

**Effects of Presentation Format and Financial Literacy on Accessibility and Decision Usefulness of
Information in Pension Benefit Statements**

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Abstract

While financial literacy affects retirement savings decision making by individuals, modifying the placement of key information in pension benefit statements can lead to positive outcomes beyond those achieved by financial literacy alone. We examine the extent to which placement of information and financial literacy affects the accessibility of information for individuals and assists them in their financial decision making. Using an experimental design involving 577 pension fund members, we find the increased salience as a result of modifying the presentation format improves the ability of participants to locate important financial information and to evaluate the relative performance of funds. However, the incremental benefits of placement are only found for individuals with intermediate financial literacy. Consequently, we find there is value accruing from financial literacy programs as advocated by regulators, but our results also suggest there are additional benefits that can be reaped from using presentation formats that improve the accessibility of information.

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Keywords: Salience, presentation format, financial literacy, decision making, pension benefit statements

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Abstract

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INTRODUCTION

We examine the effect of placement of information and financial literacy on an individual's ability to access and use information for retirement savings decision making, and explore whether the placement of information can lead to positive outcomes beyond those achieved by financial literacy alone. We propose that presenting information in a salient format enhances the accessibility of that information, and thus augment the benefits of financial literacy. Using pension benefit statements produced by Australian pension funds (similar to Individual Retirement Accounts and 401(k) plans in the U.S.), we investigate whether presentation format affects an individual's ability to locate information on administrative fees and charges and to assess the performance between funds. We also investigate the incremental benefits of placement for individuals with different levels of financial literacy.

The changing pension landscape in the U.S. has shifted the responsibility of securing retirement financial well-being onto individuals (Lusardi 2011). Similar restructuring is observed in other developed countries. In Australia, for example, reforms to the retirement savings system¹ give individual employees flexibility to choose their retirement fund provider and investment options. While these changes provide participants with a greater sense of control over planning for their financial security in retirement, it assumes that individuals possess the necessary financial acumen to take advantage of the more flexible system.

In Australia, the pension scheme known as the Superannuation Guarantee was introduced in 1992, where employers are required to make compulsory contributions on behalf of their employees into the

1. These funds are more commonly known as superannuation funds in Australia.

employees' nominated pension fund accounts.^{2,3} The total amount invested in superannuation assets has increased substantially over the years and was valued at AUD1.4 trillion at the end of June 2012, equivalent to 94.5 per cent of Australia's GDP (Australian Prudential Regulation Authority 2013). Over the financial year to 30 June 2012, total contributions increased by 10.3 per cent to \$117.5 billion. More recently in 2013, the Federal Government in Australia legislated changes to increase the contributions rate from 9% to 12% by July 2019. These changes will see a substantial increase in the proportion of an individual's wealth in their pension accounts and further increase the reliance on the individual to manage their pension investments.

A recurring theme in the literature on investment funds is that investors appear to make choices that are consistently not in their best interest. French (2008), for example, noted in his presidential address that investors in mutual funds paid an average of 67 basis points in active management fees, yet the investment performance of these funds were not commensurate with these costs. Administrative fees and charges (hereafter, administrative costs) levied on pension assets is an important component that should be considered in retirement savings decisions as these fees and charges can significantly impact on pension savings (Bateman and Mitchell 2004). Administrative costs reduce the rate of return on pension savings and, as Bateman (2001) shows, a small increase in fees (as a percentage of assets under management) can have a significant impact on the accumulation at retirement. Industry research shows fees can reduce the fund balance by between 20 to 33 percent over the lifetime of saving (Patten 2014). Consequently, administrative costs are an important factor to be considered when choosing among alternative pension plans and selecting investment strategies.

2. See (Langford, Faff, and Marisetty 2006) for a more detailed description of the Australian superannuation fund industry.

3. The contribution rate at the commencement of the scheme was between 3-4% of the employee's salary and rose to 9% by 2012. By contrast, the Plan Sponsor Council of America reported, for 2011, an average of 4.1% of participants' pay are contributed to the 401 (k) plan (Plan Sponsor Council of America 2014).

Researchers have argued that the irrational behavior is the result of biases in decision making (e.g., Goetzmann and Peles 1997, Bailey, Kumar, and Ng 2011). Other researchers have looked at financial literacy as a means of addressing this problem (e.g., Alessie, Van Rooij, and Lusardi 2011, Lusardi and Mitchell 2013). Similarly, regulators have been interested in raising levels of financial literacy. For example, in the U.S., the Financial Literacy and Education Commission was established and tasked with developing a national strategy on financial education. In Australia, an aim of the Australian Securities and Investments Commission (ASIC) is to foster a financially literate community so that consumers can make informed decisions about financial products and services (Australian Securities & Investment Commission 2008).

While financial literacy can equip investors with the knowledge and skills to manage their financial affairs, prior research (e.g., Harper, Mister, and Strawser 1987, Maines and McDaniel 2000) suggests the way in which information is communicated, through different presentation formats, can also impact on the quality of decision making. For example, in the context of pension funds, Kozup, Howlett, and Pagano (2008) find that summary information provided in a graphical format facilitated individuals' decision making.

We surveyed 577 pension fund members and find that financial literacy and the presentation format affected participants' ability to locate information in the pension benefit statements. We provided participants with statements that manipulated the location of information on administrative costs (in particular, management fees and costs).⁴ In one set of the statements (i.e., original placement format), information on management fees and costs were reflected in the investment summary, on the first page of the statement, but only to the extent that a 'net investment returns' figure and an account keeping fee figure were reported. This is the typical presentation format used in Australian pension benefit statements.

4. Administrative costs include "all expenses of an administrative and investment nature" (Bateman and Mitchell 2004, pp. 66). Management fees and costs refer to the subset of costs or expenses that are of an investment nature.

More detailed information on management fees and costs were provided in a later section of the statement. In the other set of statements (i.e., modified placement format), we manipulated the location of the management fees and costs information so that it was more salient in the investment summary section on the first page of the statement.

Participants were each provided with pension benefit statements of two funds prepared either using the original placement or modified placement. Although the two statements presented to a participant were prepared using the same format, the two funds differed in the management fees and costs charged by the fund. In addition to participants' financial literacy, we find presentation format significantly affected the participants' ability to identify management fees and costs. As the modified format increased the salience of this information, participants were better able to make assessments regarding the relative performance of the two funds.

In further analysis, we find that presentation format can augment the decision making of those who possess intermediate levels of financial literacy. Specifically, investors in this group who received the modified presentation format were more likely to locate the information on management fees and costs and correctly assess the relative performance of the funds than those who received the original presentation format. This was not evident in the other financial literacy groups. For those with low financial literacy, the modified presentation format facilitated their ability to locate the information, but neither format helped them in assessing the relative performance of the funds. Those with high financial literacy skills did not benefit from the modified presentation format in executing either task. Taken together, this analysis suggests that, in addition to improving financial literacy skills, there are extra benefits to be gained by increasing the salience of key information in pension benefit statements. Regulators can take comfort in knowing there is value in having financial literacy programs but we suggest the benefit of these programs can be accentuated by prescribing the way information is presented.

The remainder of this paper is structured as follows. The next section provides a brief review of the effect of presentation format. This is followed by a discussion of the research method. The data and descriptive statistics are described in Section 4 and the results of the study are presented in Section 5. Section 6 provides our conclusions and suggestions for future research.

PRIOR RESEARCH

Presentation format refers to the way in which information is provided to the reader. Individuals possess limited information processing capabilities. Consequently, individuals may not be able to assimilate information when inundated by substantial amounts. Presentation format can facilitate decision making by easing cognitive processes by minimizing search efforts (Payne 1982). Similarly, Hibbard and Peters (2003) posit that when faced with difficult decisions, the way in which information is presented can influence individual's attention to information and subsequently affect the choices individuals make.

Prior studies have used experimental research designs to examine the effect of information presentation on individuals' judgments and perceptions. For example, the *placement* of information has been one of the dimensions investigated. Placement refers to the location of the information, and can influence decision making as the placement of information may affect an individual's perception of the salience of the information (Bonner 2008, Cardinaels 2008, Kozup, Howlett, and Pagano 2008). The findings from this strand of research are generally consistent, revealing that decisions are, indeed, affected by placement. For example, several studies have investigated the effect of presenting information in two alternative forms (either in the main body of the financial statements or in the footnotes to the financial statements). While Wilkins and Zimmer (1983) find no difference in lending officers' assessments of credit worthiness when presenting lease information in the alternative formats, Harper and Mister (1991)

and Harper, Mister, and Strawser (1987) find the location of the information affect commercial lenders' judgments.⁵

Maines and McDaniel (2000) propose a framework to explain how presentation format influences individuals' judgments. Focusing on non-professional investors, Maines and McDaniel (2000) suggest presentation format influenced decision-making via its impact on cognitive processes. Non-professional investors typically lack investment knowledge and expertise. Their limited understanding of the importance of financial statement items and the associations among financial information led Maines and McDaniel (2000) to suggest that this group of investors deduced the importance of financial statement information based on the way it was presented. Thus, the placement of information is a pertinent consideration since a prominent location can signal importance or usefulness. As Frederickson and Miller (2004, 672) note, “[n]onprofessional investors are likely to perceive prominent information as being more important than less prominent information”.

We examine whether changing the location (and therefore the salience of information) makes information more accessible and improves investors' decision-making. Specifically, we focus on whether presentation format can assist individuals in: (i) finding information that is deemed to be important for superannuation decision making, and (ii) assessing the performance of the superannuation fund provider (i.e., performance measured in terms of the amount earned for the individual by the fund provider relative to the fees and costs charged by the provider). Our contribution is to examine the incremental benefit of presentation format to financial literacy programs.

5. Archival studies have similarly documented the effect of the placement of information on the market's perception of the reliability of the information (e.g., Davis-Friday, Liu, and Mittelstaedt 2004).

RESEARCH METHOD

The accessibility and decision usefulness of information is examined from the context of the fees and costs charged by fund providers. Given that Australian investors have the flexibility of choosing their fund provider, knowing the fees and costs owed to the fund provider for management services is an important consideration (Australian Securities & Investments Commission 2013, Creighton 2012). In the U.S., Dugas (2012) suggests investors are often not aware of the amounts charged to them. In the absence of this knowledge, it is difficult for investors to assess the fund managers' performance.

We used a 2 (*placement*) x 2 (*management cost*) mixed factorial experimental design. *Placement* is manipulated as either the original placement or a modified placement. In Australia, pension benefit statements⁶ currently received by individuals are separated into sections comprising the investment summary (i.e., main section) and additional information (i.e., subsequent sections). Information on management fees and costs are reflected in the investment summary only to the extent that a 'net investment returns' figure and an account keeping fee figure are reported.⁷ Detailed information on management fees and costs are provided in the additional information section. In the modified placement, we manipulated the location of the management fees and costs information so that it is more apparent in the investment summary section. Specifically, we showed the component parts of 'net investment returns' (i.e., 'gross investment return' and 'management costs') as separate line items. However, similar to the current pension benefit statement, we kept the account keeping fees as a separate figure reported in the investment summary and we also kept the details of management fees and costs in the additional information section.

6. In Australia, pension benefit statements are referred as Member Statements.

7. Net investment return is calculated as the gross investment returns less management fees. However, only the net figure is provided without any detail or explanation as to how the figure is calculated.

Management cost is manipulated as either a fund with higher management fees and costs or a fund with lower management fees and costs. In the higher management cost scenario, the percentage fee charged based on the average balance (4.5% p.a.)⁸ is higher than in the lower cost scenario (1.5% p.a.). The four possible combinations of Member Statements were named: Super North (original placement with low management cost); Super South (original placement with high management cost); Super East (modified placement with low management cost); and Super West (modified placement with high management cost). *Placement* was a between-subjects variable, but subjects received both scenarios for *management cost*. That is, each subject received two Member Statements (one with the higher management cost and one with the lower management cost), but the placement format was identical in both case studies.

The experiment was conducted on-line and the research instrument was in three parts. The first part sought demographic and background information about the participant. This part also contained some general questions about retirement savings, which were designed to ascertain participants' financial literacy and their perceived level of understanding of the Australian retirement savings system. In Part 2, participants were presented with the two Member Statements and asked a series of questions for each statement. The task is described in more detail below. In the third part, we asked participants about their own retirement savings affairs. Participants were asked questions such as: how many pension funds did they have; how often they received statements from their fund; did they use other facilities or services offered by their fund provider; whether they reviewed the statements received from their fund (i.e., what sections of the statements did they focus on and how regularly). These questions provided insights on individuals' levels of effort and involvement in their own retirement savings.

In Part 2, participants were tasked with reviewing the Member Statement for two hypothetical pension funds and answering a series of questions for each fund. Each participant received two cases: Super North

8. In a fund fee survey conducted in Australia in December 2013, the highest total fund fee paid was 4.08% on an account with a balance of \$25,000 (Chant West Pty Ltd 2014). The percent fee paid is dependent on the balance and is lower for accounts with higher balances.

and South or Super East and West combinations. Participants were randomly assigned to a combination, and the order in which they received each case was randomized. For each case, once the participant moved onto a new question, they were prevented from going back to change earlier responses. They could, however, retrieve and review the Member Statement at any time. Once participants moved onto the second case, they were prevented from revisiting the first case.

For each case, participants were asked to assume they were a member of the pension fund and earned an annual income of \$60,000. They were presented with a Member Statement for the fund. Each Member Statement was a two-page document. Section 1 of the Statement was headed 'Account Summary', and provided account information for the most recent fiscal year, showing the opening balance, closing balance, and movements during the fiscal year.

Section 2 of the Statement was headed 'Investment Details' and showed the member's investment plan, detailing the number of units and unit prices for the opening and closing balances. In Section 3, information on asset allocations (i.e., Australian shares, international shares, cash etc.) was illustrated as percentages in a pie chart. Information on investment plan returns was provided in Section 4. Section 5 provided information on the total fees and costs paid by the individual to the fund provider. The total of fees and costs comprised account keeping fees and other management costs. Section 6 rounded out the document, and was headed 'Additional Information'. This section informed individuals that they could obtain further information on their pension plan by contacting the fund provider.

The information contained in the Member Statements of all the cases was the same except for the manipulated items, *placement* and *management costs*. As shown in Figure 1 Panel A, for *original placement*, Section 1 (Account Summary) showed a 'net investment return' value whereas, for the *modified placement*, Section 1 (Account Summary) showed the component parts of 'net investment

return’ as the separate values of ‘gross investment return’ and ‘management costs’ (see Table 1 Panel B). *Management costs* were manipulated in Section 5.⁹ The *higher management cost* version showed management costs to be \$2,606.54 while *lower management cost* was shown as \$804.16.

For each case, participants were asked to respond to a series of questions based on information contained in the statements. These questions involved locating information, interpreting information and providing an assessment based on the information in the statements. For example, the questions asked participants to: (i) identify the total fees and costs charged by the fund, and (ii) rate the reasonableness of the total fees and costs charged by the fund relative to the amount the fund earned for the individual.¹⁰ For the question on total fees and costs charged, participants were asked to provide a dollar value. They were also given an option to tick a box labeled “Can’t tell from the statement”. For the reasonableness question, participants were asked to provide a response on a seven-point scale, ranging from 1 (not reasonable) to 7 (very reasonable). The mid-point (4) was labeled ‘reasonable’. To assess the relative performance of the two funds, we then compared the responses to this question across the two funds for each individual. We expect that the higher performing fund would be perceived as more reasonable.

DATA AND DESCRIPTIVE STATISTICS OF SAMPLE

The sample was sourced from a panel provided by MyOpinions, an online survey company. Based on the predicted response rate of 20% and target sample size of 600, invitations were sent to 11,949 participants. The actual response rate was 33% but the sample was reduced due to drop outs (387), failure to meet the screening questions (2,423), and our demographic quota (558).¹¹ We also excluded 24 responses that were

9. The effect of manipulation also flows through the investment return amount in Section 1.

10. Since each participant was asked to complete two cases, the broader set of questions was utilised to make what we were testing less obvious. Also, the broader set of questions served as a validity check. That is, and as discussed in more detail in the Results section, there should not be significant differences in the responses to questions that related to information that was held constant across the different formats.

11. A participant was screened out if she or her employer did not make contributions to the participant’s superannuation fund account. The participant was also screened out if her primary superannuation fund is a self-managed superannuation fund. The demographic criteria (i.e., gender, education level and location of dwelling) were imposed so that the composition of the sample is similar to that used in surveys conducted by the Australian Bureau of Statistics.

completed in less than five minutes as it is unlikely a genuine response could be made within that time. The final sample comprises responses from 577 participants.

Table 1 provides a description of the sample. The survey company targeted participants so that the composition of the final sample in terms of age groups and locations of dwelling is representative of the Australian population. There is a spread across education levels, with 26% of the participants having completed high school, 29% having completed vocational education and training and 45% having completed tertiary education. Most participants (93%) are currently employed or self-employed, 92% have employers that make contributions on their behalf to pension funds and less than half of the participants (47%) make additional personal contributions to the pension fund. As members of pension funds, participants in our sample are recipients of pension benefit statements and are representative of the population that should be engaged in managing their retirement savings affairs.

[Insert Table 1 about here]

RESULTS

In this section, we report on participants' perceived level of understanding of the retirement savings system and the effort they make in managing their retirement savings affairs. We also summarise the responses to the financial literacy questions adapted from Lusardi, Mitchell, and Curto (2010), Lusardi and Mitchell (2011a) and van Rooij, Lusardi, and Alessie (2011). For the experiment, we report the responses to the experiment and conduct logistic and ordinary least squares regression analysis on the effect of *placement* on the participant's ability to locate the required information and assess the performance of the funds.

Level of Understanding and Effort

In Part 1 of the questionnaire, participants were asked to rate their knowledge (on a five-point scale, where 1 = poor, 3 = average, and 5 = excellent) of the Australian retirement savings system and their understanding of terms used in pension fund statements.¹² Most participants (78%) rated themselves having an average or above average perceived understanding of the contributions that their employer has to make to their pension fund (mean=3.2). Participants' perceived knowledge of the preservation age (i.e., when they are able to access the funds) was rated as 'average' (mean = 3.1). The participants' perceived knowledge is lower on questions pertaining to: where and how pension funds are invested (mean=2.8); the taxes charged on retirement savings contributions (mean=2.7); and the factors that determine the final benefit that can be withdrawn from their pension fund (mean=2.6). The results suggest participants perceived themselves to be more knowledgeable about contributions they have to make to their pension fund but less knowledgeable about taxes and the investment returns that may be generated. We sum the ratings on the five items for a proxy of the participants' perceived knowledge of the Australian retirement savings system, *Knowledge*.

In rating their familiarity with terms used in the pension benefit statements, the participants expressed more familiarity with terms associated with contributions (mean=3.6), fees and charges (mean=3.2) and the returns that they receive (mean=3.0). They are less familiar with terms such as preserved benefits (mean=2.6), defined contribution (mean=2.3) and defined benefit plans (mean=2.3). Overall, while the participants are aware of contributions that they or their employer makes to their funds, they are less familiar with terms such as fees and charges levied by the funds and the returns that they are getting from or are reported by the funds. We sum the rating on the six items to form a proxy for the participants' perceived knowledge of the terms used in the pension fund industry, *Familiarity*.

12. Summary results are not tabulated but available from the authors.

Table 2 presents a summary of the participants' responses to questions assessing the level of effort the participants put towards managing their retirement savings. The majority of the participants do not have a financial plan for their retirement developed professionally (89%). Of the 512 participants who do not have a professionally developed financial plan, only 14% have a financial plan developed personally. And of those who do not have a financial plan developed either professionally or personally (n=438), only 9% is very likely to have one developed in the next five years. While a large proportion of the participants have not discussed their financial affairs with a financial planner, 39% claim to have read their statements either carefully or very carefully. We use responses to this question to formulate the first proxy for the effort participants expend in dealing with their retirement savings, *ReadCare*. Participants who indicated that they did not read their statements carefully were asked why this was the case. The main reasons offered are: (1) they are not concerned about their retirement savings at this point in time (43%), and (2) their failure to understand the statements (34%).

[Insert Table 2 about here]

In Part 3 of the research instrument, participants were asked about the actions they take when they receive their pension benefit statements. The responses indicate that participants are more likely to look at the beginning and ending balances (average score of 5.8 out of 7), look at the contributions that have made to the fund (mean=5.5), and look at the fees charged by the fund (mean=5.3). They are less likely to look at what has caused the change in the balance over the period (mean=5.0), read past the first page of the statement (mean=4.9), look at the dollar value (mean=4.7) or percentage rate (mean=4.4) of investment return. They are least likely to evaluate alternative investment options offered by their pension plan (mean=3.6) or to investigate the possibility of changing their pension plan provider (mean=3.1). We use

the item “read past the first page of the statement” as a second proxy of the effort the participants usually expend in dealing with their retirement savings, *ReadPastFirst*.¹³

A person’s financial knowledge has been shown to affect their investment behavior. For instance, financial literacy is positively associated with stock market participation (van Rooij, Lusardi, and Alessie 2011), private retirement saving (Bucher-Koenen 2009), portfolio diversification (Guiso and Jappelli 2008) and wealth holdings (Lusardi and Mitchell 2007). In the academic literature, the term “financial literacy” has referred to, amongst other things, the knowledge of financial products, the knowledge of financial concepts, and having the mathematical or numeracy skills necessary for effective financial decision making (Hastings, Madrian, and Skimmyhorn 2013). Lusardi and Mitchell (2011b) provide an overview of the results obtained from eight countries. Although the questions used to measure financial literacy were tailored to suit each country, the questions reflected three basic economic concepts that individuals need to understand in order to make effective financial decisions: (1) understanding of interest compounding, (2) understanding of inflation, and (3) understanding of diversification.

Table 3 presents the summary of the financial literacy test results from Part 1. The questions from Lusardi and Mitchell (2011a) and van Rooij, Lusardi, and Alessie (2011) are adapted using terms that are more commonly used in Australia. The first two questions are on interest calculations, the third is on inflation and the last is on the benefits of diversification. The first three questions provide an indication of a participant’s ability and knowledge in basic financial literacy, while the last question provides an indication of their financial literacy sophistication. The majority (more than 70%) of the participants were able to answer the first three questions correctly. Approximately 42% of the participants answered the last question incorrectly or were not able to answer the last question. The findings are similar to van Rooij, Lusardi, and Alessie (2011) where the majority of respondents to their survey display basic financial

13. The two proxies, *ReadPastFirst* and *ReadCare*, have a Pearson correlation of 0.611 and Spearman-rank correlation of 0.592.

knowledge and have some grasp of concepts such as interest compounding and inflation. However, many do not know the basics of risk diversification. We code the responses to these questions as dummy variables (*LitNum*¹⁴, *LitInflat* and *LitDiv*) taking the value of 1 if the participants answered the question correctly.¹⁵

[Insert Table 3 about here]

Experiment Results

Locating Financial Information

In Part 2 of the research instrument, the participants were asked to review the Member Statements of two separate funds (labeled Case1 and Case2, respectively) and respond to a series of questions (see Table 4) on locating financial information and assessing the relative performance of the funds.

[Insert Table 4 about here]

Question 1 is one of several questions asked and served as a validity check for the experiment. The information relating to this question are held constant across the different formats and, as such, there should not be differences in the responses to these questions. In response to question 1 (which asked participants to identify changes in the balances), most participants (> 85%) were able to identify that the

14 We code the dummy variable *LitNum* with value of 1 if the participant answered the first two questions on interest calculations correctly, zero if they answered either of the questions incorrectly.

15. In results not tabulated, we find evidence that financial literacy varies with age. In particular, older participants are more likely to provide correct answers to the questions on inflation and diversification. However, the participant's age does not significantly affect their ability to answer the question on interest compounding. The findings are similar to those in Bateman et al. (2012).

balances in the funds have increased. As expected,¹⁶ we do not find a difference between the proportions of participants that answered question 1 correctly for the two treatment groups ($\chi^2=0.123, p=0.726$).

As for question 2 (which asked participants to determine if the contributions made by the employer was above, equal or below the required rate of 9%), approximately 65% of the participants were able to respond correctly. As expected, we do not find a significant difference in the proportion of correct responses across the two treatment groups ($\chi^2=0.206, p=0.650$) since the placement of the information is held constant across both formats.

When asked about the total amount of fees (question 3), we find participants presented with the original format were less likely to identify the total amount of fees and charges correctly. When presented with the first statement produced under the original format (i.e., original format Case1), 41% of the 294 participants were able to correctly identify the fees and charges. By contrast, 56% of the 283 participants presented with the first statement produced under the modified format were able to correctly identify the fees and charges. Unlike the responses for questions 1 and 2, the placement manipulation results in a significant difference between the proportions of participants that answered question 3 correctly ($\chi^2=12.45, p=0.000$). When presented with the second statement under the original (modified) format, 64% (67%) of the participants correctly identify the fees and charges. In their review of the second statement, the placement manipulation does not significantly affect the participant's ability to answer the location question correctly ($\chi^2=0.794, p=0.373$). This suggests the questions that we asked may have drawn the participant's attention to the required information and that responses to the questions in Case 2 reflect that learning has occurred.¹⁷

16. The task requires participants to locate information in the summary box on the first page of the Statement in both formats (See Figure 1A and B).

17. Given our concerns that learning might have occurred, we use only Case1 in analysing the participants' ability to locate financial information in the statements. For the relative performance assessment task, it is necessary to use both cases to ascertain the relativity. However, if learning did occur, that effect would be present in both the original placement and the modified placement scenarios. Therefore, the effects of learning should be mitigated when we compare the participants' responses under the two scenarios.

In summary, we show that the participants are more likely to correctly identify the fees when the statements are presented using the modified format. In addition, the participants are better able to identify the fees and charges when presented with the second statement regardless of the placement manipulation. When asked how easy was it to find the information required to help answer the questions in the experiment (question 4) , the participants' responses indicate that they found it easier to locate the information when (1) the statements are presented in the modified format (mean_{modified/case1}=3.60 and mean_{original/case1}=3.95, t -stat=2.34 p =0.020),¹⁸ and (2) when reviewing the second statement, i.e., Case2 (mean_{Case1}=3.78 and mean_{Case2}=3.35, t -stat=4.05, p =0.000).

Table 5 presents the results of logistic regressions for the dependent dichotomous dummy variable that denotes if the participant has correctly identified the fee and charges. The main logistic regression model is shown below where the *logit* of the underlying probability π_i is a linear function of the predictors:

$$\begin{aligned} \text{logit}(\pi_i) = & \alpha + \beta_1 \text{Placement}_i + \beta_2 \text{Literacy}_i + \beta_3 \text{Education}_i + \beta_4 \text{Knowledge}_i \\ & + \beta_5 \text{MgtCost}_i + \beta_6 \text{ReadPastFirst}_i + \varepsilon_i \end{aligned} \quad (1)$$

where the variables are defined as follows:

Placement a dummy variable that takes on the value of one if the Member Statement analysed is presented in the modified format (i.e., Super East and Super West Member Statements).

Literacy denotes the number of the literacy questions that the participant answered correctly (range between 0 and 3). In a modified version of the logit model, we replace this variable with three dummy variables: *LitNum* (*LitInflat*, *LitDiverse*) is a dummy

18. The rating score has a maximum of 7 and the mean scores presented are based on participants' answers in Case1. The difference in the rating is not significant when examining the effect of the placement on the second statement reviewed (i.e., Case2).

variable that takes on the value of one if the participant answered the numeracy (inflation, diversification) question correctly.

Education a dummy variable that takes on the value of one if the participant has completed a University education (i.e., undergraduate or postgraduate).

Knowledge a score that ranges between 5 and 25 and measures the participant's perceived level of knowledge on the Australian retirement savings system.

MgtCost a dummy variable that takes on the value of one if the statement first presented is of the relatively poor performing fund.

ReadPastFirst is the participant's perceived likelihood of reading past the first page of the statement when they received the statement (range between 1 and 7).

We use a between-subjects setting where we examine the responses to the first statement the participants were tasked to review. In the model shown in column 1, we use *Placement* as the only independent variable and find placement does make a difference to the participants' ability to identify the fee and charges (Coeff=0.562, z-Stat=3.11). In the model presented in column 2, we control for other factors such as the fund's performance and also participant's characteristics including education level, perceived knowledge of super, financial literacy and the effort they usually make when reading their retirement savings fund statements. We find participants who have a higher financial literacy score, *Literacy*, or who typically read past the first page of their statement, *ReadPastFirst*, are more likely to correctly identify the charges and fees (significant at 1%).

[Insert Table 5 about here]

In column 3, instead of including the *Literacy* score in the logistic regression, we include the three components, i.e., *LitNum*, *LinInflat* and *LitDiv*. The effect of placement on the ability of the participants

remains highly significant in this specification of the logistic regression. As part of our robustness checks, we recalibrate the models using the variable *ReadCare* instead of *ReadPastFirst* to proxy for participant's effort in dealing with their own retirement savings funds. We do not find those who claim that they read their statements carefully, *ReadCare*, are more likely to identify the charges and fees (significant at 10%). In untabulated results, we also control for participant's age but do not find age to be a significant explanatory variable. More importantly, our variable of interest, *Placement*, remains highly significant ($p < 0.01$) in these alternative specifications.¹⁹

Assessment of Fund Performance

In reviewing the two Member Statements, participants were asked to rate the fees and costs charged by the two funds. The participants were asked the following question “[i]n your opinion, are the total fees and costs charged by this fund reasonable relative to the amount the fund has earned for you?” and asked to rate the funds using a seven-point scale. As each participant is presented with statements from two funds with different management cost, we are able to examine whether financial literacy and presentation format (i.e., placement) assist participants in rating and differentiating the two funds.

Table 6 presents a summary of the ratings that participants gave to the different funds. Depending on the group assigned, the participant was given statements presented using either the *original placement* or *modified placement*. Within each group, we also randomised the order by which we present the statements. Half of the group reviewed a fund with the higher *management cost* first (i.e., Super South or Super East), and the other half reviewed a fund with the lower *management cost* first (i.e., Super North or Super West).

[Insert Table 6 about here]

19. We also recalibrate the models by excluding the participants who are either retired or currently not employed. We were concerned that these participants are not active contributors to their superannuation and may not be representative of the sample of interest. Our results are robust to the exclusions of these observations. In additional robustness tests, we excluded the observations from participants who did not correctly answer the validity check question, i.e., Question 1 in Table 4. Again, the results are robust to the exclusions.

Regardless of the *placement* or the order by which the funds were presented, the participants were able to differentiate the funds where asked about the reasonableness of the fees and costs charged. That is, participants were on average able to assign a better rating to the funds with the lower management cost (i.e., Super North and Super East). We computed the difference in the ratings (*Diff*) given by each participant to the two funds they were presented with. An *F*-test on the difference in the ratings shows the subgroups are significantly different from each other. The results in Table 6 shows the difference in the ratings is the highest when the participants reviewed statements of funds presented using the modified format and asked to review the fund with the higher management cost first (Case1= West/ Case2=East).

We do not find the difference in the ratings for the Case1=East/Case2=West combination (i.e., using the modified format and to review the fund with the lower management cost first) to be different from those who reviewed statements presented using the original format. It is likely that participants generally assign a conservative (i.e., low) rating to the first fund reviewed. Consequently, in the Case1=East/Case2=West combination, having rated the first fund (i.e., better performing fund) low on the seven-point scale, there is less scope for the participant to mark down the poor performing fund. Thus, it is pertinent that we control for the order effect in our analysis of the data from the experiment.

We used ordinary least squares regression models to analyze the effect of financial literacy and placement on the dependent variable *Diff*. The main model is shown below:

$$\begin{aligned}
 Diff_i = & \gamma + \delta_1 Placement_i + \delta_2 Literacy_i + \delta_3 Order_i + \delta_4 Education_i \\
 & + \delta_5 Knowledge_i + \delta_6 ReadPastFirst_i + e_i
 \end{aligned}
 \tag{2}$$

where the variables are defined as follows:

Diff is the difference in the ratings given by each participant to the two funds they reviewed.

Order is a dummy variable that takes on the value of one if the first statement reviewed is of the relatively poor performing fund.

Table 7 Column 1 shows *placement* does affect the ratings that the participants give to the funds (coeff=0.434, *t*-stat=2.47). That is, participants when reviewing statements presented in the modified format are more likely to assign different ratings to the two funds they are evaluating. In models presented in columns (2) and (3), we controlled for the order in which the statements are presented, financial literacy, education level, and level of effort made by the participants when reading their own pension benefit statements they receive. As expected, we find participants who are more financially literate assign more dissimilar ratings to the two funds reviewed (coeff=0.355, *t*-stat=3.33).

[Insert Table 7 about here]

We also find the difference in the ratings, *Diff*, is larger when the participants are asked to first review a fund with higher management costs (coeff=0.647, *t*-stat=3.72). As explained previously, this is likely to be due to the general tendency to assign a low score to the first fund being assessed. Thus, there is less scope to assign a lower score if the second fund being assessed is a poorer performer. Similar to the results in Table 5, the perceived knowledge of the Australian retirement savings system (*Knowledge*) does not affect the participants' ability to differentiate between the two funds.

As part of our robustness checks, we recalibrated the models (results are untabulated) using the variable *ReadCare* instead of *ReadPastFirst* to proxy for participant's effort in dealing with their own retirement savings funds. We also controlled for the participant's age in the model using a series of dummy

variables. Our results on the effect of placement are robust to the use of different proxies and inclusion of other control variables.²⁰

Incremental Effect of Presentation Format Over Financial Literacy

To examine whether the modified presentation format provided additional benefits beyond that of financial literacy alone, we used sub-samples partitioned by financial literacy and tested whether presentation format made a difference in: (i) locating the management cost information, and (ii) assessing the relative performance of different funds. Kozup, Howlett, and Pagano (2008) find that investors' perception of their investment knowledge moderated the effects of supplementary information on their expectations of fund performance and risks. While Kozup, Howlett, and Pagano (2008) adopt a subjective measure of investment knowledge, we create three sub-samples based on participants' objective financial literacy test results and classified as: low financial literacy ($Literacy = 0, 1$); intermediate financial literacy ($Literacy = 2$); and high financial literacy ($Literacy = 3$).

Table 8 Panel A presents the results of the logistic regressions on participants' ability to locate the management cost information, and Panel B summarizes the regression results on participants' ability to distinguish between funds of differing performance. For participants with high literacy, there is no significant difference between the original presentation format and the modified presentation format either on individuals' ability to locate management cost information or on their assessment of fund performance. This finding is not surprising as this group of individuals already possess the capability to perform these tasks without further assistance. However, the results reveal there are benefits to be gained from financial literacy programs and a modified presentation format by groups who possess low or intermediate levels of financial literacy.

20. We also recalibrate the models by excluding the participants who are either retired or currently not employed. Our results are robust to the exclusions of these observations.

[Insert Table 8 about here]

Table 8 Panel A shows that placement affects the ability of individuals with low and intermediate literacy to locate information. For these groups of participants, the modified presentation format heightens the saliency of the information thus making it easier to locate.

Table 8 Panel B suggests that the modified presentation format provides some incremental benefits for decision-making, but this is dependent on the financial literacy levels of the individuals. For those with low financial literacy, the modified presentation format does not facilitate their assessment of the relative performance of the funds. However, for participants with intermediate levels of financial literacy, the modified presentation format aids their assessment. The discussion above suggests that there is a role for both financial literacy programs as well as prescribing the way information is presented in pension benefit statements.

CONCLUSIONS

We used an experimental design that involved 577 pension fund members in Australia to examine whether presentation format assists individuals to find information relating to fees and costs and to correctly assess the relative performance of funds. We also investigated whether a modified format can lead to positive outcomes beyond those achieved by financial literacy alone. As part of our study, we surveyed participants on their perceived knowledge and familiarity with the Australian retirement savings system, and assess their financial literacy and measure the effort they make in managing their own retirement savings affairs. We find variation in the levels of effort exerted and financial literacy in our sample of participants. We developed measures to control for knowledge, financial literacy and effort expended in our analysis of the effects of presentation format. While financial literacy is an important

factor, we find presentation format affects saliency and enhances participants' ability to locate information regarding management fees and costs and assess the performance of the funds.

We also find that, in addition to financial literacy programs, the inclusion of a modified presentation format that increases the salience of information can improve decision making. Educational interventions have both real costs and much larger opportunity costs such as by displacing other high school elective courses. These costs are estimated to be in the "billions of dollars annually" (p. 2, Fernandes, Lynch, and Netemeyer 2014). While our findings support the agenda of regulators to promote financial literacy, we argue that there is scope for further interventions. In particular, our results suggest incremental benefits can accrue from the use of presentation formats that communicate better necessary information. Regulators in the U.S. and Australia have recently implemented reforms on the disclosure requirements for retirement/superannuation funds. For example, the Department of Labor in the U.S. now requires more disclosure on the fees charged by 401(k) funds in the form of an annual and a quarterly fee-disclosure statement. While the required disclosure will provide additional information, there are concerns that the fee document will be a lengthy wordy document that may be too complex for the average individual (Dugas 2012). Our results suggest that saliency is an important factor and this should be considered in further deliberations on the length and format of these statements.

Finally, we note that pension benefit statements received by members are typically more voluminous than the experimental version used in this study but time constraints imposed by the experiment precluded the use of more detailed statements. We did, however, endeavor to ensure that the information we included in the experimental instrument was a faithful, albeit shortened, representation of the statement received by pension fund members. Also, there are other decisions that pension fund members must make in managing their retirement savings affairs. However we choose to focus on the important assessment of relative fund performance after fees.

References

- Alessie, Rob, Maarten Van Rooij, and Annamaria Lusardi. 2011. "Financial Literacy and Retirement Preparation in the Netherlands." *Journal of Pension Economics and Finance* 10 (04):527-545. doi: 10.1017/S1474747211000461.
- Australian Prudential Regulation Authority. 2013. Insight - Superannuation Industry Overview.
- Australian Securities & Investment Commission. 2008. Australian Investors: At a Glance.
- Australian Securities & Investments Commission. 2013. *Choosing a Super Fund* [Webpage] 2013 [cited 15 October 2013 2013]. Available from <https://www.moneysmart.gov.au/superannuation-and-retirement/how-super-works/choosing-a-super-fund>.
- Bailey, Warren, Alok Kumar, and David Ng. 2011. "Behavioral Biases of Mutual Fund Investors." *Journal of Financial Economics* 102 (1):1-27. doi: 10.1016/j.jfineco.2011.05.002.
- Bateman, Hazel. 2001. Disclosure of Superannuation Fees and Charges. In *Centre for Pensions and Superannuation Discussion Paper*: University of New South Wales.
- Bateman, Hazel, Christine Eckert, John Geweke, Jordan Louviere, Susan Thorp, and Stephen Satchell. 2012. "Financial Competence and Expectations Formation: Evidence from Australia*." *Economic Record* 88 (280):39-63. doi: 10.1111/j.1475-4932.2011.00766.x.
- Bateman, Hazel, and Olivia S Mitchell. 2004. "New Evidence on Pension Plan Design and Administrative Expenses: The Australian Experience." *Journal of Pension Economics and Finance* 3 (1):63-76.
- Bonner, S.E. 2008. *Judgment and Decision Making in Accounting*. NJ: Pearson Education.
- Bucher-Koenen, Tabea. 2009. Financial Literacy and Private Old-Age Provision in Germany—Evidence from SAVE 2008. Mannheim Research Institute for the Economics of Aging.
- Cardinaels, Eddy. 2008. "The Interplay between Cost Accounting Knowledge and Presentation Formats in Cost-based Decision-making." *Accounting, Organizations and Society* 33 (6):582-602.
- Chant West Pty Ltd. 2014. Super Fund Fee Survey December 2013.
- Creighton, Adam. 2012. Exorbitant Super Fees Must End *The Australian*, <http://www.theaustralian.com.au/business/opinion/exorbitant-super-fees-must-end/story-fnc2jivw-1226510180583#>.
- Davis-Friday, Paquita Y., Chao-Shin Liu, and H. Fred Mittelstaedt. 2004. "Recognition and Disclosure Reliability: Evidence from SFAS No. 106*." *Contemporary Accounting Research* 21 (2):399-429. doi: 10.1506/t0vc-q15y-w5qv-4ukq.
- Dugas, Christine. 2012. "New 401(k) Statement will Break Down Plan Expenses." *USA Today*, 6B.
- Fernandes, Daniel, John G. Lynch, and Richard G. Netemeyer. 2014. "Financial Literacy, Financial Education, and Downstream Financial Behaviors." *Management Science* Forthcoming. doi: 10.1287/mnsc.2013.1849.
- Frederickson, James R., and Jeffrey S. Miller. 2004. "The Effects of Pro Forma Earnings Disclosures on Analysts' and Nonprofessional Investors' Equity Valuation Judgments." *The Accounting Review* 79 (3):667-686.
- French, Kenneth R. 2008. "Presidential Address: The Cost of Active Investing." *The Journal of Finance* 63 (4):1537-1573.
- Goetzmann, William N., and Nadav Peles. 1997. "Cognitive Dissonance and Mutual Fund Investors." *Journal of Financial Research* 20 (2):145-158.
- Guiso, Luigi, and Tullio Jappelli. 2008. Financial Literacy and Portfolio Diversification. European University Institute.
- Harper, Robert M., W.G. Mister, and J.R. Strawser. 1987. "The Impact of New Pension Disclosure Rules on Perceptions of Debt." *Journal of Accounting Research* 25 (2):327-330.
- Harper, Robert M., and William G. Mister. 1991. "The Effect of Recognition Versus Disclosure of Unfunded Postretirement Benefits on Lenders' Perceptions of Debt." *Accounting Horizons* 5 (3):50-56.

- Hastings, Justine S, Brigitte C Madrian, and William L Skimmyhorn. 2013. "Financial Literacy, Financial Education and Economic Outcomes." *Annual Review of Economics* 5:347-373.
- Hibbard, Judith H., and Ellen Peters. 2003. "Supporting Informed Consumer Health Care Decisions: Data Presentation Approaches that Facilitate the Use of Information in Choice." *Annual Review of Public Health* 24 (1):413-433. doi: doi:10.1146/annurev.publhealth.24.100901.141005.
- Kozup, John, Elizabeth Howlett, and Michael Pagano. 2008. "The Effects of Summary Information on Consumer Perceptions of Mutual Fund Characteristics." *Journal of Consumer Affairs* 42 (1):37-59. doi: 10.1111/j.1745-6606.2007.00093.x.
- Langford, BenjaminR, RobertW Faff, and VijayaB Marisetty. 2006. "On the Choice of Superannuation Funds in Australia." *Journal of Financial Services Research* 29 (3):255-279. doi: 10.1007/s10693-006-7628-8.
- Lusardi, Annamaria. 2011. Americans' Financial Capability. Report prepared for the Financial Crisis Inquiry Commission, February 26, 2010: National Bureau of Economic Research.
- Lusardi, Annamaria , and Olivia S. Mitchell. 2013. "The Economic Importance of Financial Literacy: Theory and Evidence." *Journal of Economic Literature Forthcoming*.
- Lusardi, Annamaria, and Olivia S. Mitchell. 2007. "Baby Boomer Retirement Security: The Roles of Planning, Financial Literacy, and Housing Wealth." *Journal of Monetary Economics* 54 (1):205-224.
- Lusardi, Annamaria, and Olivia S. Mitchell. 2011a. "Financial Literacy and Retirement Planning in the United States." *Journal of Pension Economics and Finance* 10 (04):509-525. doi: 10.1017/S147474721100045X.
- Lusardi, Annamaria, and Olivia S. Mitchell. 2011b. "Financial Literacy Around the World: An Overview." *Journal of Pension Economics and Finance* 10 (04):497-508. doi: 10.1017/S1474747211000448.
- Lusardi, Annamaria, Olivia S. Mitchell, and Vilsa Curto. 2010. "Financial Literacy Among the Young." *Journal of Consumer Affairs* 44 (2):358-380. doi: 10.1111/j.1745-6606.2010.01173.x.
- Maines, Laureen A., and Linda S. McDaniel. 2000. "Effects of Comprehensive-Income Characteristics on Nonprofessional Investors' Judgments: The Role of Financial-Statement Presentation Format." *The Accounting Review* 75 (2):179-207.
- Patten, Sally. 2014. "Wake Up to Super Fees." *The Australian Financial Review*, 15 March 2014.
- Payne, John W. 1982. "Contingent Decision Behavior." *Psychological Bulletin* 92 (2):382.
- Plan Sponsor Council of America. *55th Annual Survey Highlights* 2014 [cited 8 April 2014]. Available from <http://www.pasca.org/55th-annual-survey-highlights>.
- van Rooij, Maarten, Annamaria Lusardi, and Rob Alessie. 2011. "Financial Literacy and Stock Market Participation." *Journal of Financial Economics* 101 (2):449-472. doi: 10.1016/j.jfineco.2011.03.006.
- Wilkins, Trevor, and Ian Zimmer. 1983. "The Effect of Leasing and Different Methods of Accounting for Leases on Credit Evaluations." *The Accounting Review* 58 (4):749-764.

TABLE 1
Description of Sample

	N	%
Age		
18-24	68	12
25-34	112	19
35-44	118	20
45-54	106	18
55-64	79	14
65-95	94	16
Gender		
Male	289	50
Female	288	50
Employment status		
Self-employed	31	5
Employed	508	88
Retired	21	4
Currently not employed	17	3
Education level		
Primary School	1	0
High School	151	26
Vocational education and training	166	29
Undergraduate	160	28
Postgraduate	99	17
Currently making personal contributions to superannuation fund		
Yes	271	47
No	306	53
Employer currently making contributions to superannuation fund		
Yes	531	92
No	18	3
Not applicable	28	5
Have a self-managed superannuation fund		
Yes	15	3
No	562	97
Location of dwelling		
NSW – New South Wales	184	32
ACT – Australian Capital Territory	13	2
VIC – Victoria	144	25
QLD – Queensland	103	18
SA – South Australia	49	8
TAS – Tasmania	12	2
WA – Western Australia	65	11
NT – Northern Territory	7	1

Notes: This table provides a description of the participants in the experiment based on demographic variables.

TABLE 2
Summary of Effort Level

	N	%
1. Have you ever discussed your financial affairs with a financial planner?		
Yes	211	37
No	366	63
2. Do you have a financial plan for your retirement, developed professionally?		
Yes	65	11
No	512	89
3. Do you have a financial plan for your retirement, developed personally?		
Yes	74	14
No	438	86
4. Are you likely to develop a financial plan in the next five years?		
1 (Not likely)	121	28
2	74	17
3	141	32
4	61	14
5 (Very likely)	41	9
5. How carefully do you read your superannuation statement?		
Don't read it	43	7
Not carefully	122	21
Somewhat carefully	187	32
Carefully	138	24
Very carefully	87	15
Don't receive it	0	0
6. What is the main reason that you do not read the statement carefully?		
I do not understand the statements	119	34
I am not concerned about my superannuation affairs at this point	152	43
Someone else is looking after my superannuation affairs	35	10
I do not have time	78	22
Other reasons	36	10

Notes: This table provides a summary of the participants' responses to questions assessing the level of effort they put towards managing their superannuation matters.

TABLE 3
Summary of Financial Literacy Test Results

Test Question	Correct (%)	Wrong (%)	No answer (%)
1. Imagine you put \$100 into a savings account that pays interest rate of 2% per year and has no charges. Imagine also 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?	77	9	14
2. How much would be in the account at the end of five years?	70	18	12
3. Imagine leaving \$1,000 in a current account that pays 1% interest and has no charges. Imagine also that inflation is running at 2%. Do you think that if you withdraw the money in a year's time you will be able to buy the same amount of goods as if you spent the \$1,000 today?	77	6	17
4. Please indicate whether this statement is true or false: It is usually possible to reduce the risk of investing in the stock market by buying a wide range of shares.	58	11	31

Notes: This table provides the percentage of the total participants who did not provide an answer, answered the question correctly, and answered the question wrongly.

TABLE 4

Summary of Responses to Questions on the Member Statements of Hypothetical Superannuation Funds

	Original Format		Modified Format	
	Case1 (%)	Case2 (%)	Case1 (%)	Case2 (%)
1. Over the year, has your balance in this superannuation fund increased?				
Correct	85	88	87	88
Incorrect	4	4	4	2
Can't tell from the statement	11	9	10	9
2. Based on the statutory rate, the contribution that your employer must make on your behalf is 9% of your salary. This equates to \$5,400 for this reporting period. Is the total contribution (not including investment returns) for the period above, equal or below this amount?				
Correct	63	68	64	65
Incorrect	22	20	21	19
Can't tell from the statement	15	12	15	16
3. What is the total amount of fees and costs charged by this superannuation fund?				
Correct	41	64	56	67
Incorrect	42	20	25	16
Can't tell from the statement	17	16	18	17
4. How easy is it to find the information to help you answer the above questions?				
1 (Easy)	11	18	13	24
2	16	21	20	19
3	12	11	14	12
4	21	22	20	19
5	19	14	16	11
6	12	6	9	9
7 (Difficult)	10	8	7	6

Notes: This table provides a summary of the responses to each of the questions on the Member Statements. Participants were tasked with reviewing the Member Statements for two hypothetical superannuation funds. Each participant received statements presented in either the original or modified format. The first statement reviewed is labeled Case1 and the second is labeled Case2.

TABLE 5
Logistic Regression Results for Placement on Ability to Locate Financial Information

	(1)		(2)		(3)	
	Coeff	z-stat	Coeff	z-stat	Coeff	z-stat
<i>Intercept</i>	-0.343	(-2.90) ***	-2.094	(-5.68) ***	-2.096	(-5.26) ***
<i>Placement</i>	0.592	(3.52) ***	0.562	(3.14) ***	0.639	(3.30) ***
<i>Literacy</i>			0.675	(6.60) ***		
<i>Education</i>			0.202	(1.10)	0.218	(1.11)
<i>Knowledge</i>			-0.028	(-1.23)	-0.022	(-0.90)
<i>MgtCost</i>			0.131	(0.73)	0.098	(0.51)
<i>ReadPastFirst</i>			0.133	(2.39) **	0.130	(2.19) **
<i>LitNum</i>					1.073	(5.10) ***
<i>LitInflat</i>					0.600	(2.32) **
<i>LitDiv</i>					0.162	(0.78)
<i>McFadden R²</i>	0.016		0.102		0.105	
<i>Obs with Dep=0</i>	296		296		263	
<i>Obs with Dep=1</i>	281		281		245	

Notes: The dependent variable in the models is a dummy variable that takes on the value of one if the participant correctly identifies the total fees and charges, zero if otherwise. *Placement* is a dummy variable that takes on the value of one if the Member Statement analyzed is presented in the modified format (i.e., Super East and Super West Member Statements). *LitNum* (*LitInflat*, *LitDiverse*) is a dummy variable that takes on the value of one if the participant answered the numeracy (inflation, diversification) question correctly, zero if otherwise. *Literacy* denotes the number of the literacy questions that the participant answered correctly (range between 1 and 3). *MgtCost* is a dummy variable that takes on the value of one if the statement first presented is of the relatively poor performing fund. *Education* is a dummy variable that takes on the value of one if the participant has completed a University education (i.e., undergraduate or postgraduate). *Knowledge* is a score that ranges between 5 and 25 and measures the participant's perceived level of knowledge on the Australian superannuation system. *ReadPastFirst* is the participant's perceived likelihood of reading past the first page of the statement when they received the statement (range between 1 and 7).

* $p < .10$; ** $p < .05$; *** $p < .01$

TABLE 6
Rating on the Reasonableness of Fee Across Different Subgroups

	Case1		Case2		Diff	
	Mean	Stdev	Mean	Stdev	Mean	Stdev
Panel A: Original format						
Case1=North/Case2=South	3.352	1.99	2.089	1.82	1.191	1.57
Case1= South/ Case2=North	3.154	2.31	4.242	2.01	1.091	2.25
Panel B: Modified format						
Case1=East/Case2=West	2.653	1.67	1.720	1.51	0.929	1.43
Case1= West/ Case2=East	1.770	1.36	4.068	1.88	2.248	1.89

Notes: The table provides a summary of the ratings that participants gave on the fees and costs charged by the superannuation funds they were asked to review. Participants were tasked with reviewing the Member Statements for two hypothetical superannuation funds. Each participant received statements presented in either the original or modified format. The first statement reviewed is labeled Case1 and the second is labeled Case2. The participants were asked the following question “[i]n your opinion, are the total fees and costs charged by this superannuation fund reasonable relative to the amount the fund has earned for you?” and asked to rate the funds using a seven point scale where 1 = Not reasonable, 4 = Reasonable, 7 = Very reasonable, 8 = Can't tell from the statement. *Diff* is the difference in the ratings given by each participant to the two funds they were presented.

TABLE 7
Regression Results on Difference in the Perception of Fees Paid

	(1)		(2)		(3)	
	Coeff	<i>t</i> -stat	Coeff	<i>t</i> -stat	Coeff	<i>t</i> -stat
<i>Intercept</i>	1.142	(9.21) ***	0.179	(0.49)	0.191	(0.48)
<i>Placement</i>	0.434	(2.47) **	0.400	(2.32) **	0.545	(2.97) ***
<i>Literacy</i>			0.355	(3.33) ***		
<i>Order</i>			0.647	(3.72) ***	0.601	(3.27) ***
<i>Education</i>			-0.066	(-0.37)	-0.108	(-0.58)
<i>Knowledge</i>			-0.030	(-1.37)	-0.024	(-1.04)
<i>ReadPastFirst</i>			0.068	(1.27)	0.095	(1.68) *
<i>LitNum</i>					0.531	(2.62) ***
<i>LitInflat</i>					-0.134	(-0.49)
<i>LitDiv</i>					0.422	(2.12) **
<i>Adj-R²</i>	0.011		0.055		0.061	
<i>F-test</i>	6.085		5.306		4.171	
<i>Prob(F-stat)</i>	0.014		0.000		0.000	

Notes: The table provides the result of the ordinary least square regressions where the dependent variable (*Diff*) is the difference in the perception of the reasonableness of fees and costs charged by the superannuation fund. The dependent variable is computed as the difference in the ratings given by each participant to the two funds they were provided. *Placement* is a dummy variable that takes on the value of one if the Member Statement analyzed is presented in the modified format (i.e., Super East and Super West Member Statement). *LitNum* (*LitInflat*, *LitDiverse*) is a dummy variable that takes on the value of one if the participant answered the numeracy (inflation, diversification) question correctly, zero if otherwise. *Literacy* denotes the number of the literacy questions that the participant answered correctly (range between 1 and 3). *Order* is a dummy variable that takes on the value of one if the first statement reviewed is of the relatively poor performing fund. *Knowledge* is a score that ranges between 5 and 25 and measures the participant's perceived level of knowledge on the Australian superannuation system. *ReadPastFirst* is the participant's perceived likelihood of reading past the first page of the statement when they received the statement (range between 1 and 7).

* $p < .10$; ** $p < .05$; *** $p < .01$

TABLE 8
Logistic Regression and Regression Results on Ability to Locate Financial Information and Difference in the Perception of Fees Paid for Subsamples Partitioned by Financial Literacy

	(A) <i>Literacy</i> <2		(B) <i>Literacy</i> =2		(C) <i>Literacy</i> >2	
	Coeff	z-Stat/t-Stat	Coeff	z-Stat/t-Stat	Coeff	z-Stat/t-Stat
Panel A: Ability to locate financial information						
<i>Intercept</i>	-1.412	(-2.20) **	-1.003	(-1.75) *	-0.242	(-0.38)
<i>Placement</i>	0.645	(1.77) *	0.715	(2.43) **	0.365	(1.25)
<i>MgtCost</i>	0.040	(0.11)	0.277	(0.93)	0.100	(0.34)
<i>Education</i>	0.513	(1.31)	0.001	(0.00)	0.307	(1.05)
<i>Knowledge</i>	-0.123	(-2.53) **	0.006	(0.17)	0.004	(0.10)
<i>ReadPastFirst</i>	0.326	(2.98) ***	0.069	(0.74)	0.079	(0.85)
<i>McFadden R</i> ²	0.086		0.029			0.014
Obs with Dep=0	121		101			74
Obs with Dep=1	47		93			141
Panel B: Difference in the perception of feeds paid						
<i>Intercept</i>	1.092	(1.53)	1.203	(2.25) **	0.758	(1.25)
<i>Placement</i>	0.225	(0.58)	0.798	(2.91) ***	0.184	(0.69)
<i>MgtCost</i>	0.091	(0.23)	0.316	(1.14)	1.007	(3.70) ***
<i>Education</i>	0.072	(0.00)	0.102	(0.37)	0.000	(0.00)
<i>KnowSuper</i>	0.013	(0.00)	-0.057	(-1.66) *	0.001	(0.04)
<i>ReadPastFirst</i>	1.727	(0.00)	0.021	(0.25)	0.064	(0.71)
<i>Adj-R</i> ²	0.013		0.054		0.050	
<i>F-test</i>	1.218		2.839		3.109	
<i>Prob(F-statistic)</i>	0.309		0.018		0.010	

Notes: Panel A presents the logistic regression results on the ability to locate financial information for subsamples partitioned by financial literacy. The dependent variable in the models is a dummy variable that takes on the value of one if the participant correctly identifies the total fees and charges, zero if otherwise. Panel B presents the regression results on the difference in the perception of feeds paid partitioned by financial literacy. *Placement* is a dummy variable that takes on the value of one if the Member Statement analyzed is presented in the modified format (i.e., Super East and Super West Member Statements). *MgtCost* is a dummy variable that takes on the value of one if the statement first presented is of the relatively poor performing fund. *Education* is a dummy variable that takes on the value of one if the participant has completed a University education (i.e., undergraduate or postgraduate). *Knowledge* is a score that ranges between 5 and 25 and measures the participant's perceived level of knowledge on the Australian superannuation system. *ReadPastFirst* is the participant's perceived likelihood of reading past the first page of the statement when they received the statement (range between 1 and 7). *Literacy* denotes the number of the literacy questions that the participant answered correctly (range between 0 and 3).

* $p < .10$; ** $p < .05$; *** $p < .01$

FIGURE 1

Panel A Excerpt from Member Statement for Super North

Member Statement		<i>SUPER NORTH</i>		Page 1 of 2
Member Number:	123456789	Statement Prepared:	28 Jul 20X1	
Statement Period:	1 Jul 20X0 to 30 Jun 20X1			
Section 1: Account Summary				
For the most recent fiscal year your account information is as follows:				
Description				Amount
Account balance as of July 1 20X0				\$50,000.00
Add:				
Contributions				\$5,400.00
Investment Returns				\$2,546.52
Less:				
Account Keeping Fee				\$120.00
Account balance as of June 30 20X1				\$57,826.52
Please see Section 5 for more information on the fees you have paid.				

Panel B Excerpt from Member Statement for Super East

Member Statement		<i>SUPER EAST</i>		Page 1 of 2
Member Number:	123456789	Statement Prepared:	28 Jul 20X1	
Statement Period:	1 Jul 20X0 to 30 Jun 20X1			
Section 1: Account Summary				
For the most recent fiscal year your account information is as follows:				
Description				Amount
Account balance as of July 1 20X0				\$50,000.00
Add:				
Contributions				\$5,400.00
Investment Returns				
Gross Investment Returns	\$3,350.68			
Less: Other Management Costs	<u>\$804.16</u>			\$2,546.52
Less:				
Account Keeping Fee				\$120.00
Account balance as of June 30 20X1				\$57,826.52
Please see Section 5 for more information on the fees you have paid.				