

A Review of Retirement Savings Investment Behaviours: Theory and Evidence

June 2013 Report Prepared by

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Summary

This report has presented an overview of the extant literature relating to retirement savings investment choices, the determinants of investment activity and switch behaviour with preliminary results from a new database of members notably drawn from the retail sector. The report placed a particular focus on the Australian Superannuation System.

Acknowledgements: We thank the essential contributions of Rohan Fletcher and Mikhail Tupitsyn in database management and preliminary analysis of the Mercer data. We also gratefully acknowledge the provision of data by Mercer Australia. Finally, we thank the support of the CSIRO-Monash Superannuation Research Cluster, a collaboration between CSIRO, Monash University, Griffith University, the University of Western Australia, the University of Warwick, and stakeholders of the retirement system in the interest of better outcomes for all.

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1 Introduction

Superannuation has become the largest asset of Australian workers after the family home. The superannuation funds that members are enrolled in by their employer, to meet mandatory superannuation contributions obligations, are primarily defined contribution (DC) funds. DC funds place the individual member at the centre of responsibility for investment decisions regarding these contributions and, with time, their accumulated savings balance.¹

Active choices by members of superannuation funds were assumed to become key forces within the system driving competition and improving overall efficiencies. This view has, however, been acknowledged as “optimistic” (Commonwealth of Australia, 2010b, p.8). The thrust of the more recent wave of regulations such as MySuper challenges this assumption more directly and has reoriented the choice architecture (Thaler and Sunstein, 2008) with the member as a reluctant decision maker at the forefront. This reflects concern about the interest/engagement of members in the task at hand as well as the competency to deal with the sophistication of products offered (Consumer and Financial Literacy Taskforce, 2004).

The dominant framework within investment finance when considering investment choices has at its core rational, utility maximising, risk-averse investors who aim to maximise returns whilst minimising risk. Alternative models have been proposed to consider investment choices, largely drawing on behavioural models from psychology. This report provides review of individual retirement savings decisions, and particularly provides an overview of when and why investors do (or do not) make changes to their superannuation savings.

We start by presenting the Australian setting and reviewing the levels of choice that members of superannuation funds have available. The available literature is reviewed to examine the influences on choice suggested by theory and reported empirically. We pay particular attention to the influence of financial literacy and demographics in these decisions. Next, we turn to potential behavioural explanations for superannuation choices as well as the choices involved in making retirement savings. The review is not exhaustive but attempts to highlight the principal areas of relevance to the Australian setting. Our

¹ A defined contribution (DC) plan is a type of [retirement plan](#) in which the amount of the employer's annual contribution is specified. Unlike a defined benefit plan (DB), only employer contributions to the account are guaranteed, not the future benefits.

report concludes with a preliminary analysis of member investment activity using a new database provided by Mercer Australia, a major wealth management company.

2 Australian Retirement Income System and Choice

Before considering the literature relating to choice within retirement savings, and superannuation specifically, it is useful to review the income support system. Since its first payment in 1909, Australia has had a policy of granting a publicly provided age pension to retirees to insure that older Australians, who cannot work, are protected from the economic fears of old age. The combination of a greater proportion of individuals becoming eligible for the age pension, over a longer period of time, coupled with a declining worker (taxpayer) base to support this has provided impetus to the mandatory, employment linked superannuation system.

Mandatory superannuation contributions, introduced with the Superannuation Guarantee Act in 1992, had their genesis in the 1980s *Accords* between the Hawke-Keating government and the union movement. Notwithstanding the tremendous growth in superannuation assets, reflecting the mandatory and widespread coverage of Australian employees, the age pension will remain a central part of the Australian retirement income system. Treasury estimates that the proportion who *will not* receive any pension by 2050 will not exceed 25 per cent (Commonwealth of Australia, 2010a) though the mix of full-rate pensions will decline. This is important to remember when considering questions of choice relating to superannuation as the age pension will remain an important component of the retirement income portfolio and choices may be influenced by member expectation of receiving the old age pension.

Australians are afforded various levels of choice in the accumulation of retirement savings. Members of superannuation funds enjoy three distinct levels of choice relating to superannuation contributions and accumulated superannuation balances, distinguished by who offers the choice and the obligations in offering this choice.

The first choice is the “investment strategy choice” within a particular superannuation fund. This choice is available in 67 per cent of funds though these funds account for 98 per cent of industry assets (Australian Prudential Regulation Authority, 2013). This choice is offered by the funds themselves as a product feature to meet member demand and as a point of competition, but under no obligation to do so. Funds vary in how frequently this is allowed as well as how the choice can be applied by members. That is, whether it is applied to future

contributions, accumulated balances, or both. Funds may charge members for this choice and subsequent changes or may allow a certain number of free changes within the year.

The second level of choice is the choice of fund, where available, to receive compulsory Superannuation Guarantee contributions. This is a mandatory choice required through the Superannuation Legislation Amendment (Choice of Superannuation Funds) Act, legislation which had a long gestation period having been initially announced in 1996 and which only came into effect in July 2005. Eligible new employees must be presented with the choice within 28 days of joining an employer.

The third, and arguably more consequential choice than the choice of fund, is the ability to choose to transfer accumulated savings to another fund as permitted under the Superannuation Industry (Supervision) Regulations. Since July 2004, fund members have been able to request the transfer of the full or partial balance from their fund to a complying superannuation fund.

Much of the literature discussed in this review focuses on the first choice as very little analysis is available on choices two and three, notwithstanding their significance when exercised.

3 Influences on individuals' retirement savings investment decisions

In describing the literature relating to decisions and choices in retirement savings and investments it is important to emphasise a key finding upfront: **most people do not make active choices**. This is a surprise given the wealth of choices provided to superannuation members in the Australian system and the persistence of attempts to make various types of choice available. In any review of member choice in superannuation, the most salient fact is that little or no exercise of choice occurs.

In the next sections we will explore different explanations for this fact. The questions explored include: How prevalent is member choice "inertia"?; What are the causes for member inertia?; Does the exercise of member choice change over different demographics?; Do financial advisors spur and influence the exercise of member choice?; and to what extent can we explain member inertia using psychology? Each of these questions and many more will be addressed in the next section.

3.1 Prevalence of Inertia

Across countries and systems a common finding is lack of choice by individuals and prevalence of "default behaviour" both in acceptance of the default level of savings and default investment strategies. For example, in the U.S. across a large sample of 1.2 million workers in 1,530 401(k) plans Mitchell, Mottola, Utkus and Yamaguchi (2006) report pervasive inertia. Almost 80% of accounts initiate no trades, and an additional 11% make only a single trade, in a two-year period. Average turnover, defined as average trade divided by average balance, was 18 per cent. The mean (median) number of trades for those who do trade is three. Agnew, Balduzzi and Sunden (2003) find that 87 per cent of members in one large 401(K) plan had zero trades over a four year period and only seven per cent had more than one trade. Also in the US, Ameriks and Zeldes (2004) find that 75 per cent of members in one plan made no change over a decade. Choi, Laibson, Madrian and Metrick (2002) suggest that employees take "the path of least resistance" when it comes to 401(k) retirement plans and highlight the control that employers ultimately have in the savings choices of their employees. Choi et al. (2002) find that there is acceptance of default contribution levels and default investment options in a large sample of individuals and

suggest how this evidence of passive decision making can be used to increase participation and contributions levels. They show, for example, that auto-enrolment dramatically increases plan participation, though also in the default investment allocation, this is also shown by Madrian and Shea (2001). Thaler and Benartzi (2004) offer prescriptive advice to overcome the procrastination and self-control they argue as underlying the inertia reported. They provide evidence from a “Save More Tomorrow” program, an acknowledged “libertarian paternalistic” (Sunstein and Thaler, 2003) approach, whereby employees are approached to commit to increases in savings from future pay rises. A high proportion commit (78%) and remain (80%) in the program after four years.

Bowman (2003) suggests similar default behaviour for Australian funds with only 10 to 15 per cent of members exercising investment choice. Over a 40-month period Gerrans, Gardner, Speelman and Clark-Murphy (2006) find only eight per cent of members in a single fund made an investment switch over a 40-month period. Gerrans (2012) examined superannuation investment choice both pre- and post-GFC and also found significant inertia even through the GFC with some spike in activity during late 2008 and early 2009. It is clear, that a large majority of investors do not exercise choice with their superannuation investment.

These findings are clearly confirmed in two major surveys on fund members’ attitude to superannuation showing the general apathy of fund members in engaging themselves in their retirement savings. Based on a sample of 1738 super fund members aged 25-70 years carried out in January 2012, the Sunway-ASFA Super Attitude Survey (2012) indicates that 42% of men and 52% of women (in total 47% of the sample) found that superannuation was too complicated for them to understand. Fifty eight per cent of respondents (53% men and 63% women) were concerned that they will not have enough superannuation savings at retirement age. For forty one per cent of respondents (34% men and women 47%) super is just a ‘set and forget’ decision. In a second recent survey (ANZ, 2011) conducted in July-August 2011, broadly similar conclusions have been drawn on financial literacy using a sample of 3,502 randomly selected Australian adults. The proportion of respondents saying they read their superannuation statements had declined six points since the previous survey in 2008, to 69%. This result seems to be due to avoidance of news of somewhat

disappointing returns over the past few years. Around a third of the respondents continued to report that they found their superannuation statements difficult to understand.

3.2 Competence, information processing and choice

The ability of individuals to make investment choices is a contentious issue in Australia as the superannuation regulatory environment and retirement planning industry —predicated on the assumption that individuals want choice— implicitly assumes the capacity of individuals to make reasonable decisions about their future retirement plans. This implies that individuals have the ability to garner a level of understanding of the choices available and make optimum selections to match their retirement needs. As Bateman, Eckert, Louviere, Thorp and Satchell (2012) state:

“Retirement savings that outsource government provision to private financial institutions and individuals depend on ordinary people possessing the skills needed to manage their financial responsibilities well. Evidence is mounting that many households in both the developed world and the developing world do not. ... Australians exhibit uneven financial competence and a poor understanding of risk management, investment and superannuation”. (Bateman et al., 2012, p.39)

In other markets, such as the U.S. and the U.K. similar assumptions are made in developing the retirement wealth management markets. This assumption of individuals' capacity to make such decisions is the subject of much interest. This is evident in studies which examine, inter alia, the seminal work of Kahneman and Tversky regarding the ability of individuals to make decisions under uncertainty (Kahneman and Tversky, 1979) as well as others such as Benartzi (2001) who finds that individuals make suboptimal choices to match their needs; and Madrian and Shea (2001) and Choi et al. (2002), noted previously, who find that individuals take the path of least resistance in making investment choices with respect to their cognitive abilities resulting in suboptimal choices. These psychological theories may explain the inertia associated with the exercise of member choice in superannuation.

To explore possible explanations for investors making suboptimal choices, it is necessary to consider the characteristics associated with the investor retirement decision. The analysis of

investor choice needs to consider initial choices made and subsequent choices in a temporal context. Firstly, it is necessary to understand how information is obtained and processed by investors in making such choices. In other words is this choice made: based on a rational search for information available; or using heuristics involving convenience or simplicity? Secondly, does the approach taken by investors in making such choices vary according to their knowledge, skill-set or understanding of these choices? Alternatively, the likelihood of investors' choice may be made due to other predispositions such as the propensity to plan for the future with respect to anticipated or unanticipated needs including basing their decisions on heuristics or reference to mimicking others.

3.3 Financial literacy and investor retirement decisions

A potential explanation for member choice inertia may have to do with lack of financial education. The ability of individuals to make savings and investment decisions influences likely success of retirement income systems and this is particularly relevant in Australia, which relies increasingly on DC type structures. Measuring this ability has most commonly been described as an individuals' financial literacy. Financial literacy has been defined as a "combination of awareness, knowledge, skills, attitude, and behaviours necessary, to make sound financial decisions and ultimately achieve individual financial wellbeing" (OECD INFE, 2011).

International and national benchmark surveys of financial literacy present worryingly low levels of financial literacy: "financial literacy is very low around the world, irrespective of the level of financial market development and the type of pension provision" (Lusardi and Mitchell, 2011, p.506).

While a range of characteristics have been associated with levels of financial literacy, gender and age have been persistently associated with low levels. Not only do "women uniformly know less – [and] they know they know less ... low levels of financial knowledge in older populations also suggest that these groups may be particularly vulnerable" (Lusardi and Mitchell, 2011, p.506).

In a similar vein, Clark, Caerlewy-Smith and Marshall (2009) following Lusardi and Mitchell (2007; 2008), investigate the extent to which individuals in the UK give importance to their planning ability and their understanding of how accumulated savings can be converted in to an annuity stream. They find that attributes such as age, risk tolerance, income and whether their spouses are in employer provided pension plans, are all positively correlated with perceived importance of pension planning. They also find that the source of information, whether from generic or other national sources, as well as knowledge of annuities are of less perceived value than information received from specialist advisers, and their advice.

Worthington (2008) investigates basic superannuation literacy in Australia. He utilises data from a national survey which asks a series of questions relating to fundamental superannuation understanding and analyses responses according to demographics. He finds that if you are a female migrant with little education, then your understanding of superannuation is relatively poor compared to a professional aged over 40 with university education. Interestingly, the vast majority of respondents understood that the government would no longer fund a retirement funding gap.² This acknowledgement of, but ultimately indifference to the government's message that individuals will bare the responsibility for retirement savings, is supported in recent survey findings by Croy, Gerrans and Speelman (2012).

Perhaps, the combination of financial illiteracy and superannuation choice 'overload' are responsible for the observed member choice inertia? Fund or plan level relationships between financial literacy and retirement savings outcomes have also been investigated. Agnew and Szykman (2005) use experimental evidence from Australia to link financial literacy and information overload and default "selection". More financially literate individuals, reported less overload. The authors highlight that knowledge has a strong mediation effect on a sense of overload as only high knowledge individuals experience a reduction in information overload when the number of options available reduced. They find that the default option plays a greater role for low knowledge individuals than high knowledge individuals and explain this behaviour as the choice of the path of least resistance.

² Worthington's findings on gender-based differences in understanding finance are confirmed in ANZ financial literacy survey (ANZ, 2011) in that females were more likely to have lower levels of financial literacy.

In a related Australian study, Gallery, Gallery, Brown, Furneaux and Palm (2011) investigate financial literacy variability using a comprehensive survey dataset from a large group of public sector superannuation fund members. Three measures of financial literacy were employed: general financial literacy, general investment literacy and specific investment knowledge. They also measure individuals' perceived versus actual financial literacy and report that the ability of investors to make optimal investment choices depends on the levels of financial literacy. In general, they find that although investor financial literacy is at a reasonable level, specific investment literacy was low. Wealth and household income are also identified as being positively related to investment knowledge. In addition, they conclude that those who self-rated their financial literacy as high generally achieved low scores on objective tests for investment literacy suggesting overconfidence in their skills in making more advanced investment decisions. They highlight the importance of improving financial literacy through the use of education programs to prevent uninformed decisions that lead to unexpected and undesirable financial outcomes. This is critical given the propensity of super funds to increase choices of investments offered to superannuation fund members. Recent survey results (ANZ, 2011) also seem to show that lack of financial literacy is responsible for a third of the respondents who reported difficulty in understanding their superannuation statements.

Financial literacy is therefore clearly an important contributing factor to investor ability in making appropriate superannuation saving and investment decisions.

3.4 The role of demographics in individual retirement decisions

So far, we have considered psychology and financial literacy in explaining inertia in members exercising choice. However, demographic factors may also be an explanatory or associated factor. How demographics relates to differences in retirement savings decisions (amount of savings, investment type) and decision making (those consulted, resources used) has attracted considerable attention.

In terms of the decision making process, Clark-Murphy and Gerrans (2001) identify that female fund members are less likely to consult work colleagues but are more likely to consult a finance professional and partner when making retirement savings decisions. In

relation to the role of demographic characteristics in retirement decisions, Clark and Strauss (2008) examine a random sample of the British adult population to explore the significance of socio-demographic characteristics for pension-related risk attitudes. The attitudes towards risk is reflected by respondents' answer to the question of whether they "aim to get best possible growth ... even if that means taking some risks" (i.e. financial risk tolerance) or whether they prefer "safe and secure savings and investments" with the cost of foregoing potential growth (i.e. financial risk aversion). They document no difference in the risk propensities among respondents by retirement savings plan type (personal plan, employer-sponsored plan, or both) or types of employer-sponsored pension plans (defined benefit, defined contribution, or both). In regards to respondents' socio-demographic characteristics, Clark and Strauss (2008) show that respondents' age, income, gender, marital status, and spouse's pension are all related to their risk propensity. More specifically, middle-aged respondents tend to be more risk averse while no difference in risk propensity is observed for young and old respondents. No difference is found in risk propensities of those with low and medium income but they observe that respondents with high income tend to be less risk averse. Similar to prior research [see, for example, Clark, Caerlewy-Smith and Marshall, 2007; Bajtelsmit, Bernasek and Jianakoplos (1999) and Papke (1998)], Clark and Strauss (2008) find that men are more risk tolerant than women. The authors find no difference in the risk propensity for married and unmarried individuals but they do observe that respondents whose spouses also have pension entitlements tend to be less risk averse.

Males have generally been identified as more likely to make investment switches and to make riskier choices (i.e. higher growth assets, equity). Agnew et al. (2003) and Mitchell et al. (2006) report this in the US, for example. Gerrans and Yap (2013) identify the lower propensity to trade by women in Australia. In the U.K., Byrne, Blake and Mannion (2009) did not find a gender difference in investment activity. In terms of risk levels, Gerrans and Clark-Murphy (2004) confirm lower risk investment choices by female fund members in Australia and confirm this is prevalent among young female members as well.

Mitchell et al. (2006) find men are positively associated with activity: they are more likely to trade (40 per cent more likely); they are more likely to be active traders (approximately 150 per cent more likely); with more trades (91 per cent more); and higher turnover (41-55 per

cent higher). Mitchell et al. (2006) emphasise that while relative likelihood varies by gender, and other characteristics discussed below, the larger result is that the overall level of non-traders is 76 per cent for men against 83 per cent for females and the proportion of active traders (six or more trades) is only 2.2 per cent. Gerrans (2012) examined superannuation *investment* choice both pre- and post-GFC and also found significant inertia with some spike in activity during late 2008 and early 2009.

Some suggest that the occupational basis of superannuation in Australia has a clear gendered effect (Jefferson, 2012). That is, the percentage of women who have no superannuation (33.7%) is substantially higher than that of men (24.3%). This varies considerably with age, with older individuals being most likely to have no superannuation. However, even at younger ages, more men have super than women. The average super account balance is also much lower for women when compared to men (52,000 vs. 88,000). In fact, the ABS (2009) suggests women have only about 60% of the accumulated super funds of men. Preston and Jefferson (2005) suggest this is likely due to their lower average earnings and less time spent in employment due to (mainly) family responsibilities.

So, clearly gender is associated with superannuation choice. Men exercise choice more often than women and also accumulate more super and therefore have a stronger incentive to exercise choice.

The life-cycle hypothesis of Modigliani and Brumberg (1954; 1990) suggests that individuals plan their consumption and savings over the lifecycle. In this vein, Gerrans et al. (2010) analyse the superannuation investment strategy of Australian workers to highlight how actual investment strategy and asset allocation choices of members change with age. They aim to investigate whether individual risky (conservative) asset class allocations decline (increase) consistently with age. Their study is motivated by the conflicting predictions and findings in prior theoretical and empirical studies on this issue. Gerrans et al. (2010) collect data on asset allocation decisions of members of three large Australian retirement savings funds. They model the joint-decision of whether to allocate to equity/property/cash/fixed interest and how much to allocate to these assets. They document a humped shape age-profile for aggressive asset class allocations and a 'U-shaped' age-profile for defensive asset class allocations. More specifically, there is a humped equity and age profile with allocations

peaking at 34. Allocations to property also show a humped profile, but the result is weaker compared to equity. In contrast, allocations to cash have a 'U-shaped' age profile, with comparable allocations for the lowest (greater than 53) and highest (less than 30) age quintiles. Allocations to fixed interest generally increase with age. They also document that the fund the member belongs to, the year the allocation decision was made and member characteristics, such as gender, wealth proxy, can also explain the differences in asset allocation. This result is consistent with that in Agnew et al. (2003) for the US.

Consistent with the life-cycle hypothesis of savings, age therefore appears an important consideration in how superannuation decisions are made. Parrish and Delpachitra (2012) focus on younger individuals in particular and acknowledge that despite the importance of superannuation for retirement, many Australians are disengaged from their superannuation plans and unaware of how their funds are performing. Their survey of students, to examine which factors influence young Australians in their choice of superannuation fund and investment options, aim to uncover the best ways to present financial information to help young Australians make optimal decisions regarding their superannuation. The authors focus on young investors since these investors mostly have lower level of financial literacy and knowledge than older individuals (Lusardi et al., 2010), and thus are more vulnerable to factors leading them away from optimal choices. Their survey presents information on returns, fees and risk of four hypothetical funds, but differs in the way the information is presented to participants. Respondents were asked to rank the funds in the order from most preferred to least preferred and to provide the reasons for their rankings. Parrish and Delpachitra (2012) document that the way information is presented to investors is important in affecting their superannuation choice. They show that the display of fee information affects both the choice of funds and the frequency in which respondents cite fees as the reason for their investment option. Respondents also rely more on risk labels such as "medium risk" or "high risk" than risk expressed as years of negative returns (risk probabilities). Employers appear to be highly influential in fund selection with the majority (82 per cent) of respondents choose the funds selected by their employer while age and gender do not have significant effect on the fund or investment option selection. Overall, the findings of the paper highlight the importance of the presentation of information for

superannuation decisions and the impact this has on the investment choices of younger individuals.

3.5 Other influences on member choices: Income, Wealth, Internet and Advice

Aside from gender and age, income and wealth have generally been positively related to the likelihood of choice (Mitchell et al., 2006; Gerrans, 2012). Registering for internet access has a clear association with trading activity. For example Choi, Laibson and Metrick (2000) report that trading frequency doubles and turnover increases by 50 per cent. An unresolved issue is the direction of causality, that is are more active traders more likely to register? Those with a greater number of investment options are more likely to subsequently trade whereas those initially invested in index funds are less likely to trade

Given that members exhibit considerable inertia in the exercise of choice in the context of superannuation, to what extent does professional financial advice overcome this inertia? How many members seek financial advice? What is the quality of the advice provided? How does this advice influence member behaviour and ultimately choice?

Australian Securities and Investment Commission (ASIC) conducted its latest shadow shopping study of retirement study in 2011 using 64 examples of retirement advice for analysis and the relevant report was published in March 2012. It finds, while the majority of advice examples reviewed (58%) were adequate, 39% of the advice examples were poor, and two examples were good quality advice (3%). In 16 of the advice examples, the investigation of the client's personal circumstances was poor. And in 15 of these 16 examples (94%), the overall quality of advice was also rated as poor. In 78% of the advice examples, the adviser was remunerated through product commissions or fees that were based on a percentage of the client's assets or investments under advice giving rise to a conflict of interest situation. In similar vein, distrust of financial advisors is also evident from an ANZ (2011) survey in that 4 in 10 respondents disagreed with the proposition "*I would trust financial professionals and accept what they recommend*".

In a survey of 1001 full-time working Australians aged 25-65, Mercer (2011) documents that only 10% of respondents made changes to their superannuation investment strategy from growth to conservative option or vice versa in the preceding 3 months. Four in five had not

made any changes while among those who made changes to their superannuation investment strategy 47% did not seek any advice prior to doing so. Only 30% sought advice from a financial adviser while others (16%) approached family and friends.

Another recent survey conducted by CHOICE in July 2010 found that Retail Super fund members have a noticeable dissatisfaction with fees, investment performance, customer service and, ironically, financial advice provided by the fund. About one in 10 of all respondents are considering switching their super fund, with the potential for churn highest among retail fund members, at 23% (compared to 9% of corporate fund members, 7% of industry fund respondents and 4% of those in public sector funds).

Thus members' poor attitude towards superannuation coupled with substantial reluctance to seek professional advice from financial advisors (with evidence of questionable advice) compound the issue of investment switching behaviour in superannuation. This is an aspect of superannuation, which warrants further investigation.

3.6 Behavioural influences on investor retirement decisions

Behavioural and psychological factors can influence investor retirement decisions. A growing body of research is choosing to look beyond demographic predictors of behaviour and focus on the complexities of human behaviour and the psyche. The hope is that directly understanding behaviour will lead to a better understanding of member choice and that demographics has merely provided a coarse characterization of such behaviour. This section reviews some of this research.

Investment choices can be strongly influenced by the way in which information is presented or 'framed' to individuals (Benartzi and Thaler, 1999). For instance Benartzi and Thaler (1999) found that by aggregating one year returns into 30-year equivalents then this increased the attractiveness of the stocks. Therefore when individuals are presented with explicit multi-year distributions, in comparison to one year return distributions, then they are willing accept more risks. An implication of this is in instances where employers are required to provide information about investment alternatives to their employees but are not allowed to offer advice about investment choice, then the very way in which they

provide the information can have a strong impact on investment choice (Benartzi and Thaler, 1999).

An individuals' aversion to loss can also impact on their retirement decisions. When an individual has a loss aversion then they weigh reductions in wealth much more heavily than increases in wealth, where losses are roughly weighed around twice as much as gains (Benartzi and Thaler, 1999). This is an example of 'narrow framing' (Kahneman and Lovallo, 1993) when, for instance, individuals' are thinking about gambles they are considered one at a time rather than being aggregated into a portfolio. Benartzi and Thaler (1999) found that by providing individuals with the explicit distribution of potential outcomes, then aversion to short terms losses can be overcome. They conclude that by aggregating and plotting results, individuals can be helped to appreciate the effects of statistical aggregation.

In the context of superannuation, this is vital: after all the key to good choice is appreciating that long run retirement goals require long run strategies. In particular, it is crucial to understand that increased risk exposure leads to increased **expected** returns. This means that increased returns may not be realised in the short run due to variability in short run returns, however in the long run such increased risk exposures will almost certainly lead to increased returns.

Psychological variables also play a role in influencing investor retirement decisions. A recent survey of 300 working Malaysians revealed that goal clarity, attitude towards retirement and potential conflict in retirement, were all significantly related to retirement planning behaviour (Moorthy, Chelliah, Sien, Leong, Kai, Rhu and Teng, 2012). Behavioural tendencies have also been found to impact on retirement planning. For instance, a survey on 911 American households revealed that individuals who were more likely to use more financial information sources (for instance, engage financial advisors, conduct internet research etc.), those who started investing early in life and those who had been active investors in the past 12 months were more likely to own an IRA (individual retirement account) (Hira, Whitney, and Loibl, 2009). Moreover, individuals who engage in ex ante research (researching information before speaking with an individual), who review information received in the mail, who start investing early in life and holding the belief that it is important to set up automatic deposits, are all more likely to maximise their retirement contributions (Hira et

al., 2009). Their study highlights the importance of creating opportunities for young people to learn about investments and to start investing as early as possible. They also advocate the need to explore ways to help people build a strong internal locus of control (locus of control was found to be very strong for the youngest age group only, significantly associated with those who maximised their contributions). Jacobs-Lawson and Hershey (2005) explore three psychological variables and their relationship to an individuals' tendency to save for retirement. They found that by having a future time perspective (the extent to which individuals' focus on the future), knowledge of financial planning for retirement, and risk tolerance were all significant predictors of retirement savings decisions (more aggressive savings profiles). A significant three-way interaction between these psychological variables was found. They conclude by advocating the importance of looking beyond main effects and incorporating interaction effects into empirical analysis.

Psychological bias can also impact on investor retirement decisions. Familiarity bias, for instance, is where investors prefer to invest in certain stocks because they are familiar to them. The problem associated with this is that investors tend to believe that because of this familiarity, their stock is less risky than other company stocks (Bailey, Nofsinger, and O'Neill, 2003). Representative and status quo biases are other psychological biases that may be relevant for investor retirement decisions. Representative bias can lead to the incorrect assumption that a good company, that is one with a good work force, management etc., is also a good investment in terms of possessing stocks that increase in value, where in fact this is not always the case (Bailey et al., 2003; Shefrin, 2000). Status quo bias refers to preferring the default choice and this can occur when investors are presented with many choices (Samuelson and Zeckhauser, 1988; Bailey et al., 2003). Many employees do not take an active ongoing role in their retirement funds, rather once they have made their initial investment decisions; they maintain the status quo thereafter (Bailey et al., 2003). This has implications for the amount of offerings from superannuation funds where more investment options may actually lead to poorer individual outcomes due to the status quo effect where investors are overwhelmed by such choices and therefore decide to do nothing instead. Information also has the potential of being misinterpreted, for instance if a company is offering employees stock, then employees, due to their trust in the company, may view this

as a signal that the stock is 'safe', this can be particularly the case when the company matches with its stock (Benartzi, 2001).

Behavioural and psychological factors also have the potential to impact on investor switching behaviours. Tetlock (2007) examines the relationship between investor sentiment and stock returns using content analysis of a daily Wall Street Journal article "Abreast of the Market" over an extended period of time (1984-1999). Specifically, Tetlock (2007) investigates the relationship between pessimism and short and "long"-term returns as well as market trading volume. A quantitative content analysis program is employed to investigate the daily variation in a single media factor, produced from a principal components analysis of the 77 categories in the General Inquirer software program, which is strongly related to pessimism. Alternative measures related to pessimism ("Negative" and "Weak" words) are also investigated to examine robustness of findings. In Tetlock (2007, p.1141) investor sentiment is defined as "the level of noise traders' beliefs relative to Bayesian beliefs as investor sentiment" following the distinction between "noise traders who hold random beliefs about future dividends and rational arbitrageurs who hold Bayesian beliefs". Three hypotheses are investigated focussed on the timing of pessimism in the media. The first is that pessimism forecasts investor sentiment; a second has pessimism reflecting past investment sentiment; and a third has a mixture of the two. If the latter, sentiment theory, is the case, a pattern of low market returns followed by high pessimism which forecasts lower returns over short horizons and higher returns, reversals, over longer horizons. A remaining, information theory, hypothesis suggests media pessimism reflects new fundamental price information not currently reflected in prices. This also predicts lower returns in the short run with no impact on long-run returns. Aside from association with returns, the sentiment theory predicts high and low pessimism is also predicted to be associated with increased trading volumes.

In Tetlock (2007), media content, high pessimism specifically, is associated with a decline in prices the following day which is reversed within a week. Moreover, unusual levels of pessimism (high or low) result in temporarily high trading volumes. Both are consistent with noise trader and liquidity trader models of DeLong, Shleifer, Summers and Waldmann (1990) and Campbell, Grossman and Wang (1993) respectively. The price decline is larger

and slower to reverse for smaller stocks, which further corroborates the link between pessimism and individual investor behaviour.

The status quo bias can also be applied to the superannuation environment as a potential explanation for investor myopia. In one of the most important papers published in the field of economics and decision-making, Samuelson and Zeckhauser (1988) make a distinction between “rational choice” and the ways in which people conceptualise and implement decision-making. As they note, conventional models posit that the theory of rational choice is both a prescriptive and descriptive paradigm: it would seem that many economists believe that people should and actually do act in accordance with the axioms of rational choice. Samuelson and Zeckhauser (1988) contend that rational choice is not an adequate description of how people make decisions, illustrating their argument by reference to status quo bias.

Importantly, Samuelson and Zeckhauser (1988, p.10) do not run an argument which juxtaposes rationality with irrationality; rather, they suggest that “status quo bias is best viewed as a deeply rooted decision-making practice stemming partly from a mental illusion and partly from psychological inclination”. Throughout, they are at pains to suggest that status quo bias is a characteristic of human behaviour and should be recognised as such, rather than dismissed as an aberration. So, for example, they contend that “status quo bias is not a mistake”; even when people are made aware that they act in such a manner, they find it hard to act so as to mediate their psychological predisposition. Elsewhere, Zeckhauser amongst a number of other economists and psychologists have suggested that people can be educated and trained so as to dampen the effects of such predispositions. Indeed, setting and following rules applicable to situations which lend themselves to status quo bias (amongst other kinds of biases) are entirely possible, even desirable (Doherty, 2003). However, psychologists including Kahneman (2003) are not so confident as to the power of education and following rules.

Samuelson and Zeckhauser (1988) use a series of decision-making experiments combined with the analysis of two datasets to demonstrate that status quo bias can be seen in the choices made by individuals about enrolment in health care plans and the allocation of assets between various options in defined contribution pension plans. As such, this paper

has had an enormous impact in pension research, especially as regards the conceptualisation and analysis of patterns of decision-making. Nonetheless, the authors found it necessary to defend the use of experiments to illustrate the nature and significance of status quo bias. They note that critics of their paper suggested that when people are faced with “real” decisions with “real resources at stake” experimental results will fade into the background in the face of the imperatives of real life. The authors defend themselves against this argument suggesting, in fact, that people are more likely prone to status quo bias in “real” situations than in experimental settings. So-called real situations are often not fully specified in terms of the available options, information is in short supply, and there is some urgency in making a decision. As a consequence, people are more likely to default to customary practice (status quo bias) than in experimental situations.

The results of their experiments are compelling, even though experimental design and implementation have obviously moved on over the past 25 years (Baron, 2008). In any event, this aspect of their paper is often passed over in favour of their analysis of the patterns of status quo bias evident in the behaviour of participants in Harvard’s health plan (1986–1987) and in the TIAA-CREF pension system (1981–1986). They show that health plan choices and TIAA-CREF asset allocations can be reasonably explained by status quo bias. Another of their findings is that the initial asset allocations between equities and bonds made by new participants in TIAA-CREF hold for many years, and typically centre on a 50-50 split between the two asset classes. Much has been made about these findings, and there has been considerable research done on the effects of framing choice and the setting of options for subsequent behaviour. So, for example, if choice is set between just two asset classes it is inevitable, it appears, that many people simply distribute evenly the available assets between those choices.

This issue has been addressed in some detail by Benartzi and Thaler (2001) and is conceptualised as *the 1/n problem* such that investors invest evenly across the menu of options available. However, little evidence of this form of naïve diversification is reported elsewhere. Huberman and Jiang (2006) use a *conditional 1/n* heuristic where individuals allocate evenly across options conditional on the subset of options they use, not the total options offered. However they note that this behaviour is not inconsistent with decision rationality. Gerrans and Yap (2013) report similar conditional 1/n heuristic use in Australia

but also do not find evidence that investment menu size is associated with asset allocations. However, Clark et al. (2009) show that the strength of this effect may be mediated by the salience of the issue (age-related) and the significance of the assets relative to participants' overall wealth.

Benartzi and Thaler (2001) also show that there are differences in status quo bias between new and old participants by age. In this respect, the authors (p.33) contend that "it is difficult to characterise retention of the status quo allocation as a rational operating rule of thumb". They also note that those who changed their asset allocation, did so for a specific reason (for example primarily because of stock market performance) rather than a strategic understanding of the nature and scope of retirement saving. Implied is an argument that people are either over-responsive to short-term events and/or over-confident in their ability to make effective investment decisions. Either way, this type of behaviour can be characterised as myopic.

The status-quo bias, documented by Samuel and Zeckhauser (1988) applied to investments suggests that investors are more likely to make no changes to their investments when faced with different choices. Rational choice economic theory suggests economic agents choose amongst alternatives based on their well-defined preferences. Status quo bias instead shows that investors are more likely to stick to the status quo unless they experience enough conflict to incite change. Self-perception theory is offered as a potential explanation for status quo persistence – it suggests individuals view their life as if an outsider and so draw inferences about their own underlying attitudes and preferences. One manifestation of this self-perception is to refer to past decisions as a guide for future ones – good enough for me then, must be good enough for me now.

In a related study, as discussed earlier, Agnew and Szykman (2005) investigate the extent to which the notion of the "path of least resistance" proposed by Choi et al. (2002) can account for the observable data that suggest that individuals make choices with a status quo bias. They examine the role of information overload in explaining why individuals are reluctant to make investment decisions in their defined contribution plans. There is the suggestion in the literature that investors may tend to reduce their effort in making such decisions in the face

of increasing complexity arising from the need to discriminate amongst the available choices and thus perhaps rely on heuristics or perceived safe choices.

So, it appears that at least conceptually, psychological biases such as status quo bias, familiarity bias and a conditional $1/n$ heuristic may explain many of the member behaviors and choices observed in superannuation data. Next, we consider the single most important empirical fact associated with member choice: the fact that most members never exercise choice.

4 Why investors may not be switching

From the discussion presented above, it is clear that the decisions investors make in regards to saving for retirement, and how to do so are clearly complex. Whilst we have discussed to this point how investors make decisions about retirement savings, we have not examined the process involved in these choices or what precipitates such decisions. It appears from extant studies, however, that the vast majority of investors place themselves (or are placed by their employer upon joining) in a “default” option and that most individuals hardly ever change from this strategy (Agnew et al. 2003). We therefore examine next the extant literature attempting to explain why some investors switch whilst others do not.

Once in an investment strategy, change theory predicts investors will only alter their strategy when frustrated/experiencing conflict with their current situation (perhaps feeling aggrieved by returns earned, fees paid etc.). However, more likely than change is maintaining the status quo and as detailed before, Samuelson and Zeckhauser (1988) and others since (Agnew and Szykman, 2005) clearly document that a ‘status quo bias’ exists. That is, investors are more likely to make no changes to their investments when faced with different choices. So whilst rational choice economic theory suggests economic agents choose amongst alternatives based on their well-defined preferences, status quo bias instead shows that investors are more likely to stick to the status quo.

So how does change occur then? Festinger (1964) suggests that the decision making process consists of several phases – but that the first, the pre-decision phase will only be entered into once there is conflict – decision-motivating tension – a frustration and dissatisfaction with the status quo. The pre-decision phase involves examining and evaluating alternatives– whilst an ideal might not exist, a realistic “established alternative” will be identified. The decision maker reaches for consensus opinion. Towards the end of this phase, a partial decision can be made. The second phase (partial decision) involves eliminating the “furthest” from ideal options. The remaining options are ranked. The final decision stage – alternatives become less and less until final decision made. In the post decision stage, post decision regret sets in once dissonance has become salient. Then dissonance reduction sets in. Whilst this, in theory, is how investors should be driven to make changes in their superannuation, the large number of investors in default options (and

low percentages of investor who switch options) suggest that investors never truly reach the final stages of this decision making progress (where a decision is made and action taken).

4.1 Why do some investors switch and others don't?

Given the extent of investor inactivity in their retirement savings plans, some suggest that a "life-cycle fund" is the most appropriate for such myopic investors. A life-cycle fund is a particular type of mutual fund whereby the proportion of investment in different assets classes in an investor's super portfolio are automatically adjusted from a high risk to a lower risk position as the investor ages and nears retirement. Recognising that many people are risk averse, by convention life-cycle funds tend to expose younger participants to equity market risks in the early stages of their enrolment and dampen those risks as they come closer to retirement. It is assumed that certainty of income (and indeed certainty of total accumulated assets) towards the end of ones working career is a desirable attribute of a defined contribution pension plan. This permits retirement planning with some certainty and also avoids drawdowns late in one's career when it is difficult to recoup losses due to lack of earning time and time in markets. However, there are many unresolved issues with such funds, not least of which being when the asset allocation should be adjusted, at what rate and whether the reduction in equity exposure may be counterproductive to wealth accumulation.

Basu and Drew (2009) examine this issue in a simulated environment. Recognising that many participants in DC plans tend not to vary their initial asset allocation strategies as they progress through their employment careers to retirement, one response has been to encourage participants to enrol in life-cycle funds which it is assumed that this type of fund is consistent with the long-term interests of participants in building a retirement fund appropriate to their retirement needs. These funds reduce exposure to equity with age. Notwithstanding the popularity of life-cycle funds critics such as Shiller (2005) have suggested that the design of these types of funds leave a lot to be desired. Specifically, Shiller (2005) argues that life-cycle funds ought to be exposed to equity market risk during the latter stages of participants' employment careers because earnings are so much higher due to the balance at this stage being larger than is the case in their initial stages of

employment. He suggests that this would make a significant difference to the value of the accumulated fund at retirement.

Basu and Drew (2009) test Shiller's hypothesis and show that the argument does, in fact, hold for the most likely scenarios. They do so by constructing a set of hypothetical investment strategies, including conventional lifecycle approaches and contrarian approaches in the manner suggested by Shiller. They conclude that "naive contrarian strategies which, defying conventional wisdom, switch to risky stocks from conservative assets produce far superior wealth outcomes relative to conventional life-cycle strategies in all but the most extreme cases" (Basu and Drew, 2009, p.70).

This is an inventive and compelling argument, made plausible by the assumptions underpinning the analysis and the four different asset allocation strategies used to assess the case for and against Shiller's argument. However, as suggested by Pfau (2010) there are (at least) two caveats to the scope and significance of Basu and Drew's (2009) conclusion. First, it is arguable that those affected by the extreme case would pay a heavy price if, in fact, they were subject to the "impact of severe market downturns" as they entered the final phase of their employment careers. There is, therefore, a trade-off to be made between return maximisation and insuring planned future income. As indicated by Pfau (2010) people may be willing to forfeit the upside potential in exchange for certainty.

Second, Basu and Drew (2009) do not take seriously the possibility that a plan participant, or indeed a whole generation of plan participants, may be so unlucky as to encounter a series of market downturns such that their continued exposure to market volatility radically discounts their future incomes. Granted, taking risk off-the-table after one event may lock-in losses should there be no subsequent downturn. However, simulations based upon US nominal returns data over the past century may be misleading in regards to current circumstances and the possibility of systemic shifts in the nature and incidence of financial crises in Western markets (Barro, 2006).

Missing in Basu and Drew (2009), but hinted at by Pfau (2010), is the consideration of the likely impact of other types of wealth, including housing, on the optimal saving strategies

and risk appetite of DC plan participants. The authors share similar assumptions about income, employment histories, and the like. Nonetheless, it is apparent that those who earn more also tend to acquire high levels of housing wealth and other forms of household assets. As has been shown in a study of UK DC plan participants in a London-based investment bank, the older the participant and the higher their income the more diverse are their savings instruments. As a consequence, certain types of plan participants may be quite willing to assume a high level of risk in their DC asset allocations through to retirement because these risks are, in a sense, covered by their other savings instruments with much lower downside risks (Clark, Strauss and Know-Hayes, 2012).

However, there are likely to be older participants with lower incomes and few options, if any, available to discount the risks assumed by an aggressive asset allocation formula carried through to retirement. Should they be affected by an extreme event or, worse, a sequence of extreme events, their future retirement incomes are likely to be much lower than if they had assumed a lower risk strategy some years prior to retirement. This does not mean that the risks assumed are switched on or off. Assuming a retirement age of 65, one could imagine a life-cycle fund that gradually reduces the risk exposure of participants from about 50 years of age onwards. It is arguable, in fact, that the regulators of life-cycle funds are likely to err on the side of securing an adequate retirement income rather than facilitating the maximisation of returns on accumulated funds. The adverse consequences of extreme events could shift lower income DC participants back into the public pension system. Implicit in Basu and Drew, though again hinted at by Pfau, is an assumption that the welfare consequences of extreme events are insured by governments rather than plan sponsors or the individuals concerned. In fact, there is a moral hazard problem when people assume (explicitly or implicitly) that the adverse consequences of taking risk up until point of retirement will be borne by some other entity than themselves.

Fry, Heaney and McKeown(2007) use “Prospect theory” to explain superannuation fund choice in relation to superannuation guarantee contributions. They suggest that given loss aversion the expected benefit/cost ratio needs to be substantial to encourage a change which is further magnified as “superannuation profits cannot be realised until retirement” (Fry et al., 2007). Their key point of departure is the reliance on behavioural theory of

Kahneman and Tversky (1979, 1984) and Tversky and Kahneman (1992) which focuses on gains or losses, as distinct from total wealth. Specifically the status quo effect whereby those already assigned to a default investment option, or fund in this case, will require substantial expected benefits to be encouraged to move from their current reference point, which is their current fund. Fry et al. (2007) utilise survey data from a FinaMetrica survey completed by "Personal Investor" magazine readers. Only 9.5 per cent reported they were very likely to change superannuation fund and a further 9.3 per cent answering that they were fairly likely to do so. These rates are in line with those reported elsewhere for intentions to change superannuation fund reported elsewhere at the same time (Fear and Pace, 2008: p.16) but overstate the actual rates observed which have been in the range of three to six per cent (Fear and Pace, 2008: p.15) and primarily due to change of employment or the employer changing the default fund.

Results show that those self-reporting with better superannuation knowledge were less likely to change fund (Fry et al. 2007). Those reporting an awareness of an alternative fund preferred to their current fund were more likely to change as were those comparing their current fund poorly to the best available fund. The latter two results are suggested as indication of a change in reference point to the new fund. Croy, Gerrans and Speelman (2010a, 2010b) are further examples of applications of broader psychological models to investment choice in the use of Theory of Planned Behaviour (TPB). The focus of TPB is on attitudes, social norms and behavioural control to explain retirement savings decision intention and behaviour, namely investment strategy switch.

The popularity of life-cycle funds in the U.S. is interesting to consider when reviewing the evidence of Australian fund member investment choice. Fund trustees appear not to share the same view of asset allocation as their U.S. counterparts when faced with a majority of members who remain in the default option. Whilst loss aversion and the status quo bias might explain some of the evidence of limited switching behaviour observed in the Australian setting there may be reason to propose a misunderstanding of the default "balanced" fund. Superannuation members may assume an investment in a balanced option to be a fairly risk-averse option. At an aggregate level there is not compelling evidence that Australian funds are rebalancing their default strategies as their membership ages. The

average balanced fund in Australia contains some 65% in growth assets (shares and property) and up to 17% in 'other' investments such as hedge funds. Such an option, with approximately 82% exposure to risky assets is unlikely to be appropriate for an investor nearing retirement. The lack of rebalancing of "balanced default options" is suggested as a shortcoming of the current Australian super system (Ingles, 2009).

5 Preliminary Analysis of the Mercer Database

To complete this report we present selected preliminary analysis of a new database of member investment behaviour constructed from members of the Mercer Super Trust, Corporate Division. The Mercer Database includes approximately 200 employer sub-plans with approximately 400,000 employees. These members can be tracked between 2003 and 2012 as they enter, receive employer superannuation contributions and make investment strategy changes. The data includes both active and exited members.

Three different types of investment activity is observable. The first is a contributions investment change (CIC) which changes the investment strategy for future contributions. The second is a balance investment change (BIC) which changes the investment strategy of the accumulated balance. A third combines the BIC and CIC at the same time. These are treated as separate investment change events for purpose of the analysis here.

The Mercer Super Trust is a corporate master trust where the majority of members are employees and where the employer has normally selected the super fund. The data is therefore noteworthy as it allows a contrast with the Australian empirical findings, discussed elsewhere in this report, which primarily rely on Industry fund data.

The results presented should be reviewed as preliminary and will be subject to further review but provide some empirical evidence to complement the previous discussion.

5.1 Gender

A breakdown of investment activity by gender in Figure 1 indicates a greater likelihood of investment activity, of each type, by males. The overall proportion with any switching activity is 24% (with males 26% and females 21%). Figure 2 provides a breakdown of activity over time, split by gender. It reveals that men consistently make greater changes in their investments than women between 2003 and 2012. There are two exceptions in: 2003 and 2006. The 2006 result is possibly influenced by the timing of individual sub-plans entering and is subject to robustness checks. Similarly the relatively high proportions in 2003 may be an artefact of the total number of sub-plans observed in the database at the time. It is worth noting that these changes appear to be declining for both men and women over the time period.

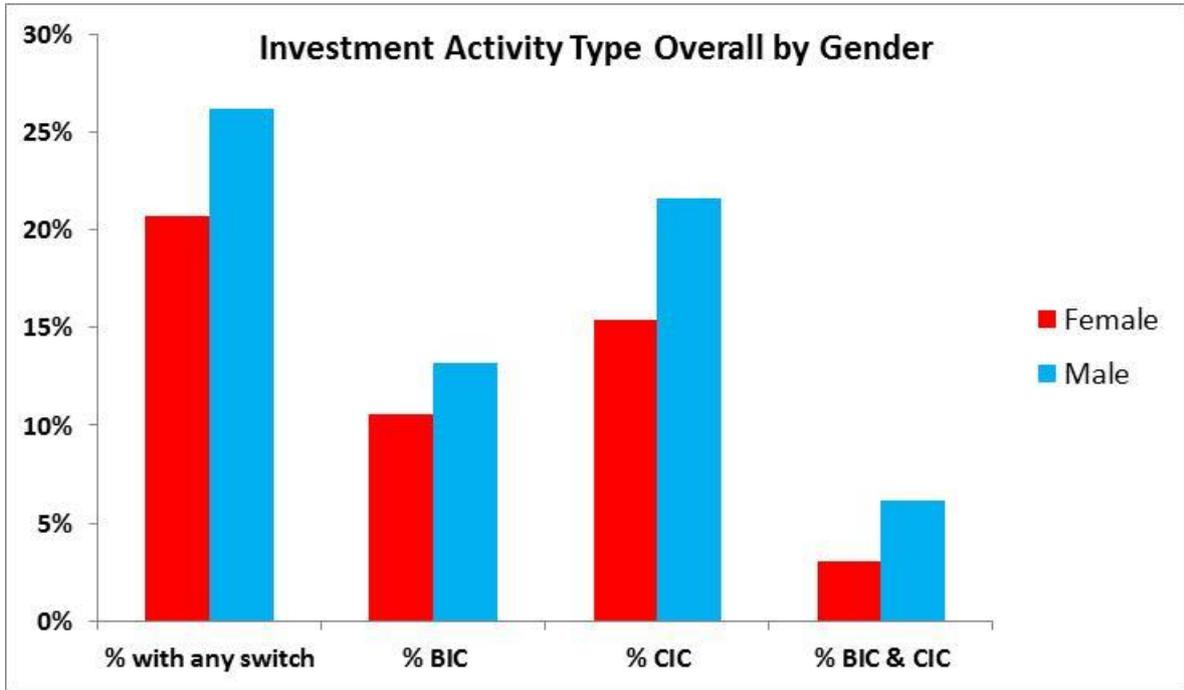


Figure 1 Overall Investment Activity by Gender

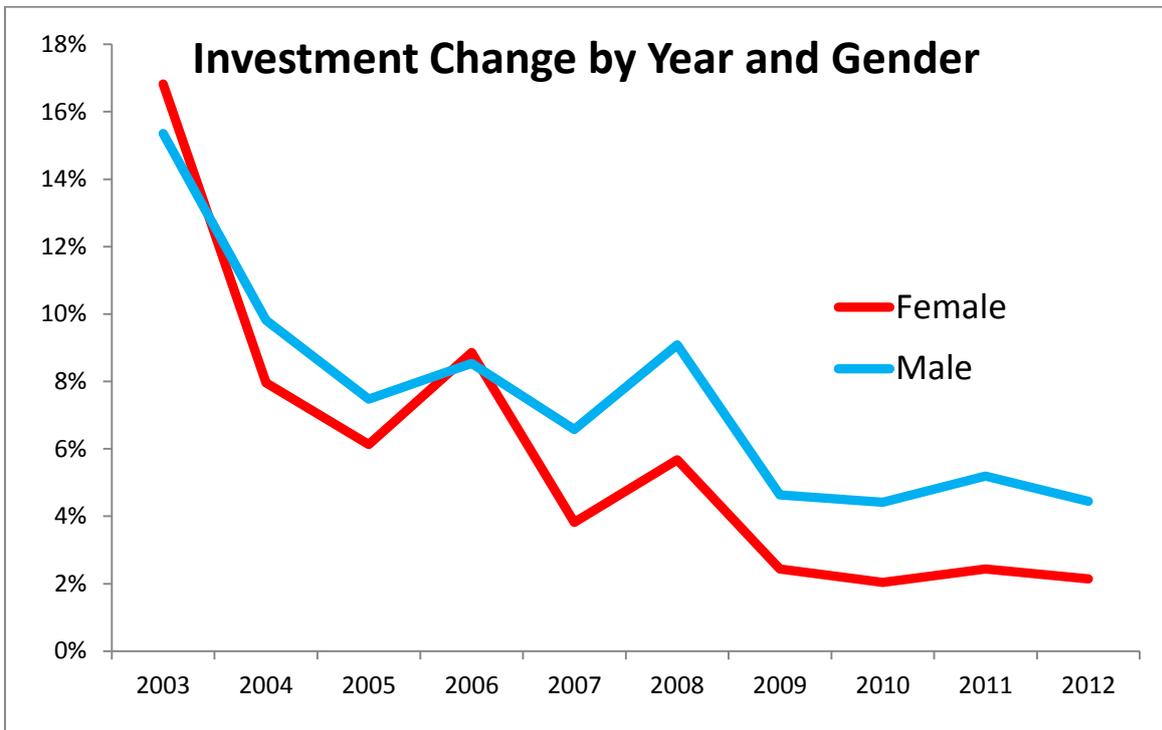


Figure 2 Investment Activity Over Time by Gender

5.2 Investment Activity by Age, Balance and Salary

Figure 3 provides a breakdown of investment activity by age. Note that the age breakdown is for age at the time the activity was observed and hence a member may appear across two age cohorts given the timespan of the data. A consistent ordering of activity by age is observed from the oldest (red) to youngest (dark blue) over the entire time period. The oldest members are more likely to make changes to their portfolio. Note the spikes in 2003, 2006 and 2008. Consistent with Figure 1 the overall investment change appears to decline over time.

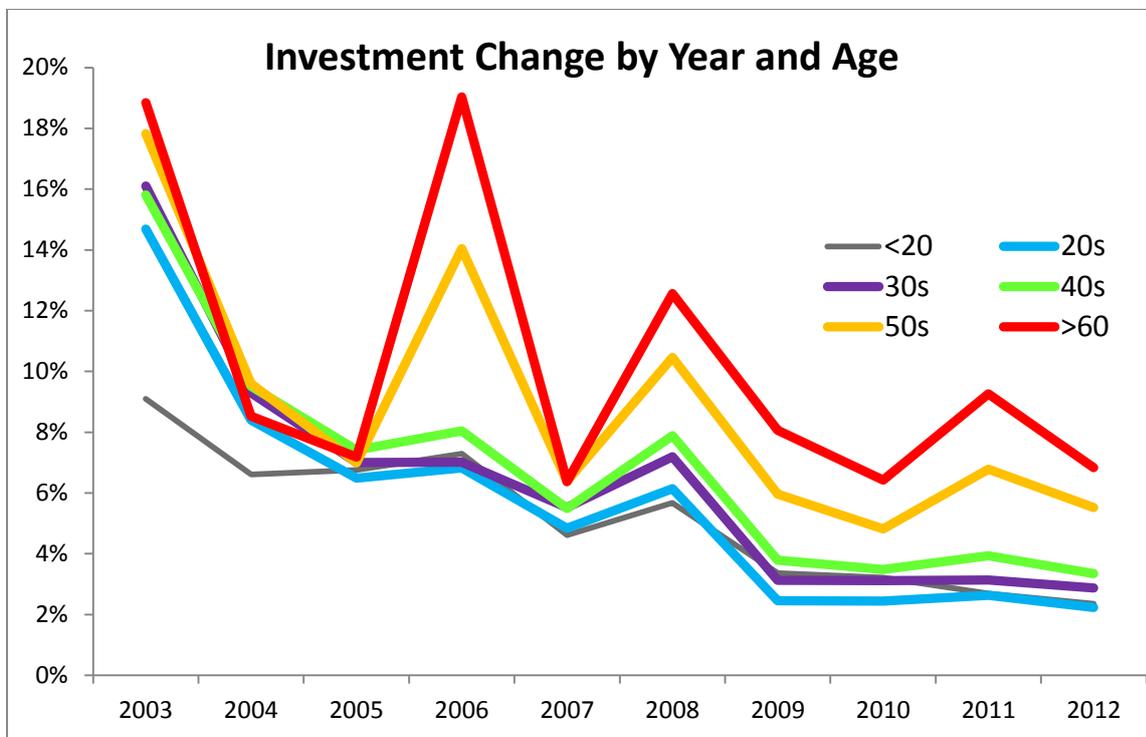


Figure 3 Investment Activity by Age

A complement to the age analysis is presented in Figure 4. Here activity is broken down by length of membership. This breakdown provides a clear difference by length of membership. For example, 49 percent of those with 10 years or more of membership have made an investment switch compared with 13 percent of those with one year.

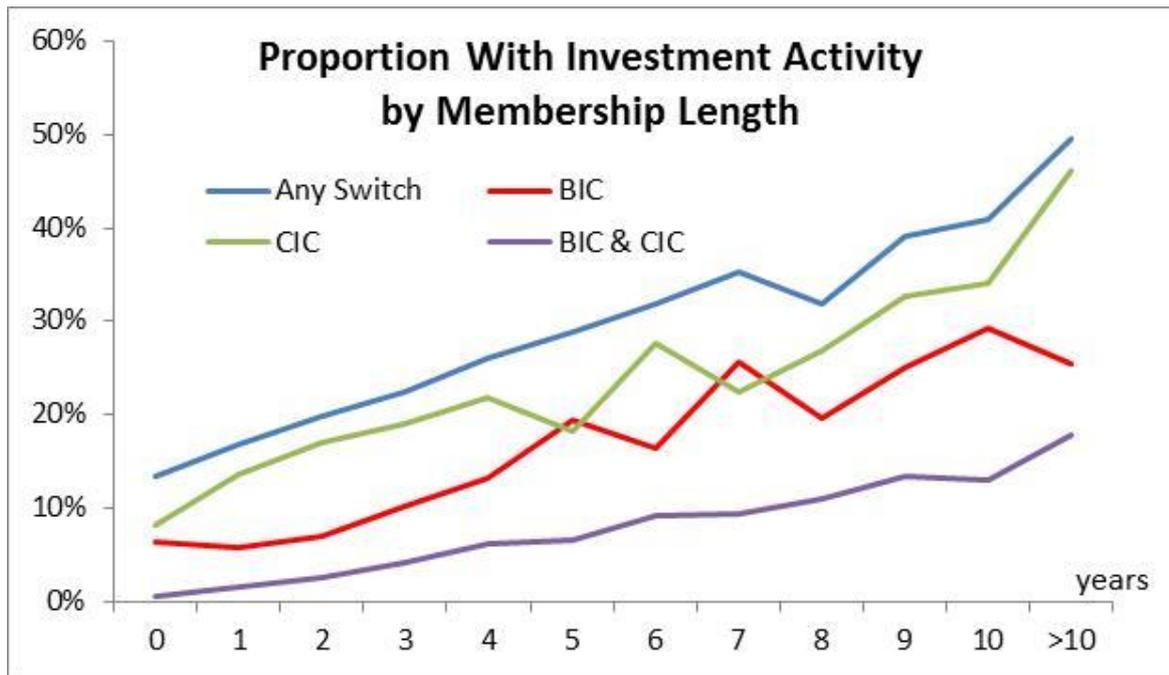


Figure 4 Investment Activity by Membership Length

Figure 5 shows investment change by balance quintile from 2003 to 2012. The balance quintile is determined for each year. A U-shape pattern in activity by balance quintile is observed. The largest balance members consistently make the largest change to their investments (and this is particularly true of the latter years). The lowest balance quintile make the second largest change, however their changes are smaller and probably due to initial information and set-up. This suggests that new members may be over-represented in investment activity, but consistent with Figure 3, the age of new members is across the age distribution, that is they are not necessarily the youngest.

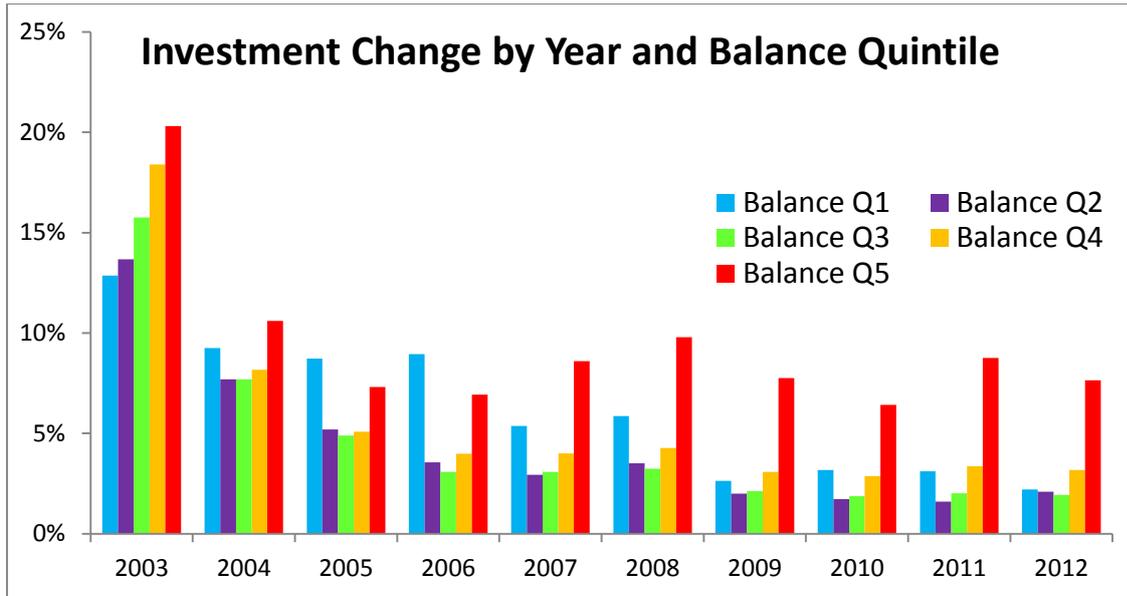


Figure 5 Investment Activity by Balance Quintile

A breakdown of investment activity by salary is presented in Figure 6. A distinct profile is reflected with those in higher salary quintiles more likely to have investment activity. The highest salary quintile is disproportionately larger. The results for age, salary and balance activity suggest interactions between each variable which will be further explored.

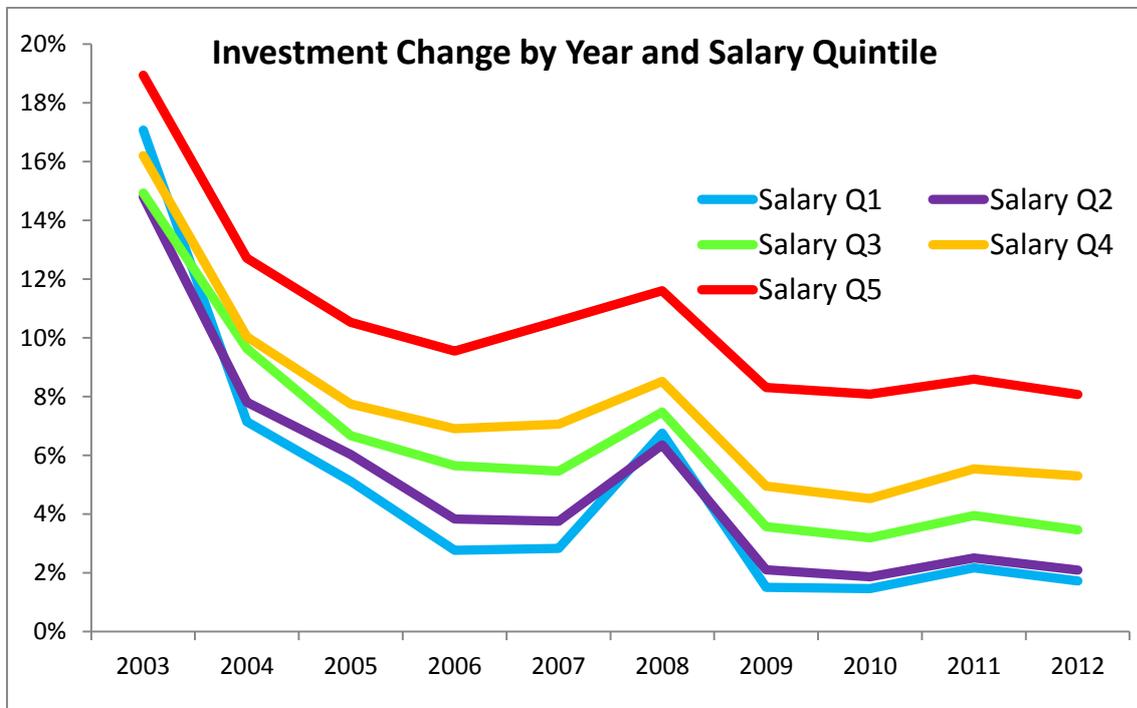


Figure 6 Investment Activity by Salary Quintile

At present the analysis does not reveal what the nature of the investment change is. That is, what are the asset allocation or risk changes produced. Further, we do not assess whether some members are observed across time or just observed once. Further analysis will reveal this.

6 Summary

The Australian retirement income system continues to mature as it enters its twenties. As per any young adult, significant changes are being encountered. Significant structural changes to the institutional environment, through SuperStream, as well as the investment product environment through MySuper will influence the retirement income wellbeing of Australian workers.

This report has presented an overview of the extant literature relating to retirement savings investment choices, the determinants of investment activity and switch behaviour with preliminary results from a new database of members notably drawn from the retail sector. The report placed a particular focus on the Australian superannuation system.

From this review, it is clear that our knowledge of investor behaviour and particularly their decisions regarding investment savings and changes in their retirement savings can be improved. There appears to be some key demographic factors (gender, age, balance, income) associated with behaviour. Other factors such as financial literacy and internet access have also been found to explain investment activity. The most compelling finding is the lack of activity. The majority of members do not make changes even over considerable periods of time. Our understanding of why is improving but further reconciliation with available empirical facts is needed. Ideally this would utilise both revealed behaviour, as from the Mercer database, and attitudinal data collected via survey from the member when the investment is (and is not) undertaken.

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