Increasing consumer engagement in the annuities market: can prompts raise shopping around?

Oxera and the Nuffield Centre for Experimental Social Sciences

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Abstract

Many people buy their annuity from their existing pension provider, even though they might get a better deal by switching provider. The Financial Conduct Authority (FCA) has proposed that pension providers make it clear to consumers how their quotes for annuities compare with other providers in the open market.

To test whether, and if so how, 'prompts' might encourage consumers to shop around for their annuity, the FCA commissioned Oxera and the Centre for Experimental Social Sciences to conduct an experiment.

The results of the online experiment show that carefully designed prompts can encourage shopping around. The key finding is that using targeted communications, as proposed in the FCA retirement income market study, significantly increased shopping around. More specifically:

- a comparison showing the pension provider quote against the best available quote in the market, and personalised for the individual in question, led to the highest rates of shopping around;
- being told that eight out of ten people lose out by not shopping around led to the second-highest shopping-around rate;
- people shop around much less if provided with too much information;
- being given additional information on the lifetime gains from shopping around did not increase the rate of shopping around;
- as expected, the higher the prospective gain from shopping around relative to the initial quote received from the pension provider, the greater the shopping around. At the same time, the absolute amount that an individual stood to gain from shopping around had a smaller impact on their likelihood to do so.

Glossary of terms

Framing	The way in which information is framed can affect a consumer's preferences in relation to the options available. For example, consumers react differently when a fee is expressed in percentage or in absolute terms.
Heuristics	Mental shortcuts used by people every day to make decisions. For example, people may use simple rules of thumb to help them deal with a complex decision—if I withdraw 4% each year from my pension pot, this will last me for retirement. Although heuristics can save time and effort, especially when dealing with complex problems, they can sometimes be imperfect and open to exploitation by firms. People commonly use the **availability heuristic** to assess the probability of an event happening based on information that is easily available in their mind, which tends to be recent information. For example, insurance purchases increase immediately after floods and earthquakes, and gradually decline when memory of these events fades.[1]
Loss aversion	People prefer to avoid loss rather than acquire gains. Loss aversion is partly due to what is known as the **endowment effect**: people ascribe more value to their own goods simply because they own them. This in turn suggests that people often demand much more to give up an object than they would be willing to pay to acquire it.
Present bias	The tendency to place too much weight on immediate gains at the expense of one's long-term goals. For example, consumers may agree that they should switch energy provider to save money, but many are unwilling to give up their time today to do this.
Prompts	Ways in which consumers can be nudged towards taking a particular action. Prompts can offer simple calls to action ('it's good to shop around') or provide information ('you could be better off by £100 if you shop around'). In other cases, prompts can be timely reminders to help consumers make better decisions ('you're approaching your credit limit in your account').
Reference dependence and anchoring	Consumers' appraisal of different options of a product may be influenced by what is presented as an initial reference point or anchor. For example, when purchasing goods and services, consumers are often influenced by the base price and discount on an item. If a bottle of wine is initially priced at $10 but reduced to $5, consumers may perceive that they are getting a better deal than if the wine were offered at $5 in the first place. By showing a discount on a certain high base price, firms are attempting to move the consumer's implicit reference point to the base price, and consumers feel a gain from buying the product (even if the consumer might not have been willing to pay the base price).
Status quo bias	Consumers' tendency to stick with their current choice. For example, experience with their current pension provider leads some customers to place additional trust in this provider and to perceive a risk of loss when considering changing provider for their annuity purchase.
Treatment	In experimental research, in order to measure the impact of a particular policy change, participants are divided into a 'treatment' and a 'control' group (or groups). The treatment group is the recipient of the policy change and the control group serves as the baseline. The terms treatment and control originate from medical research where a medical treatment is tested on a randomly selected group. In the context of this report, the treatments refer to the prompts that seek to induce consumers to shop around.

[1] Chuah, S.H. and Devlin, J. (2011), 'Behavioural economics and financial services marketing: a review', *International Journal of Bank Marketing*, **29**:6, pp. 456–69.

1 Introduction and summary

1.1 Objective

The retirement income market study by the Financial Conduct Authority (FCA) found that competition is not working well for consumers in the annuities market.[2] One of the study's key findings was that many consumers are missing out by not shopping around for an annuity and switching providers (see Box 1.1), and some do not purchase the best annuity for their circumstances. In particular in its earlier thematic review in 2014, the FCA found that, while 80% of consumers who purchase their annuity from their current pension provider could benefit by shopping around and switching,[3] many fail to do so.

There could be several explanations for this failure to shop around. In part, it may reflect key behavioural biases, but also in part the way in which consumers assess the costs and benefits of different products available to them.

According to the FCA retirement income market study:[4]

> Of the 40% of consumers who stayed with their existing pension provider for an annuity, the majority (80%) were aware of their option to shop around. However, of those who did not switch, one half did no shopping around. This suggests that even when consumers are aware of their option to shop around, not all are clear on how to do this in practice. Some consumers made an active choice to stay with their existing provider out of brand loyalty and trust. Others, however, believe shopping around is not worth it.

Box 1.1 Shopping around versus switching

A distinction should be made between shopping around and switching—shopping around does not necessarily lead to switching and switching does not always require shopping around. Shopping around is usually measured through consumer research, while switching is a quantitative measure based on actual purchases from a different provider.

An individual may have switched without shopping around—for example, buying from another provider, perhaps as a response to a direct financial promotion, which arguably does not constitute true shopping around.

The Money Advice Service (MAS) promotes a four-step plan to shopping around for annuities:

Step 1: Decide on the type of annuity you want

Step 2: Check what your pension provider is offering

Step 3: Use the MAS annuity comparison table

Step 4: Discuss your findings with a retirement income expert

The MAS guide is equally applicable to other retirement income products as it is to annuities, although the comparison of products (Step 3) is more difficult for alternative retirement products with features over and above the headline price (e.g. income drawdown products). Pension Wise is available to help consumers with Step 4. Consumers may also choose to take regulated financial advice.

[2] Financial Conduct Authority (2015), 'Retirement Income Market study: final report – confirmed findings and remedies', March.
[3] Financial Conduct Authority (2014), 'Thematic review of annuities', TR 14/2, February.
[4] Financial Conduct Authority (2014), 'Retirement income market study: interim report – provisional findings and proposed remedies', December.

Source: Financial Conduct Authority (2014), 'Thematic review of annuities', TR 14/2, February; and Money Advice Service, https://www.moneyadviceservice.org.uk.

To promote shopping around, the FCA's proposed remedies have centred on the provision of effective prompts. Such prompts have helped consumers make better decisions in other areas, including in relation to retail banking, energy and telecoms.[5] Their effectiveness depends on the context in which they are provided—including the point in the consumer journey when the prompts are shown—and how they are presented or framed.

To understand consumers' reactions to prompts in the market for retirement products, the FCA commissioned Oxera and the Nuffield Centre for Experimental Social Sciences (CESS) to conduct an experiment. The experiment focused on the particular point when consumers receive an annuity quote from their pension provider.[6] In particular, the experiment tests the impact of different prompts in the provider's written communication. Although the experiment focuses on prompts in the annuities market, it is also likely to provide more general lessons about the effectiveness and use of prompts relevant to other markets and sectors. In applying lessons learned from this research to other markets, we should be mindful that there are key differences between the purchases that consumers make, as well as similarities.

Several innovative features were incorporated into the environment in which the experiment was undertaken. The aim of these was to mirror as closely as possible the inertia observed when people are faced with buying annuities in the real world, given that this situation cannot be fully replicated in an online experiment.

1.2 The experiment

1.2.1 Information treatments

Our sample of 1,996 participants from the UK population of people at or nearing retirement age (aged 55–65) was randomly divided into six groups.[7] Five of the six groups received a prompt with varying information on the gains from shopping around intended to encourage consumers to shop around. These are referred to as the 'treatments'. The sixth group was not presented with information on the gains from shopping around, and therefore acted as a 'control' against which the behaviour of the other groups could be compared.

The six groups (five treatments and one control group) were as follows (as illustrated in Figure 1.1).

- **The control group**—the participants were told, in a statement, that it was not too late to shop around for quotes from other providers.[8] The statement was based on an actual letter of a pension provider sent to one of its clients.

[5] See, for example, Financial Conduct Authority (2015), 'Message received? The impact of annual summaries, text alerts and mobile apps on consumer banking behaviour', March, Occasional Paper No. 10, pp. 4–5.
[6] The quote offered by the pension provider is often an indicative quote based on the characteristics of the consumer in question.
[7] The sample was restricted to people aged 55–65 because they are the people who can potentially purchase an annuity. Annuity buyers may be different to the general population, however, and their characteristics are likely to change given recent policy changes and the sharp decline in the number of annuities sold. The sampling is discussed in more detail in section 4.6.
[8] Current FCA regulation requires pension providers to remind consumers that they have the option of shopping around should they wish to do so.

- **Call to action**—the participants were told that '80% of people who fail to switch from their pension provider lose out by not doing so.' This text was accompanied by a visual representation of the 80% figure.

- **Personalised quote comparison**—the participants were provided with the highest quote they could obtain by shopping around. The difference between that quote and the pension provider quote was highlighted. The text information was then complemented by a bar chart comparison of the two quotes.

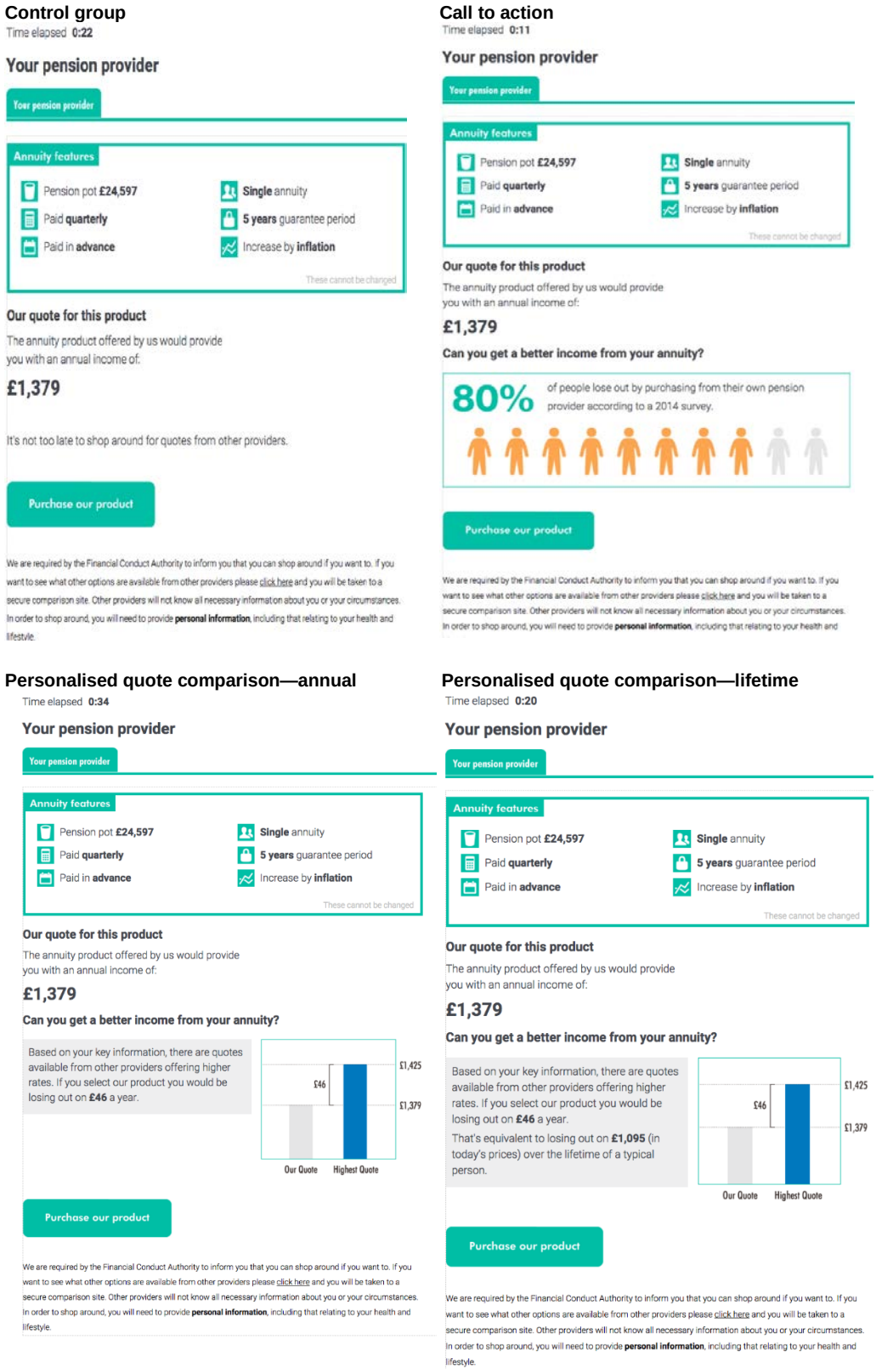
- **Personalised quote comparison with lifetime gains**—the same information was provided as in the 'personalised quote comparison', but also with an estimate of the *forgone gains* from not shopping around over *a typical person's lifetime*.

- **Non-personalised quote comparison**—the participants were provided with an estimate of how much they could obtain by shopping around. However, the information emphasised that the quote provided was based on an estimate and that the participants might obtain a higher or lower quote were they to shop around.

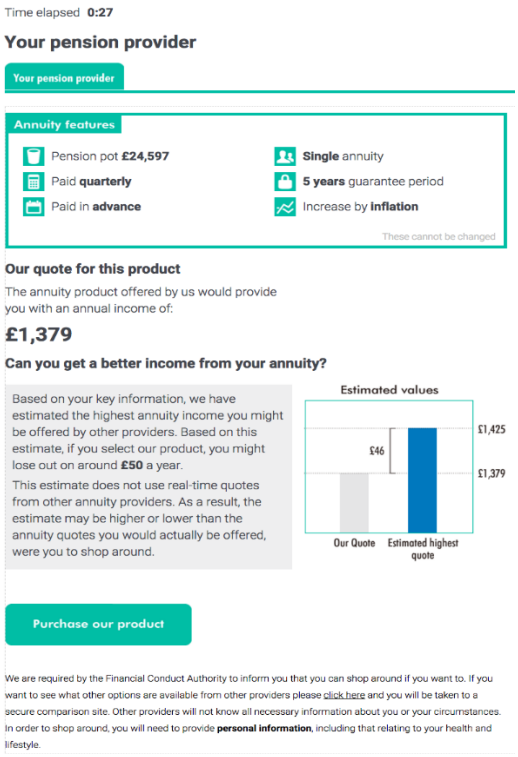
- **Non-personalised quote comparison with lifetime gains**—the same information was provided as in the 'non-personalised quote comparison', but also with an estimate of the *forgone gains* from not shopping around over *a typical person's lifetime*.

All five treatments emphasised that consumers were likely to *lose out* on prospective gains by not shopping around. They sought to reduce customer inertia in different ways. For example, the call to action treatment was more generic. It focused on simplicity, and a prominent visual image that invoked social comparisons. By contrast, the personalised treatment was more bespoke to an individual, with a visual comparison of the best external quote available and the internal provider's offering.

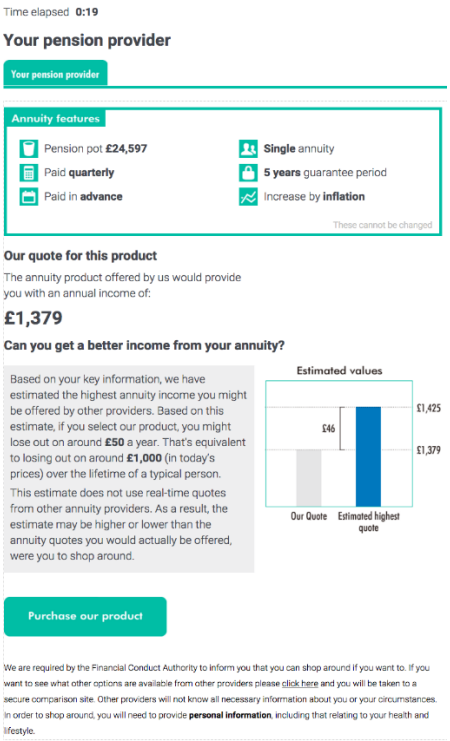
Figure 1.1 Information treatments



Non-personalised quote comparison—annual



Non-personalised quote comparison—lifetime



Source: Oxera.

The experiment further tested whether the size of the gains matters in the decision to shop around. Each treatment was applied to two sizes of pension pot and two levels of pension provider quote (giving a total of four). This brought the number of groups in the experiment to a total of 24 (six information variations multiplied by four pot size and provider quote variations).

1.2.2 Experiment environment

The experiment sought to encourage participants to act as they would do in real life when it came to which choice they would make. In particular, the experiment was designed to reduce the risk of participants 'playing the game' and shopping around for annuities to comply with what they thought was expected of them in the experiment.[9]

Thus, the experiment placed participants in a scenario where they had to make a series of decisions on their retirement income sources. In addition to their pension annuity, they were asked to make decisions on: (i) part-time employment, (ii) private savings, and (iii) income from their home. They were incentivised to maximise their retirement income through the payment of a reward at the end which depended on the level of income they accumulated during the experiment. The monetary incentive was provided in order to increase the likelihood that participants were sufficiently engaged in the tasks.

The pension task began with a personalised letter from their pension provider, which looked like a letter that a provider would send in real life. The participant was asked to make choices on various annuity features before receiving the provider quote. This was aimed at inducing a degree of brand loyalty to the pension provider, and a sense of 'job done', while also inducing some fatigue in

[9] This is known as 'experimenter demand effects'. See Zizzo, D.J. (2010), 'Experimenter demand effects in economic experiments', *Experimental Economics*, **13**:1, pp. 75–98.

the process, with the participant being required to focus effort on a task for a period of time, which depletes mental resources, making problem-solving and active choice-making more difficult. Taken together, these factors should have reinforced any status quo bias.

It was at that point in the experiment that the pension provider quote was provided and the information treatment concerning the benefits of shopping around applied (i.e. call to action, personalised or non-personalised). If the participant subsequently decided to shop around, they would then need to input some personal information. Once they had done so, they were directed to a price comparison website (PCW) with three quotes. At that point, the participant could choose to purchase a product from one of the three providers; proceed to another PCW and review more quotes; or return to their pension provider. A total of five PCWs were available to be viewed.

1.3 Key findings

The key outcome of interest was the proportion of consumers who shopped around. In particular, the experiment sought to measure the impact of the prompts on the participants' decision to shop around. The important metric is therefore whether the consumer clicked to shop around after they were exposed to the information treatment. Shopping-around behaviour was also captured using additional metrics. These included the degree of intensity with which consumers shopped around (e.g. the number of quotes they reviewed), whether they switched or not, and how much they gained (or lost) by switching.

1.3.3 Propensity to shop around

All the information treatments had a significant impact on the consumers' decision to shop around. Figure 1.2 shows the proportions of participants who clicked to shop around for the six groups. The proportion who clicked to shop around in the control group is 13%. This figure is substantially lower than the proportion of consumers who did not switch from their pension provider in real life, which is approximately 40%.[10] This in turn suggests that the key outcome of the experimental results is the ranking of the treatments, not necessarily the magnitudes of the difference between them.

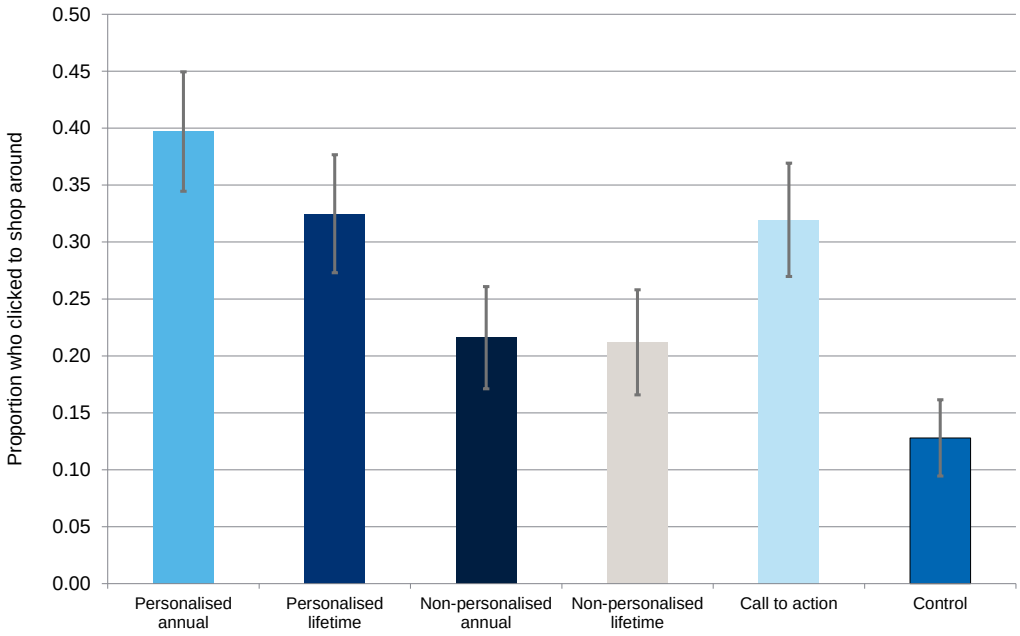
The effects of the treatment, measured as the difference between the treatment and the control, range from around 8 percentage points for the non-personalised lifetime to 27 percentage points for the personalised annual treatment. Furthermore, there is substantial variation in the effects across the five treatments, with the personalised annual treatment achieving the highest impact on shopping around, followed by the call to action treatment—at 8 percentage points, the difference between these two is statistically significant. The two treatments prompt consumers in different ways: the personalised treatments offer information that is reliable and customised to the consumer; the call to action treatment offers simple, easily digestible information accompanied by a strong social-comparison visual.

Moreover, the non-personalised treatments caused significantly less shopping around than both the personalised and the call to action treatments. There are two main potential explanations for this. The non-personalised treatments may have contained too much text, which may have led to information overload and

[10] Financial Conduct Authority (2014), 'Thematic review of annuities', TR 14/2, February. Switching rates have remained approximately the same since 2014. See https://www.fca.org.uk/news/retirement-income-market-data, accessed 27 April 2016. In the real world, shopping-around rates are expected to be higher than switching rates as it is expected that more people shop around but do not switch than people who switch without shopping around. See Box 1.1 above for a discussion.

dilution of the message, prompting consumers to stick to the status quo. An alternative explanation is that the non-personalised treatments highlighted the uncertainty in the gains of shopping around, which may have discouraged consumers.

Figure 1.2 Proportion who clicked to shop around



Note: Each bar measures the proportion who clicked to shop around. Error bars indicate 95% confidence intervals.

Source: Oxera.

Another significant finding is that including information about lifetime gains in the text does not improve shopping around. Including information about the lifetime gains was expected to increase shopping around, as a higher figure might make it seem more worthwhile. The additional information may have been ineffective as the prompts contained too much information for the participants to process. More research would be needed to determine the best explanation for this finding with more certainty.

1.3.4 Persistence in shopping around

The experiment also measured the extent to which the treatments caused participants to review quotes from other providers and switch from their pension provider. As noted above, in order to review alternative providers' quotes, the participants needed to input personal and medical information. Around one-quarter of those who decided to shop around were deterred by those questions and did not proceed any further.

Of those who answered the questions and reviewed the first PCW, around two-thirds decided not to review any more quotes. They may have contented themselves with simply having a better offer than their pension provider, and therefore stopped there.[11] Others may not have wanted to spend more time shopping around because they did not think the potential gains would be worth

[11] This situation, whereby the consumer is satisfied with the option and stops searching through available alternatives until they find an acceptable alternative, is referred to as 'satisficing' behaviour.

the additional burden of providing more personal information or spending more time on the task.

Throughout the shopping-around process, there was a significant difference between the control group and all the treatments. The results suggest that the treatments not only caused consumers to immediately respond and press the button to shop around, but also to persist in finding the best deal.

1.3.5 Switching and switching gains

When consumers reached the first PCW, three quarters of them switched from their pension provider and bought an annuity from the open market. It is nevertheless surprising that, even though the first PCW contained at least one quote that was higher than the pension provider quote, some consumers decided not to switch. This may be because consumers wanted to remain with their pension provider because they did not trust alternative providers and felt the gains were not sufficient to induce them to switch. In fact, half of those participants who did not switch would gain only £10 by switching. There is also the possibility that some participants made a mistake.

The findings also show that the treatments that were most successful in encouraging consumers to shop around were also more effective in helping them make a better choice. The results for switching and switching gains (i.e. the difference between the purchased product and the pension provider quote) are qualitatively similar to the differences seen in the degree of shopping around. The personalised annual treatment led to significantly higher gains than the non-personalised treatments. The difference between the call to action and the non-personalised groups was not statistically significant.

1.3.6 Pension pot size and pension provider quote level

In terms of actual sums of money, individuals with a high pension pot had the most to gain from shopping around. However, the analysis found no evidence of an impact of the pension pot size *per se* on the participants' propensity to shop around. At the same time, reducing the pension provider's quote increased the proportion of participants who clicked to shop around in the personalised annual group by 17 percentage points.

This, in turn, suggests that consumers are more influenced by the relative (percentage) than the absolute (£) gains of shopping around. This is known as 'reference dependence', with the reference point here being the level of the pension provider's offer, and it is consistent with findings from other studies.[12]

1.3.7 Impact according to gender, income and education

The analysis explored whether participants responded differently to each of the treatments according to their gender, income and education. The findings reveal that:

- women are around more likely to respond to the personalised annual treatment than men (by 12 percentage points);
- high income participants are more likely to shop around than low income participants when assigned to the non-personalised lifetime group (by 10 percentage points);

[12] See, for example, Andersen, S., Brandon, A., Gneezy, U. and List, J.A. (2014), 'Toward an Understanding of Reference-Dependent Labor Supply: Theory and Evidence from a Field Experiment', National Bureau of Economic Research, No. w20695.

- high education participants are more likely to shop around than low education participants when assigned to either the control group or the non-personalised treatment (by 8–13 percentage points).

1.4 Conclusions

Overall, the results provide evidence that carefully designed prompts can have a significant impact on consumer behaviour and encourage shopping around. Importantly, the experiment has also been able to identify which prompts were most effective in this regard.

These two most effective treatments prompt consumers in different ways. The personalised treatments offer information customised to the consumer. The effectiveness of such interventions may be explained in a number of ways. For example, they may be effective because they provide credible information that the consumer trusts and can act upon, or because of the way they interact with consumers' other behavioural traits, such as procrastination and inertia.

The call to action treatment contained a short, yet effective, statement prompting consumers to shop around by invoking a social comparison. The impact of the call to action treatment suggests that simple, easily digestible, information that accompanies text with visuals can have a large impact on consumer behaviour. It also offers more evidence that social comparisons of this sort can have a significant impact.

From a methodological perspective, the experiment sought to increase the 'external validity' of the results, by encouraging behaviour similar to that observed in reality. The experiment used design features to induce behavioural biases that have been found to inhibit shopping around, such as requiring participants to go through multiple steps where they had to read a lot of information and make selections on the annuity features they wanted, before they were faced with the information treatments.

Overall, the evidence presented in this study provides useful insights both for the annuities market and for regulators in other markets who wish to increase customer engagement and enhance competition. The relative impact of the various treatments, combined with an estimated cost of implementation, can in turn provide useful guidance on which remedies to follow in order to improve shopping around.

2 Motivation

In certain markets, while consumers would be better off shopping around and switching from their existing provider, many fail to do so. This has been observed in a variety of markets, for example, including general insurance, cash savings and energy supply.[13] This reluctance to search and switch is driven not just by a fully rational assessment of the prospective costs and benefits of doing so, but also by consumers' behavioural biases. These biases include loss aversion, present bias and heuristics, as explained in this section. Academics have noted that behavioural biases are particularly relevant to annuity purchasing, and are often cited as the reason for the 'annuity puzzle', explaining why voluntary annuitisation is lower than might be expected in some countries.[14]

In the UK annuities market, consumers may purchase an annuity from their existing pension provider, or search for and buy an annuity in the open market. While there are substantial gains to be had by shopping around, approximately 60% of consumers stick with the default option—their existing pension provider.[15] They may do so, for example, because of 'mistaken beliefs' that shopping around is not worth it,[16] or, faced with what they may believe will be too much information and complexity, they resort to a rule of thumb or heuristics. They may be averse to potential losses should they make a mistake ('loss aversion'), and may wish to avoid decisions they later regret ('regret avoidance'). Also, they may procrastinate, and, even if they know that, in the longer term, they could be better off shopping around and exploring the market, they fail to act on this assessment in the short term ('present bias').

All these forms of behaviour will serve to reinforce the status quo option. In this context, effective prompts can help consumers make better decisions, by targeting or working with behavioural biases that affect decision-making. As part of a wider awareness-raising to promote shopping around, information on the potential benefits of switching could help to challenge beliefs, and prompt consumers to shop around and reconsider their choice of annuity provider. In addition, useful, accurate information on their outside options can help them better evaluate these options and simplify the process of comparison.

Furthermore, if consumers are subject to behavioural biases, the way in which this information is framed matters. In particular, it matters whether the information seeks to prompt the consumer by appealing to their emotions, or to educate them by appealing to their planning abilities, and which courses of action may be promoted by each.

Appropriate prompts require careful design, planning and testing, and this is what the experiment undertaken for this study set out to do. While the experiment and the results are described in more detail in sections 3 and 4, this section outlines the context of the UK annuities market and the role that effective prompts can have on consumers' propensity to shop around.

[13] See, for example, Financial Conduct Authority (2015), 'Encouraging consumers to act at renewal: evidence from field trials in the home and motor insurance markets', Occasional paper No. 12; Financial Conduct Authority (2015), 'Cash savings market study report: Part I: Final findings Part II: Proposed remedies', MS14/2.3; Competition and Markets Authority (2015), 'Energy market investigation: summary of provisional findings report', July.
[14] For an overview, see Benartzi, S., Previtero, A. and Thaler, R.H. (2011), 'Annuity Puzzles', *Journal of Economic Perspectives*, Fall.
[15] Financial Conduct Authority (2014), 'Thematic review of annuities', TR 14/2, February.
[16] For a review of the qualitative research on the reasons for not shopping around for annuities, see Financial Conduct Authority (2014), 'Retirement income market study: interim report – provisional findings and proposed remedies', December.

The section is structured as follows.

- Section 2.1 describes the developments in the UK annuities market since the pension freedoms introduced in April 2015.
- Section 2.2 discusses the FCA market study on the annuities market which found that not many consumers shop around in the market. Also discussed is the use of prompts as remedies, and how the current experiment can inform their design.
- Section 2.3 outlines reasons why consumers do not shop around, from both a rational and a behavioural perspective.
- Section 2.4 describes how prompts are employed in other sectors, highlighting their increasing use as a policy tool to encourage shopping around.

2.1 The UK annuities market

Pension freedoms, introduced in April 2015, have brought about significant changes in the ways in which consumers can access their pensions. In particular, the reforms simplified the tax rules on pension withdrawals, providing consumers with more options for converting their pension savings into retirement income (see Box 2.1).[17]

Box 2.1 Defined-contribution pension fund reforms introduced in April 2015

Under the previous system, each person over the minimum retirement age (55 years old) had the following restrictions.

- **Lump-sum tax**: 25% of pension savings could be withdrawn tax-free; a lump-sum withdrawal of the rest was subject to 55% tax.
- **Trivial commutation**: the consumer was allowed to withdraw their entire pension as a lump sum without any additional tax charge, provided that the pension pot was under £18,000.
- **Capped drawdown**: if the consumer decided to opt for an income drawdown product, the amount withdrawn each year was capped at 120% of an equivalent annuity.
- **Flexible drawdown**: no limit was imposed on the amount withdrawn each year, provided that the consumer had a guaranteed retirement income of more than £20,000.

The reforms relaxed these restrictions in the following way.

- Anyone from the age of 55 is allowed to access their defined-contribution (DC) savings as a lump sum without facing additional taxes over the marginal rate (for income tax). There is a tax-free allowance of 25% each time the consumer withdraws from their pension savings (with the remainder being treated as income for taxation purposes).
- Consumers can also use the pension pot to buy annuities or income drawdown products without restrictions.

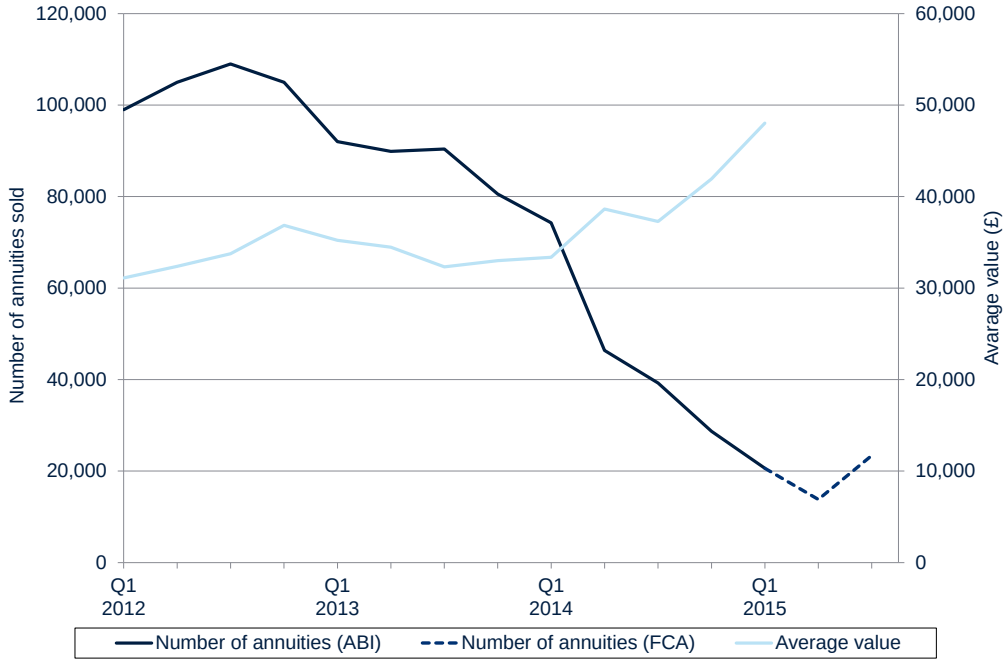
Source: Oxera (2015), 'Pension reforms in the UK: what can be learned from other countries?' *Agenda*, January.

[17] Since April 2015, drawdown of pension income has been taxed at marginal income tax rates rather than at the previous rate of 55% for full withdrawals (over and above the tax-free lump sum of 25%).

It is too early to conclude what the long-term effect of the reforms on consumer choices will be. Early evidence suggests that, so far at least, many consumers have moved away from annuity purchase and towards alternative options such as income drawdown and cash withdrawals.

Figure 2.1 collates data on annuity sales collected by the Association of British Insurers (ABI)[18] and the FCA[19] for the period 2012–15. The ABI data covers the period 2012 to Q1 2015, and the FCA data covers Q2 and Q3 2015. Following the introduction of the first set of reforms in April 2014,[20] there was a downward trend in the sale of annuities, which continued into 2015. Furthermore, the average value of annuities has increased significantly. One explanation for this is that the reforms may have allowed more people with smaller pension pots to access their pot rather than converting it into an annuity. However, evidence from the period July to September shows that the annuities market has rebounded, with the number of annuities sold rising to 23,395, from 13,787 in the previous quarter.

Figure 2.1 Number of annuities sold, 2012–15



Note: ABI data is based on ABI members only, while FCA data is based on 107 providers.

Source: Q1 2012–15 based on ABI data (www.abi.org.uk); Q2 and Q3 2015 taken from Financial Conduct Authority (2015), 'Retirement income market data July-September 2015'.

Whether these early trends will continue is unclear, but annuities are likely to remain relevant to a significant number of people because, unlike alternatives, they insure against longevity risk. Research commissioned by the FCA suggests that many consumers value the features offered by annuities.[21]

[18] www.abi.org.uk.
[19] Financial Conduct Authority (2015), 'Retirement income market data July-September 2015'.
[20] The initial reforms introduced in April 2014 relaxed some of the withdrawal restrictions on income drawdown products and increased the trivial commutation amount to £30k.
[21] GFK (2014), 'At Retirement Consumer research – exploring changes in the retirement landscape'.

2.2 The FCA market study on the retirement income market

In the context of this rapidly changing market, the FCA's retirement income market study, published in March 2015,[22] found that competition is not working well for consumers in the annuities market. Of particular concern is that consumers are not aware of their options at the point of retirement, and tend not to shop around for annuities, with 60% purchasing an annuity from their current pension provider.[23] Many consumers have been forgoing significant gains in retirement income by not shopping around and purchasing an annuity in the open market.

In the 2014 Thematic Review of the annuities market, conducted before the reforms took effect, the FCA noted that:

> the majority of consumers (60%) do not switch providers when they buy an annuity, despite the fact that we estimate 80% of these consumers could get a better deal on the open market, many significantly so.[24]

The consumer decision-making process involves a number of steps, which could be spread over several years, and the FCA has already been looking at various interventions. Six months before the consumer reaches the planned retirement age, they receive a wake-up pack from their pension provider, informing them of their options, although they may not make a decision until later.

The options for a person reaching age 55 with a DC pension fund can be grouped into four broad categories:

- buying an **annuity**, which provides an income for life and therefore insures the individual against running out of funds, irrespective of how long they live. Consumers may purchase an annuity later in retirement, and do nothing in the meantime;
- shifting pension funds into an **income drawdown** product, which will typically provide an income in retirement, but with flexibility in how much income is received. Importantly, this does not insure against funds running out. Consumers who begin drawdown may also use (some of) their funds to purchase an annuity later;
- taking a **lump sum** (subject to taxation) for the individual to do what they want with. This might involve leaving the funds in a savings pot to be withdrawn as and when required;
- doing nothing, and taking a decision to decumulate later.

For consumers who *do* choose to purchase an annuity, the FCA's Thematic Review noted that:

> consumer research, in particular behavioural economics research, tells us that there are significant barriers to consumers shopping around in this market and that the traditional method of disclosure may not be enough to change consumer behaviour.[25]

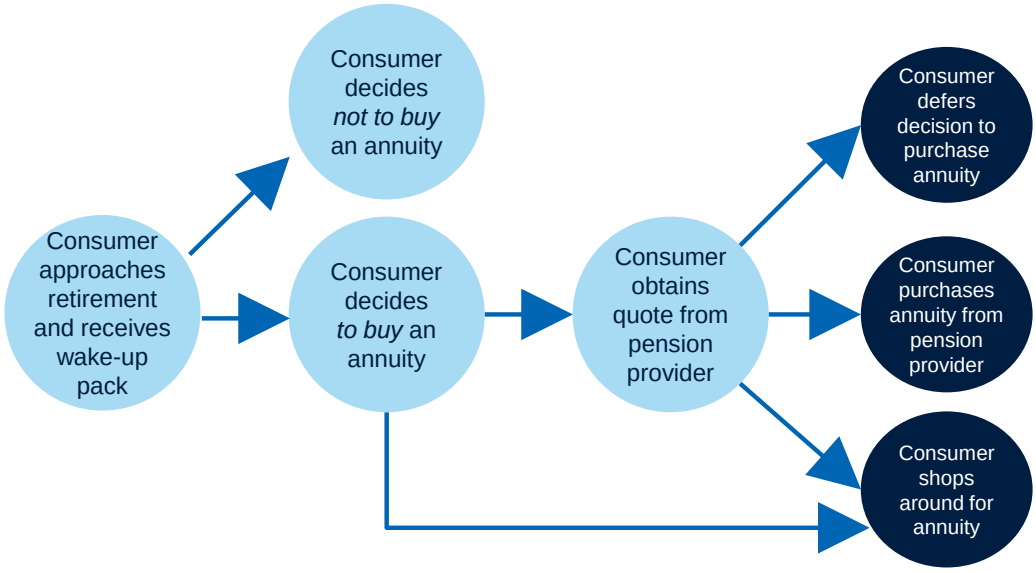
[22] Financial Conduct Authority (2015), 'Retirement Income Market study: final report – confirmed findings and remedies', March.
[23] More recent data from the FCA for the period July–September 2015 shows that 64% of consumers stayed with their current provider. See Financial Conduct Authority (2015), 'Retirement income market data July-September 2015'.
[24] Financial Conduct Authority (2014), 'Thematic review of annuities', TR 14/2, February. Switching rates have remained approximately the same since 2014. See https://www.fca.org.uk/news/retirement-income-market-data, accessed on 27 April 2016.
[25] Ibid.

This is not to say that disclosure *per se* is ineffective. Rather, the way in which disclosure is undertaken, when it is undertaken, and its purpose, are key. Traditional disclosure methods seek to educate consumers by providing them with all the potentially relevant information they may need. However, behavioural economics tells us that this will often fail to engage consumers, or to instigate shopping around. Effective disclosure seeks to help consumers assess product information and effectively compare across products. In addition, it can work with consumers' other behavioural biases in order to activate better decision-making.[26].

The FCA market study proposed a set of remedies to facilitate consumer choice. These included measures to strengthen the effectiveness of information provided to consumers in order to increase the incidence of shopping around. The remedies relevant to this research are those that deal with the information that the supplier provides to the consumer alongside the quote.[27]

Figure 2.2 outlines the process that a consumer typically goes through when choosing to buy an annuity. Around six months before retirement, the consumer receives a wake-up pack from their pension provider setting out the consumer's options with important information on various retirement products. If the consumer decides to purchase an annuity, they can request a quote from their pension provider or go directly to an alternative provider. Assuming that the consumer has applied for a quote, following this request, the provider will send out a written communication setting out their quote.

Figure 2.2 Consumer journey at retirement



Source: Oxera.

At this quotation stage, the FCA is considering various forms of information provision to encourage consumers to shop around for their annuity. These range from requiring that, when making an offer to a consumer, firms make it clearer how their particular annuity quote compares with other providers operating in the open market, through to setting out more general information about how other consumers have benefited from shopping around.

[26] For a review on effective disclosure see Oxera (2014), 'Review of literature on product disclosure', prepared for the FCA, October.
[27] The information provided in the wake-up pack is currently subject to a separate work plan by the FCA.

To assess the impact of various prompts, it is important first to understand the behavioural reasons why consumers do not shop around. This, in turn, informed the design of the experiment, which seeks to recreate biases that inhibit shopping around, in order to test how prompts help consumers to overcome them. Section 2.3 describes the main behavioural biases at play when consumers approach retirement.

2.3 Why do consumers not shop around?

There are two broad approaches in economic thought for considering why people might not search—or shop around—for an annuity in the open market, and why they may subsequently fail to switch provider.

On the one hand, according to traditional economics, consumers may have perfectly rational reasons for sticking with the status quo (in this case, the quote offered by their pension provider). These consumers accurately compute the search costs involved in exploring the open market, and the potential gains. Quite rationally, some people may decide not to search the open market, or switch, if the prospective gains are too low, too unlikely, and the costs of search are too high. These may include the time and effort required to shop around, rather than simply monetary costs.

On the other hand, behavioural economics points to reasons why sticking with the status quo may be a manifestation of consumer 'biases' rather than the result of a rational consideration of all relevant costs and benefits.

In this vein, behavioural economics seeks to explain observed behaviour, often when it cannot be readily explained by the traditional model. In this market, the traditional account appears to go against the facts—i.e. that 80% of consumers who purchase their annuity from their pension provider can be better off by shopping around. Out of all consumers, 60% indeed do some shopping around, while only 40% of customers switch providers.[28] The 2014 Thematic Review offered some potential explanations:

- **lack of clarity**—in the gains available from shopping around;
- **complexity**—people find it difficult to assess risk and uncertainty in financial products, which results in a general lack of engagement, with many consumers struggling to evaluate the options;
- **inertia**—leads consumers to the easiest and most straightforward choice available to them (their existing pension provider's annuity, presented during the wake-up process);
- **trust**—consumers may not trust themselves to make better choices in the open market, and may have trust and confidence in their existing provider.

Furthermore, prior to deciding on an annuity, many customers are apprehensive of selecting an annuity due to the irreversibility of the decision and limited financial experience.[29]

Table 2.1 summarises some of the biases that may be relevant to annuity searching, grouped according to whether these factors affect preferences, beliefs or decision-making. A number of academic and experimental papers

[28] Financial Conduct Authority (2014), 'Thematic review of annuities', TR 14/2, February.
[29] This is known as 'regret aversion'. See Optimisa Research (2013), 'The Annuity Purchasing Process', Qualitative research report prepared for the Financial Services Consumer Panel, July, pp. 3–4.

have demonstrated that these types of factor can indeed lead to status quo bias.[30]

Table 2.1 Behavioural biases relevant to annuity searching

Preferences	Beliefs	Decision-making
Loss aversion and regret avoidance: e.g. not switching in case it leads to a poorer outcome; the consumer may not trust themselves, but may have trust in their existing provider; they also may not wish to contemplate their own lifespan	**Incorrect beliefs regarding prospective payoffs from switching**: e.g. 'there's not much to be gained from switching'	**Information and choice overload**: having too much information and too many choices inhibits effective decision-making, and leads to recourse to 'gut feeling' and heuristics
Present bias: e.g. knowing that switching may lead to a better outcome, but putting this off and sticking with the easier option of the current provider; or putting off long-term planning more generally	**Incorrect beliefs regarding search costs**: e.g. 'searching will take up too much time, involve too much personal information, and will be too complex'	**Faced with uncertainty and perceived complexity, heuristics may result in inertia**: recourse to the default/easiest options, herd behaviour/social norms, most salient option

Source: Oxera.

In the context of the experiment conducted for this study, it is important that participants are subject to some of the biases to which consumers are subject in real life. This will ensure that the reasons why participants do not shop around during the experiment are linked to the biases described above. This was the most significant methodological challenge in the experimental design, and the way in which it was addressed is described in section 3.

2.4 Remedies and the use of prompts

Behaviourally informed policy responses can help consumers achieve better outcomes by taking into account some of these obstacles. Some policies are intended to alter the decision-making environment such that consumers' biases will precipitate good consumer outcomes (for example, by changing the way the information is given 'framed' to consumers). By contrast, other policies aim at correcting or countering consumer biases.

Informational prompts are used in a number of sectors to encourage consumers to engage with a decision, and to mitigate behavioural biases that impair decision-making. Evidence shows that these kinds of prompts can be effective at improving consumer outcomes.

For example, text alerts for personal current account (PCA) customers about their overdrafts have been found to reduce overdraft usage, the average overdraft charges paid, and the average 'buffer' that consumers keep on their PCA.[31] Similarly, prompts to payday loan customers can reduce payday loan uptake, although there are large differences in the effectiveness of specific prompts.[32] This indicates that the design of a prompt, its content, medium and formatting are critical to its effectiveness in nudging consumers to consider whether they are making good choices.

[30] Different studies explore different explanations. See, for example, Samuelson, W. and Zeckhauser, R. (1988), 'Status quo bias in decision making'; Kahneman, D., Knetsch, J.L. and Thaler, R.H. (1991), 'Anomalies: The endowment effect, loss aversion, and status quo bias', *The Journal of Economic Perspectives*, **5**:1, pp. 193–206; and Ren, Y. (2014), 'Status Quo Bias and Choice Overload: An Experimental Approach', working paper.
[31] Financial Conduct Authority (2015), 'Message received? The impact of annual summaries, text alerts and mobile apps on consumer banking behaviour', March, Occasional Paper No. 10, pp. 4–5.
[32] Bertrand, M. and Morse, A. (2011), 'Information disclosure, cognitive biases, and payday borrowing', *The Journal of Finance*, **66**:6, pp. 1865–93.

In the UK, retail energy suppliers are required to note on a customer's bill whether the supplier offers a tariff that would be cheaper for the customer than their current tariff.[33] Additionally, for fixed tariffs over a fixed period, suppliers are required to notify customers soon before the end of the period that their fixed tariff is coming to an end, and what it will be when that happens.[34]

There are also mandated prompts in telecoms. For example, EU regulation requires mobile providers to send a text message to customers when they cross national borders to inform them of roaming charges they may incur.[35] Providers are further required to send a text message when data-roaming usage reaches a certain level.[36]

An important issue is the extent to which prompts seek to educate consumers on the benefits of shopping around versus providing simple illustrations that require little deliberation. In this respect, marketing is often not aimed at educating consumers into buying a product, but rather at emotional (and impulsive) responses. The study sought to test various remedies that aimed, to different degrees, to educate and/or induce consumers to engage in shopping around.

In this context, to inform its understanding of the likely efficacy of prompts in the annuities market, the FCA commissioned Oxera and the Centre for Experimental Social Sciences (CESS) at Nuffield College of the University of Oxford to conduct an experimental study.

The purpose of the experiment was to determine which prompts would induce consumers to shop around for their annuity. This experiment focused on the consumer response to information provided by pension providers contained in a letter with the provider's quote.

The experimental design is described in section 3 and the results presented in section 4.

[33] Ofgem, 'Understanding energy bills', https://www.ofgem.gov.uk/information-consumers/domestic-consumers/understanding-energy-bills, accessed 27 April 2016.
[34] Ibid.
[35] European Commission (2012), 'Regulation (EU) No 531/2012 of the European Parliament and of the Council of 13 June 2012 on roaming on public mobile communications networks within the Union', 30 June, p. 20.
[36] Ibid.

3 The experiment

The experiment assesses whether different kinds of information on the benefits of switching induce the consumer to shop around for the most competitively priced annuity. It was conducted online with UK residents aged 55–65, with participants randomly assigned to a control group or one of five treatment groups. Each treatment group was given additional information on the potential gains from shopping around, while the control group was not given any additional information.

The four key stages of the experiment are summarised in Figure 3.1 below.

- **A: introduction and instructions**: participants were first asked a series of questions about themselves, and were provided with a set of instructions. They were presented with a menu of four tasks to complete: employment, pensions, savings and housing.
- **B: pension task**: for the pension task, participants were provided with a letter from their pension provider explaining that they needed to select a number of annuity features before being offered a quote. Subsequent steps involved selection of these features.
- **C: pension provider quote and information treatments**: the pension provider then provided its quote together with information on the benefits of shopping around for an annuity in the marketplace. The information varied depending on which treatment had been assigned to the participant. Participants could choose to shop around or to take up their provider's offer. This was the core part of the experiment.
- **D: shopping around + external quotes**: upon deciding to shop around, participants would need to enter personal information to obtain quotes from each price comparison site explored (a total of five comparison sites were available). They could then choose to purchase an annuity from one of these sites, or to return to their pension provider's quote.

The experimental design sought to increase 'external validity', by encouraging behaviour similar to that observed in reality. As explained in section 2.3, the objective was to create conditions whereby participants, like consumers in the actual annuities market, fail to shop around due to behavioural biases rather than rational reasons. This was the primary challenge in conducting the experiment, to ensure that the results reflected consumer biases observed in reality, and hence could be used to predict outcomes in practice.

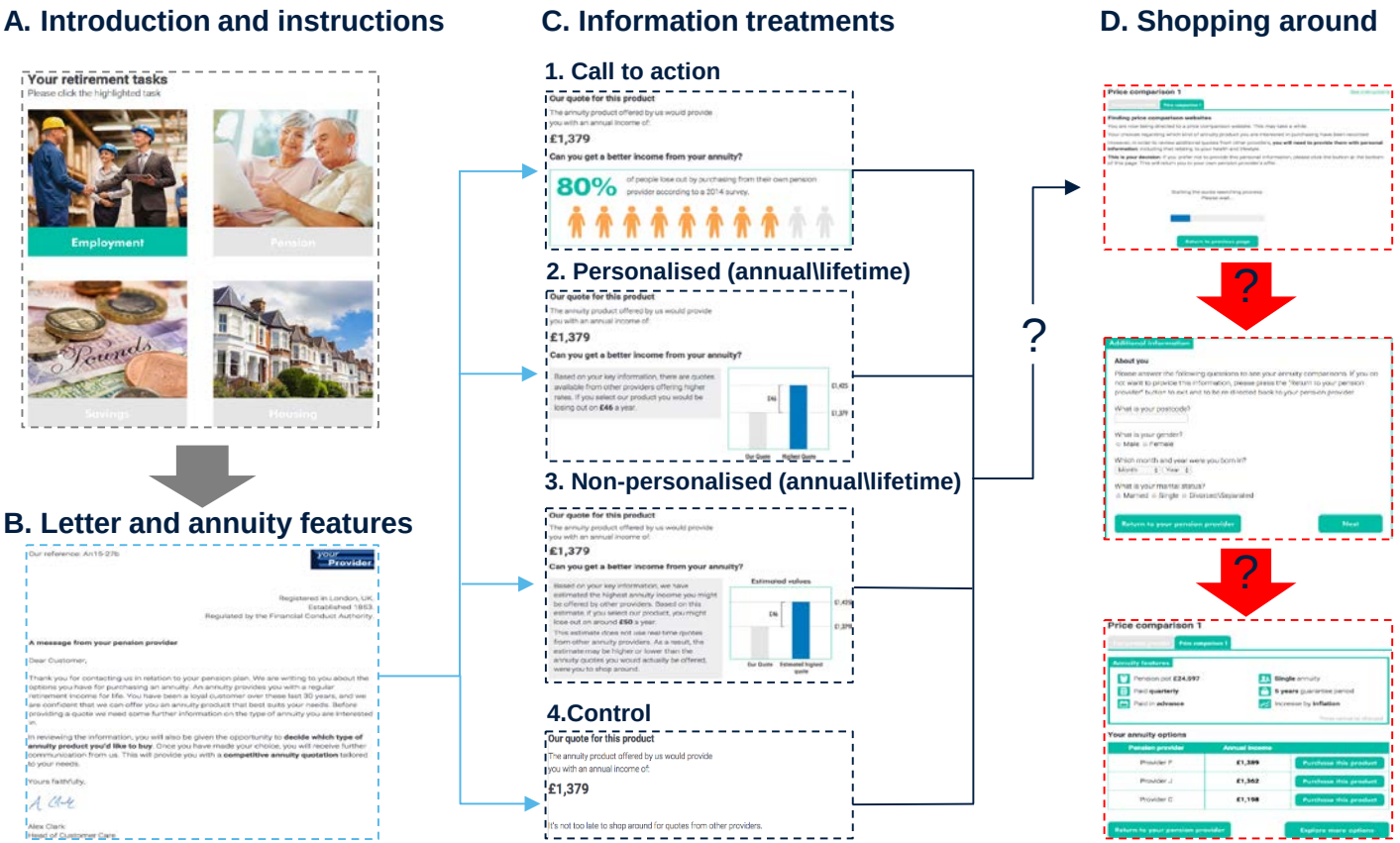
This section explains the core elements of the experiment, designed to achieve this objective. This involved:

- selecting a set of prompts (stage C in Figure 3.1) that were expected to induce consumers to shop around, and randomly allocating consumers to different treatment groups (section 3.1);
- creating an experimental environment, prior to the information treatment stage (stages A and B), and afterwards (stage D), which encouraged key behaviours observed in the consumer journey at the point of retirement—in particular, the experimental setting aimed to induce biases that lead consumers not to shop around for annuities (e.g. status quo bias) (section 3.2);

- collecting data on a variety of outcome measures which capture the consumer response to the various prompts (section 3.3).

Further detail about the sample of participants, the empirical methods to allocate subjects to treatments, and the process of testing and refining the experimental design can be found in Appendix 1.

Figure 3.1 Main features of the experiment



Note: The experimental environment has been simplified. Information treatments shown exclude the control group and lifetime gains treatments.

Source: Oxera.

3.1 Information treatments

Stage C in Figure 3.1 was the key point of interest in the experiment. Once at this stage, the control group was presented with a statement saying 'it's not too late to shop around', while each treatment group received additional information on the potential gains from shopping around. All treatments presented the information in terms of what the individual would lose as a result of not shopping around.

The groups were as follows (see Appendix 1 for a detailed description).

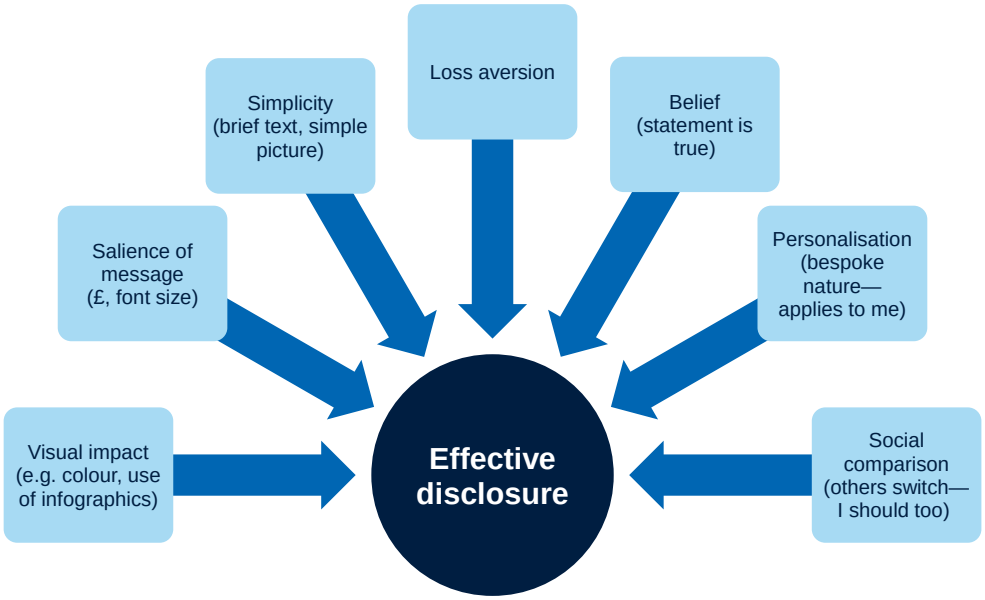
- **The control group**—the participants were given a statement saying 'it is not too late to shop around for quotes from other providers.' The statement was taken from an actual letter of a pension provider sent to one of its clients.[37]
- **Call to action**—the participants were given a statement saying '80% of people who fail to switch from their pension provider lose out by not doing so.' This text was accompanied by a visual representing the 80% figure.
- **Personalised quote comparison**—the participants were provided with the highest quote they could obtain by shopping around. The difference between that quote and the pension provider quote was highlighted. The text information was then complemented by a bar chart comparison of the two quotes.
- **Personalised quote comparison with lifetime gains**—the participants were offered the same information as the 'personalised quote comparison', but with an estimate of the forgone gains from not shopping around over a typical person's lifetime. For example, if the annual gains from shopping around were £46, the additional sentence would say: 'That's equivalent to losing out on £1,095 over the lifetime of a typical person.'
- **Non-personalised quote comparison**—the participants were provided with an estimate of how much they would lose out by not shopping around. The information emphasised that the quote provided was based on an estimate and that the participant could obtain a higher or lower quote were they to shop around. As in the 'personalised quote comparison', the information was accompanied by a bar chart comparing the pension provider with the open market quote.
- **Non-personalised quote comparison with lifetime gains**—the participants were offered the same information as the 'personalised quote comparison', but with an additional estimate of the forgone gains from not shopping around over a typical person's lifetime. For example, if the forgone annual gains from not shopping around were around £50, the additional sentence would say: 'That's equivalent to losing out on around £1,000 over the lifetime of a typical person.'

The prompts were designed to induce consumers to shop around through a variety of mechanisms (see Figure 3.2 below). They aimed to reduce the appeal of the default pension provider option, and increase the appeal of shopping around, by:

[37] The current regulation by the FCA requires pension providers to remind consumers that they have the option of shopping around should they wish to.

- highlighting that the consumer would lose out by not shopping around (appealing to loss aversion);
- using simple, easily digestible, messages, particularly for the call to action group. This helps to reduce information overload, which, as noted above, can exacerbate status quo bias;
- using social comparisons (e.g. 80% of people lose out by not shopping around);
- challenging beliefs about the prospective gains (and, in the real world, switching costs), by providing precise information on open market quotes, particularly in the personalised quote comparison.

Figure 3.2 Features of effective disclosure



Source: Oxera (2014), 'Review of literature on product disclosure', prepared for Financial Conduct Authority, October.

The treatments differed in the extent to which they educate consumers versus providing an impetus to act. In particular, the call to action treatment provided, in one sentence, simple, generic information, in the form of a social comparison, while the quote comparison treatments informed the consumer about their potential gains from shopping around.

3.1.1 Group assignment

Participants were randomly assigned to the control group or one of the other treatments using a method called block randomisation (described in Appendix 1). This method first divides participants into sub-groups ('blocks') based on observable characteristics (e.g. age or gender). Then, within each block, participants are randomly assigned to each group.

This method ensures that any characteristics of the participants that might influence the outcome are accounted for. For example, if highly educated people are more likely to shop around, block randomisation prevents this skewing results because it prevents any one of the treatment groups containing too many highly educated people.

The analysis verified that the socio-demographic characteristics of each of the six groups were similar. The results are reported in Table A1.1 in the appendix.

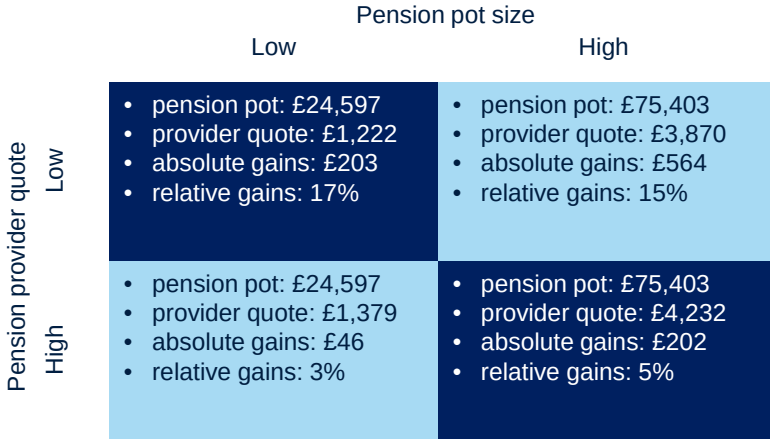
3.1.2 Treatment variations

Once assigned to one of the treatments or control, participants were further assigned to one of two groups, each with a different pension pot size:

- a small pot size of £24,597;
- a large pot size of £75,403.

Within each pension pot size, participants were divided into two further groups, a high and a low pension provider quote. This in turn provided for four groupings, bringing the total to 24 groups in the experiment (six information variations multiplied by four pot size and provider quote variations) (see Figure 3.3).[38]

Figure 3.3 Pension pot size and provider quote groups



Source: Oxera.

While the pension pot size changes the absolute gains, the level of the pension provider's quote would influence the gains from switching, relative to the current quote. The level of the pension provider's quote is therefore expected to influence the personalised and non-personalised groups only, which show the potential gains from shopping around in relation to the pension provider's quote. The experimental design intentionally assigned the same absolute gains to the low pension pot and low provider quote (LL) and high pension post and high provider quote (HH) groups. By holding the absolute gains constant, the analysis was able to measure the impact of the relative gains on the decision to shop around.

3.2 Experiment environment

Participants go into an online experiment expecting to perform a certain action. If they think that the experiment wants them to shop around for a product, many of them may then shop around simply because they think they are supposed to, irrespective of whether there is a prompt. This is known as an 'experimenter demand effect'.[39] This hypothesis was tested during the first pilot stage of the experiment described in Box 3.1. In that pilot, participants were immediately faced with the pension provider quote and they had two options: (i) choose the

[38] Table A2.1 details all the treatment variations.
[39] Zizzo, D.J. (2010), 'Experimenter demand effects in economic experiments', *Experimental Economics*, **13**:1, pp. 75–98.

pension provider quote and end the experiment; or (ii) shop around and carry on. Not surprisingly, a large majority of participants in all groups (including the control group) decided to shop around.

Box 3.1 Pilot testing

The experiment was piloted several times during August to November 2015, to ensure robust design and implementation. Each pilot contained a debrief questionnaire requesting feedback on the design of the experiment.

The first pilot test was conducted with a sample of 500 participants of all ages. The experiment contained only the pension task, which began immediately with the information treatment (i.e. there was no provider letter or no choice of annuity features). This resulted in shopping-around rates of 85–90%, with no difference detected across the treatments. This indicated that it was important to include other elements in the design of the experiment to create a more realistic environment where participants would be subject to biases similar to those observed in real life.

The next pilot was conducted with 24 participants aged 50–65. It contained all four tasks, with the pension task the same as in the previous pilot stage. Following the experiment, the participants were debriefed. As in the previous pilot stage, the shopping-around rate was high, with the majority of participants reviewing all five PCWs. The debrief revealed that the participants were not as engaged in the pension task, and shopped around out of curiosity rather than a desire to find a better product. Some were more engaged in the secondary tasks. In particular, the employment chosen by many of the participants was based on their preferences rather than the income offered. Furthermore, some did not want to answer the medical questions, but did so out of a feeling that they needed to comply with the experiment, even though they had the option to return to their pension provider without answering the questions.

Using the feedback received from the lab experiment, in order to increase engagement with the task, the pension task was expanded to include:

- a letter from the pension provider;
- a choice of annuity features;
- a warning that the participant would need to input personal and medical information before proceeding to the first PCW.

The results from the revised design were significantly different from earlier results: shopping-around rates dropped to around 40%, and differences were detected across treatments. The results were confirmed in the final pilot with 150 participants aged 55–65 drawn from the Survey Sampling International (SSI) panel.

The final experiment was undertaken with 1,996 participants drawn from the SSI panel.

Source: Oxera and CESS.

This posed a significant challenge for the experimental design, as the primary objective was to determine which prompts lead to the highest shopping around rates. The aim was to create an environment whereby participant did not think they were there to shop around and ensure that participants would be subject to certain biases similar to those in real life.

Thus, in addition to their annuity, participants were asked to make decisions on three other sources of retirement income: (i) part-time employment, (ii) private savings, and (iii) income from their home. This ensured that participants did not think that choosing an annuity was the focal task of the experiment.

The experiment also sought to encourage participants to act as they would in real life when it came to which choice they would make on their retirement, as opposed to 'playing the game' and maximising their rewards. In that respect, the secondary tasks served as a useful cross-check on the success of the experimental design. If most participants made a selection which seemed more appealing but offered less reward (e.g. working at the local community centre as opposed to a call centre which offered higher income), this would indicate that participants were being themselves in the experiment rather than 'playing the game'.

Furthermore, the experiment aimed to create conditions in which participants fail to shop around due to 'biases', rather than for rational reasons. It was designed explicitly to induce consumer inertia and status quo bias prior to the treatment taking effect. Put another way, the intention was to induce status quo bias within the sample before subjecting the participants to one of the information treatments. (See Table 3.1 for a summary of the measures taken.) It would then be for the treatments to discourage this inertia.

Table 3.1 Design features aimed at inducing consumer biases

Objective	Design features
Increase present bias	Introduce a non-binding timer that tracks real-time elapsed across all screens, inducing a sense of urgency
Increase default bias/social default	Introduce a clear default option in the employment task which precedes the pension task
Raise the profile of the pension provider	Introduce a clear branded and signed letter from the existing pension provider that is distinct, and contains wording and pictures that reinforce the default
Increase the cognitive effort of shopping around	Ensure that participants need to read lots of information and make more calculations/choices immediately before choosing whether to shop around for an annuity (e.g. index-linked)
Privacy concerns about shopping around	Require participants to answer a series of personal and medical questions before they can access the first PCW
Provide a clear upfront indication of the cost of shopping around	Provide a clear warning at the point of shopping around: 'If you opt to shop around you MUST input personal information…'
Ensure consumers are not shopping around simply because they feel they have to	Provide a clear 'Return to provider' button once the participant has opted to shop around; *and* make it clear that there are a number of personal questions to be completed

Source: Oxera.

Despite the introduction of these features, there remain differences between the experimental and real environment. In particular:

- the decision on which retirement income product to buy in real life often takes months. Even if consumers receive a quote from an annuity provider, they may not act on it immediately;
- the process of shopping around for an annuity is more time-consuming in real life and there are more distractions;

- the communication between a pension provider and their clients may happen over the phone or by post.

3.2.3 Participant journey in the experiment

Participants had to complete four tasks in the following order:

- employment;
- pension;
- savings;
- housing.

They then had to fill out a questionnaire about their actual decisions on other products. Information collected in the questionnaire is considered in more detail in section 3.3.

The participants were incentivised with real monetary rewards. Each participant was paid a participation fee, as well as a performance fee that depended on the annual income they earned in each individual task. Paying participants according to their performance has been shown to increase attention to the task and make the answers more reliable than where no reward is given.[40]

3.2.4 Pension task

The pension task intended to mimic certain aspects of the consumer journey when consumers shop around for an annuity. This was done through a variety of measures (see Appendix 1 for a description of the task).

Participants had to go through some information material on annuities, and make selections on their desired annuity features. The pension task began with a letter from the pension provider that looked like actual letters sent by providers in the real world. The letter highlighted that the consumer had been a loyal customer for the last 30 years, and that the provider hoped to carry on providing its services.

The pages that followed then provided useful information on annuities, and various customisation options. The consumer could then select among the several annuity features (e.g. joint versus single annuity). In each case, the participant was informed that choosing one of the features might reduce their annual income. For example, if one chose a joint life annuity, their annual income might decrease by 10–15%, depending on the spouse's age and health.

All consumers within a pension pot\pension provider category received the same annuity quotes regardless of their annuity feature selections. However, participants were unaware of this when making their selection. In a world where participants cared only about the rewards in the experiment, and hence their annual income in the first year,[41] they would be expected to choose a single annuity with no guarantee period and with a fixed payment.

Once the participants had chosen their annuity, they were directed to the pension provider quote (and the associated information treatment), described in

[40] Camerer, C.F. and Hogarth, R.M. (1999), 'The effects of financial incentives in experiments: A review and capital-labor-production framework', *Journal of Risk and Uncertainty*, **19**:1–3, pp. 7–42.
[41] Participants are informed in the instructions that their reward will be based on the annual income received by the annuity in the **first year**. Choosing any of the features would reduce that income.

section 3.1. Participants could then choose whether they would like to shop around or simply go with the annuity offered by their provider.

In the real world, when a consumer shops around through a PCW, they have to input personal and medical information which is used to calculate the annuity quote. This has proved a deterrent for some consumers, who are averse to divulging personal information to third-party websites.[42]

Accordingly, if a consumer decided to shop around, they would need to input personal (lifestyle and medical) information. Furthermore, participants were warned before reaching the questionnaire that they would need to input personal information. They were also provided with the opportunity to go back to the pension provider page if they did not want to provide their information. This was done to avoid a situation where participants felt compelled to answer the questions, or feel that since they had started with the questions, they had to finish.

Once the participants had filled out the questionnaire, they were directed to the first PCW. Quotes were presented, starting with the highest. There were five PCWs altogether, and consumers needed to answer alternate lifestyle and medical questions to proceed to the next PCW.

For the purposes of the experiment, external open market quotes across various providers were obtained from the Money Advice Service website. Nine quotes were obtained for each pot size. An additional quote was generated using the data, providing a total of 10 external quotes. While the first quote reviewed was always better than that offered by the pension provider, the fourth PCW contained the best quote in all cases. For more details on the quote generation process, see Appendix 1.

3.2.5 Secondary tasks

The secondary tasks were significantly less time-consuming than the pension task. All participants were asked to choose among four options in the following order: employment, pension, savings, and housing. Each option offered a different income and a simple calculation was required to determine the option with the highest income.

One of the four options was the default option, which represented the participant's current situation (although the participants needed to make an active selection of one of the four choices). For example, in the employment task, the participant could choose to stay with their current employer as a part-time employee—the default—or choose another employment option. The selection of a default was another way to increase default bias in the pension task.

The tasks are briefly described below (detailed descriptions are included in Appendix 1).

The **employment task** required participants to select an employment they would engage in after retirement. They were informed that their current employer had offered to let them stay on as a part-time employee, working 10 hours a week. Alternative employment opportunities included part-time work at: their local community centre; a pet shop; or a call centre.

[42] Optimisa Research (2013), 'The Annuity Purchasing Process', Qualitative research report prepared for the Financial Services Consumer Panel, July, pp. 3–4.

The call centre offered the highest income, equal to £4,200.

In the **savings task**, subjects selected an account in which to deposit their savings of £50,000, which were deposited in their bank current account (default). The other options included: a variable-rate account offering a higher rate for the first £20,000; a cash ISA; or a notice account with a limit on the number of withdrawals.

The notice account offered the highest interest income of the four options, equal to £600.

In the **housing task**, participants could explore ways to generate additional retirement income from their home. The default option was to stay in their house and not change anything, thus not generating any income whatsoever. The other options were: rent out a room in their house; sell their house and buy a smaller house and deposit the profit from the sale into a fixed-rate bond; or sell their house and rent in a new house.

Renting out the room in their own house offered the highest income, equal to £2,000.

3.3 Outcomes and data collected

The key outcome of interest was the proportion of consumers who shopped around. In particular, the experiment sought to measure the impact of the prompts on the participants' decision to shop around. The relevant metric, therefore, is whether the consumer clicked to shop around after they were exposed to the information treatment.

Shopping-around behaviour was also captured using additional metrics, including the number of quotes reviewed (which reflects the intensity with which consumers shop around), whether they switched or not, and how much they gained (or lost) by switching (the effectiveness of shopping around).

Table 3.2 summarises the metrics used to determine the degree of impact of the main outcomes of interest. In addition to the main outcomes discussed above, there was data on other metrics of consumer behaviour, such as their choices in the secondary tasks.

Table 3.2 Metrics used

Outcome	Metric
Propensity to shop around	Proportion who clicked to shop around Proportion who filled out the questionnaire and reviewed the first PCW
Persistence in shopping around	Proportion who reviewed more than one PCW Time spent shopping around
Willingness to switch	Proportion who switched from their provider
Effectiveness of shopping around	Average gains from switching
Other	Choice of annuity features Choice in secondary tasks

Source: Oxera.

In addition to the experiment, each subject needed to fill out a short questionnaire on:

- whether they have, or would be interested in, an annuity;

- whether they shopped around for other products;
- their financial literacy, attitude to risk, and present bias.

The full list of questions is presented in Appendix 1.

4 Experiment results

The analysis collected a rich set of data which offers a comprehensive view of consumer responses to the various treatments.

This section presents the key findings of the experiment in terms of the impact of the information treatments (and their variations) on the various shopping-around metrics. Some descriptive statistics are also presented on the participants' behaviour in the secondary tasks of the experiment.

The section is structured as follows:

- section 4.1 presents the findings on the key shopping-around metrics across all treatment groups. This provides an initial understanding of the participants' journeys and the varying degrees of shopping-around behaviour;
- section 4.2 presents the main findings of the experiment, providing comparisons across all treatment groups on all shopping-around and switching outcomes;
- section 4.3 examines the impact of the size of the pension pot and the provider quote on the propensity to shop around;
- section 4.4 conducts robustness checks, which use additional data on the participant characteristics to check the validity of the results;
- section 4.5 discusses whether the impact of the information treatments varies across different participant characteristics (e.g. gender);
- section 4.6 extrapolates the results to the population as a whole, using census data to adjust the sample to reflect the actual proportions in the population;
- section 4.7 shows how consumers behaved in other parts of the experiments—namely, their choices in the secondary tasks and the annuity features.

4.1 Overview of shopping around

The FCA Thematic Review highlighted that shopping around can reflect a range of behaviour, from simply looking online for information to actively seeking quotes from providers.[43] This section gives an overview of the consumer journey in the experiment and participants' shopping-around behaviour. For each shopping around or switching metric, the average across all treatments was compared with that of the control. This was done to assess whether the treatments caused a significant increase in each of those metrics.

Around a quarter of those who clicked to shop around did not answer the personal and medical questions, and therefore did not review quotes from other providers. Furthermore, only a small fraction (around 7%) of consumers reviewed more than one PCW.

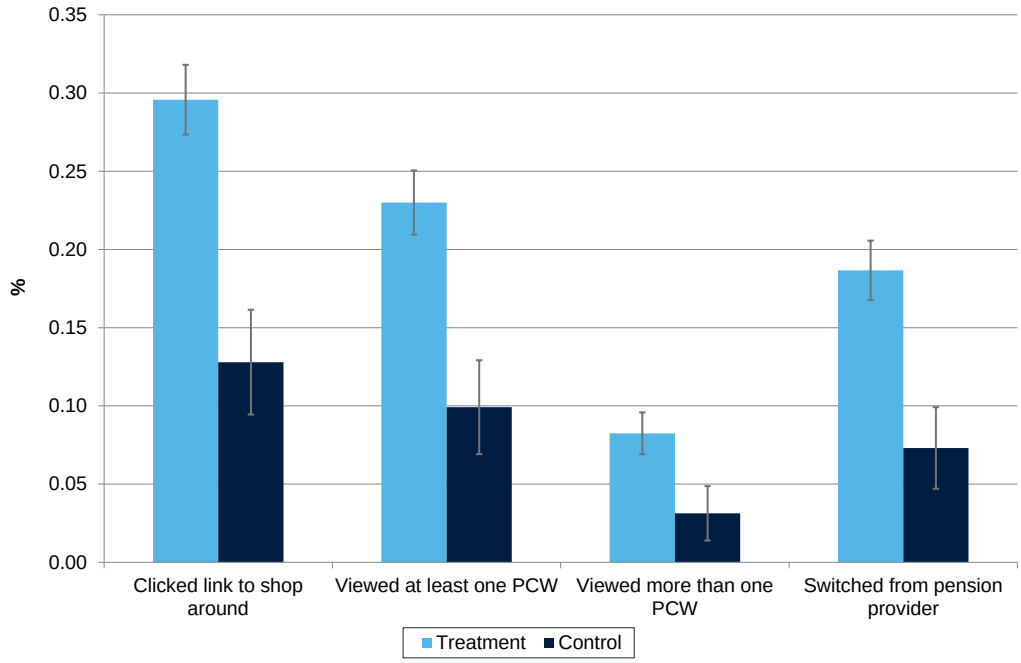
Figure 4.1 shows the average level of different metrics of shopping around across all five treatment groups, and the corresponding level for the control. The metrics are whether the participant:

- clicked to shop around on the pension provider page;

[43] Financial Conduct Authority (2014), 'Thematic review of annuities', TR 14/2, February.

- filled out the questionnaire and proceeded to the first PCW;
- reviewed more than one PCW;
- switched from their pension provider.

Figure 4.1 Average impact on various metrics of shopping around



Note: Error bars indicate 95% confidence intervals. Treatment refers to the average level across all five treatment groups.

Source: Oxera and CESS.

Across the whole sample, around 26% of participants clicked to shop around. One-quarter of those decided not to answer the personal and medical questions and were therefore unable to review quotes from other providers. Of those who did answer the questions and go to the first PCW, around two-thirds stayed there and did not review any more PCWs.

Figure 4.1 exhibits the level of each of the shopping-around metrics across all treatment groups and the control group. Both sets of groups show a similar decline in the level of shopping around; however the treatments remain significantly higher than the control even for the proportion of participants who viewed more than one PCW. This provides strong evidence that the treatments induce consumers not only to respond immediately and click the button to shop around, but also to persist and find a better deal.

The first drop between clicking to shop around and viewing the first PCW shows that some consumers do not shop around owing to the existence of personal and medical questions in the PCW. This finding is consistent with qualitative surveys, which show that consumers are often deterred by personal questions.[44]

The findings also show that, once participants review the first PCW, only one-third decide to look at more than one PCW. This significant drop can be attributed to a number of factors. Consumers may content themselves with simply having a better offer than their pension provider, and therefore stop there.

[44] In our debriefing session after one of the pilot sessions, one of the participants expressed significant anxiety when it came to answering these questions.

Others may not want to spend more time shopping around because they do not believe the potential gains to be won are worth the additional time spent on the task.

In terms of switching, around one-quarter of those participants who saw at least one PCW decided not to switch, which is perhaps surprising given that the first PCW contained at least one quote that was higher than the pension provider quote. As participants were incentivised to maximise their pension income, this suggests that biases discussed in section 2.3 above might have continued to influence their behaviour. For example, participants may have remained with their pension provider because they did not trust alternative providers and they felt the gains were not sufficient to induce them to switch. In fact, half of those participants who did not switch would gain only £10 per year by switching.

4.2 Shopping around and switching

For the various shopping-around outcomes, the analysis compares how each of the five information treatments fares relative to the other, and to the control group.

The section reviews the key shopping-around metrics for all six groups. The findings reveal that all of the treatments had an impact on shopping around. The personalised quote comparison had the highest impact, followed by the call to action treatment. The inclusion of lifetime gains in the information did not improve shopping-around rates.

4.2.1 Click to shop around

Figure 4.2 shows the proportion of participants who clicked to shop around for all six groups. On this measure, shopping around for the control group was approximately 13 percentage points.

The first important finding is that all treatments have a significant impact on shopping around. The treatment effects (i.e. the difference between the treatment and the control) range from around 8 percentage points for the non-personalised lifetime to 27 percentage points for the personalised annual.

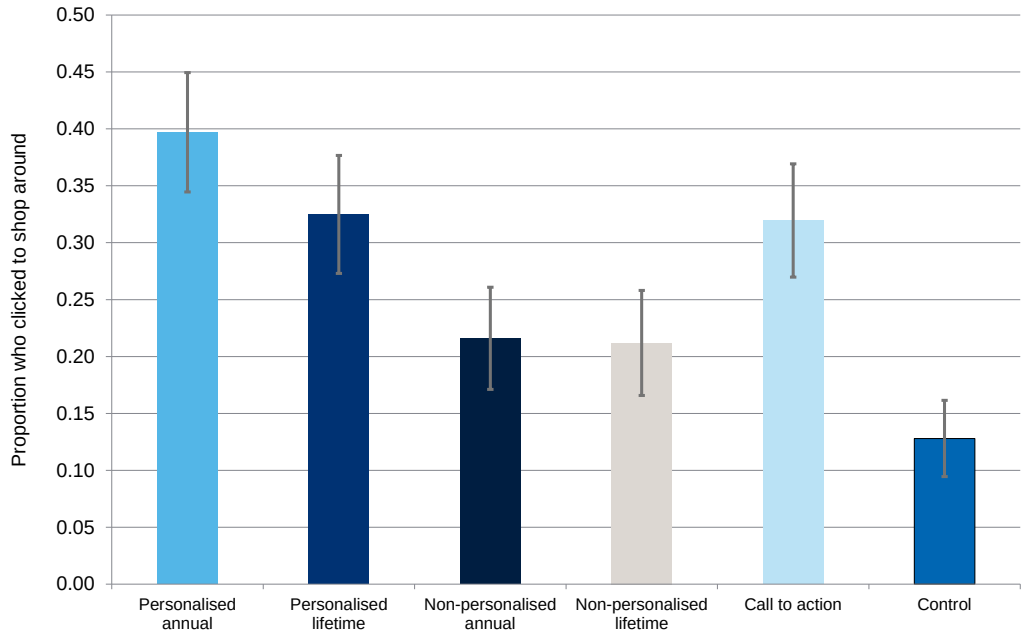
Furthermore, there is substantial variation in the effects across the five treatments, with the personalised annual treatment achieving the highest impact on shopping around, followed by the call to action treatment. At 8 percentage points, the difference between the two treatments is statistically significant.[45] The two information treatments have different ways to prompt consumers, yet produce similar results. The personalised treatments offer information that is reliable and customised for the consumer; the call to action treatment offers simple, easily digestible information accompanied by a strong visual.

In general, the non-personalised treatments caused significantly less shopping around than both the personalised and the call to action treatments. There are several possible explanations for this. The non-personalised treatments contained a lot of text, which might have led to information overload, prompting consumers to stick with the status quo. An alternative explanation is that the non-personalised treatments highlighted the uncertainty in the gains of shopping around, which might have discouraged consumers. More research would be

[45] However, when the sample is adjusted to reflect the socio-demographic proportions of the general population, the difference is not significant.

required to determine the relative importance of these factors in personalised and generic communications.

Figure 4.2 Proportion who clicked to shop around



Note: Error bars indicate 95% confidence intervals.

Source: Oxera and CESS.

Another significant finding is that including information about the lifetime gains in the text does not improve shopping around. In fact, for the personalised groups, adding lifetime gains reduced shopping around, although the difference is statistically significant only at the 10% level.[46] Including information about the lifetime gains was expected to increase shopping around, as a higher figure would make it more worthwhile. The lack of impact may have been due to the experimental environment (rewards are based on annual, not lifetime, income). Furthermore, the additional information might have been ineffective as the prompts contained too much information for the participants to process.

Overall, the results show that two distinct treatments are most effective in increasing shopping around rates. The personalised quote comparison offers information that is reliable and customised to the consumer. The call to action treatment contained a short, yet effective, statement prompting consumers to shop around, by introducing an element of social comparison. By contrast, the non-personalised quote comparison is not as effective. This may be because it contains a lot of text, which can lead to information overload and reduced shopping around.

4.2.2 Review alternative quotes and switch provider

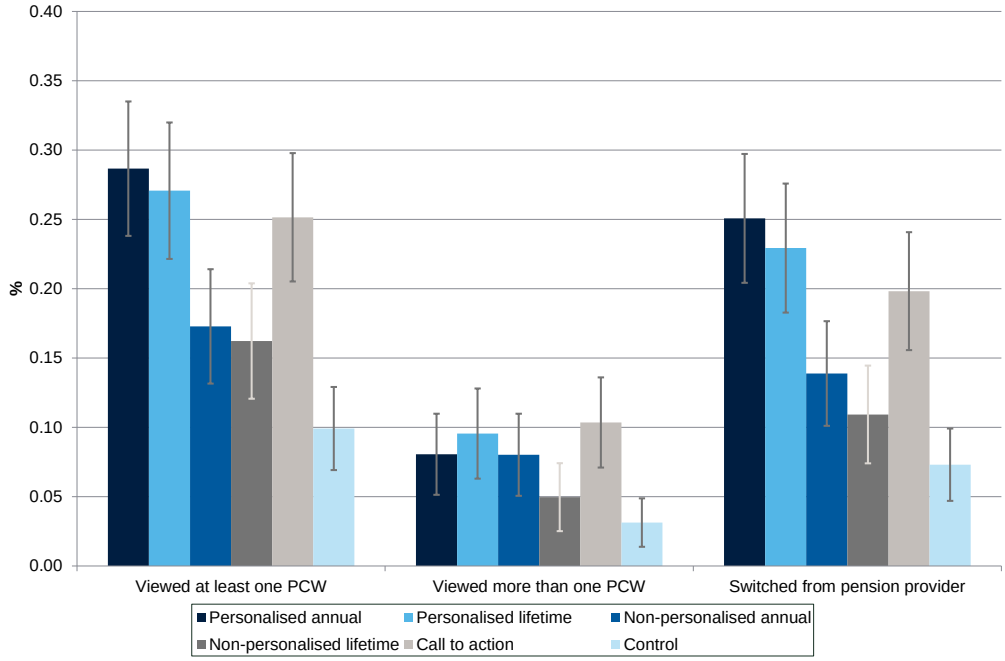
Figure 4.3 shows the results for the other shopping-around and switching metrics. These metrics assess how consumers behave after they click to shop around. Overall, the results show that the treatments remained significantly different to the control group. At the same time, the drop in the shopping-around

[46] The conventional threshold for statistical significance is the 5% level. If the difference is significant at the 10% level, this suggests that the difference is not zero, although it does not provide strong evidence that this is the case.

rates was accompanied by a contraction in the differences across the treatments.

Specifically, the personalised annual treatment still has the highest impact, but the difference with call to action treatment is no longer statistically significant. The non-personalised groups remain lower than the personalised groups and the call to action group. The results are qualitatively similar for the proportion of consumers who switched from their pension provider. As we move beyond the first PCW, very few consumers review more than one PCW, and the differences between the different treatment groups disappear. Importantly, however, the difference between all treatments and the control group remains significant.

Figure 4.3 Shopping-around metrics—all treatment groups



Note: Error bars indicate 95% confidence intervals.

Source: Oxera and CESS.

Overall, the results suggest that the treatments caused consumers to respond immediately and press the button to shop around, and the effect persisted so that consumers went ahead and reviewed the first PCW. In other words, the treatments affected both the incidence and the intensity of shopping around. For example, while the personal and medical questions deterred participants from shopping around, the treatment effect remains considerable across all treatments.

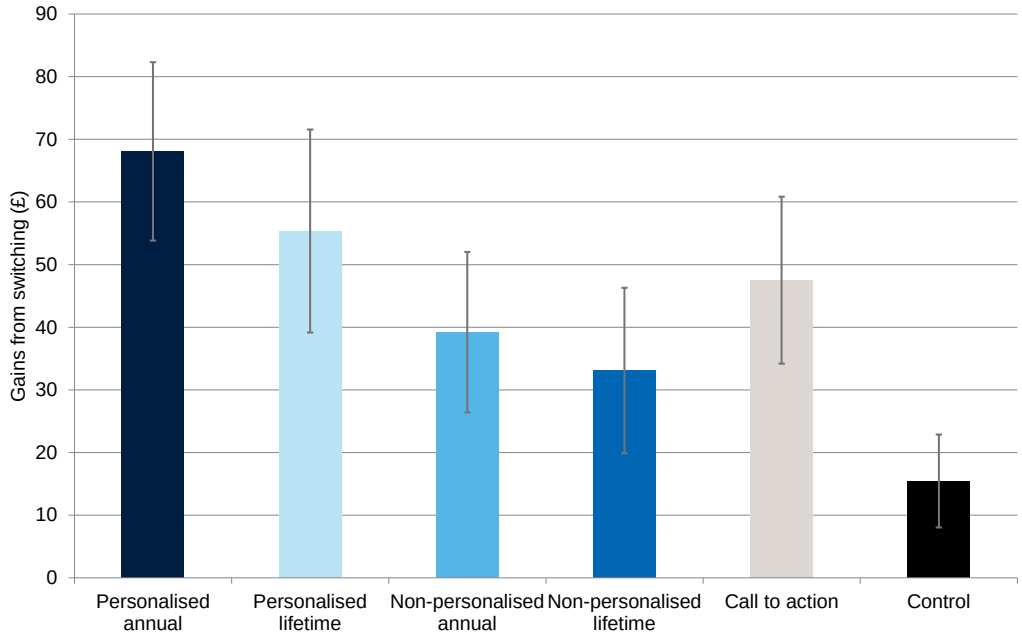
4.2.3 Switching gains

Consumers will realise the benefits from shopping around only if they are prepared to switch providers. While the primary objective of the experiment was to measure the impact of the information treatments on the propensity to shop around, data was also collected to assess whether the prompts helped consumers make better purchase decisions. Switching gains were found to be higher in the treatments, which provides additional evidence of the effectiveness of these prompts.

To assess the effectiveness of the participants' search, the analysis estimated, for those consumers who switched from their pension provider, the difference

between the annuity rate offered by the pension provider and the rate they ended up buying.

Figure 4.4 Switching gains



Note: Error bars indicate 95% confidence intervals.

Source: Oxera and CESS.

The findings, shown in Figure 4.4, are qualitatively similar to the differences seen in the degree of shopping around and switching. The personalised annual treatment led to the highest gains, followed by the personal lifetime and call to action treatment. At the same time, the variance between the call to action and the non-personalised groups is not significantly different from zero.

These findings show that those treatments most successful in encouraging consumers to shop around—especially the personalised treatments—were also more effective in helping them make a better choice. This may also be because of the superior information provided, which prompted respondents to be more persistent in shopping around or to take the shopping-around task seriously.

4.2.4 Time spent shopping around

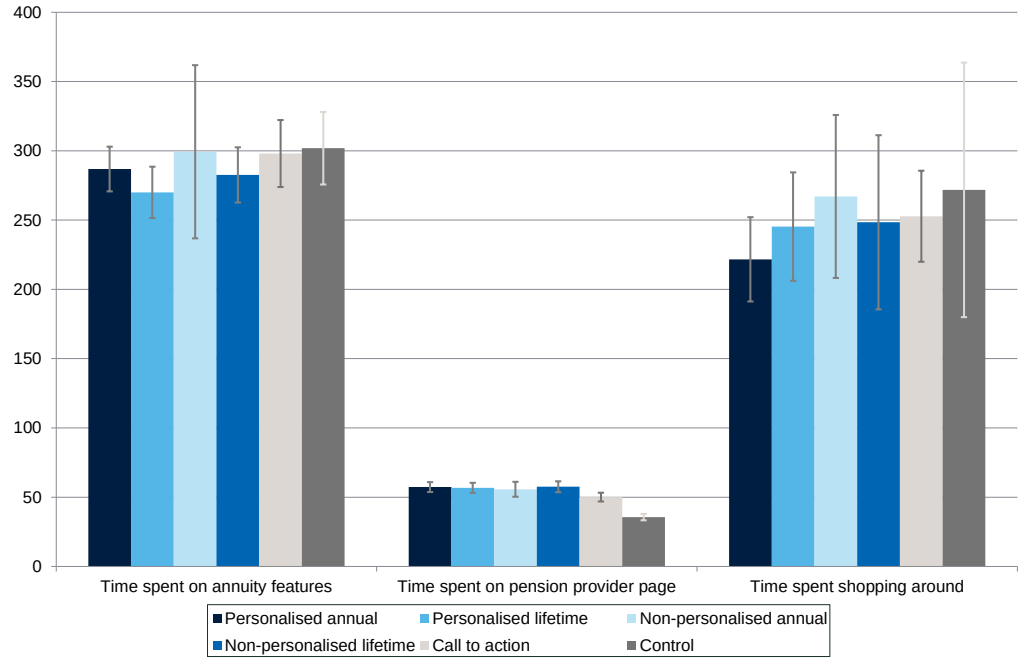
Another metric that reflects the intensity of shopping around is the time spent doing so, especially in relation to the time spent on other parts of the task (e.g. reviewing the annuity features). The analysis does not find any differences in the time that participants spend shopping around. In other words, while the treatments induce more consumers to shop around, once consumers begin shopping around, the difference across groups is not significant.

The pension task was divided into three parts, with the time spent on each part recorded:

- the letter from the pension provider and the choice of annuity features;
- the pension provider quote page;
- shopping around (conditional on the participant moving to the first PCW).

The findings reveal that, conditional on the participants reaching the first PCW, there were no significant differences in the time spent shopping around across the groups. So, while the information treatments induced more people to shop around, they did not increase the time spent looking for quotes, once the participant started searching (see Figure 4.5).[47] The results suggest that the treatments helped consumers extract higher gains from shopping around (as indicated in section 4.2.3) without incurring additional costs in terms of time.

Figure 4.5 Time spent on pension task



Note: Error bars indicate 95% confidence intervals.

Source: Oxera and CESS.

In terms of the time spent on other parts of the experiment, as expected there were no significant differences in the time spent on the annuity features. Furthermore, on the pension provider page, participants in the control groups spent significantly less time than those in the treatment groups. This again may not be surprising given that the control group had considerably less information to process on the page.

4.3 Pension pot size and pension provider quote level

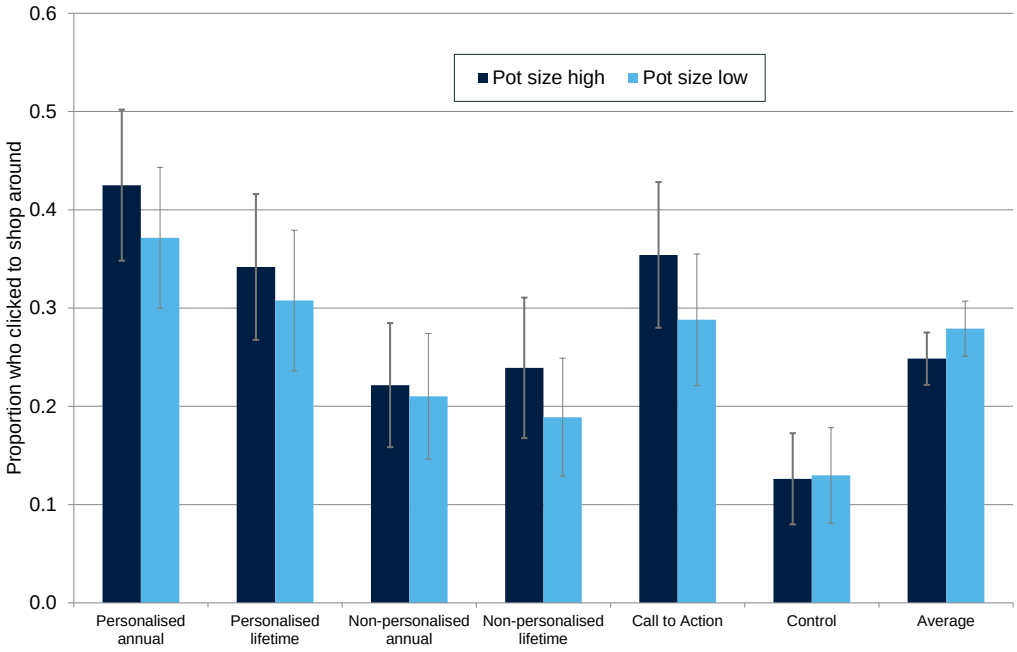
The experiment also tested whether the size of the gains from shopping around relative to the pension provider quote influence the decision to shop around. The findings show that shopping around was indeed higher when the relative gains from shopping around were higher. At the same time the absolute amount that the participants could gain from shopping around had a significantly smaller impact on likelihood to shop around than the relative gains.

To measure the impact of relative and absolute gains on the decision to shop around, participants were divided into four groups: a high and low pension pot interacted with a high and low pension provider quote (see section 3.1.2). The high pension pot offered higher absolute gains from shopping around, while the low pension provider quote offered higher relative gains from shopping around.

[47] See Table A2.8 for regression estimates.

The analysis first tested whether the size of the participant's pension pot would influence their propensity to shop around. As shown in Figure 4.6, the pension pot size does not have a significant impact on the initial search behaviour of subjects (clicking through to the PCW). The results for the other outcomes are qualitatively similar, and are shown in more detail in Appendix 1.[48]

Figure 4.6 Proportion who clicked to shop around by pension pot size



Note: Error bars indicate 95% confidence intervals.

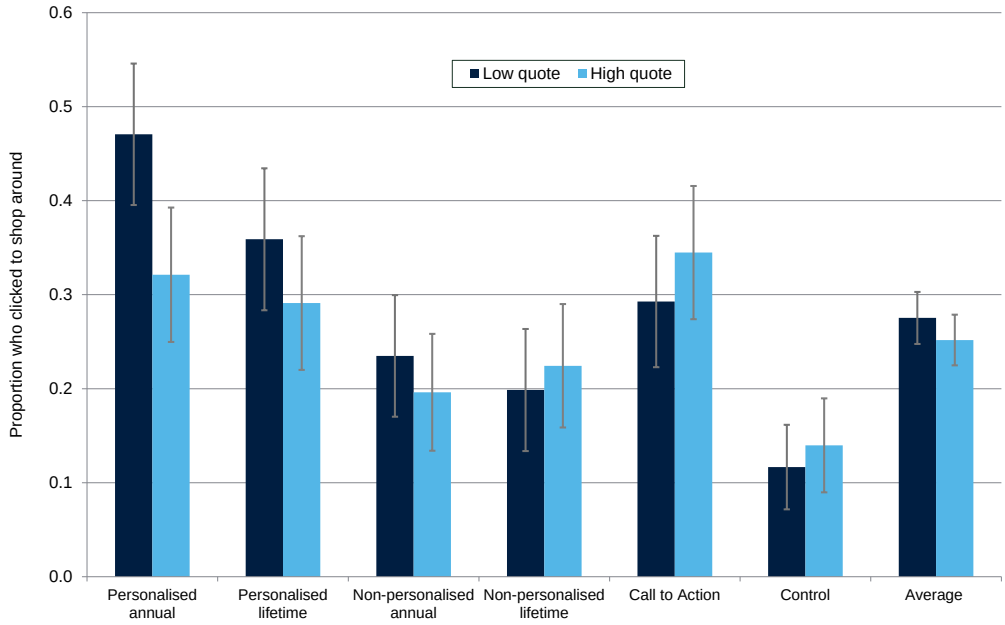
Source: Oxera and CESS.

While the pension pot size changes the absolute gains, the level of the pension provider's quote would influence the relative gains from switching. The quote level is therefore expected to influence the personalised and non-personalised groups only, which show the potential gains from shopping around in relation to the pension provider's quote.

The findings show that this is indeed the case, at least for the personalised annual group. Reducing the internal quote increases by 17 percentage points the proportion of participants who clicked to shop around in the personalised annual group (see Figure 4.7 below). The impact is significant on the other shopping-around variables, as well as on the rate of switching (see Appendix 1).

[48] One exception is that those with a higher pension pot are more likely to view more than one PCW if they are assigned to the personalised quote comparison group. However, given the small number of participants who visited more than one PCW, this result should be interpreted with caution.

Figure 4.7 Proportion who clicked to shop around by level of pension provider quote



Note: Error bars indicate 95% confidence intervals.

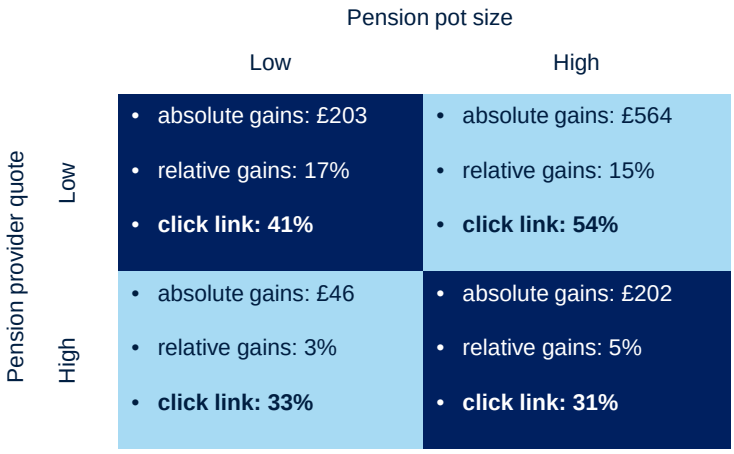
Source: Oxera and CESS.

To illustrate the difference in the impact of absolute versus relative gains on shopping around, we compared the shopping-around rates across the four sub-groups:

- low pension pot and low provider quote (LL);
- low pension pot and high provider quote (LH);
- high pension pot and low provider quote (HL);
- high pension pot and high provider quote (LL).

Figure 4.8 presents the proportion of participants who clicked to shop around for each of these sub-groups, restricting the results to the personalised annual group. The experimental design intentionally assigned the same absolute gains to the LL and HH groups to compare absolute with relative gains. The findings show that the shopping-around rate is higher for the LL group, which has higher relative gains, although the difference is not statistically significant owing to the small size of the cells. Furthermore, the impact of the pension provider quote is significantly greater when the pension pot is larger.

Figure 4.8 Combination of pot size and internal quote



Note: Limited to personalised annual gains group.

Source: Oxera and CESS.

These findings provide evidence that suggests that consumers are influenced more by relative gains than by absolute gains. At the same time, the impact of relative gains on shopping around is higher when the absolute gains are also high.

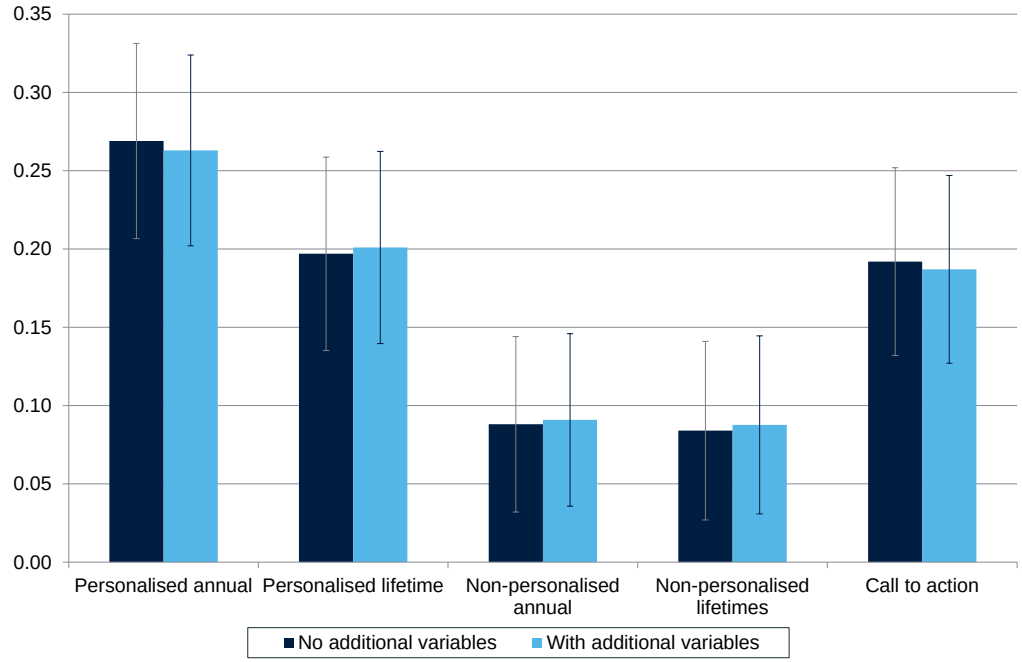
4.4 Robustness checks

Robustness checks test the validity of the results described above by running additional regression analyses that control for a number of socio-demographic variables. The additional analyses reaffirm the validity of the results, and highlight that the randomisation methodology has captured the impact of the treatments on shopping around.

Two separate linear regressions were run, with and without the additional variables. The additional variables included data collected on participants when they joined the experiments (gender, education and income level), as well as the participants' answers to the follow-up survey.

The lack of significant difference across all treatment groups provides strong evidence of the effectiveness of the randomisation strategy (see Figure 4.9 below). If the treatment groups differed from each other, the inclusion of additional variables would significantly change the results.

Figure 4.9 Impact on click to shop around with and without additional covariates



Note: Each bar represents the difference between the mean of the particular treatment group and the mean of the control group. Error bars indicate 95% confidence intervals.

Source: Oxera and CESS.

The results are presented in more detail in the appendix. Table A2.4 in the appendix shows the regression results that control for the participants' main demographic characteristics used to allocate them into each group (gender, income and education). Table A2.5 includes other data collected in the follow-up survey.[49]

The results provide useful insights into the impact of socioeconomic and other variables on the propensity to shop around across all treatments. For example:

- women are around 4 percentage points more likely to click on the button to shop around than men;
- participants with a high education are significantly more likely to shop around. This applies to all the shopping-around metrics used.

The inclusion of more variables from the follow-up survey provides further insights into the factors that might influence people's propensity to shop around. (The questions in the follow-up survey are listed in Appendix 1.) As shown in Figure 4.1, participants who declared that they had switched on other products were also more likely to shop around in the experiment.

- If the participant answered correctly the question on the credit card[50]—which is a proxy for financial knowledge—they were found to be more likely to shop around in the experiment.

[49] Regression results for the switching gains are shown in the appendix.
[50] The question asked: 'Imagine you have a credit card debt of £3,000 at an Annual Percentage Rate of 12% (or 1% per month). You pay of £30 per month and do not suffer any charges or additional spending on the card. How long will it take you to pay off this debt: (1) Less than 5 years, (2) Between 5 and 10 years, (3) More than 10 years, (4) None of the above, you will continue to be in debt, (5) Do not know'.

- Similarly, answering the bat-and-ball question[51] correctly was also found to be positively correlated with shopping around in the experiment. While not difficult in principle, the bat-and-ball question requires careful deliberation to avoid the common mistake of taking the difference between the two numbers presented. This is an attribute that is correlated with shopping around, perhaps due to evaluating one's options carefully.

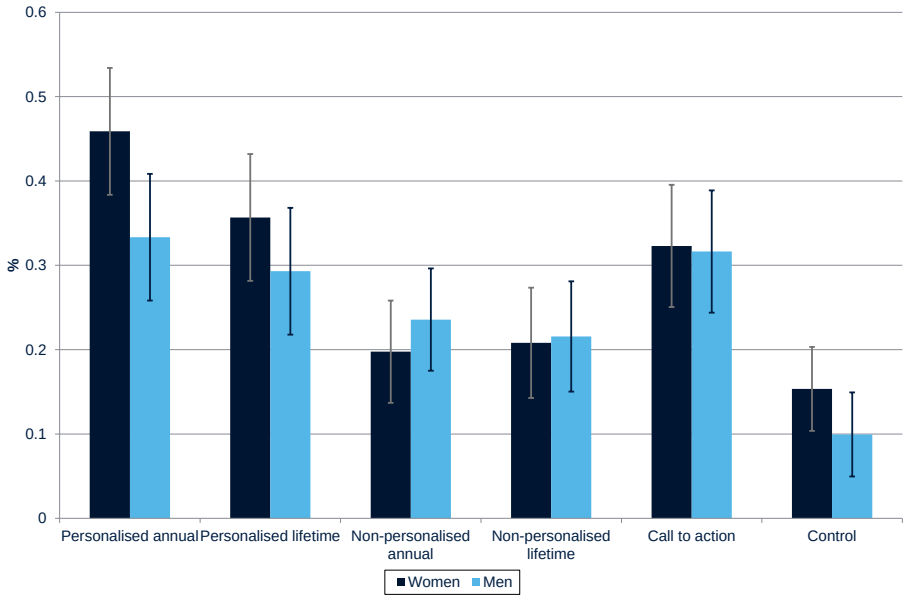
Logistic regressions were also run to test the robustness of the ordinary least squares (OLS) regressions. The results, shown in Appendix 2, are consistent with the above findings.

4.5 Impact of gender, income and education

As indicated above, individual characteristics (e.g. gender) can influence participants' propensity to shop around. Accordingly, the analysis explored whether participants responded differently to each of the treatments according to their socio-demographic characteristics. The findings reveal that certain characteristics affect the participants' response to the treatments:[52]

- women were more likely to respond to the personalised annual treatment than men (see Figure 4.10);
- high income participants were more likely to shop around than low income participants when assigned to the non-personalised lifetime group (Figure 4.11);
- high education participants were more likely to shop around than low education participants when assigned to either the control group or one of the non-personalised treatment groups (Figure 4.12).

Figure 4.10 Impact on click to shop around by gender

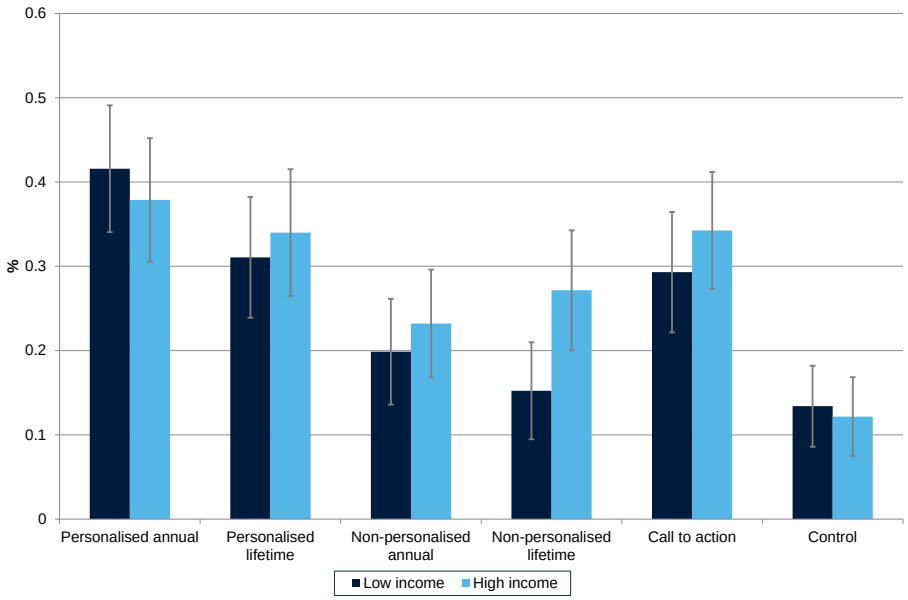


Note: Error bars indicate 95% confidence intervals.

Source: Oxera and CESS.

[51] The question asked: You buy a bat and a ball for £1.10. The bat costs £1 more than the ball. How much does the ball cost?'
[52] For findings on the impact on other shopping-around metrics, see Table A2.7.

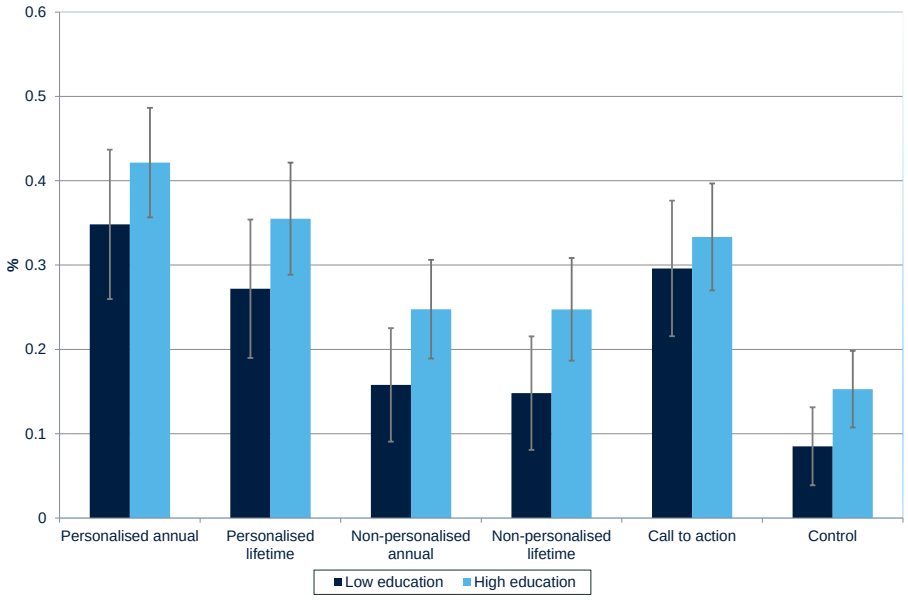
Figure 4.11 Impact on click to shop around by income



Note: Error bars indicate 95% confidence intervals.

Source: Oxera and CESS.

Figure 4.12 Impact on click to shop around by education level



Note: Error bars indicate 95% confidence intervals.

Source: Oxera and CESS.

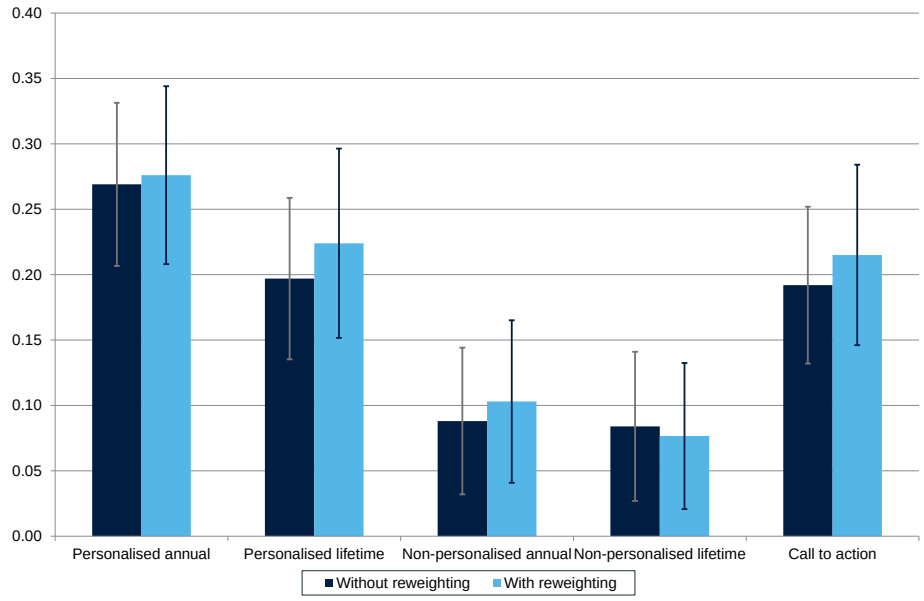
4.6 Sample

The experiment sought to obtain responses from participants who are likely to purchase an annuity and therefore restricted the sample to those aged 55–65. Characteristics of annuitants were not possible to obtain and it is in fact expected that those characteristics will change in the future given the recent policy changes and the sharp decline in the number of annuities sold. It is expected that annuity purchasers may be different to the general population aged 55–65 and may in fact be more highly educated than the average population.

The analysis assessed whether the experimental sample differed significantly to the UK population aged 55–65. The results are explained in detail in Appendix 1. It was found that the experimental sample was more highly educated than the population as whole. The largest difference between the sample and the UK population is in the 'no qualifications' category. According to the census data, of those aged 50–64, 25% had no qualifications; in the experiment, only 7% of participants reported that they had no qualifications.[53]

The analysis then tested how this difference would affect the results. To do that, the sample was reweighted to reflect the actual proportions in the population.[54] Figure 4.13 shows the treatment effects (the difference between the treatment groups and the control group) on the proportion who clicked to shop around, with and without the reweighting.[55] The reweighting of the data did not cause any significant changes in the findings. The ranking of the treatments remains the same. There was one change from the unweighted results, with the increase in the impact of the call to action treatment results in the difference between the personalised annual and call to action treatments no longer being statistically significant.

Figure 4.13 Treatment effects with and without the reweighting



Note: Each bar measures the difference in the proportion who clicked to shop around between each treatment group and the control group. Error bars indicate 95% confidence intervals.

Source: Oxera and CESS.

4.7 Other outcome variables

As highlighted in section 3, participants' decisions can serve as a cross-check on the success of the experimental design. In particular, the decisions show whether participants were incentivised to make choices as they would in real life

[53] The population of relevance are those aged 55–65 who are interested in purchasing an annuity. Annuity purchasers might, as a matter of fact, be more highly educated than the average population and thus resemble the experimental sample. Data on the education level of annuity purchasers was not available for this study, however, and it should be noted that the recent decline in annuity sales is likely to have resulted in a change in the profile of typical annuity purchasers.
[54] Taking data from the 2011 census for the UK population aged 50–64 (http://www.nomisweb.co.uk/query/select/getdatasetbytheme.asp?theme=26), the sample is effectively reweighted to account for under- or over-represented groups in the population. In this particular case, the sample was adjusted to account for the under-representation of the low education category.
[55] For the regression estimates, see Table A2.8.

as opposed to 'playing the game' and maximising their rewards. If most participants made a selection that seemed more appealing but offered less reward (e.g. working at the local community centre as opposed to a call centre that offered higher income), this would indicate that the participants were being themselves in the experiment rather than 'playing the game'.

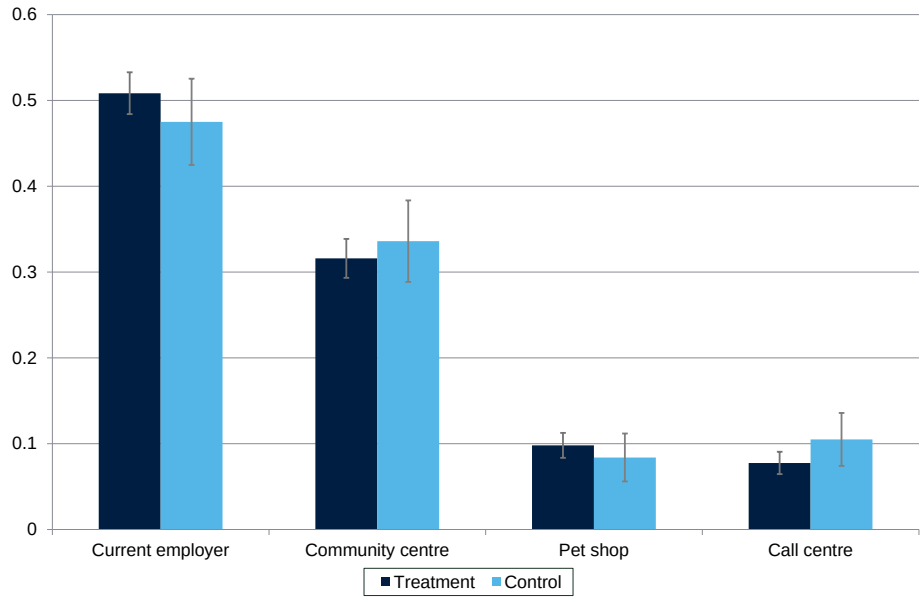
The findings reveal that many of the participants made choices using their preferences, rather than simply trying to maximise their rewards. For example, in the savings task, around half of the participants chose a cash ISA even though it did not offer the highest income

4.7.1 Choices in secondary tasks

To maximise rewards, participants needed to have selected the options in the secondary tasks that provided the highest amounts of retirement income. These were not the most popular options, suggesting that most participants were using other criteria when making selections. The most popular choices appear to coincide with the choices that one might expect to be the most popular in reality, despite the reward system of the experiment.

First, looking at the decisions made in the employment task, most participants decided to stay with their current employer, which was the default option. The call centre offered the highest reward, but was perhaps the least desirable in terms of job satisfaction, which explains its low popularity.

Figure 4.14 Employment choices

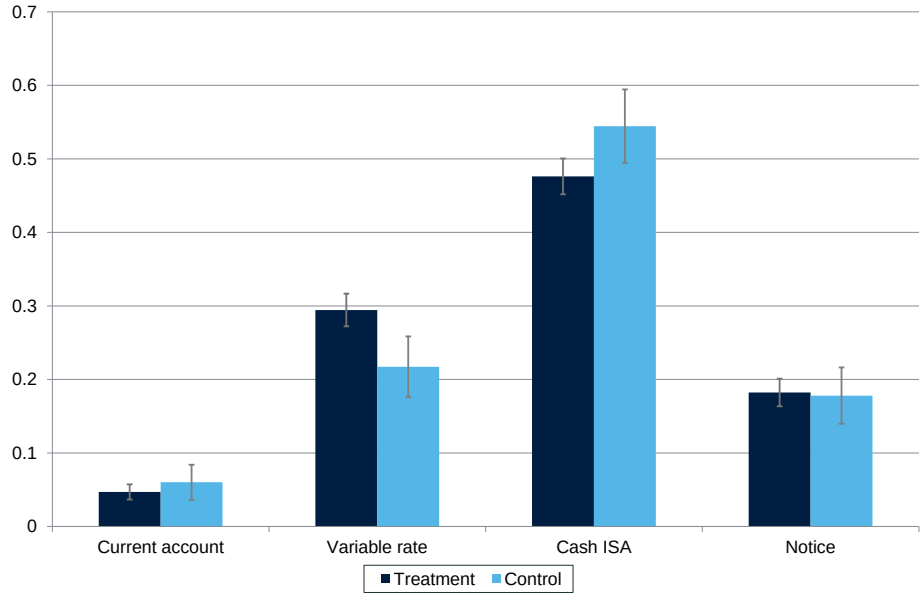


Note: Error bars indicate 95% confidence intervals.

Source: Oxera and CESS.

For the savings task, most participants opted for the cash ISA, which appears to be the social norm in this case. The notice account, which offered the highest reward, was not as popular, perhaps because of the restrictions on the number of withdrawals.

Figure 4.15 Savings choices

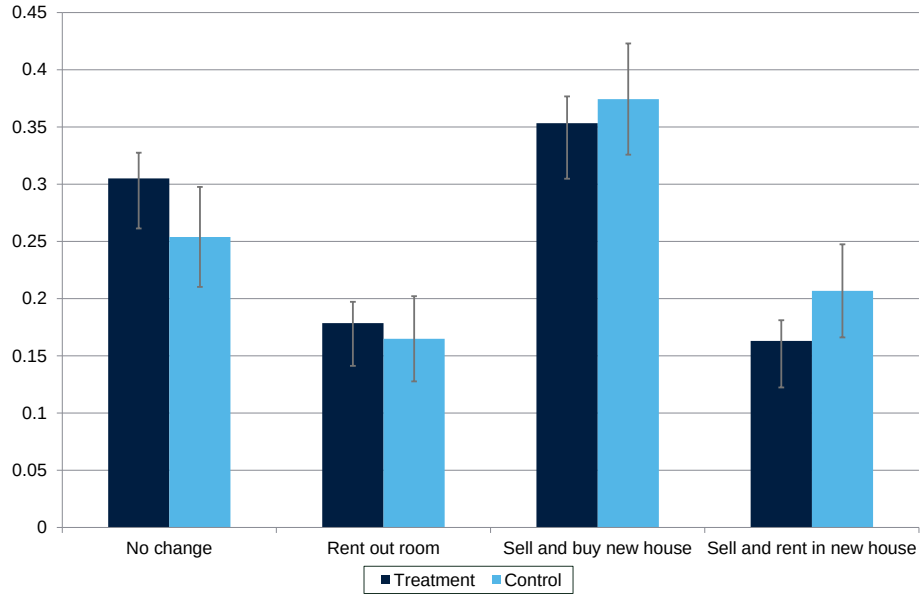


Note: Error bars indicate 95% confidence intervals.

Source: Oxera and CESS.

Finally, for the housing task, many participants chose the most convenient option, which was not to change anything, even though this offered no additional income. Renting out a room in their house was the least desirable option, despite offering the highest rewards.

Figure 4.16 Housing choices



Note: Error bars indicate 95% confidence intervals.

Source: Oxera and CESS.

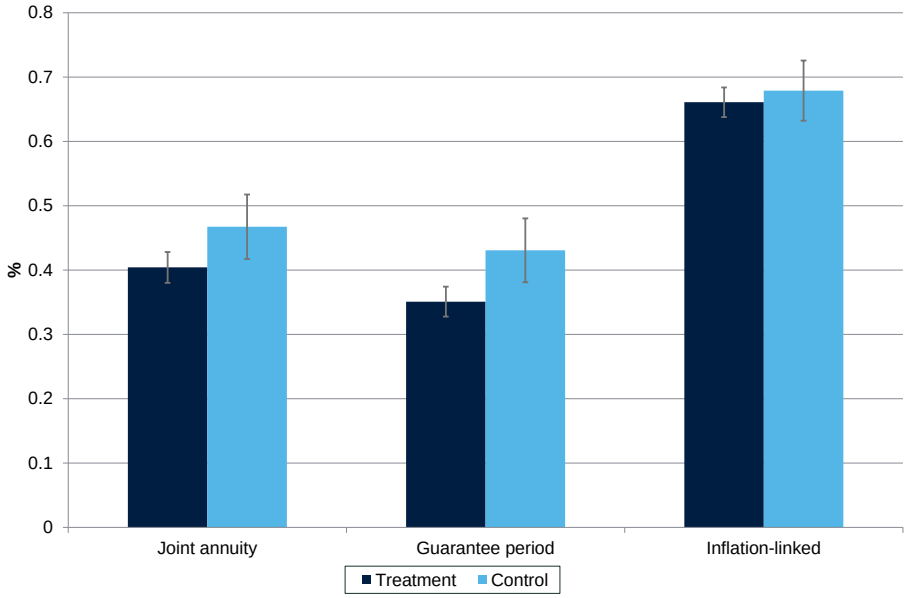
The most popular choices appear to suggest that participants were thinking more about what they would do in reality than they were aiming to maximise rewards. While participants in different groups made different decisions on the secondary tasks, there are no significant differences in the proportion of those who chose the maximum income from the task. In other words, while it is natural

to expect people to have different tastes across the tasks, there is no evidence that the participants in the treatment groups were more concerned about maximising rewards than those in the control group.

4.7.2 Choice of annuity features

Similar insights can be drawn by looking at the choices made on the annuity features. Almost half of the participants chose a joint life annuity or a product with a guarantee period, even though they were warned that this would reduce their annual income and hence their rewards. The consumer responses to the debrief questionnaires in the pilot stage revealed that many participants were considering their spouse when making these decisions. Similarly, around two-thirds of participants chose an inflation-linked annuity, which offered a lower annual income in the first year.[56]

Figure 4.17 Choices of annuity features



Source: Oxera and CESS.

Overall, the results show that consumers were engaged in all the tasks at hand and acted on their impulses and preferences, rather than being driven to maximise rewards.

[56] As noted in section 3, all consumers within a pension pot\pension provider category received the same annuity quotes regardless of their annuity feature selections. However, participants were unaware of this when they were making their selection.

5 Conclusion

Overall, the results provide evidence that carefully designed prompts can have a significant impact on consumer behaviour and encourage shopping around. Importantly, the experiment has also been able to identify which prompts resulted in more shopping around.

These two treatments prompt consumers in different ways. The personalised treatments offer information customised to the consumer. The effectiveness of such interventions may be explained in a number of ways. For example, they may be effective because they provide credible information that the consumer trusts and can act upon, or because of the way they interact with consumers' other behavioural traits, such as procrastination and inertia.

The call to action treatment contained a short, yet effective, statement prompting consumers to shop around by invoking a social comparison. The impact of the call to action treatment suggests that simple, easily digestible, information that accompanies text with visuals can have a large impact on consumer behaviour. It also offers more evidence that social comparisons of this sort can have a significant impact.

From a methodological perspective, the experiment sought to increase the 'external validity' of the results, by encouraging behaviour similar to that observed in reality. The experiment used a number of design features to induce behavioural biases that have been found to inhibit shopping around, such as requiring participants to go through multiple steps, where they had to read a lot of information and make selections on the annuity features they wanted, before they were faced with the information treatments.

Overall, the evidence presented in this study provides useful insights both for the annuities market and for regulators in other markets who wish to increase customer engagement and enhance competition. The relative impact of the treatments, combined with an estimated cost of implementation, can in turn provide useful guidance on which remedies to follow in order to improve shopping around.

APPENDICES

A1 The experiment

A1.1 Sampling and recruitment

A1.1.1 Recruitment methodology

The experiment recruited 1,996 participants from the UK population of people at or nearing retirement age (aged 55–65). This age bracket, along with the residency requirement, were the only variables qualifying potential subjects for participation in the experiment. The experimental subjects were recruited by the SSI, one of the largest online panels in the UK, with 250,000 registered subjects, 35,000 of whom are in the 55–65 age bracket.

SSI used invitations of all types to bring in people with a diversity of motivations to take part in the research. These included email invitations, SMS and text messages, telephone alerts, banners and messaging on websites and online communities. The messages themselves were also varied, including invitations to give your opinion, win a prize, earn cash, or let your voice be heard. This diversity of motivations contributed to a high-quality sample. To avoid self-selection bias, specific project details were not included in the invitation. Rather, participants were invited to 'take a survey' with the details disclosed later.

A1.1.2 Group assignment

Participants were assigned to treatment and control groups using block randomisation. This method first divides participants into sub-groups ('blocks') based on observable characteristics (e.g. their age or gender). Then, within each block, participants are randomly assigned to treatment and control groups.

This method ensured that any characteristics of the participants that might influence the outcome were accounted for. For example, if highly educated people are more likely to shop around, the objective was to avoid any one of the treatment groups containing too many highly educated people.

The blocking variables used for the experiment were gender, education (high and low) and income (high and low). There were two categories in each group for a total of eight blocks (e.g. block 1 would be male, high income, high education). Information on each of these variables was collected before the participant started the experiment.

Once the participant had input this information, they would be assigned to the appropriate block and then randomly assigned to one of the treatment or control groups. The probability of assignment into each treatment group would vary according to the number of participants within each block that had been assigned to that group. This was done to maintain a balance across all treatment groups within each block. For example, if there were too many men in the personalised quote comparison group compared with the other groups, the probability of being assigned to that group would be reduced for the next male participant. The likelihood of this occurring is typically 1/3 or 1/4. This method is called 'biased coin'.

To test whether the groups were balanced, Table A1.1 shows the breakdown in the three blocking variables across the six groups. The control group has slightly fewer men than the treatment groups, although the difference is not statistically significant. Similarly, there are no significant differences between the control and treatment groups in terms of the proportion of high income or highly educated participants.

A1.1.3 Sample characteristics

Participants were recruited to be representative of the UK population at or nearing retirement (aged 55–65) in terms of gender, education and income. The socio-demographic characteristics of the sample are shown in Table A1.1. Participants were evenly divided between men and women, in line with the UK population as a whole.[57]

Table A1.1 Socio-demographic characteristics of participants across treatment groups

	Personalised annual	Personalised lifetime	Non-personalised annual	Non-personalised lifetime	Call to action	Control
Male	0.493	0.500	0.485	0.507	0.524	0.473
	(0.501)	(0.501)	(0.501)	(0.501)	(0.500)	(0.500)
High income	0.504	0.487	0.519	0.500	0.536	0.493
	(0.501)	(0.501)	(0.500)	(0.501)	(0.499)	(0.501)
High education	0.666	0.637	0.648	0.642	0.630	0.632
	(0.472)	(0.482)	(0.478)	(0.480)	(0.483)	(0.483)
Observations	335	314	324	302	338	383

Note: Standard deviations in parentheses.

Source: Oxera and CESS.

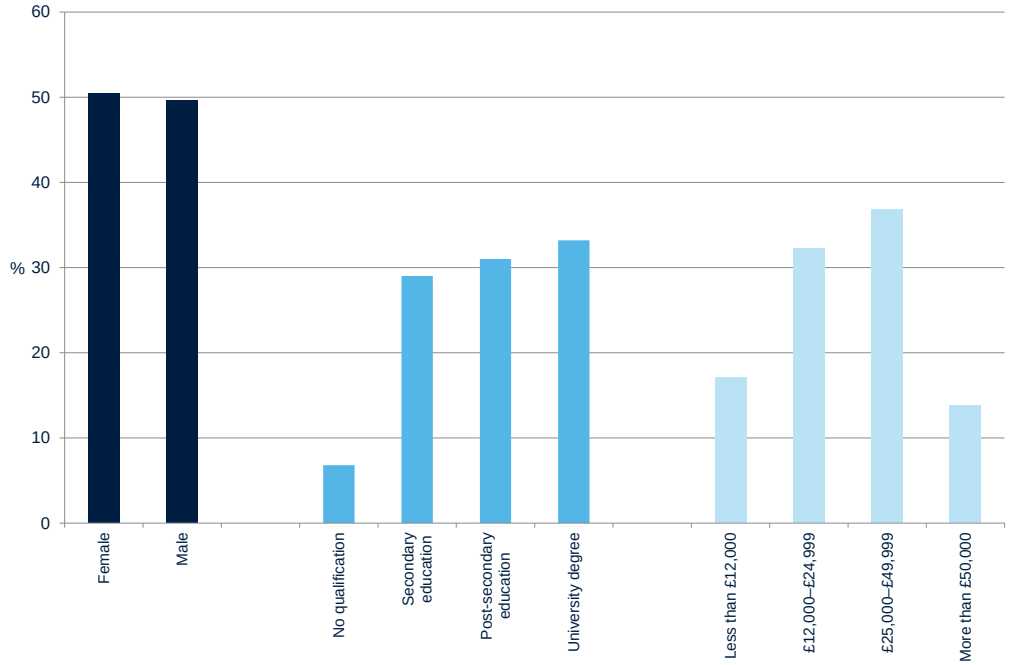
With regard to income, the sample was quite similar to the UK population. According to the 2014 Annual Survey of Hours and Earnings (ASHE), in the age group 50–59, 20% of the population had annual earnings of just above £12,000, 30% earn around £23,000, and 40% earn between £23,000 and £52,000. These figures are quite close to the proportions in the sample.

However, the sample was significantly more educated than the UK population aged 55–65. According to the 2011 UK census,[58] of those aged 50–64, 25% had no qualification and 26% had up to secondary education (O levels, GCSEs, etc.). This is significantly higher than the corresponding percentage in the sample, which was approximately 36%.[59]

Bearing this in mind, the analysis employed methods to control for socio-demographic characteristics. First, multivariate regressions controlled for a number of demographic characteristics to test the robustness of the results. Furthermore, the sample was adjusted to reflect the actual proportions of educational achievement observed in the population. The results of these tests were discussed in detail in section 4.

[57] According to the 2011 UK census, 50.7% of the population aged 55–64 were women (http://www.nomisweb.co.uk/query/select/getdatasetbytheme.asp?theme=26), accessed 27 April 2016.
[58] http://www.nomisweb.co.uk/query/select/getdatasetbytheme.asp?theme=26
[59] The population of relevance are those aged 55–65 who are interested in purchasing an annuity. Annuity purchasers might, as a matter of fact, be more highly educated than the average population and thus resemble the experimental sample. Data on the education level of annuity purchasers was not available for this study, however. Moreover, the recent decline in annuity sales is likely to have resulted in a change in the profile of typical annuity purchasers.

Figure A1.1 Socio-demographic characteristics of sample



Source: Oxera and CESS.

A1.2 Experiment instructions

The instructions screen presented below were shown to all the participants before the start of the experiment. Each individual task then had its own specific instructions.

Figure A1.2 Initial questions on gender, education and income

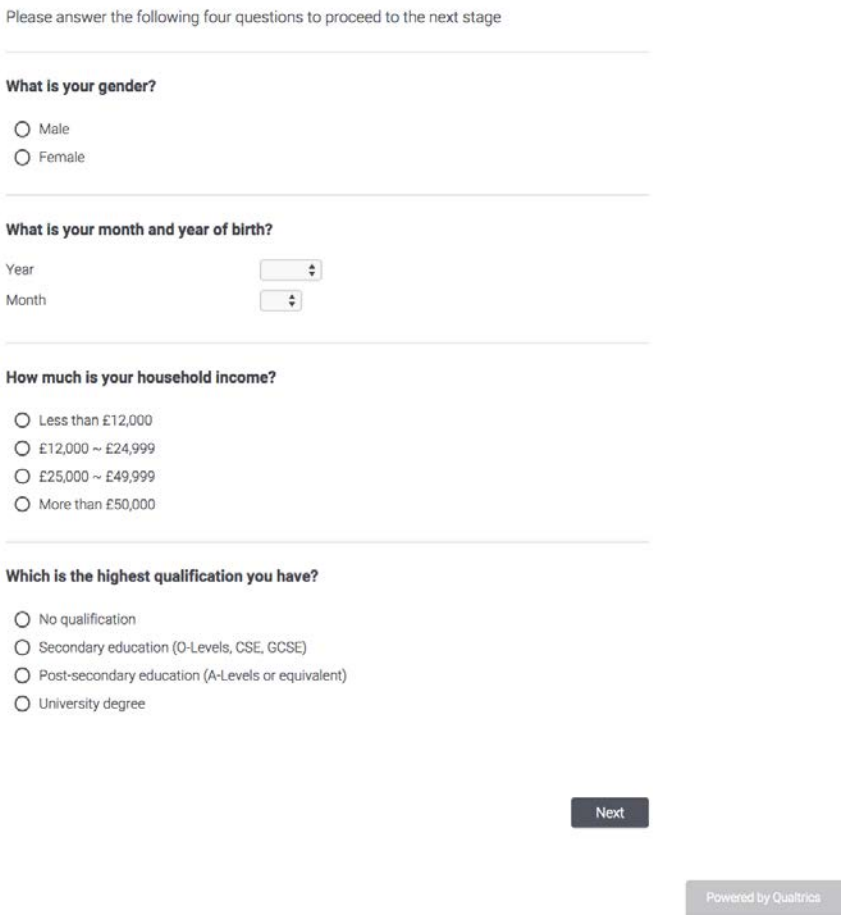
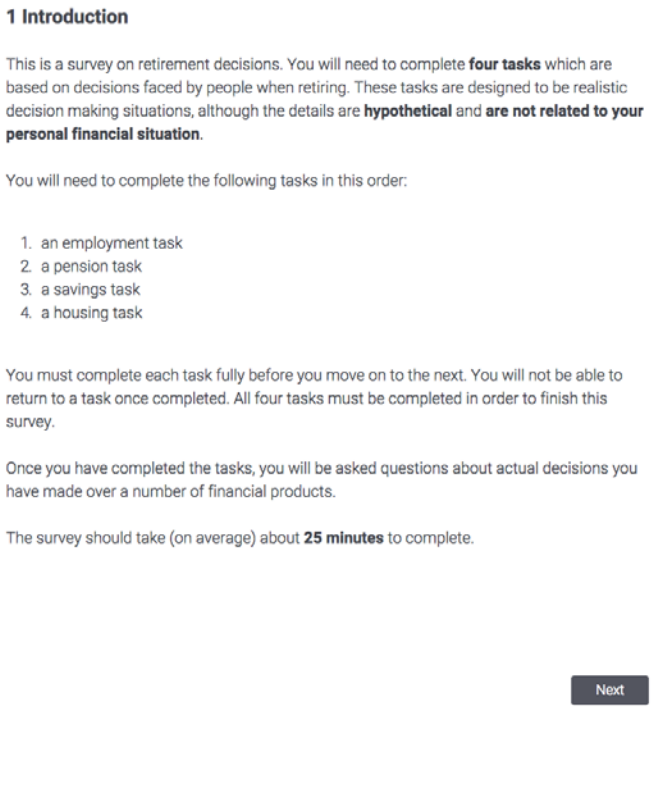


Figure A1.3 Instructions—general



1 Introduction

This is a survey on retirement decisions. You will need to complete **four tasks** which are based on decisions faced by people when retiring. These tasks are designed to be realistic decision making situations, although the details are **hypothetical** and **are not related to your personal financial situation**.

You will need to complete the following tasks in this order:

1. an employment task
2. a pension task
3. a savings task
4. a housing task

You must complete each task fully before you move on to the next. You will not be able to return to a task once completed. All four tasks must be completed in order to finish this survey.

Once you have completed the tasks, you will be asked questions about actual decisions you have made over a number of financial products.

The survey should take (on average) about **25 minutes** to complete.

Next

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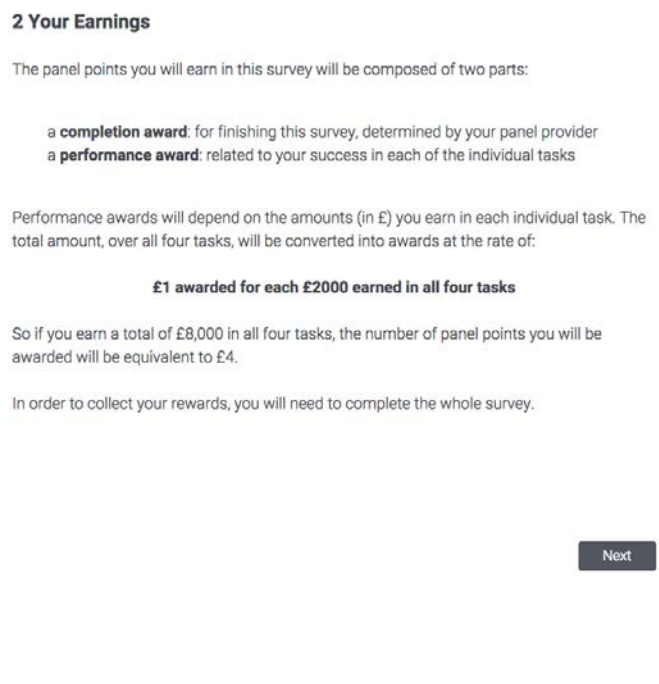
Figure A1.4 Instructions—reward structure



2 Your Earnings

The panel points you will earn in this survey will be composed of two parts:

a **completion award**: for finishing this survey, determined by your panel provider
a **performance award**: related to your success in each of the individual tasks

Performance awards will depend on the amounts (in £) you earn in each individual task. The total amount, over all four tasks, will be converted into awards at the rate of:

£1 awarded for each £2000 earned in all four tasks

So if you earn a total of £8,000 in all four tasks, the number of panel points you will be awarded will be equivalent to £4.

In order to collect your rewards, you will need to complete the whole survey.

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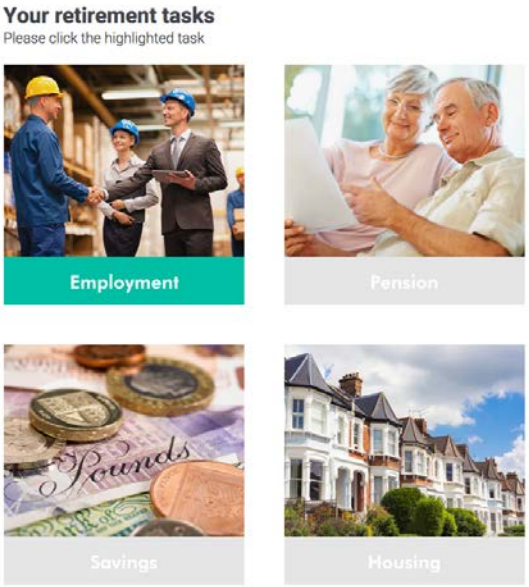
Figure A1.5 Main menu



A1.3 Pension task

The following screenshots set out the screens presented to participants in the pension task. They exclude the pension provider quote screens, which were presented in section 3.

Figure A1.6 Instructions—pension task

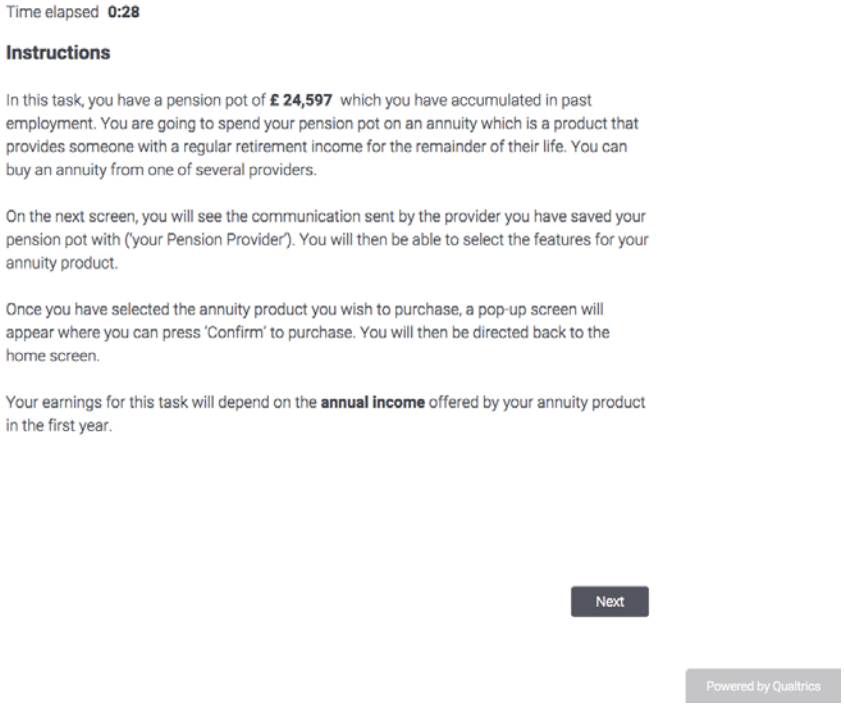
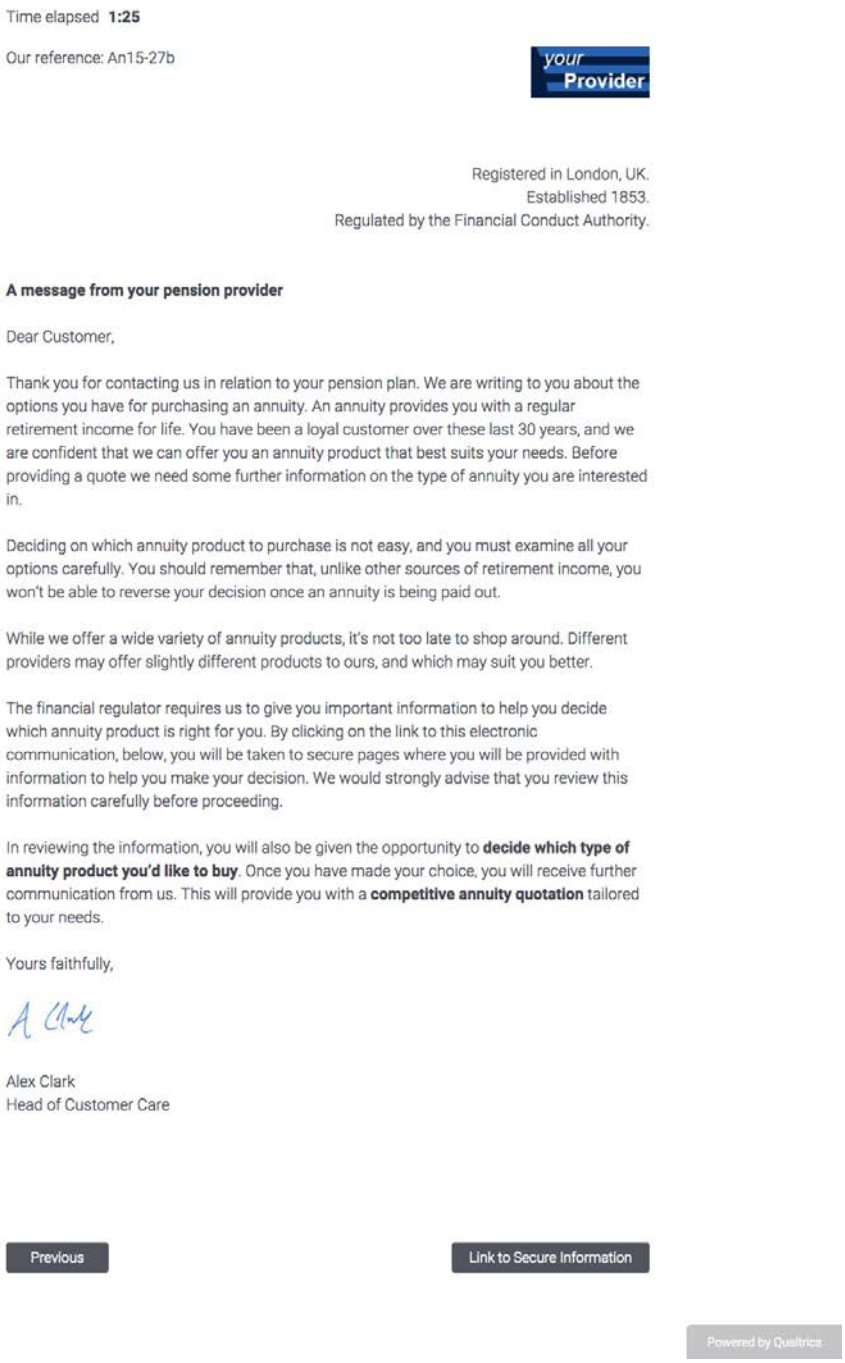


Figure A1.7 Provider letter (1)



Time elapsed **1:25**

Our reference: An15-27b

your Provider

Registered in London, UK.
Established 1853.
Regulated by the Financial Conduct Authority.

A message from your pension provider

Dear Customer,

Thank you for contacting us in relation to your pension plan. We are writing to you about the options you have for purchasing an annuity. An annuity provides you with a regular retirement income for life. You have been a loyal customer over these last 30 years, and we are confident that we can offer you an annuity product that best suits your needs. Before providing a quote we need some further information on the type of annuity you are interested in.

Deciding on which annuity product to purchase is not easy, and you must examine all your options carefully. You should remember that, unlike other sources of retirement income, you won't be able to reverse your decision once an annuity is being paid out.

While we offer a wide variety of annuity products, it's not too late to shop around. Different providers may offer slightly different products to ours, and which may suit you better.

The financial regulator requires us to give you important information to help you decide which annuity product is right for you. By clicking on the link to this electronic communication, below, you will be taken to secure pages where you will be provided with information to help you make your decision. We would strongly advise that you review this information carefully before proceeding.

In reviewing the information, you will also be given the opportunity to **decide which type of annuity product you'd like to buy**. Once you have made your choice, you will receive further communication from us. This will provide you with a **competitive annuity quotation** tailored to your needs.

Yours faithfully,

A Clark

Alex Clark
Head of Customer Care

Previous

Link to Secure Information

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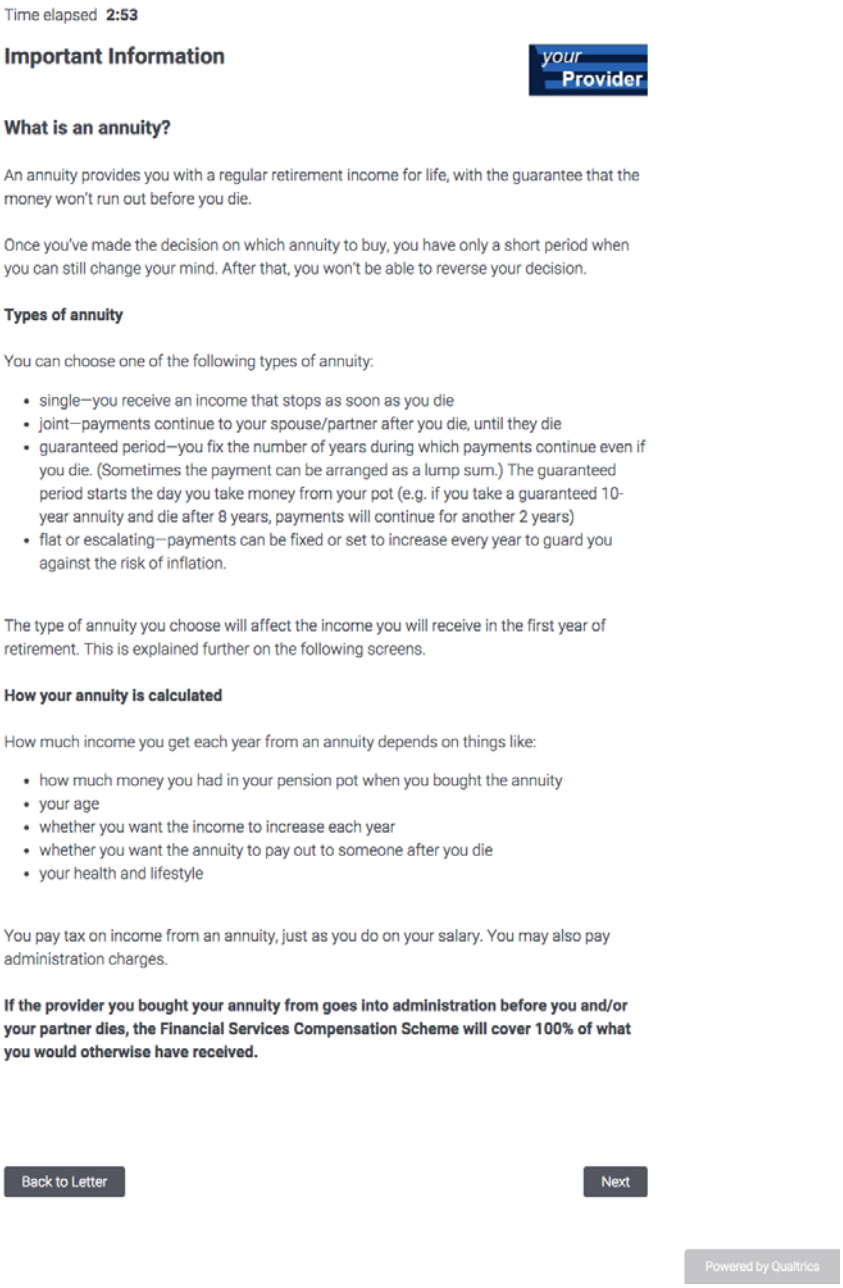
Figure A1.8 Provider letter (2)



Time elapsed **2:53**

Important Information

your Provider

What is an annuity?

An annuity provides you with a regular retirement income for life, with the guarantee that the money won't run out before you die.

Once you've made the decision on which annuity to buy, you have only a short period when you can still change your mind. After that, you won't be able to reverse your decision.

Types of annuity

You can choose one of the following types of annuity:

- single—you receive an income that stops as soon as you die
- joint—payments continue to your spouse/partner after you die, until they die
- guaranteed period—you fix the number of years during which payments continue even if you die. (Sometimes the payment can be arranged as a lump sum.) The guaranteed period starts the day you take money from your pot (e.g. if you take a guaranteed 10-year annuity and die after 8 years, payments will continue for another 2 years)
- flat or escalating—payments can be fixed or set to increase every year to guard you against the risk of inflation.

The type of annuity you choose will affect the income you will receive in the first year of retirement. This is explained further on the following screens.

How your annuity is calculated

How much income you get each year from an annuity depends on things like:

- how much money you had in your pension pot when you bought the annuity
- your age
- whether you want the income to increase each year
- whether you want the annuity to pay out to someone after you die
- your health and lifestyle

You pay tax on income from an annuity, just as you do on your salary. You may also pay administration charges.

If the provider you bought your annuity from goes into administration before you and/or your partner dies, the Financial Services Compensation Scheme will cover 100% of what you would otherwise have received.

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Figure A1.9 Single or joint life annuity

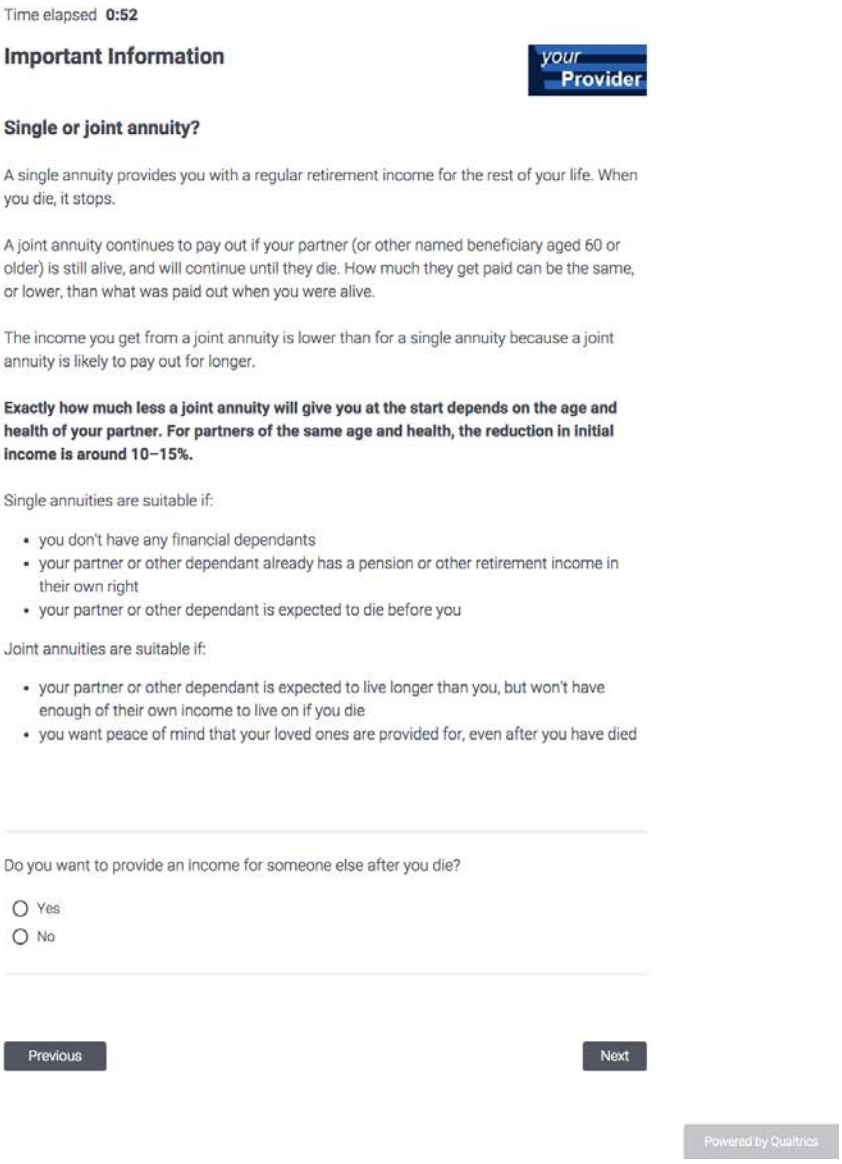
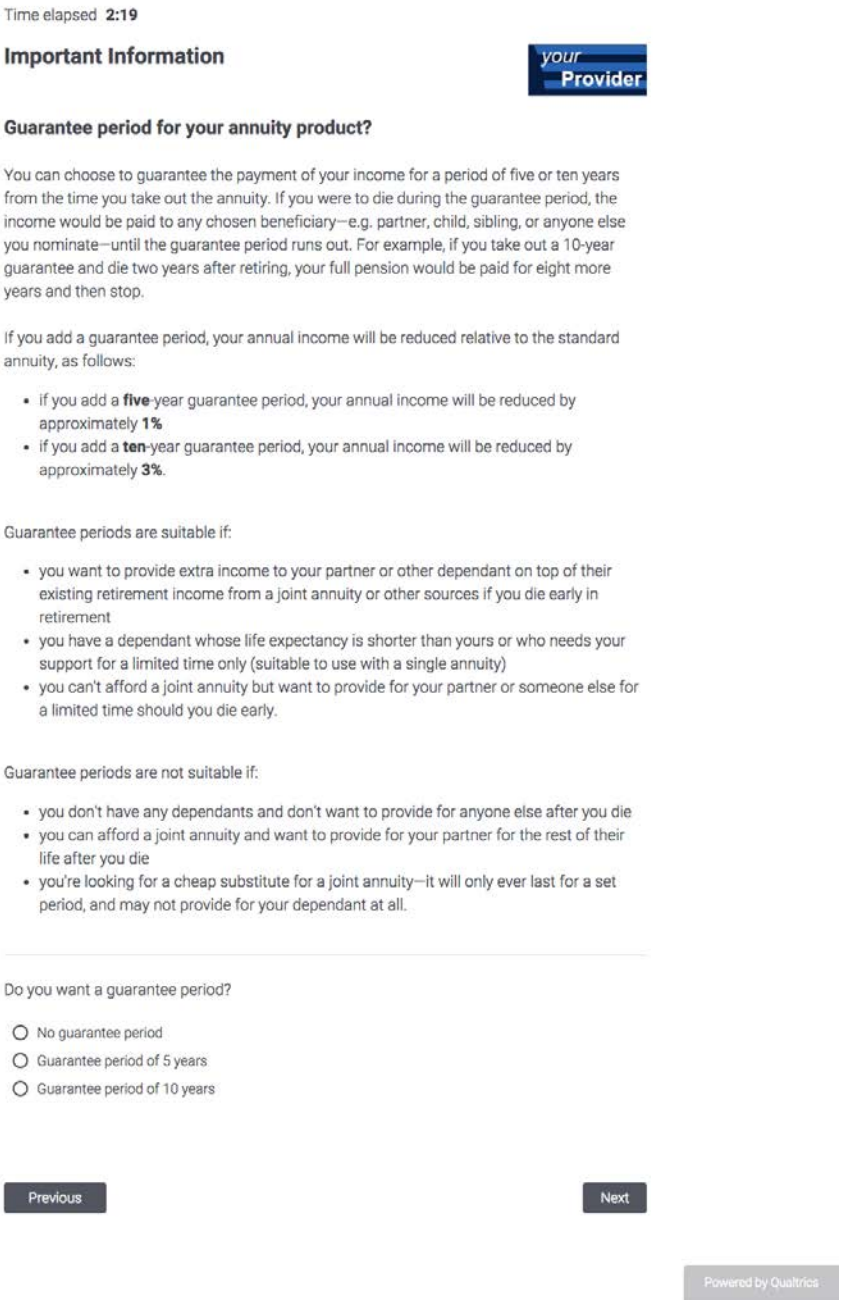


Figure A1.10 Guaranteed period for annuity



Time elapsed **2:19**

Important Information

your Provider

Guarantee period for your annuity product?

You can choose to guarantee the payment of your income for a period of five or ten years from the time you take out the annuity. If you were to die during the guarantee period, the income would be paid to any chosen beneficiary—e.g. partner, child, sibling, or anyone else you nominate—until the guarantee period runs out. For example, if you take out a 10-year guarantee and die two years after retiring, your full pension would be paid for eight more years and then stop.

If you add a guarantee period, your annual income will be reduced relative to the standard annuity, as follows:

- if you add a **five**-year guarantee period, your annual income will be reduced by approximately **1%**
- if you add a **ten**-year guarantee period, your annual income will be reduced by approximately **3%**.

Guarantee periods are suitable if:

- you want to provide extra income to your partner or other dependant on top of their existing retirement income from a joint annuity or other sources if you die early in retirement
- you have a dependant whose life expectancy is shorter than yours or who needs your support for a limited time only (suitable to use with a single annuity)
- you can't afford a joint annuity but want to provide for your partner or someone else for a limited time should you die early.

Guarantee periods are not suitable if:

- you don't have any dependants and don't want to provide for anyone else after you die
- you can afford a joint annuity and want to provide for your partner for the rest of their life after you die
- you're looking for a cheap substitute for a joint annuity—it will only ever last for a set period, and may not provide for your dependant at all.

Do you want a guarantee period?

- ○ No guarantee period
- ○ Guarantee period of 5 years
- ○ Guarantee period of 10 years

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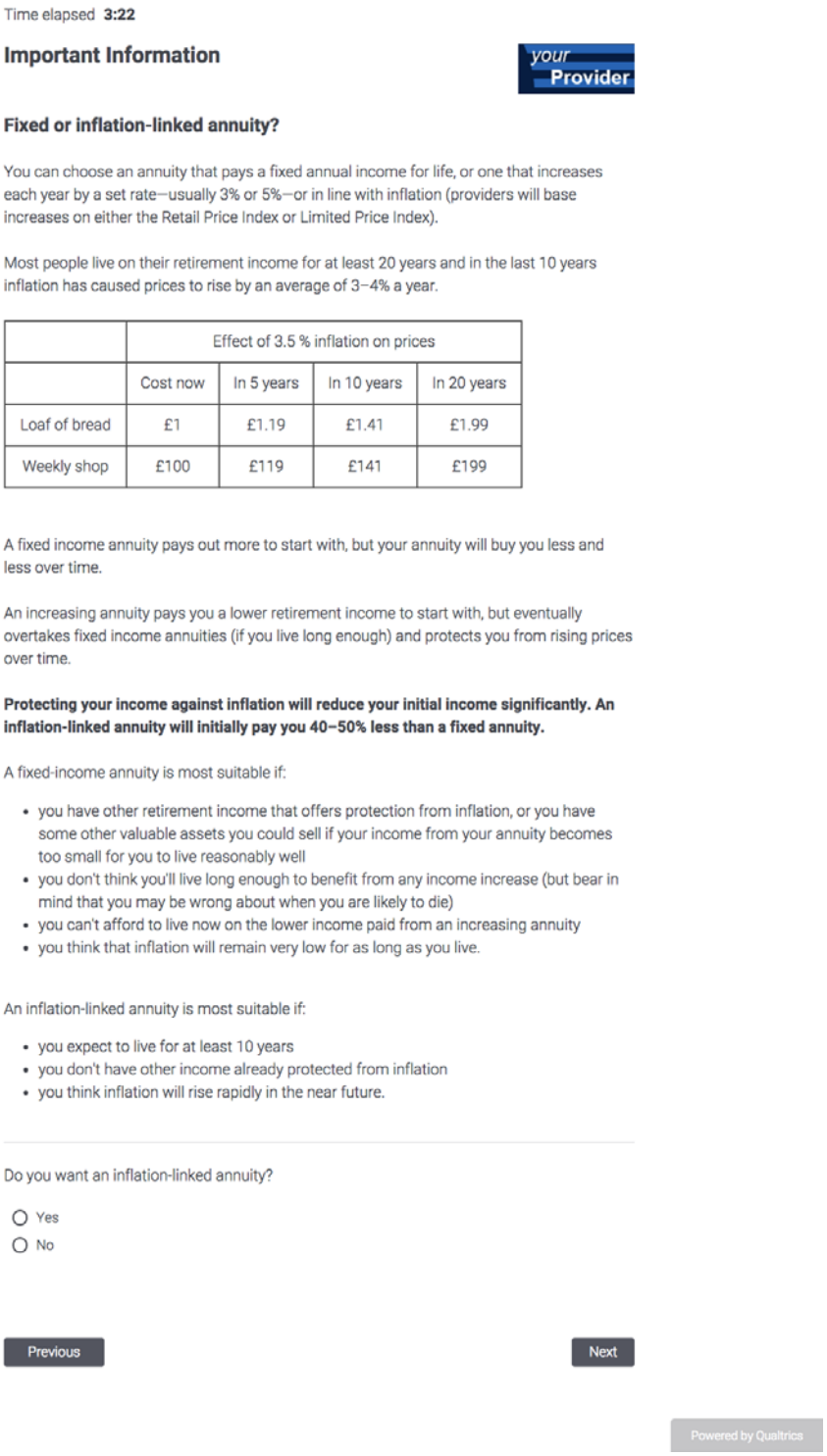
Figure A1.11 Inflation-linked or fixed



Time elapsed **3:22**

Important Information

your Provider

Fixed or inflation-linked annuity?

You can choose an annuity that pays a fixed annual income for life, or one that increases each year by a set rate—usually 3% or 5%—or in line with inflation (providers will base increases on either the Retail Price Index or Limited Price Index).

Most people live on their retirement income for at least 20 years and in the last 10 years inflation has caused prices to rise by an average of 3–4% a year.

	Effect of 3.5 % inflation on prices			
	Cost now	In 5 years	In 10 years	In 20 years
Loaf of bread	£1	£1.19	£1.41	£1.99
Weekly shop	£100	£119	£141	£199

A fixed income annuity pays out more to start with, but your annuity will buy you less and less over time.

An increasing annuity pays you a lower retirement income to start with, but eventually overtakes fixed income annuities (if you live long enough) and protects you from rising prices over time.

Protecting your income against inflation will reduce your initial income significantly. An inflation-linked annuity will initially pay you 40–50% less than a fixed annuity.

A fixed-income annuity is most suitable if:

- you have other retirement income that offers protection from inflation, or you have some other valuable assets you could sell if your income from your annuity becomes too small for you to live reasonably well
- you don't think you'll live long enough to benefit from any income increase (but bear in mind that you may be wrong about when you are likely to die)
- you can't afford to live now on the lower income paid from an increasing annuity
- you think that inflation will remain very low for as long as you live.

An inflation-linked annuity is most suitable if:

- you expect to live for at least 10 years
- you don't have other income already protected from inflation
- you think inflation will rise rapidly in the near future.

Do you want an inflation-linked annuity?

○ Yes
○ No

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Figure A1.12 Frequency of payment

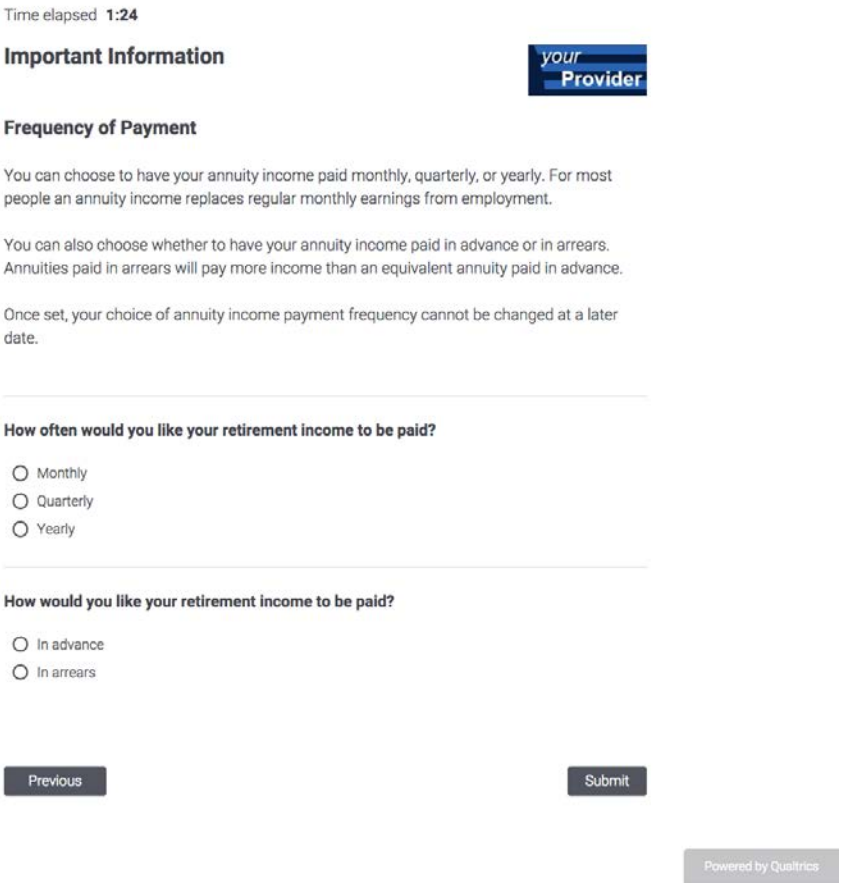


Figure A1.13 Provider letter (3)

Figure A1.14 Waiting screen (after consumer clicks to shop around)

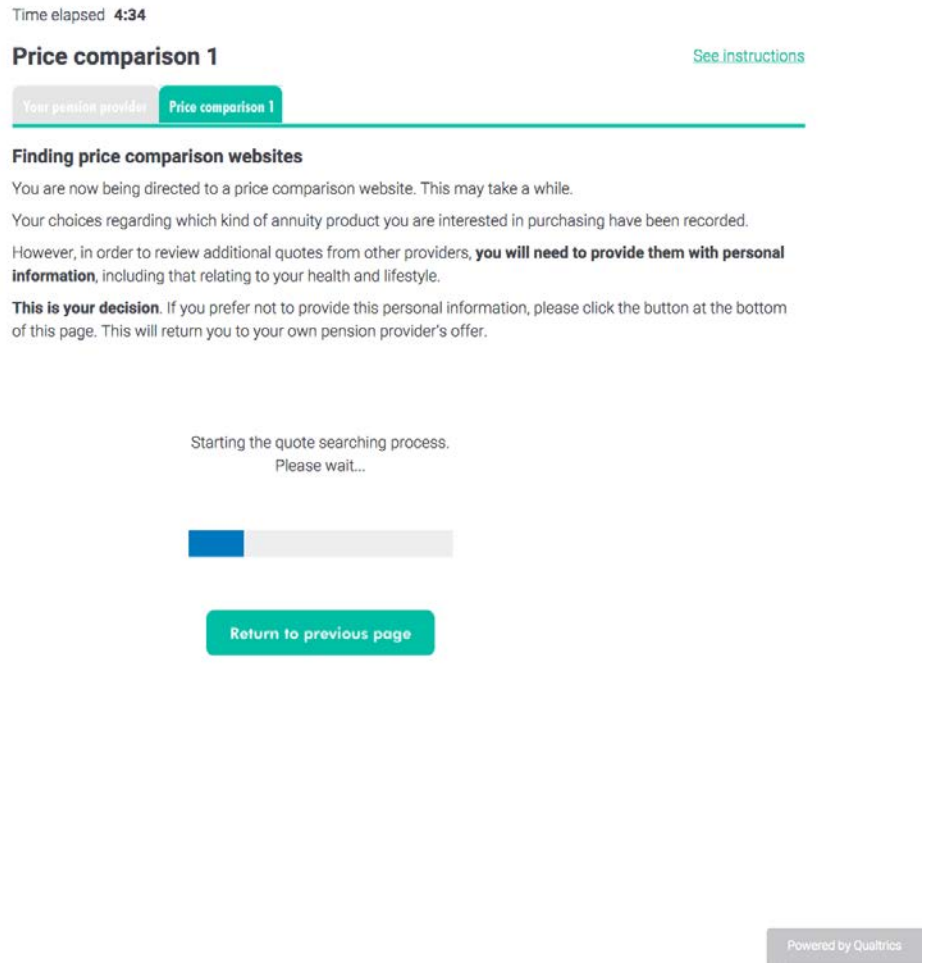


Figure A1.15 Price comparison—information request (1)

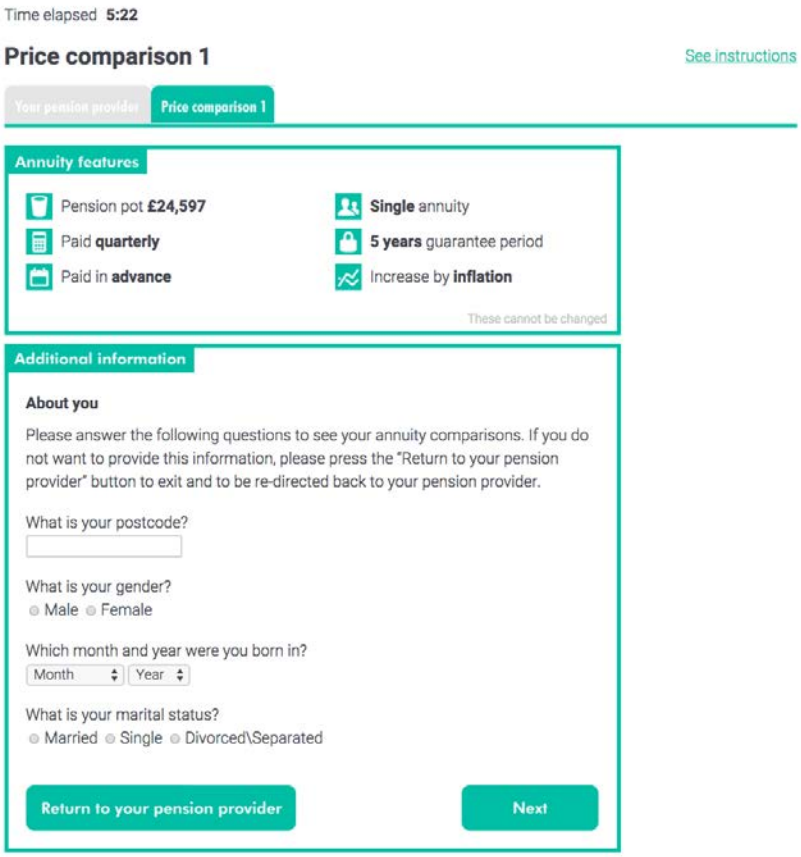


Figure A1.16 Price comparison—information request (2)

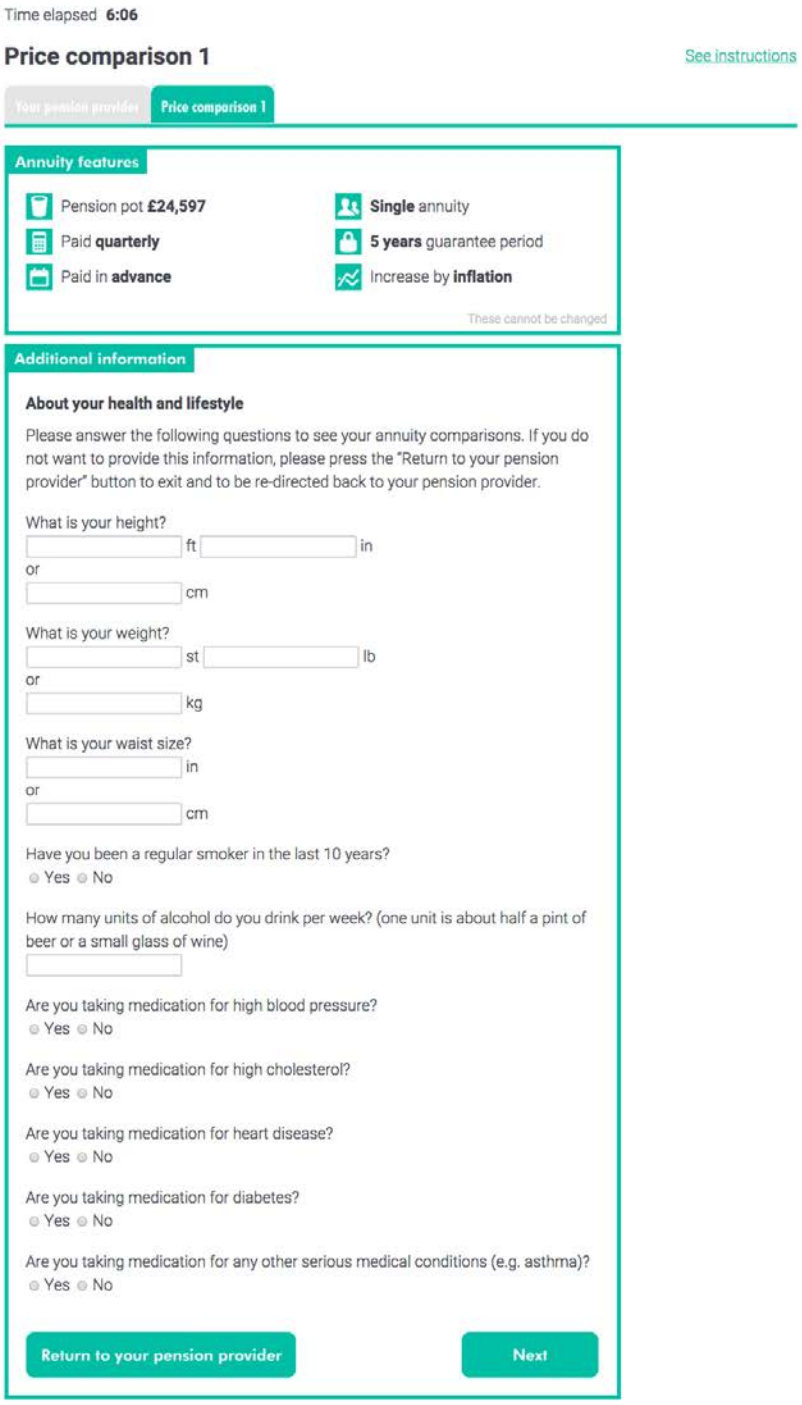
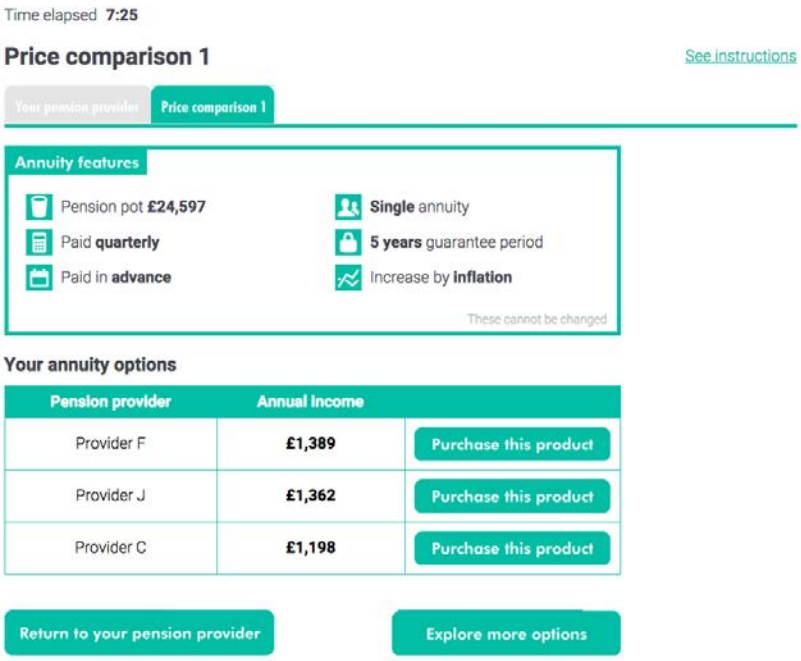


Figure A1.17 Price comparison—provider quotes



A1.4 Treatments and related text

Figure A1.18 Control group

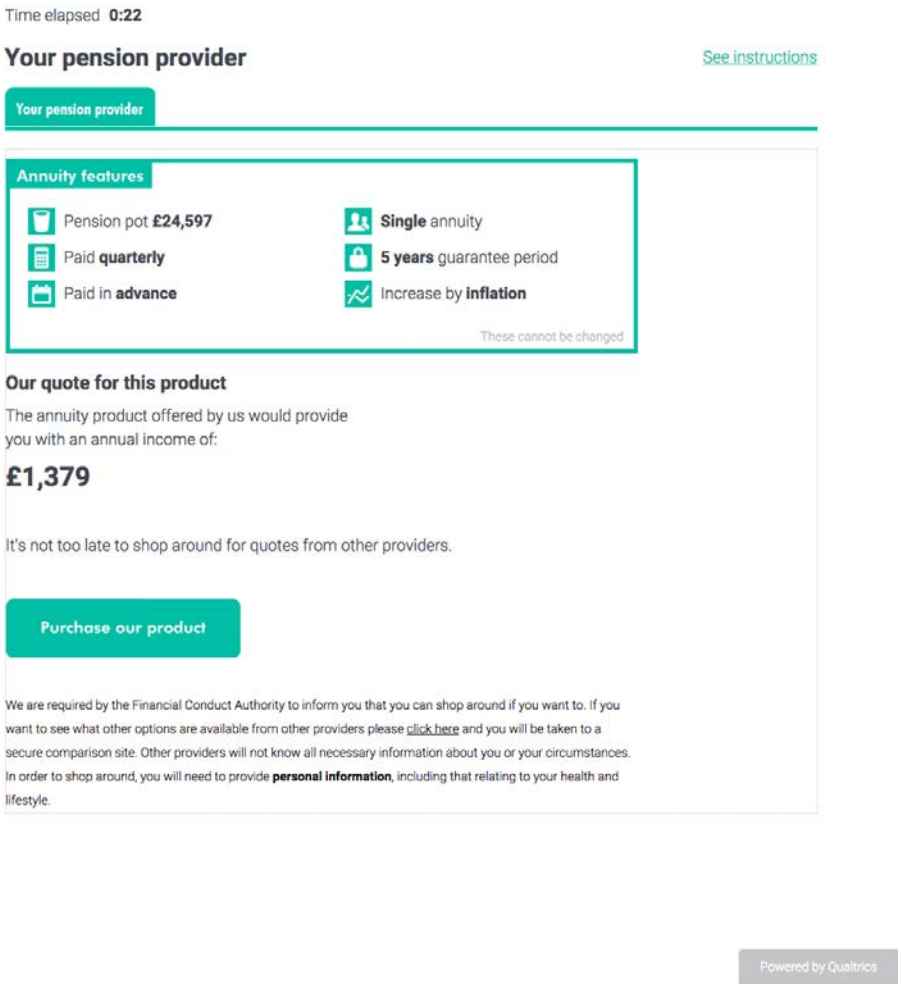


Figure A1.19 Call to action

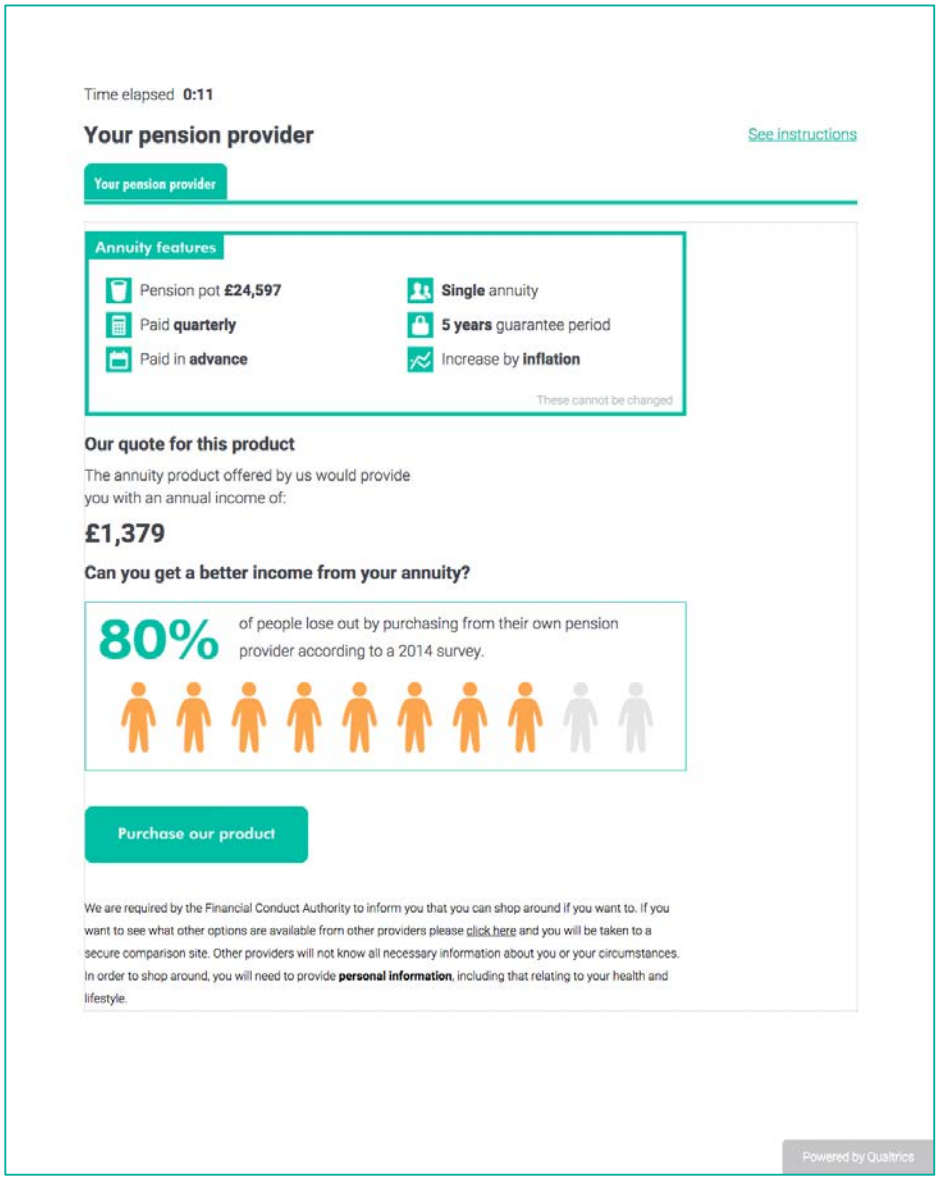


Figure A1.20 Personalised quote comparison (annual gains frame)

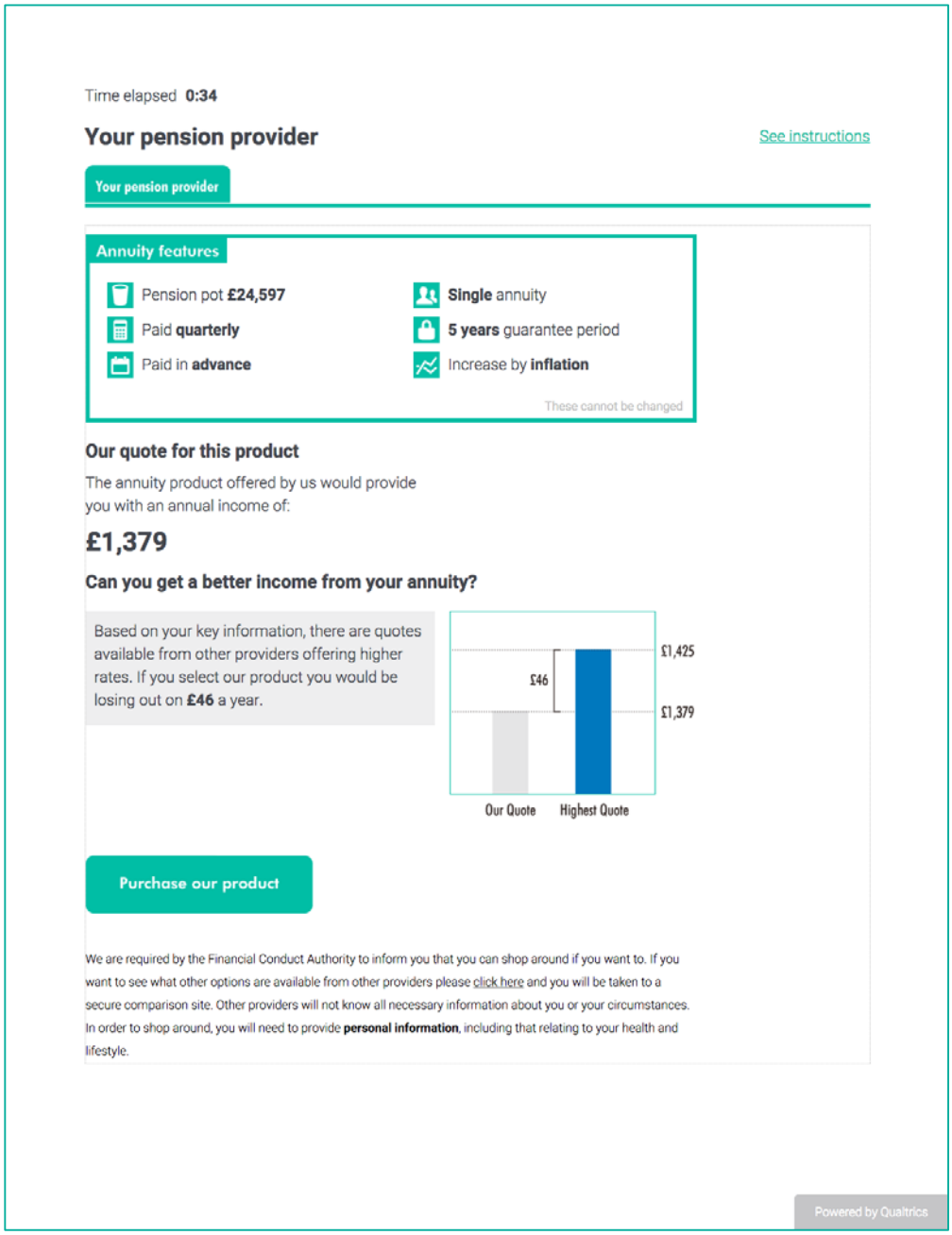


Figure A1.21 Non-personalised quote comparison (lifetime gains frame)

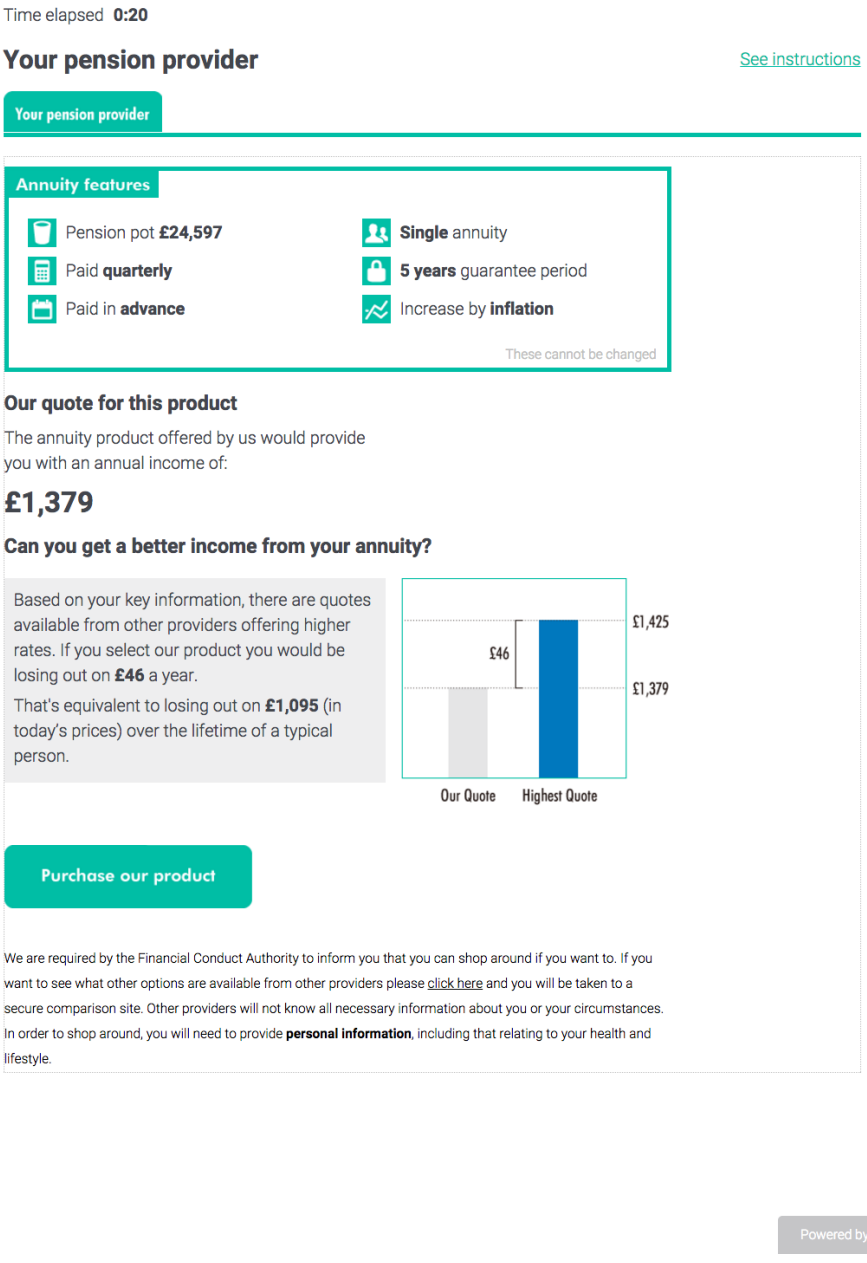


Figure A1.22 Non-personalised quote comparison (annual gains frame)

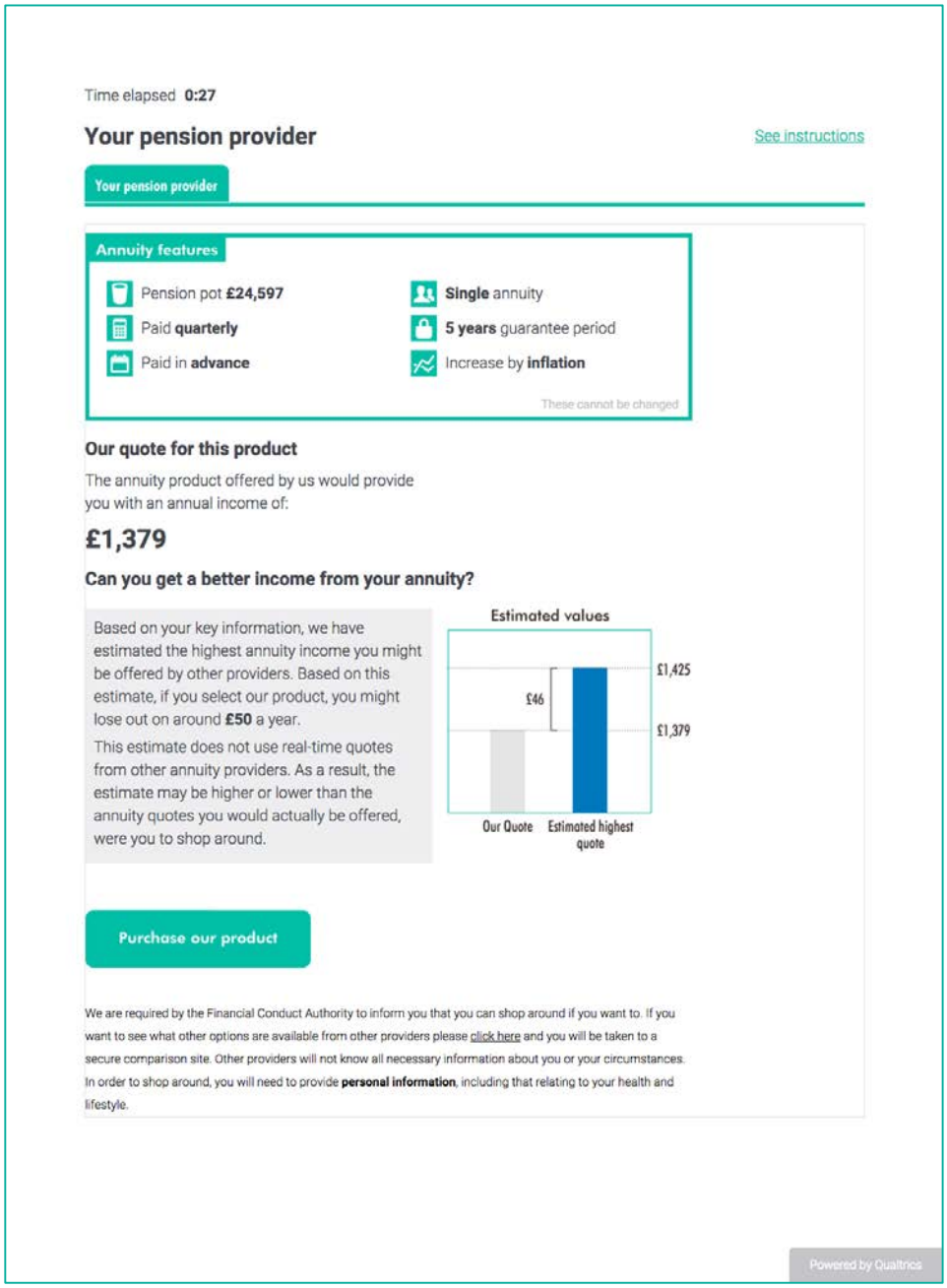
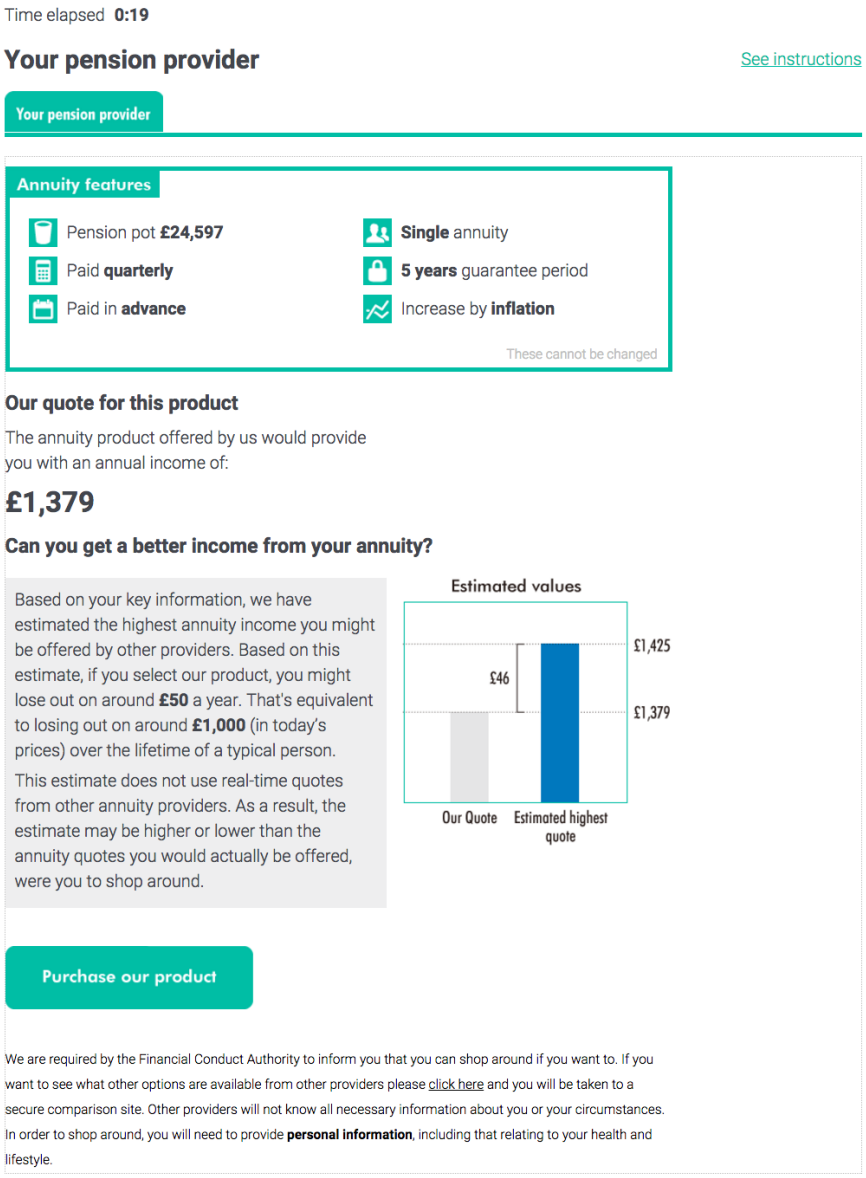


Figure A1.23 Non-personalised quote comparison (lifetime gains frame)



A1.5 Secondary tasks

Figure A1.24 Instructions—employment task

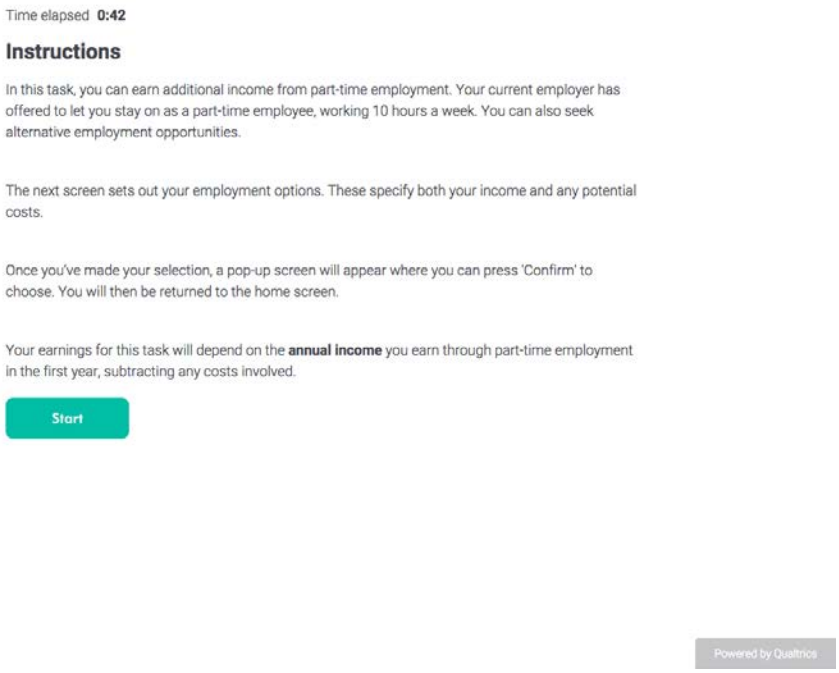


Figure A1.25 Employment task—main screen

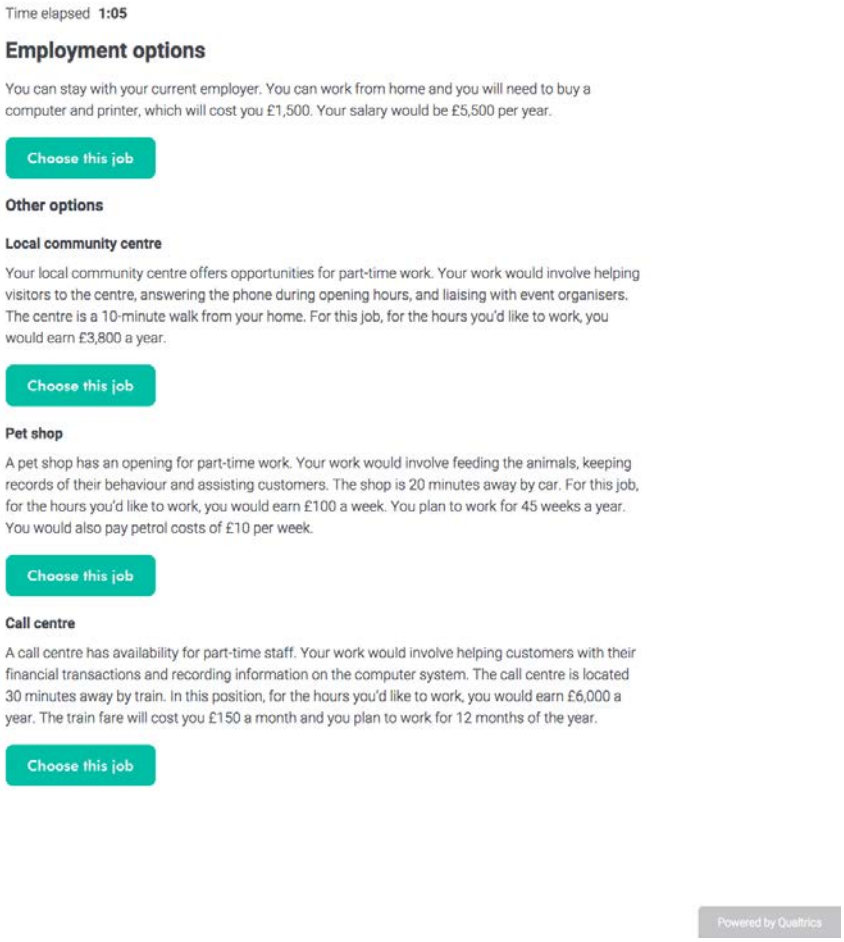


Figure A1.26 Instructions—savings task

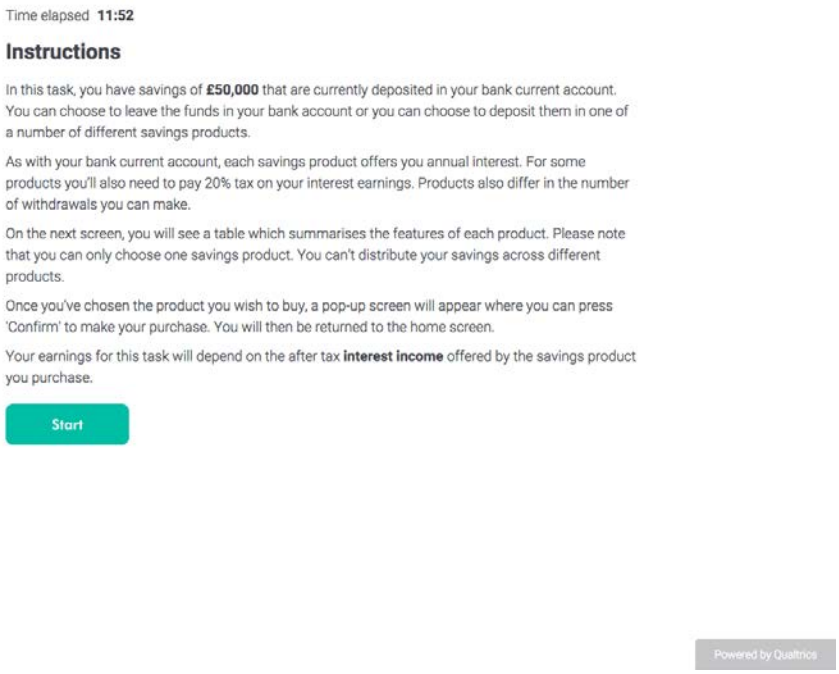
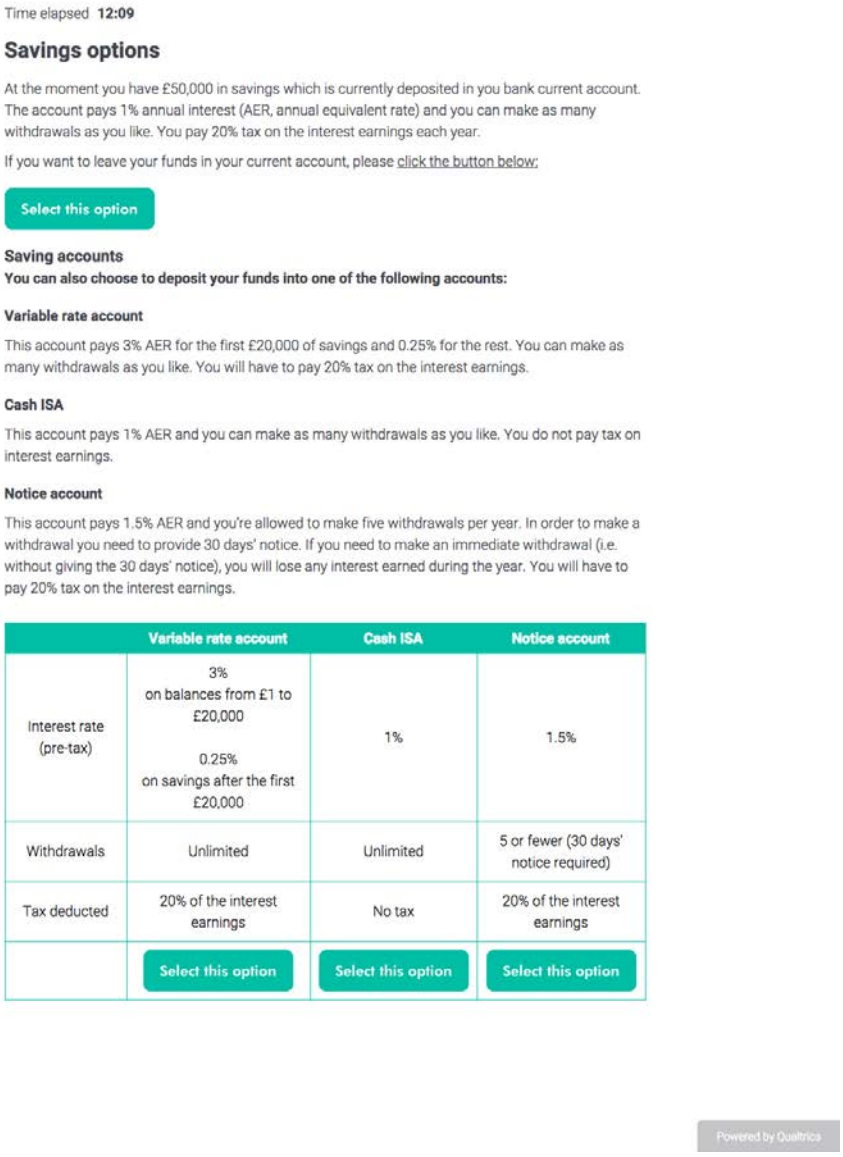


Figure A1.27 Savings task—main screen



Time elapsed **12:09**

Savings options

At the moment you have £50,000 in savings which is currently deposited in you bank current account. The account pays 1% annual interest (AER, annual equivalent rate) and you can make as many withdrawals as you like. You pay 20% tax on the interest earnings each year.

If you want to leave your funds in your current account, please click the button below:

Select this option

Saving accounts

You can also choose to deposit your funds into one of the following accounts:

Variable rate account

This account pays 3% AER for the first £20,000 of savings and 0.25% for the rest. You can make as many withdrawals as you like. You will have to pay 20% tax on the interest earnings.

Cash ISA

This account pays 1% AER and you can make as many withdrawals as you like. You do not pay tax on interest earnings.

Notice account

This account pays 1.5% AER and you're allowed to make five withdrawals per year. In order to make a withdrawal you need to provide 30 days' notice. If you need to make an immediate withdrawal (i.e. without giving the 30 days' notice), you will lose any interest earned during the year. You will have to pay 20% tax on the interest earnings.

	Variable rate account	Cash ISA	Notice account
Interest rate (pre-tax)	3% on balances from £1 to £20,000 0.25% on savings after the first £20,000	1%	1.5%
Withdrawals	Unlimited	Unlimited	5 or fewer (30 days' notice required)
Tax deducted	20% of the interest earnings	No tax	20% of the interest earnings
	Select this option	Select this option	Select this option

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Figure A1.28 Instructions—housing task

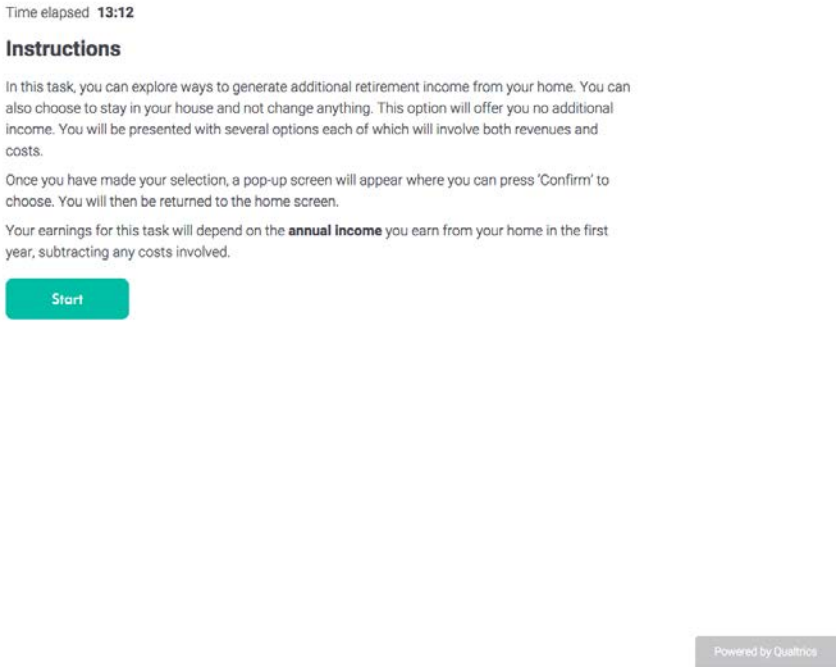
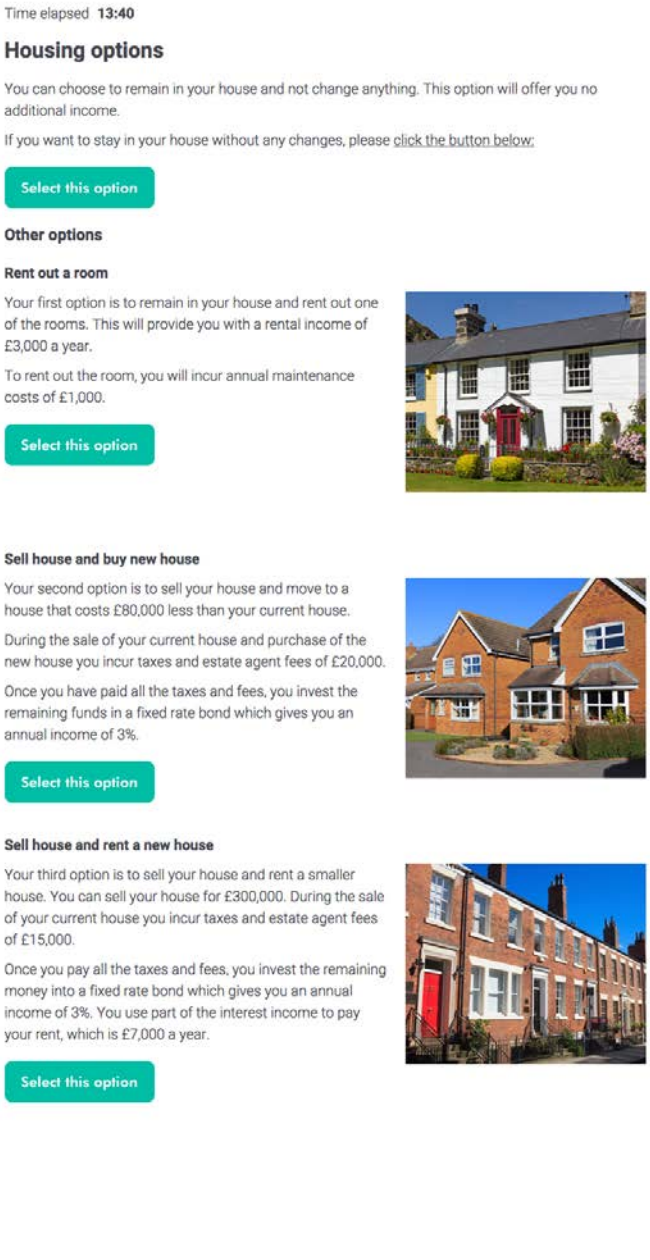


Figure A1.29 Housing task—main screen



A1.6 Quote generation

For the purposes of the experiment, open market quotes across various providers were obtained from the Money Advice Service website. Nine quotes were obtained for a pension pot size of £24,597 and £75,403, respectively, and these were converted into ten external quotes for the purpose of the experiment (illustrated in Table A1.2).

Table A1.2 Open market quotes

	Open market quotes								
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Low pension pot (£24,597)	1,425	1,394	1,390	1,389	1,378	1,362	1,345	1,298	1,237
High pension pot (£75,403)	4,434	4,410	4,370	4,368	4,218	4,068	4,062	4,048	4,037

Source: Money advice service, https://www.moneyadviceservice.org.uk. The quotes were for a single, not enhanced, fixed annuity for a person aged 65 years old.

Due to confidentiality, information on the internal quotes of each of provider was not available. However, the FCA's Thematic Review provided information on the difference in the average pension provider and open market quotes, as surveyed by the FCA at the time. This information was combined with the sample of market quotes to derive ten quotes, from which a high (top 3) and a low (bottom 3) internal quote was selected.

The variance in the ten pension provider quotes was adjusted to achieve two desired experiment properties in the high and low provider quotes:

- that those in the high pension pot group could gain across only four open market option providers, while those in the low pension pot group could gain across all ten open market option providers;
- that the maximum gain for the low pot from shopping around in the open market was, in absolute terms, the same as that for the high pot (around £202).

The results are shown in Table A1.3. In effect, there were four pension provider quotes, based first on pension pot size and second on whether the internal quote was high or low.

Table A1.3 Internal quotes

	High pension provider quote	**Low pension provider quote**
Low pension pot (£24,597)	1,425	1,394
High pension pot ($75,403)	4,434	4,410

Source: Money Advice Service and FCA data.

The issue was then how to generate the external market quotes, should a participant choose to shop around. By clicking on the information treatment link to initiate the search process, the participant would then be taken to price comparison website 1 (PCW1). Here, were they to fill in the required personal information, they would be presented with three of the external provider quotes, as shown in the first entries in Table A1.4.

Table A1.4 External quote generation process

	Provider no.	Low pension pot	High pension pot
PCW 1	4	£1,389	£4,368
	6	£1,362	£4,068
	8	£1,298	£4,048
PCW 2	5	£1,378	£4,218
	7	£1,345	£4,062
	9	£1,237	£4,037
	2	£1,394	£4,410
PCW 3	4	£1,389	£4,368
	10	£1,226	£4,029
PCW 4	1	£1,425	£4,434
	3	£1,390	£4,370
	5	£1,378	£4,218
PCW 5	2	£1,394	£4,410
	4	£1,389	£4,368
	6	£1,362	£4,068

Source: Oxera based on Money Advice Service data.

If participants wanted to search further, they would be taken to PCW2, at which point they would be provided with a further three quotes. The participants could visit a maximum of five PCWs.

This external quote generation process was identical for each participant (albeit the absolute figures varied by pot size), as illustrated in Table A1.4. The quotes alternated between ‘even’ and ‘odd’ providers, and offered varying degrees of better offer than the internal quote. For example, all participants could secure a better deal on PCW1. However, PCW2 offered fewer prospective gains than PCW1—in particular for those with a high internal quote (whose internal quote was actually better than the external provider’s offering). This was deliberately designed as a ‘hump’ in the search process, which consumers would either overcome or fall back to PCW1. For the most determined consumers, PCW3 offered a better deal than PCW1, with PCW4 offering the best deal.

Table A1.5 Treatment text

	Core	Pot size	Internal quote	Text
1	Personalised quote comparison—annual	Low	Low	Based on your key information, there are quotes available from other providers offering higher rates. If you select our product you would be losing out on **£203** a year.
2	Personalised quote comparison—annual	Low	High	Based on your key information, there are quotes available from other providers offering higher rates. If you select our product you would be losing out on **£46** a year.
3	Personalised quote comparison—annual	High	Low	Based on your key information, there are quotes available from other providers offering higher rates. If you select our product you would be losing out on **£564** a year.
4	Personalised quote comparison—annual	High	High	Based on your key information, there are quotes available from other providers offering higher rates. If you select our product you would be losing out on **£202** a year.
5	Non-personalised quote comparison—annual	Low	Low	Based on your key information, we have estimated the highest annuity income you might be offered by other providers. Based on this estimate, if you select our product, you might lose out on around **£200** a year. This estimate does not use real-time quotes from other annuity providers. As a result, the estimate may be higher or lower than the annuity quotes you would actually be offered, were you to shop around.
6	Non-personalised quote comparison—annual	Low	High	Based on your key information, we have estimated the highest annuity income you might be offered by other providers. Based on this estimate, if you select our product, you might lose out on around **£50** a year. This estimate does not use real-time quotes from other annuity providers. As a result, the estimate may be higher or lower than the annuity quotes you would actually be offered, were you to shop around.
7	Non-personalised quote comparison—annual	High	Low	Based on your key information, we have estimated the highest annuity income you might be offered by other providers. Based on this estimate, if you select our product, you might lose out on around **£550** a year. This estimate does not use real-time quotes from other annuity providers. As a result, the estimate may be higher or lower than the annuity quotes you would actually be offered, were you to shop around.
8	Non-personalised quote comparison—annual	High	High	Based on your key information, we have estimated the highest annuity income you might be offered by other providers. Based on this estimate, if you select our product, you might lose out on around **£200** a year. This estimate does not use real-time quotes from other annuity providers. As a result, the estimate may be higher or lower than the annuity quotes you would actually be offered, were you to shop around.
9	Personalised quote comparison–Lifetime	Low	Low	Based on your key information, there are quotes available from other providers offering higher rates. If you select our product you would be losing out on **£203** a year. That's equivalent to losing out on **£4,830** over the lifetime of a typical person.
10	Personalised quote comparison–Lifetime	Low	High	Based on your key information, there are quotes available from other providers offering higher rates. If you select our product you would be losing out on **£46** a year. That's equivalent to losing out on **£1,095** over the lifetime of a typical person.
11	Personalised quote comparison–Lifetime	High	Low	Based on your key information, there are quotes available from other providers offering higher rates. If you select our product you would be losing out on **£564** a year. That's equivalent to losing out on **£13,420** over the lifetime of a typical person.
12	Personalised quote comparison–Lifetime	High	High	Based on your key information, there are quotes available from other providers offering higher rates. If you select our product you would be losing out on **£202** a year. That's equivalent to losing out on **£4,807** over the lifetime of a typical person.

	Core	Pot size	Internal quote	Text
13	Non-personalised quote comparison–Lifetime	Low	Low	Based on your key information, we have estimated the highest annuity income you might be offered by other providers. Based on this estimate, if you select our product, you might lose out on around **£200** a year. That's equivalent to losing out on around **£4,750** over the lifetime of a typical person. This estimate does not use real-time quotes from other annuity providers. As a result, the estimate may be higher or lower than the annuity quotes you would actually be offered, were you to shop around.
14	Non-personalised quote comparison–Lifetime	Low	High	Based on your key information, we have estimated the highest annuity income you might be offered by other providers. Based on this estimate, if you select our product, you might lose out on around **£50** a year. That's equivalent to losing out on around **£1,000** over the lifetime of a typical person. This estimate does not use real-time quotes from other annuity providers. As a result, the estimate may be higher or lower than the annuity quotes you would actually be offered, were you to shop around.
15	Non-personalised quote comparison–Lifetime	High	Low	Based on your key information, we have estimated the highest annuity income you might be offered by other providers. Based on this estimate, if you select our product, you might lose out on around **£550** a year. That's equivalent to losing out on around **£13,000** over the lifetime of a typical person. This estimate does not use real-time quotes from other annuity providers. As a result, the estimate may be higher or lower than the annuity quotes you would actually be offered, were you to shop around.
16	Non-personalised quote comparison–Lifetime	High	High	Based on your key information, we have estimated the highest annuity income you might be offered by other providers. Based on this estimate, if you select our product, you might lose out on around **£200** a year. That's equivalent to losing out on around **£4,750** over the lifetime of a typical person. This estimate does not use real-time quotes from other annuity providers. As a result, the estimate may be higher or lower than the annuity quotes you would actually be offered, were you to shop around.
17–20	Call to action			80% of people lose out by purchasing from their own pension provider according to a 2014 survey
21–24	Control group			It's not too late to shop around for quotes from other providers.

A1.7 Follow-up survey

Figure A1.30 Question 1—employment status

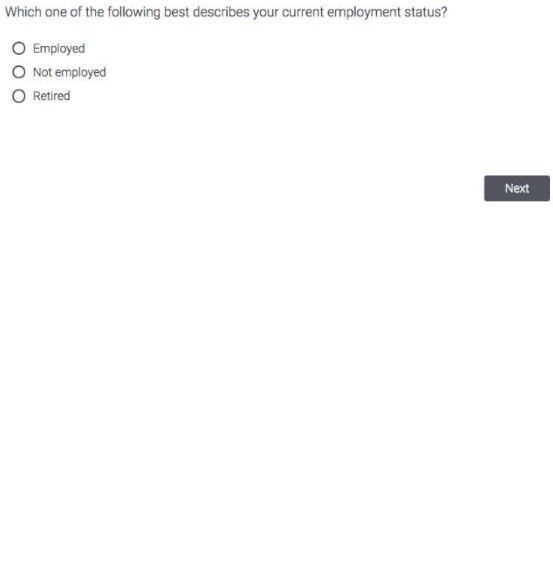


Figure A1.31 Question 2a—employment pension scheme (if employed)

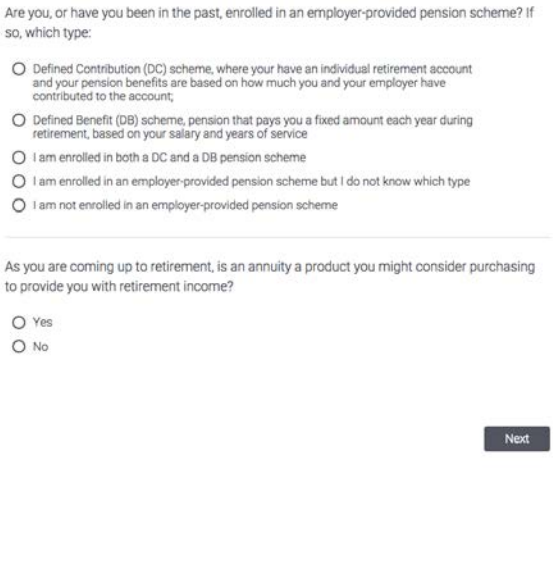


Figure A1.32 Question 2b—retirement income (if retired)

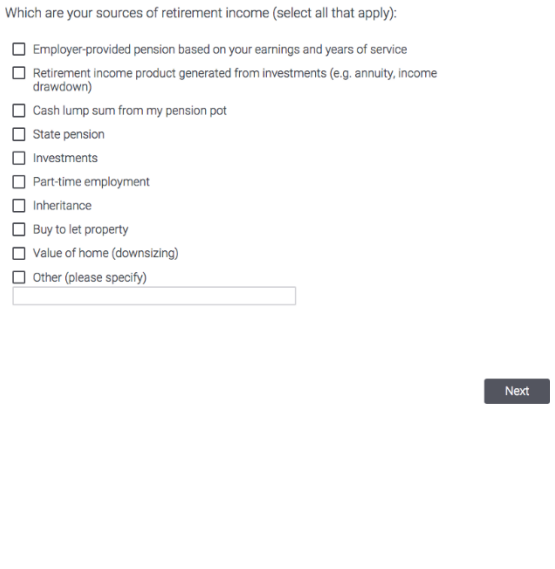


Figure A1.33 Question 2c—type of retirement income product purchased (if purchased retirement income product)

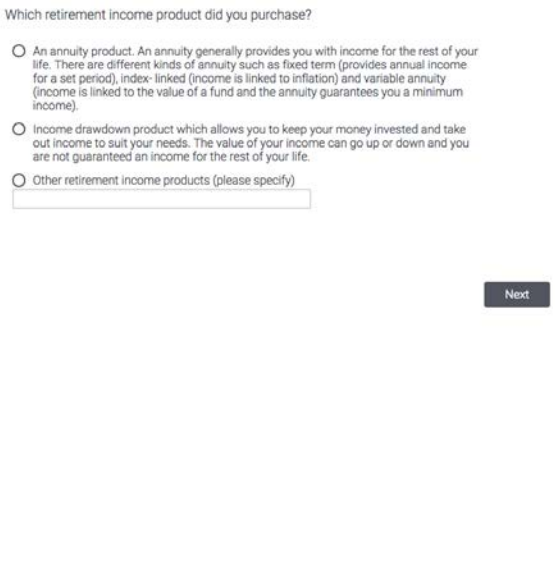


Figure A1.34 Question 2d—shop around for retirement product

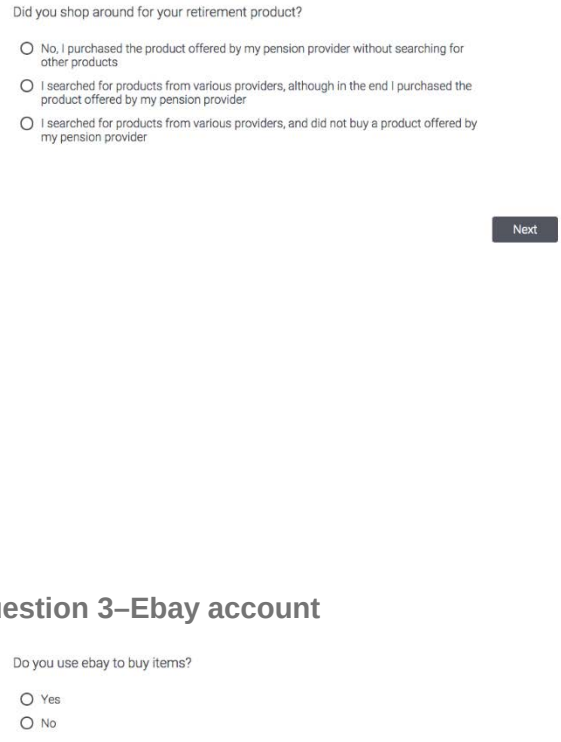


Figure A1.35 Question 3–Ebay account

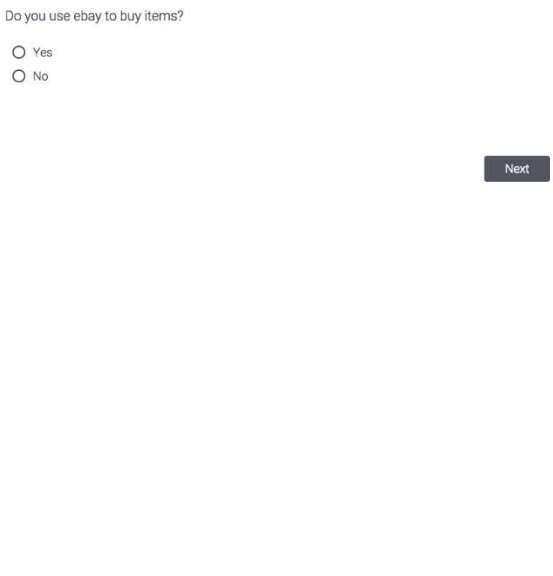


Figure A1.36 Question 4—shop around for other products

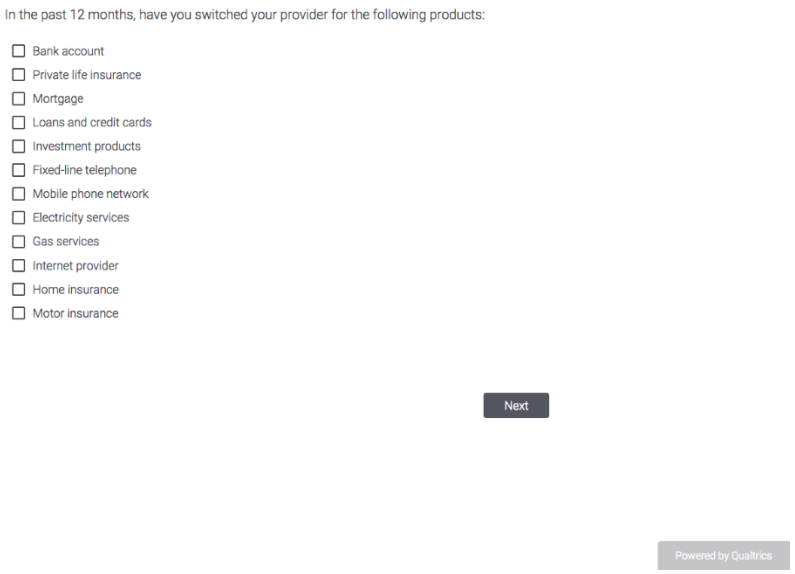


Figure A1.37 Question 5—attitude to personal finance

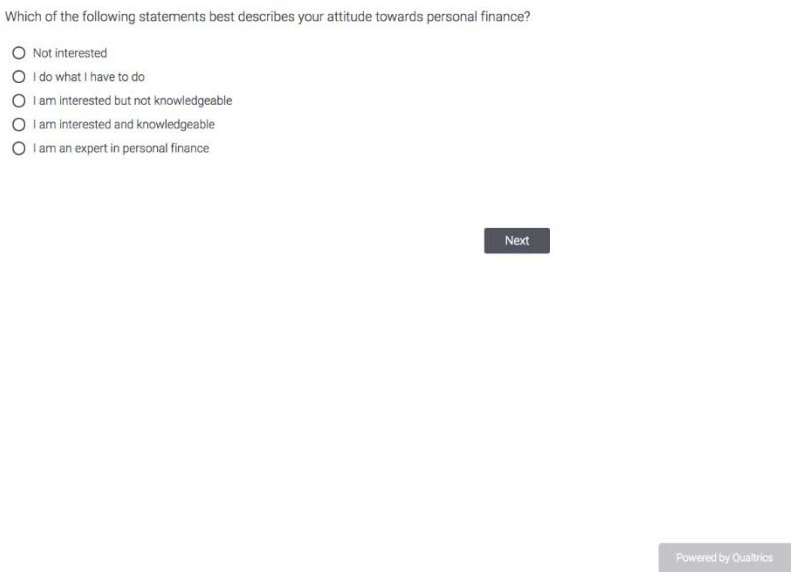


Figure A1.38 Questions 6 and 7—interest rate calculation

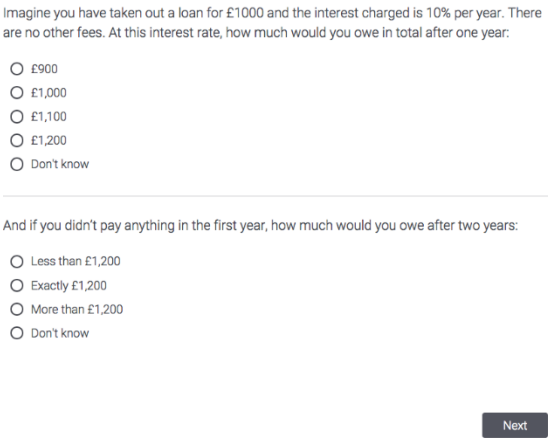


Figure A1.39 Question 8—credit card debt

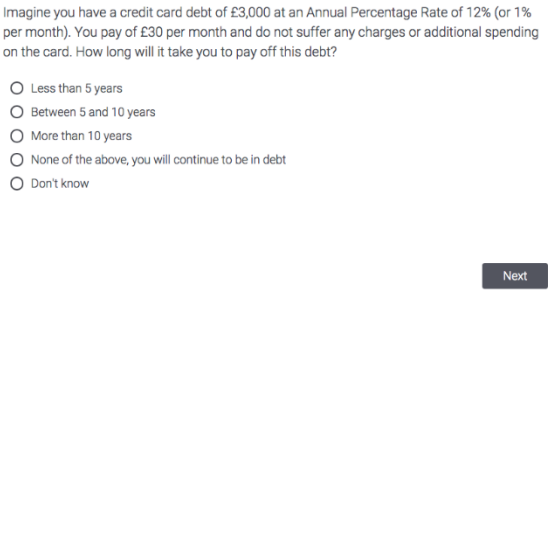


Figure A1.40 Question 9—risk attitude

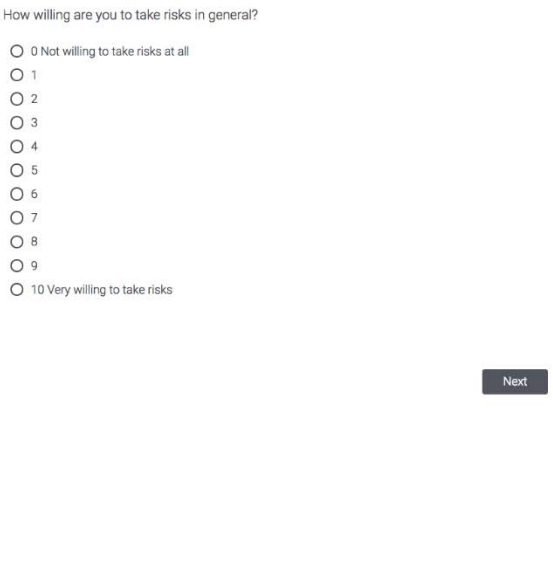


Figure A1.41 Question 10a—present bias (1)

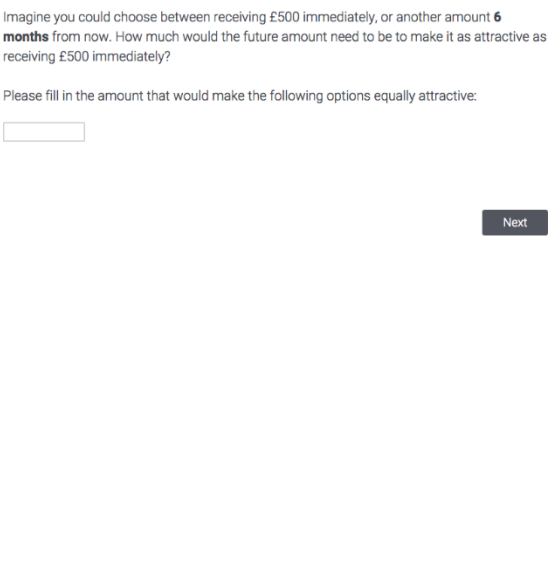


Figure A1.42 Question 10b—present bias (2)

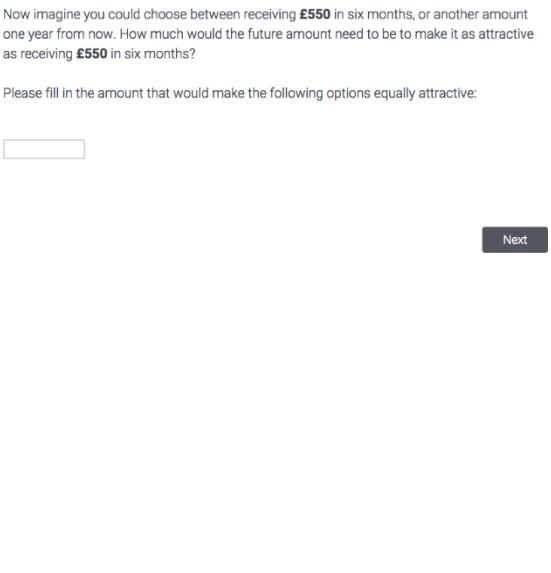
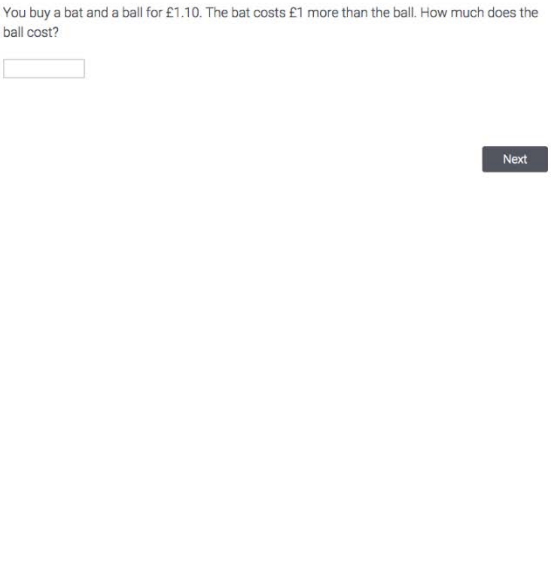


Figure A1.43 Question 11—bat and ball



A2 Regression tables

A2.1 Ordinary least squares

In the tables in this appendix, t statistics are shown in parenthesis, and the confidence intervals are denoted as follows: * significant at the 10% level, ** at the 5% level, and *** at the 1% level. The omitted category in the regressions is the control group. Regression coefficients therefore report the difference between the specific treatment and the control group. The source for the data is Oxera and CESS.

Table A2.1 Shopping-around metrics—no additional controls

	Clicked link to shop around	Viewed at least one PCW	Viewed more than one PCW	Switched from pension provider
Personalised annual	0.269***	0.187***	0.0493***	0.178***
	(8.47)	(6.44)	(2.84)	(6.53)
Personalised lifetime	0.197***	0.171***	0.0642***	0.156***
	(6.25)	(5.83)	(3.41)	(5.73)
Non-personalised annual	0.0881***	0.0736***	0.0489***	0.0658***
	(3.08)	(2.83)	(2.79)	(2.81)
Non-personalised lifetime	0.0840***	0.0630**	0.0183	0.0362
	(2.89)	(2.41)	(1.19)	(1.62)
Call to action	0.192***	0.152***	0.0722***	0.125***
	(6.26)	(5.41)	(3.83)	(4.91)
Constant	0.128***	0.0992***	0.0313***	0.0731***
	(7.48)	(6.49)	(3.51)	(5.49)

Table A2.2 Impact on shopping around by pot size

	Clicked link to shop around	Viewed at least one PCW	Viewed more than one PCW	Switched from pension provider
Personalised annual	0.242***	0.154***	0.00247	0.131***
	(5.46)	(3.86)	(0.11)	(3.48)
Personalised lifetime	0.178***	0.147***	0.0337	0.112***
	(3.99)	(3.56)	(1.29)	(2.94)
Non-personalised annual	0.0805**	0.0629*	0.0268	0.0345
	(1.96)	(1.69)	(1.06)	(1.04)
Non-personalised lifetime	0.0593	0.0375	0.00554	-0.0194
	(1.50)	(1.07)	(0.25)	(-0.68)
Call to action	0.158***	0.112***	0.0585**	0.0717**
	(3.75)	(2.93)	(2.14)	(2.08)
High pot size	-0.00347	-0.00674	-0.0230	-0.0259
	(-0.10)	(-0.22)	(-1.28)	(-0.97)
Personalised annual high pot	0.0570	0.0684	0.0961***	0.0962*
	(0.90)	(1.17)	(2.73)	(1.76)
Personalised lifetime high pot	0.0375	0.0479	0.0600	0.0867
	(0.60)	(0.81)	(1.59)	(1.59)
Non-personalised annual high pot	0.0148	0.0208	0.0428	0.0605
	(0.26)	(0.40)	(1.22)	(1.29)
Non-personalised lifetime high pot	0.0536	0.0549	0.0250	0.118***
	(0.91)	(1.04)	(0.81)	(2.59)
Call to action high pot	0.0694	0.0840	0.0269	0.110**
	(1.13)	(1.49)	(0.71)	(2.15)
Constant	0.130***	0.103***	0.0432***	0.0865***
	(5.24)	(4.59)	(2.88)	(4.17)
Observations	1,996	1,996	1,996	1,996

Table A2.3 Impact on shopping around by pension provider quote

	Clicked link to shop around	Viewed at least one PCW	Viewed more than one PCW	Switched from pension provider
Personalised annual	0.354***	0.251***	0.0848***	0.260***
	(7.91)	(5.93)	(3.43)	(6.28)
Personalised lifetime	0.242***	0.205***	0.0681***	0.201***
	(5.40)	(4.82)	(2.85)	(4.89)
Non-personalised annual	0.118***	0.102***	0.0691***	0.106***
	(2.94)	(2.73)	(2.96)	(2.93)
Non-personalised lifetime	0.0819**	0.0816**	0.0327*	0.0763**
	(2.03)	(2.14)	(1.65)	(2.12)
Call to action	0.176***	0.147***	0.0945***	0.150***
	(4.15)	(3.71)	(3.64)	(3.92)
High internal quote	0.0230	0.00570	0.0332*	-0.0167
	(0.67)	(0.19)	(1.84)	(-0.63)
Personalised annual high quote	-0.172***	-0.129**	-0.0726**	-0.167***
	(-2.73)	(-2.22)	(-2.09)	(-3.13)
Personalised lifetime high quote	-0.0909	-0.0665	-0.00890	-0.0881
	(-1.44)	(-1.13)	(-0.24)	(-1.62)
Non-personalised annual high quote	-0.0618	-0.0589	-0.0415	-0.0814*
	(-1.08)	(-1.13)	(-1.18)	(-1.76)
Non-personalised lifetime high quote	0.00270	-0.0364	-0.0298	-0.0767*
	(0.05)	(-0.69)	(-0.97)	(-1.71)
Call to action high quote	0.0291	0.00901	-0.0452	-0.0483
	(0.48)	(0.16)	(-1.19)	(-0.95)
Constant	0.117***	0.0964***	0.0152*	0.0812***
	(5.09)	(4.57)	(1.74)	(4.16)
Observations	1,996	1,996	1,996	1,996

Table A2.4 Robustness checks—main demographic variables

	Clicked link to shop around	Viewed at least one PCW	Viewed more than one PCW	Switched from pension provider
Personalised annual	0.267***	0.185***	0.0484***	0.176***
	(8.45)	(6.36)	(2.79)	(6.46)
Personalised lifetime	0.198***	0.172***	0.0642***	0.156***
	(6.31)	(5.87)	(3.41)	(5.77)
Non-personalised annual	0.0869***	0.0718***	0.0483***	0.0644***
	(3.05)	(2.77)	(2.75)	(2.75)
Non-personalised lifetime	0.0844***	0.0625**	0.0181	0.0359
	(2.92)	(2.41)	(1.18)	(1.61)
Call to action	0.193***	0.151***	0.0719***	0.124***
	(6.32)	(5.40)	(3.80)	(4.89)
Male	-0.0395**	-0.00993	-0.00298	-0.0111
	(-2.05)	(-0.56)	(-0.25)	(-0.68)
High income	0.0188	0.0342*	0.0124	0.0334**
	(0.96)	(1.88)	(1.06)	(1.99)
High education	0.0720***	0.0649***	0.0234**	0.0440***
	(3.62)	(3.56)	(2.01)	(2.61)
Constant	0.0918***	0.0460**	0.0118	0.0341*
	(3.94)	(2.24)	(0.93)	(1.84)
Observations	1,996	1,996	1,996	1,996

Table A2.5 Robustness check—all variables

	Clicked link to shop around	Viewed at least one PCW	Viewed more than one PCW	Switched from pension provider
Personalised annual	0.263***	0.185***	0.0490***	0.179***
	(8.44)	(6.54)	(2.83)	(6.73)
Personalised lifetime	0.201***	0.175***	0.0646***	0.162***
	(6.42)	(6.05)	(3.46)	(6.02)
Non-personalised annual	0.0909***	0.0759***	0.0483***	0.0670***
	(3.23)	(2.94)	(2.76)	(2.86)
Non-personalised lifetime	0.0877***	0.0683***	0.0195	0.0444**
	(3.03)	(2.64)	(1.27)	(1.99)
Call to action	0.187***	0.147***	0.0716***	0.129***
	(6.10)	(5.29)	(3.72)	(5.06)
Male	-0.0665***	-0.0418**	-0.0174	-0.0402**
	(-3.33)	(-2.27)	(-1.44)	(-2.40)
High income	-0.00834	0.00478	0.00232	0.00518
	(-0.40)	(0.25)	(0.18)	(0.29)
High education	0.0328	0.0256	0.00716	0.0110
	(1.60)	(1.38)	(0.58)	(0.65)
High pot size	0.0342*	0.0371**	0.0189	0.0498***
	(1.78)	(2.10)	(1.61)	(3.06)
High internal quote	-0.0276	-0.0459***	-0.00114	-0.0941***
	(-1.45)	(-2.63)	(-0.10)	(-5.89)
Retired	-0.0101	-0.0219	-0.0201	-0.00851
	(-0.33)	(-0.80)	(-1.08)	(-0.35)
Employed	-0.00267	-0.0166	-0.0232	-0.000396
	(-0.09)	(-0.62)	(-1.26)	(-0.02)
Purchase retirement income product	0.0138	0.0170	0.0667	-0.0181
	(0.20)	(0.27)	(1.19)	(-0.34)
Shop around for retirement income product	0.0271	0.0204	-0.0513	0.0823
	(0.36)	(0.29)	(-0.85)	(1.36)
Consider purchasing annuity	0.0386	0.0396*	0.0220	0.0369*
	(1.49)	(1.65)	(1.36)	(1.67)
Ebay account	-0.00406	-0.0171	0.00000287	0.00159
	(-0.20)	(-0.94)	(0.00)	(0.10)
Number of other products switched	0.0162***	0.0163***	0.00666*	0.0154***
	(2.97)	(3.24)	(1.93)	(3.32)
Knowledgeable and interested in personal finance	0.00163	0.0281	0.0102	0.0254
	(0.08)	(1.47)	(0.81)	(1.45)
Simple interest rate correct	0.0372	0.00346	-0.00615	-0.0108
	(1.41)	(0.14)	(-0.38)	(-0.48)
Compound interest rate correct	0.0172	0.0156	0.0120	0.00885
	(0.79)	(0.81)	(0.97)	(0.50)
Credit card question correct	0.0985***	0.0967***	0.0305**	0.0782***
	(4.36)	(4.58)	(2.20)	(4.06)
Risk preference	0.000357	0.00215	0.00283	0.00326
	(0.09)	(0.56)	(1.12)	(0.92)
Bat and ball question correct	0.0898***	0.0962***	0.0464***	0.0934***
	(3.57)	(4.07)	(2.85)	(4.26)
Present bias factor	-0.0000953***	-0.0000602**	-0.0000168	-0.0000594***

Table A2.6 Gains from switching

	(1)	(2)	(3)
Personalised annual	52.61***	52.19***	52.62***
	(5.78)	(5.73)	(5.74)
Personalised lifetime	39.90***	39.94***	40.41***
	(4.87)	(4.88)	(4.94)
Non-personalised annual	23.74***	23.41***	24.70***
	(3.07)	(3.02)	(3.13)
Non-personalised lifetime	17.62**	17.54**	17.31**
	(2.33)	(2.34)	(2.30)
Call to action	32.05***	31.91***	31.85***
	(4.12)	(4.10)	(4.04)
Male		-2.383	-7.346
		(-0.44)	(-1.28)
High income		6.647	2.505
		(1.19)	(0.40)
High education		11.66**	6.313
		(2.12)	(1.13)
Retired			2.645
			(0.31)
Employed			1.953
			(0.24)
Purchase retirement income product			7.153
			(0.30)
Shop around for retirement income product			-0.585
			(-0.02)
Consider purchasing annuity			3.438
			(0.48)
Ebay account			1.024
			(0.18)
Number of other products switched			2.266
			(1.39)
Knowledgeable and interested in personal finance			0.718
			(0.12)
Simple interest rate correct			-3.412
			(-0.43)
Compound interest rate correct			1.398
			(0.23)
Credit card question correct			24.17***
			(3.72)
Risk preference			0.0614
			(0.05)
Bat and ball question correct			11.06
			(1.60)
Present bias factor			-0.0154***
			(-2.71)
Constant	15.46***	5.942	-3.655
	(4.09)	(1.03)	(-0.34)
Observations	1,996	1,996	1983

Table A2.7 Impact by gender, income and education

	Clicked link to shop around	Viewed at least one PCW	Viewed more than one PCW	Switched from pension provider
Personalised annual	0.297***	0.182***	0.0263	0.183***
	(5.08)	(3.43)	(0.88)	(3.61)
Personalised lifetime	0.170***	0.110**	0.0242	0.0936**
	(3.04)	(2.15)	(0.80)	(2.00)
Non-personalised annual	0.00845	0.00282	0.00958	0.0215
	(0.19)	(0.07)	(0.39)	(0.57)
Non-personalised lifetime	-0.0165	-0.0459	-0.0126	-0.0442
	(-0.37)	(-1.18)	(-0.63)	(-1.39)
Call to action	0.156***	0.0986**	0.0854**	0.0857**
	(2.91)	(2.02)	(2.34)	(1.97)
Personalised annual male	-0.122**	-0.0625	-0.0425	-0.0524
	(-2.28)	(-1.26)	(-1.44)	(-1.10)
Personalised lifetime male	-0.0700	-0.0535	-0.0136	-0.0605
	(-1.33)	(-1.08)	(-0.42)	(-1.30)
Non-personalised annual male	0.0310	0.0553	0.0405	0.0499
	(0.67)	(1.30)	(1.30)	(1.28)
Non-personalised lifetime male	-0.00459	0.0443	0.0154	0.0351
	(-0.10)	(1.04)	(0.59)	(0.97)
Call to action male	-0.0163	-0.00868	-0.0167	-0.0271
	(-0.32)	(-0.18)	(-0.49)	(-0.61)
Personalised annual high income	-0.0459	-0.000234	0.0492	0.00561
	(-0.84)	(-0.00)	(1.64)	(0.11)
Personalised lifetime high income	0.0195	0.0264	-0.0413	0.0307
	(0.36)	(0.52)	(-1.25)	(0.64)
Non-personalised annual high income	0.0199	0.0140	0.0287	0.0163
	(0.43)	(0.33)	(0.92)	(0.42)
Non-personalised lifetime high income	0.105**	0.0973**	0.0291	0.0754**
	(2.19)	(2.26)	(1.19)	(2.08)
Call to action high income	0.0473	0.0733	0.00863	0.0737
	(0.91)	(1.52)	(0.26)	(1.64)
Personalised annual high education	0.0827	0.0543	0.0286	0.0260
	(1.44)	(1.01)	(0.97)	(0.50)
Personalised lifetime high education	0.0825	0.119**	0.105***	0.122***
	(1.51)	(2.35)	(3.52)	(2.59)
Non-personalised annual high education	0.0839*	0.0567	0.00741	0.0179
	(1.81)	(1.32)	(0.23)	(0.45)
Non-personalised lifetime high education	0.0782*	0.0589	0.0134	0.0387
	(1.67)	(1.42)	(0.58)	(1.12)
Call to action high education	0.0291	0.0301	-0.0143	0.0225
	(0.55)	(0.61)	(-0.41)	(0.50)
Constant	0.128***	0.0992***	0.0313***	0.0731***
	(7.46)	(6.46)	(3.50)	(5.47)
Observations	1,996	1,996	1,996	1,996

Table A2.8 Regression—with and without reweighting

	Without reweighting	With reweighting
Personalised annual	0.269***	0.276***
	(8.47)	(7.96)
Personalised lifetime	0.197***	0.224***
	(6.25)	(6.06)
Non-personalised annual	0.0881***	0.103***
	(3.08)	(3.26)
Non-personalised lifetime	0.0840***	0.0766***
	(2.89)	(2.68)
Call to action	0.192***	0.215***
	(6.26)	(6.11)
Constant	0.128***	0.104***
	(7.48)	(6.47)
Observations	1,996	1995

Table A2.9 Time spent in different parts of pension task

	Time spent on annuity features	Time spent on pension provider page	Time spent shopping around
Personalised	-23.18	21.42***	-39.01
	(-1.57)	(12.29)	(-0.81)
Non-personalised	-10.65	20.99***	-13.42
	(-0.49)	(10.07)	(-0.26)
Call to action	-3.857	14.44***	-19.02
	(-0.21)	(7.26)	(-0.39)
Constant	301.9***	35.62***	271.8***
	(22.61)	(30.78)	(5.85)
Observations	1995	1995	409

Table A2.10 Proportion of participants who chose the maximum income in secondary tasks

	Chose maximum employment income	Chose maximum savings income	Chose maximum housing income
Personalised annual	0.0131	-0.0107	0.0204
	(0.42)	(-0.42)	(0.80)
Personalised lifetime	0.0219	-0.0113	-0.0177
	(0.69)	(-0.43)	(-0.72)
Non-personalised annual	0.0210	-0.0199	-0.0163
	(0.67)	(-0.78)	(-0.66)
Non-personalised lifetime	0.00528	-0.0305	0.0479*
	(0.17)	(-1.18)	(1.74)
Constant	0.309***	0.193***	0.171***
	(17.95)	(13.11)	(12.16)
Observations	1,996	1,996	1,996

Table A2.11 Choice of annuity features

	Joint annuity	Guarantee period	Inflation linked
Personalised annual	-0.0435	-0.120***	-0.0191
	(-1.17)	(-3.36)	(-0.54)
Personalised lifetime	-0.101***	-0.0964***	-0.0324
	(-2.71)	(-2.62)	(-0.90)
Non-personalised annual	-0.0476	-0.0481	-0.00601
	(-1.27)	(-1.30)	(-0.17)
Non-personalised lifetime	-0.0733*	-0.0699*	0.00989
	(-1.93)	(-1.86)	(0.28)
Call to action	-0.0532	-0.0639*	-0.0398
	(-1.44)	(-1.75)	(-1.12)
Constant	0.467***	0.431***	0.679***
	(18.30)	(17.00)	(28.41)
Observations	1,996	1,996	1,996

A2.2 Logistic regressions

The source for the data in this section is Oxera and CESS.

Table A2.12 Shopping-around metrics—no controls (logistic regression)

	Clicked link to shop around	Viewed at least one PCW	Viewed more than one PCW	Switched from pension provider
Personalised annual	1.501***	1.294***	0.997***	1.445***
	(7.93)	(6.18)	(2.81)	(6.20)
Personalised lifetime	1.188***	1.215***	1.184***	1.328***
	(6.10)	(5.71)	(3.38)	(5.58)
Non-personalised annual	0.630***	0.640***	0.992***	0.715***
	(3.09)	(2.84)	(2.78)	(2.82)
Non-personalised lifetime	0.606***	0.564**	0.480	0.442
	(2.91)	(2.44)	(1.21)	(1.64)
Call to action	1.163***	1.115***	1.273***	1.142***
	(6.05)	(5.26)	(3.71)	(4.78)
Constant	-1.919***	-2.206***	-3.431***	-2.540***
	(-12.55)	(-12.91)	(-11.70)	(-12.94)
Observations	1,996	1,996	1,996	1,996

Table A2.13 Impact on shopping around by pot size (logistic regression)

	Clicked link to shop around	Viewed at least one PCW	Viewed more than one PCW	Switched from pension provider
Personalised annual	1.377***	1.107***	0.0582	1.075***
	(5.12)	(3.72)	(0.11)	(3.37)
Personalised lifetime	1.092***	1.069***	0.612	0.963***
	(3.91)	(3.51)	(1.30)	(2.92)
Non-personalised annual	0.580**	0.550*	0.511	0.374
	(1.97)	(1.70)	(1.07)	(1.05)
Non-personalised lifetime	0.447	0.354	0.126	-0.275
	(1.51)	(1.07)	(0.25)	(-0.68)
Call to action	0.999***	0.871***	0.918**	0.686**
	(3.64)	(2.87)	(2.09)	(2.06)
High pot size	-0.0311	-0.0754	-0.785	-0.384
	(-0.10)	(-0.22)	(-1.26)	(-0.97)

	Clicked link to shop around	Viewed at least one PCW	Viewed more than one PCW	Switched from pension provider
Personalised annual high pot	0.255	0.377	1.819**	0.758
	(0.67)	(0.90)	(2.40)	(1.61)
Personalised lifetime high pot	0.187	0.284	1.218*	0.729
	(0.48)	(0.67)	(1.66)	(1.52)
Non-personalised annual high pot	0.0982	0.174	1.055	0.676
	(0.24)	(0.38)	(1.41)	(1.32)
Non-personalised lifetime high pot	0.330	0.428	0.826	1.354**
	(0.79)	(0.92)	(1.01)	(2.44)
Call to action high pot	0.334	0.486	0.827	0.915*
	(0.87)	(1.14)	(1.15)	(1.89)
Constant	-1.903***	-2.168***	-3.097***	-2.357***
	(-8.70)	(-8.95)	(-8.57)	(-9.01)
Observations	1,996	1,996	1,996	1,996

Table A2.14 Impact on shopping around by pension provider quote (logistic regression)

	Clicked link to shop around	Viewed at least one PCW	Viewed more than one PCW	Switched from pension provider
Personalised annual	1.906***	1.605***	1.972***	1.768***
	(7.06)	(5.53)	(3.10)	(5.76)
Personalised lifetime	1.444***	1.396***	1.771***	1.492***
	(5.20)	(4.69)	(2.73)	(4.72)
Non-personalised annual	0.843***	0.844***	1.784***	0.955***
	(2.93)	(2.72)	(2.76)	(2.91)
Non-personalised lifetime	0.629**	0.708**	1.181*	0.749**
	(2.07)	(2.18)	(1.69)	(2.17)
Call to action	1.141***	1.106***	2.076***	1.227***
	(4.07)	(3.66)	(3.28)	(3.84)
High internal quote	0.206	0.0638	1.190*	-0.248
	(0.67)	(0.19)	(1.76)	(-0.63)
Personalised annual high quote	-0.837**	-0.673	-1.734**	-0.770
	(-2.20)	(-1.60)	(-2.19)	(-1.61)
Personalised lifetime high quote	-0.517	-0.372	-0.908	-0.353
	(-1.32)	(-0.87)	(-1.17)	(-0.73)
Non-personalised annual high quote	-0.436	-0.440	-1.304*	-0.611
	(-1.07)	(-0.97)	(-1.65)	(-1.17)
Non-personalised lifetime high quote	-0.0520	-0.289	-1.120	-0.756
	(-0.12)	(-0.62)	(-1.30)	(-1.35)
Call to action high quote	0.0341	0.0145	-1.320*	-0.163
	(0.09)	(0.03)	(-1.73)	(-0.34)
Constant	-2.024***	-2.237***	-4.169***	-2.426***
	(-9.12)	(-9.27)	(-7.17)	(-9.30)
Observations	1,996	1,996	1,996	1,996

Table A2.15 Robustness checks—main demographics (logistic regression)

	Clicked link to shop around	Viewed at least one PCW	Viewed more than one PCW	Switched from pension provider
Personalised annual	1.504***	1.288***	0.985***	1.440***
	(7.91)	(6.13)	(2.77)	(6.16)
Personalised lifetime	1.202***	1.225***	1.186***	1.337***
	(6.15)	(5.73)	(3.38)	(5.60)
Non-personalised annual	0.629***	0.633***	0.984***	0.708***
	(3.07)	(2.80)	(2.75)	(2.78)
Non-personalised lifetime	0.612***	0.564**	0.477	0.441
	(2.93)	(2.43)	(1.21)	(1.63)
Call to action	1.180***	1.119***	1.271***	1.143***
	(6.11)	(5.25)	(3.70)	(4.77)
Male	-0.215**	-0.0640	-0.0471	-0.0848
	(-2.04)	(-0.56)	(-0.27)	(-0.68)
High income	0.101	0.216*	0.186	0.250**
	(0.95)	(1.86)	(1.04)	(1.98)
High education	0.401***	0.432***	0.374*	0.346**
	(3.51)	(3.43)	(1.91)	(2.53)
Constant	-2.141***	-2.579***	-3.758***	-2.863***
	(-11.80)	(-12.67)	(-11.07)	(-12.47)
Observations	1,996	1,996	1,996	1,996

Table A2.16 Robustness checks—all variables (logistic regression)

	Clicked link to shop around	Viewed at least one PCW	Viewed more than one PCW	Switched from pension provider
Personalised annual	1.536***	1.347***	0.996***	1.543***
	(7.88)	(6.23)	(2.77)	(6.39)
Personalised lifetime	1.269***	1.303***	1.200***	1.445***
	(6.34)	(5.93)	(3.38)	(5.85)
Non-personalised annual	0.664***	0.665***	0.979***	0.717***
	(3.17)	(2.87)	(2.70)	(2.73)
Non-personalised lifetime	0.652***	0.626***	0.506	0.525*
	(3.07)	(2.64)	(1.27)	(1.89)
Call to action	1.189***	1.140***	1.269***	1.231***
	(6.01)	(5.21)	(3.66)	(4.98)
Male	-0.385***	-0.295**	-0.287	-0.337**
	(-3.37)	(-2.37)	(-1.53)	(-2.47)
High income	-0.0503	0.0284	0.0280	0.0427
	(-0.43)	(0.22)	(0.15)	(0.31)
High education	0.197	0.189	0.132	0.113
	(1.63)	(1.41)	(0.64)	(0.77)
High pot size	0.196*	0.254**	0.286	0.405***
	(1.82)	(2.17)	(1.61)	(3.13)
High internal quote	-0.146	-0.298**	-0.00624	-0.752***
	(-1.36)	(-2.54)	(-0.04)	(-5.70)
Retired	-0.0481	-0.133	-0.291	-0.0357
	(-0.27)	(-0.68)	(-0.99)	(-0.16)
Employed	0.00344	-0.0901	-0.321	0.0245
	(0.02)	(-0.50)	(-1.22)	(0.12)

	Clicked link to shop around	Viewed at least one PCW	Viewed more than one PCW	Switched from pension provider
Purchase retirement income product	0.0843	0.131	0.792	-0.140
	(0.21)	(0.30)	(1.51)	(-0.27)
Shop around for retirement income product	0.135	0.0949	-0.578	0.560
	(0.32)	(0.21)	(-1.01)	(1.04)
Consider purchasing annuity	0.211	0.261*	0.326	0.290*
	(1.49)	(1.70)	(1.41)	(1.72)
Ebay account	-0.0412	-0.137	-0.0117	-0.0191
	(-0.37)	(-1.14)	(-0.06)	(-0.14)
Number of other products switched	0.0880***	0.104***	0.0946**	0.115***
	(3.00)	(3.30)	(2.08)	(3.37)
Knowledgeable and interested in personal finance	0.0123	0.189	0.164	0.206
	(0.11)	(1.50)	(0.86)	(1.49)
Simple interest rate correct	0.251	0.0485	-0.0733	-0.0816
	(1.34)	(0.24)	(-0.24)	(-0.37)
Compound interest rate correct	0.114	0.138	0.247	0.0998
	(0.84)	(0.90)	(1.02)	(0.59)
Credit card question correct	0.515***	0.584***	0.414**	0.552***
	(4.41)	(4.65)	(2.18)	(3.99)
Risk preference	0.00157	0.0142	0.0425	0.0279
	(0.06)	(0.53)	(1.05)	(0.95)
Bat and ball question right	0.469***	0.569***	0.596***	0.664***
	(3.74)	(4.28)	(3.06)	(4.58)
Present bias factor	-0.0116	-0.00790	-0.00880	-0.0310
	(-0.89)	(-0.84)	(-0.45)	(-0.80)
Constant	-2.716***	-3.012***	-4.298***	-3.315***
	(-9.19)	(-9.29)	(-8.44)	(-9.10)
Observations	1983	1983	1983	1983

Table A2.17 Impact by gender, income and education (logistic regression)

	Click link to shop around	Click link to shop around	Click link to shop around
Personalised annual	1.754***	1.579***	1.292***
	(8.08)	(7.19)	(5.16)
Personalised lifetime	1.330***	1.122***	0.934***
	(5.88)	(4.90)	(3.59)
Non-personalised annual	0.518**	0.525**	0.245
	(2.09)	(2.08)	(0.82)
Non-personalised lifetime	0.583**	0.203	0.170
	(2.30)	(0.74)	(0.55)
Call to action	1.179***	1.038***	1.053***
	(5.18)	(4.46)	(4.24)
Male personalised annual	-0.528**		
	(-2.34)		
Male personalised lifetime	-0.291		
	(-1.20)		
Male non-personalised annual	0.225		
	(0.83)		

	Click link to shop around	Click link to shop around	Click link to shop around
Male non-personalised lifetime	0.0457		
	(0.16)		
Male call to action	-0.0303		
	(-0.13)		
High income personalised annual		-0.154	
		(-0.69)	
High income personalised lifetime		0.134	
		(0.55)	
High income non-personalised annual		0.198	
		(0.73)	
High income non-personalised lifetime		0.730**	
		(2.51)	
High income call to action		0.229	
		(0.97)	
High education personalised annual			0.310
			(1.29)
High education personalised lifetime			0.388
			(1.51)
High education non-personalised annual			0.563*
			(1.86)
High education non-personalised lifetime			0.637**
			(2.00)
High education call to action			0.173
			(0.71)
Constant	-1.919***	-1.919***	-1.919***
	(-12.55)	(-12.55)	(-12.55)
Observations	1996	1996	1996

Table A2.18 With and without reweighting (logistic regression)

	Clicked link to shop around	Clicked link to shop around
Personalised annual	1.501***	1.668***
	(7.93)	(7.70)
Personalised lifetime	1.188***	1.438***
	(6.10)	(6.28)
Non-personalised annual	0.630***	0.813***
	(3.09)	(3.39)
Non-personalised lifetime	0.606***	0.643***
	(2.91)	(2.72)
Call to action	1.163***	1.399***
	(6.05)	(6.21)
Constant	-1.919***	-2.158***
	(-12.55)	(-12.52)
Observations	1,996	1995

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