section we describe the characteristics of individuals reporting different intentions with regards to their DC pension funds, before looking at these relationships in a multivariate setting.

Table 4 shows the association of various demographic and economic characteristics with individuals' pension intentions. Among funds held by those who left school upon reaching the compulsory schooling age, 16.6% are held by individuals planning to withdraw them as a lump sum. This proportion drops among more highly educated groups - only 10.9% of funds held by those educated to age 19 or above are thus intended.

The table also shows how intentions differ between individuals who are in a relationship and those who are single and between those who have children and those who do not. Both might plausibly be expected to factor in pension decision-making. For example, those with children might be less likely to report intending to purchase an annuity as it would not enable them to leave part of their pension savings to their children. Such an argument is one often put forth to help explain the 'annuity puzzle'. On the other hand, those with a partner may feel less need to hold substantial precautionary savings if they are able to pool their savings, and risk, with their partner – potentially making annuity purchase a more attractive option. However, it is difficult to discern substantial differences across these two characteristics from Table 4.

Finally, Table 4 shows how pension intentions are associated with home ownership. A notably smaller proportion of those who are renting their home are intending to purchase an

annuity – 1.7% compared to 3.6% and 4.5% of those who own but have a mortgage and those who own outright respectively.

**Table 4: Reported plans for DC pension funds, demographics and economic situation**

	<b>Purchase an annuity</b>	<b>Draw regular income</b>	<b>Withdraw as one lump sum</b>	<b>Withdraw multiple cash sums</b>	<b>Haven't decided/ don't know</b>	<b>N</b>
<b>Education</b>						
Not yet finished	0	0	10	3.3	86.7	30
Compulsory school leaver	3.3	22	16.6	1.8	58.4	541
Between CSL age and 18	5.6	18.2	14.9	3.1	62	606
At age 19 or above	2.9	18.2	10.9	6.7	64.9	521
<b>Is in a couple</b>						
Yes	3.8	18.8	14.7	3.9	62	1,441
No	4.4	20.5	11.7	3.5	63.1	317
<b>Holder has any children</b>						
Yes	3.6	19.2	15.3	3.3	61.5	1,212
No	4.3	17.3	13	4.5	64.9	376
<b>In paid employment</b>						
Yes	4	20	14.5	3.1	61.4	1,418
No	3.6	15.2	12.5	7	65.3	329
<b>Home tenure status</b>						
Own outright	4.5	17.7	13	4.3	63.6	986
Buying with mortgage or loan <sup>1</sup>	3.6	21.7	14.2	4.3	59.7	585
Rent	1.7	19	21.3	0	61.5	174

<sup>1</sup>i.e. owns, but is still paying off mortgage/loan.

In Table 5, we describe how pension intentions are associated with self-reported health. Interestingly, a higher proportion of funds held by those who report having fair or poor health are planned for annuitisation than those held by those reporting ‘good’, ‘very good’, or ‘excellent’ health. One might expect the reverse of this pattern – the less healthy might be more inclined to keep hold of precautionary savings to pay for social care costs, and might also see themselves as having less longevity risk. However, such an association does not of course suggest causality – health is likely to correlate with a number of other relevant characteristics.

The table also shows how pension intentions are associated with quartiles of risk aversion and patience. We construct indices of both by making use of various relevant questions in the

ELSA survey. In particular, the survey asks individuals to self-assess their risk and patience on a scale of 0 to 10 across three dimensions – in the general sense, and in their approach to both finance and health.<sup>1</sup> For both risk aversion and patience we calculate each individual’s average score across these three questions.

As described in Section 1, the link between risk aversion and the annuitisation decision is one that has proved difficult to pin down for researchers in the data. It can be argued that annuitisation may appeal more to the risk-averse, since it guarantees the holder an income stream for the rest of their life – meaning that the holder bears less ‘longevity risk’. On the other hand, various considerations might work in the opposite direction – for example the desire to hold precautionary savings. In the univariate setting shown by Table 5, it is difficult to discern systematic or substantial differences in pension intentions along the risk aversion scale.

The value that individuals place on the present relative to the future (which can be to some extent conflated with ‘patience’) could also affect decisions on what to do with their pension pots. An individual who strongly discounts the future would, *ceteris paribus*, be more likely to want to be able to access their whole fund immediately, rather than purchasing an annuity and having it paid out over their lifetime. In accordance with this reasoning, Table 5 shows that funds planned for annuitisation are least prevalent among funds held by individuals in the least patient quartile of our sample. However, it also shows that a smaller proportion of funds held by individuals in the most patient quartile are intended for annuitisation than in the middle two quartiles, suggesting the possibility of non-linearities in the relationship between patience and the annuitisation decision.

**Table 5: Reported plans for DC pension funds, demographics and economic situation**

	<b>Purchase an annuity</b>	<b>Draw regular income</b>	<b>Withdraw as one lump sum</b>	<b>Withdraw multiple cash sums</b>	<b>Haven’t decided/ don’t know</b>	<i>N</i>
<b>Health</b>						
Fair/poor	5.2	21.8	15.9	1	58.8	308
Good	3.7	18.2	13.2	5.2	63.8	538
Very good	3.7	20.5	12.1	3.7	62.9	572
Excellent	3.5	15.9	17.6	4.4	61.5	340
<b>Risk aversion quantiles (most</b>						

<sup>1</sup> With regards patience, the three categories are actually general, financial, and ‘whether respondent prefers to live for the moment, or for the future’.

<b>risk-averse = 1)</b>						
1	3.4	16.7	12.7	3.7	65.6	378
2	3.1	19.7	16.8	4	59.7	422
3	4.5	17.7	16.1	3.4	60.3	355
4	4.1	21.6	13.2	3.5	61.4	342
<b>Patience quantiles (Least patient = 1)</b>						
1	2.9	20	14.4	3.2	60.8	375
2	4	16.7	15.1	3.8	63.9	371
3	4.4	21	16.2	3.7	59.6	433
4	3.5	19.8	13.9	3.8	60.8	288

Table 6 shows how reported plans for pension funds differ according to the status of the fund. Unsurprisingly, it shows that funds smaller than £8,000 are substantially less likely than larger funds to be intended for annuitisation, and that individuals are most likely to report planning to withdraw such funds as one lump sum. The income guaranteed by purchasing an annuity with such a small pot would be very small, and in fact many annuity providers have a minimum purchase price that would bar most such pots being used in this way. It also shows that on average there is little difference between annuitisation plans for funds to which individuals are still contributing and those to which they are not, or between funds that are employer-provided and those which are not.

**Table 6: Reported plans for DC pension funds, demographics and economic situation**

	<b>Purchase an annuity</b>	<b>Draw regular income</b>	<b>Withdraw as one lump sum</b>	<b>Withdraw multiple cash sums</b>	<b>Haven't decided/ don't know</b>	<b>N</b>
<b>Size of pot</b>						
Less than £8,000	1.3	13.1	24	3.5	58.5	229
£8,000 - £29,999	4.1	16.8	17.6	5.3	58.2	244
£30,000 - £79,999	8.3	18.6	10.8	7.4	58.8	204
£80,000 or above	5.6	29.5	11.5	11.1	53.8	234
<b>Currently contributing</b>						
Yes	4	21.6	13	4.1	60.8	852
No	3.9	16.8	15.2	3.5	63.5	906
<b>Employer provided</b>						
Yes	3.9	20.7	16	3	59.4	945
No	3.9	17.2	12.1	4.8	65.4	813

The final set of univariate associations we present are those relating to the information individuals have accessed. The decision faced by holders of DC pensions as to how to access

their pension pot is a financially complex one. It requires individuals to weigh up and assess various risk factors, as well as evaluate their household characteristics and circumstances. In light of this, there is significant policy interest in the role of advice in pension decisions – the government’s Financial Advice Market Review from March 2016 contained a number of recommendations regarding pension advice. However, among other factors, the cost of accessing independent financial advice limits the number of those doing so – those who did not take advice accounted for 63% of annuity sales and 30% of drawdown sales between October and September 2016.

ELSA respondents are asked two questions pertaining to information accessed – what sources of information they have accessed in the past two years, and what sources of information they have accessed specific to each pension. Looking first at what sources of information each individual has accessed in the past two years, Table 7 shows that 8.5% of funds held by individuals who have consulted an accountant are planned for annuitisation compared with an average of 3.9% (although the sample sizes by source of information are fairly low).

It is notable when looking at sources of information accessed regarding a specific pension that funds held by individuals who have taken information from a financial advisor regarding that particular pot are substantially more likely to be intended for annuitisation or drawdown (30.2%) than the average across all funds (23%).

**Table 7: Reported plans for DC pension funds, demographics and economic situation**

	<b>Purchase an annuity</b>	<b>Draw regular income</b>	<b>Withdraw as one lump sum</b>	<b>Withdraw multiple cash sums</b>	<b>Haven’t decided/ don’t know</b>	<i>N</i>
<b>Sources of information accessed in past 2 years</b>						
Accountant	8.5	17	17	4.3	61.7	47
Bank, building society, or insurance company	0	30	23.3	0	50	30
Employer	6.6	13.2	13.2	2.6	68.4	76
Independent financial advisor	4.2	19.6	10.6	6.1	63.9	377
Advice service or consumer body	0	11.3	13.8	3.8	71.3	80
Private pension	2.4	13.4	23.2	4.9	57.3	82

provider							
Other	5.7	20.5	7.4	9	59	122	
No information	3.4	17.7	17.1	2.3	61.8	899	
<b>Sources of information on this pension</b>							
Accountant	28.6	42.9	28.6	0	28.6	7	
Colleague	0	100	0	0	0	1	
Employer	1.9	24.1	13.7	0.9	61.8	212	
Independent Financial Advisor	5.2	25	6	6.9	61.2	116	
Financial press	0	0	0	0	100	4	
Insurance/pension representative	7.5	17.5	20	5	52.5	40	
Pension scheme reports	3.6	17.6	15.5	3.8	63.1	1,091	
Other	7.7	30.8	0	7.7	53.8	13	
No information	4.4	13.9	15.2	1.3	65.2	158	

### ***Multivariate analysis of reported plans for DC pension funds***

We also carry out a series of multivariate regressions to look at the associations of various individual characteristics with reported plans for DC pension funds. A full list of regressors can be found in the appendix, but Table 8 shows the results of three probit regressions for a subset of the included variables.

The sample used is as for the above tables – un-accessed DC pension funds. In all three regressions we include whether or not the holder has received information from an independent financial advisor regarding that pension. However, we do so using holders’ responses to a question on information accessed taken from the previous wave of ELSA data, collected in 2014–15. The reason for this is to avoid possible endogeneity between individuals’ plans and their having consulted a financial advisor. In particular, it could be that those who had decided to purchase an annuity chose to consult an independent financial advisor having already taken that decision, rather than that those who consulted an independent financial advisor were subsequently more likely to plan to purchase an annuity. Using responses from the previous wave should allow us to reduce the possibility of such endogeneity, since prior to the pension freedom reforms individuals were substantially less likely to be planning to use their pension pot for anything other than purchasing an annuity.

We also cluster standard errors at the level of the individual to account for the fact that some individuals hold multiple DC funds (the regressions are run at the level of DC pension fund).

The results in column one pertain to a regression of whether or not the holder of a fund has decided what they plan to do with that fund. We find that the holders of funds provided by employers are more likely to have decided what to do with their pension, which may highlight the role employers could play in informing individuals about the decision. There is also some evidence that the holders of DC funds who also have a defined benefit pension are less likely to have decided how to use that DC fund. This is unsurprising given that those with defined benefit pensions might be less worried about how to ensure an income stream upon retirement.

Column two shows results from a probit regression where the outcome is as follows: considering only the set of funds for which the holder has decided what they plan to do, does the holder plan to use it to purchase an annuity or to withdraw a regular income, or not. The results show that the holders of funds who are employed (as opposed to unemployed, self-employed, sick or disabled, or retired) are significantly more likely to report planning to purchase an annuity or withdraw a regular income from that fund than other fund-holders. On the other hand, the holders of funds who also have a defined benefit pension are less likely to have opted for annuitisation or drawdown with regards their DC fund. We also find strong statistically significant support for the suggestion from the univariate analysis that larger pots are more likely than smaller pots to be held by those planning to use them to purchase an annuity or draw them down as regular income – reflecting both the fact that very small pots are unlikely to provide a sufficient income stream, and that many of the smallest pots will not meet minimum purchase prices required by annuity providers. This column also shows that holders of DC funds who own their home are more likely to be planning to purchase an annuity with the fund or draw it down as regular income than those who rent.

The final column takes as its sample only funds held by individuals planning to use them to purchase an annuity or withdraw them as regular income, and looks at whether or not individuals plan to use them to purchase an annuity. Once more, the holders of DB pension funds report different intentions from those who do not have a DB pension fund – the holder of a DC fund who also has a DB pension is significantly less likely to be planning to annuitise their DC fund than the holder who does not also have a DB pension. In addition, we find that within this group, holders of DC funds who stayed in education beyond the age of 18 are less likely to be planning to annuitise their fund than those who left before 19 but after the compulsory schooling age.



Notably, across all three regression outcomes shown in Table X, we do not find that reported pension intentions for DC funds are significantly associated with whether the holder has consulted an independent financial advisor. Furthermore, we do not find any statistically significant relationship between either of our indices of risk aversion or patience and reported pension intentions (as defined by the choice sets outlined in the previous paragraphs). These results are included in the full table in the appendix. This is perhaps surprising in the context of the predictions of economic theory that have been touched upon above. However, as discussed in the introduction to this paper, the desire to retain precautionary savings has been put forward as one possible explanation for the ‘annuity puzzle’, and such a desire would make the effect of risk aversion on the annuitisation decision more ambiguous.

**Table 8: Pension intentions, by various characteristics**

	(1) <b>Decided = 1</b>	(2) <b>Annuity or drawdown = 1   decided</b>	(3) <b>Annuity = 1   decided on annuity or drawdown</b>
Employed	0.144 (0.137)	0.580** (0.243)	-0.204 (0.389)
Has DB pension	0.206* (0.109)	-0.315* (0.190)	-0.911*** (0.349)
Partner has DB pension	0.154 (0.109)	-0.251 (0.193)	-0.417 (0.280)
Has DB pension and partner has DB pension	0.0489 (0.174)	0.257 (0.287)	1.259** (0.504)
Owns home (inc. buying with mortgage and shared ownership)	-0.00199 (0.135)	0.432* (0.226)	0.212 (0.447)
Left education at compulsory schooling age	0.102 (0.100)	0.0864 (0.166)	-0.394 (0.243)
Left education at age 19 or above	-0.102 (0.101)	-0.0908 (0.176)	-0.566** (0.262)
Employer-provided pension	0.168** (0.0738)	0.141 (0.139)	0.0151 (0.207)
Fund size: £8,000-£29,999	-0.00110 (0.0912)	0.465*** (0.166)	0.336 (0.321)
Fund size: £30,000-£79,999	0.0866 (0.0977)	0.821*** (0.180)	0.441 (0.279)
Fund size: £80,000 or above	0.119 (0.101)	1.006*** (0.189)	0.140 (0.306)
Employment income (£ per week)	3.22e-05 (0.000172)	-0.000306 (0.000211)	0.000485 (0.000453)

Age, 55-59	-0.385*** (0.114)	0.0707 (0.194)	0.278 (0.314)
Age, 60--64	-0.244** (0.118)	-0.0307 (0.194)	0.714** (0.306)
Age, 65-69	-0.0794 (0.159)	0.0350 (0.273)	0.872** (0.412)
Age, 70+	-0.295 (0.278)	0.249 (0.519)	-
Observations	1,604	511	293

Robust standard errors in parentheses  
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

## 6. Conclusions

Since the introduction of so-called ‘pension freedoms’ in April 2015, individuals have been able to access their entire pension wealth as cash withdrawals whenever they choose after age 55, subject to their marginal income tax rate. Previous to this, the law effectively mandated annuity purchase in most cases, although policy had begun to move away from this from 2011 onwards. Evidence from industry data so far reveals that there has been a significant fall in annuity demand since the announcement of pension freedoms in April 2014. Given the potential importance of pension behavior for individuals’ standards of living in retirement, it will be important for policy-makers to continue to monitor how use of pension wealth responds to these reforms, and to learn more about how individuals take decisions regarding their financial plans for retirement.

In this paper we have used data from the English Longitudinal Study of Ageing to provide new empirical evidence on how holders of defined contribution pensions aged 50 and over plan to access their wealth. ELSA data has allowed us to examine how intentions differ according to a range of individual characteristics and circumstances.

We find that individuals’ plans for use of their retirement wealth show that the holders of remarkably few defined contribution funds (4%) plan to use them to purchase an annuity. This represents approximately 10% of all those who have decided how to use their fund, and thus reflects the fall in actual annuity purchases that has been recorded in industry data since the announcement of pension freedoms. We also find significant evidence for a link between the size of pension funds and the likelihood of planned annuitisation – the holders of pots smaller than £8,000 who have made plans regarding how they will access their pension wealth are significantly less likely to be planning to purchase an annuity than those with

larger pots. Along various margins of decision-making, we also find evidence for the relevance of home ownership and whether a pension is employer-provided to individuals' reported plans.

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## Appendix

### Pension intentions, by various characteristics

	(1) <b>Decided = 1</b>	(2) <b>Annuity or drawdown = 1   decided</b>	(3) <b>Annuity = 1   decided on annuity or drawdown</b>
2 <sup>nd</sup> most risk-averse quartile		-0.0441 (0.185)	-0.292 (0.320)
3 <sup>rd</sup> most risk-averse quartile		-0.0423 (0.189)	-0.286 (0.312)
Least risk-averse quartile		0.236 (0.204)	-0.138 (0.311)
2 <sup>nd</sup> least patient quartile		-0.111 (0.199)	0.157 (0.328)
3 <sup>rd</sup> least patient quartile		0.0804 (0.191)	0.263 (0.300)
Most patient quartile		-0.133	0.145

		(0.211)	(0.319)
Gender	0.0259 (0.0835)	0.161 (0.144)	0.238 (0.224)
Has any children	-0.0747 (0.0979)	0.0243 (0.163)	-0.290 (0.271)
Is in a relationship	0.0149 (0.106)	-0.196 (0.195)	0.144 (0.339)
Employed	0.144 (0.137)	0.580** (0.243)	-0.204 (0.389)
Self-employed	0.0153 (0.161)	0.581* (0.301)	-0.0622 (0.464)
Unemployed	-0.389 (0.338)	0.781 (0.689)	
Permanently sick or disabled	0.296 (0.255)	0.498 (0.418)	-0.919 (0.688)
Looking after home or family	0.262 (0.233)	0.0765 (0.428)	-0.418 (0.807)
Has DB pension	0.206* (0.109)	-0.315* (0.190)	-0.911*** (0.349)
Partner has DB pension	0.154 (0.109)	-0.251 (0.193)	-0.417 (0.280)
Has DB pension and partner has DB pension	0.0489 (0.174)	0.257 (0.287)	1.259** (0.504)
Self-reported health is good, very good, or excellent	-0.120 (0.106)	-0.176 (0.177)	0.112 (0.282)
Owns home (inc. buying with mortgage and shared ownership)	-0.00199 (0.135)	0.432* (0.226)	0.212 (0.447)
Currently contributing to pension	0.0596 (0.0724)	0.166 (0.139)	-0.326* (0.197)
Not yet finished education	-0.816** (0.317)	-	-
Left education at compulsory schooling age	0.102 (0.100)	0.0864 (0.166)	-0.394 (0.243)
Left education at age 19 or above	-0.102 (0.101)	-0.0908 (0.176)	-0.566** (0.262)
Employer-provided pension	0.168** (0.0738)	0.141 (0.139)	0.0151 (0.207)
Fund size: £8,000-£29,999	-0.00110 (0.0912)	0.465*** (0.166)	0.336 (0.321)
Fund size: £30,000-£79,999	0.0866 (0.0977)	0.821*** (0.180)	0.441 (0.279)
Fund size: £80,000 or above	0.119 (0.101)	1.006*** (0.189)	0.140 (0.306)
Employment income (£ per week)	3.22e-05 (0.000172)	-0.000306 (0.000211)	0.000485 (0.000453)
Age, 55-59	-0.385***	0.0707	0.278

	(0.114)	(0.194)	(0.314)
Age, 60--64	-0.244**	-0.0307	0.714**
	(0.118)	(0.194)	(0.306)
Age, 65-69	-0.0794	0.0350	0.872**
	(0.159)	(0.273)	(0.412)
Age, 70+	-0.295	0.249	-
	(0.278)	(0.519)	
Has consulted an independent financial advisor regarding this pension	0.131	0.0360	-0.882
	(0.193)	(0.373)	(0.537)
Constant	-0.351	-0.931**	-1.245*
	(0.249)	(0.459)	(0.752)
Observations	1,604	511	293

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Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1