# Understanding the profile of those most at risk of detriment as a result of low financial capability:

# Analysis of the Money Advice Service Financial Capability Survey

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# Executive summary

## *Background*

The University of Bristol's Personal Finance Research Centre (PFRC) was commissioned to conduct an analysis of the Money Advice Service's (the Service's) Financial Capability Survey[1]. The aim of this research is to provide a better understanding of the profile of those individuals most at risk of detriment as a result of low financial capability. The Service commissioned the analysis in February 2014 to help inform the early stages of the development of the Financial Capability Strategy for the UK. It was commissioned in response to interest from members of the Strategy's Steering Group[2].

At the time this research was undertaken, the Service defined financial capability as a combination of the underlying drivers of financial behaviour (including ability, mindset and access to financial products and services) as well as the financial behaviours themselves. The Financial Capability Framework[3] has since been developed. This Framework differentiates between the underlying components of financial capability and financial behaviour which can be an expression of a person's financial capability, but may also be constrained or enabled by the financial means they have at their disposal and the pressures they face. This research uses the older definition of financial capability throughout.

## *Findings*

The analysis of the Financial Capability Survey data from 2013/14 found that the financial behaviours and dimensions of capability asked about in the survey could be organised into four distinct groupings:

- Planning Ahead;
- Managing Bills and Payments;
- Budgeting; and
- Financial Knowledge and Numeracy.

For each group of financial capability components and behaviours the analysis suggested there are two or three key indicator questions that can be used to give an indication of wider changes in levels of capability and behaviour within that grouping over time. On the whole, these indicators are valid for people across the key age groups (18 – 24, 25 – 64, and 65 and over).

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[1] The Money Advice Service's Financial Capability Survey is a nationally representative survey of all adults (aged 18 and over) across the UK. The initial wave was conducted in 2013 and it has gone into the field quarterly since then. For more information see: Money Advice Service (2013) *The financial capability of the UK.*
[2] The Steering Group consists of senior representatives from key organisations involved in financial capability in the UK from across the financial services industry, public sector and third sector.
[3] For more information about the Financial Capability Framework see *Financial Capability Strategy for the UK: The Draft Strategy* (2014).

## *Characteristics of people who are likely to have lower levels of financial capability*

The analysis showed a relatively complex picture in relation to variations in financial capability and behaviour and the characteristics that predict those levels. Like previous research[4], it demonstrates that people can be relatively capable in some aspects of their financial lives and less capable in others.

Key findings include:

- **Attitudes and motivations are strong predictors of levels of financial capability and behaviour**. Feeling **financially self-confident**; **feeling comfortable** about one's current finances; and**preferring a larger sum of money in a few months' time rather than a smaller amount straight away**[5] were all associated with *higher* levels of capability.

- **Socio-demographic characteristics only explain a small proportion of the difference in levels of financial capability.** The analysis identified a range of characteristics that are associated with *lower* capability in relation to Planning Ahead, Managing Bills and Payments, Budgeting, and Financial Knowledge and Numeracy. These are summarised in the table below (Table 1). On the whole, however, there were relatively small differences in levels of financial capability between survey respondents with these characteristics and those who did not have these characteristics. There are clearly other factors that help predict financial capability that are not currently captured in the Service's Financial Capability Survey.

- **In summary, private tenants, socials housing tenants, people with no educational qualifications, and people on Jobseeker's Allowance have slightly lower capability** in three of the four areas of financial capability and behaviour: Planning Ahead, Managing Bills and Payments and Financial Knowledge and Numeracy (but not Budgeting).

[4] See Financial Services Authority (2006) *Levels of financial capability in the UK: Results of a baseline survey.*
[5] Survey participants were asked whether they would prefer £200 now or £400 in two months' time.

**Table 1: Socio-demographic characteristics associated with lower levels of financial capability**

| Planning Ahead | Managing Bills and Payments |
|---|---|
| • Private tenants<br>• Social housing tenants<br>• GCSEs only or no educational qualifications<br>• On Jobseeker's Allowance | • Private tenants<br>• Social housing tenants<br>• Living with family<br>• GCSEs only or no educational qualifications<br>• On Jobseeker's Allowance<br>• On Income Support |
| **Budgeting** | **Financial Knowledge and Numeracy** |
| • Men<br>• Live in London<br>• Large income drop in last three years<br>• Feel comfortable with finances<br>• New parent<br>• Doesn't use internet | • Women<br>• Private tenants<br>• Social housing tenants<br>• No educational qualifications<br>• In lowest income band<br>• Has children<br>• New parent<br>• On Jobseeker's Allowance<br>• Doesn't use internet |

Source: Analysis of the Money Advice Service Financial Capability Survey 2013/14, Waves 1-3

## *Life events and transitions*

The Financial Capability Survey asked participants whether they had experienced any of the following life events or transitions over the preceding 12 months: redundancy; retirement; bereavement; child left home; child moved back home; moved house; had a baby; separated from partner; became a carer. Two-in-ten survey respondents (22 per cent) had experienced one of these life events or transitions.

When other factors in the analysis were taken into account, life events and transitions were not significant predictors of levels of financial capability other than in two situations:

- **New parents were slightly *less capable*** at Budgeting and Financial Knowledge and Numeracy; and
- **People who had been made redundant in the last 12 months were slightly *more capable*** at Planning Ahead than those who had not been made redundant.

These findings are not altogether surprising. People's financial capability develops over time and is influenced by a range of factors such as their education, upbringing and environment. While life events and transitions may not predict people's financial capability to any great extent, nonetheless these situations may put people's capability to the test and require them to have and display a different set of financial knowledge, skills and behaviours.

## *Profiling the population in terms of individual financial capability*

As well as looking at the predictors of the individual areas of financial capability and behaviour (Planning Ahead; Managing Bills and Payments; Budgeting; and Financial Knowledge and Numeracy) the analysis also profiled people according to their capability across all four of these areas.

There are five clear profiles in relation to individual's financial capability and behaviour. Two of these profiles stand out as most likely to be at risk of detriment because of below-average financial capability: **people who are Below-average All Round and Below-average Planners**. Together these two profiles comprise around a third of the survey population (34 per cent). Notably, the characteristics of both these groups mean they are likely to have lower financial means compared to other survey respondents. This in turn will adversely affect their ability to demonstrate financially capable behaviours such as planning ahead.

**Table 1: The five population groups by levels of financial capability**

| | % of survey population | Planning ahead | Managing Bills and Payments | Budgeting | Financial Knowledge and Numeracy |
|---|---|---|---|---|---|
| **1. Below-average All Round** | 12% | 40 | 50 | 45 | 55 |
| **2. Below-average planners** | 22% | 48 | 60 | 78 | 89 |
| **3. Below-average budgeters** | 21% | 70 | 85 | 50 | 89 |
| **4. Below-average financial knowledge and numeracy** | 15% | 65 | 71 | 76 | 44 |
| **5. Good all-rounders** | 30% | 79 | 89 | 84 | 91 |
| Overall average score | | 63 | 74 | 69 | 78 |

- People who are **Below-average All Round** (12 per cent of the population) have below-average capability on all four components of financial capability:
  - The types of people who are overrepresented in this group compared to the general population are aged under 35 (41 per cent cf. 29 per cent); single people (57 per cent cf. 47 per cent); social tenants (28 per cent cf. 19 per cent); unemployed (14 per cent cf. 7 per cent); and those who have no educational qualifications (30 per cent cf. 19 per cent).
  - They demonstrate a marked lack of confidence when it comes to money (53 per cent lack confidence cf. 19 per cent overall).
  - Most are concerned about the state of their finances (69 per cent cf. 47 per cent), but at the same time don't feel comfortable talking about money matters (46 per cent cf. 33 per cent).
  - They are more likely not to have a bank account in their name (31 per cent cf. 22 per cent overall).

- People who are **Below-average Planners** (22 per cent) are below average in terms of Planning Ahead and Managing Bills and Payments, although they score above-average in relation to Budgeting and Financial Knowledge and Numeracy:
    - Like those Below-average All Round, below-average Planners are more likely than the general population to be aged under 35 (34 per cent cf. 29 per cent), to be renters (46 per cent cf. 36 per cent) and to have children (31 per cent cf. 24 per cent).
    - Notably, below-average Planners are more likely than others to have had a big income drop in the last three years (37 per cent cf. 24 per cent), which might help to explain their low financial self-confidence (69 per cent felt confident cf. 81 per cent of the general population).

The next two groups have lower-than-average capability in relation to one particular aspect of financial capability and behaviour:

- **Below-average Budgeters** comprise 21 per cent of the population:
    - An older group, Below-average Budgeters are more likely than the general population to be aged 65 and over (38 per cent cf. 27 per cent) and usually don't have dependent children (18 per cent cf. 24 per cent).
    - Predominantly homeowners (71 per cent cf. 54 per cent), they are the better-off among the survey respondents (20 per cent had an annual income of over £25,000 cf. 13 per cent of the general population), and more likely than the general population to be university educated (47 per cent cf. 36 per cent).
    - Financially self-confident (90 per cent felt confident cf. 81 per cent) and comfortable with their finances (73 per cent cf. 53 per cent), it may be the case that Below-average Budgeters don't feel a strong need to budget and hence appear to have lower financial capability in this area.

- **People with Below-average Financial Knowledge and Numeracy** make up 15 per cent of the population:
    - They are more likely than the general population to be aged 75+ (22 per cent cf. 10 per cent), and mainly comprise women (64 per cent cf. 51 per cent). With a significant minority lacking formal education qualifications (37 per cent cf. 19 per cent), this group is more likely to report lower incomes (29 per cent had an annual income of less than £4,500 cf. 19 per cent overall) and be social housing tenants (31 per cent cf. 19 per cent).
    - They are about average when it comes to other aspects of financial capability, which may explain why they are not especially lacking in financial self-confidence (84 per cent felt confident cf. 81 per cent), nor unduly concerned about their finances (57 per cent felt comfortable cf. 53 per cent).

While both Below-average Budgeters and People with Below-average Financial Knowledge and Numeracy would benefit from improved financial capability in these particular respects, they are likely to be less at risk of detriment than those who are Below-average All Round and Below-average Planners.

- The remaining 30 per cent of the population (and encouragingly the largest single group that emerged from the analysis) are **Good All-Rounders** when it comes to financial capability. The Good All-Rounders comprise similar types of people to the Below-Average Budgeters:
    - They are more likely than the general population to be older (32 per cent are 65 or over cf. 27 per cent overall); homeowners (67 per cent cf. 54 per cent); and to have received a university education (43 per cent cf. 36 per cent).
    - Reflecting their above-average financial capability, they are financially self-confident (97 per cent cf. 81 per cent felt confident) and comfortable with their financial lives (69 per cent cf. 53 per cent).
    - Perhaps as a result of this, they feel very comfortable talking about money matters with friends and family (77 per cent cf. 67 per cent).

# 1 Introduction

The University of Bristol's Personal Finance Research Centre (PFRC) was commissioned to conduct an analysis of the Money Advice Service's (the Service's) Financial Capability Survey[6]. The aim of this research is to provide a better understanding of the profile of those individuals most at risk of detriment as a result of low financial capability. The Service commissioned the analysis in February 2014 to help inform the early stages of the development of the Financial Capability Strategy for the UK. It was commissioned in response to interest from members of the Strategy's Steering Group[7].

The survey analysis took a data-driven approach. The three stages of the analysis are described in Box 1.

**Box 1: The three stages of analysis**

1. Identify the key indicators of financial capability from the Financial Capability Survey (Section 2).
2. Explore the distribution of financial capability across various life-stages, demographic and socio-economic groups and the characteristics of the least and most financially capable (Section 3).
    a) This included analysis of the extent to which recent major life events and transitions (either experienced or anticipated, such as bereavement, redundancy, becoming a parent etc.) predict people's financial capability and their likelihood of experiencing detriment as a result of low capability (see Sections 3.1-3.4).
    b) Separate analyses were conducted on three sub-groups of the survey population: Young People (18-24); Working Age (25-64); and Older People (65 and over). For each of these groups, the analysis examined the extent to which socio-demographic variables and life events and transitions predict people's financial capability and their likelihood of experiencing detriment as a result of low capability (section 3.5).
3. Identify and profile those groups at most risk of detriment as a result of low financial capability (Section 4).

At the time this research was undertaken, the Service defined financial capability as a combination of the underlying drivers of financial behaviour (including ability, mindset and

[6] The Money Advice Service's Financial Capability Survey is a nationally representative survey of all adults (aged 18 and over) across the UK. The initial wave was conducted in 2013 and it has gone into the field quarterly since then. For more information see: Money Advice Service (2013) *The financial capability of the UK.*
[7] The Steering Group consists of senior representatives from key organisations involved in financial capability in the UK from across the financial services industry, public sector and third sector.

access to financial products and services) as well as the financial behaviours themselves. The Financial Capability Framework[8] has since been developed. This Framework differentiates between the underlying components of financial capability and financial behaviour which can be an expression of a person's financial capability, but may also be constrained or enabled by the financial means they have at their disposal and the pressures they face. This research uses the older definition of financial capability throughout.

## *1.1 The Money Advice Service's Financial Capability Survey*

The Service's Financial Capability Survey is a nationally representative individual-level survey of adults (aged 18 and over) in the UK. First conducted in 2013 (with fieldwork conducted in quarterly waves since then) it involved an online or face-to-face interview of approximately 20-30 minutes. The fieldwork was conducted by Ipsos MORI.

The interview questionnaire was designed by the Service. It was broadly based on the questionnaire used in the 2006 Baseline Survey of Financial Capability[9] but adapted to reflect changes in the financial climate and financial services, and the shorter length and predominantly online mode of the new survey.

The statistical techniques used to analyse the Financial Capability Survey in the project were factor analysis, regression analysis, and cluster analysis.

The Appendix provides further details about the data analysed, statistical techniques used and the full outputs from the analysis.

[8] For more information about the Financial Capability Framework see *Financial Capability Strategy for the UK: The Draft Strategy* (2014).
[9] See Financial Services Authority (2006) *Levels of financial capability in the UK: Results of a baseline survey.*

# 2 Key indicators of financial capability

The first step in understanding the types of people most at risk of detriment as a result of low financial capability is to define what makes up 'financial capability'[10]. The statistical analysis of the Financial Capability Survey data from 2013/14 found that the financial behaviours and dimensions of capability asked about in the survey could be organised into four distinct groupings:

1. Planning Ahead;
2. Managing Bills and Payments;
3. Budgeting; and
4. Financial Knowledge and Numeracy.

Each of these four components generated by the analysis comprises a number of specific indicators. The most important indicators are shown by component in Table 2.1, in the order of importance.

**Table 2.1 Key indicators of financial capability**

| Planning ahead: Top 3 indicators | Budgeting: Top 3 indicators | Managing bills and payments: Top 3 indicators | Financial knowledge and numeracy: Top 2 indicators |
|---|---|---|---|
| 1. I always make sure I have money saved for a rainy day | 1. Knowing what money you have available | 1. I am never late in paying my bills | 1. Applied numeracy |
| 2. I am more of a saver than a spender | 2. Sticking to a budget | 2. I ensure I have enough money available for bills when they are due | 2. Awareness of economic indicators |
| 3. Running short of money | 3. Controlled spending | 3. I sometimes have to choose which bill I pay first because I can't cover them all at once | |

[10] Please note that a new definition of financial capability has been created as part of the process of developing the new draft Financial Capability Strategy for the UK. This new definition differentiates between the underlying components of financial capability, and financial behaviour. This analysis uses an older definition of financial capability which combines a consideration of financial capability and behaviour.

Some of the indicators shown in Table 2.1 relate to single survey questions asked in the Service's Financial Capability Survey. Others (such as 'Running short of money') are composite measures created from several different survey questions. In relation to *Financial Knowledge and Numeracy,* the indicator *Applied Numeracy* is a composite measure that incorporates survey questions on topics such as understanding of investment performance. *Awareness of Economic Indicators* is also a composite measure that includes questions on the Bank of England base rate and the impact of inflation on savings.

Some type of scoring system was required in the statistical analysis in order to identify (in Stage 1) the key indicators of financial capability and (in Stage 2) the individuals who are more or less capable on different dimensions of financial capability and behaviour. The scores generated for each component of financial capability in the course of the analysis are shown in Appendix Table A2.1, by key characteristics. Financial capability is nonetheless a very complex concept with multiple subjective and objective dimensions, and as such care must be taken not to place too much emphasis on these absolute numbers. Equally, the scores should not be compared across domains, because the score for each domain is calculated differently.

### 2.1 Are there any differences by age group in the key indicators of financial capability?

As well as looking at the key indicators of financial capability for the survey population as a whole (Table 2.1), the analysis was repeated for Young People (18 - 24), Working Age (25 - 64), and Older People (65+).

For Working Age and Older People, the indicators were exactly the same across the four components of financial capability.

For Young People there was one difference, in relation to Planning Ahead, where the attitude statement 'I prefer to live for today than plan for tomorrow' replaced 'Running short' as the third most important indicator. The indicators for Young People are shown in Table 2.2, with the different indicator shown in red.

**Table 2.2 Key indicators of financial capability (Young People only)**

| Planning ahead: Top 3 indicators | Budgeting: Top 3 indicators | Managing Bills and Payments: Top 3 indicators | Financial knowledge and numeracy: Top 2 indicators |
|---|---|---|---|
| 1. I always make sure I have money saved for a rainy day | 1. Knowing what money you have available | 1. I am never late in paying my bills | 1. Applied numeracy |
| 2. I am more of a saver than a spender | 2. Sticking to a budget | 2. I ensure I have enough money available for bills when they are due | 2. Awareness of economic indicators |
| 3. I prefer to live for today than plan for tomorrow | 3. Controlled spending | 3. I sometimes have to choose which bill I pay first because I can't cover them all at once | |

# 3 The characteristics of people with higher and lower levels of financial capability

The second stage of the analysis examined the socio-demographic and other characteristics that predict levels of financial capability (as defined in Stage 1). This in turn allows the identification of the types of people who have lower levels of financial capability, and who may be at greater risk of detriment as a result.

Among other things, major life events and transitions (either experienced or anticipated) were included in the analysis, to explore whether these events and transitions help predict people's financial capability (Box 3.1).

**Box 3.1: Major life events and transitions**

The survey asked about nine different life events or transitions that might be associated with financial capability:

| | |
|---|---|
| Redundancy | Having a baby |
| Retirement | Separation |
| Bereavement | Becoming a carer |
| Child left home | Moved house |
| Child moved back home | |

In total, 22 per cent of survey respondents had experienced a life event or transition in the last 12 months.

The statistical technique used to analyse the data meant that it was possible to model the *unique* influence of characteristics (such as age or experiencing a life event) on financial capability, taking all other characteristics in the analysis into account and holding them constant.

The following sections explore the characteristics that are associated with lower financial capability for each of the four components.[11] On the whole, there were relatively small differences in levels of financial capability between survey respondents with different socio-demographic characteristics. In other words, the socio-demographic characteristics of individuals only explain a small proportion of the difference in levels of financial capability. Attitudes and motivations were more predictive of individuals' financial capability. There are also likely to be other factors that help predict financial capability not currently captured in the Service's Financial Capability Survey.

[11] The analysis reported here focuses on findings that are (1) highly statistically significant and (2) of a magnitude of +/- 3 points or more. The full output is presented in the Appendix Tables.

## 3.1 Planning ahead

Of the socio-demographic characteristics captured in the Service's Financial Capability Survey, housing tenure and educational qualifications were the strongest predictors of Planning Ahead. Even so, the differences were still relatively small.

In relation to housing tenure, outright owners (the comparison or reference group that was used in the analysis, see Appendix for details) had the highest levels of capability, with all other tenures having significantly lower levels of ability in Planning Ahead. Private tenants had the lowest capability (8 points lower than outright owners), followed by tenants living in local authority or housing association properties (7 points lower).

In general, the lower someone's level of educational attainment was, the less capable they were at Planning Ahead. Survey respondents with only GCSEs or no qualifications at all were less good at Planning Ahead (4 points lower) than those educated to degree level or its equivalent (which was the comparison or reference group).

Other characteristics (such as gender, marital status, having children, income, where people lived) were predictive of people's ability at Planning Ahead, but the effects were even smaller (i.e. there was less than +/- three points difference).

As well as individual characteristics, people's attitudes and motivations were also included in the analysis. These proved to be better predictors of individual's capability at Planning Ahead than socio-demographic characteristics (Box 3.2). The same was true for the three other components of financial capability as well, as we go on to describe in later sections.

**Box 3.2: Attitudes and motivations as predictors of Planning Ahead**

People who said they were confident about managing money had much higher levels of capability at Planning Ahead than those were not confident (+13 points).

Similarly, people who said they felt comfortable about their finances displayed higher levels of ability at Planning Ahead than those who did not (+9 points).

People who said they would prefer to receive £400 in two months rather than £200 now were slightly more capable at Planning Ahead than those who did not (+3 points).

Attitudes and motivations were an important predictor of financial capability in relation to Managing Bills and Payments, Budgeting, and Financial Knowledge and Numeracy as well. On the whole, people who were financially self-confident, comfortable with their finances, and who would prefer to receive a larger amount of money in a few months' time rather than a smaller sum straight away tended to demonstrate better-than-average levels of capability on all these dimensions.

In terms of life events and transitions, the analysis indicated that people who had experienced a redundancy in the past 12 months were slightly more capable when it came to Planning Ahead (all other things being equal) but the effect was small.

In the context of UK welfare reform, the Service is interested in links between benefit receipt and levels of financial capability. The analysis showed that benefit receipt is predictive of financial capability, but only to a small extent. People in receipt of Jobseeker's Allowance had slightly lower levels of financial capability in respect of Planning Ahead (-3 points). People in receipt of Carers Allowance were somewhat better at Planning Ahead (+4 points).

The full output from this analysis is provided in Appendix Tables A3.1 and A3.2.

## *3.2 Managing Bills and Payments*

The strongest predictor of capability in relation to Managing Bills and Payments was, not surprisingly, being responsible for bill payment (+18 points, compared with those who did not have this responsibility).

As with Planning Ahead, housing tenure and educational qualifications predicted *lower* levels of capability when it came to Managing Bills and Payments, although the differences were relatively small. Private and social housing tenants were less capable at Managing Bills and Payments (both 6 points lower than outright owners). People living with their family were also less capable (-3 points). People with only GCSEs or no educational qualifications displayed lower levels of capability than those with higher education (3 points lower in both cases).

There were small generational differences, with Older People better at Managing Bills and Payments than Young People (+4 points). People who had experienced an unexpected large drop in income were better at Managing Bills and Payments than those who had not (+3 points).

As with Planning Ahead, attitudes and motivations were stronger predictors of Managing Bills and Payments than individual's socio-demographic characteristics. People who felt confident and comfortable about their finances did better than those who did not (+11 points and +7 points respectively), and so to a lesser extent did people who were financially satisfied (+4 points).

The analysis showed that the life events and transitions asked about in the Service's Financial Capability did not predict levels of capability in relation to Managing Bills and Payments.

People in receipt of Jobseeker's Allowance and Income Support had slightly lower levels of capability in relation to Bill Payment, all other things being equal (-5 points and-3 points respectively). The full output from this analysis is provided in Appendix Tables A3.3 and A3.4.

### 3.3 Budgeting

Compared with Planning Ahead and Managing Bills and Payments, the picture was less clear-cut in terms of the types of people with lower Budgeting capability.

Housing tenure was a weaker predictor of capability, but social tenants (+3 points), were slightly *more* capable when it came to Budgeting than outright homeowners (the comparison or reference group). Educational qualifications were not a strong predictor of levels of financial capability with regards to Budgeting, and generation had no statistically significant effect at all, all other things being equal. Those who gave their work status as long term sick or disabled were slightly more capable when it came to budgeting (+4) than those in full time work.

Unlike Planning Ahead and Managing Bills and Payments, there were some small regional effects, with people in London faring less well at Budgeting than those living elsewhere (-4 points).

Men proved to be slightly less capable at Budgeting than women (-3 points). (Men were also less capable than women at Planning Ahead and Managing Bills and Payments, but the effects were even smaller.)

People in the two lowest income bands were somewhat better at Budgeting, as measured by the Service's Financial Capability Survey (+6 points for those with incomes up to £4,499 and 5 points higher for those with incomes between £4,500 and £11,499). People who had a bank account were more likely to have higher levels of Budgeting capability than those without an account (+5 points). And people who reported a large drop in income in the past three years had lower levels of capability than those who had not (-3 points).

People who felt confident about their finances were again more likely to do well than those who did not feel confident (+10 points). However, those who reported feeling comfortable with their financial situation were slightly less likely to be capable at Budgeting (-3 points) than were their counterparts who were not financially comfortable, all else being equal. This could well indicate that they do not see the need to budget, as they feel secure about their financial situation.

One life event, having a baby, was predictive of lower levels of Budgeting, all other things being equal. Consequently, people who had had a baby in the last 12 months were less capable at Budgeting, although the difference was small (-3 points).

Non-internet users were somewhat less capable at Budgeting than those who used the internet (-3 points), all other things being equal.

The full output from this analysis is provided in Appendix Tables A3.5 and A3.6.

## 3.4 Financial Knowledge and Numeracy

A wide range of factors were predictive of levels of Financial Knowledge and Numeracy. A relatively strong predictor of Financial Knowledge and Numeracy was internet use. Non-internet users were very poor when it came to Financial Knowledge and Numeracy (-13 points), compared with internet users.

Education level was also important, with a steep fall in capability as educational attainment declined. As a result, people with no qualifications fared very poorly (-11 points compared with people educated to degree level).

While work status was a significant predictor of financial knowledge and numeracy, the differences were relatively small. Those in full time education and those who were long term sick and disabled were slightly more capable in this domain (+4 and +3 points respectively) than those in full time work.

As with other components of financial capability, housing tenure helped to predict levels of Financial Knowledge and Numeracy. Both social and private tenants did less well (-7 points and -4 points respectively) than outright home owners or people buying a home on a mortgage.

Other significant factors in predicting levels of Financial Knowledge and Numeracy were income, family type and benefit receipt, although the differences were relatively small.

As a result, people in the lowest income band (up to £4,499) were somewhat less capable at Financial Knowledge and Numeracy (-6 points) than those with incomes of £25,000 or more. People living with children showed slightly lower levels of Financial Knowledge and Numeracy (-4 points) than people without children. And people in receipt of Jobseeker's Allowance were slightly less capable at Financial Knowledge and Numeracy (-3 points), all other things being equal.

In addition, people who had had a baby in the last 12 months were slightly less capable at Financial Knowledge and Numeracy (-4 points). This was the only life event that was a statistically significant predictor of Financial Knowledge and Numeracy.

Somewhat higher levels of Financial Knowledge and Numeracy were found among: men (+6 points); people who would prefer £400 in two months to £200 now (+6 points); people who felt confident about their finances (+4 points) compared with those who lacked confidence; people responsible for paying the bills (+4 points) compared with those who did not have this responsibility, and older People compared with Young People (+3 points).

The full output from this analysis is provided in Appendix Tables A3.7 and A3.8.

## 3.5 Predictors of financial capability for key age groups

In addition to the analysis of the whole survey population, described in Sections 3.1-3.4, the Money Advice Service required the analysis to be run separately for each of the three generational subsets of the survey population: Young People (18 - 24), Working Age (25 - 64) and Older Age (65+).

Overall, this analysis showed that the main predictors of financial capability (such as housing tenure and educational qualifications) were broadly the same across the age groups.

At the same time, there were some differences in the factors that predicted lower levels of financial capability in relation to each of the four components of capability. For Young People and Working Age, consumer credit use was a significant predictor of lower capability in relation to Planning Ahead and Managing Bills and Payments. The same was not true for Older People.

For Working Age and Older People, not using the internet was a significant predictor of lower capability in relation to Budgeting and Financial Knowledge and Numeracy; this was not the case for Young People.

For Older People, use of financial advice and region were factors that influenced their Budgeting capability and their Financial Knowledge and Numeracy. These were not significant factors for Young People or Working Age.

Tables 3.1, 3.2 and 3.3 set out the significant predictors of lower capability for the three age groups. The full output from this analysis is provided in Appendix Tables A3.9-A3.20

**Table 3.1: Young People (18 - 24) - Predictors of lower financial capability**

| | Planning Ahead | Managing Bills and Payments | Budgeting | Financial Knowledge and Numeracy |
|---|---|---|---|---|
| **Gender** | Young men | | | |
| **Education level** | GCSEs only<br>No qualifications | GCSEs only | | GCSEs only |
| **Consumer credit** | Payday loan users[1] | Payday loan users[1] | | |
| **Life event** | | Started looking after relative[2] | | |
| **Tenure** | | | Private tenants<br>Social tenants<br>Live at home | |
| **Work status** | | | | Raising a family or at home |

1 Although use of payday loans was a highly significant predictor of young people's financial capability, there were only 16 young people with payday loans in Waves 1-3 of the survey.
2 Although becoming a carer was a highly significant predictor of young people's financial capability, there were only 15 young people who had experienced this life event in Waves 1-3 of the survey.

**Table 3.2: Working Age (25 - 64) - Predictors of lower financial capability**

| | Planning Ahead | Managing Bills and Payments | Budgeting | Financial Knowledge and Numeracy |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| **Gender** | | | | Women |
| **Education level** | No qualifications | | | GCSEs only<br>No qualifications |
| **Consumer credit** | Users of payday loans; informal loans; bank or building society loans; mail order; hire purchase | Users of payday loans; informal loans; mail order; hire purchase | | |
| **Life event** | | | Large unexpected drop in income in last 3 years | |
| **Tenure** | Private tenants<br>Social tenants<br>Mortgagors<br>Live at home | Private tenants<br>Social tenants<br>Mortgagors<br>Live at home | | Social tenants<br>Mortgagors |
| **Benefit receipt** | | On JSA | | On JSA<br>On Incapacity Benefit |
| **Internet use** | | | Don't use internet | Don't use internet |
| **Attitudes and motivations** | | | Comfortable with financial situation | |
| **Household composition** | | | | Children in household |
| **Income** | | | | In lowest income group (£0-£4,499) |

**Table 3.3: Older Age (65+) - Predictors of lower financial capability**

| | Planning Ahead | Managing Bills and Payments | Budgeting | Financial Knowledge and Numeracy |
|---|---|---|---|---|
| **Gender** | | | Men | Women |
| **Education level** | | | | No qualifications |
| **Life event** | | | Large unexpected drop in income in last 3 years | |
| **Tenure** | Private tenants<br>Social tenants<br>Mortgagors | Private tenants | | Social tenants |
| **Benefit receipt** | | On Income Support or Incapacity Benefit | | |
| **Internet use** | | | Don't use internet | Don't use internet |
| **Attitudes and motivations** | | | Comfortable with financial situation | |
| **Income** | | | Provide for retirement with savings and investments | In lowest income group (£0-£4,499) |
| **Region** | London<br>East Midlands | | London | London<br>South West |
| **Use of financial advice** | | | Not received financial advice | Not received financial advice |

## *3.6 Predictors of financial capability among working age people who live with children*

The Service was interested to know if different factors affect the financial capability of working age people who live with children, compared with the population as a whole.

The same analysis that was conducted for the whole survey population (described in Sections 3.1-3.4) was therefore repeated only for working age people who live in households with children.[12]

Overall, there were few major differences among this subset of the survey population, partly due to the small sample size that this analysis was conducted on. The main difference (in terms of the magnitude of the difference) was in relation to Planning Ahead, where there were some regional differences (Box 3.2).

[12] The analysis of working age adults living in households with children was conducted using Wave 1 of the Financial Capability Survey. The analysis described earlier in this chapter was conducted on Waves 1-3 of the survey.

**Box 3.2: Predictors of financial capability among working age people who live with children**

Additional analysis focused solely on working age people who live with children. This indicated that those in the South West of England, the South East, London and Scotland showed higher levels of capability in relation to Planning Ahead than their counterparts living in the North East (the reference or comparison category). It is not possible from the analysis to explain why this might be the case.

Table 3.1 presents a summary of the output from this discrete piece of analysis. The full output from this analysis is provided in Appendix Tables A3.21-A3.24.

**Table 3.1: Summary of differences in the factors that predict levels of financial capability between the full survey population and working age people living with children**

| Financial Capability component | Predictor (survey question) | Is the predictor significant for…? | |
|---|---|---|---|
| | | The full survey population | Working age people living with children |
| Planning Ahead | Money is something you discuss openly | Yes | No |
| | Region | No | Yes |
| Managing Bills and Payments | Money is something you discuss openly | Yes | No |
| | Has bank account | Yes | No |
| Budgeting | Money is something you discuss openly | Yes | No |
| | Have you heard of the Money Advice Service? | Yes | No |
| Financial Knowledge and Numeracy | Household circumstances | Yes | No |
| | You feel comfortable about your finances | No | Yes |
| | Has bank account | Yes | No |
| | Have you contacted the Money Advice Service? | Yes | No |

## *3.7 Summary of risk factors associated with lower levels of financial capability*

The analysis shows a fairly complex picture in relation to variations in financial capability across the population. In particular, it demonstrates that people can be relatively capable in some aspects of financial capability, and less capable in others.

On the whole, there were small differences in levels of financial capability between survey respondents with particular socio-demographic characteristics and those who did not have these characteristics. In other words, the socio-demographic characteristics of individuals only explain a small proportion of the difference in levels of financial capability. Attitudes and motivations were more predictive of individuals' financial capability. There may also be other factors that help predict financial capability that are not captured in the Service's Financial Capability Survey.

Based on the analysis of the whole survey population described in Sections 3.1-3.4, private tenants, social housing tenants, people with no education qualifications and people on Jobseeker's Allowance all have somewhat lower capability in *three* of the four components of financial capability: Planning Ahead, Managing Bills and Payments and Financial Knowledge and Numeracy (but not Budgeting).

In addition, people with secondary education only, new parents and non-internet users show lower levels of capability across *two* aspects of financial capability. People who only have GCSE-level education have lower capability in relation to Planning Ahead and Managing Bills and Payments. New parents and people who don't use the internet have below-average skills at Budgeting and Financial Knowledge and Numeracy. Men have slightly lower capability in relation to Budgeting, whereas women have somewhat lower capability when it comes to Financial Knowledge and Numeracy.

Additional analysis run separately for Young People, Working Age and Older Age shows that consumer credit is a risk factor for Young People and Working Age people when it comes to Planning Ahead and Managing Bills and Payments.

# 4 The profiles of people most at risk of detriment as a result of low financial capability

Whereas Stage Two of the analysis examined the characteristics of people with lower and higher levels of capability (described in Section 3), the purpose of Stage Three was to identify and profile those groups most at risk of detriment as a result of low financial capability. The results (in the form of groups or clusters of people) are derived from the data, rather than generated or imposed using non-statistical methods.

Five distinct groups emerged from the analysis. Table 4.1 shows how each of the five groups map on the financial capability scores which were used to form them.[13] The table shows the average score for each of the four components of financial capability. Those scores that represent higher-than-average capability are shaded green, while lower-than-average capability is shaded pink.

**Table 4.1 The five groups by levels of financial capability**

| | % of survey population | Planning ahead | Managing Bills and Payments | Budgeting | Financial Knowledge and Numeracy |
|---|---|---|---|---|---|
| **6. Below-average All Round** | 12% | 40 | 50 | 45 | 55 |
| **7. Below-average planners** | 22% | 48 | 60 | 78 | 89 |
| **8. Below-average budgeters** | 21% | 70 | 85 | 50 | 89 |
| **9. Below-average financial knowledge and numeracy** | 15% | 65 | 71 | 76 | 44 |
| **10. Good all-rounders** | 30% | 79 | 89 | 84 | 91 |
| Overall average score | | 63 | 74 | 69 | 78 |

This analysis shows that one group (the smallest group to emerge from the analysis), those Below-average All Round, are most likely to be at risk of detriment because they have lower-than-average financial capability across all four components of capability. Below-average Planners, a larger group, are another group who are likely to be at risk. While they are above-average when it comes to Budgeting and Financial Knowledge and Numeracy, Below-average Planners demonstrate poor levels of capability in Planning Ahead and Managing Bills and Payments. Notably, the characteristics of both these groups mean they are likely to have fewer financial resources to draw upon compared to other survey respondents. This in turn will adversely affect their ability to demonstrate financially capable behaviours such as planning ahead.

[13] Please note that these scores are for indicative purposes only. They should not be compared across domains, because the score for each domain is calculated differently. The scores should be used to distinguish between higher and lower levels of capability within each of the domains. The overall average scores in Table 4.1 differ slightly from Appendix Table A2.1. This is because Appendix Table A2.1 is based on analysis of wave one of the Money Advice Service Financial Capability Survey only.

Two other groups – the Below-average Budgeters and Below-average Financial Knowledge and Numeracy – are each poor in one component of capability but otherwise perform around or above average. Encouragingly, the largest single group to emerge from the analysis – the Good All-Rounders – is also the most financially capable.

Each of the five groups is described in detail in the following sections. Not surprisingly, the characteristics shown to predict financial capability that we described in Section 3 feature strongly. A full descriptive analysis of each of the five groups is provided in Appendix Tables A4.1 and A4.2.

> **Below-average All Round**
>
> The types of people who are more likely to be Below-average All Round when it comes to financial capability are aged under 35; single people; social tenants; unemployed; and have no educational qualifications.
>
> They demonstrate a marked lack of confidence when it comes to money. Most are concerned about the state of their finances, but at the same time don't feel comfortable talking about money matters. A significant number do

### *4.1 Below-average All Round*

People who were Below-average All Round are the smallest group to emerge from the data analysis, accounting for 12 per cent of people surveyed. These are the people **most at risk of detriment as a result of low financial capability,** as they are significantly below average in all four components of capability.

The distinct features of people who are Below-average All Round are described in detail below.

**They are a younger group**: 41 per cent of them were aged 34 or under, compared to 29 per cent of the survey population overall.

**They are more likely to be single people**: Nearly six-in-ten of this group (57 per cent) did not live with a partner, compared with 47 per cent overall.

**They are more likely to live in social housing**: Almost three-in-ten (28 per cent) of people who are Below-average All Round lived in social housing, compared to just 11 per cent of the Good All-Rounders (see below) and 19 per cent overall.

**They are more likely to be unemployed:** unemployment among people Below-average All Round was double the overall figure (14 per cent cf. seven per cent).

**They are more likely to have no educational qualifications**: Almost a third (30 per cent) of this group had no formal qualifications compared with 19 per cent of survey respondents overall.

In addition, people who were Below-average All Round showed a distinct lack of financial confidence. Worryingly, more than half (53 per cent) said they lack confidence when it comes to managing money, compared to just 19 per cent overall, and just three per cent of the Good All-Rounders (see below). In keeping with this, two-thirds of people who were Below-average All Round (69 per cent cf. 47 per cent overall) were concerned when thinking about their current financial situation, and almost half (46 per cent cf. 33 per cent overall) feel uncomfortable talking about money.

Three-in-ten of people who were Below-average All Round (31 per cent cf. 22 per cent) do not have a bank account in their own name, which is at least five percentage points higher than any of the other groups. They also have the lowest instance of being responsible for paying for bills (63 per cent, compared with 81 per cent overall), and are the least likely to take a long-term view with over a third (37 per cent cf. 20 per cent overall) saying they would take £200 now, rather than wait two months and accept £400.

Finally, people who were Below-average All Round were rather more likely to live in the West Midlands (13 per cent cf. nine per cent overall) or Greater London (18 per cent cf. 13 per cent overall).

### *4.2 Below-average Planners*

A larger group than those Below-average All Round, the Below-average Planners comprised one-in-five of the survey population (22 per cent). Below-average Planners are below average at Planning Ahead and Managing Bills and Payments, but above average at Budgeting and Financial Knowledge and Numeracy.

Notable features of Below-average Planners are described below.

**They are a younger group**: Like those Below-average All Round, Below-average Planners were over-represented among the younger age groups. 34 per cent of them were under 35, compared to 29 per cent of the survey population overall. The majority of them (57 per cent cf. 46 per cent overall) were under 45. Their younger demographic is also reflected in the fact that just 15 per cent of them were retired, compared to 31 per cent overall.

**They are more likely to live in rented housing**: Half (46 per cent) of Below-average Planners lived in rented homes, compared to 36 per cent of people overall. They split equally into social tenants (23 per cent) and private tenants (23 per cent).

**They are more likely to live with children**: Again reflecting their younger demographic, 31 per cent of Below-average Planners lived in a house with children, compared to 24 per cent overall.

**Below-average Planners**

Like those Below-average All Round with financial capability, Below-average Planners are over-represented among the under-45s. They are also more likely to be renters and have children.

Notably, Below-average Planners are more likely than others to have had a big income drop in the last three years, which might help explain their low financial self-confidence.

**They are more likely to have had a recent income drop:** Below-average Planners had the highest incidence of experiencing a large unexpected drop in income in the past three years (37 per cent cf. 24 per cent overall, and just 15 per cent of Below-average Budgeters).

Like the people Below-average All Round, Below-average Planners showed lower levels of financial self-confidence. Only 69 per cent felt confident when it came to managing money (cf. 81 per cent overall), while just a quarter (25 per cent) felt comfortable when thinking about their current finances (cf. 81 and 53 per cent respectively for the survey population as a whole). Unlike the people Below-average All Round, however, Below-average Planners had the highest percentage of people with a bank account in their own name (83 per cent cf. 78 per cent overall).

### *4.3 Below-average Budgeters*

Below-average Budgeters comprised 21 per cent of the total survey population. People in this group performed better than average in Planning Ahead, Managing Bills and Payments and Financial Knowledge and Numeracy, but substantially below average when it came to Budgeting.

The distinct features of Below-average Budgeters are described in detail below.

**They are an older group**: 38 per cent of Below-average Budgeters were aged 65+, compared to 27 per cent of people overall. Reflecting this, two-in-five Below-average Budgeters were retired (40 per cent cf. 31 per cent overall) and they were the least likely to live with children (18 per cent cf. 24 per cent overall).

**Below-average Budgeters**

An older group, Below-average Budgeters are often retired and usually don't have dependent children.

Predominantly homeowners, they are more likely to be better off and university educated than the survey population overall.

Financially self-confident and comfortable with their finances, it may be the case that below-average budgeters don't feel a strong need to budget.

**They are mostly homeowners**: Almost three-quarters of Below-average Budgeters (71 per cent) were homeowners (either outright or with a mortgage), compared to an overall average of 54 per cent. Relatively few lived in social housing (nine per cent, compared with 19 per cent overall).

**They are likely to have higher incomes**: 20 per cent of Below-average Budgeters had a personal annual income in excess of £25,000, compared to 13 per cent of survey respondents overall.[14] This goes some way to explaining the lower budgeting score of

[14] Please note that the Financial Capability Survey has a significant amount of missing personal income data.

Below-average Budgeters, as they were generally slightly older with higher incomes and so arguably have less need for careful budgeting.

**They are more likely to have higher education qualifications**: Below-average Budgeters were the most likely group to hold a degree (47 per cent cf. 36 per cent overall and 21 per cent of people Below-average All Round).

Reflecting their relatively comfortable financial situation, nine-in-ten Below-average Budgeters felt confident when it comes to managing money (90 per cent), while three-quarters (73 per cent) felt comfortable when thinking about their finances (cf. 81 per cent and 53 per cent respectively overall). And only 15 per cent of this group had seen a large drop in income in the past three years (cf. 24 per cent overall).

### 4.4 *Below-average Financial Knowledge and Numeracy*

People with Below-average Financial Knowledge and Numeracy comprised 15 per cent of the survey population. They perform fairly close to the average on all components of financial capability apart from Financial Knowledge and Numeracy, at which they score poorly. The notable characteristics of people with Below-average Financial Knowledge and Numeracy are described below.

**Below-average Financial Knowledge and Numeracy**

People with below-average financial knowledge and numeracy are more likely to be aged 75+, and mainly comprise women.

Often lacking formal education qualifications, this group is more likely to report lower incomes and they are more likely to be social housing tenants.

They are about average when it comes to other aspects of financial capability, which may explain why they are not especially lacking in financial self-confidence. Nor are they unduly concerned about their finances.

**They are a much older group**: Almost a quarter (22 per cent) of them were aged 75 and above, compared to just 10 per cent overall.

**They are predominantly women**: Two-thirds of people with Below-average Financial Knowledge and Numeracy were women (64 per cent), compared with 51 per cent overall.

**They are more likely to have lower personal incomes:** Three-in-ten of this group (29 per cent; cf. 19 per cent overall) were in the lowest income group (up to £4,499 per year), while just one per cent had personal annual income in excess of £40,000, compared to an overall figure of four per cent.

**They are more likely to live in social housing**: People with Below-average Financial Knowledge and Numeracy had the highest instance of living in social housing (31 per cent cf.19 per cent overall).

**They are more likely to have no formal educational qualifications:** This group had the highest incidence of having no formal education qualifications at all (37 per cent cf. 19 per cent overall).

Unlike people who are Below-average All Round, those with Below-average Financial Knowledge and Numeracy are close to the overall average when it comes to feeling confident about managing money (84 per cent cf. 81 per cent overall) as well as feeling comfortable about their current financial situation (57 per cent cf. 53 per cent overall).

Around three-quarters (73 per cent) are responsible for paying the household bills, compared to 81 per cent overall. Similar to those people Below-average All Round, a sizeable minority tended not to take a long-term view (34 per cent cf. 20 per cent overall), and would take £200 now, rather than wait two months and accept £400.

### *4.5 Good All-Rounders*

People who were Good All-Rounders performed above average in all four components of financial capability. They are therefore **least at risk of detriment as a result of low financial capability**. The largest single group to emerge from the analysis, Good All-Rounders represent almost a third of the survey population (30 per cent). The distinct features of Good All-Rounders are described below.

**They are a somewhat older group:** Almost a quarter of Good All-Rounders were in the 'newly retired' age group of 65-74 (24 per cent cf. 17 per cent overall).

**They are very likely to own their own home:** Good All-Rounders had a higher instance of home ownership than all other groups apart from the Below-average Budgeters. Two-thirds (67 per cent) own their homes outright or with a mortgage, compared to 54 per cent overall.

**They are more likely to have higher education qualifications**: Like the Below-average Budgeters, the Good All-Rounders were over-represented among those with higher education (43 per cent cf. 36 per cent overall).

Remarkably, almost all Good All-Rounders (97 per cent cf. 81 per cent overall) said they are confident at managing money, with 69 per cent also reporting that they felt comfortable about their finances, compared to

**Good All-Rounders**

The Good All-Rounders comprise similar types of people to the Below-Average Budgeters: they are more likely to be aged 65-74; homeowners; and to have received higher education.

Reflecting their above-average financial capability, they are financially self-confident and content with their financial lives. Perhaps as a result of this, they feel very comfortable talking about money matters with friends and family.

just over half (53 per cent) overall. Given this, it is perhaps unsurprising that over three-quarters (77 per cent cf. 67 per cent overall) of Good All-Rounders said they discussed money openly with their family and friends, the highest instance among the five groups.

Over nine-in-ten (93 per cent) of Good All-Rounders were responsible for paying the bills, which again is the highest percentage of all five groups. Continuing the theme of financial competence, 87 per cent would take the long term view and wait for £400 in two months, rather than take £200 now (cf. 63 per cent of people Below-average All Round, and 80 per cent overall).

# Appendix

This appendix provides details of the statistical techniques that were used in the analysis.

**Stage One**

A statistical technique called Principal Component Analysis was used to identify the key indicators of financial capability. The technique facilitates the identification of the optimal number of underlying components for the data that is analysed. The output of Principal Component Analysis is a 'factor' that represents the responses of each individual across a range of questions, taking into account the relative importance of each question. These 'factors' were used to derive the key indicators of financial capability.

The Stage One analysis was undertaken on Wave 1 of the Financial Capability Survey, which was the data available at the time the analysis was conducted. Two important data considerations had to be taken into account in preparing the survey data for analysis. First, Principal Component Analysis can only reliably be conducted using variables that have at least a three-point scale in the replies. Second, survey questions have to be asked of all survey participants (not just a subset) to be included in a score; otherwise individuals will have lower scores just because a question did not apply to them. A significant amount of data preparation was undertaken beforehand, therefore, to maximise the amount of survey data that could be included in the analysis. Even so, not all the survey questions were able to be included in the analysis.

**Stage Two**

Linear regression analysis was used to explore the distribution of financial capability across various life-stage, demographic and socio-economic groups, and the characteristics of the least and most financially capable. Linear regression identifies the unit change in an outcome measure (e.g. financial capability) that is associated with the unit change of a particular 'predictor' characteristic (e.g. respondent's age). Multiple linear regression analysis in turn considers the influence of multiple predictors simultaneously in the same model, enabling the unique influence of each predictor on the change in the outcome measure to be determined. The constant in a multiple linear regression relates to a (hypothetical) reference group.[15]

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[15] For all linear regression models described in this report, the reference group was defined as a single female outright home owner aged 18-24 (where not split by generation), living alone in the North East with a degree and no children, who has never contacted nor heard of the Money Advice Service and has no benefits (where applicable). The person does not openly discuss money, would take £200 now rather than £400 in two months, does not feel comfortable or confident about their finances, has no bank account, is not responsible for paying the bills and has not had a large drop in income over the past three years. They are an internet user, have received financial advice, and are neither happy nor financially satisfied. They are in the lowest income group and have not experienced any 'life events' in the past 12 months.

Two sets of regression models were run in Stage Two. The first set of models was run on Wave 1 of the Service's Financial Capability Survey, which was the data available at the time the analysis was conducted. The models were run using a set of predictor variables recommended by PFRC on the basis of its knowledge and experience of financial capability research, and its Stage 1 analysis of the Service's Financial Capability Survey. We have not reported the findings from this first set of models in this report.

At the request of the Service, a second set of models was run that included additional predictor variables selected by the Service. The second set of models was run on the combined Waves 1-3 of the Service's Financial Capability Survey. These additional predictor variables added little explanatory power to the models in terms of understanding the characteristics that predict lower levels of financial capability. The findings from the second set of models are described in Section 3 of this report.

For methodological reasons it was not possible to include both age (or, where relevant, generation) and work status in the same regression model. This is because people in full-time education in the work status variable were almost all in the 18-24 category (Young People); and almost all the people who are retired in the work status variable are in the 65+ category (Older People). This is known as multicollinearity between the two variables. Two sets of models were therefore run on all the analysis that was conducted: one set including generation but excluding work status; the second including work status but excluding generation. All of the findings included in the report are significant to the commonly accepted statistical threshold of $p<0.05$.

**Stage 3**

Cluster analysis was used to identify and profile those groups at most risk of detriment as a result of low financial capability. Cluster analysis is a segmentation technique used to identify 'natural' structures within a dataset based on multiple variables. It seeks to summarise the multiple and complex interactions between variables (the 'cluster variate') into the most dominant patterns and classifies cases into clusters based on this. The optimal cluster solution minimises the within-cluster variance and maximises between-cluster variance. The cluster variate for this analysis was the four domain scores of financial capability identified at Stage One of the research (see above).

The Stage Three analysis was carried out on the combined dataset for Waves 1-3 of the Service's Financial Capability Survey. The cluster analysis was undertaken on standardised versions of the financial capability variables (converted using z-scores) to control for the heterogeneity of variance among the cluster variate. Given the relatively large sample size (around 9,000 individuals), a two-step cluster analysis methodology was employed. The first step comprised hierarchical clustering – a sophisticated but computationally-intensive method – on a randomly selected subset of 250 cases. This produced starting clusters for use in non-hierarchical k-means clustering – in which each cluster is refined iteratively – which was applied to all individuals in the data.