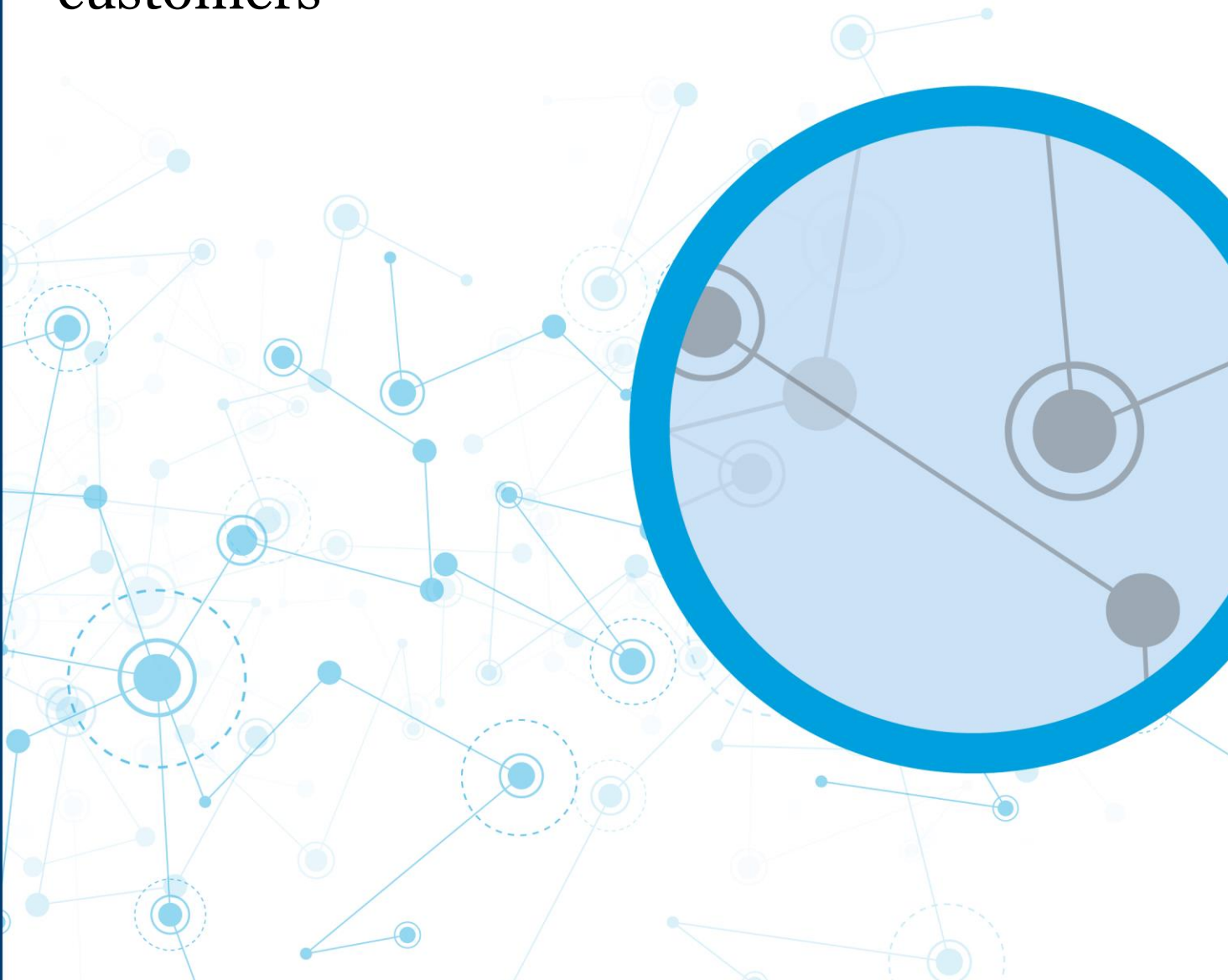


Occasional Paper 65: Annex 2

11 September 2024

Annex 2. Is timing of the essence? Testing when to engage UK pension customers



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Methodology

Figure 1. Template for email sent to under-50s



3 in 4 people seek support when making their retirement plans*

Dear member,

When the time comes to retire, you'll have to make an important decision about how to take the money from your pension. It's normal to feel unsure and most people seek help on what to do next. Understanding how your pension works can help you plan for retirement.

You don't need to go it alone, you can use the government's MoneyHelper service for free and impartial guidance on pensions. Go to [MoneyHelper](#).

What's MoneyHelper?

- MoneyHelper is a service backed by government, offering free, impartial guidance on pensions
- They'll explain how pensions work and the other things you need to think about when planning for your retirement

Find out about pensions at [MoneyHelper](#).

Kind regards,
The MyPension Team

* Source: Department for Work and Pensions – Planning and Preparing for Later Life survey (2022)

Figure 2. Template for email sent to over-50s



Dear member,

When the time comes to retire, you'll have to make an important decision about how to take the money from your pension. It's normal to feel unsure and most people seek help on what to do next. Understanding the options available to you will help you make an informed decision, and can help you plan for retirement.

You don't need to go it alone, you can use the government's MoneyHelper service for free and impartial guidance on pensions. Go to [Pension Wise](#).

What's Pension Wise?

- Pension Wise is a service backed by government, offering free, impartial guidance on how to take your pension.
- They'll explain how your options for taking your pension work and the other things you need to think about when planning for your retirement.

Find out your options at [Pension Wise](#).

Kind regards,

[The MyPension Team](#)

* Source: Department for Work and Pensions – Planning and Preparing for Later Life survey (2022)

Table 1. Sample sizes per touchpoint, age group, firm

| Firm | Strata | Age Group | Control | T1 | T2 | T3 | T4 | T5 | T6 |
|--------------|---------------|------------------|----------------|-------------|-------------|--------------|--------------|-------------|--------------|
| 1 | 1 | U50s | 4499 | NA | NA | NA | 2688 | NA | 2647 |
| 1 | 1 | O50s | 5125 | NA | NA | NA | 2779 | 424 | 2652 |
| 1 | 2 | U50s | 2256 | 777 | NA | NA | NA | NA | NA |
| 1 | 2 | O50s | 2691 | 1258 | NA | NA | NA | NA | NA |
| 1 | 3 | U50s | 3683 | NA | NA | 2665 | NA | NA | NA |
| 1 | 3 | O50s | 4140 | NA | NA | 2750 | NA | NA | NA |
| 2 | 4 | U50s | 10906 | NA | 5305 | NA | 3552 | NA | 2649 |
| 2 | 4 | O50s | 8077 | NA | NA | NA | 2682 | 4858 | 2650 |
| 2 | 5 | U50s | 4983 | 4481 | NA | NA | NA | NA | NA |
| 2 | 5 | O50s | 4180 | 2682 | NA | NA | NA | NA | NA |
| 2 | 6 | U50s | 8032 | NA | NA | 3276 | NA | NA | NA |
| 2 | 6 | O50s | 6148 | NA | NA | 2735 | NA | NA | NA |
| Total | | | 64720 | 9198 | 5305 | 11426 | 11701 | 5282 | 10598 |

Table 2. Sample sizes per touchpoint, age group, firm (with the reallocation of participants for sensitivity analysis)

| Firm | Strat a | Age Grou p | Contro l | T1 | T2 | T3 | T4 | T5 | T6 |
|-------------------|--------------------|---------------------------|---------------------|-------------|------------|-------------|-------------|------------|-------------|
| 1 | 1 | U50s | 3905 | NA | NA | NA | 2688 | NA | 2647 |
| 1 | 1 | O50s | 3636 | NA | NA | NA | 2779 | 650 | 2652 |
| 1 | 2 | U50s | 1824 | 1040 | NA | NA | NA | NA | NA |
| 1 | 2 | O50s | 1719 | 1805 | NA | NA | NA | NA | NA |
| 1 | 3 | U50s | 3159 | NA | NA | 2900 | NA | NA | NA |
| 1 | 3 | O50s | 2841 | NA | NA | 3144 | NA | NA | NA |
| 2 | 4 | U50s | | | 530 | | | | |
| | | | 6122 | NA | 5 | NA | 3552 | NA | 2649 |
| 2 | 4 | O50s | | | | | | 531 | |
| | | | 3507 | NA | NA | NA | 2682 | 8 | 2650 |
| 2 | 5 | U50s | 968 | 8617 | NA | NA | NA | NA | NA |
| 2 | 5 | O50s | 678 | 6270 | NA | NA | NA | NA | NA |
| 2 | 6 | U50s | 4576 | NA | NA | 3924 | NA | NA | NA |
| 2 | 6 | O50s | 2698 | NA | NA | 3257 | NA | NA | NA |
| Tota l | | | 35633 | 1773 | 530 | 1322 | 1170 | 596 | 1059 |
| | | | | 2 | 5 | 5 | 1 | 8 | 8 |

Table 3. Sample characteristics by firm

| Characteristic | Firm 1 | Firm 2 |
|---------------------------------|---------------|---------------|
| Age (Median, Years) | 50 | 48 |
| Pot Size | £8307 | £8964 |
| Tenure (Years) | 6.08 | 5 |
| Online Account (% with account) | 82 | 72 |

Section 1. Power calculations and multiple comparisons

We corrected for multiple comparisons among our primary and secondary outcomes, pooled analysis, and exploratory analysis looking at the composite engagement score. We did this within each sub-group of the trial using Bonferroni correction.

We ran two-sided statistical tests at the 95% confidence level, and planned to power our trial at the 80% level. Our primary outcome was the click-through rate to our call-to-action. Prior to the study, we used firm data to estimate the baseline click-through rate to be 3%. We wanted to achieve a minimum uplift of 1 percentage point (pp) on the baseline.

As we planned to compare effects within sub-groups, the comparisons we made and the minimum sample sizes we planned to use based on our power calculations are laid here:

| Strata | Number of Comparisons | Minimum Sample Size |
|--------|-----------------------|---------------------|
| 1 | 3 | 7,070 |
| 2 | 1 | 5,300 |
| 3 | 1 | 5,300 |

However, following discussions with the firms on achievable sample sizes for each treatment group, we had to make some adaptations to the sample sizes to accommodate the pool of customers available at each firm and what was practically achievable and proportional to the firms. Based on the final sample sizes requested, the estimated uplift in click-through rate we calculated we would be able to detect, using the parameters outlined above, are as follows:

| Firm | Sub-group | Strata | Alpha | MDE (pp uplift from 3% baseline) |
|-----------------|-----------|--------|--------|----------------------------------|
| Total (P1, P1) | 40-49 | 1 | 0.0166 | 1.17pp |
| | | 2 | 0.05 | 0.99pp |
| | | 3 | 0.05 | 0.99pp |
| | Over 50 | 1 | 0.0166 | 1.17pp |
| | | 2 | 0.05 | 1.16pp |
| | | 3 | 0.05 | 0.99pp |
| Firm 2 (S1, S2) | 40-49 | 1 | 0.0166 | 1.71pp |
| | | 2 | 0.05 | 1.09pp |
| | | 3 | 0.05 | 1.46pp |
| | Over 50 | 1 | 0.0166 | 1.71pp |
| | | 2 | 0.05 | 1.46pp |
| | | 3 | 0.05 | 1.56pp |
| Firm 1 (S1, S2) | 40-49 | 1 | 0.0166 | 1.71pp |
| | | 2 | 0.05 | 2.99pp |
| | | 3 | 0.05 | 1.46pp |
| | Over 50 | 1 | 0.0166 | 5.11pp |
| | | 2 | 0.05 | 2.11pp |

| | | | | |
|--|--|---|------|--------|
| | | 3 | 0.05 | 1.46pp |
|--|--|---|------|--------|

Section 2. Logging into Account Sensitivity Analysis

The sensitivity analysis detailed below investigated the association between the recency of customers logging into their pensions accounts and the likelihood of clicking on the call-to-action.

Time elapsed between last login and the email being sent was categorised into discrete intervals, as follows:

- 0-2 months
- 2-4 months
- 4-6 months
- 6 months – 1 year
- 1-2 years
- 2-5 years
- 5+ years

The longest interval (5 years +) was set as the reference category. Additionally, a binary variable was defined to indicate whether a customer had logged into their account in the two months prior to the email being sent. Analyses were stratified by firm (Firm 1, Firm 2) and age group (under 50s, over 50s).

For each sub-group a linear regression model was employed to evaluate the impact of whether a customer logged into their account in the two months prior to the email being sent on the click rate to the call-to-action, controlling for the time elapsed between the last log in and the email being sent. The findings from these regression models are detailed in Tables 86-89.

Section 3. Treatment Reallocation Sensitivity Analysis

As mentioned, we discovered that there were a larger-than-expected proportion of people in the control group who were eligible for another treatment group. We worked with Firms 1 and 2 to better understand the issue, and it seems that the sampling instructions the firms followed led to 'treatable' individuals being oversampled in the control group.

To account for this, we conducted robustness checks around this issue. We reassigned anyone within the control groups that were also eligible for the treatment group to the corresponding treatment group. A detailed account of changes to the sample size can be found in Table 2 of this annex.

With the changes to this dataset, we re-ran all of the primary and secondary analysis, looking at click-through and open rates split by firm. As mentioned, we found that the results were broadly consistent with the results reported. Further results can be found in this annex in Tables 37-41. As you will see, we found minor and expected differences around the magnitude of effects.

Primary results

Table 4. Primary analysis: strata 1 under-50s click-through rate, Firm 2

| | Impact of Touchpoints on Pensions Engagement | | |
|---------------------------------|--|-------------------------|--------------------|
| | (1) | Click-rate (2) | (3) |
| Starting a new pension | -0.275 (0.139) | -0.431* (0.173) | -0.006* (0.002) |
| Increasing contributions | 0.315* (0.131) | 0.279 (0.137) | 0.006 (0.003) |
| New Year | -0.603* (0.210) | -0.472 (0.219) | -0.007* (0.003) |
| Age | | 0.027 (0.020) | 0.001 (0.0004) |
| Pot size | | -0.00001 (0.00002) | -0.00000 (0.00000) |
| Tenure | | -0.002 (0.001) | -0.00002 (0.00003) |
| Pot size * Tenure | | 0.00000002 (0.00000002) | |
| Age * Pot size | | 0.0000002 (0.0000004) | |
| Constant: Anniversary of policy | -4.011*** (0.072) | -5.033*** (0.847) | |
| Observations | 22,412 | 22,224 | 22,224 |
| Log Likelihood | -1,906.063 | -1,879.991 | -1,879.991 |
| Akaike Inf. Crit. | 3,820.125 | 3,777.982 | 3,777.982 |

Note:

*p<0.05; **p<0.01; ***p<0.001

Models 1 displays the results of just the treatment variables' impact on the outcome.

Models 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Models 3 displays coefficients transformed into Average Marginal Effects (AMEs) for ease of interpretation.

Table 5. Primary analysis: strata 1 over-50s click-through rate, Firm 2

| | Impact of Touchpoints on Pensions Engagement | | |
|---------------------------------|--|-------------------------|--------------------|
| | (1) | Click-rate (2) | (3) |
| Increasing contributions | 0.246 (0.119) | 0.254 (0.122) | 0.008 (0.004) |
| Approaching Retirement | 0.521*** (0.092) | 0.545*** (0.118) | 0.020*** (0.005) |
| New Year | -0.398* (0.151) | -0.385 (0.162) | -0.009* (0.003) |
| Age | | 0.001 (0.010) | -0.00000 (0.00003) |
| Pot size | | 0.000004 (0.000004) | 0.00000 (0.00000) |
| Tenure | | 0.001 (0.001) | 0.00001 (0.00003) |
| Pot size * Tenure | | -0.000 (0.000) | |
| Age * Pot size | | -0.00000002 (0.0000001) | |
| Constant: Anniversary of policy | -3.456*** (0.065) | -3.666*** (0.580) | |
| Observations | 18,267 | 17,789 | 17,789 |
| Log Likelihood | -2,782.628 | -2,665.097 | -2,665.097 |
| Akaike Inf. Crit. | 5,573.257 | 5,348.193 | 5,348.193 |

Note:

*p<0.05; **p<0.01; ***p<0.001

Models 1 displays the results of just the treatment variables' impact on the outcome.

Models 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Models 3 displays coefficients transformed into Average Marginal Effects (AMEs) for ease of interpretation.

Table 6. Primary analysis: strata 2 under-50s click- through rate, Firm 2

| | Impact of Touchpoints on Pensions Engagement | | |
|--|--|-----------------------------|-----------------------|
| | (1) | Click-rate (2) | (3) |
| Milestone Birthday (Age 40, 45) | -0.096 (0.160) | -0.124 (0.169) | -0.002 (0.003) |
| Age | | 0.045 (0.038) | 0.001 (0.001) |
| Pot size | | 0.00001 (0.00003) | 0.00000 (0.00000) |
| Tenure | | -0.002 (0.002) | -0.00004 (0.00004) |
| Pot size * Tenure | | -0.00000002 (0.00000004) | |
| Age * Pot size | | -0.0000001 (0.000001) | |
| Constant: Anniversary of policy (Age 40, 45) | -4.019*** (0.108) | -5.808*** (1.571) | |
| Observations | 9,464 | 9,340 | 9,340 |
| Log Likelihood | -811.272 | -794.895 | -794.895 |
| Akaike Inf. Crit. | 1,626.544 | 1,603.790 | 1,603.790 |

Note:

*p<0.05; **p<0.01; ***p<0.001

Models 1 displays the results of just the treatment variables' impact on the outcome.

Models 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Models 3 displays coefficients transformed into Average Marginal Effects (AMEs) for ease of interpretation.

Table 7. Primary analysis: strata 2 over-50s click-through rate, Firm 2

| | Impact of Touchpoints on Pensions Engagement | | |
|--|--|---------------------------|-------------------|
| | | Click-rate | |
| | (1) | (2) | (3) |
| Milestone Birthday (Age 50, 55, 60 etc.) | 0.112 (0.142) | -0.035 (0.155) | -0.001 (0.004) |
| Age | | 0.060*** (0.016) | 0.001** (0.001) |
| Pot size | | 0.00002 (0.00001) | 0.00000 (0.00000) |
| Tenure | | 0.001 (0.002) | 0.00003 (0.00004) |
| Pot size * Tenure | | 0.000 (0.00000002) | |
| Age * Pot size | | -0.0000003 (0.0000002) | |
| Constant: Anniversary of policy (Age 50, 55, 60 etc.) | -3.496*** (0.092) | -6.946*** (0.916) | |
| Observations | 6,862 | 6,597 | 6,597 |
| Log Likelihood | -942.090 | -870.690 | -870.690 |
| Akaike Inf. Crit. | 1,888.181 | 1,755.379 | 1,755.379 |

Note:

*p<0.05; **p<0.01; ***p<0.001
 Models 1 displays the results of just the treatment variables' impact on the outcome.
 Models 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.
 Models 3 displays coefficients transformed into Average Marginal Effects (AMEs) for ease of interpretation.

Table 8. Primary analysis: strata 3 under-50s click-through rate, Firm 2

| Impact of Touchpoints on Pensions Engagement | | | |
|---|-------------------|---------------------------|-------------------|
| | Click-rate | | |
| | (1) | (2) | (3) |
| Logging into account | 0.567*** (0.124) | 0.507*** (0.131) | 0.013*** (0.004) |
| Age | | 0.035 (0.023) | 0.001 (0.001) |
| Pot size | | 0.0000004 (0.00001) | -0.000 (0.00000) |
| Tenure | | 0.0005 (0.002) | -0.00003 (0.0001) |
| Pot size * Tenure | | -0.00000004* (0.00000002) | |
| Age * Pot size | | 0.0000001 (0.0000003) | |
| Constant: Anniversary of policy (with online account) | -3.890*** (0.080) | -5.417*** (1.001) | |
| Observations | 11,308 | 11,104 | 11,104 |
| Log Likelihood | -1,283.676 | -1,260.032 | -1,260.032 |
| Akaike Inf. Crit. | 2,571.353 | 2,534.064 | 2,534.064 |

Note:

*p<0.05; **p<0.01; ***p<0.001
 Models 1 displays the results of just the treatment variables' impact on the outcome.

Models 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Models 3 displays coefficients transformed into Average Marginal Effects (AMEs) for ease of interpretation.

Table 9. Primary analysis: strata 3 over-50s click-through rate, Firm 2

| | Impact of Touchpoints on Pensions Engagement | | |
|---|--|----------------------------|--------------------|
| | (1) | Click-rate (2) | (3) |
| Logging into account | 0.827*** (0.099) | 0.720*** (0.106) | 0.035*** (0.006) |
| Age | | 0.019 (0.012) | 0.001 (0.0005) |
| Pot size | | 0.000002 (0.000004) | 0.00000 (0.00000) |
| Tenure | | -0.001 (0.001) | -0.00002 (0.00005) |
| Pot size * Tenure | | 0.000 (0.000) | |
| Age * Pot size | | -0.00000003 (0.0000001) | |
| Constant: | | | |
| Anniversary of policy (with online account) | -3.299*** (0.069) | -4.369*** (0.656) | |
| Observations | 8,883 | 8,478 | 8,478 |
| Log Likelihood | -1,693.560 | -1,576.658 | -1,576.658 |
| Akaike Inf. Crit. | 3,391.120 | 3,167.316 | 3,167.316 |

Note:

*p<0.05; **p<0.01; ***p<0.001

Models 1 displays the results of just the treatment variables' impact on the outcome.

Models 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Models 3 displays coefficients transformed into Average Marginal Effects (AMEs) for ease of interpretation.

Table 10. Primary analysis: strata 1 under-50s click-through rate, Firm 1

| | Impact of Touchpoints on Pensions Engagement | | |
|--------------------------|--|----------------------|-------------------|
| | (1) | Click-rate (2) | (3) |
| Increasing contributions | 0.249 (0.172) | -0.015 (0.188) | -0.0003 (0.003) |
| New Year | 0.082 (0.181) | 0.202 (0.190) | 0.004 (0.004) |
| Age | | 0.085* (0.031) | 0.001* (0.001) |
| Pot size | | 0.0001 (0.00004) | 0.00000 (0.00000) |
| Tenure | | 0.001 (0.003) | -0.0001 (0.0001) |
| Pot size * | | -0.0000004* | |
| Tenure | | (0.0000002) | |
| Age * Pot size | | -0.000001 (0.000001) | |
| Constant: | | | |
| Anniversary of policy | -4.012*** (0.113) | -7.669*** (1.404) | |
| Observations | 9,834 | 9,834 | 9,834 |
| Log Likelihood | -944.803 | -936.622 | -936.622 |
| Akaike Inf. Crit. | 1,895.606 | 1,889.244 | 1,889.244 |

Note:

*p<0.05; **p<0.01; ***p<0.001

Models 1 displays the results of just the treatment variables' impact on the outcome.

Models 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Models 3 displays coefficients transformed into Average Marginal Effects (AMEs) for ease of interpretation.

Table 11. Primary analysis: strata 1 over-50s click-through rate, Firm 1

| | Impact of Touchpoints on Pensions Engagement | | |
|--------------------------|--|------------------------|-------------------|
| | (1) | Click-rate (2) | (3) |
| Increasing contributions | 0.233 (0.125) | 0.090 (0.133) | 0.003 (0.004) |
| Approaching Retirement | 0.228 (0.260) | -0.121 (0.287) | -0.004 (0.008) |
| New Year | 0.234 (0.126) | 0.362* (0.134) | 0.014* (0.005) |
| Age | | 0.036* (0.012) | 0.001* (0.0004) |
| Pot size | | 0.00001 (0.00001) | 0.00000 (0.00000) |
| Tenure | | 0.002 (0.002) | 0.00003 (0.0001) |
| Pot size * | | -0.00000004 | |
| Tenure | | (0.00000004) | |
| Age * Pot size | | -0.0000001 (0.0000002) | |
| Constant: | | | |
| Anniversary of policy | -3.403*** (0.079) | -5.526*** (0.732) | |
| Observations | 10,980 | 10,980 | 10,980 |
| Log Likelihood | -1,718.271 | -1,708.705 | -1,708.705 |
| Akaike Inf. Crit. | 3,444.542 | 3,435.410 | 3,435.410 |

Note:

*p<0.05; **p<0.01; ***p<0.001

Models 1 displays the results of just the treatment variables' impact on the outcome.

Models 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Models 3 displays coefficients transformed into Average Marginal Effects (AMEs) for ease of interpretation.

Table 11. Primary analysis: strata 2 under-50s click-through rate, Firm 1

| | Impact of Touchpoints on Pensions Engagement | | |
|------------------------------------|--|--------------------------|--------------------|
| | | Click-rate | |
| | (1) | (2) | (3) |
| Milestone Birthday (Age 40, 45) | 0.106 (0.329) | -0.064 (0.356) | -0.001 (0.005) |
| Age | | 0.046 (0.080) | 0.001 (0.001) |
| Pot size | | -0.0001 (0.0002) | -0.00000 (0.00000) |
| Tenure | | -0.001 (0.006) | -0.0001 (0.0001) |
| Pot size * Tenure | | -0.0000004 (0.000001) | |
| Age * Pot size | | 0.000002 (0.000004) | |
| Constant: | | | |
| Anniversary of policy (Age 40, 45) | -4.180*** (0.173) | -5.703 (3.398) | |
| Observations | 3,033 | 3,033 | 3,033 |
| Log Likelihood | -242.439 | -238.929 | -238.929 |
| Akaike Inf. Crit. | 488.878 | 491.858 | 491.858 |

Note:

*p<0.05; **p<0.01; ***p<0.001

Models 1 displays the results of just the treatment variables' impact on the outcome.

Models 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Models 3 displays coefficients transformed into Average Marginal Effects (AMEs) for ease of interpretation.

Table 12. Primary analysis: strata 2 over-50s click-through rate, Firm 1

| | Impact of Touchpoints on Pensions Engagement | | |
|--|--|---------------------------|-------------------|
| | | Click-rate | |
| | (1) | (2) | (3) |
| Milestone Birthday (Age 50, 55, 60 etc.) | 0.186 (0.185) | -0.083 (0.210) | -0.003 (0.007) |
| Age | | 0.061** (0.022) | 0.002* (0.001) |
| Pot size | | -0.00001 (0.00004) | 0.00000 (0.00000) |
| Tenure | | 0.008* (0.004) | 0.0002 (0.0001) |
| Pot size * Tenure | | -0.0000001 (0.0000001) | |
| Age * Pot size | | 0.0000002 (0.000001) | |
| Constant: Anniversary of policy (Age 50, 55, 60 etc.) | -3.435*** (0.111) | -7.310*** (1.273) | |
| Observations | 3,949 | 3,949 | 3,949 |
| Log Likelihood | -574.497 | -567.338 | -567.338 |
| Akaike Inf. Crit. | 1,152.993 | 1,148.677 | 1,148.677 |

Note:

*p<0.05; **p<0.01; ***p<0.001

Models 1 displays the results of just the treatment variables' impact on the outcome.

Models 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Models 3 displays coefficients transformed into Average Marginal Effects (AMEs) for ease of interpretation.

Table 13. Primary analysis: strata 3 under-50s click-through rate, Firm 1

| | Impact of Touchpoints on Pensions Engagement | | |
|---|--|-----------------------|--------------------|
| | Click-rate | | |
| | (1) | (2) | (3) |
| Logging into account | 0.608*** (0.156) | 0.484** (0.168) | 0.013** (0.005) |
| Age | | 0.027 (0.030) | 0.001 (0.001) |
| Pot size | | -0.00005 (0.00003) | -0.00000 (0.00000) |
| Tenure | | -0.004 (0.003) | -0.0001 (0.0001) |
| Pot size * Tenure | | 0.0000001 (0.0000001) | |
| Age * Pot size | | 0.000001 (0.000001) | |
| Constant: | | | |
| Anniversary of policy (with online account) | -3.873*** (0.117) | -4.653*** (1.327) | |
| Observations | 6,348 | 6,348 | 6,348 |
| Log Likelihood | -786.150 | -781.650 | -781.650 |
| Akaike Inf. Crit. | 1,576.299 | 1,577.300 | 1,577.300 |

Note:

*p<0.05; **p<0.01; ***p<0.001

Models 1 displays the results of just the treatment variables' impact on the outcome.

Models 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Models 3 displays coefficients transformed into Average Marginal Effects (AMEs) for ease of interpretation.

Table 14. Primary analysis: strata 3 over-50s click-through rate, Firm 1

| | Impact of Touchpoints on Pensions Engagement | | |
|---|--|-----------------------------|-------------------|
| | (1) | Click-rate (2) | (3) |
| Logging into account | 0.775*** (0.108) | 0.651*** (0.119) | 0.033*** (0.006) |
| Age | | 0.022 (0.012) | 0.001* (0.001) |
| Pot size | | -0.000004 (0.00001) | 0.00000 (0.00000) |
| Tenure | | 0.0001 (0.002) | -0.00005 (0.0001) |
| Pot size * Tenure | | -0.00000004 (0.00000003) | |
| Age * Pot size | | 0.0000001 (0.0000002) | |
| Constant: | | | |
| Anniversary of policy (with online account) | -3.247*** (0.082) | -4.472*** (0.690) | |
| Observations | 6,890 | 6,890 | 6,890 |
| Log Likelihood | -1,413.113 | -1,407.938 | -1,407.938 |
| Akaike Inf. Crit. | 2,830.225 | 2,829.876 | 2,829.876 |

Note:

*p<0.05; **p<0.01; ***p<0.001

Models 1 displays the results of just the treatment variables' impact on the outcome.

Models 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Models 3 displays coefficients transformed into Average Marginal Effects (AMEs) for ease of interpretation.

Secondary results

Table 15. Secondary analysis: strata 1 under-50s open rate, Firm 2

| | Impact of Touchpoints on Pensions Engagement | |
|--------------------------|--|------------------------------|
| | Open-rate | |
| | (1) | (2) |
| Starting a new pension | -0.064*** (0.008) | -0.053*** (0.011) |
| Increasing contributions | -0.001 (0.010) | -0.014 (0.010) |
| New Year | -0.041*** (0.011) | -0.036** (0.011) |
| Age | | 0.002 (0.001) |
| Pot size | | 0.000002 (0.000001) |
| Tenure | | -0.00003 (0.0001) |
| Pot size * Tenure | | -0.000 (0.000) |
| Age * Pot size | | -0.00000004 (0.00000002) |
| Constant: | | |
| Anniversary of policy | 0.480*** (0.005) | 0.373*** (0.056) |
| Observations | 22,412 | 22,224 |
| R ² | 0.003 | 0.007 |
| Adjusted R ² | 0.003 | 0.006 |
| Residual Std. Error | 0.498 (df = 22408) | 0.497 (df = 22215) |
| F Statistic | 22.641*** (df = 3; 22408) | 18.533*** (df = 8; 22215) |

Note:

*p<0.05; **p<0.01; ***p<0.001

Models 1 displays the results of just the treatment variables' impact on the outcome.

Models 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

**Table 16. Secondary analysis: strata 1 over-50s open rate,
Firm 2**

| | Impact of Touchpoints on Pensions Engagement | |
|--------------------------|--|--------------------------|
| | (1) | (2) |
| | Open-rate | |
| Increasing contributions | 0.018 (0.011) | 0.016 (0.011) |
| Approaching Retirement | 0.035*** (0.009) | 0.031* (0.011) |
| New Year | 0.001 (0.011) | 0.006 (0.012) |
| Age | | 0.0005 (0.001) |
| Pot size | | -0.00000004 (0.000001) |
| Tenure | | -0.0001 (0.0001) |
| Pot size * Tenure | | 0.000 (0.000) |
| Age * Pot size | | 0.000 (0.000) |
| Constant: | | |
| Anniversary of policy | 0.483*** (0.006) | 0.446*** (0.054) |
| Observations | 18,267 | 17,789 |
| R ² | 0.001 | 0.004 |
| Adjusted R ² | 0.001 | 0.003 |
| Residual Std. Error | 0.500 (df = 18263) | 0.499 (df = 17780) |
| F Statistic | 5.695*** (df = 3; 18263) | 8.011*** (df = 8; 17780) |

Note:

*p<0.05; **p<0.01; ***p<0.001

Models 1 displays the results of just the treatment variables' impact on the outcome.

Models 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 17. Secondary analysis: strata 2 under-50s open rate, Firm 2

| | Impact of Touchpoints on Pensions Engagement | |
|------------------------------------|--|-----------------------|
| | (1) | (2) |
| Milestone Birthday (Age 40, 45) | -0.009 (0.010) | -0.012 (0.011) |
| Age | | 0.003 (0.003) |
| Pot size | | 0.0000003 (0.000002) |
| Tenure | | 0.00001 (0.0001) |
| Pot size * Tenure | | 0.000 (0.000) |
| Age * Pot size | | -0.000 (0.0000001) |
| Constant: | | |
| Anniversary of policy (Age 40, 45) | 0.478*** (0.007) | 0.358*** (0.104) |
| Observations | 9,464 | 9,340 |
| R ² | 0.0001 | 0.002 |
| Adjusted R ² | -0.00003 | 0.001 |
| Residual Std. Error | 0.499 (df = 9462) | 0.499 (df = 9333) |
| F Statistic | 0.714 (df = 1; 9462) | 2.677* (df = 6; 9333) |

Note:

*p<0.05; **p<0.01; ***p<0.001

Models 1 displays the results of just the treatment variables' impact on the outcome.

Models 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 18. Secondary analysis: strata 2 over-50s open rate, Firm 2

| | Impact of Touchpoints on Pensions Engagement | |
|---|--|-------------------------|
| | (1) | (2) |
| Milestone Birthday (Age 50, 55, 60 etc.) | 0.010 (0.012) | 0.003 (0.013) |
| Age | | 0.003* (0.001) |
| Pot size | | 0.000001 (0.000001) |
| Tenure | | 0.0001 (0.0001) |
| Pot size * Tenure | | -0.000 (0.000) |
| Age * Pot size | | 0.000 (0.00000002) |
| Constant: Anniversary of policy (Age 50, 55, 60 etc.) | 0.471*** (0.008) | 0.264*** (0.077) |
| Observations | 6,862 | 6,597 |
| R ² | 0.0001 | 0.004 |
| Adjusted R ² | -0.00005 | 0.003 |
| Residual Std. Error | 0.499 (df = 6860) | 0.499 (df = 6590) |
| F Statistic | 0.660 (df = 1; 6860) | 4.146*** (df = 6; 6590) |

Note:

*p<0.05; **p<0.01; ***p<0.001

Model 1 displays the results of just the treatment variables' impact on the outcome.

Model 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 19. Secondary analysis: strata 3 under-50s open rate, Firm 2

| | Impact of Touchpoints on Pensions Engagement | |
|---|--|---------------------------|
| | Open-rate | |
| | (1) | (2) |
| Logging into account | 0.072*** (0.010) | 0.065*** (0.011) |
| Age | | -0.0005 (0.002) |
| Pot size | | -0.0000002 (0.000001) |
| Tenure | | -0.0001 (0.0001) |
| Pot size * Tenure | | 0.000 (0.000) |
| Age * Pot size | | 0.000 (0.00000002) |
| Constant: Anniversary of policy (with online account) | 0.517*** (0.006) | 0.539*** (0.076) |
| Observations | 11,308 | 11,104 |
| R ² | 0.004 | 0.006 |
| Adjusted R ² | 0.004 | 0.005 |
| Residual Std. Error | 0.498 (df = 11306) | 0.497 (df = 11097) |
| F Statistic | 48.092*** (df = 1; 11306) | 10.643*** (df = 6; 11097) |

Note:

*p<0.05; **p<0.01; ***p<0.001

Model 1 displays the results of just the treatment variables' impact on the outcome.

Model 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 20. Secondary analysis: strata 3 over-50s open rate, Firm 2

| | Impact of Touchpoints on Pensions Engagement | |
|---|--|--------------------------|
| | Open-rate | |
| | (1) | (2) |
| Logging into account | 0.082*** (0.011) | 0.072*** (0.012) |
| Age | | 0.002 (0.001) |
| Pot size | | 0.0000002 (0.000001) |
| Tenure | | -0.0002 (0.0001) |
| Pot size * Tenure | | 0.000 (0.000) |
| Age * Pot size | | -0.000 (0.000) |
| Constant: Anniversary of policy (with online account) | 0.523*** (0.006) | 0.401*** (0.070) |
| Observations | 8,883 | 8,478 |
| R ² | 0.006 | 0.007 |
| Adjusted R ² | 0.006 | 0.007 |
| Residual Std. Error | 0.496 (df = 8881) | 0.496 (df = 8471) |
| F Statistic | 51.854*** (df = 1; 8881) | 10.345*** (df = 6; 8471) |

Note:

*p<0.05; **p<0.01; ***p<0.001

Model 1 displays the results of just the treatment variables' impact on the outcome.

Model 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 21. Secondary analysis: strata 1 under-50s open rate, Firm 1

| | Impact of Touchpoints on Pensions Engagement | |
|--------------------------|--|----------------------------|
| | (1) | (2) |
| | Open-rate | |
| Increasing contributions | 0.008 (0.012) | 0.003 (0.013) |
| New Year | 0.053*** (0.012) | 0.059*** (0.012) |
| Age | | 0.004 (0.002) |
| Pot size | | 0.000002 (0.000004) |
| Tenure | | 0.0004 (0.0002) |
| Pot size * Tenure | | 0.000 (0.000) |
| Age * Pot size | | -0.00000004 (0.0000001) |
| Constant: | | |
| Anniversary of policy | 0.422*** (0.007) | 0.223 (0.103) |
| Observations | 9,834 | 9,834 |
| R ² | 0.002 | 0.004 |
| Adjusted R ² | 0.002 | 0.003 |
| Residual Std. Error | 0.496 (df = 9831) | 0.495 (df = 9826) |
| F Statistic | 10.014*** (df = 2; 9831) | 5.293*** (df = 7; 9826) |

Note:

*p<0.05; **p<0.01; ***p<0.001

Models 1 displays the results of just the treatment variables' impact on the outcome.

Models 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 22. Secondary analysis: strata 1 over-50s open rate, Firm 1

| | Impact of Touchpoints on Pensions Engagement | |
|--------------------------|--|----------------------------|
| | (1) | (2) |
| | Open-rate | |
| Increasing contributions | -0.003 (0.012) | -0.011 (0.013) |
| Approaching Retirement | 0.031 (0.025) | 0.007 (0.028) |
| New Year | 0.016 (0.012) | 0.024 (0.012) |
| Age | | 0.002 (0.001) |
| Pot size | | 0.000001 (0.000002) |
| Tenure | | 0.0005* (0.0002) |
| Pot size * Tenure | | -0.000 (0.000) |
| Age * Pot size | | -0.000 (0.00000003) |
| Constant: | | |
| Anniversary of policy | 0.509*** (0.007) | 0.354*** (0.072) |
| Observations | 10,980 | 10,980 |
| R ² | 0.0003 | 0.002 |
| Adjusted R ² | 0.0001 | 0.001 |
| Residual Std. Error | 0.500 (df = 10976) | 0.500 (df = 10971) |
| F Statistic | 1.256 (df = 3; 10976) | 2.851** (df = 8; 10971) |

Note:

*p<0.05; **p<0.01; ***p<0.001

Models 1 displays the results of just the treatment variables' impact on the outcome.

Models 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 23. Secondary analysis: strata 2 under-50s open rate, Firm 1

| | Impact of Touchpoints on Pensions Engagement | |
|------------------------------------|--|-------------------------|
| | (1) | (2) |
| Milestone Birthday (Age 40, 45) | -0.075*** (0.020) | -0.081*** (0.022) |
| Age | | 0.005 (0.006) |
| Pot size | | 0.000001 (0.00001) |
| Tenure | | 0.0001 (0.0004) |
| Pot size * Tenure | | 0.000 (0.00000003) |
| Age * Pot size | | -0.00000003 (0.0000002) |
| Constant: | | |
| Anniversary of policy (Age 40, 45) | 0.427*** (0.010) | 0.209 (0.232) |
| Observations | 3,033 | 3,033 |
| R ² | 0.004 | 0.005 |
| Adjusted R ² | 0.004 | 0.003 |
| Residual Std. Error | 0.491 (df = 3031) | 0.491 (df = 3026) |
| F Statistic | 13.388*** (df = 1; 3031) | 2.564* (df = 6; 3026) |

Note:

*p<0.05; **p<0.01; ***p<0.001

Model 1 displays the results of just the treatment variables' impact on the outcome.

Model 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 24. Secondary analysis: strata 2 over-50s open rate, Firm 1

| | Impact of Touchpoints on Pensions Engagement | |
|---|--|------------------------|
| | (1) | (2) |
| Milestone Birthday (Age 50, 55, 60 etc.) | -0.003 (0.017) | -0.015 (0.019) |
| Age | | 0.004 (0.002) |
| Pot size | | -0.0000002 (0.000005) |
| Tenure | | 0.001* (0.0003) |
| Pot size * Tenure | | -0.000 (0.000) |
| Age * Pot size | | 0.00000002 (0.0000001) |
| Constant: Anniversary of policy (Age 50, 55, 60 etc.) | 0.514*** (0.010) | 0.256* (0.119) |
| Observations | 3,949 | 3,949 |
| R ² | 0.00001 | 0.003 |
| Adjusted R ² | -0.0002 | 0.001 |
| Residual Std. Error | 0.500 (df = 3947) | 0.500 (df = 3942) |
| F Statistic | 0.027 (df = 1; 3947) | 1.741 (df = 6; 3942) |

Note:

*p<0.05; **p<0.01; ***p<0.001

Model 1 displays the results of just the treatment variables' impact on the outcome.

Model 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 25. Secondary analysis: strata 3 under-50s open rate, Firm 1

| | Impact of Touchpoints on Pensions Engagement | |
|---|--|-------------------------|
| | Open-rate | |
| | (1) | (2) |
| Logging into account | 0.060*** (0.013) | 0.054*** (0.014) |
| Age | | 0.001 (0.003) |
| Pot size | | -0.000001 (0.000003) |
| Tenure | | -0.0004 (0.0002) |
| Pot size * Tenure | | 0.000 (0.000) |
| Age * Pot size | | 0.00000002 (0.0000001) |
| Constant: Anniversary of policy (with online account) | 0.452*** (0.008) | 0.459*** (0.116) |
| Observations | 6,348 | 6,348 |
| R ² | 0.003 | 0.004 |
| Adjusted R ² | 0.003 | 0.003 |
| Residual Std. Error | 0.499 (df = 6346) | 0.499 (df = 6341) |
| F Statistic | 22.191*** (df = 1; 6346) | 4.350*** (df = 6; 6341) |

Note:

*p<0.05; **p<0.01; ***p<0.001

Model 1 displays the results of just the treatment variables' impact on the outcome.

Model 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 26. Secondary analysis: strata 3 over-50s open rate, Firm 1

| | Impact of Touchpoints on Pensions Engagement | |
|---|--|--------------------------|
| | (1) | (2) |
| | Open-rate | |
| Logging into account | 0.077*** (0.012) | 0.069*** (0.013) |
| Age | | 0.003 (0.001) |
| Pot size | | 0.00001* (0.000002) |
| Tenure | | -0.0002 (0.0002) |
| Pot size * Tenure | | -0.00000002*** (0.000) |
| Age * Pot size | | -0.00000001 (0.00000003) |
| Constant: | | |
| Anniversary of policy (with online account) | 0.545*** (0.008) | 0.410*** (0.080) |
| Observations | 6,890 | 6,890 |
| R ² | 0.006 | 0.009 |
| Adjusted R ² | 0.006 | 0.009 |
| Residual Std. Error | 0.493 (df = 6888) | 0.492 (df = 6883) |
| F Statistic | 40.485*** (df = 1; 6888) | 10.974*** (df = 6; 6883) |

Note:

*p<0.05; **p<0.01; ***p<0.001

Model 1 displays the results of just the treatment variables' impact on the outcome.

Model 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Pooled results

Table 27. Pooled analysis: Strata 1 under-50s click rate

| | Impact of Touchpoints on Pensions Engagement | | |
|---------------------------------------|--|-----------------------|--------------------|
| | (1) | Click-rate (2) | (3) |
| Increasing contributions | 0.287* (0.103) | 0.149 (0.111) | 0.003 (0.002) |
| New Year | -0.205 (0.130) | -0.070 (0.139) | -0.001 (0.002) |
| Age | | 0.055** (0.018) | 0.001** (0.0004) |
| Pot size | | -0.00001 (0.00001) | -0.000 (0.00000) |
| Tenure | | -0.002 (0.001) | -0.00004 (0.00003) |
| Firm (Reference: Firm 2) | | 0.097 (0.097) | 0.002 (0.002) |
| Pot size * Tenure | | -0.000 (0.00000002) | |
| Age * Pot size | | 0.0000002 (0.0000003) | |
| Constant: Anniversary of policy | -4.011*** (0.061) | -6.246*** (0.773) | |
| Observations | 26,941 | 26,753 | 26,753 |
| Log Likelihood | -2,474.054 | -2,441.916 | -2,441.916 |
| Akaike Inf. Crit. | 4,954.109 | 4,901.832 | 4,901.832 |

Note:

*p<0.05; **p<0.01; ***p<0.001

Models 1 displays the results of just the treatment variables' impact on the outcome.

Models 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Models 3 displays coefficients transformed into Average Marginal Effects (AMEs) for ease of interpretation.

Table 28. Pooled analysis: Strata 1 over-50s click rate

| | Impact of Touchpoints on Pensions Engagement | | |
|---------------------------------------|--|----------------------------|--------------------|
| | (1) | Click-rate (2) | (3) |
| Increasing contributions | 0.246* (0.086) | 0.197 (0.089) | 0.006 (0.003) |
| Approaching Retirement | 0.483*** (0.081) | 0.432*** (0.103) | 0.016*** (0.004) |
| New Year | -0.022 (0.094) | 0.041 (0.101) | 0.001 (0.003) |
| Age | | 0.015 (0.008) | 0.0005 (0.0003) |
| Pot size | | 0.000004 (0.000004) | 0.00000* (0.00000) |
| Tenure | | 0.001 (0.001) | 0.00001 (0.00003) |
| Firm (Reference: Firm 2) | | 0.211** (0.071) | 0.007* (0.003) |
| Pot size * Tenure | | -0.000 (0.000) | |
| Age * Pot size | | -0.00000002 (0.0000001) | |
| Constant: Anniversary of policy | -3.435*** (0.050) | -4.500*** (0.439) | |
| Observations | 29,247 | 28,769 | 28,769 |
| Log Likelihood | -4,510.283 | -4,384.559 | -4,384.559 |
| Akaike Inf. Crit. | 9,028.566 | 8,789.117 | 8,789.117 |

Note:

*p<0.05; **p<0.01; ***p<0.001

Models 1 displays the results of just the treatment variables' impact on the outcome.

Models 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Models 3 displays coefficients transformed into Average Marginal Effects (AMEs) for ease of interpretation.

Table 29. Pooled analysis: Strata 2 under-50s click rate

| | Impact of Touchpoints on Pensions Engagement | | |
|--|--|-----------------------------|-----------------------|
| | (1) | Click-rate (2) | (3) |
| Milestone Birthday (Age 40, 45) | -0.042 (0.142) | -0.113 (0.153) | -0.002 (0.002) |
| Age | | 0.046 (0.034) | 0.001 (0.001) |
| Pot size | | -0.00001 (0.00003) | 0.00000 (0.00000) |
| Tenure | | -0.002 (0.002) | -0.00005 (0.00003) |
| Firm (Reference: Firm 2) | | -0.027 (0.173) | -0.0004 (0.003) |
| Pot size * Tenure | | -0.00000002 (0.00000004) | |
| Age * Pot size | | 0.0000002 (0.000001) | |
| Constant: Anniversary of policy (Age 40, 45) | -4.066*** (0.091) | -5.803*** (1.418) | |
| Observations | 12,497 | 12,373 | 12,373 |
| Log Likelihood | -1,054.041 | -1,036.734 | -1,036.734 |
| Akaike Inf. Crit. | 2,112.081 | 2,089.468 | 2,089.468 |

Note:

*p<0.05; **p<0.01; ***p<0.001

Models 1 displays the results of just the treatment variables' impact on the outcome.

Models 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Models 3 displays coefficients transformed into Average Marginal Effects (AMEs) for ease of interpretation.

Table 30. Pooled analysis: Strata 2 over-50s click rate

| | Impact of Touchpoints on Pensions Engagement | | |
|--|--|---------------------------|-------------------|
| | (1) | Click-rate (2) | (3) |
| Milestone Birthday (Age 50, 55, 60 etc.) | 0.133 (0.112) | -0.038 (0.123) | -0.001 (0.004) |
| Age | | 0.058*** (0.012) | 0.002*** (0.0004) |
| Pot size | | 0.00001 (0.00001) | 0.00000 (0.00000) |
| Tenure | | 0.002 (0.001) | 0.0001 (0.00004) |
| Firm (Reference: Firm 2) | | 0.244* (0.119) | 0.008* (0.004) |
| Pot size * Tenure | | -0.000 (0.00000002) | |
| Age * Pot size | | -0.0000002 (0.0000002) | |
| Constant: Anniversary of policy (Age 50, 55, 60 etc.) | -3.472*** (0.071) | -6.969*** (0.713) | |
| Observations | 10,811 | 10,546 | 10,546 |
| Log Likelihood | -1,516.940 | -1,440.273 | -1,440.273 |
| Akaike Inf. Crit. | 3,037.881 | 2,896.546 | 2,896.546 |

Note:

*p<0.05; **p<0.01; ***p<0.001
Models 1 displays the results of just the treatment variables' impact on the outcome.

Models 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Models 3 displays coefficients transformed into Average Marginal Effects (AMEs) for ease of interpretation.

Table 31. Pooled analysis: Strata 3 under-50s click rate

| | Impact of Touchpoints on Pensions Engagement | | |
|---|--|-----------------------------|--------------------|
| | (1) | (2) | (3) |
| Logging into account | 0.588*** (0.096) | 0.498*** (0.103) | 0.013*** (0.003) |
| Age | | 0.037* (0.018) | 0.001* (0.001) |
| Pot size | | -0.00001 (0.00001) | -0.000 (0.00000) |
| Tenure | | -0.001 (0.001) | -0.00004 (0.00004) |
| Firm (Reference: Firm 2) | | 0.059 (0.102) | 0.001 (0.003) |
| Pot size * Tenure | | -0.00000003 (0.00000002) | |
| Age * Pot size | | 0.0000002 (0.0000003) | |
| Constant: | | | |
| Anniversary of policy (with online account) | -3.884*** (0.066) | -5.413*** (0.792) | |
| Observations | 17,656 | 17,452 | 17,452 |
| Log Likelihood | -2,069.916 | -2,043.808 | -2,043.808 |
| Akaike Inf. Crit. | 4,143.831 | 4,103.616 | 4,103.616 |

Note:

*p<0.05; **p<0.01; ***p<0.001

Models 1 displays the results of just the treatment variables' impact on the outcome.

Models 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Models 3 displays coefficients transformed into Average Marginal Effects (AMEs) for ease of interpretation.

Table 32. Pooled analysis: Strata 3 over-50s click rate

| | Impact of Touchpoints on Pensions Engagement | | |
|--|--|---------------------|--------------------|
| | Click-rate | | |
| | (1) | (2) | (3) |
| Logging into account | 0.806*** (0.073) | 0.693*** (0.079) | 0.035*** (0.004) |
| Age | | 0.021** (0.008) | 0.001** (0.0003) |
| Pot size | | 0.000001 (0.000004) | 0.00000 (0.00000) |
| Tenure | | -0.001 (0.001) | -0.00002 (0.00004) |
| Firm (Reference: Firm 2) | | 0.113 (0.077) | 0.005 (0.004) |
| Pot size * Tenure | | 0.000 (0.000) | |
| Age * Pot size | | -0.000 (0.0000001) | |
| Constant: Anniversary of policy (with online account) | -3.277*** (0.053) | -4.499*** (0.451) | |
| Observations | 15,773 | 15,368 | 15,368 |
| Log Likelihood | -3,106.789 | -2,986.213 | -2,986.213 |
| Akaike Inf. Crit. | 6,217.578 | 5,988.425 | 5,988.425 |

Note:

*p<0.05; **p<0.01; ***p<0.001
 Models 1 displays the results of just the treatment variables' impact on the outcome.
 Models 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.
 Models 3 displays coefficients transformed into Average Marginal Effects (AMEs) for ease of interpretation.

Table 32. Pooled analysis: Strata 1 under-50s open rate

| | Impact of Touchpoints on Pensions Engagement | |
|--------------------------|--|------------------------------|
| | (1) | (2) |
| Increasing contributions | -0.005 (0.007) | -0.011 (0.008) |
| New Year | -0.006 (0.008) | 0.006 (0.008) |
| Age | | 0.003 (0.001) |
| Pot size | | 0.000002 (0.000001) |
| Tenure | | -0.00003 (0.0001) |
| Firm (Reference: Firm 2) | | -0.026*** (0.007) |
| Pot size * Tenure | | 0.000 (0.000) |
| Age * Pot size | | -0.00000003 (0.00000002) |
| Constant: | | |
| Anniversary of policy | 0.463*** (0.004) | 0.352*** (0.054) |
| Observations | 26,941 | 26,753 |
| R ² | 0.00003 | 0.004 |
| Adjusted R ² | -0.00004 | 0.004 |
| Residual Std. Error | 0.498 (df = 26938) | 0.497 (df = 26744) |
| F Statistic | 0.444 (df = 2; 26938) | 14.130*** (df = 8; 26744) |

Note:

*p<0.05; **p<0.01; ***p<0.001

Models 1 displays the results of just the treatment variables' impact on the outcome.

Models 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 33. Pooled analysis: Strata 1 over-50s open rate

| | Impact of Touchpoints on Pensions Engagement | |
|--------------------------|--|-----------------------------|
| | (1) | (2) |
| | Open-rate | |
| Increasing contributions | 0.010 (0.008) | 0.003 (0.008) |
| Approaching Retirement | 0.027** (0.008) | 0.027* (0.010) |
| New Year | 0.011 (0.008) | 0.014 (0.009) |
| Age | | 0.001 (0.001) |
| Pot size | | -0.000 (0.0000005) |
| Tenure | | 0.00002 (0.0001) |
| Firm (Reference: Firm 2) | | 0.033*** (0.006) |
| Pot size * Tenure | | -0.000 (0.000) |
| Age * Pot size | | 0.000 (0.000) |
| Constant: | | |
| Anniversary of policy | 0.493*** (0.004) | 0.425*** (0.042) |
| Observations | 29,247 | 28,769 |
| R ² | 0.0004 | 0.003 |
| Adjusted R ² | 0.0003 | 0.003 |
| Residual Std. Error | 0.500 (df = 29243) | 0.499 (df = 28759) |
| F Statistic | 3.748* (df = 3; 29243) | 9.614*** (df = 9; 28759) |

Note:

*p<0.05; **p<0.01; ***p<0.001

Models 1 displays the results of just the treatment variables' impact on the outcome.

Models 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 34. Pooled analysis: Strata 2 under-50s open rate

| | Impact of Touchpoints on Pensions Engagement | |
|--|--|--------------------------|
| | (1) | (2) |
| Milestone Birthday (Age 40, 45) | -0.010 (0.009) | -0.025** (0.010) |
| Age | | 0.003 (0.002) |
| Pot size | | 0.0000002 (0.000002) |
| Tenure | | 0.00004 (0.0001) |
| Firm (Reference: Firm 2) | | -0.067*** (0.011) |
| Pot size * Tenure | | 0.000 (0.000) |
| Age * Pot size | | 0.000 (0.00000005) |
| Constant: Anniversary of policy (Age 40, 45) | 0.462*** (0.006) | 0.362*** (0.094) |
| Observations | 12,497 | 12,373 |
| R ² | 0.0001 | 0.005 |
| Adjusted R ² | 0.00002 | 0.004 |
| Residual Std. Error | 0.498 (df = 12495) | 0.497 (df = 12365) |
| F Statistic | 1.250 (df = 1; 12495) | 8.887*** (df = 7; 12365) |

Note:

*p<0.05; **p<0.01; ***p<0.001

Model 1 displays the results of just the treatment variables' impact on the outcome.

Model 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 35. Pooled analysis: Strata 2 over-50s open rate

| | Impact of Touchpoints on Pensions Engagement | |
|---|--|--------------------------|
| | (1) | (2) |
| Milestone Birthday (Age 50, 55, 60 etc.) | 0.003 (0.010) | -0.003 (0.011) |
| Age | | 0.003** (0.001) |
| Pot size | | 0.0000005 (0.000001) |
| Tenure | | 0.0002 (0.0001) |
| Firm (Reference: Firm 2) | | 0.050*** (0.010) |
| Pot size * Tenure | | -0.000 (0.000) |
| Age * Pot size | | 0.000 (0.00000002) |
| Constant: Anniversary of policy (Age 50, 55, 60 etc.) | 0.488*** (0.006) | 0.269*** (0.063) |
| Observations | 10,811 | 10,546 |
| R ² | 0.00001 | 0.004 |
| Adjusted R ² | -0.0001 | 0.004 |
| Residual Std. Error | 0.500 (df = 10809) | 0.499 (df = 10538) |
| F Statistic | 0.078 (df = 1; 10809) | 6.742*** (df = 7; 10538) |

Note:

*p<0.05; **p<0.01; ***p<0.001

Model 1 displays the results of just the treatment variables' impact on the outcome.

Model 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 36. Pooled analysis: Strata 3 under-50s open rate

| | Impact of Touchpoints on Pensions Engagement | |
|---|--|---------------------------|
| | Open-rate | |
| | (1) | (2) |
| Logging into account | 0.058*** (0.008) | 0.061*** (0.008) |
| Age | | 0.0001 (0.001) |
| Pot size | | -0.0000004 (0.000001) |
| Tenure | | -0.0002* (0.0001) |
| Firm (Reference: Firm 2) | | -0.065*** (0.008) |
| Pot size * Tenure | | 0.000 (0.000) |
| Age * Pot size | | 0.000 (0.00000002) |
| Constant: Anniversary of policy (with online account) | 0.496*** (0.005) | 0.523*** (0.062) |
| Observations | 17,656 | 17,452 |
| R ² | 0.003 | 0.008 |
| Adjusted R ² | 0.003 | 0.008 |
| Residual Std. Error | 0.499 (df = 17654) | 0.498 (df = 17444) |
| F Statistic | 52.470*** (df = 1; 17654) | 20.917*** (df = 7; 17444) |

Note:

*p<0.05; **p<0.01; ***p<0.001

Model 1 displays the results of just the treatment variables' impact on the outcome.

Model 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 37. Pooled analysis: Strata 3 over-50s open rate

| | Impact of Touchpoints on Pensions Engagement | |
|---|--|---------------------------|
| | Open-rate | |
| | (1) | (2) |
| Logging into account | 0.082*** (0.008) | 0.069*** (0.009) |
| Age | | 0.002* (0.001) |
| Pot size | | 0.0000003 (0.000001) |
| Tenure | | -0.0003* (0.0001) |
| Firm (Reference: Firm 2) | | 0.029*** (0.008) |
| Pot size * Tenure | | 0.000 (0.000) |
| Age * Pot size | | -0.000 (0.000) |
| Constant: Anniversary of policy (with online account) | 0.532*** (0.005) | 0.410*** (0.050) |
| Observations | 15,773 | 15,368 |
| R ² | 0.006 | 0.008 |
| Adjusted R ² | 0.006 | 0.008 |
| Residual Std. Error | 0.495 (df = 15771) | 0.495 (df = 15360) |
| F Statistic | 97.970*** (df = 1; 15771) | 17.875*** (df = 7; 15360) |

Note:

*p<0.05; **p<0.01; ***p<0.001

Model 1 displays the results of just the treatment variables' impact on the outcome.

Model 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Sensitivity analysis results

Table 38. Sensitivity analysis following treatment reallocation: Strata 1 under-50s click rate, Firm 2

| | Impact of Touchpoints on Pensions Engagement | |
|--------------------------|--|-------------------------|
| | (1) | (2) |
| | | Click-rate |
| Starting a new pension | -0.188 (0.156) | -0.340 (0.201) |
| Increasing contributions | 0.402* (0.149) | 0.378* (0.154) |
| New Year | -0.516 (0.221) | -0.314 (0.244) |
| Age | | 0.035 (0.024) |
| Pot size | | -0.00001 (0.00002) |
| Tenure | | -0.002 (0.002) |
| Pot size * Tenure | | 0.00000002 (0.00000003) |
| Age * Pot size | | 0.0000002 (0.0000004) |
| Constant: | | |
| Anniversary of policy | -4.098*** (0.101) | -5.454*** (1.070) |
| Observations | 17,628 | 17,512 |
| Log Likelihood | -1,442.758 | -1,429.947 |
| Akaike Inf. Crit. | 2,893.516 | 2,877.894 |

Note:

*p<0.05; **p<0.01; ***p<0.001

Models 1 displays the results of just the treatment variables' impact on the outcome.

Models 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 39. Sensitivity analysis following treatment reallocation: Strata 1 over-50s click rate, Firm 2

| | Impact of Touchpoints on Pensions Engagement | |
|--------------------------|--|------------------------|
| | Click-rate | |
| | (1) | (2) |
| Increasing contributions | 0.308 (0.142) | 0.322 (0.147) |
| Approaching Retirement | 0.566*** (0.119) | 0.730*** (0.150) |
| New Year | -0.336 (0.170) | -0.431 (0.185) |
| Age | | -0.020 (0.012) |
| Pot size | | 0.000002 (0.000005) |
| Tenure | | 0.001 (0.001) |
| Pot size * Tenure | | -0.00000002 (0.000) |
| Age * Pot size | | 0.00000002 (0.0000001) |
| Constant: | | |
| Anniversary of policy | -3.518*** (0.101) | -2.549*** (0.697) |
| Observations | 14,157 | 13,806 |
| Log Likelihood | -2,215.420 | -2,123.368 |
| Akaike Inf. Crit. | 4,438.839 | 4,264.735 |

Note:

*p<0.05; **p<0.01; ***p<0.001

Models 1 displays the results of just the treatment variables' impact on the outcome.

Models 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 40. Sensitivity analysis following treatment reallocation: Strata 2 under-50s click rate, Firm 2

| | Impact of Touchpoints on Pensions Engagement | |
|------------------------------------|--|-----------------------|
| | (1) | (2) |
| Milestone Birthday (Age 40, 45) | -0.157 (0.246) | -0.171 (0.249) |
| Age | | 0.036 (0.036) |
| Pot size | | 0.00001 (0.00003) |
| Tenure | | -0.002 (0.002) |
| Pot size * Tenure | | -0.000 (0.00000004) |
| Age * Pot size | | -0.0000002 (0.000001) |
| Constant: | | |
| Anniversary of policy (Age 40, 45) | -3.911*** (0.232) | -5.286*** (1.555) |
| Observations | 9,585 | 9,464 |
| Log Likelihood | -829.560 | -812.995 |
| Akaike Inf. Crit. | 1,663.121 | 1,639.989 |

Note:

*p<0.05; **p<0.01; ***p<0.001

Model 1 displays the results of just the treatment variables' impact on the outcome.

Model 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 41. Sensitivity analysis following treatment reallocation: Strata 2 over-50s click rate, Firm 2

| | Impact of Touchpoints on Pensions Engagement | |
|---|--|--------------------------|
| | (1) | (2) |
| | | Click-rate |
| Milestone Birthday (Age 50, 55, 60 etc.) | 0.081 (0.244) | 0.174 (0.265) |
| Age | | 0.059*** (0.016) |
| Pot size | | 0.00002 (0.00001) |
| Tenure | | 0.001 (0.002) |
| Pot size * Tenure | | 0.000 (0.00000002) |
| Age * Pot size | | -0.00000003 (0.00000002) |
| Constant: Anniversary of policy (Age 50, 55, 60 etc.) | -3.546*** (0.233) | -7.113*** (0.930) |
| Observations | 6,948 | 6,692 |
| Log Likelihood | -938.079 | -866.137 |
| Akaike Inf. Crit. | 1,880.158 | 1,746.273 |

Note:

*p<0.05; **p<0.01; ***p<0.001

Model 1 displays the results of just the treatment variables' impact on the outcome.

Model 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 42. Sensitivity analysis following treatment reallocation: Strata 3 under-50s click rate, Firm 2

| | Impact of Touchpoints on Pensions Engagement | |
|---|--|---------------------------|
| | (1) | (2) |
| | Click-rate | |
| Logging into account | 0.645*** (0.141) | 0.620*** (0.145) |
| Age | | 0.046 (0.028) |
| Pot size | | 0.00001 (0.00002) |
| Tenure | | 0.001 (0.002) |
| Pot size * Tenure | | -0.00000004* (0.00000002) |
| Age * Pot size | | -0.0000001 (0.0000003) |
| Constant: | | |
| Anniversary of policy (with online account) | -3.979*** (0.110) | -6.058*** (1.254) |
| Observations | 8,500 | 8,349 |
| Log Likelihood | -1,006.582 | -991.610 |
| Akaike Inf. Crit. | 2,017.164 | 1,997.220 |

Note:

*p<0.05; **p<0.01; ***p<0.001

Model 1 displays the results of just the treatment variables' impact on the outcome.

Model 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 43. Sensitivity analysis following treatment reallocation: Strata 3 over-50s click rate, Firm 2

| | Impact of Touchpoints on Pensions Engagement | |
|---|--|------------------------|
| | Click-rate | |
| | (1) | (2) |
| Logging into account | 0.849*** (0.128) | 0.750*** (0.134) |
| Age | | 0.010 (0.014) |
| Pot size | | -0.0000002 (0.000005) |
| Tenure | | -0.001 (0.001) |
| Pot size * Tenure | | 0.000 (0.000) |
| Age * Pot size | | 0.00000002 (0.0000001) |
| Constant: Anniversary of policy (with online account) | -3.390*** (0.108) | -3.955*** (0.785) |
| Observations | 5,955 | 5,676 |
| Log Likelihood | -1,239.528 | -1,151.144 |
| Akaike Inf. Crit. | 2,483.057 | 2,316.287 |

Note:

*p<0.05; **p<0.01; ***p<0.001

Model 1 displays the results of just the treatment variables' impact on the outcome.

Model 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 44. Sensitivity analysis following treatment reallocation: Strata 1 under-50s click rate, Firm 1

| | Impact of Touchpoints on Pensions Engagement | |
|--------------------------|--|----------------------------|
| | Click-rate | |
| | (1) | (2) |
| Increasing contributions | 0.348 (0.181) | 0.021 (0.198) |
| New Year | 0.181 (0.190) | 0.355 (0.202) |
| Age | | 0.113** (0.033) |
| Pot size | | 0.0001 (0.00004) |
| Tenure | | 0.002 (0.003) |
| Pot size * Tenure | | -0.0000004* (0.0000001) |
| Age * Pot size | | -0.000001 (0.000001) |
| Constant: | | |
| Anniversary of policy | -4.111*** (0.127) | -9.026*** (1.489) |
| Observations | 9,240 | 9,240 |
| Log Likelihood | -865.634 | -855.615 |
| Akaike Inf. Crit. | 1,737.268 | 1,727.230 |

Note:

*p<0.05; **p<0.01; ***p<0.001

Models 1 displays the results of just the treatment variables' impact on the outcome.

Models 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 45. Sensitivity analysis following treatment reallocation: Strata 1 over-50s click rate, Firm 1

| | Impact of Touchpoints on Pensions Engagement | |
|--------------------------|--|--------------------------|
| | (1) | (2) |
| Increasing contributions | 0.481** (0.143) | 0.299 (0.158) |
| Approaching Retirement | 0.390 (0.233) | 0.051 (0.278) |
| New Year | 0.482** (0.145) | 0.576*** (0.150) |
| Age | | 0.033 (0.015) |
| Pot size | | 0.00001 (0.00001) |
| Tenure | | 0.001 (0.002) |
| Pot size * Tenure | | -0.00000004 (0.00000005) |
| Age * Pot size | | -0.0000001 (0.0000002) |
| Constant: | | |
| Anniversary of policy | -3.651*** (0.106) | -5.570*** (0.852) |
| Observations | 9,717 | 9,717 |
| Log Likelihood | -1,449.512 | -1,441.217 |
| Akaike Inf. Crit. | 2,907.025 | 2,900.433 |

Note:

*p<0.05; **p<0.01; ***p<0.001

Models 1 displays the results of just the treatment variables' impact on the outcome.

Models 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 46. Sensitivity analysis following treatment reallocation: Strata 2 under-50s click rate, Firm 1

| | Impact of Touchpoints on Pensions Engagement | |
|------------------------------------|--|----------------------|
| | (1) | (2) |
| Milestone Birthday (Age 40, 45) | 0.355 (0.329) | 0.135 (0.369) |
| Age | | 0.112 (0.086) |
| Pot size | | 0.0001 (0.0002) |
| Tenure | | 0.005 (0.007) |
| Pot size * Tenure | | -0.000001 (0.000001) |
| Age * Pot size | | -0.000001 (0.000004) |
| Constant: | | |
| Anniversary of policy (Age 40, 45) | -4.453*** (0.219) | -9.152* (3.714) |
| Observations | 2,864 | 2,864 |
| Log Likelihood | -201.422 | -198.609 |
| Akaike Inf. Crit. | 406.845 | 411.218 |

Note:

*p<0.05; **p<0.01; ***p<0.001

Model 1 displays the results of just the treatment variables' impact on the outcome.

Model 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 47. Sensitivity analysis following treatment reallocation: Strata 2 over-50s click rate, Firm 1

| | Impact of Touchpoints on Pensions Engagement | |
|---|--|------------------------|
| | (1) | (2) |
| | Click-rate | |
| Milestone Birthday (Age 50, 55, 60 etc.) | 0.734*** (0.205) | 0.610* (0.240) |
| Age | | 0.033 (0.024) |
| Pot size | | 0.000003 (0.00004) |
| Tenure | | 0.009* (0.004) |
| Pot size * Tenure | | -0.0000001 (0.0000001) |
| Age * Pot size | | 0.0000001 (0.000001) |
| Constant: Anniversary of policy (Age 50, 55, 60 etc.) | -3.845*** (0.168) | -6.404*** (1.363) |
| Observations | 3,524 | 3,524 |
| Log Likelihood | -493.027 | -488.717 |
| Akaike Inf. Crit. | 990.053 | 991.435 |

Note:

*p<0.05; **p<0.01; ***p<0.001

Model 1 displays the results of just the treatment variables' impact on the outcome.

Model 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 48. Sensitivity analysis following treatment reallocation: Strata 3 under-50s click rate, Firm 1

| | Impact of Touchpoints on Pensions Engagement | |
|---|--|-----------------------|
| | Click-rate | |
| | (1) | (2) |
| Logging into account | 0.697*** (0.166) | 0.554** (0.177) |
| Age | | 0.042 (0.031) |
| Pot size | | -0.00004 (0.00003) |
| Tenure | | -0.003 (0.003) |
| Pot size * Tenure | | 0.0000001 (0.0000001) |
| Age * Pot size | | 0.000001 (0.000001) |
| Constant: Anniversary of policy (with online account) | -3.979*** (0.133) | -5.502*** (1.365) |
| Observations | 6,059 | 6,059 |
| Log Likelihood | -740.842 | -736.540 |
| Akaike Inf. Crit. | 1,485.684 | 1,487.081 |

Note:

*p<0.05; **p<0.01; ***p<0.001

Model 1 displays the results of just the treatment variables' impact on the outcome.

Model 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 49. Sensitivity analysis following treatment reallocation: Strata 3 over-50s click rate, Firm 1

| | Impact of Touchpoints on Pensions Engagement | |
|---|--|--------------------------|
| | (1) | (2) |
| | Click-rate | |
| Logging into account | 0.967*** (0.129) | 0.823*** (0.141) |
| Age | | 0.024 (0.013) |
| Pot size | | -0.000004 (0.00002) |
| Tenure | | -0.0005 (0.002) |
| Pot size * Tenure | | -0.00000004 (0.00000004) |
| Age * Pot size | | 0.0000002 (0.0000003) |
| Constant: Anniversary of policy (with online account) | -3.479*** (0.110) | -4.717*** (0.737) |
| Observations | 5,985 | 5,985 |
| Log Likelihood | -1,220.018 | -1,215.025 |
| Akaike Inf. Crit. | 2,444.036 | 2,444.051 |

Note:

*p<0.05; **p<0.01; ***p<0.001

Model 1 displays the results of just the treatment variables' impact on the outcome.

Model 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 50. Sensitivity analysis following treatment reallocation: Strata 1 under-50s open rate, Firm 2

| | Impact of Touchpoints on Pensions Engagement | |
|--------------------------|--|---------------------------|
| | Open-rate | |
| | (1) | (2) |
| Starting a new pension | -0.060*** (0.009) | -0.047*** (0.013) |
| Increasing contributions | 0.003 (0.010) | -0.007 (0.011) |
| New Year | -0.037** (0.012) | -0.035* (0.013) |
| Age | | 0.001 (0.002) |
| Pot size | | 0.000003* (0.000001) |
| Tenure | | -0.00003 (0.0001) |
| Pot size * Tenure | | -0.000 (0.000) |
| Age * Pot size | | -0.0000001 (0.00000003) |
| Constant: | | |
| Anniversary of policy | 0.476*** (0.006) | 0.426*** (0.068) |
| Observations | 17,628 | 17,512 |
| R ² | 0.003 | 0.007 |
| Adjusted R ² | 0.003 | 0.006 |
| Residual Std. Error | 0.497 (df = 17624) | 0.496 (df = 17503) |
| F Statistic | 17.813*** (df = 3; 17624) | 15.118*** (df = 8; 17503) |

Note:

*p<0.05; **p<0.01; ***p<0.001

Models 1 displays the results of just the treatment variables' impact on the outcome.

Models 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 51. Sensitivity analysis following treatment reallocation: Strata 1 over-50s open rate, Firm 2

| | Impact of Touchpoints on Pensions Engagement | |
|--------------------------|--|--------------------------|
| | (1) | (2) |
| | Open-rate | |
| Increasing contributions | 0.020 (0.013) | 0.017 (0.013) |
| Approaching Retirement | 0.041*** (0.011) | 0.042** (0.014) |
| New Year | 0.003 (0.013) | 0.003 (0.015) |
| Age | | -0.0003 (0.001) |
| Pot size | | 0.0000001 (0.000001) |
| Tenure | | -0.0001 (0.0001) |
| Pot size * Tenure | | 0.000 (0.000) |
| Age * Pot size | | 0.000 (0.000) |
| Constant: | | |
| Anniversary of policy | 0.480*** (0.008) | 0.489*** (0.066) |
| Observations | 14,157 | 13,806 |
| R ² | 0.001 | 0.005 |
| Adjusted R ² | 0.001 | 0.004 |
| Residual Std. Error | 0.500 (df = 14153) | 0.499 (df = 13797) |
| F Statistic | 6.015*** (df = 3; 14153) | 7.939*** (df = 8; 13797) |

Note:

*p<0.05; **p<0.01; ***p<0.001

Models 1 displays the results of just the treatment variables' impact on the outcome.

Models 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 52. Sensitivity analysis following treatment reallocation: Strata 2 under-50s open rate, Firm 2

| | Impact of Touchpoints on Pensions Engagement | |
|------------------------------------|--|------------------------|
| | (1) | (2) |
| Milestone Birthday (Age 40, 45) | -0.034* (0.017) | -0.028 (0.017) |
| Age | | 0.003 (0.002) |
| Pot size | | 0.0000003 (0.000002) |
| Tenure | | -0.00001 (0.0001) |
| Pot size * Tenure | | 0.000 (0.000) |
| Age * Pot size | | 0.000 (0.0000001) |
| Constant: | | |
| Anniversary of policy (Age 40, 45) | 0.501*** (0.016) | 0.380*** (0.103) |
| Observations | 9,585 | 9,464 |
| R ² | 0.0004 | 0.002 |
| Adjusted R ² | 0.0003 | 0.001 |
| Residual Std. Error | 0.499 (df = 9583) | 0.499 (df = 9457) |
| F Statistic | 3.941* (df = 1; 9583) | 3.104** (df = 6; 9457) |

Note:

*p<0.05; **p<0.01; ***p<0.001

Model 1 displays the results of just the treatment variables' impact on the outcome.

Model 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 53. Sensitivity analysis following treatment reallocation: Strata 2 over-50s open rate, Firm 2

| | Impact of Touchpoints on Pensions Engagement | |
|---|--|------------------------|
| | (1) | (2) |
| Milestone Birthday (Age 50, 55, 60 etc.) | -0.015 (0.020) | -0.013 (0.021) |
| Age | | 0.003* (0.001) |
| Pot size | | 0.0000002 (0.000001) |
| Tenure | | 0.0001 (0.0001) |
| Pot size * Tenure | | -0.000 (0.000) |
| Age * Pot size | | 0.000 (0.00000002) |
| Constant: Anniversary of policy (Age 50, 55, 60 etc.) | 0.487*** (0.019) | 0.297*** (0.078) |
| Observations | 6,948 | 6,692 |
| R ² | 0.0001 | 0.003 |
| Adjusted R ² | -0.0001 | 0.002 |
| Residual Std. Error | 0.499 (df = 6946) | 0.499 (df = 6685) |
| F Statistic | 0.561 (df = 1; 6946) | 3.722** (df = 6; 6685) |

Note:

*p<0.05; **p<0.01; ***p<0.001

Model 1 displays the results of just the treatment variables' impact on the outcome.

Model 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 54. Sensitivity analysis following treatment reallocation: Strata 3 under-50s open rate, Firm 2

| | Impact of Touchpoints on Pensions Engagement | |
|---|--|--------------------------|
| | (1) | (2) |
| | Open-rate | |
| Logging into account | 0.083*** (0.011) | 0.079*** (0.011) |
| Age | | -0.004 (0.002) |
| Pot size | | -0.000001 (0.000001) |
| Tenure | | -0.0001 (0.0001) |
| Pot size * Tenure | | 0.000 (0.000) |
| Age * Pot size | | 0.00000002 (0.00000003) |
| Constant: Anniversary of policy (with online account) | 0.509*** (0.007) | 0.667*** (0.097) |
| Observations | 8,500 | 8,349 |
| R ² | 0.007 | 0.009 |
| Adjusted R ² | 0.007 | 0.008 |
| Residual Std. Error | 0.496 (df = 8498) | 0.496 (df = 8342) |
| F Statistic | 59.302*** (df = 1; 8498) | 12.762*** (df = 6; 8342) |

Note:

*p<0.05; **p<0.01; ***p<0.001

Model 1 displays the results of just the treatment variables' impact on the outcome.

Model 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 55. Sensitivity analysis following treatment reallocation: Strata 3 over-50s open rate, Firm 2

| | Impact of Touchpoints on Pensions Engagement | |
|---|--|-------------------------|
| | Open-rate | |
| | (1) | (2) |
| Logging into account | 0.089*** (0.013) | 0.076*** (0.014) |
| Age | | 0.003 (0.002) |
| Pot size | | 0.0000005 (0.000001) |
| Tenure | | -0.0003* (0.0002) |
| Pot size * Tenure | | 0.000 (0.000) |
| Age * Pot size | | -0.000 (0.000) |
| Constant: Anniversary of policy (with online account) | 0.510*** (0.010) | 0.375*** (0.088) |
| Observations | 5,955 | 5,676 |
| R ² | 0.008 | 0.010 |
| Adjusted R ² | 0.008 | 0.009 |
| Residual Std. Error | 0.495 (df = 5953) | 0.495 (df = 5669) |
| F Statistic | 47.447*** (df = 1; 5953) | 9.936*** (df = 6; 5669) |

Note:

*p<0.05; **p<0.01; ***p<0.001

Model 1 displays the results of just the treatment variables' impact on the outcome.

Model 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 56. Sensitivity analysis following treatment reallocation: Strata 1 under-50s open rate, Firm 1

| | Impact of Touchpoints on Pensions Engagement | |
|--------------------------|--|-------------------------|
| | (1) | (2) |
| | Open-rate | |
| Increasing contributions | 0.006 (0.012) | 0.004 (0.014) |
| New Year | 0.052*** (0.012) | 0.059*** (0.013) |
| Age | | 0.004 (0.002) |
| Pot size | | 0.000003 (0.000004) |
| Tenure | | 0.0004 (0.0002) |
| Pot size * Tenure | | 0.000 (0.000) |
| Age * Pot size | | -0.0000001 (0.0000001) |
| Constant: | | |
| Anniversary of policy | 0.423*** (0.008) | 0.217 (0.107) |
| Observations | 9,240 | 9,240 |
| R ² | 0.002 | 0.004 |
| Adjusted R ² | 0.002 | 0.003 |
| Residual Std. Error | 0.496 (df = 9237) | 0.496 (df = 9232) |
| F Statistic | 9.339*** (df = 2; 9237) | 5.210*** (df = 7; 9232) |

Note:

*p<0.05; **p<0.01; ***p<0.001

Models 1 displays the results of just the treatment variables' impact on the outcome.

Models 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 57. Sensitivity analysis following treatment reallocation: Strata 1 over-50s open rate, Firm 1

| | Impact of Touchpoints on Pensions Engagement | |
|--------------------------|--|------------------------|
| | (1) | (2) |
| | Open-rate | |
| Increasing contributions | 0.013 (0.013) | 0.005 (0.014) |
| Approaching Retirement | 0.027 (0.021) | 0.005 (0.026) |
| New Year | 0.033* (0.013) | 0.039** (0.013) |
| Age | | 0.002 (0.001) |
| Pot size | | 0.000001 (0.000002) |
| Tenure | | 0.0005 (0.0002) |
| Pot size * Tenure | | -0.000 (0.000) |
| Age * Pot size | | -0.000 (0.00000003) |
| Constant: | | |
| Anniversary of policy | 0.493*** (0.008) | 0.335*** (0.081) |
| Observations | 9,717 | 9,717 |
| R ² | 0.001 | 0.002 |
| Adjusted R ² | 0.0004 | 0.002 |
| Residual Std. Error | 0.500 (df = 9713) | 0.500 (df = 9708) |
| F Statistic | 2.350 (df = 3; 9713) | 2.941** (df = 8; 9708) |

Note:

*p<0.05; **p<0.01; ***p<0.001

Models 1 displays the results of just the treatment variables' impact on the outcome.

Models 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 58. Sensitivity analysis following treatment reallocation: Strata 2 under-50s open rate, Firm 1

| | Impact of Touchpoints on Pensions Engagement | |
|------------------------------------|--|-------------------------|
| | (1) | (2) |
| Milestone Birthday (Age 40, 45) | -0.085*** (0.019) | -0.094*** (0.021) |
| Age | | 0.006 (0.006) |
| Pot size | | 0.000001 (0.00001) |
| Tenure | | 0.00005 (0.0004) |
| Pot size * Tenure | | 0.000 (0.00000004) |
| Age * Pot size | | -0.00000002 (0.0000002) |
| Constant: | | |
| Anniversary of policy (Age 40, 45) | 0.436*** (0.011) | 0.171 (0.236) |
| Observations | 2,864 | 2,864 |
| R ² | 0.007 | 0.008 |
| Adjusted R ² | 0.007 | 0.006 |
| Residual Std. Error | 0.489 (df = 2862) | 0.490 (df = 2857) |
| F Statistic | 20.187*** (df = 1; 2862) | 3.752** (df = 6; 2857) |

Note:

*p<0.05; **p<0.01; ***p<0.001

Model 1 displays the results of just the treatment variables' impact on the outcome.

Model 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 59. Sensitivity analysis following treatment reallocation: Strata 2 over-50s open rate, Firm 1

| | Impact of Touchpoints on Pensions Engagement | |
|---|--|-----------------------|
| | (1) | (2) |
| Milestone Birthday (Age 50, 55, 60 etc.) | 0.034* (0.017) | 0.034 (0.020) |
| Age | | 0.002 (0.002) |
| Pot size | | 0.000001 (0.000005) |
| Tenure | | 0.001* (0.0003) |
| Pot size * Tenure | | -0.000 (0.000) |
| Age * Pot size | | -0.000 (0.0000001) |
| Constant: Anniversary of policy (Age 50, 55, 60 etc.) | 0.489*** (0.012) | 0.331* (0.129) |
| Observations | 3,524 | 3,524 |
| R ² | 0.001 | 0.004 |
| Adjusted R ² | 0.001 | 0.002 |
| Residual Std. Error | 0.500 (df = 3522) | 0.500 (df = 3517) |
| F Statistic | 4.149* (df = 1; 3522) | 2.132* (df = 6; 3517) |

Note:

*p<0.05; **p<0.01; ***p<0.001

Model 1 displays the results of just the treatment variables' impact on the outcome.

Model 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 60. Sensitivity analysis following treatment reallocation: Strata 3 under-50s open rate, Firm 1

| | Impact of Touchpoints on Pensions Engagement | |
|---|--|-------------------------|
| | (1) | (2) |
| | Open-rate | |
| Logging into account | 0.057*** (0.013) | 0.052*** (0.014) |
| Age | | 0.001 (0.003) |
| Pot size | | -0.000001 (0.000003) |
| Tenure | | -0.0004 (0.0003) |
| Pot size * Tenure | | 0.000 (0.000) |
| Age * Pot size | | 0.000 (0.0000001) |
| Constant: Anniversary of policy (with online account) | 0.454*** (0.009) | 0.453*** (0.118) |
| Observations | 6,059 | 6,059 |
| R ² | 0.003 | 0.004 |
| Adjusted R ² | 0.003 | 0.003 |
| Residual Std. Error | 0.499 (df = 6057) | 0.499 (df = 6052) |
| F Statistic | 20.040*** (df = 1; 6057) | 3.807*** (df = 6; 6052) |

Note:

*p<0.05; **p<0.01; ***p<0.001

Model 1 displays the results of just the treatment variables' impact on the outcome.

Model 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

**Table 61. Sensitivity analysis following treatment reallocation:
Strata 3 over-50s open rate, Firm 1**

| | Impact of Touchpoints on Pensions Engagement | |
|--|--|--------------------------|
| | (1) | (2) |
| | Open-rate | |
| Logging into account | 0.087*** (0.013) | 0.072*** (0.014) |
| Age | | 0.003* (0.002) |
| Pot size | | 0.00001* (0.000002) |
| Tenure | | -0.0002 (0.0002) |
| Pot size * Tenure | | -0.00000002*** (0.000) |
| Age * Pot size | | -0.00000001 (0.00000003) |
| Constant: | | |
| Anniversary of policy (with online account) | 0.533*** (0.009) | 0.361*** (0.087) |
| Observations | 5,985 | 5,985 |
| R ² | 0.008 | 0.012 |
| Adjusted R ² | 0.008 | 0.011 |
| Residual Std. Error | 0.492 (df = 5983) | 0.491 (df = 5978) |
| F Statistic | 46.327*** (df = 1; 5983) | 12.281*** (df = 6; 5978) |

Note:

*p<0.05; **p<0.01; ***p<0.001

Model 1 displays the results of just the treatment variables' impact on the outcome.

Model 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Exploratory results

Table 62. Exploratory analysis: Strata 1 under-50s composite engagement score, Firm 2

| | Impact of Touchpoints on Pensions Engagement | |
|--------------------------|--|------------------------|
| | Composite Engagement Score | |
| | (1) | (2) |
| Starting a new pension | 0.038 (0.127) | 0.200 (0.166) |
| Increasing contributions | 0.116 (0.142) | 0.060 (0.147) |
| New Year | -0.378 (0.194) | -0.303 (0.203) |
| Age | | 0.024 (0.020) |
| Pot size | | 0.00001 (0.00001) |
| Tenure | | 0.001 (0.001) |
| Pot size * Tenure | | -0.00000002 (0.000) |
| Age * Pot size | | -0.0000001 (0.0000002) |
| Constant: | | |
| Anniversary of policy | -5.453*** (0.073) | -6.710*** (0.845) |
| Observations | 22,412 | 22,224 |

Note:

*p<0.05; **p<0.01; ***p<0.001

Models 1 displays the results of just the treatment variables' impact on the outcome.

Models 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 63. Exploratory analysis: Strata 1 over-50s composite engagement score, Firm 2

| | Impact of Touchpoints on Pensions Engagement | |
|--------------------------|--|-----------------------|
| | Composite Engagement Score | |
| | (1) | (2) |
| Increasing contributions | 0.187 (0.132) | 0.160 (0.135) |
| Approaching Retirement | 0.047 (0.114) | -0.028 (0.144) |
| New Year | -0.253 (0.157) | -0.221 (0.170) |
| Age | | -0.0002 (0.012) |
| Pot size | | -0.000002 (0.000004) |
| Tenure | | -0.0003 (0.001) |
| Pot size * Tenure | | -0.000 (0.000) |
| Age * Pot size | | 0.0000001 (0.0000001) |
| Constant: | | |
| Anniversary of policy | -5.079*** (0.071) | -5.141*** (0.671) |
| Observations | 18,267 | 17,789 |

Note:

*p<0.05; **p<0.01; ***p<0.001

Models 1 displays the results of just the treatment variables' impact on the outcome.

Models 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 64. Exploratory analysis: Strata 2 under-50s composite engagement score, Firm 2

| | Impact of Touchpoints on Pensions Engagement | |
|---------------------------------------|--|--------------------------|
| | Composite Engagement Score | |
| | (1) | (2) |
| Milestone Birthday (Age 40, 45) | 0.134 (0.164) | 0.111 (0.175) |
| Age | | 0.038 (0.039) |
| Pot size | | 0.00003 (0.00002) |
| Tenure | | 0.001 (0.002) |
| Pot size * Tenure | | -0.00000002 (0.00000003) |
| Age * Pot size | | -0.000001 (0.000001) |
| Constant: | | |
| Anniversary of policy (Age 40, 45) | -5.606*** (0.117) | -7.448*** (1.637) |
| Observations | 9,464 | 9,340 |

Note:

*p<0.05; **p<0.01; ***p<0.001

Model 1 displays the results of just the treatment variables' impact on the outcome.

Model 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 65. Exploratory analysis: Strata 2 over-50s composite engagement score, Firm 2

| | Impact of Touchpoints on Pensions Engagement | |
|---|--|------------------------|
| | Composite Engagement Score | |
| | (1) | (2) |
| Milestone Birthday (Age 50, 55, 60 etc.) | 0.338* (0.150) | 0.375* (0.155) |
| Age | | -0.009 (0.017) |
| Pot size | | 0.00001 (0.00001) |
| Tenure | | 0.002 (0.002) |
| Pot size * Tenure | | -0.000 (0.000) |
| Age * Pot size | | -0.0000001 (0.0000002) |
| Constant: Anniversary of policy (Age 50, 55, 60 etc.) | -5.134*** (0.103) | -4.866*** (0.928) |
| Observations | 6,862 | 6,597 |

Note:

*p<0.05; **p<0.01; ***p<0.001

Model 1 displays the results of just the treatment variables' impact on the outcome.

Model 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 66. Exploratory analysis: Strata 3 under-50s composite engagement score, Firm 2

| | Impact of Touchpoints on Pensions Engagement | |
|---|--|------------------------|
| | Composite Engagement Score | |
| | (1) | (2) |
| Logging into account | 0.938*** (0.103) | 0.899*** (0.110) |
| Age | | 0.028 (0.020) |
| Pot size | | 0.00001 (0.00001) |
| Tenure | | -0.0003 (0.001) |
| Pot size * Tenure | | -0.000 (0.00000002) |
| Age * Pot size | | -0.0000002 (0.0000003) |
| Constant: Anniversary of policy (with online account) | -5.146*** (0.073) | -6.367*** (0.876) |
| Observations | 11,308 | 11,104 |

Note:

*p<0.05; **p<0.01; ***p<0.001

Model 1 displays the results of just the treatment variables' impact on the outcome.

Model 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 67. Exploratory analysis: Strata 3 over-50s composite engagement score, Firm 2

| | Impact of Touchpoints on Pensions Engagement | |
|---|--|------------------------|
| | Composite Engagement Score | |
| | (1) | (2) |
| Logging into account | 0.830*** (0.100) | 0.762*** (0.108) |
| Age | | 0.017 (0.012) |
| Pot size | | 0.00001 (0.00001) |
| Tenure | | 0.002 (0.001) |
| Pot size * Tenure | | -0.000 (0.000) |
| Age * Pot size | | -0.0000001 (0.0000001) |
| Constant: Anniversary of policy (with online account) | -4.804*** (0.071) | -5.948*** (0.660) |
| Observations | 8,883 | 8,478 |

Note:

*p<0.05; **p<0.01; ***p<0.001

Model 1 displays the results of just the treatment variables' impact on the outcome.

Model 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 68. Exploratory analysis: Strata 1 under-50s composite engagement score, Firm 1

| | Impact of Touchpoints on Pensions Engagement | |
|--------------------------|--|------------------------|
| | Composite Engagement Score | |
| | (1) | (2) |
| Increasing contributions | 0.443* (0.192) | 0.157 (0.213) |
| New Year | -0.094 (0.225) | 0.033 (0.231) |
| Age | | 0.086* (0.035) |
| Pot size | | 0.00003 (0.00003) |
| Tenure | | 0.002 (0.003) |
| Pot size * Tenure | | -0.0000001 (0.0000001) |
| Age * Pot size | | -0.0000003 (0.000001) |
| Constant: | | |
| Anniversary of policy | -5.769*** (0.133) | -9.672*** (1.593) |
| Observations | 9,834 | 9,834 |

Note:

*p<0.05; **p<0.01; ***p<0.001

Models 1 displays the results of just the treatment variables' impact on the outcome.

Models 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 69. Exploratory analysis: Strata 1 over-50s composite engagement score, Firm 1

| | Impact of Touchpoints on Pensions Engagement | |
|--------------------------|--|-------------------------|
| | Composite Engagement Score | |
| | (1) | (2) |
| Increasing contributions | 0.174 (0.146) | -0.035 (0.152) |
| Approaching Retirement | 0.263 (0.293) | -0.066 (0.318) |
| New Year | -0.288 (0.173) | -0.112 (0.180) |
| Age | | 0.041** (0.014) |
| Pot size | | 0.00001 (0.00001) |
| Tenure | | -0.004 (0.002) |
| Pot size * Tenure | | 0.00000003 (0.00000004) |
| Age * Pot size | | -0.0000001 (0.0000002) |
| Constant: | | |
| Anniversary of policy | -5.126*** (0.091) | -7.187*** (0.823) |
| Observations | 10,980 | 10,980 |

Note:

*p<0.05; **p<0.01; ***p<0.001

Models 1 displays the results of just the treatment variables' impact on the outcome.

Models 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 70. Exploratory analysis: Strata 2 under-50s composite engagement score, Firm 1

| | Impact of Touchpoints on Pensions Engagement | |
|---------------------------------------|--|------------------------|
| | Composite Engagement Score | |
| | (1) | (2) |
| Milestone Birthday (Age 40, 45) | 0.010 (0.410) | -0.077 (0.452) |
| Age | | 0.068 (0.102) |
| Pot size | | 0.00002 (0.0001) |
| Tenure | | 0.004 (0.008) |
| Pot size * Tenure | | -0.0000005 (0.0000004) |
| Age * Pot size | | 0.000001 (0.000002) |
| Constant: | | |
| Anniversary of policy (Age 40, 45) | -5.970*** (0.208) | -9.138* (4.368) |
| Observations | 3,033 | 3,033 |

Note:

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Model 1 displays the results of just the treatment variables' impact on the outcome.

Model 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 71. Exploratory analysis: Strata 2 over-50s composite engagement score, Firm 1

| | Impact of Touchpoints on Pensions Engagement | |
|---|--|----------------------|
| | Composite Engagement Score | |
| | (1) | (2) |
| Milestone Birthday (Age 50, 55, 60 etc.) | 0.825*** (0.200) | 0.600** (0.222) |
| Age | | 0.078*** (0.022) |
| Pot size | | 0.0001 (0.00004) |
| Tenure | | -0.012*** (0.003) |
| Pot size * Tenure | | 0.000 (0.0000001) |
| Age * Pot size | | -0.000001 (0.000001) |
| Constant: Anniversary of policy (Age 50, 55, 60 etc.) | -5.367*** (0.143) | -8.874*** (1.314) |
| Observations | 3,949 | 3,949 |

Note:

*p<0.05; **p<0.01; ***p<0.001

Model 1 displays the results of just the treatment variables' impact on the outcome.

Model 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 72. Exploratory analysis: Strata 3 under-50s composite engagement score, Firm 1

| | Impact of Touchpoints on Pensions Engagement | |
|---|--|-------------------------|
| | Composite Engagement Score | |
| | (1) | (2) |
| Logging into account | 1.410*** (0.156) | 1.281*** (0.162) |
| Age | | -0.001 (0.026) |
| Pot size | | 0.00001 (0.00002) |
| Tenure | | -0.012*** (0.002) |
| Pot size * Tenure | | -0.00000003 (0.0000001) |
| Age * Pot size | | -0.0000001 (0.0000004) |
| Constant: Anniversary of policy (with online account) | -5.569*** (0.134) | -4.799*** (1.146) |
| Observations | 6,348 | 6,348 |

Note:

*p<0.05; **p<0.01; ***p<0.001

Model 1 displays the results of just the treatment variables' impact on the outcome.

Model 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Table 73. Exploratory analysis: Strata 3 over-50s composite engagement score, Firm 1

| | Impact of Touchpoints on Pensions Engagement | |
|--|--|------------------------|
| | Composite Engagement Score | |
| | (1) | (2) |
| Logging into account | 1.451*** (0.106) | 1.417*** (0.111) |
| Age | | 0.015 (0.010) |
| Pot size | | 0.00003* (0.00001) |
| Tenure | | -0.008*** (0.001) |
| Pot size * Tenure | | 0.000 (0.00000003) |
| Age * Pot size | | -0.000001* (0.0000002) |
| Constant: | | |
| Anniversary of policy (with online account) | -4.912*** (0.090) | -5.193*** (0.599) |
| Observations | 6,890 | 6,890 |

Note:

*p<0.05; **p<0.01; ***p<0.001

Model 1 displays the results of just the treatment variables' impact on the outcome.

Model 2 displays the results of the model with covariates to increase statistical power. The purpose of covariate inclusion is not to interpret their coefficients.

Heterogeneity test results

Table 74. Chi-squared test for heterogeneity: Pooled strata 1, under-50s click rate

| Statistic | N | Mean | St. Dev. | Min | Max |
|--------------|---|------------|----------|-----------|-----------|
| Residual Df | 2 | 32,045.000 | 5.657 | 32,041 | 32,049 |
| Residual Dev | 2 | 5,641.472 | 11.663 | 5,633.226 | 5,649.719 |
| Df | 1 | 8.000 | | 8 | 8 |
| Deviance | 1 | 16.493 | | 16.493 | 16.493 |
| P-Value | 1 | 0.036 | | 0.036 | 0.036 |

This table compares the statistical significance of model variations using ANOVA. Model 1 represents a baseline model. Model 2 includes an additional interaction term with firm. The Chi-Squared Test assesses the significance of adding this interaction term to the model.

Table 75. Chi-squared test for heterogeneity: Pooled strata 1, over-50s click rate

| Statistic | N | Mean | St. Dev. | Min | Max |
|--------------|---|------------|----------|-----------|-----------|
| Residual Df | 2 | 28,755.500 | 6.364 | 28,751 | 28,760 |
| Residual Dev | 2 | 8,762.738 | 21.404 | 8,747.603 | 8,777.872 |
| Df | 1 | 9.000 | | 9 | 9 |
| Deviance | 1 | 30.270 | | 30.270 | 30.270 |
| P-Value | 1 | 0.0004 | | 0.0004 | 0.0004 |

This table compares the statistical significance of model variations using ANOVA. Model 1 represents a baseline model. Model 2 includes an additional interaction term with firm. The Chi-Squared Test assesses the significance of adding this interaction term to the model.

Table 76. Chi-squared test for heterogeneity: Pooled strata 2, under-50s click rate

| Statistic | N | Mean | St. Dev. | Min | Max |
|--------------|---|------------|----------|-----------|-----------|
| Residual Df | 2 | 12,362.500 | 4.950 | 12,359 | 12,366 |
| Residual Dev | 2 | 2,070.570 | 4.133 | 2,067.648 | 2,073.492 |
| Df | 1 | 7.000 | | 7 | 7 |
| Deviance | 1 | 5.845 | | 5.845 | 5.845 |
| P-Value | 1 | 0.558 | | 0.558 | 0.558 |

This table compares the statistical significance of model variations using ANOVA. Model 1 represents a baseline model. Model 2 includes an additional interaction term with firm.

The Chi-Squared Test assesses the significance of adding this interaction term to the model.

Table 77. Chi-squared test for heterogeneity: Pooled strata 2, over-50s click rate

| Statistic | N | Mean | St. Dev. | Min | Max |
|--------------|---|------------|----------|-----------|-----------|
| Residual Df | 2 | 10,535.500 | 4.950 | 10,532 | 10,539 |
| Residual Dev | 2 | 2,880.392 | 6.133 | 2,876.056 | 2,884.729 |
| Df | 1 | 7.000 | | 7 | 7 |
| Deviance | 1 | 8.673 | | 8.673 | 8.673 |
| P-Value | 1 | 0.277 | | 0.277 | 0.277 |

This table compares the statistical significance of model variations using ANOVA.

Model 1 represents a baseline model.

Model 2 includes an additional interaction term with firm.

The Chi-Squared Test assesses the significance of adding this interaction term to the model.

Table 78. Chi-squared test for heterogeneity: Pooled strata 3, under-50s click rate

| Statistic | N | Mean | St. Dev. | Min | Max |
|--------------|---|------------|----------|-----------|-----------|
| Residual Df | 2 | 17,441.500 | 4.950 | 17,438 | 17,445 |
| Residual Dev | 2 | 4,085.658 | 3.244 | 4,083.364 | 4,087.952 |
| Df | 1 | 7.000 | | 7 | 7 |
| Deviance | 1 | 4.587 | | 4.587 | 4.587 |
| P-Value | 1 | 0.710 | | 0.710 | 0.710 |

This table compares the statistical significance of model variations using ANOVA.

Model 1 represents a baseline model.

Model 2 includes an additional interaction term with firm.

The Chi-Squared Test assesses the significance of adding this interaction term to the model.

Table 79. Chi-squared test for heterogeneity: Pooled strata 3, over-50s open rate

| Statistic | N | Mean | St. Dev. | Min | Max |
|--------------|---|------------|----------|-----------|-----------|
| Residual Df | 2 | 15,357.500 | 4.950 | 15,354 | 15,361 |
| Residual Dev | 2 | 5,971.875 | 3.795 | 5,969.191 | 5,974.559 |
| Df | 1 | 7.000 | | 7 | 7 |
| Deviance | 1 | 5.368 | | 5.368 | 5.368 |
| P-Value | 1 | 0.615 | | 0.615 | 0.615 |

This table compares the statistical significance of model variations using ANOVA.

Model 1 represents a baseline model.

Model 2 includes an additional interaction term with firm.

The Chi-Squared Test assesses the significance of adding this interaction term to the model.

Table 80. Chi-squared test for heterogeneity: Pooled strata 1, under-50s open rate

| Statistic | N | Mean | St. Dev. | Min | Max |
|--------------|---|------------|----------|------------|------------|
| Residual Df | 2 | 32,045.000 | 5.657 | 32,041 | 32,049 |
| Residual Dev | 2 | 43,990.070 | 37.440 | 43,963.600 | 44,016.540 |
| Df | 1 | 8.000 | | 8 | 8 |
| Deviance | 1 | 52.948 | | 52.948 | 52.948 |
| P-Value | 1 | 0.000 | | 0 | 0 |

This table compares the statistical significance of model variations using ANOVA.

Model 1 represents a baseline model.

Model 2 includes an additional interaction term with firm.

The Chi-Squared Test assesses the significance of adding this interaction term to the model.

Table 81. Chi-squared test for heterogeneity: Pooled strata 1, over-50s open rate

| Statistic | N | Mean | St. Dev. | Min | Max |
|--------------|---|------------|----------|------------|------------|
| Residual Df | 2 | 28,755.500 | 6.364 | 28,751 | 28,760 |
| Residual Dev | 2 | 39,801.680 | 26.364 | 39,783.040 | 39,820.320 |
| Df | 1 | 9.000 | | 9 | 9 |
| Deviance | 1 | 37.284 | | 37.284 | 37.284 |
| P-Value | 1 | 0.00002 | | 0.00002 | 0.00002 |

This table compares the statistical significance of model variations using ANOVA.

Model 1 represents a baseline model.

Model 2 includes an additional interaction term with firm.

The Chi-Squared Test assesses the significance of adding this interaction term to the model.

Table 82. Chi-squared test for heterogeneity: Pooled strata 2, under-50s open rate

| Statistic | N | Mean | St. Dev. | Min | Max |
|--------------|---|------------|----------|------------|------------|
| Residual Df | 2 | 12,362.500 | 4.950 | 12,359 | 12,366 |
| Residual Dev | 2 | 17,016.040 | 34.027 | 16,991.980 | 17,040.100 |
| Df | 1 | 7.000 | | 7 | 7 |
| Deviance | 1 | 48.121 | | 48.121 | 48.121 |
| P-Value | 1 | 0.00000 | | 0.00000 | 0.00000 |

This table compares the statistical significance of model variations using ANOVA.

Model 1 represents a baseline model.

Model 2 includes an additional interaction term with firm.

The Chi-Squared Test assesses the significance of adding this interaction term to the model.

Table 83. Chi-squared test for heterogeneity: Pooled strata 2, over-50s open rate

| Statistic | N | Mean | St. Dev. | Min | Max |
|--------------|---|------------|----------|------------|------------|
| Residual Df | 2 | 10,535.500 | 4.950 | 10,532 | 10,539 |
| Residual Dev | 2 | 14,576.320 | 19.513 | 14,562.520 | 14,590.110 |
| Df | 1 | 7.000 | | 7 | 7 |
| Deviance | 1 | 27.595 | | 27.595 | 27.595 |
| P-Value | 1 | 0.0003 | | 0.0003 | 0.0003 |

This table compares the statistical significance of model variations using ANOVA.

Model 1 represents a baseline model.

Model 2 includes an additional interaction term with firm.

The Chi-Squared Test assesses the significance of adding this interaction term to the model.

Table 84. Chi-squared test for heterogeneity: Pooled strata 3, under-50s open rate

| Statistic | N | Mean | St. Dev. | Min | Max |
|--------------|---|------------|----------|------------|------------|
| Residual Df | 2 | 17,441.500 | 4.950 | 17,438 | 17,445 |
| Residual Dev | 2 | 24,060.940 | 47.403 | 24,027.420 | 24,094.460 |
| Df | 1 | 7.000 | | 7 | 7 |
| Deviance | 1 | 67.039 | | 67.039 | 67.039 |
| P-Value | 1 | 0.000 | | 0 | 0 |

This table compares the statistical significance of model variations using ANOVA.

Model 1 represents a baseline model.

Model 2 includes an additional interaction term with firm.

The Chi-Squared Test assesses the significance of adding this interaction term to the model.

Table 85. Chi-squared test for heterogeneity: Pooled strata 3, over-50s open rate

| Statistic | N | Mean | St. Dev. | Min | Max |
|--------------|---|------------|----------|------------|------------|
| Residual Df | 2 | 15,357.500 | 4.950 | 15,354 | 15,361 |
| Residual Dev | 2 | 20,960.950 | 23.812 | 20,944.110 | 20,977.790 |
| Df | 1 | 7.000 | | 7 | 7 |
| Deviance | 1 | 33.675 | | 33.675 | 33.675 |
| P-Value | 1 | 0.00002 | | 0.00002 | 0.00002 |

This table compares the statistical significance of model variations using ANOVA.

Model 1 represents a baseline model.

Model 2 includes an additional interaction term with firm.

The Chi-Squared Test assesses the significance of adding this interaction term to the model.

Logging into account sensitivity analysis results

Table 86. Logging into account sensitivity analysis, Firm 1 under-50s

| | Impact of Logging into Account on Click-rate |
|--|--|
| | Click-rate (1) |
| Intercept: Not logged in (within 2 months) | 0.006 (0.012) |
| Logged in (within 2 months) | 0.033** (0.013) |
| Time since login (0-2 months) | NA |
| Time since login (2-4 months) | 0.030 (0.016) |
| Time since login (4-6 months) | 0.003 (0.016) |
| Time since login (6-12 months) | 0.014 (0.013) |
| Time since login (1-2 years) | 0.006 (0.013) |
| Time since login (2-5 years) | 0.002 (0.014) |
| Observations | 6348 |
| R ² | 0.007 |
| Adjusted R ² | 0.006 |
| Residual Std. Error | 0.1623 (df = 6341) |
| F Statistic | 7.307*** (df = 6; 6341) |

Note:

*p<0.05; **p<0.01; ***p<0.001
Model 1 displays the results of just logging into account (within 2 months) binary variable on the click-rate.

Table 87. Logging into account sensitivity analysis, Firm 1 over-50s

| | Impact of Logging into Account on Click-rate |
|--|--|
| | Click-rate (1) |
| Intercept: Not logged in (within 2 months) | 0.008 (0.020) |
| Logged in (within 2 months) | 0.070*** (0.020) |
| Time since login (0-2 months) | NA |
| Time since login (2-4 months) | 0.036 (0.023) |
| Time since login (4-6 months) | 0.021 (0.024) |
| Time since login (6-12 months) | 0.019 (0.021) |
| Time since login (1-2 years) | 0.008 (0.022) |
| Time since login (2-5 years) | 0.005 (0.022) |
| Observations | 6890 |
| R ² | 0.015 |
| Adjusted R ² | 0.014 |
| Residual Std. Error | 0.2236 (df = 6883) |
| F Statistic | 17.38*** (df = 6; 6883) |

Note:

*p<0.05; **p<0.01; ***p<0.001
Model 1 displays the results of just logging into account (within 2 months) binary variable on the click-rate.

Table 88. Logging into account sensitivity analysis, Firm 2 under-50s

| | Impact of Logging into Account on Click-rate |
|--|--|
| | Click-rate (1) |
| Intercept: Not logged in (within 2 months) | 0.012* (0.006) |
| Logged in (within 2 months) | 0.022*** (0.006) |
| Time since login (0-2 months) | NA |
| Time since login (2-4 months) | 0.005 (0.008) |
| Time since login (4-6 months) | 0.009 (0.009) |
| Time since login (6-12 months) | 0.006 (0.007) |
| Time since login (1-2 years) | 0.004 (0.007) |
| Time since login (2-5 years) | -0.005 (0.007) |
| Observations | 11308 |
| R ² | 0.005 |
| Adjusted R ² | 0.004 |
| Residual Std. Error | 0.1537 (df = 11301) |
| F Statistic | 8.683*** (df = 6; 11301) |

Note:

*p<0.05; **p<0.01; ***p<0.001
Model 1 displays the results of just logging into account (within 2 months) binary variable on the click-rate.

Table 89. Logging into account sensitivity analysis, Firm 2 over-50s

| | Impact of Logging into Account on Click-rate |
|--|--|
| | Click-rate (1) |
| Intercept: Not logged in (within 2 months) | 0.016* (0.011) |
| Logged in (within 2 months) | 0.052*** (0.011) |
| Time since login (0-2 months) | NA |
| Time since login (2-4 months) | 0.018 (0.014) |
| Time since login (4-6 months) | 0.016 (0.015) |
| Time since login (6-12 months) | 0.0002 (0.013) |
| Time since login (1-2 years) | 0.013 (0.013) |
| Time since login (2-5 years) | -0.004 (0.014) |
| Observations | 8883 |
| R ² | 0.011 |
| Adjusted R ² | 0.011 |
| Residual Std. Error | 0.2139 (df = 8876) |
| F Statistic | 17.2*** (df = 6; 8876) |

Note:

*p<0.05; **p<0.01; ***p<0.001
Model 1 displays the results of just logging into account (within 2 months) binary variable on the click-rate.

