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MEASURING FINANCIAL PREPARATION FOR RETIREMENT – A NEW SCALE

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MEASURING FINANCIAL PREPARATION FOR RETIREMENT – A NEW SCALE

Abstract:
The increasing volume of work into the financial preparation for retirement has led to independent researchers measuring different aspects of financial preparation for retirement behaviour. This has caused problems in comparing outcomes. This paper presents a Financial Preparation for Retirement Scale (FPRS) that incorporates many of the questions currently being used by researchers but in a common scale that has very high levels of reliability and validity.

Introduction - Measuring Financial Preparation for Retirement

The importance placed upon the need to assess financial preparation for retirement has led to many research projects around the world that relate to a range of activities. his has led to different researchers using different methods to measure financial preparation behaviour, e.g. seeking relevant information (Hersley et al. 2003), going to seminars (Clarke-Murphy and Gerrans 2001), giving thought to retirement (Ameriks et al. 2002), talking to others (RCS 2005), considering when to retire (HSBC 2005) how long any retirement might last (Robinson 2005) or how much money might actually be needed (FINSIA 2006). However, the use of different methods to assess patterns of behaviour can generate problems in comparing outcomes, as it is difficult to determine whether the researchers are measuring the same or different behaviour. In such circumstances it is not possible to determine if the results achieved are a representation of different behaviour patterns or are a merely reflection of the question asked or indeed the different ways the answers are recorded. Developing a measure of financial preparation behaviour that included many of the questions currently being used, but incorporated into a scale, would permit researchers to apply that same measure across different research studies.

This paper reports on the development of the Financial Preparation for Retirement Scale (FPRS) to measure the preparedness of 1000 members of a large Australian pension fund. The dimensions of financial preparation for retirement are first discussed followed by a detailing of the questions used in the FPRS. The approach used to develop and test the scale is then presented along with a description of the sample used. Results setting out the reliability and validity of the scale conclude the paper.

Dimensions of Financial Preparation for Retirement Behaviour

For members of a household to try and determine how much they will need to be able to retire comfortably and then how to invest to achieve that goal is a considerable challenge (Fore, 2003). To plan adequately for retirement requires extensive information, including an understanding of the elaborate rules governing social security and private pensions (A. Lusardi, 1999). In addition, retirement is not a repeated event that provides people with the opportunity to learn from their mistakes. Only at retirement will people realize their errors and their likely magnitude.

The reasons why people do not prepare adequately for retirement are many, with Fore (2003) finding a significant lack of financial knowledge among employees at all levels of many firms. Lusardi (2002b) suggests that some individuals may be poorly informed because for them gaining information is too costly. Aaron (1999) suggests some may be poorly informed because they are not capable of solving the complex problems associated with rational retirement and saving behaviour. Some may simply be taking a 'head in the sand' attitude and ignoring the problem or overestimating the value of their future pension benefits and as a result have an over-optimistic view of their lifestyle in retirement (Elder & Rudolph, 2000). Such an explanation could result from people not having the sophistication and/or knowledge required to make good estimates, or that the type of plan they belong to, i.e. defined benefit, makes such analysis difficult. Such a view is supported by findings that people do not seem to know much about their pension plans (Elder & Rudolph, 2002).

When asked why people had not attempted to work out how much money they would need in retirement a significant proportion said they could not find the time and that they were afraid of the answer (Yakoboski & Dickemper, 1997). Individuals may also procrastinate over something that takes time and effort, such as developing a financial plan (A. Lusardi, 2003a). Some households may simply face high planning costs or lack financial literacy (A Lusardi, Skinner, & Venti, 2001), they may find planning for retirement too complicated and they do not know how to find help to do it (Yakoboski & Dickemper, 1997). Not only do individuals have to spend time collecting information about the variables that are needed to make savings decisions, they also have to overcome any stress associated with what may be to them an unpleasant event, i.e. their retirement and impending morbidity (A. Lusardi, 2003a).

Such a view is supported by Retirement and Confidence Surveys which invariably show that workers in the US have done little retirement planning or saving (RCS, 2001, 2002, 2003, 2004, 2005b). When people have been asked why they have not attempted to calculate how money they need for their retirement, many reply that it is too difficult (A. Lusardi, 2003a). Yet Lusardi reports a significant correlation between thinking about retirement and retirement satisfaction with those thinking 'a lot' about retirement reporting greater levels of satisfaction compared to those who had 'hardly thought at all' about retirement (A. Lusardi, 2000b).

A strong correlation has also been found between the amount of time a person spends developing a financial plan and the accuracy of their estimates of spending needs at retirement (Ameriks, Caplin, & Leahy, 2003). However, there is substantial evidence that many individuals find it difficult to make financial decisions (Fore, 2003), suggesting that members of a typical household may not be sufficiently financially literate to make appropriate savings decisions regarding their financial preparation for retirement (B. Bernheim, 1998).

Financial planning is also shaped by the experience of other individuals, as people learn to plan for retirement from older siblings (A. Lusardi, 2001). They also learn from the experiences of old parents especially if their parents are experiencing financial difficulties (A. Lusardi, 2002a). Economic knowledge may also be positively correlated with the inclination to save because knowledge creates the impetus to save, because high savers have greater incentives to acquire knowledge, or because taste for saving and tastes for financial knowledge are correlated (B. Bernheim & Garret, 2003). However, it is not easy to interpret evidence on retirement preparation behaviour, as there are many reasons why households have low wealth holdings close to retirement.

A number of explanations for low accumulation have been suggested, including that households may rely on pensions or Social Security, they may have little savings because they have low lifetime resources or have been hit by many shocks. In addition, they may accumulate little because they do not face high risks such as unemployment or poor health, or they have some form of insurance against adverse events. The bequest motive is important in explaining accumulation, particularly for those with high education and for richer households (A. Lusardi, 2002a) and they may also expect to receive inheritances or to enjoy big capital gains on their assets as expectations that house prices will increase in the future can be important (A. Lusardi, 2003a). In addition, they may fail to anticipate a prolonged period in retirement or may simply be impatient and discount the future heavily with many baby boomers stating that they plan to work at least part time during their retirement (Uccello, 2001). Plan features have also been found to be important in encouraging participation. Contribution rates including choice over asset allocation (Papke, 2002) and having a retirement plan can be influenced by the availability of a pension and when the benefits will be available (Shaw, 1984). Lusardi also reported that a lack of 'planning' can explain why savings and wealth holdings relating to retirement are so small (A. Lusardi, 1999). People with a high propensity to plan are more likely to save than those with a low propensity, and budgeting appears to have an important relationship to one's propensity to plan (Ameriks, Caplin, & Leahy, 2003). People also procrastinate when faced with making decisions that require immediate effort (Akerlof, 1991) and many suffer from self-control problems and consequently fail to follow through on plans to save (Thaler & Shefrin, 1981).

The Questions Used in the FPRS

In research into financial preparation for retirement, a number of researchers have used several indicators of retirement planning activities based on information from the Health & Retirement Study database. In this database, many of the subjects responses have been limited to one of four responses, 'a lot, some, a little or hardly at all'. Consequently, questions have previously been developed and tested and a number of those have been incorporated in the FPRS. However this will be the first time such questions have been put together as a scale to measure levels of financial preparation.

Hersley et al. (2003) considered several retirement preparation measures. One included actions such as, seeking relevant information and/or advice as well as making various financial calculations with respect to retirement. A second measure considered was based on five 7-point Likert type items that included activities such as collecting information about retirement, establishing how much money will be need in retirement and discussing retirement plans with others. Clarke-Murphy & Gerrans (2001) considered the use of seminars, collecting and using information as well as consulting others when making decisions regarding financial preparation. Lord (2002) reported on a number of studies that related to an individual's propensity to plan/prepare for their retirement. Under the heading 'Giving thought to retirement' Lord referred to research reporting that those who have given 'some' thought to retirement have a 45% greater net worth than those who have 'hardly at all' thought about retirement. Lord also referred to research that reported a correlation between thinking about retirement and retirement satisfaction.

Ameriks et al. (2002a) found a strong correlation between the amount of time people spent thinking about their retirement (and developing a financial plan) and the accuracy of their estimates of spending needs in retirement. Further research provided more evidence on the strength of the correlation between giving thought to retirement (with planning) and net worth once retired (Ameriks, Caplin, & Leahy, 2002b). By asking whether people had given thought to their retirement, along with other questions, Lusardi (2000a; , 2000b) found a lack of planning prevalent among older workers 5 to 10 years away from retirement. Elder & Rudolph (1999) found that thinking about retirement can have a significant impact upon retirement outcomes.

It has been found that many families have not thought about retirement even though they are only a few years away from retirement and the event is imminent (A. Lusardi, 2003b). Elder & Rudolph (1999) suggested that the 'thought about' and 'attended meetings' responses can have a positive impact upon retirement preparation. Lusardi (2002a) found that approximately 30% of households whose head was close to retirement have done little or no planning for retirement (i.e. have given it little or no thought and have not attended any retirement seminars/meetings). Devaney & Su (1997) found that future expectations about the quality of lifestyle in retirement were closely related to the type of financial preparation undertaken. Lusardi (2000b; , 2002a) found that a majority of respondents who had not thought about retirement rated their retirement years as being inferior to the years before retirement. Neukam & Hershley (2003) looked at people thinking about their retirement in terms of the types of images they conjured up about life in retirement and the setting of goals as part of the retirement preparation process. Lusardi (1999) has reported that a great many who have thought little about retirement expect to have no assets at retirement and are generally uninformed about the retirement process. Thinking about retirement was also considered by Chan & Stevens (2004). Industry research found that many had a vague plan for their retirement or simply had not thought about it (Wills, 2001) and a large proportion of Australian pre-retirees have been found to have given little or no thought to preparing financially for their retirement (Newspoll, 2003). Consequently, thinking about retirement was incorporated as one of the questions in the FPRS.

Lusardi (2000b; , 2002a) asked respondents where they obtained their information about preparing for retirement. She concluded that very little work has been done in investigating how households prepare for their retirement and how they collect relevant information to make such decisions. However, she reported that households might make use of a variety of sources of information, including magazines and newspapers when preparing for their retirement. Such findings were supported by the 2005 Retirement Confidence Survey (RCS) which found that when making decisions regarding their financial preparation many utilise the input of family and friends as well as various written materials (RCS, 2005b). Bernheim & Garret (2003) also considered the impact of collecting relevant information about financial preparation for retirement whilst Bernartzi and Thaler (1999) had previously reported that many do not read related material about retirement preparation other than that provided by their pension fund company. Yet an earlier RCS survey found that almost 20% of workers reported that they had made changes as a result of material collected from their employers about financial preparation (RCS, 2003). Consequently, collecting information about retirement and taking action based on that information were measures that were incorporated into the FPRS.

Elder & Rudolph (1999) found that attending seminars/meetings about retirement can have a significant impact upon a persons life in retirement. The Metlife Institute found that approximately 25% of respondents to the 1992 and 2000 AHEAD[1] surveys reported having attended a seminar/meeting on financial preparation with a high proportion of those reporting having a satisfying retirement (Institute, 2002). Madian & Shea (2001) found that attendance at financial education seminars had a significant impact on financial preparation for retirement. Lusardi (2000b; , 2001; , 2003a) also found that attending seminars can have a positive and significant impact with respect to financial preparation for retirement. Bernheim & Garett (2003) reported that seminars can be an effective means of encouraging some types of financial preparation behaviour. Lord (2002) reported upon a number of studies relating to the affects of seminars concerned with retirement preparation and found that participants were more active in their retirement preparation after attending such seminars. Elder & Rudolph (1999) found that preparing for retirement as measured by how much a person thought about retirement and whether they attended retirement planning meetings, was positively related to the level of satisfaction in retirement. They believed this was an indication that action must have been taken as a result of this activity. Clark et al. (2003) reported that after completing seminars, a very large proportion of respondents indicated a likelihood of changing their retirement preparation behaviour. Bernheim & Garret (2003) considered action people take after attending seminars concerned with financial preparation for retirement. However, Lusardi (2003b) reported that whilst several studies have found a positive correlation attending a retirement seminar and increased financial preparation, it is not clear what that correlation means. Hersley et al. (2003) investigated the impact of various interventions (meetings/seminars) causing participants to think about their retirement and found the strongest impact where the intervention was focused on relevant financial information and goal setting. Clarke et al. (2003) and Clark & d'Ambrosio (2003) found that after attending seminars/meetings on financial preparation, people were likely to alter their plans in relation to work and retirement. Consequently, whether people attended seminars/meetings relating to retirement, and whether they took action as a result of those meetings, were measures that were incorporated into the FPRS.

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[1] Assets and Health Among the Oldest-Old (AHEAD) survey administered by the University of Michigan with funding from the National Institute on Ageing (part of the US Department of Health & Human Services).

The Metlife Institute found that approximately one in seven respondents to the 1993 & 1995 AHEAD surveys discussed their financial preparation with a financial adviser. Yet Bernartzi and Thaler (1999) found that many did not consult with anyone about their financial preparation for retirement, other than family members. Lusardi (2000b; , 2002a) asked respondents whether they used others such as family, friends or financial planners, as sources of information when preparing for their retirement. Industry research in Australia found that family and friends can be regarded as important sources of financial information (Wills, 2001). The 2005 Retirement Confidence Survey reported that more than a third of workers reported they had asked a financial adviser to calculate how much they would need in retirement (RCS, 2005b). Bernheim & Garret (2003) looked at actions people undertook following discussions with others about preparing financially for retirement. The 2004 Retirement Index in the UK (Prudential, 2004) found that two thirds of those surveyed had not taken any financial advice before they retired. Almost two thirds of those surveyed as part of a global research project by HSBC said they had begun to prepare for retirement but most of this was restricted to reading up on the subject and discussions with family and friends (HSBC, 2005b). The 2005 RCS found that discussions with a financial adviser was considered to be amongst the most valuable activities in preparing financially for retirement (RCS, 2005b). As a result, discussing financial preparation with others and taking action as a result of those discussions were measures that were incorporated into the FPRS.

The remaining questions were based upon a number of studies, several of which incorporated more than one of the questions in relation to financial preparation for retirement:

Kim & Hong (2001) investigated factors affecting the expected retirement age of workers and found that they could be influenced by knowledge of retirement benefits. Clarke et al. (2003) and Clark & d'Ambrosio (2003) found that attendance at seminars had an impact upon the setting of an age for retirement. When inquiring about what age people expect to retire, HSBC found that globally, when people expected to retire, remained relatively constant with the average age at 58. However, they found that those still in work were on average expecting to retire at age 59 (HSBC, 2005b).

The first Australian Citibank Retirement Index report stated that 33% of respondents had not considered when they would retire (Citibank., 2005). Research by the Financial Services Institute of Australia (FINSIA, 2006) found that many had unrealistic expectations in terms of the savings required to generate an adequate income in retirement as well as the age at which they expected to retire. A national retirement survey conducted in the US asked about planned retirement age and found that more than 40% of workers stated a desire to retire before they reached the age of 65 (Highland, 2005). The Metlife Institute found that many underestimated how many years they are likely to spend in retirement and did not consider longevity a significant financial risk in terms of appropriately preparing for their retirement (M. M. M. Institute, 2003).

In the UK the Institute for Public Policy Research (IPPR) asked people about their expectations of how long they would live in retirement and found that many did not believe they were likely to live longer than their parents as they did not accept that life expectancy is increasing (Robinson, 2005). The Institute of Fiscal Studies (IFS) in the UK also enquired about expectations regarding both retirement age and life expectancy and as a result, how long people expected to live in retirement (J. Banks, Emerson, & Oldfield, 2005). Clark et al. (2003) found that when thinking about their financial preparation for retirement individuals often anticipated making some changes in their planned lifetime pattern of work and retirement. Yakobski & Dickemper (1997) report that only 36% of workers in the 1997 Retirement Confidence Survey had tried to determine how much they need to save in order to fund a comfortable retirement.

Lusardi et al. (2001) noted that some households have difficulty recognising the need to prepare for retirement and calculating the saving they need. When asked about expectations of living standards in retirement 50% of workers in their fifties felt it would stay the same (as when they were working) whilst 42% felt it would decline 'somewhat' or 'a lot' (Institute, 2002). The Metlife Institute found that many underestimate how much money they should be saving a s part of their financial preparation for retirement and displayed a lack of understanding of the extended time horizon they would be living in retirement and the likely impact of inflation on the future value of their money (M. M. M. Institute, 2003). Hersley et al. (2003) found that clear and strong retirement goals (particularly in relation to finances) were closely associated with retirement preparation.

The 2004 Retirement Index in the UK (Prudential, 2004) found that when asked if people had considered how much money they needed to save in to provide them with the income they want in retirement, 50% had no idea. The Citibank Retirement Index investigated confidence in having enough money in retirement and found that approximately 30% of the total sample considered they do not have enough savings to get by on (Citibank., 2005), a figure that rose to 42% for those aged between 55 & 64. Bernheim & Garret (2003) found that those who attended relevant seminars in the workplace were more likely to consider their financial needs in retirement. Neukam & Hershley (2003) measured a number of issues relating to financial preparation including concern about how much money a person would have in retirement. Global industry research (HSBC, 2005b) reported that Canada was the country found to be the best prepared. However, even in that country, when asked about whether people thought they would have enough money to fund their retirement, less than 25% stated they equated later life with financial independence. Clark et al. (2003) found individuals altered their desired level of income in retirement after attending a seminar/meeting. Industry research in Australia found that a majority could nominate how much income they wanted in retirement but had not calculated how much money would be required to produced that income (Wills, 2001). Industry research in the US found that approximately 45% of the US workforce does not believe it will have enough money set aside for a comfortable retirement (Highland, 2005). The 2005 RCS reported that approximately 40% of workers had tried to calculate how much they need to accumulate for their retirement whilst 10% indicated they simply made a guess at the figure (RCS, 2005b).

Financial Literacy research in Australia found that less than 40% of people had worked out how much money they needed for their retirement (Research, 2003). The IFS in the

UK used information from the first wave of the English Longitudinal Study of Ageing (ELSA) and discovered that approximately 30% of house owners expect to have insufficient [financial] resources when retired whilst the figure amongst non house owners was closer to 50% (J. Banks, Emerson, & Oldfield, 2005). Asking people about when they are going to retire, how long they expect to be retired for and how much money they consider they need has also been a regular feature of RCS research (RCS, 2001, 2002, 2003, 2004, 2005b, 2006).

Consequently, asking if people had considered an age and/or date for retirement, whether they and thought about how long they would be in retirement and whether they had considered how much money they would need to fund a comfortable retirement were all measures incorporated into the FPRS.

Developing a Scale to Measure Financial Preparation for Retirement

As the questions used in the FPRS have all evolved from previous research studies, where practical the wording used in previous research was replicated in both the question and the answer. By way of example, the use of the four options of ‘a lot‘ ‘some’, ‘a little’ and ‘not at all’ have all been taken from the correlational studies on financial preparation conducted by Lusardi who utilised information from the Health and Retirement Survey (A. Lusardi, 1999, 2000b, 2001, 2002a, 2002b, 2003a, 2003b). The scoring of those questions follows that outlined in the 2000 study (A. Lusardi, 2000b).

In order to assess the degree of financial preparation of the respondents, an overall measure of the financial preparation was devised, based on questions used in previous research. Ten questions made up the FPRS and are shown in Appendix 1. These questions are factually based but asked the respondent to rate their responses on a four-point ordinal scale, i.e. the choices differed in relative magnitude and therefore could be ordered from smaller to larger (Herzog, 1996). A four-point scale was used to force a response as no neutral or indifferent position logically exists (Peterson, 2000). Either a person has done something or they have not. Consequently the questions provided broad categories for those who had given the issues some thought and a simple response for those who had not.

The questions were scored in manner consistent with previous studies (A. Lusardi, 1999, 2000b, 2001, 2002a, 2002b; , 2003a, 2003b), i.e. each of the answers was translated into a score with 4 points scored for the highest level of preparation and 1 for the lowest.

The answers to several questions led directly to the following question when a positive answer was given. Those that provide a negative answer were directed to skip the following question. In such instances the default score of 1 point applied to the missed question as this corresponds with the answer of taking no action. As a result, the maximum score that could be gained in the FPRS was 40 points and the minimum score 10.

In order to make the task of completing the questionnaire as clear and simple for the respondents, the wording of the answers was kept constant in a number of instances.

Consequently five questions had exactly the same response options; another three shared a (different) set of response options whilst only two questions had unique answers. In four of the questions the rating scale was reversed with the lowest scoring option being on the left of the answer set.

The rationale behind each of the questions was as follows:

Q1. *Thinking about retirement*
This was to provide an indication of how many respondents had given some thought to life in retirement.

Q2. *Collecting information about retirement*
This was to establish if the respondent had made the effort to locate any information about preparing financially for retirement, rather than where or how they collected it or even the nature of that information. The answer given was used in question 3 for the first three response options (i.e. 'a lot', 'some', or 'a little'). When the answer given was 'none', the instruction is to move ahead to question 4, skipping question 3.

Q3. *Using information collected about financial preparation for retirement*
Having established if the respondent had collected information about the issue, this sought to determine if that had given rise to any action, or at least the consideration of action. This question reversed the scoring of the response options.

Q4. *Attending seminars or meetings about preparing financially for retirement*
This enquired as to whether the respondent had attended any relevant seminars. The answers to the first three response options (i.e. 'a lot', 'some', or 'a little') led into question 5 whilst the final response box (none) included the direction to move directly to question 6.

Q5. *Taking action after attending a seminar or meeting about preparing financially for retirement*
Having established that the respondent has attended at least one seminar or meeting about preparing financially for retirement, this question aimed to determine if this had given rise to any action, or at least the consideration of action. This question also reversed the scoring of the responses with no action as the first option.

Q6. *Discussing their financial preparation with others*
This sought to determine if the respondent had discussed his or her financial preparation for retirement with anyone. More weight was given to discussing the issue with a financial planner or an accountant than family or friends. Where a respondent replied to both options, the highest scoring option was used in determining their FPRS score. This question also reversed the scoring with the first option being the negative response ('not at all) and included a directive to skip question 7 and move directly to question 8. The next three options were utilised in question seven ('only in passing', 'yes with my family etc'. 'yes with a financial planner etc.').

Q7. *Taking action after discussing their financial preparation with others*
Having established that the respondent had discussed their financial preparation for retirement with others, this aimed to determine if they had taken action as a result, or at the very least thought about taking action. This question also reversed the scoring system.

Q.8 *Thinking about setting a date or age at which the person expects to retire*
Respondents were asked if they had determined either the date or the age at which they wished to retire. This was asked as it required that the respondent had given thought to how long they had remaining in the workforce and thereby the time left to contribute to their retirement savings.

An additional sub-question was incorporated for those who answered that they had thought about a date or age at which they wished to retire. They were requested to specify their target age for retirement as this enabled the number of years to their desired retirement to be calculated. Where subjects did not specify an age (e.g. they answered with 'Not at all') the desired retirement age of 65 was the default.

Q9. *Giving thought to how long they expect to be retired for*
This sought to establish if consideration had been given to how long retirement savings were expected to last in retirement by asking if the respondent had thought about how long they expect to be retired for.

Q.10 *Thinking about how much is needed for a comfortable retirement*
Respondents were asked if they had thought about how much money they would need to have saved by the time they retired in order to live comfortably in retirement. The definition of 'comfortable' was left to the respondent, as was their assessment of when they would retire and how long they would live in retirement. Despite its subjective nature, the question was designed to provide an indication of how many have made an attempt at analysing their financial preparation for retirement.

Testing the FPRS
The survey method is one of the most common approaches used in the social sciences to empirically study the characteristics and interrelations of sociological and psychological variables (Roberts, 1999). Given that questionnaires can be highly structured, enabling data to be collected in a form that is quantifiably analysable, such an instrument is usually therefore regarded as easily replicable and as a result reliable (Gill & Johnson, 2002). Therefore, using a survey, i.e. a self-report measure instrument that can collect data from the subject without intervention by the researcher, lent itself to the testing of the FPRS.

The survey was enacted via a self-administered mailed questionnaire. As a result, it was possible to obtain a relatively large dispersed sample and keep sampling error to acceptable levels. The questionnaire also facilitated the collection of large amounts of information relating to the activities of those people who had time to consider their answers, whilst retaining their anonymity (Fowler, 2002; Roberts, 1999).

Pilot Study for FPRS

A pilot study was developed to test the material, to establish whether the proposed questions would be understood, were considered relevant and could be answered easy without clarification. The study was conducted in three stages. In the first stage three subjects were provided with the introductory material about the research and the questionnaire. They were asked to complete the questionnaire as if they had been sent it in the post, i.e. they were not allowed to seek clarification. After completing the survey the subjects were asked whether they considered the instructions and questions were clear and relevant, as well as whether they had any difficulty in answering the questions. All three subjects reported that the instructions were clear and easy to follow and stated they had no issues in answering any of the questions, which they felt were appropriate to the issue being researched. In the next stage, 24 new subjects were provided with the questionnaire only and were asked to complete it. None of the subjects reported any difficulty and all found it only required a few minutes. All subjects stated that the questions were simple and easy to address and required no further instructions. In the third stage the information from all 27 subjects (the 24 subjects who completed this stage plus the three subjects from the interview stage) was then used in refining the data entry process and critical testing on the analysis model prior to the main survey. Based upon the results of the pilot study it was decided to proceed to the main study and test the FPRS with the full 1000 person sample.

Sample Analysis

The 1000 subjects were randomly selected from the pension fund's database. Once incorrect addresses etc. had been accounted for the overall response rate achieved was 53.4% with 53.1% of the responses providing a completed and usable FPRS. The sample of respondents was compared to Australian population statistics as provided by the Australian Bureau of Statistics (ABS, 2000). The total pension fund database of the industry partner was compared to the Australian population and was found to have a spread of ages indicating that the mean age was slightly lower than that of the Australian population. Given that the pension fund would not have so many people in the older age groups as the broader Australian population, this was expected. However, the respondents to the survey were found to be weighted towards the older end of the age range. Given that the questionnaire was focused on preparing for retirement this was hardly surprising. However the sample demonstrated a broad spread of ages with approximately a quarter reporting they were younger then 30, almost half stated that they were aged between 30 & 49 and the remainder stated they were 50 or older.

Allowing for the higher numbers of very old in the ABS information, the sample distribution appeared similar to that of the general Australian population. Kruskal-Wallis analysis was conducted on the distribution of the sample compared to the distribution of the Australian population and no significant difference was found ($p < 0.05$). In terms of the amount of time subjects had to their retirement, the sample showed a wide range of responses, i.e. just over 22% of the sample had less than 10 years to their retirement, slightly more than 27% stated they were between 10 & 19 years away from retiring, almost 24% said they were between 20 and 29 years away from retiring, just over 17% said this figure was between 30 & 39 years and almost 9% claimed they were more than 40 years away from retirement.

The sample showed a slight bias towards women with 55% being women, slightly above the general population. In terms of the level of education completed, the sample illustrated a broad spread of responses with just over 2% stating they were post graduates, almost 18% claimed they were undergraduates, 4% said they had undergone some professional education, almost 9% stated they had been to TAFE whilst almost 68% stated that their education finished at school. Just over half the sample reported they had no dependants whilst a little over 30% reported one or two and another 10% reported three. The income ranges of the sample were compared to the Australian population using the most recent statistics from the Australian Taxation Office (Office, 2004). The income distribution of the sample was found to be closely aligned to that of the Australian population. This comparison was analysed and it there was found to be a significant correlation between the income distribution of the sample and the general Australian population with a Kruskal-Wallis test indicating no significant difference between the two groups. Consequently it was considered that the sample was not dissimilar to the general Australian population.

Reliability analysis

Cronbach Alpha scores were used to assess the reliability of the FPRS measure. Nunnaly (1978) and Garson (2006) suggest that the widely accepted cut-off is that the reliability coefficient should be above 0.7 for a set of items to be considered a scale whilst Dijkers et al. (2002) argue that it should be above 0.8. When tested, the reliability coefficient for the FPRS was found to be .92, and no removal of any of the items making up the FPRS would have enhanced this reliability coefficient. (See Table 1.) These results suggest the FPRS is a reliable measure and consequently is one that will enable future research to compare behaviour relating to financial preparation for retirement across groups.

Table 1. FPRS Reliability Analysis Scale (ALPHA)

	FPRS Items	Mean	Std Dev	Cases	Scale Mean if item Deleted	Scale Variance if item Deleted	Corrected Item Total Correlation	Suared Multiple Correlation	Alpha if item Deleted
1	Thought About Retirement	2.8294	0.9040	463	18.1469	57.9221	0.6813	0.5425	0.9117
2	Collected Information	1.9784	1.0084	463	18.9978	54.9026	0.8161	0.7362	0.904
3	Taken Action as a Result	2.0821	1.2681	463	18.8942	51.8178	0.8046	0.7724	0.9037
4	Attended Seminars/Meetings	1.4017	0.8695	463	19.5745	58.9852	0.6269	0.774	0.9143
5	Taken Action as a Result	1.4924	1.0483	463	19.4838	56.904	0.6393	0.7886	0.9134
6	Discussed Retirement Preparation	2.3434	1.1755	463	18.6328	53.6484	0.7598	0.6709	0.9065
7	Taken Action as a Result	2.1058	1.2706	463	18.8704	52.7797	0.7432	0.7083	0.9079
8	Thought About Retirement Age	2.2678	1.0719	463	18.7084	56.7958	0.6295	0.5523	0.914
9	Thought About Length of Retirement	2.1361	1.0654	463	18.8402	57.1086	0.613	0.536	0.9149
10	Thought About Money for Retirement	2.3391	1.0660	463	18.6371	55.8507	0.6674	0.5153	0.9119

No. Variables	Mean	Variance	Std Dev
10	20.9762	68.1142	8.2531

Item-Total Statistics for FPRS Reliability Analysis - Reliability Coefficients

N of Cases = 463.0 N of Items = 10 Alpha = .9186 Standardised item Alpha = .9194

Results Found Using FPRS

The results obtained from using the FPRS can be considered in a number of ways. By examining the overall FPRS scores, by considering high and low scores of the FPRS to determine if there are certain common characteristics and by looking at the individual questions to determine if any patterns emerge. In all cases the results can be compared to previous research to establish if previously observed trends are evident with the FPRS.

Financial Preparation for Retirement and Age

Members of the workforce are able to contribute to a retirement-savings fund, irrespective of their age. A sense of getting older and an awareness that old age may cause people to take action as saving tends to increase as people get older (Glass & Kilpatrick, 1998) particularly when a 'benchmark' age is reached, such as 30, 40 or 50 (FSA, 2002). Age can also be a factor in the determination of retirement goals and in particularly desired retirement age with younger people less likely to be more specific about a set retirement age and/or date (Clark & d'Ambrosio, 2003). Determination of a set age for retirement can bring into focus the amount of time left before reaching that desired age and therefore could lead to a modification of financial preparation. This is supported by findings that a primary decision making issue with regard to saving for retirement is the expected time horizon (Waggle & Englis, 2000). The younger the individual, the longer the expected time until retirement is likely to be. This is consistent with findings that show young families demonstrate particularly low levels of wealth accumulation (A. Lusardi, Cossa, & Krupka, 2001).

One major economic framework used to describe how people make spending and saving decisions over the course of their lifetimes is the life-cycle approach. Estimation of retirement needs is often based on the life-cycle hypothesis and the assumption that individuals desire to smooth the level of consumption over their lifetime. (Modigliani & Brumberg, 1954 cited in Yuh, Hanna, & Montalto, 1998). Such models predict that the profile of wealth accumulation over the life-cycle is hump shaped, i.e. to finance consumption during nonworking years, individuals save a portion of their earnings earlier in life. They decide on their optimal path of earnings and savings that will achieve the desired level of consumption in each period. These consumption and savings decisions determine their retirement income at their chosen retirement ages (Clark, d'Ambrosio, McDermed, & Sawant, 2003). Age can reflect a person's stage in the life-cycle and as a result their interest in retirement preparation with evidence suggesting that rates of saving rise moderately with age (B. Bernheim, Garret, & Maki, 1997).

The link between financial preparation for retirement and age was reflected in the FPRS scores obtained. A highly significant correlation was found between the subjects' FPRS scores and their age ($r = 0.353$, $n = 463$, $p < 0.001$). However, this does not illustrate any relationship between age and time left to retirement. This is important as younger people could actually have less time before their desired retirement age than older people, e.g. a 40 year old who desires to retire at 50 and therefore has ten years left before their retire, compared to a 50 year old who aims to retire at 65 and therefore has 15 years left. Consequently, the relationship between the subjects' FPRS scores and their desired retirement age was examined. A very significant negative correlation was found ($r = -0.208$, $n = 463$, $p < 0.001$). This illustrated that the FPRS scores were higher for those with lower retirement ages. This relationship was further illustrated when the relationship between the subjects' FPRS scores and the time they had left before they wished to retire was examined. A highly significant correlation was found between the FPRS scores and the time left before retirement ($r = -0.504$, $n = 463$, $p <= 0.001$). Therefore, the FPRS provided support for previous research findings that there is a link between financial preparation for retirement and age.

Financial Preparation for Retirement and Income

The ability of a retiree to maintain their pre-retirement standard of living depends on their ability to replace pre-retirement income from Social Security, private retirement benefits and investments. Whilst income from some form of social benefit is usually the main source of retirement income, for most, especially higher income individuals, such benefits do not provide sufficient income to maintain the pre-retirement standard of living. However, a divergence of expectations and reality has been documented with many failing to perceive the need to accumulate more as they expect their various benefits to 'fill the gap' (Elder & Rudolph, 2000).

Research that considers current income with respect to the adequacy of retirement saving has produced mixed results. Engen et al. (2001) argued that some findings indicated that households with higher current earnings are less likely to be saving adequately for retirement whilst others present evidence that high earning households save a greater share of their incomes. However, a positive relationship has been found to exist between the value of savings, status of employment and income in relation to the level of savings for retirement (Glass & Kilpatrick, 1998).

Income and tax may also affect the decision to save for retirement. The relative appeal of the available tax concession in retirement savings can depend upon income, with it being more favourable for low-income workers than those on higher salaries. Low income workers are also more likely to be liquidity constrained and would also encounter relatively higher replacement rates from any safety net system and therefore have less apparent need for additional retirement income (Munnell, Sunden, & Taylor, 2001). Households whose head suffered periods of unemployment in the past have also been found to have significantly lower wealth accumulation for retirement (A. Lusardi, 1998).

In the US, income, age and education were all found to be important determinants of both participation and contributions to a pension scheme (Munnell & Sunden, 2003). One study found that irrespective of income or wealth, the majority of respondents displayed low levels of knowledge about financial preparation for retirement including approximately one third of those with significant assets and high levels of income (M. M. M. Institute, 2003). Income levels were found to be a factor in the determination of:

- Expected retirement age
- The degree to which social security and/or any retirement plan will provide expected income in retirement
- The amount of full time/part time employment that the individual anticipates they will need to undertake to provide an adequate income once retired

- The likelihood that the individual has attempted to establish how much money they will actually need to live on in retirement.

(Tucker et al., 2001)

The link between income and financial preparation for retirement was demonstrated when analysing the FPRS scores and their incomes. A very significant correlation was found ($r = 0.310$, $n = 463$, $p < 0.001$) indicating that those with higher incomes were undertaking higher levels of financial preparation.

Financial Preparation for Retirement and Gender

Previously it was argued that despite the increased emphasis on ageing in society, the issue of women and retirement had been neglected (Johnson & Price-Bonham, 1980). There is now a growing body of evidence emerging that gender is an important macroeconomic variable in terms of saving (RCS, 2005a, 2006; Seguino & Floro, 2003). Glass and Kilpatrick (1998) found that the lowest level of retirement savings for males, regardless of marital status, was higher than the highest level of savings for females. Gender can also have an influence on the setting of retirement goals with women more likely to aim to retire prior to reaching the age 65 than men (Clark & d'Ambrosio, 2003). Men have been found to be more likely to save than women (Glass & Kilpatrick, 1998), are also more likely to overestimate their pension (Elder & Rudolph, 2002), but do a better job at estimating their pension benefits (Gustman & Steinmeier, 2001).

When women actually save for retirement they display characteristics that may be conducive to low savings (A. Lusardi, 2003b) as they are more likely to make lower risk/lower return investment choices than men (Bajtelsmit, Bernasek, & Jianakoplos, 1999; Bernasek & Shwiff, 2001; Graham, Stendardi, Myers, & Graham, 2002; T.-C. Institute, 2003; Sunden & Surette, 1998). Single women have also been found to exhibit relatively more risk aversion in financial decision making than single men (Jianakoplos & Bernasek, 1998). A survey of US pre-retirees found that women were typically less well informed and/or knowledgeable about retirement issues. Women were also found to be:

- Less likely to be able to identify whether they belong to a DC or DB retirement-savings plan (Gustman & Steinmeier, 2001)
- Less likely to consider longevity a significant financial risk (M. M. M. Institute, 2003)
- Less confident about having enough money
- Less knowledgeable, in their own opinion, than men about saving for retirement (RCS, 2003).

Such evidence was supported by research that found women were less likely to plan for retirement (A. Lusardi, 2003b) and were less likely to have attended a retirement seminar (A. Lusardi, 2003a). Indeed women were identified as being at risk of facing a vulnerable financial situation in retirement (Tucker et al., 2001).

Comparatively little research has been conducted on individual retirement-savings decisions in the mandatory system in Australia, particularly in relation to gender. An opportunity arose in 2001 as a number of funds have converted from a traditional DB structure to a DC approach and as a result the decisions of members who were asked to choose between these two types of schemes was examined (Clarke-Murphy & Gerrans, 2001; Gerrans & Clark-Murphy, 2004). The researchers explored gender differences in knowledge of the retirement savings system as well as who was consulted in the decision making process. Clark-Murphy and Gerrans found that females were significantly more likely to consider themselves to have a lower level of knowledge of the retirement savings system. Further, it was found that those most likely not to consult with others were the ones who viewed themselves as having the least amount of knowledge about retirement savings, e.g. women. This was supported by Ginn (2003) who argued that the need for financial advice to avoid the pensions poverty trap was greater for women than men, and industry research that reported that less than 30% of women were ‘very confident’ about their level of financial preparation compared to 43% for men (Citibank., 2005).

The use of the FPRS allows this relationship to be examined. The gender of each subject was recorded in the survey revealing that 55% of the respondents were female. However women were under represented in the high financial preparation group (50% women) and over represented in the low financial preparation group (59% women). The two groups were similar in a number of respects. The mean age of the males was 40.2 (n = 210) compared to 39.2 for the women (n = 253). The expected retirement age of males was 61.1 compared to 59.9 for women with the males providing a mean period to retirement of 20.8 years compared to 20.5 years for women. The analysis also revealed that there was a significant difference between the FPRS scores obtained by men and women ($p < 0.05$) with women producing a lower mean score than males (22.0 versus 20.1).

High and Low FPRS Scores

To decide the cut off points for low and high scores on this scale, the current study adopted the process followed by Zaichkowsky in her development of the original Personal Involvement Inventory scale (Zaichkowsky, 1985). The overall distribution was based on the data collected from the sample of 463 subjects with a mean FPRS score of 21. The distribution derived from the data was used to classify scorers into either low (bottom 25% of distribution) with scores ranging from 10–14; medium (middle 50% of distribution) with scores ranging from 15–27; or high (top 25% of distribution) with scores ranging from 28–40.

The results revealed that 26% of males achieved high scores on the FPRS whilst only 21% of women achieved the same level of score providing further support for previous research that indicated women undertake less financial preparation than men. This was reinforced by the fact that whilst 25% of males achieved low FPRS scores, 31% of females achieved that level.

When the age of the sample was considered in terms of the high and low FPRS scores achieved, it was found that the average age of the high scoring subject was 46. The average age for their chosen retirement date was 60 meaning they had 14 years left before they were due to retire. In contrast the average age of those subjects that produced a low FPRS scores was 35, with an average age for their chosen retirement of 63, meaning they had 28 years left before they were due to retire, i.e. twice that of the high scoring subjects.

When the income of the subjects was examined it was found that the average income of the high scoring FPRS was $57,000 and that of the low scoring FPRS subjects was $32,000.

Examining Constituent Behaviours of the FPRS

Each of the questions on the FPRS asks the subjects to report on certain activities. Using a list of questions that are common across studies would able individual behaviours to be investigated and compared. This section looks at groups of questions and provides details of the results achieved by the study population.

(i) Thinking about retirement

Thinking about retirement can have profound implications (Ameriks, 2000; Chan & Stevens, 2004; A. Lusardi, 2000b, 2002a), Research has shown a significant correlation between thinking about retirement and satisfaction in retirement (Elder & Rudolph, 1999). Previous studies have also shown that the majority of those who had reported that they had thought “a lot” about retirement indicated that their retirement was better than the years just before retirement (Elder & Rudolph, 2000). It has also been found that individuals who have given at least “some” thought to retirement have significantly more net worth than those who have thought “hardly at all” about retirement (Elder & Rudolph, 2002). When asked how much they had thought about retirement, just over 37% of the respondents reported they had given their retirement little or no thought at all and only 27% had given it ‘a lot’ of thought. Such findings have potentially serious implications for the lifestyle of those who will be retiring in the coming years as previous research has indicated that lack of financial preparation can result in unrealistic expectations regarding the affordability of any future lifestyle in retirement (Devaney & Su, 1997).

(ii) Collecting and acting on information

Unfortunately it appears that very little work has been done in investigating how households collect relevant information to make decisions concerning their financial preparation for retirement (A. Lusardi, 2000b, 2002a). However, Bernartzi and Thaler (1999) had reported that many do not read related material about retirement preparation. However, if such information is read, it can have an impact upon financial preparation (RCS, 2003). Yet groups such as financial planners, accountants, fund management organisations and even the Federal Government produce large amounts of information about preparing financially for retirement. Significant sums are also expended to promote relevant products and appropriate strategies relating to financial preparation for retirement, i.e. in excess of A$70 million in Australia in 2005 alone (Media, 2006). However, the efficacy of this effort is open to question as 66% of the respondents reported they had collected little or no information about preparing financially for retirement. Further, of those who had collected information only 26% had taken action as a result of that information.

(iii) Attending Seminars and taking action as a result

Seminars are one of the most common methods that are used by both financial planners and fund managers to explain retirement issues, their products and strategies to prepare financially for retirement. As noted earlier, seminars can have a significant impact upon an individual’s life in retirement (Elder & Rudolph, 1999; A. Lusardi, 2001, 2003a; Madrian & Shea, 2001). However, such a strategy can only have an impact if people actually attend such sessions. The majority of respondents reported that they had not attended any seminars or meetings on such issues (79%) and only 11% stated they had been to more than 1 such session. Further, of those that stated they had attended seminars/meetings on preparing financially for retirement, only 13% had taken any action as a result and 80% had not even consider taking action.

(iv) Discussing financial preparation for retirement with others and taking action

Previous research has found that people may well discuss their financial preparation with others (M. M. M. Institute, 2003; A. Lusardi, 2000b, 2002b) whilst other research has found that many do not (Bernartzi & Thaler, 1999; Prudential, 2004). Using the FPRS it was found that 24% of the respondents stated they had discussed the issue with either a financial planner or an accountant. However, 55% had either not discussed the issue or had only done so in passing. Whilst Bernheim and Garret (B. Bernheim & Garret, 2003) consider what action people may undertake following such discussions, only 25% of the respondents in this research had actually taken any action as a result of having discussed their financial preparation with others.

(v) Considering when to retire

HSBC global research reported that the age of 58 was a very common target age for retirement (HSBC, 2005a, 2005b). Using the FPRS it was found that when asked if they had given consideration to when they wished to retire, 58% of the respondents stated they had given it little or no thought. This is higher than previous research that found that 33% had not given thought to when they would retire (Citibank., 2005). Those who indicated they had given the issue some thought were also asked to provide a specific age at which they wished to retire. 13% indicated they wished to retire by the time they reached the age of 50 and 49% indicated that they wished to be retired by the time they had reached 60.

(vi) Thinking about life in retirement

Previous research has noted that many have not given a great deal of consideration as to how long their retirement might last (G. Banks, 2005; Highland, 2005; M. M. M. Institute, 2003; Robinson, 2005). When asked whether they had given thought to how long they would be in retirement for, 62% of the respondents stated they had given it little or no thought at all. Further, 54% had given little or no consideration to how much money they would need to be able to live comfortably in retirement and only 19% had thought about it in detail. This is consistent with other findings in this area (Citibank., 2005; FINSIA, 2006; HSBC, 2005b; Prudential, 2004; Wills, 2001).

Conclusions

A scale to measure Financial Preparation for retirement has been developed which:

- Considers the various dimensions of financial preparation behaviour.
- Uses questions that are commonly employed in the financial planning literature.
- When tested for internal consistency produced very high Cronbach Alpha scores.
- During initial use, revealed that financial preparation for retirement behaviour amongst Australians is consistent with general industry held perceptions.

Accordingly, difficulties in comparing the overlapping and sometimes conflicting findings reported by independent researchers using different measures of financial preparation for retirement should be ameliorated by this new and reliable Financial Preparation for Retirement Scale.

Appendix 1

Preparing Financially for Retirement

The purpose of this study is to measure your actions in preparing financially for your retirement. To take this measure, we need you to answer various questions and choose the answer that best describes how YOU have prepared financially for your retirement.

All the questions are factual but there are no wrong answers.

If you feel you have thought about retirement a lot, you should mark the box for that answer

a lot	some	a little	not at all
x			

If however you feel that you have spent some time thinking about retirement but would not class it as a lot, mark the box for that answer

a lot	some	a little	not at all
	x		

Alternatively, if you feel you have only thought about retirement a little, mark that box

a lot	some	a little	not at all
		x	

Naturally, if you feel you have not thought about retirement at all, mark that box

a lot	some	a little	not at all
			x

Important

Please be sure to answer all the questions unless you are instructed to skip ahead
Work at fairly high speed through these questions. Do not worry or puzzle over individual items. It is your first impressions, the immediate feelings about the item that we want. On the other hand, please do not be careless, because we want your true impressions.

Now turn the page and please start answering the questions.

Q1. How much have you thought about retirement?

a lot	some	a little	not at all

Q2. Have you collected any information about preparing financially for retirement?

a lot	some	a little	none – go to Q4

Q3. If you have collected information about preparing financially for retirement, have you taken any action as a result?

no I have not taken any action	I have thought about it	I know what to do but I have not done it yet	yes I have taken action

Q4. Have you attended any seminars or gone to any meetings on preparing financially for retirement?

more than two	two	one	none – go to Q6

Q5. If you have been to any seminars or meetings on preparing financially for retirement, have you taken any action as a result?

no I have not taken any action	I have thought about it	I know what to do but I have not done it yet	yes I have taken action

go to Q6

Q6. Have you discussed preparing financially for retirement with anyone?

not at all – go to Q8	only passing, not in detail	yes with my family and/or friends	yes with a Financial Planner or Accountant

Q7. If you have discussed preparing financially for retirement, have you taken any action as a result?

no I have not taken any action	I have thought about it	I know what to do but I have not done it yet	yes I have taken action

Q8. Have you thought about a date or the age at which you wish to retire?

a lot	some	a little	not at all

If so, please provide the age you wish to retire at: ________________

Q9. Have you thought about how long you expect to be retired for?

a lot	some	a little	not at all

Q10. Have you thought about how much you will need to have saved by the time you retire so you can live comfortably in retirement?

a lot	some	a little	hardly at all

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