nest insight

Exploring flexible saving mechanisms designed for self-employed people

Learnings from a randomised controlled trial with the Penfold pension scheme

Department for Work & Pensions

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About this report

This report is part of our larger research programme on supporting self-employed people to save for retirement. Visit **nestinsight.org.uk/research-projects/self-employed-pension-saving**

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Research collaboration

Penfold is an award-winning digital pension designed to help everyone take control of their savings and grow their wealth. Founders Pete Hykin, Stuart Robinson and Chris Eastwood set up Penfold in 2018 to bring the pension industry into the 21st century. Today, Penfold offers a tech-first auto enrolment scheme for UK businesses as well as a powerful, easy-to-use pension for private savers looking to combine all their pots. For more information, visit: **getpenfold.com**

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Introduction

This randomised controlled trial in collaboration with Penfold is part of a programme of research generating evidence from the field on ways to help increase savings among self-employed people.

This trial built on previous Nest Insight research which suggested that signing up to save a regular amount of money into a pension can be difficult for some self-employed people, particularly those with variable and uncertain income.

Without a predictable income, self-employed people may not feel able to commit to a regular savings contribution or, if they do, they may set it at a level that is affordable in leaner months and therefore not save as much as they could in months when they have more excess income. Some may stop saving in a leaner period and, through inertia, never get back to saving.

The other way to save is to make ad hoc pension contributions. However, we know that it can be difficult for people to remember and find time to do this. In addition, not everyone knows that ad hoc pension contributions are possible.

Our previous research found relatively high levels of interest among self-employed people in a range of new, flexible saving mechanisms that could potentially better meet their contexts and needs. These novel mechanisms included saving a set percentage of income, which was of interest to 58% of self-employed people, and automatically sweeping up leftover or excess funds, which appealed to 46% of self-employed people.[1] We explored these ideas in practice in this trial.

This report details the methodology, results and learnings from a live randomised controlled field (RCT) trial of two flexible saving mechanisms for self-employed people conducted in collaboration with the pension provider Penfold. The trial was conducted with a sample of 19,000 active Penfold users and 26,000 individuals who had started to sign up to Penfold but not yet created an account. The sample was randomised between three treatment groups and a control group. We analysed users' behaviour through their response to emails as well as their account data.

We are grateful to Penfold for their collaboration in this research.

[1] Nest Insight, 'Talking with self-employed people about retirement saving' (September 2020), **nestinsight.org.uk/wp-content/uploads/2020/09/Talking-with-self-employed-people-about-retirement-saving.pdf**

Section 1

Objectives

The main aim of this research was to understand how self-employed people would respond to more flexible ways of saving into a pension compared with the established approach of choosing a monthly amount of money to save.

We were keen to understand:

- **the relative appeal of more flexible saving approaches**
- **how these saving mechanisms would be used in practice**
- **whether there were any differences in responses** by different sub-groups of the self-employed population

Additionally, as part of the development work involved in designing and building the saving mechanisms we aimed to learn about the design and implementation considerations involved in turning the theory of flexible saving approaches into practice.

Section 2

The Penfold environment

Penfold is a digital pension provider. It was founded in 2018 and initially offered a bespoke pension scheme for self-employed people in the UK. It has since grown rapidly and expanded its offering with the addition of a workplace pension solution for businesses.

Penfold pensions are accessible to people of all incomes as accounts can be opened with a deposit of just £1. The Penfold app allows customers to open a pension account within minutes using a smartphone. The user experience is designed to be simple and engaging, and tools and resources are provided to help people consider their saving goals in the context of retirement.

The minimum contribution using a Direct Debit mandate from the user's bank is £10 per month. Monthly contributions can easily be paused at any time. Users can also make one-off pension contributions at any point.

Before this trial collaboration, Penfold had already leveraged open banking technology to incorporate payment-initiation services into its product, making payments into a pension account easier, quicker and more secure for their customers.

Key phrases

Open banking

Technology framework for connecting banks, financial technology companies and other providers to customer connect accounts and enable digital transactions between them. See **openbanking.org.uk**

In the UK, the Open Banking Implementation Entity (OBIE) establishes standards and guidelines and the Competition and Markets Authority (CMA) and the Financial Conduct Authority (FCA) oversee development and regulation of the sector.

Application programming interface (API)

Rules and tools that allow data systems and software apps to communicate and share data with each other

Section 3

Intervention design

This research project was a live field pilot trial of two new flexible saving solutions using personalised nudge messages. It sought to understand the levels of interest, uptake and feasibility of the nudges among both active Penfold self-employed users and self-employed people who had started to sign up to Penfold but had not yet created an account.

We drew upon insights from the literature and previous learnings in this research programme on supporting self-employed people to save for retirement in working with Penfold to design nudges with the greatest potential to influence user behaviour.

Two types of nudges were piloted and tested during the trial period:

1. **Autosave** – supporting users to automatically save a percentage of any excess monthly income
2. **Savings insights** – prompting users to save at moments when it might be more affordable for them

Both nudges were informed by data collected on users' financial transactions using open banking APIs. This means that to sign up for the new saving nudges, users had to connect their bank account to the Penfold app.

The autosave and savings insights mechanisms were compared with the existing monthly Direct Debit and one-off contribution saving methods.

Autosave

Employed people tend to contribute to their pensions as a percentage of their income through their employer's payroll, so the amount contributed automatically changes with their pay.

Self-employed people often have variable income but no established route to vary pension contributions based on their income. This can mean that a set monthly contribution to savings does not suit their finances – some months it could be too much and some months too little. Our previous research found there is a relatively high level of interest among self-employed people in a range of different mechanisms to facilitate retirement saving. For example, over half (57%) said they like the idea of automatically diverting a proportion of their income to saving for retirement.[2] We also found in our previous research that variability and uncertainty of income can create barriers to retirement saving for self-employed people. Flexibility and control are therefore important.[3] From these insights the idea of a saving nudge which automatically calculates a person's total income for the month and suggests an amount to be saved was conceived.

As the idea was developed to be tested in the field, it was also ensured that the autosave tool design tested in the trial allowed users to approve, change or dismiss any calculated amount, so that users remained in control of any savings contributions they made in response to a nudge. During the set-up process, users chose the percentage of their excess income they would be nudged to save each month.

It's important to consider the default presented in such situations. Setting an appropriate default can reduce the friction in the user journey and thus could ultimately enable saving. Other field trials have shown that a simplified process with pre-selected contribution rates can increase saving participation.[4] During the design of the set-up process for the autosave mechanisms in the trial, a default value of 50% was set and a slider bar was provided to allow users to alter the percentage (see **Figure 4**).

[2] Nest Insight, 'The impact of Covid-19 on self-employed people's saving outlook' (December 2020), **nestinsight.org.uk/wp-content/uploads/2020/12/The-impact-of-Covid-19-on-self-employed-peoples-saving-outlook.pdf**

[3] Nest Insight, 'Supporting self-employed people to save for retirement' (October 2019), **nestinsight.org.uk/wp-content/uploads/2019/10/supporting-self-employed-people-save-for-retirement.pdf**

[4] John Beshears, James J. Choi, David Laibson and Brigitte Madrian, 'Simplification and saving', *Journal of Economic Behavior and Organization* 95 (November 2013): pages 130–45, **doi.org/10.1016/j.jebo.2012.03.007**

When developing the autosave tool we also considered:

- **How to treat users who already had a monthly Direct Debit pension contribution in place** – We wanted to ensure that the use of an autosave mechanism did not undermine any existing levels of pension saving. The autosave solution was designed to suggest additional savings for those who already had a regular monthly savings contribution set up. In cases where the saving mechanism would have otherwise suggested an amount lower than the user's regular monthly savings contribution, it defaulted to suggesting that the user make the regular monthly contribution.
- **How to achieve the right level of automation of saving while preserving control** – Originally, we conceived that the autosave approach would be fully automatic – once a user had selected what proportion of their excess income to save, it would happen automatically each month in the same way that a monthly Direct Debit contribution occurs automatically. However, in working through the user journey with Penfold it became apparent that this could undermine an important principle of saving for self-employed people – feeling in control. For example, an unusually large amount could be automatically saved into a person's pension based on a large invoice covering several months' work being paid at once, and then those funds would become inaccessible until they reached age 55 to 57. Further, as it's currently only possible to link one bank account to the Penfold app through open banking, the nudge calculation in the deployed autosave tool might not have taken into account the user's full income and expenditure picture. Therefore, an approval step for each autosave suggestion, with an option for the user to edit the amount to be saved, was built into the nudge.

Savings insights

Previous Nest Insight research found that a high proportion of self-employed people express willingness to save for retirement and are open to being helped to do so. Indeed, over half (55%) said they would welcome more guidance on how to best save for retirement.[5] The design of the savings insights nudges in this trial were based on these learnings. In addition, our literature review of evidence in this area concluded: 'It is clear from the qualitative research that messages that are personalised and tailored to individual circumstances are likely to have most traction', citing previous field trials on saving reminders[6] and on interest in emailed newsletters that were personalised to an individual's expressed interests.[7]

Based on this, the users in the trial received nudges tailored to their transaction history linked within the Penfold app, so they only got those versions relevant to their circumstances.

Multiple versions of the nudges were created to account for different scenarios. These included nudges tailored for active customers with a regular Direct Debit pension contribution, nudges for inactive customers and nudges for customer 'leads' – those who had started to set up an account but had not completed the process.

User journeys

The user journeys were kept as consistent as possible across the two flexible saving treatment groups:

Step 1. Notification

Users received a notification about one of the new saving mechanisms – either the autosave tool or the savings insights feature. **Figure 1** shows the autosave email and **Figure 6** shows the savings insights email.

Step 2. Information

Individuals who chose to click a link in the message were shown information cards in the Penfold app which explained the new saving mechanism. If an individual had not already downloaded the app, they were prompted to do so and then shown the information cards. **Figure 2** shows the autosave information cards and **Figure 7** shows the savings insights information cards.

[5] **nestinsight.org.uk/wp-content/uploads/2019/10/supporting-self-employed-people-save-for-retirement.pdf**

[6] Dean S. Karlan, Margaret McConnell, Sendhil Mullainathan and Jonathan Zinman, 'Getting to the top of mind: How reminders increase saving', *Management Science* 62:12 (December 2016), pages 3393–411, **jstor.org/stable/44166531**

[7] O. J. Postma and M. Brokke, 'Personalisation in practice: The proven effects of personalisation' (January 2002), **link.springer.com/article/10.1057/palgrave.jdm.3240069**

Step 3. Connection

Users were given the opportunity to connect a bank account through open banking, allowing their transaction data to be read (**Figure 3**).

Step 4. Set-up

For autosave, users were asked to choose their settings, including the percentage of income that they wished to be calculated for the autosave nudge and the day of the month on which calculations would be made (**Figure 4**).

For savings insights, users were asked to select which of the three savings insights nudges they wished to receive and were given the choice of how often they would be contacted (**Figure 8**).

Step 5. Calculation

For autosave, when the calculation date came each month, users were prompted with an email or a push notification to view their autosave calculation, at which point they had the option to approve, change or dismiss the suggested amount (**Figure 5**).

For savings insights, when an insight was triggered, users were prompted with a push notification to view their insight and make a payment (**Figure 9**).

The decision to make authorisation necessary for each payment was taken to enable users to have the highest level of control over their payments. Penfold did explore the option to turn off this authorisation step, which would have removed frictions in the payment process. However, this was not possible in the trial due to the Financial Conduct Authority (FCA) rules around variable recurring payments (VRPs) at the time. VRP is an open banking feature that enables a bank account holder to connect an authorised payments provider to their account so the provider can make payments on the account holder's behalf. Previously customers were required to re-authenticate the sharing of their account data with outside vendors every 90 days. Starting on 26 March 2022, this requirement was lifted by the FCA.[8] This change could reduce the frictions involved in making payments to saving through an autosave mechanism, so that the process becomes truly automated.

In the piloted design, users still had to respond to the nudge and confirm the savings amount and their bank account in order to make a payment (see **Figure 5**). As such it was effectively a semi-automatic saving mechanism.

[8] For further explanation of the changes to the 90-day rule see, for example, TrueLayer, 'Explaining changes to the 90 day rule for open banking access' (14 February 2022), **truelayer.com/blog/explaining-changes-to-the-90-day-rule-for-open-banking-access**

Penfold autosave user journey

Figure 1. Email message sent to introduce and explain the autosave tool

Rosanne, tired of working out how much you can afford to save each month?

No month's income and outgoings are quite the same, meaning working out how much to save each month is a huge headache.

Meet **Auto-save** - our latest tool to make saving faff-free.

Auto-save calculates your income each month and automatically saves for you.

Select a percentage of your monthly excess income that you'd like to save, and by measuring your income and outgoings we'll calculate the amount for you.

Automatic. Flexible. Smart. Try it today!

Explore Auto-save

And don't worry, we'll always confirm with you first before taking anything from your account 👌

Note: All screenshots courtesy of Penfold. © 2022 Penfold Savings Ltd

Figure 2. Autosave explanation

The user was brought to these information screens when they clicked on the link in the autosave treatment email.

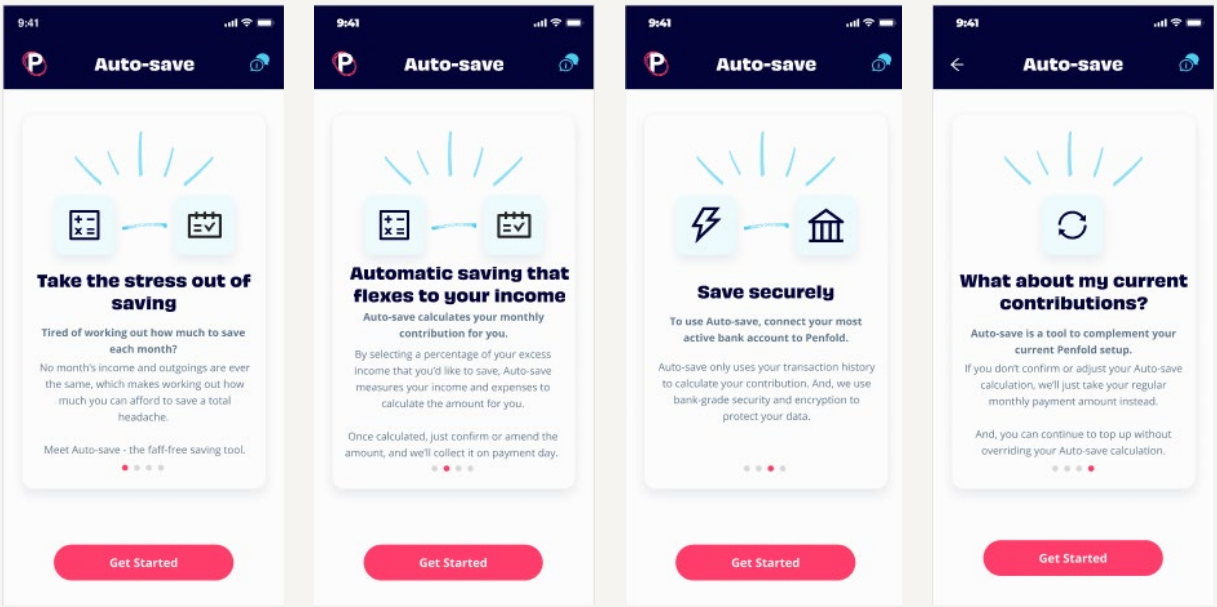


Figure 3. Autosave account connection

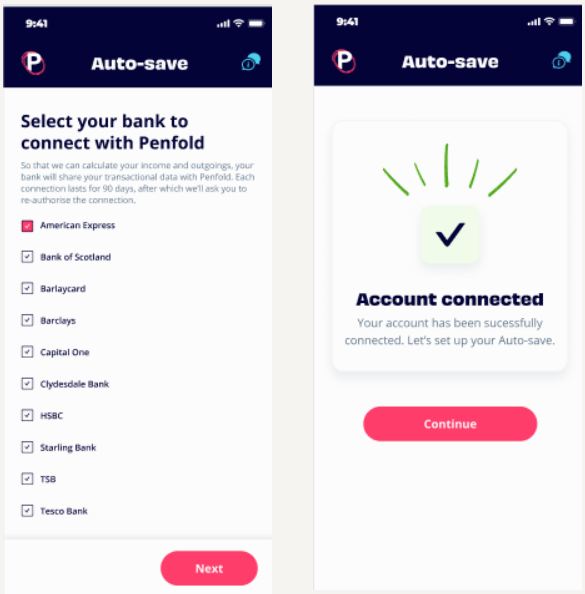


Figure 4. Autosave set-up

These screens allowed the user to select autosave settings during autosave set-up.

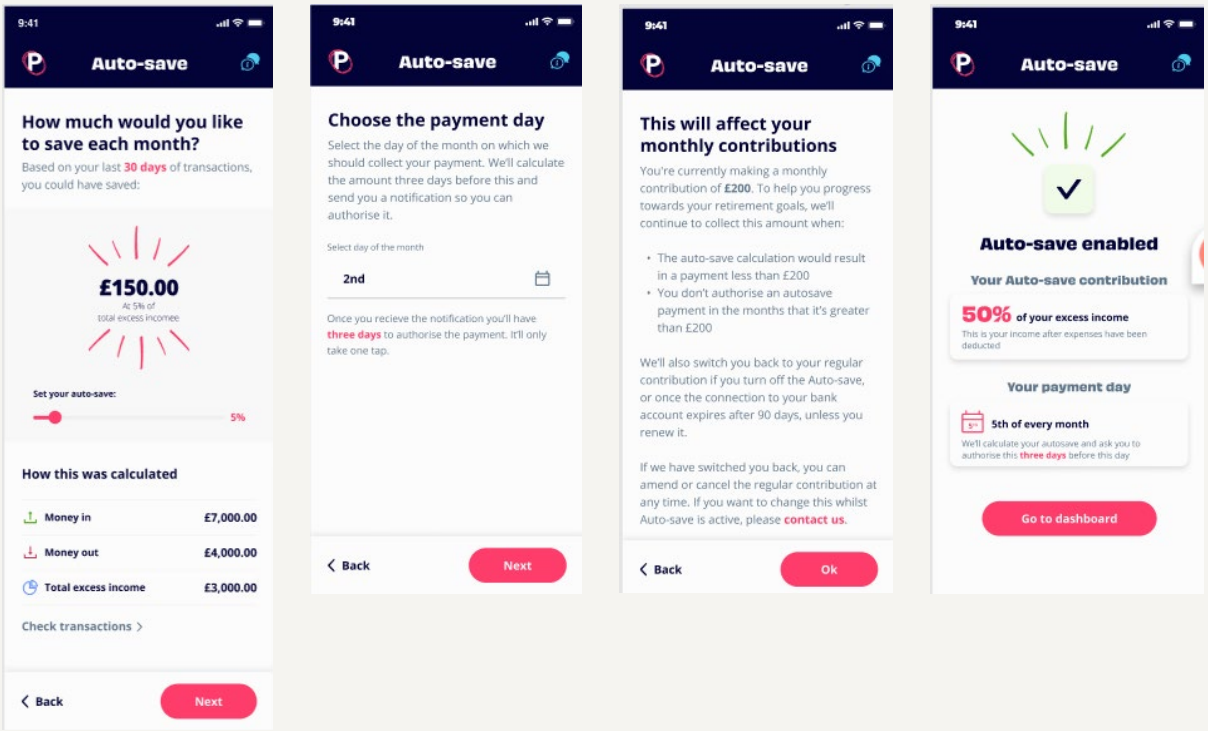
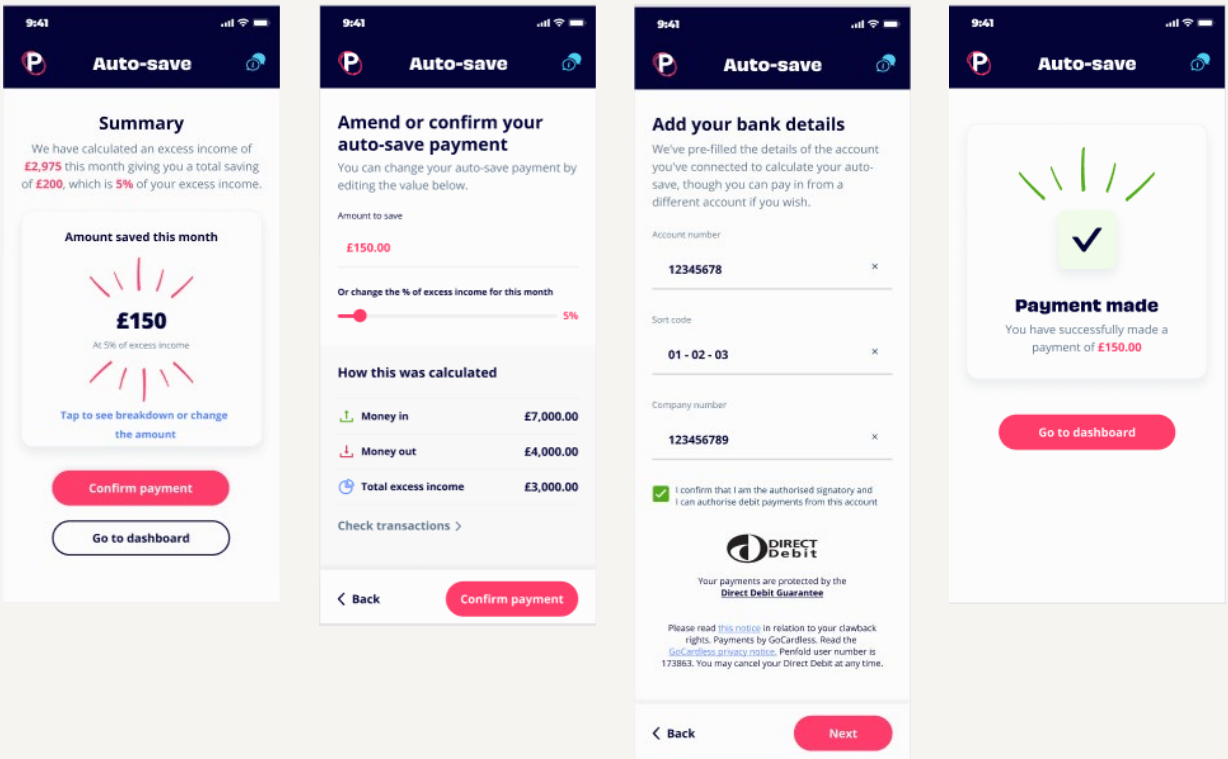


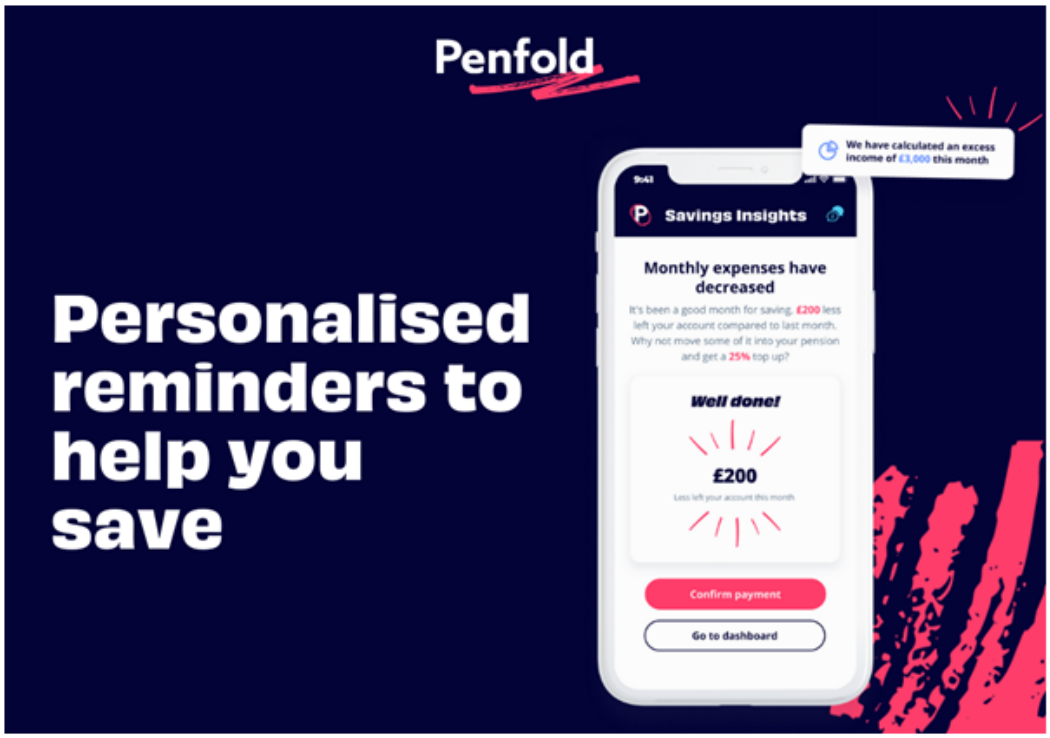
Figure 5. Autosave calculation and authorisation screens

These screens were shown when the user clicked the notification informing them that they have an autosave calculation. They were then given the choice to approve, change or dismiss the autosave amount.



Penfold savings insights user journey

Figure 6. Email message sent to introduce and explain the savings insights feature



Saving can often fall to the bottom of our priority list each month.

And, when no month's income and outgoings are quite the same, it's difficult to keep track of when and what to save.

Our latest tool, **Savings Insights,** can help.

Savings Insights helps you contribute when the time is right - like when you have a good month or spend less than usual.

The tool connects with your bank, tracks your monthly income and outgoings and sends personalised notifications when you can *actually* afford to top-up.

Check out smart Savings Insights today - the laid-back way of saving.

Get Savings Insights

Figure 7. Savings insights explanation

The user was brought to these information screens when they clicked on the link in the savings insights treatment email.

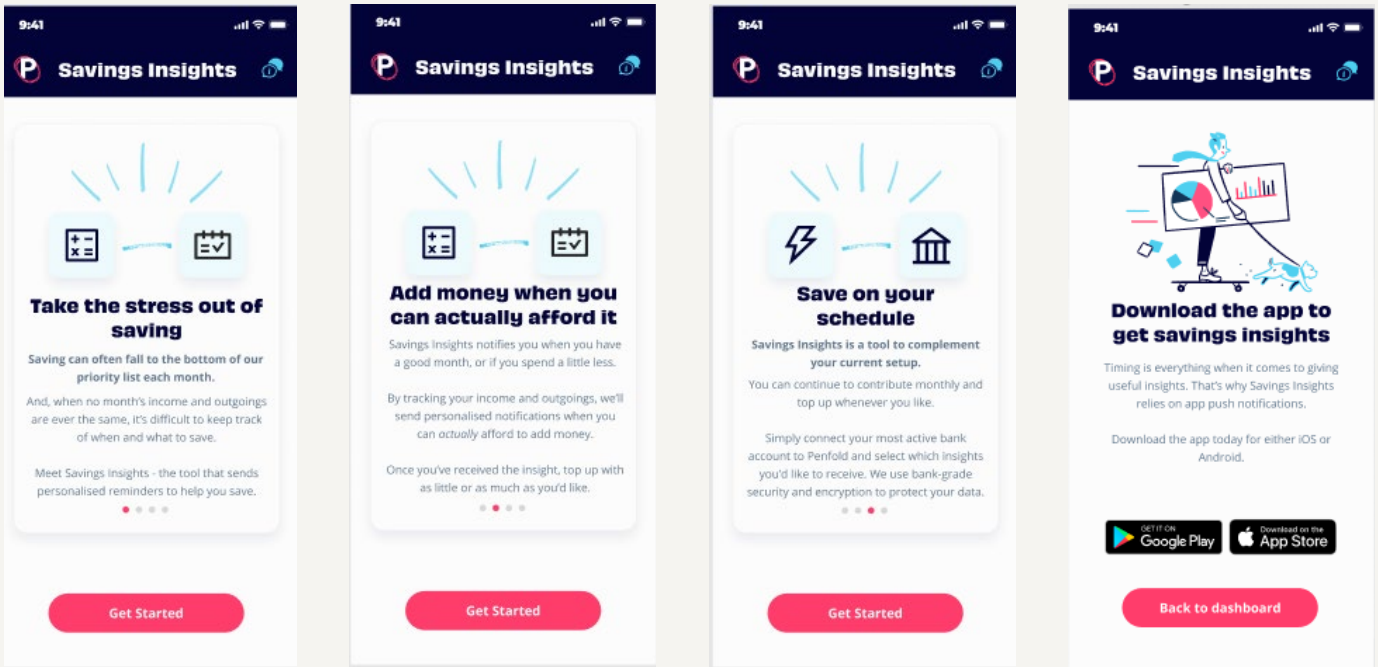


Figure 8. Savings insights set-up

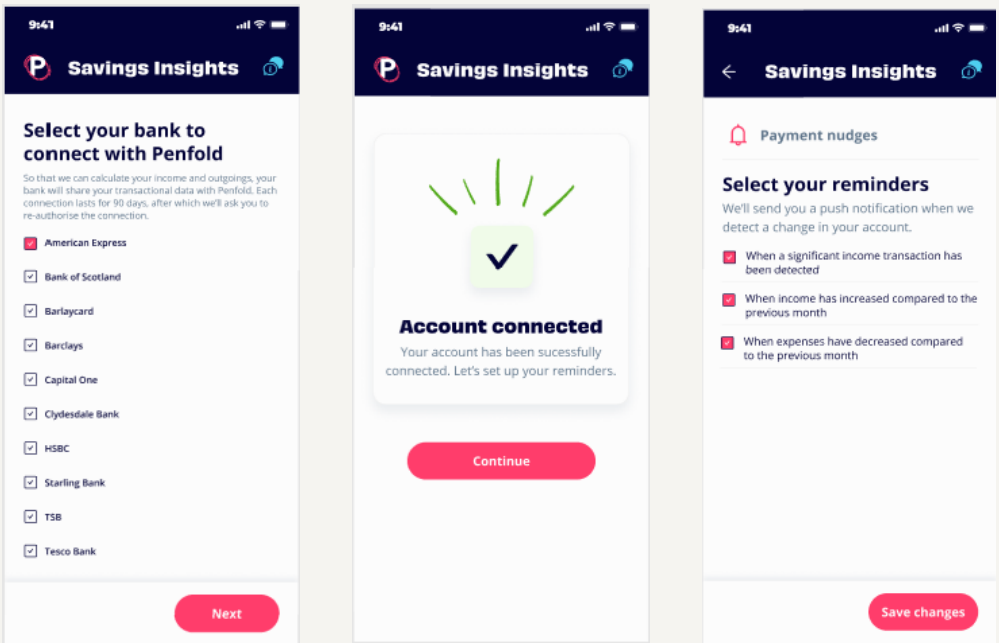
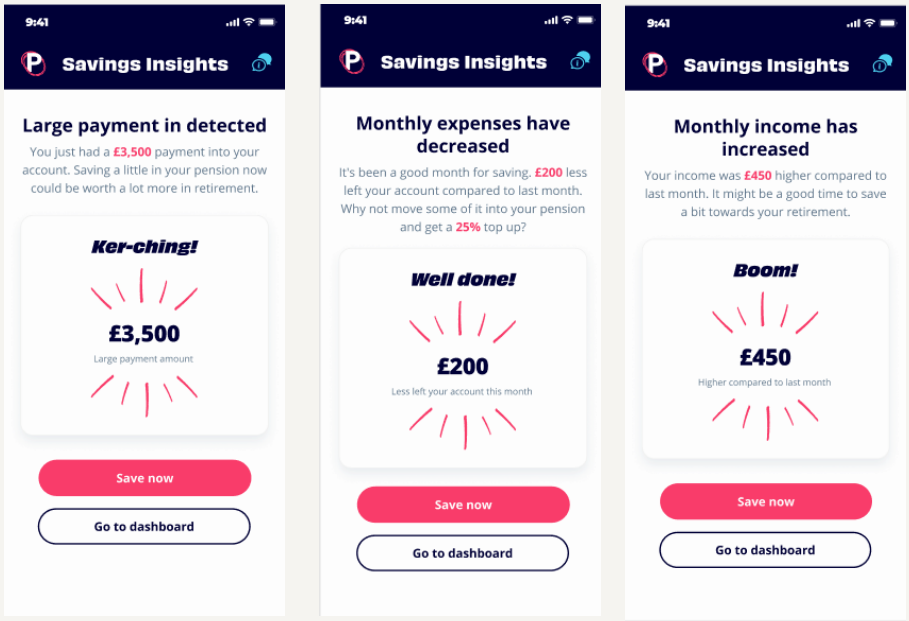


Figure 9. Savings insights screens

These screens were displayed to notify the user that a savings insights reminder had been triggered.



Section 4

Research approach

The trial was run as a randomised controlled trial to test the two new flexible savings mechanisms among Penfold customers and customer leads for six months starting in December 2021 and ending in May 2022.

Experimental design

Penfold customers are already able to set up regular pension contributions or make one-off contributions.

We recognised that looking at the new saving mechanism treatments against a control group would not be a clean comparison, as there would be two factors varying between them: introducing a saving mechanism option and receiving an additional message from Penfold.

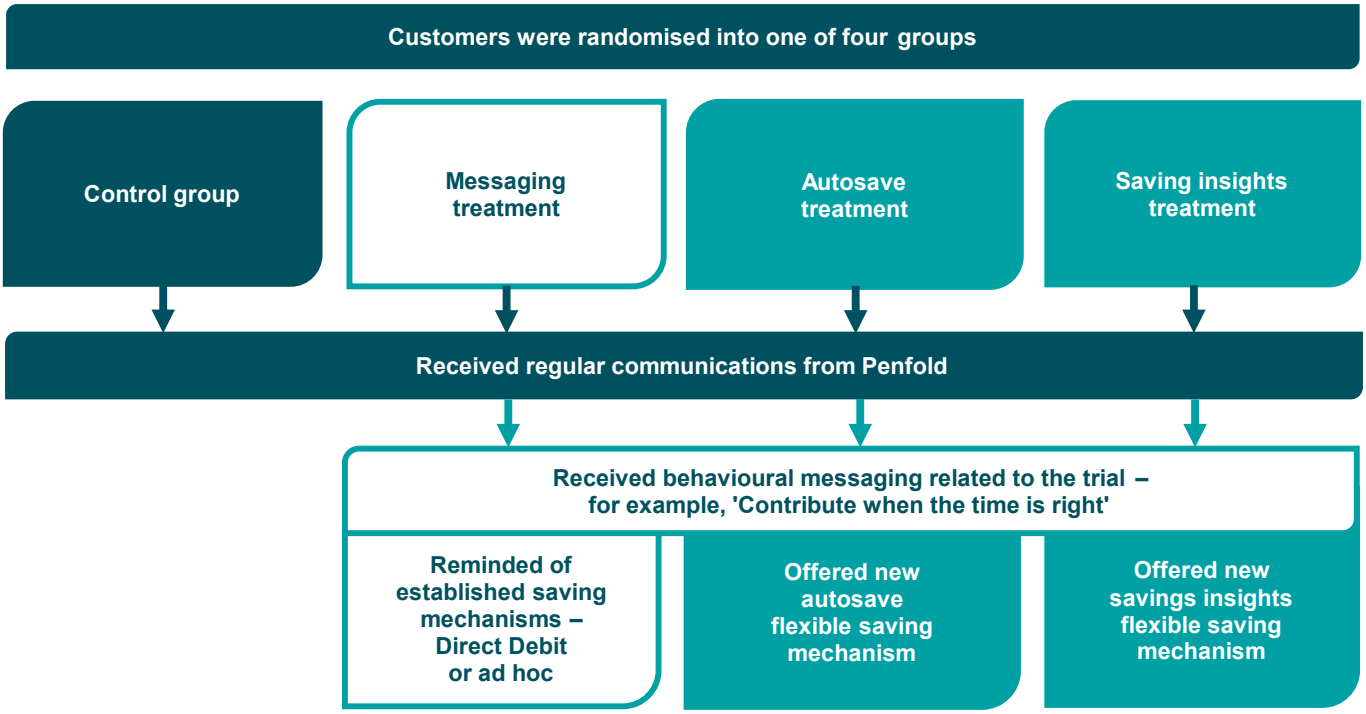
In order to distinguish between the effect of the messaging and the effect of the mechanisms, users were randomised between four groups: two mechanism treatments and two mechanism controls. One of the mechanism controls received no additional communications, serving as a pure control group, while the other control group, referred to as the 'messaging treatment', received communications about established saving mechanisms. This allowed us to isolate the effect of messaging alone. This was necessary because we were primarily interested in the saving mechanisms and would not be able to disaggregate the effect of these from just the reminder effect of a message. We assumed an additive effect from messaging and the saving mechanism.

The groups were as follows:

- **Control group** – received no trial-related messages, only the normal schedule of Penfold communications
- **Messaging treatment** – received the normal schedule of Penfold communications and a series of emails reminding them about the existing saving mechanisms – monthly Direct Debit and ad hoc contributions. The message encouraged them to use the Penfold pensions calculator to determine their ideal monthly contribution.
- **Autosave treatment** – received the normal schedule of Penfold communications and were made aware of a new flexible saving mechanism which would suggest an amount to save each month based on a percentage of their monthly excess income
- **Savings insights treatment** – received the normal schedule of Penfold communications and were made aware of a new flexible saving mechanism which would alert them to a significant change in income or spending compared to usual

This trial design is illustrated in **Figure 10**.

Figure 10. Trial design



The messaging, autosave and savings insight treatment groups each received behavioural messaging notifications during the trial such as 'Contribute when the time is right', as set out in **Table 1**.

Table 1. Variation in communications by treatment group

	Control group	Messaging treatment	Autosave treatment	Savings insights treatment
Percentage of sample population	25%	25%	25%	25%
Communications				
Users with monthly payment	No trial communications	Did you know you can contribute into your pension through top-ups as well as your monthly payment?	Did you know you can set up your monthly payment so that it flexes to your monthly income?	Did you know we can provide insights to help you save into your pension?
Users with no monthly payment	No trial communications	Did you know you can contribute into your pension through a monthly payment as well as top-ups?	Did you know you can set up a monthly payment so that it flexes to your monthly income?	Did you know we can provide insights to help you save into your pension?

Note: Email newsletter headings for each group differed by whether they already had a monthly payment set up.

Users in the treatment groups were also able to sign up to the saving mechanisms directly in the Penfold app.

The new saving mechanisms were made available on the app to all users out of consideration. If a user was allocated to a treatment group that wasn't being messaged about one of the two new mechanisms and wanted to use it, they were able to request to set it up. However, no users outside of the new saving mechanisms treatment groups signed up to either mechanism during the trial.

The established saving mechanisms of regular Direct Debit payments and one-off payments are regularly advertised as part of Penfold's communications strategy. They are also featured as part of the sign-up process to activate a new user's account. In addition, there is information about how to use these mechanisms on the frequently asked questions (FAQ) section of Penfold's website.[9] Therefore, the whole trial sample were likely to have been aware of these existing ways of saving. In contrast, communications about the new flexible saving mechanisms were limited during the trial period to allow the randomised controlled trial (RCT) design to be implemented. Outside of this research trial setting, Penfold would usually have promoted new offerings like this via multiple channels and to all users.

Analysis strategy

We were interested in the effect of the new saving mechanisms on both engagement and saving behaviours. The nature of the intervention provided several outcome measures of interest. We measured email open and click rates, decisions about setting up the saving mechanisms and ongoing pension contribution decisions over the duration of the trial.

We considered these outcome measures in light of two research questions:

- **What is the effect of messaging about a saving mechanism compared to the control group?**
  Measures included:
  - contribution level
  - contribution frequency

- **What is the effect of offering a new flexible saving mechanism compared to established saving approaches?**
  Measures included:
  - click rate from emails
  - uptake rate of the new saving mechanisms
  - contribution level and authorisation
  - account set-up completion
  - Direct Debit set-up

We anticipated that offering the autosave mechanism could lead to:

- lapsed savers saving again
- contribution amounts that suited the income level of the individual – these could be higher or lower than the person's regular pension contributions

Statistical analysis

The treatment effect size on binary variables was estimated using a probit regression, which is a type of statistical model used to generate estimates of the size and significance of predicted probability effects on outcome variables. The treatment effect size on continuous variables was estimated using ordinary least squares (OLS), which is a statistical model commonly used with continuous variables to estimate the size and significance of unit change effects.

[9] Information about the autosave mechanism has been added to the Penfold FAQs.

Section 5

Sample

Penfold's large population of customers and customer leads provided an opportunity to test the appeal of flexible saving solutions among self-employed people. Although the population was, to varying degrees, already engaged in retirement saving, a significant proportion had not yet actually started saving. Further, only about one quarter were saving regularly.

Sample size

For this randomised controlled trial (RCT) we used a sample of 43,000 self-employed Penfold users. This sample size was chosen as it would allow us to determine if there was a statistically significant effect at the expected minimum detectable effect size.

There were roughly 11,000 users in each arm, of which approximately 3,500 were active users and 7,500 were inactive.

Penfold's self-employed users

Our earlier research found there is a latent opportunity to help self-employed people reactivate old pensions. In surveys about one third (34%) reported they have a private or workplace pension but are not currently contributing to it currently.[10]

Penfold has an active customer base as well as customer leads – people who have only partially completed the sign-up process, which is common with apps. We considered these customer leads to be a highly relevant sample for this trial as they were not currently saving into their Penfold pension but might be encouraged to do so. In some respects they're similar to the 34% of self-employed people who have a pension but are not contributing to it because they have already passed one friction point in the saving journey – choosing a pension provider and setting up with it.

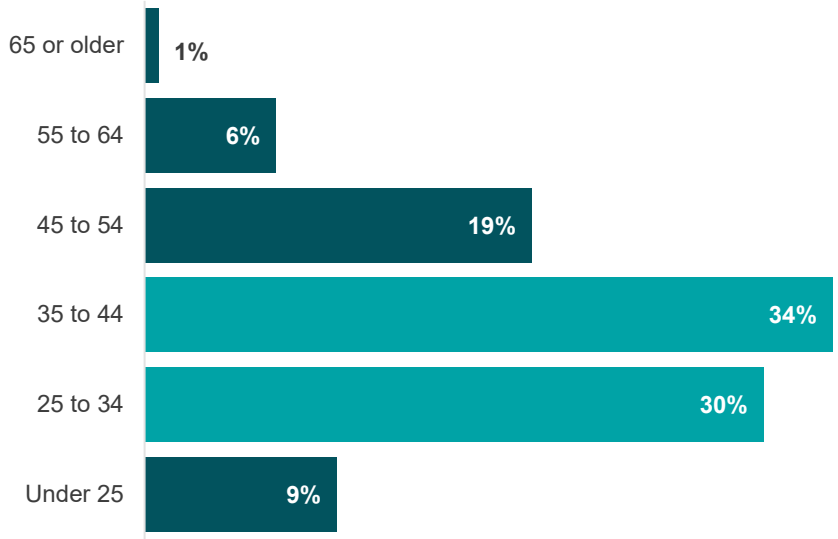
Of course, the Penfold sample is not representative of the self-employed population in the UK as a whole as it leans towards people who have either already set up a pension or have engaged with the set-up process. However, it does include many people who have never saved into their Penfold pension and for this reason provided an opportunity to better understand how this segment of self-employed people might be supported to get started with saving.

The sample included users who already had a regular monthly contribution set up with Penfold. These people were randomised between groups. The messages they received were tailored to relate to the additional contribution amount they might be able to afford.

At the time of the trial Penfold users were predominantly people aged under 40 (see **Figure 11**). They are likely more confident in adopting and using new technology than the wider self-employed population.

[10] **nestinsight.org.uk/wp-content/uploads/2019/10/supporting-self-employed-people-save-for-retirement.pdf**

Figure 11. Age of users at the start of the trial



Randomisation

A simple individual level randomisation was run using a computer program to generate the random allocation to the treatment sequence at a ratio of 1:1:1:1. All users, active and inactive, were allocated to a group.

This took place just before the trial was launched. As new users created accounts, they were also randomly allocated following a computer-generated sequence.

A balancing check using demographic and account data was performed to check on allocations of subjects from across the range of potential sub-groups to the control and treatments and ensure the randomisation process had been run successfully (**Table 2**).

Table 2. Randomisation balance check

	Control group	Messaging treatment	Autosave treatment	Saving insights treatment
Current contributions				
Active Direct Debit	26.3%	25.7%	26.0%	27.0%
No active Direct Debit	73.7%	74.3%	74.0%	73.0%
Employment identification				
Director	343	334	375	343
Self-employed	10,521	10,601	10,466	10,454
Age (median)	38	38	38	38
Gender				
Women	33.9%	35.5%	34.9%	35.6%
Men	59.7%	57.5%	58.4%	58.0%
Undisclosed gender	6.4%	6.9%	6.7%	6.4%

Note: There were no statistically significant differences on any of these variables, indicating randomisation was successful.

User types

We looked at different types of users depending on their account usage, analysing six sub-groups:

1. **Inactive users** – These users had started the sign-up journey but had not completed it. They were 62% of the sample.
2. **Active users** – These users had completed their account set-up by making an initial pension contribution. This initial contribution cold be as little as £1. They were 38% of the sample.
3. **Direct Debit** – These users had an active monthly Direct Debit mandate. They were 26% of the sample.
4. **No Direct Debit** – These users were active but had no current monthly Direct Debit mandate, although they may have had one in the past. They were 30% of the active users sample and 12% of the whole sample.
5. **Lapsed Direct Debit** – These users had previously had a monthly Direct Debit mandate but had paused or stopped their contributions. They were 9% of the active users sample and 3.5% of the whole sample.
6. **Never had Direct Debit** – These users have never had a monthly Direct Debit in place. They were 24% of the active users sample and 8% of the whole sample.

Users could be in more than one sub-group.

Section 6

Findings

Our analysis found that users who were more engaged in pension saving – those who had active accounts and particularly those making a regular Direct Debit contribution – were more likely to sign up to a flexible saving solution. It was more difficult to engage those not already saving.

Open rates

Three stages of communications were sent:

- **Launch communications** – explaining either the established ways of saving (messaging treatment) or the new flexible saving mechanisms (autosave and savings insights treatments)
- **Follow-up 1**
- **Follow-up 2**

Open rates ranged from 35% to 54% when comparing treatment groups and message types (**Figure 12**).

Figure 12. Open rates by communication stage and treatment group

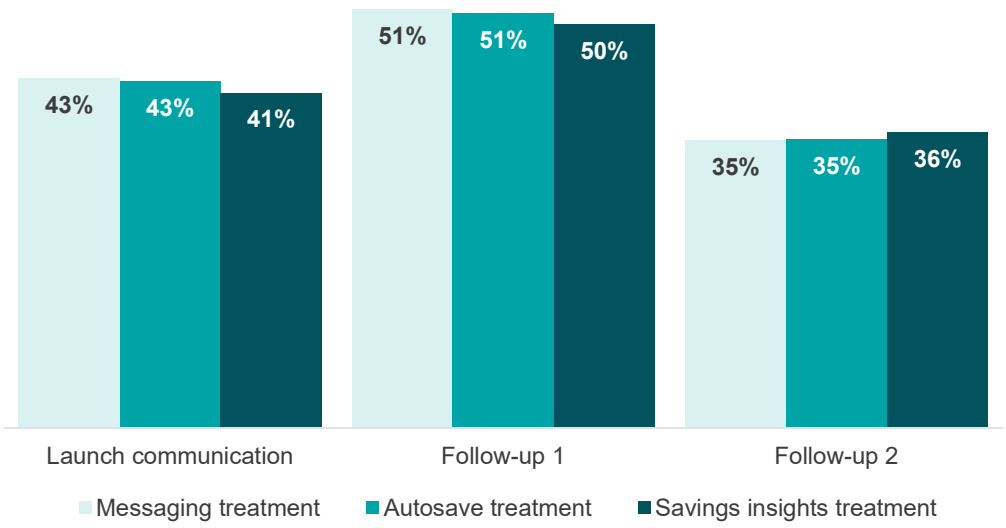


Figure 13. Aggregated open rates across all three communication stages by treatment group

Aggregated open rates were higher for the first follow-up email but there were no real differences in open rates between the treatments (**Figure 13**). These open rates are broadly in line with other Penfold communications.

There were some differences by user type:

- **Active versus inactive** – Active Penfold users were more likely to open a treatment email but there were no clear differences between the treatment groups among either active or inactive users (see **Figure 14**).
- **Direct Debit versus no Direct Debit** – In the group of users who had activated their Penfold account, those with a monthly Direct Debit mandate set up to make pension contributions were more likely to open a treatment email than those without a Direct Debit in place (**Figure 15**). Based on open rates there appeared to be slightly less interest in the savings insights feature than in both the autosave tool and the established saving mechanisms among those who had a Direct Debit set up.
- **Lapsed Direct Debit** – Users who had activated their account and previously but no longer had a Direct Debit mandate set up were more likely to open the treatment messages than those who had never had a Direct Debit. There was no difference between the treatments (**Figure 15**).

Figure 14. Open rates for active versus inactive users

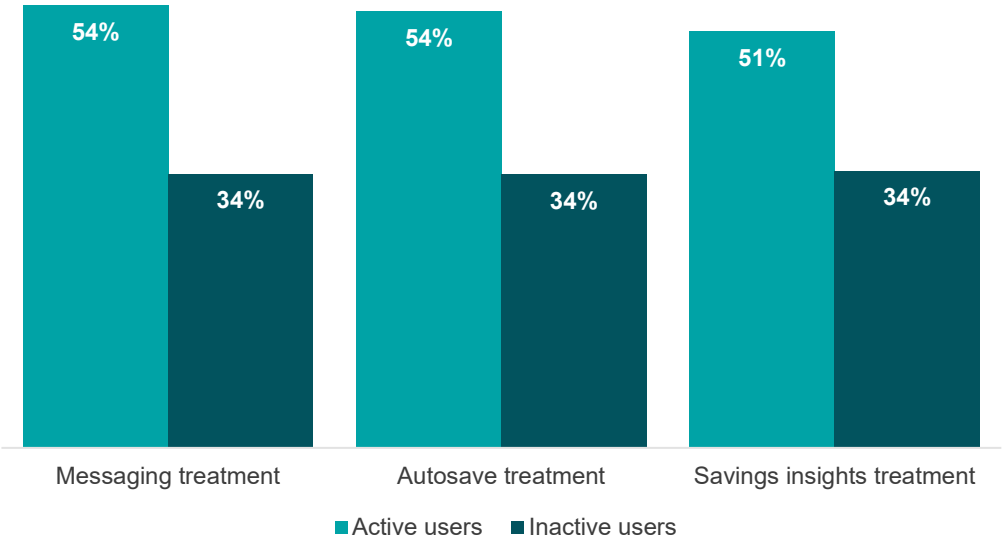
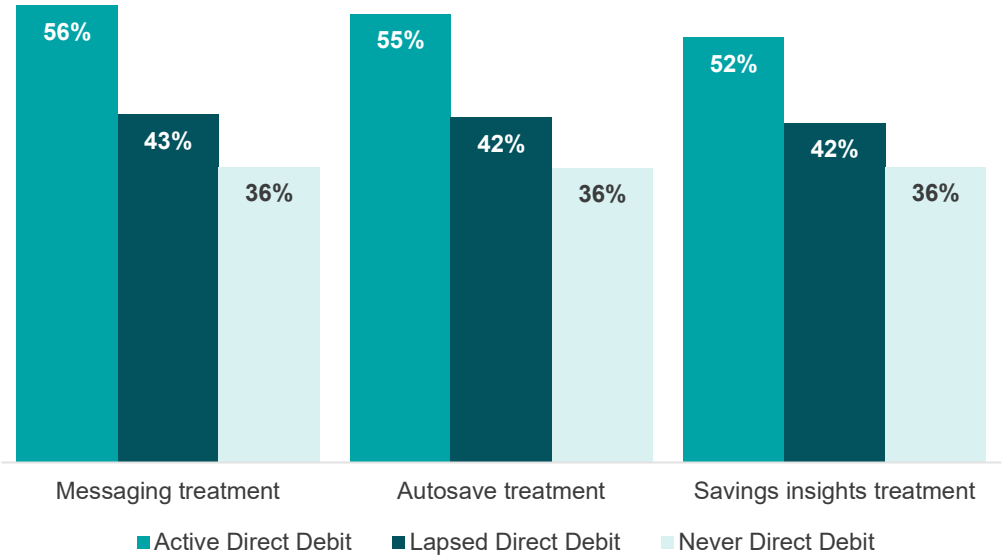


Figure 15. Open rates for users by Direct Debit status

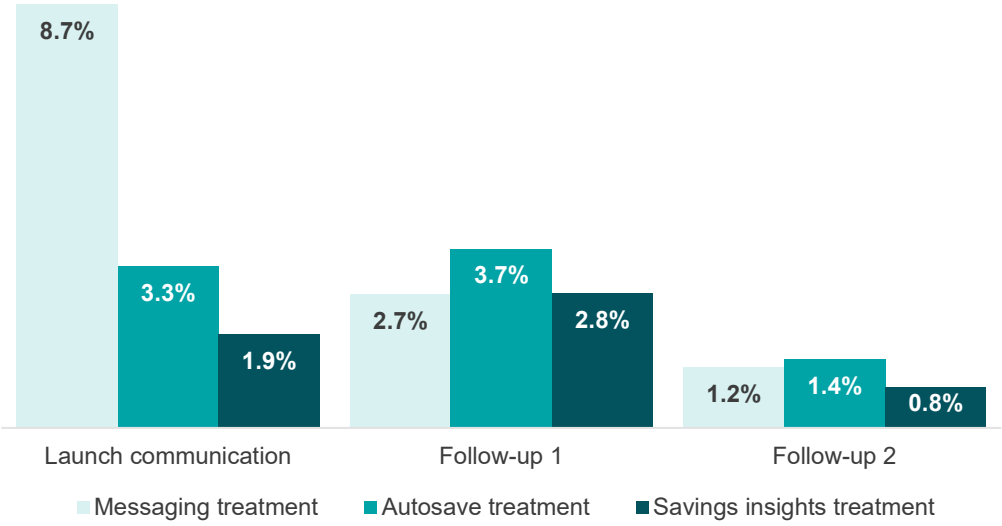


Click rates

Users were more likely to click on a link to a saving mechanism after opening a message if the message was a launch communication rather than a follow-up communication.

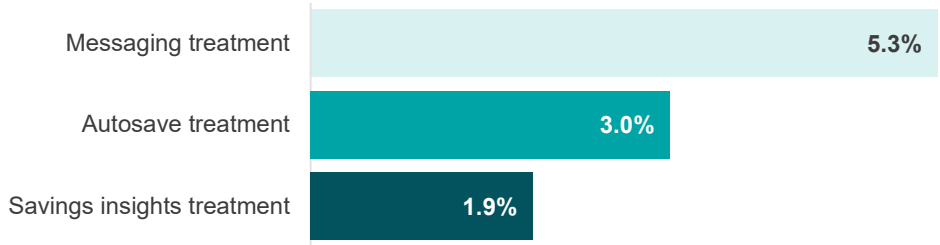
Click rates were between 1.8% and 8.7% for the launch communications (**Figure 16**).

Figure 16. Click rates by communication stage and treatment group



Note: Click rates are a proportion of open rates.

Figure 17. Aggregated click rates across all three communication stages by treatment group



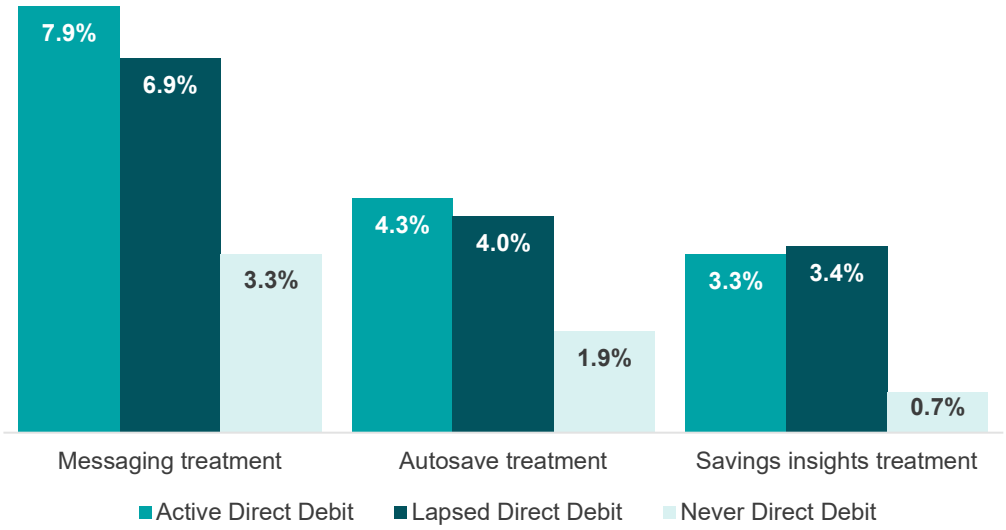
Note: Click rates are a proportion of open rates.

Aggregated click rates after opening were highest for the messaging treatment, followed by autosave and then the savings insights treatments (**Figure 17**). Click rates for all three treatments were statistically significantly lower than for regular messages.

There were also some differences by user type:

- **Active versus inactive** – Active users were much more likely to click a link in the email once opened, with the same pattern of click rates between the treatment groups seen in the aggregated results.
- **Direct Debit versus no Direct Debit** – Users with an active Direct Debit mandate set up to make pension contributions were more likely to click on the link to the savings insights feature than those who didn't have an active Direct Debit in place (**Figure 18**). However, the overall pattern of click rates was the same when the results were aggregated.
- **Lapsed Direct Debit** – Users with a lapsed Direct Debit mandate were as likely to click on the link to the autosave tool and the savings insights feature as those who had an active Direct Debit in place.

Figure 18. Click rates for users by Direct Debit status



Note: Click rates are a proportion of open rates.

Autosave saving behaviours

Percentage of excess income to be saved set by users

Users of the autosave tool chose the percentage of their excess income that they wanted to be nudged to save. There was a default of 50% in place on the set-up screen.

The default had a strong effect. **Figure 19** shows a strong mode at 50% of excess income, with nearly one in three (29%) of autosave users choosing to set this as their savings percentage. Otherwise, there is a skew to setting percentages lower than the default as can be seen in **Figure 20**, in which the percentages set by users are grouped into 10% intervals.

Figure 19. Percentage of excess income to be saved set by autosave users, in 1% intervals

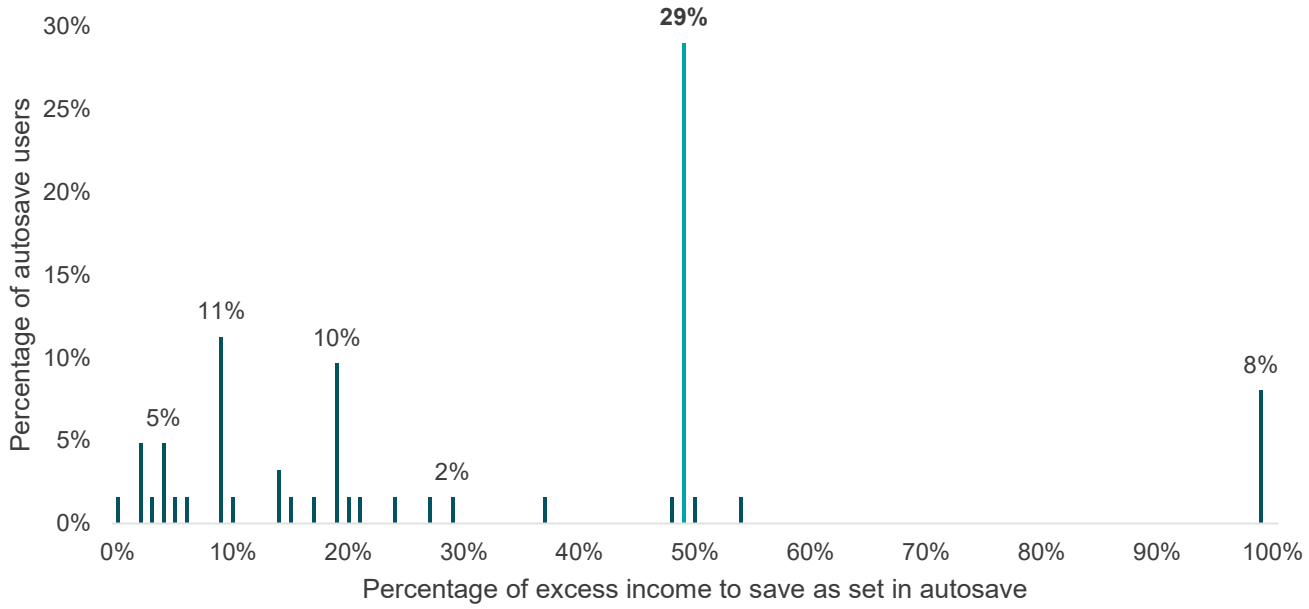
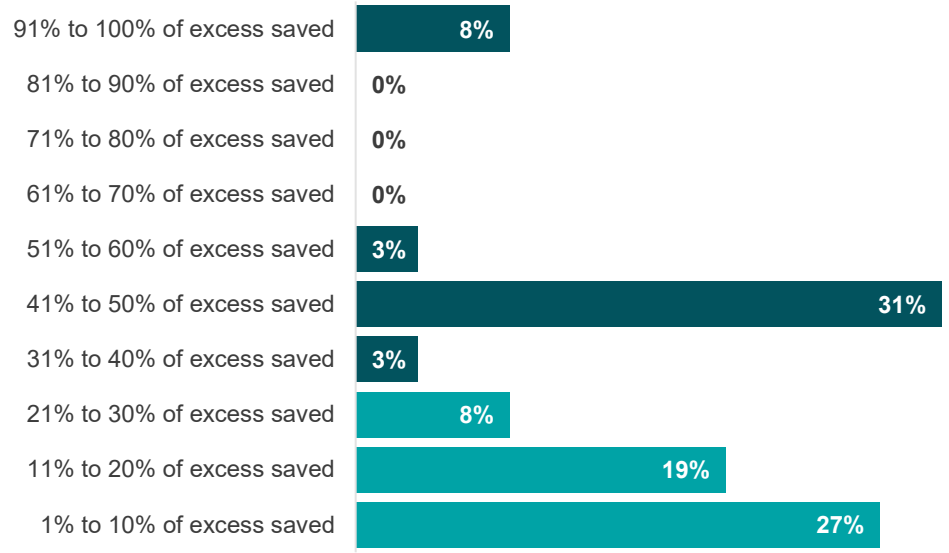


Figure 20. Percentage of autosave users setting different levels of excess income, in 10% intervals



Percentage of excess income actually saved by users

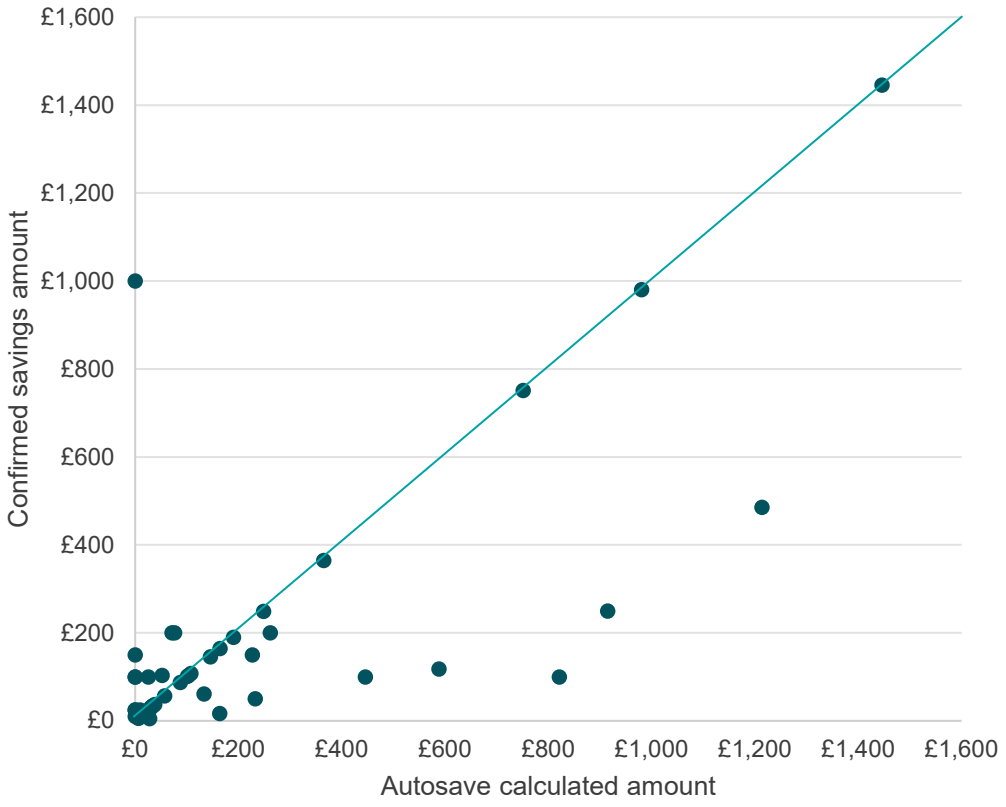
Figure 21 shows the autosave calculation amount that autosave users saw. This calculation took the difference in income and expenditure as observed through the user's linked account transactions and calculated a suggested amount to save based on the percentage the user said they'd like to save when they set up the autosave tool. This suggested amount was presented to the user, who could then approve the amount and move the money to savings, change the amount and move that amount to savings or dismiss the saving suggestion. We plotted the amount suggested by the autosave tool against the amount that users actually confirmed to save upon seeing the calculation.

Each plotted point in Figure 21 represents one transaction. Points on the diagonal show when users in the trial confirmed the autosave calculation. Points below the diagonal show when they reduced the amount from the autosave calculation before saving. whereas points above the diagonal show when they increased it.

Notably, there were some transactions for which the autosave calculation was £0 but the user went ahead and made a contribution to their pension.

These findings indicate that people were using the autosave calculation as a guide but often changed the amount to suit their context and needs, in some cases choosing to save even when the autosave tool would suggest they didn't have excess income.

Figure 21. Autosave calculation amounts versus confirmed amounts



Actual saving

There were 106 autosave calculation events for 54 users during the trial.

Of these, 23% were approved by the user, either at the suggested amount or after editing, and the user went on to make a pension contribution.

About 33% of the time the calculations were either dismissed or not approved, while 40% of the time the user didn't interact with the suggestion at all.

About 75% of users who signed up for the autosave tool had an active Direct Debit mandate in place already.

We analysed the behaviour of a small sample of these users, looking at 29 payments completed by those who had an active Direct Debit and comparing the amounts they saved using the autosave tool to the amount of their regular Direct Debit. Our indicative analysis of this sample found that:

- around half (48%) of confirmed amounts were higher than their average monthly contribution
- 17% saved the same amount as their average monthly contribution
- around one third (31%) saved less than their average monthly contribution

Not all confirmed payments were completed based on a review of transaction data. This could be due to further approval needed by some banks to release funds.

Savings insights saving behaviours

There were 274 savings insights calculation events for 52 users during the trial:

- nearly two thirds (61%) were triggered by a large one-off payment in
- one quarter (25%) were triggered by a total monthly income increase
- 14% were triggered by a total monthly expenses decrease

This could mean that expenses for this group of self-employed people were less variable than their income.

There were no payments matched with these savings insights events, suggesting that this mechanism was not effective in inducing additional pension contributions.

Notably, 94% of those who signed up for savings insights already had an active Direct Debit mandate.

Other outcome variables

Although there were relatively high levels of interest in the two flexible saving mechanisms, there were relatively low levels of actual sign-up.

In this section we look at other outcome variables to see if the messaging about saving mechanisms may have prompted other associated behaviours beyond signing up to save in these new ways. Here we look at whether the messaging about existing, traditional ways of saving or those about new ways of saving influenced the outcome variables in comparison to the pure control group, which did not receive behaviour messaging related to the trial (see **Figure 10**).

One-off contributions

None of the treatment communications had an impact on one-off pension contributions. We saw:

- no effect among active users
- no effect among those who had not made a payment since June 2021
- no effect among those who had ever had a Direct Debit in place
- no effect among those who had ever made a one-off payment

Direct Debit set-up

We also looked at whether the treatment communications increased rates of setting up a Direct Debit mandate across any of the identified sub-groups. There was no impact. This result was maintained when we looked only at the sub-groups who opened or clicked the treatment messages.

Account activation

Finally, we looked at whether the treatment communications had any impact on account activation among the sample of customer leads – the inactive users who had started to sign up to Penfold but had not yet finished creating a pension account. There was no overall effect on account activation rates.

Section 7

Conclusions

The new, more flexible saving solutions tested in this trial show potential to help support some self-employed people to save in ways that may be more suited to their needs and contexts.

Interest levels in the new autosave and savings insights mechanisms were relatively high. Users were as likely to open communications about these novel ways of saving as they were to open communications about established ways of saving, such as setting a regular monthly amount of money to save by Direct Debit or making an ad hoc payment. This was despite the fact that awareness of existing approaches would have been significantly higher, supported by a wider campaign of communications both before and during the trial period.

Outside of a research trial setting, a new feature would usually have been launched with communications such as an information article in the FAQs section of the provider's website or information at the point of account sign-up. Such communications would help to prime users to open and respond to emails like the treatment messages in this trial.

There was greater variation in click rates between the treatment groups. Click rates for the new saving approaches were lower than for the established saving approaches. Again, it's important to bear in mind that these two new mechanisms were piloted over a short period and did not benefit from the familiarity that wider communications provide to established ways of saving. Familiarity would have reduced the deliberative friction required for users to take the next step to action.

Click rate differences were primarily driven by user responses to the launch email. The two follow-up emails did not show the same difference in click rates between the messaging treatment and the two mechanism treatments. This suggests that as familiarity with the new ways of saving increased, differences in user response to the messages were reduced.

Users who were already more engaged in pension saving – those who had an active account with Penfold and particularly those who had a regular Direct Debit mandate in place – were more likely to respond to the treatment messages and to sign up to a new way of saving. It was more difficult to engage with users who were not already saving to their Penfold pension.

There are some indications that an autosave approach has wider appeal than a savings insights approach and is more likely to lead to actual saving behaviour.

Offering a default percentage of income to save within the autosave approach was powerful. About 30% of autosavers stuck with the default setting. It's possible that simply having fields automatically populated with suggested amounts reduces some of the decision-making friction around setting up and making pension contributions, and could be a simple way to help self-employed people to get started with saving.

The autosave feature did lead to those who had a Direct Debit mandate in place to save more than their regular amount in almost half of cases. Although sample sizes of this occurrence were small, it does lend weight to the hypothesis that self-employed people may 'play it safe' when setting regular savings amounts, even where they could save more in some months because of excess income. If self-employed people had a more frictionless, regular way of knowing when they have actual excess income, this could help some to save more.

Impact on actual saving behaviour was minimal during the trial period. Over time, and as open banking evolves, it is possible that the interest in the flexible savings mechanisms will translate into higher savings levels. However, to reach a broader audience, these sorts of saving approaches may need to be embedded in the day-to-day touchpoints where self-employed people are managing their money.

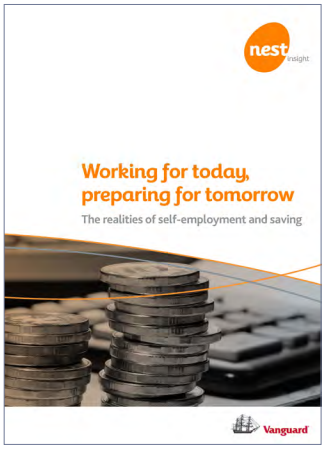
Our research in this area

This report is part of our larger programme of research and innovation around supporting self-employed people to save for retirement.

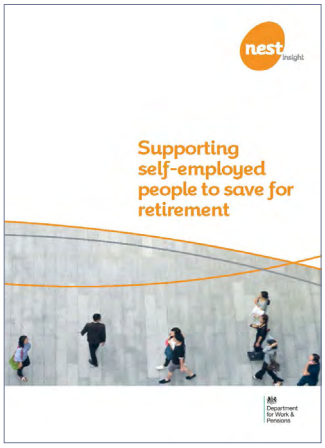
More information and other reports are available at **nestinsight.org.uk/research-projects/self-employed-pension-saving**

Retirement saving and the self-employed: A research summary (May 2018)

Working for today, preparing for tomorrow: The realities of self-employment and saving (December 2018)

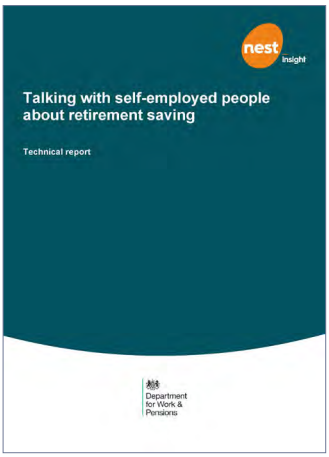


Supporting self-employed people to save for retirement (October 2019)



Talking with self-employed people about retirement saving (September 2020)

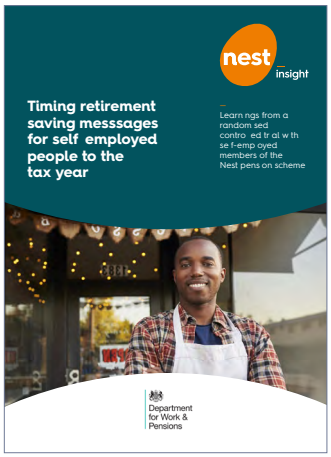
Talking with self-employed people about retirement saving: Technical report (September 2020)



The impact of Covid-19 on self-employed people's saving outlook: Summary of learnings from UK survey research conducted in September 2020 (December 2020)

Exploring practical ways to support self-employed people to save for retirement: Summary of findings from a multi-year research programme (November 2022)

Timing retirement saving messages for self-employed people to the tax year: Learnings from a randomised controlled trial with self-employed members of the Nest pension scheme (November 2022)



Exploring retirement planning and saving nudges tailored to self-employed people: Learnings from a proof-of-concept trial with the Moneyhub platform (November 2022)

Exploring flexible saving mechanisms designed for self-employed people: Learnings from a randomised controlled trial with the Penfold pension scheme (November 2022)

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