Adult Financial Wellbeing Survey

2021 Technical Report

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1.   Introduction

1.1   Survey background

1.1.1   The Money and Pension Service

The Money and Pensions Service (MaPS) is an arms-length body (ALB) of the Department of Work and Pensions. It is an organisation whose statutory objective is to develop and co-ordinate a national strategy to improve people's financial wellbeing. It was created as one organisation from three providers of government-sponsored financial guidance, The Money Advice Service, The Pensions Advisory Service and Pension Wise, bringing together the provision of debt advice, money guidance and pensions guidance.

MaPS's vision is "Everyone making the most of their money and pensions". MaPS have a long-term vision, and a ten-year strategy to transform financial wellbeing across the UK, which sets deliberately ambitious goals. Three over-arching priorities are:

1. Create a movement of many different organisations working together towards the same ambitious goals
2. Deliver for customers, building on the foundations of MaPS legacy organisations and focusing on the national goals, and
3. Build strong foundations to create a great organisation for the future driven by MaPS values of caring, connecting and transforming

1.1.2   The Adult Financial Wellbeing Survey

The Adult Financial Wellbeing Survey is a nationally representative survey of adults living in the UK. The survey was previously run in 2018 and 2015, when it was known as the Financial Capability Survey.

The questionnaire covers the building blocks of financial wellbeing:

* current and longer-term financial wellbeing

* day-to-day behaviours like managing credit, active saving and keeping track of spending

* planning behaviours like pension saving and building resilience against expected and unexpected life events

* enablers and inhibitors like confidence, sense of control, financial numeracy, and engagement with money information, advice and guidance.

1.2   Research objectives

The survey provides robust measures of UK Financial Wellbeing, and measures for each devolved nation. These help MaPS and other organisations working in Financial Wellbeing to design and target interventions more effectively. In addition, questions from the survey form the basis of three of the five National Goals of the UK Strategy for Financial Wellbeing.

In particular, MaPS uses the survey to:

- Understand financial behaviours and attitudes of the adult population (amongst sub groups in particular circumstances and including vulnerable consumers) of the UK, especially in light of the current pandemic;

- inform and evaluate the UK Strategy for Financial Wellbeing;

- understand the profile of our 'squeezed', 'struggling' and 'cushioned' segments; and

- understand the building blocks of financial wellbeing.

Key questions from the survey have been included in outcomes frameworks and question banks, which are designed to help organisations measure changes in people's financial wellbeing.

1.3 Changes for the 2021 survey

The 2021 questionnaire was developed from the 2018 survey.

To further build on the extensive data analysis from the 2015 and 2018 surveys, the 2021 wave has a particular focus on tracking the established building blocks of financial capability.

Additionally, questionnaire changes have been introduced to cover:

- the impact of Covid-19 on household finances

- repayment holidays and falling behind on bills and credit commitments

- providers of current accounts and savings accounts

- funding retirement and pension drawdown

Many other minor adjustments were made to the questionnaire to ensure it was up-to-date for 2021.

The survey has also seen an increase in the overall sample size from c.6,000 to c.10,000 in order to analyse smaller subgroups in more detail, especially:

- subgroups within English regions

- subgroups within the ethnic minority population

Finally, the 2021 research adopted an alternative methodology in order to avoid face-to-face in-home interviewing which was not possible due to the restrictions in contact brought in as a result of the Covid-19 pandemic.

2. Overview of survey

The Financial Wellbeing Survey is a nationally representative survey of adults aged 18+ living in the UK. The survey was conducted through online access panels and with posted invitations in order to represent both heavier and lighter users of the internet.

Interviewing was conducted between July and September 2021. Interviews were conducted with a regionally and nationally representative sample of 10,306 adults in the UK. The sample was boosted in each of the devolved nations (Scotland, Wales and Northern Ireland) to ensure a robust base for analysis in each nation.

The mixed mode approach aimed to balance online with offline interviewing, as informed by a number of successful surveys such as the FCA's Financial Lives study[1] and Ofcom's Technology Tracker.[2] Projects such as these have shown that online interviews are the best method for including heavier internet users, who are in themselves more financially capable, but that a wholly online approach would exclude lighter internet users who are in turn likely to have lower levels of financial wellbeing. Therefore, a representative sample of those who are online for fewer than 6 hours a week were interviewed using a postal approach, utilising address-based sampling.

To ensure that the findings accurately reflect the UK population, the dataset was weighted to known population estimates. The variables used for weighting were age, gender, nation, urbanity, working status, internet usage, IMD (Indices of Multiple Deprivation), social grade (SEG) and housing tenure. Housing tenure was added in addition to social grade after interrogation of the initial data and comparison with ONS and other data sources.

Some respondents did not supply details of household or personal incomes, debt levels or savings. Missing values for these respondents were imputed based on answers provided at other questions. The imputation model used for this was based on a model used by Ofcom in their Technology Tracker and Media Literacy[3] studies, and further modified this time based on the 2018 and 2021 datasets from this survey.

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[1] https://www.fca.org.uk/publications/research/understanding-financial-lives-uk-adults

[2] https://www.ofcom.org.uk/__data/assets/pdf_file/0021/113169/Technology-Tracker-H1-2018-data-tables.pdf

[3] https://www.ofcom.org.uk/research-and-data/media-literacy-research

2.1 The model of financial wellbeing

The survey is based on MaPS's model of financial wellbeing:

Financial wellbeing isn't just about how much money we have.

It's about feeling secure and in control.

It is about making the most of your money day to day, dealing with the unexpected, and being on track for a healthy financial future.

In short: financially resilient, confident, and empowered.

To explore this, the survey includes:

- **Financial wellbeing measures** – these are best defined as what we would like people to be able to achieve in their financial lives, either day to day or in the future. As such, wellbeing measures comprise dimensions such as satisfaction, being able to cope with household bills including unexpected ones, not being anxious, or having savings for the future.

- **Financial behaviours** – these are the behaviours that people exhibit or the actions they take, for example saving regularly, keeping track of their finances, working towards longer-term goals, or how they use credit.

- **Financial enablers and inhibitors** – these are the things that make behaviours or financial wellbeing either easier or more difficult for people to achieve. They encompass attitudes and motivations, skills and knowledge as well as aspects of how easy or difficult it is for people to access the financial services system.

- **Demographics and other characteristics –** covering both household and individual characteristics. These are used to better understand the needs of different sections of the population and help ensure MaPS meets its Public Sector Equality Duty.

3. Sampling design

3.1 Initial investigation into a changed data collection method

As a result of the pandemic, a methodological change was required which in essence replaced in-home face-to-face (CAPI) interviews with a self-completion postal invitation. These invitations enabled UK adults to complete the survey either:

- Online, by entering a unique access code
- On paper, by requesting a paper copy and returning a completed questionnaire in the post

To inform the decision to adopt this approach, re-analysis of the 2018 dataset was conducted. In particular the analysis was looking to establish whether sampling or weighting, or a combination of the two could convert a sample sourced entirely from online panels into one representative of all UK adults. Ultimately it was felt that such a sample would be too 'narrow' – not only would it lack diversity compared to mixed method approaches, it could not by definition represent those unavailable for sampling because they are not members of an online survey panel.

Crucially, an important sub-group of this unrepresented group are those unable to access the internet. As this is thought to be linked to financial wellbeing, their exclusion risked biasing the survey results.

Ultimately the sampling design consisted of three data collection methods:

- Online panel providers
- Invitations sent by post and completed online
- Invitations sent by post and completed on paper

3.1.1 Shortcoming of the mixed method approach adopted for 2021

The analysis described in section 3.1 suggested that to a great extent, low internet users can be used to represent non-internet users. Therefore, the mixed method of panel and post-to-online (with some post-to-paper) was superior to panel alone. Nonetheless, the analysis also indicated the approach was likely to lack some weighting 'power' in particular when looking at the low and non-internet user groups. They are inevitably under-sampled, and hence when comparing this group (or other groups correlated with internet use), with results from 2018 it is possible any differences could be related to the methodology.

3.2 Overall principles

The sample profile was designed to give as close a representation as possible to the UK adult population, thus minimising the weighting required, and maximising the effective sample size (ESS). Additionally, the design compensated for deliberate over-sampling in each devolved nation such that robust samples were delivered for each.

3.2.1 Known under-representations and adjustments to the postal sampling

Online panels have a tendency to under-represent certain populations:

- Those living in more rural communities
- Those in the very young or very old age groups
- Those using the internet less frequently
- Those from certain ethnicity backgrounds
- Those living in Northern Ireland

As a result, not only was particular attention dedicated to ensuring these quota targets were met, but geodemographic profiling was adopted in order to nudge the postal sampling approach to higher incidences of these measures.

3.2.2 Setting an age quota by internet use

Conducting data collection almost entirely online risks introducing a bias towards those people who are most internet proficient. A quota of lighter internet users is important therefore, to counteract this effect. However typically the lighter internet users who complete surveys via panels are almost all younger. Or to put it another way, older lighter users of the internet are far less likely to be members of online panels. To compensate for this and to help diversify the lighter internet user group, a further quota was imposed to achieve at least half of the lighter internet users to come from the 45+ age bracket.

3.2.3 Stratifying and setting other quotas

Data from ONS[4] and the Ofcom Technology Tracker[5] were used to identify appropriate sample profiles for each of the panel and postal samples. The profiles covered nation, urbanity, gender, age, SEG and working status. This structuring allowed the samples to be profiled and controlled for these elements within the four nations.

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[4] https://www.ons.gov.uk/peoplepopulationandcommunity/householdcharacteristics

[5] https://www.ofcom.org.uk/__data/assets/pdf_file/0021/113169/Technology-Tracker-H1-2018-data-tables.pdf

3.3 Online panel

For the online panel interviews, sample was drawn from combined UK panels (covering England, Wales, Scotland and Northern Ireland) and was quota controlled on nation and English region, age, gender, SEG, working status, ethnicity, urbanity and internet usage.

Online panels typically under-represent some rural parts of the country. The design that was adopted attempted to handle any shortfall in the online sample within nation, by compensating in the postal sample. Urbanity was introduced as a quota measure for the online sample using a self-reported measure, although ultimately this was used for observation only, and no screening was conducted on the basis of urbanity. For reporting, Urbanity is based entirely on postcode using the ONS system[6] for rural/urban classification.

Quotas were monitored during fieldwork to ensure there were no sampling cul-de-sacs, for example becoming short of working people, C2DE and 65+ respondents. For these reasons quotas were met within small margins (+/-5%) rather than precisely.

3.4 Postal

3.4.1 Sample design by UK Geographics

Quotas in these groups were controlled indirectly by introducing known (and reversible) skews into the postal samples drawn. Four different postal samples were introduced to compensate for biases in online panel-based samples, as well as catering for some differential non-response in postal surveys.

- Sample A (30% of addresses): A national representative sample in all ways, except boosted to achieve a greater number of interviews in Scotland, Wales and in particular Northern Ireland
- Sample B (45% of addresses): A sample from areas with high penetration of SEG 'DE', falling in the 20% most deprived areas, particularly to achieve greater coverage of non-internet users
- Sample D (15% of addresses): A sample from areas with higher concentration of 16-24's
- Sample E (10% of addresses): A sample from locations with a greater incidence of those aged 75+

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[6] https://www.ons.gov.uk/methodology/geography/geographicalproducts/ruralurbanclassifications

Sample C was derived to produce a known skew towards those from ethnic minority backgrounds, but was unsuccessful in doing so, hence was dropped.

The initial overall nation quotas were 70% England and 10% for the other nations. The postal samples were produced at 20% Northern Ireland, 9% Scotland and Wales and 62% England, which further helped ease issues sourcing Northern Ireland interviews from panels.

Whilst the impact of the postal sample adjustments was small overall, it did mean the final achieved profile was a better match for the initial targets and resulted in smaller weights.

3.4.2 Approach for issuing the postal invitations

Invitations were issued in 3 batches to 26,000 households across a fieldwork period of 7 weeks. See the Appendix for a copy of the letter used. Two codes to access the survey were included in each letter, such that up to two members of the household could participate in the research, to help avoid a bias towards surveys only being completed by the household's financial decision maker.

The invitation letter also included details of how to request a paper copy of the questionnaire for those unable to access the internet. In total 137 requests for paper copies of the questionnaire were received and issued.

Incentives in the form of online shopping vouchers of £10 per completed survey were provided. For those not online, an alternative was provided.

3.5 Quota profiles (targets)

The following distribution was set to deliver an overall representative sample of UK adults:

	England	Scotland	Wales	Northern Ireland
Male	49%	48%	49%	49%
Female	51%	52%	51%	51%
Male 18-24	5%	5%	5%	5%
Female 18-24	5%	5%	5%	5%
25-34	17%	17%	17%	17%
35-44	17%	15%	15%	17%
45-54	17%	17%	17%	18%
55-64	16%	17%	17%	17%
65-74	13%	13%	15%	12%
75+	9%	9%	10%	9%
AB	27%	23%	22%	22%
C1	31%	32%	30%	29%
C2DE	42%	45%	48%	50%
Male Working	30%	29%	28%	28%
Male Not	19%	20%	21%	21%
Female Working	28%	28%	27%	27%
Female Not	23%	24%	24%	24%
White	85%	96%	96%	98%
Asian	8%	3%	2%	1%
Black	3%	1%	1%	0%
Mixed	2%	1%	1%	0%
Other	1%	0%	1%	0%
Internet use: None	8%	8%	8%	8%
Internet use: 1 to 6 hours per week	21%	21%	21%	21%
Internet use: 7 to 19 hours per week	29%	29%	29%	29%
Internet use: 20+ hours per week	42%	42%	42%	42%

Table 1. Targeted quota profile

4. Questionnaire Development

The questionnaire has been developed further since the inception of the research in 2015. A number of question sources have been used, including other financial wellbeing surveys from other countries.

4.1 Minimising mode effects

Because the questionnaire has been used for a number of different data collection methods, it has been important to ensure the questions are understood and answered in the same way, regardless of the method used to ask and record the answers to the questions. In previous waves when a face-to-face interview was used for part of the data collection, it was important to use showcards so that survey participants were presented the questions in the same way regardless of the survey mode.

For the 2021 wave, all participants completed the questionnaire themselves without an interviewer involved. Both the postal sample and the panel sample were directed to the same programmed questionnaire. Only those completing on paper may have had a slightly different experience, but the printed questionnaire was designed to be completed in a very similar way to the online version, with reductions made only for length reasons.

4.2 Testing and feedback

With many of the questions already undergoing cognitive testing prior to their inclusion in the 2021 questionnaire, no additional formal testing was conducted. However the questionnaire was trialled with a small number of researchers to test for flow and comprehension. Minor adjustments were made to question wording and order as a result.

4.3 Questionnaire programming

The questionnaires were programmed in specialist market research software Askia, for both the online and postal variants – the same programming was used for both data collection methods. A further shorter version was used to enter the information provided by those completing a postal version of the questionnaire. The scripting was checked thoroughly against the master copy, for wording and routing errors. Minor corrections were made ahead of the soft-launch.

4.4 Soft launch

A soft-launch to panel respondents was conducted on 09 July 2021 from which 176 questionnaires were completed and checked. For the postal element, an initial mailing of 8,600 was conducted on 04 August 2021. The resulting data from each question were checked to ensure bases were correct and levels of non-response were not higher than expected.

4.5 Welsh version

In line with the Welsh Language Act, the online questionnaire was made available in Welsh for respondents who were living in Wales. This option was used by 6 respondents.

5. Fieldwork

5.1 Interviews achieved

Following data cleaning processes (see section 6.1), a total of 10,306 interviews were completed, split 9,130 via panels and 1,176 via postal invitations (of which 129 returned a shorter, paper questionnaire).

	England	Scotland	Wales	Northern Ireland
Male	3,169	480	459	424
Female	4,049	582	526	573
Male 18-24	319	27	52	48
Female 18-24	404	124	59	79
25-34	1,307	172	182	238
35-44	1,233	179	182	178
45-54	1,171	162	160	170
55-64	1,297	188	172	143
65-74	1,117	155	135	106
75+	390	55	47	37
AB	2,205	287	243	252
C1	1,998	313	291	299
C2DE	2,898	446	433	396
Male Working	1,923	288	258	252
Male Not	1,014	144	146	134
Female Working	2,242	308	300	352
Female Not	1,039	129	127	103
White	6,193	1,005	919	907
Asian	544	30	22	20
Black	209	7	10	12
Mixed	160	7	22	20
Other	71	7	4	5
Internet use: None	83	10	18	21
Internet use: 1 to 6 hours per week	1,467	207	178	202
Internet use: 7 to 19 hours per week	2,435	379	363	354
Internet use: 20+ hours per week	3,153	455	414	407

Table 2. Interviews achieved

5.2 Qualification

In order to qualify for the survey, participants needed to be aged 18+ and resident in the UK. Additional screening was conducted for the purposes of quota control and quality control, but no other qualification criteria were set.

Postcode was recorded for the following reasons:

- To ensure participants were resident in the UK
- To provide an indication of geographical spread and hence to allow geographic representation across the UK
- To facilitate the appending of further geodemographic data such as Urbanity and IMD (see section 6.3 Data appending).

The provision of postcode was optional however, and 1,672 potential participants declined to provide postcode and hence did not continue with the survey. As a proportion of those completing, this equates to 14%.

5.3 Postal invitations and response rates

Addresses were generated from the latest available Post Office Address file of all households in the UK, by taking random selections from lower super output areas (LSOAs) known to have higher incidences of our populations of interest. See section 3.4 for more details on these selections.

The postal sample was invited to the survey in 3 batches. Reminder letters were issued to non-responders from batches 1 and 2. The table below shows the number and date of invitations issued, the composition of the invitations and the response rates.

	Batch 1 (09 Jul 21)	Batch 2 (23 Jul 21)	Batch 3 (04 Aug 21)	Total
Total invitations issued	8,600	5,400	12,000	26,000
Request for paper questionnaire	61	21	54	136
Completed by paper	55	27	47	129
Total completed interviews	459	259	458	1,176
Response rate	5.3%	4.8%	3.8%	4.5%

Table 3. Postal sample breakdown

Batch 3 was larger in size in order to boost the total number of mailing responses beyond a thousand.

5.4   Responses by device

Increasingly online participants complete surveys on small-screened devices such as mobile phones. Ensuring all response options and buttons are shown, with limited need for scrolling, is of particular importance for self-completion techniques, so an understanding of how survey respondents completed the survey is helpful for future survey designs.

	Panel	Postal	Total
Large-screened device (desktop, laptop or tablet)	41.8%	47.9%	42.4%
Small-screened device (mobile phone)	58.2%	52.1%	57.6%

Table 4. Devices used (excludes questionnaires returned by paper)

For those completing via postal invitations to an online questionnaire, a greater proportion completed on a larger screened device, perhaps reflecting the slightly less technically proficient audience. Nonetheless, overall the majority of participants used a small-screened device.

5.5 Questionnaire length

Questionnaire length was controlled by ensuring any additions had a corresponding question removed in order to retain the same questionnaire length as the previous wave.

	Median minutes
Average questionnaire length for those invited from panels	19.9
Average questionnaire length for those invited by post	25.8
Average questionnaire length for those completing on a small screen device	19.1
Average questionnaire length for those completing on a laptop or desktop	22.3

Table 5. Median questionnaire lengths for those completing online (excluding paper returns)

5.6 Fieldwork dates

Including soft-launch, fieldwork dates for the panel responses were: 09 July 2021 to 27 September 2021. For those invited by post, the fieldwork dates were: 06 August to 25 September 2021.

6. Data processing

6.1 Data cleaning

Two principles were adopted in order to clean the data. These were:

- Removing and or replacing obvious errors from answers to specific *questions*
- Removing (and in some cases replacing) complete *interviews* because certain quality control criteria were not met (see sections 6.1.1 and 6.1.2 below).

In fact very little question cleaning was required. The main cleaning occurred with the postcode question. Respondents were only invited to participate if they were able to provide a correctly formatted postcode. During and after fieldwork these were periodically checked to ensure a match could be found on the Post Office address file (PAF). Where an obvious mistake was made entering the postcode and this was at sector level (the final 2 digits of postcode), these were corrected. All other mistakes or invalid postcodes were removed.

6.1.1 Duplicate responses

The datafile was continually checked for duplication and records were removed (and replaced) if one of the following scenarios was found:

- The data record had the same ID and the same survey answers (system duplication)
- The data record had the same ID and survey answers differed (client duplication error)
- The data record had a different ID, but results to key questions[7] were the same (respondent duplication)

Because the interview selection process sources respondents from multiple panels, it is quite possible that an individual is invited to participate more than once because they are registered on more than one survey panel. To overcome this, the system uses an IP checker that automatically makes an exclusion for an IP address of a survey already completed. This system is not perfect (for example it will not allow multiple people per household to participate, if both are sourced from a panel; certain VPNs can mask your IP), which is why the above manual checks are also important.

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[7] A mix of open questions, contact details (such as name and postcode) and demographics were used to establish duplication

6.1.2 Algorithm for removing online responses

In the absence of an interviewer, self-completion respondents may occasionally not read questions correctly and/or enter responses too quickly in order to complete and qualify for the financial incentive.

As a result, an algorithm was used to establish whether an online respondent had not answered the questionnaire with due consideration and attention. As on occasion measures of the time taken to complete online can be wrong, the speed of completion was only one input into the algorithm and as such apparent speeding alone was not considered a sufficient reason for exclusion.

The factors which were included in the algorithm, and the score associated with each issue is shown below:

Factor	Category	Importance
Speed of completion (measured as 25% or less of the median time)	Speeding	6 points (automatically eliminated)
Speed of completion (measured as 25-40% of the median time)	Speeding	3 points
Responding "Don't know" or "Prefer not to say" to the majority of questions	Disruption	6 points (automatically eliminated)
Answers to open-questions are nonsense or single keystrokes when otherwise a useful response is expected	Disruption	5 points (automatically eliminated)
Tenure and working status both blank or not answered	Disruption	2 points
Question B3 (5 statements about confidence in using money) answered entirely as "'Don't know"	Disruption	1 point
Incompatible answers: A4a (London) vs Urbanity	Confusion	4 points (automatically eliminated)
Incompatible answers: O2 vs O3	Confusion	2 points
Incompatible answers: D5C vs D7C	Confusion	2 points
Incompatible answers: I1X vs I5	Confusion	2 points
Incompatible answers: G7 vs G3/G5a	Confusion	2 points
Incompatible answers: H6 and D8	Confusion	2 points

Table 6. Parameters for exclusion (only survey)

Using this scoring system, it was determined that no one with a QC score in excess of 3 would be included in the survey and in total 171 exclusions were made.

6.2 Imputation of missing data

Because of the sensitive financial nature of some questions, and the difficulty some people have in accurate recalling the financial value of their holdings, a high level of 'Don't know' or 'Prefer not to say' responses were recorded when asking people for amounts of income, savings and levels debt.

In order to enable full analysis of income, savings and total owed it was necessary to impute estimated values where these were missing in the data. This was done using other information available from the survey, and these imputed values were then incorporated with the non-imputed data to produce a higher base (response).

The 5 questions which required for imputation where data points are missing, were:

- P1. Household income
- P2. Personal income
- G5A/B. Total personal savings
- G6A/B. Total joint savings
- E7. Amount of debt owed

The imputation was done using a modelling approach to estimate the value of the missing variables, based on a number of 'predictor' variables which were identified as key determinants.

The predictor variables used for the imputation were:

- age
- gender
- ethnic group
- housing tenure
- marital status
- working status
- region
- whether chief income earner
- social grade
- number of vehicles in household
- savings value
- whether receiving any benefits
- whether paying into a pension
- housing type
- highest qualification

Additionally the following 3 variables were used to model debt levels at E7:

- DNN3. Thinking about the last 6 months as a whole, how often would you say you have been behind on bills or credit commitments?
- J1. How well are you keeping up with your bills credit commitments? (option 6 = I do not have any bills or credit commitments)
- I9. What is the biggest bill you could pay?

Based on success of modelling in the previous waves, a **discriminant analysis** was used, which takes the above variables and predicts which of the categories each respondent lies in. The method does not per se assume an order – it could be used for example to predict membership of disparate groups such as attitudinal segments – but has the benefit that the predictors can have different levels of influence on the categories.

6.2.1 Assessment process

Whilst these questions were measured using more categories, the imputations were conducted into a shorter 7 category code frame, based on the improved accuracy of this approach in the previous wave.

The key measure is the overall match between imputed and actual segments, but a fully reasonable second objective is to get the overall distribution of answers (the profile) as close as possible. To achieve this, it is possible to tweak the discriminant analysis by modifying the prior distribution used, typically by increasing the probability if a segment is underrepresented in the computed segment and vice versa. This is worth doing only if there was minimal impact on the overall accuracy, which remains the main success measure of imputations.

Because the imputation exercise generates an estimate, rather than looking at absolute success, the imputation was deemed accurate if the model predicted plus or minus one category.

With some modifications to each of the standard algorithms, an approach was found that generated acceptable success levels for each of the 5 imputations. This means the missing values for these questions can be taken from the imputed data and combined with those giving a response, resulting in responses for everyone (some of which have been imputed).

The method that was adopted for each is shown below.

6.2.2 Household income (P1)

Nearly one in eight (12%) of responses were "Don't know" or "Prefer not to say" at household income. Two models were attempted: the first a standard discriminant approach where the probability of being allocated to each category was equal; for the second these probabilities were adjusted slightly such that the likely outcome would produce a better matching distribution.
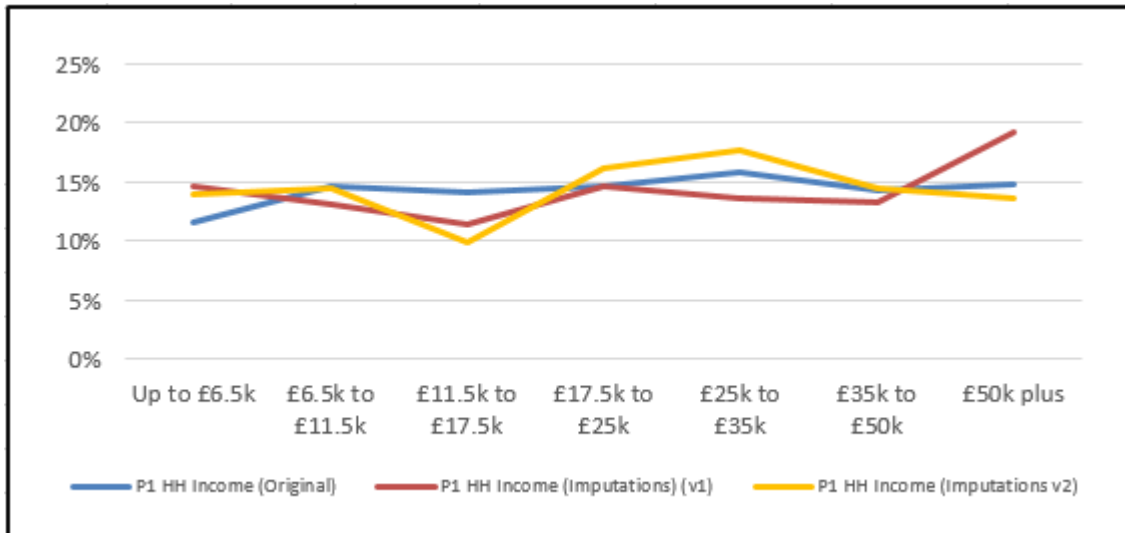
Figure 1. Discriminant analyses for P1 (household income)

The yellow line (version 2) was adopted because not only was it more accurate at predicting the correct category, the distribution of answers was a closer match to the genuine findings. Overall, the success rates were 71% (+/- one category). Whilst this means 29% could be in the wrong category, for the 12% where no answer was provided for P1, this imputation model was adopted.

6.2.3 Personal income (P2)

About one in seven (14%) of values were missing for personal income, and again a model with adjusted prior probabilities proved to be more successful as predicting the correct outcome:
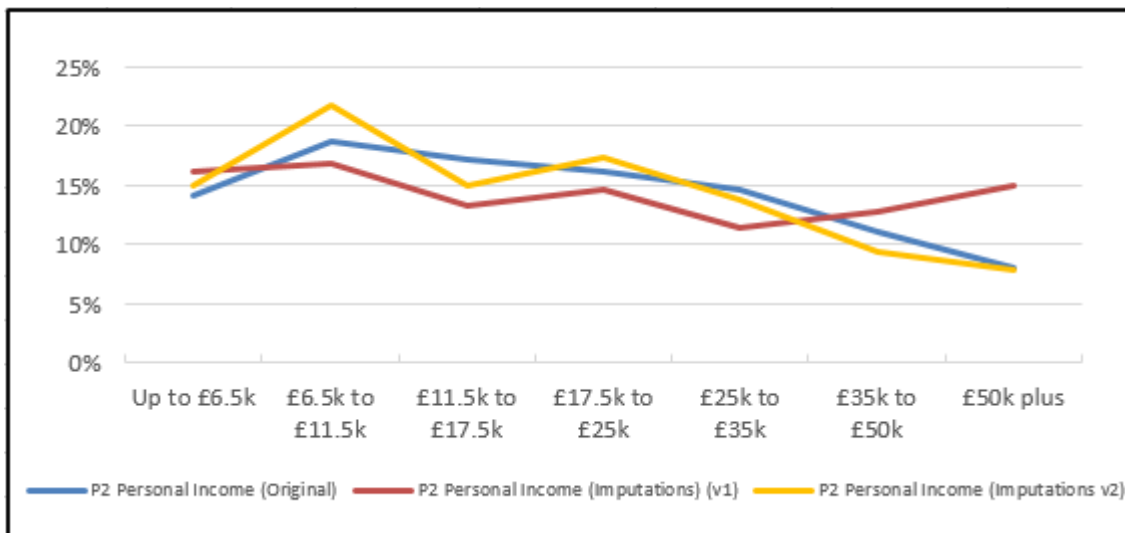

Figure 2. Discriminant analyses for P2 (personal income)

Version 2 was adopted because of the increased accuracy of prediction and an improved distribution, especially around the top box (£50k plus). Overall, the success rates were also 71% (+/- one category).

6.2.4 Personal savings (G5)

Only one model of discriminant analysis resulted in an accuracy of better than 60%.
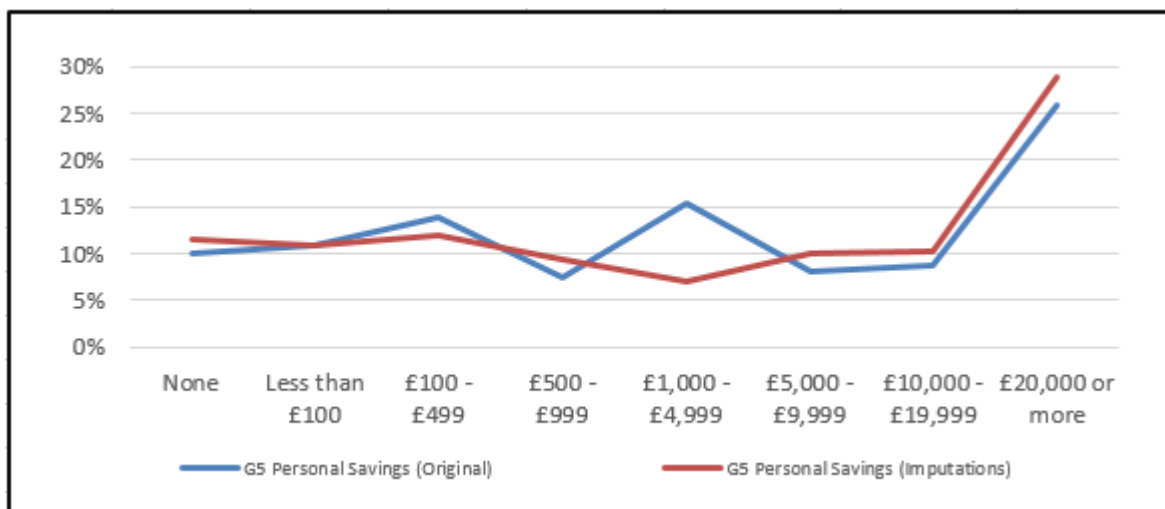

Figure 3. Discriminant analyses for G5 (personal savings)

This model produced an accuracy of 60% in predicting +/- one category. Because the level of non-response was low (10%), the accuracy was felt to still be sufficient to adopt this solution.

6.2.5 Household savings (G6)

The imputation model with adjusted prior probabilities (v2) produced an uneven distribution, however the accuracy was greatly improved.
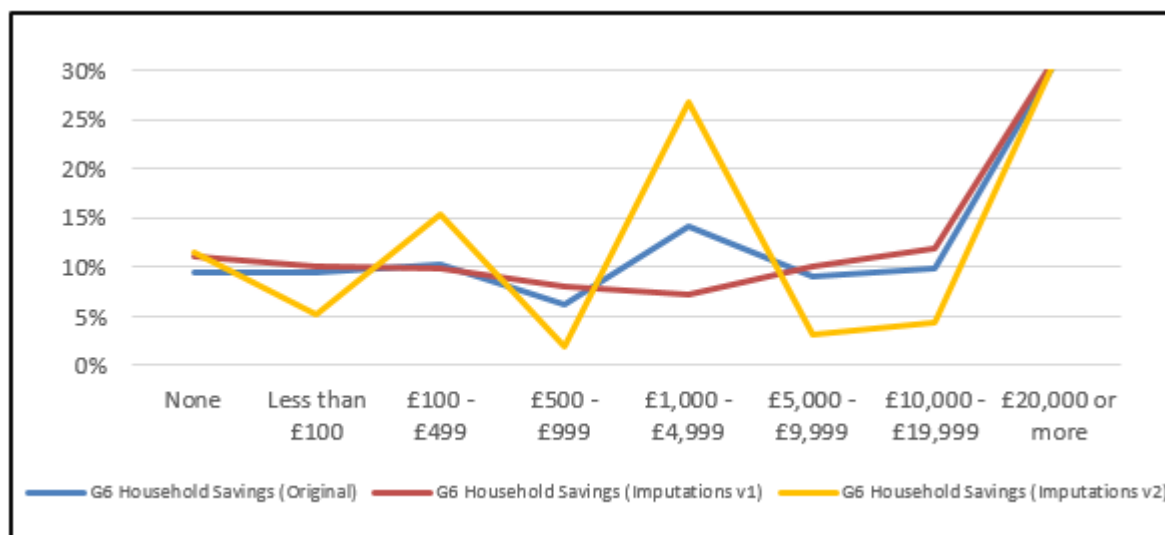

Figure 4. Discriminant analyses for G6 (household savings)

With equal probabilities for each category (v1), the accuracy was 62% but adjusting the probabilities increases it to 72%, so despite a slightly 'lumpy' distribution, v2 was adopted.

6.2.6 Level of household Debt (E7)

The introduction of 3 new variables into the model greatly improved accuracy and distribution when modelling levels of debt:

Figure 5. Discriminant analyses for E7 (level of debt)

Version 2 of the imputations increased the accuracy by 7% to 60% and matches the distribution of genuine answers very closely. This model was adopted for the 5% of people who did not provide an answer to this question.

6.3 Data appending

Following fieldwork, additional geodemographic data fields were appended to provide further analysis options. These appends were linked by postcode where the respondent provided explicit permission for us to do this. Data appends were processed following GDPR and MRS code of conduct rules and guidelines. Following the addition of the geodemographic information, postcode was removed from the dataset.

The list of extra variables is as follows:

Field Name	Description
LSOA	Lower super output area
LOWER_TIER_LA	Local Authority (lower tier) Name
UPPER_TIER_LA	Local Authority (upper tier) Name
WESTMINSTER_CONST	Westminster Parliamentary Constituency name
SCOTLAND_WALES_CONST	Scottish Parliamentary Constituency / Welsh Assembly Constituency name
UKG_CTV_Group_ID	Rural Urban indicator ID
UKG_CTV_Group_NAME	Rural Urban indicator Name
IMD_deciles	Index of Multiple Deprivation decile (for each of England, Scotland, Wales, Northern Ireland)
IMD_quintiles	Index of Multiple Deprivation quintile (for each of England, Scotland, Wales, Northern Ireland)
maps_seg_micro	MaPS Segmentation flag

Table 7. List of data appends

7. Weighting

Weighting is the adjustment of the relative importance or influence that each response has on the total survey responses, generated in such a way as to ensure that the profile of the total sample matches some pre-defined criteria or target.

7.1 Motivations for weighting

Given that the sample was controlled by quotas, the final demographic profile was fairly close to that of the target population. As a result of quotas targets being set to a range, some groups achieving higher and lower responses than expected, and some metrics which were not quota controlled varied from the optimal observations, the final dataset was weighted to a known, representative profile.

Weighting does have the impact of reducing effective sample size, and it also may not be able to correct all skews in the sample. However, on balance it is generally better to match the achieved profile to the known profile, in order that specific sub-populations, who may display unusual behaviour, contribute to the results in the correct proportions.

7.2 Overview of approach

The core weighting approach used a set of rim targets within nation and English region, covering the following:

- Age within gender
- IMD
- Working status
- Urbanity
- Tenure
- Internet usage (0-6, 7+ hours per week)

7.2.1 Additional dimensions which were considered

SEG was considered in 2018, as it was in this wave. For 2021, improved question text was used in order to help respondents better self-define their SEG. Ultimately this dimension was rejected as a weighting variable however, because the profile was still felt to be unreliable when collected in a self-completion format, compared to targets which are typically assessed with an interviewer or other indirect methods. Instead, appended IMD was included as variable for weighting.

The weighting also looked at Ethnicity and Household composition to establish if there was any benefit in including general weighting for these measures. Ultimately it was felt that global weighting adjustments for these dimensions were not needed.

Lastly the weighting also made regional specific adjustments, for example using IMD, to ensure each nation and English region could be viewed in isolation.

7.2.2 A note on the rural/urban indicator

When considering the rural/urban split, it is important to note that the published ONS stats provide an urban/rural indicator that is specific to each nation. As a result, weighting for Urbanity has been conducted within nation.

7.3 Targets and sources

ONS, The Labour Force Survey and Ofcom (for internet usage) were used as sources for the weighting targets.

Due to over-sampling the devolved nations, the weighting also corrected the distribution by nation, in order that the total is representative of the UK as a whole. This meant that the targets for dimensions within England are higher, and correspondingly those in devolved nations are lower than would be otherwise expected from a more geographically representative unweighted sample.

7.3.1 Gross weighting

In order to report in absolute numbers of adults (as opposed to proportions), the weighting was rescaled as follows:

Region / Nation	Adults aged 18+	Target	Share
United Kingdom	52,890,044	10306.0	100.00%
England	44,456,850	8662.7	84.06%
East	4,912,789	957.3	9.29%
East Midlands	3,857,688	751.7	7.29%
London	6,954,893	1355.2	13.15%
North East	2,147,125	418.4	4.06%
North West	5,795,875	1129.4	10.96%
South East	7,234,655	1409.7	13.68%
South West	4,546,239	885.9	8.60%
West Midlands	4,655,599	907.2	8.80%
Yorkshire And The Humber	4,351,987	848.0	8.23%
Wales	2,539,714	494.9	4.80%
Scotland	4,439,078	865.0	8.39%
Northern Ireland	1,454,402	283.4	2.75%

Table 8. Gross weighting by nation and English region

7.4 Establishing the effectiveness of weighting

7.4.1 Effective sample size (ESS)

Throughout the weighting iterations, effective sample size was monitored as a key success criterion. The aim was to maximise ESS in the final weighting algorithm, by adjusting the input dimensions and number of cells. The greater the effective sample size, the greater the accuracy of the final analysis, meaning for example smaller confidence intervals when comparing differences between subgroups.

7.4.2 Key questions

To determine the effects of the weighting, a list of key questions was used to view the initial results. The purpose was to establish if the applied corrections had an impact on the results. Adding a dimension to the weighting, but detecting no change in the results, could mean that the dimension is unnecessary, and in effect is only resulting in a reduction in effective sample size.

The variables used for examining the weighting are shown below.

Questions for examining weighting
J1 How well are you keeping up with bills and credit commitments at the moment?
C1 To what extent do you feel that keeping up with your bills and credit commitments is a burden?
C2 In the last 6 months, have you fallen behind on, or missed, any payments for credit commitments or domestic bills for any 3 or more months?
I10 Still thinking about an unexpected bill which you have to pay within seven days from today. Which, if any of the following would you do to pay a bill of £300?
G3 Which of these best describes how often you save money? (Savings (personal) - whether save every/most/some months)
G5A Approximately how much, if anything, do you personally have in savings and investments?
B3 How confident do you feel managing your money?
O2A When it comes to money, I prefer to live for today rather than plan for tomorrow
N3 Suppose you put £100 into a savings account with a guaranteed interest rate of 2% per year. You don't make any further payments into this account and you don't withdraw any money. How much would be in the account at the end of the first year, once the interest payment is made?
O2G I would be happy to carry out day to day banking transactions online
O3A Save money for a rainy day
O4A To what extent would you say the following statements apply to you personally? I often buy things on impulse.
NORF3. feel that the future will take care of itself when it comes to money
E7a/b. have unsecured borrowing
IGA1t. know of organisations and websites that can offer free or affordable financial information, help and support to people when they are making financial decisions

Questions for examining weighting
I9: Biggest unexpected bill could pay
B2: Satisfaction with financial circumstances
WASOU: Understand enough to make decisions about retirement
C1: Extent to which keeping up with bills/ credit commitments is a burden
OEQF13: How long could last without borrowing if lost main source of income
D5c: How much of plan for retirement finances
NORB10: How often do you use a credit card, overdraft or borrow money to buy food or pay bills?
J1 How well are you keeping up with bills and credit commitments at the moment?
C1 To what extent do you feel that keeping up with your bills and credit commitments is a burden?
C2 In the last 6 months, have you fallen behind on, or missed, any payments for credit commitments or domestic bills for any 3 or more months?
I10 Still thinking about an unexpected bill which you have to pay within seven days from today. Which, if any of the following would you do to pay a bill of £300?
G3 Which of these best describes how often you save money? (Savings (personal) - whether save every/most/some months)
G5A Approximately how much, if anything, do you personally have in savings and investments?
B3 How confident do you feel managing your money? (Confidence - managing your money)
O2A When it comes to money, I prefer to live for today rather than plan for tomorrow
N3 Suppose you put £100 into a savings account with a guaranteed interest rate of 2% per year. You don't make any further payments into this account and you don't withdraw any money. How much would be in the account at the end of the first year, once the interest payment is made?
O2G I would be happy to carry out day to day banking transactions online
O3A Save money for a rainy day
O4A To what extent would you say the following statements apply to you personally? I often buy things on impulse.
NORF3. feel that the future will take care of itself when it comes to money
E7a/b. have unsecured borrowing
IGA1t. know of organisations and websites that can offer free or affordable financial information, help and support to people when they are making financial decisions
I9: Biggest unexpected bill could pay

Table 9. Questions used to determine the effectiveness of the weighting

7.5   Adjustments to the weighting

In total, 8 main weighting iterations were produced in order to test various combinations of the weighting variables to achieve the right balance of correction with weighting efficiency. These iterations are summarised below:

Iteration	Content
Iteration 1	Interim using main targets (age, gender, IMD, urbanity, working, tenure, internet)
Iteration 2	Final cleaned dataset, first version using main targets
Iteration 3	Updated using final version of urbanity (allocated using postcode, not from respondent's answer)
Iteration 4	English region, age and gender adjustments introduced
Iteration 5	Some corrective weighting introduced by English regions for minor discrepancies: ▪ East Midlands tenure ▪ London tenure ▪ London working status ▪ London ethnicity ▪ North East ethnicity ▪ North West ethnicity
Iteration 6	Additional corrective weighting to counteract under-representation of private renters in Scotland
Iteration 7	Weights were capped to ensure no single case received a weight lower than 0.1 or higher than 5.0
Iteration 8	The weighting was rescaled to be consistent geographically with other MaPS studies (see Table 8). Additional adjustments were made to IMD, gender, rural, tenure, working status and ethnicity profiles within English region, using minor pre-weights. In total these final adjustments affected ESS by less than 1%.

Table 10. Main weighting iterations

Whilst iterations 1 to 4 were used to build the best list of weighting inputs and test them on interim and final data, iterations 5 to 8 were adjustments which were required to produce a better balance of effective sample size and accuracy.

7.6 Weighting efficiency and effective sample sizes

By nation and region, the weighting efficiencies and effective sample sizes are shown below

	Unweighted base	Weighted base	Weighted %	Weighting coefficient	Effective base
UK	10,306	10,306	100.0%	1.00	7,413
England	7,250	8,663	84.1%	1.19	5,793
London	1,021	1,355	13.1%	1.33	857
South East (not London)	1,167	1,409	13.7%	1.21	957
South West	683	887	8.6%	1.30	563
East of England	793	957	9.3%	1.21	613
North East	378	419	4.1%	1.11	272
North West	1,022	1,130	11.0%	1.11	818
East Midlands	616	751	7.3%	1.22	479
West Midlands	770	907	8.8%	1.18	601
Yorkshire & the Humber	800	848	8.2%	1.06	656
Scotland	1,063	864	8.4%	0.81	799
Wales	992	495	4.8%	0.50	749
Northern Ireland	1,001	284	2.8%	0.28	728

Table 11. Weighting efficiency and effective sample sizes

Appendix 1: Invitation by post

2 August 2021

THE RESIDENT(S)
«zadd1»
«zadd2»
«zadd3»
«zadd4»
«zadd5»
«zpostcode»

Your views are important to us

We recently invited up to two adults in your household to take part in a survey to understand how people spend, save and manage their money. The Money and Pensions Service is a free and impartial service set-up by the government. Our mission is to help everyone make the most of their money and pensions and we are keen to involve as many people in the survey as possible. Many people have already completed the survey, but **there is still time for you to take part.**

Each person who completes the survey will receive a £10 gift voucher as a thank you. You can take part either online or by post.

To **take part online** (including on a smartphone) please go to **www.crweblab.com/money** and log in using the reference number and password details provided below. Details can only be used once, and the closing date is **3 September 2021.**

If you **don't go online or only go online occasionally**, we are particularly interested in your views and you can take part **by post** at no cost to you. Please call the freephone number **0800 326 5052** at any time of day to leave a message with your **reference number (below)** and **name**. A questionnaire and pre-paid envelope will be posted for you to complete and return.

Person 1		Person 2	
Reference number:	«UserName1»	Reference number:	«UserName2»
Password:	«Password1»	Password:	«Password2»

With many thanks for your help – it really does make a difference.

Nick Watkins, Head of Research, Money and Pensions Service

This survey is being carried out on behalf of The Money and Pensions Service by Critical Research Ltd, an independent market research organisation. If you would like to talk to someone about the survey, please contact Critical Research using the email address below or by calling the information line between Monday to Friday 9am to 5pm.

✉ afw@critical.co.uk   ☎ Information line: 0800 326 5052

How do I take part?

Taking part is easy – online or by post. If you can take part **online**, please go to www.crweblab.com/money and log in using the reference number and password details provided in this letter. If you are completing the survey online you may find it easier for you to use a computer, laptop or tablet, rather than a mobile phone, to complete the survey. To take part by **post**, please call the freephone number **0800 326 5052** at any time of day to leave a message with your **reference number and name**. A printed questionnaire and pre-paid envelope will be sent for you to complete and return. Information about the survey can be found on The Money and Pensions Service website at https://maps.org.uk/surveys

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Why did we choose your address?

As it is not possible to ask everyone to take part in the survey, we select a sample of addresses to represent the entire country. Your address was selected at random from a list of residential addresses held by the Royal Mail.

Who is conducting the survey?

The Money and Pensions Service is a free and impartial service set-up by the government. Our mission is to help everyone make the most of their money and pensions and we are keen to involve as many people as possible. The survey is being conducted on behalf of Money and Pensions Service by Critical Research, an independent market research agency. You can contact The Money and Pensions Service here: https://www.moneyhelper.org.uk/en/contact-us

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How will my information be used?

This survey aims to understand people's views on how they spend, save and generally manage their money. The Money and Pensions Service is keen to understand what you think, so that we can put together a picture of how the UK as a whole is managing money.

Is this survey confidential?

Yes, totally. The information that we collect will be used only for **research purposes**. The answers you provide, and your name and address, will not be used for sales or direct marketing purposes. Your answers will be combined with those of others who take part in the survey for reporting purposes. You will not receive any junk mail or marketing calls as a result of taking part.

How do I collect my reward?

If completing the survey online, once you have completed the survey, you will be asked for your email address so that the gift voucher (£10 Amazon voucher) can be sent by email within a week of you completing the survey. If you are completing the survey by post £10 High Street gift card will be posted to you once your completed questionnaire has been received. The gift card will be sent by 2nd class post, so please allow a few days for this to arrive.