

Drivers of Investment Choice: Some Evidence From Australian Superannuation Participants

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JEL classification: G23

Keywords: Pensions, Investment Choice

ABSTRACT

This research uses a data from a major Australian superannuation fund, and analyses members' switching behaviour between various investment options. The paper examines the influence of default options on member's decisions, the duration between switches, and the diversification habits of members. This paper is concerned with what members have done, and does not evaluate whether the decisions might be beneficial for members well-being in retirement.

Summary

We have found that for the data set we have used, members have a significant propensity to select the investment default option. But older members with large account balances appear to be the most active members, having a lower propensity to follow the default option, making more adjustments to their asset allocations, and doing so in a shorter timeframe relative to younger members and members with small account balances. Our analysis found a gender difference in members' propensity to make at least one switch in a year, but otherwise, our results show there is no gender effect. Members have also been found to be relatively slow to make a second investment switch but once a member starts to make multiple choices, they do so with increasing rapidity.

Data

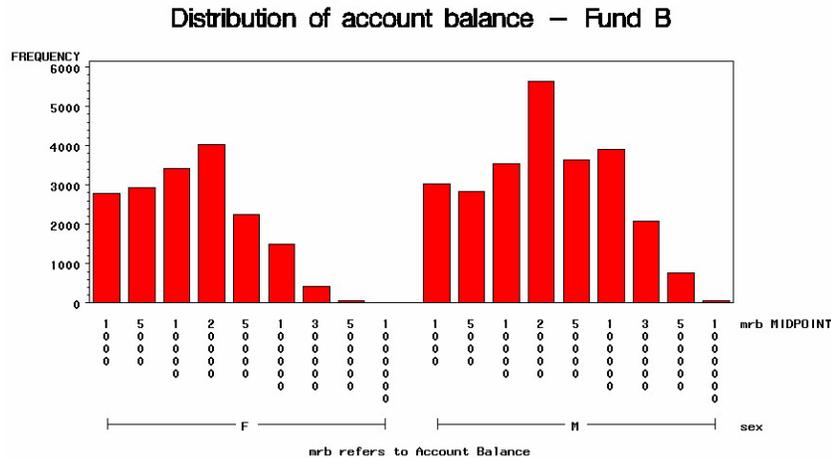
Our data consists of member details provided by a large corporate superannuation fund, "Fund B" over the period 1997 through 2005. Member investment choice was introduced in Fund B in 1997, with four options available, followed in 2001 by two new options. Fund B changed its fee structure for investment switches in 2004 by increasing the number of free switches per year. Fund B allowed online access for members in 2002.

Member responsiveness to choice offers

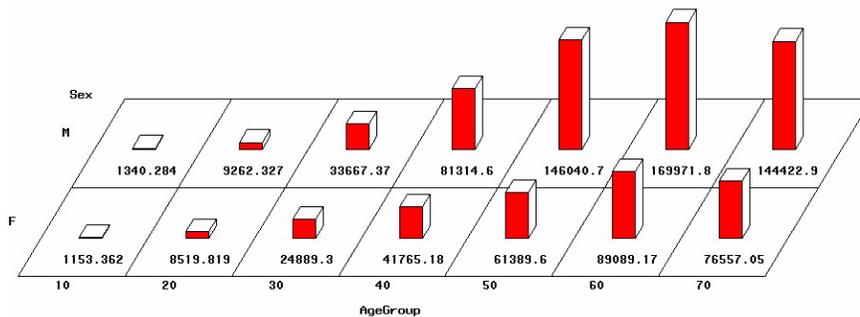
We divided the members into two groups: those who were already in the fund before member investment choice was introduced (pre-1997 members), and those that joined the fund after.

For the Pre-1997 group of members, we observed the proportion of eligible members that registered at least one investment switch within 3 months of member investment choice being introduced as an indication of this group of

members' responsiveness towards the new member investment choice scheme. For the Post-1997 group, we examined the proportion of members who made at least one investment switch after their date of entry. Due to a new default option framework being introduced in 2003, we further subdivided the Post-1997 group into Pre-2003 and Post-2003 members. The characteristics (age, gender, account balance) of each group of members are summarised below.



Mean account balance based on age group and gender – Fund B



A comparison of the Pre-1997 and Post-1997 groups reveals a significant difference in members' behaviour.

Statistics of members' switching behaviour at period of entry								
	Number of members	Means of variables			Members' statistics			
		Age	Gender	Account Balance	(1)	(2)	(3)	(4)
Pre-1997								
49 and under	1889	33.2	0.19	5141	25.99%	11.75%	38.90%	42.76%
50 to 59	113	53.8	0.29	48542	41.59%	6.19%	17.02%	24.50%
60 and over	1	63.0	0.00	3348	100%	100%	100%	100%
Post-1997 Pre-2003								
49 and under	28626	34.7	0.42	31835	99.35%	98.57%	92.37%	92.96%
50 to 59	4607	54.3	0.34	116364	99.46%	98.81%	73.44%	76.37%
60 and over	289	62.9	0.35	163024	99.31%	98.96%	38.68%	42.60%
Post 2003								
49 and under	6099	33.2	0.46	38535	99.97%	99.82%	81.78%	82.57%
50 to 59	1118	54.5	0.32	178017	99.91%	99.73%	64.10%	70.80%
60 and over	160	63.2	0.34	215072	100%	100%	28.75%	38.23%

(1): Percentage of members who make at least one investment switch, from their inception into Fund B until 25/02/2005.
(2): Percentage of members who:
Pre-1997: registered at least one investment switch within 3 months of MIC being introduced.
Post-1997: switch before the end of the financial year in which they joined Fund B.
(3): Conditional on members making at least one switch, the proportion of members with 100% allocation to the default option.
(4): Average members' allocation on the default option.

Amongst the members who submitted an investment choice form, a relatively large proportion of the Post-1997/ Pre-2003 group allocated 100% to the default option. The proportion decreased however across the age brackets. The proportion of members who allocated 100% of funds into the default option were: 92% of members aged under 50, 73% of members aged between 50 and 59, 39% of members aged 60 and above. In the Post-2003 member group, these figures decrease by approximately 10% in each age bracket, indicating a decrease in default option participation through time.

Gender issues

We have also analysed the relationship between investor characteristics (e.g. gender) and the propensity for a member to select the default option in their initial choice. The results are shown in Figure 1.

Figure 1: Impact of age and MRB

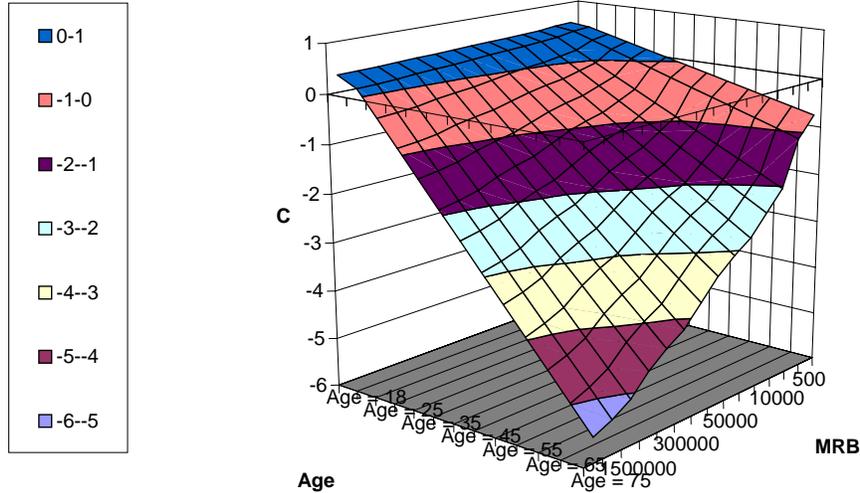
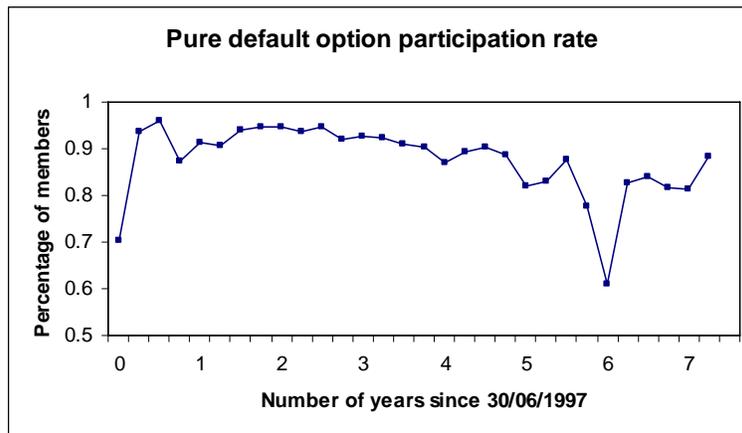


Figure 1: Effects of age and account and its balance combined effect on the probability of 100% allocation to default option. (MRB refers to most recent account balance.)

Where we take age as a constant and analyse the effect of a change in account balance on c , we see a strictly negative slope for all age values, which indicates that as account balance grows, members of all ages are less likely to allocate all their funds into the default option. This is consistent with the results in Choi, Laibson, Madrian and Metrick (2001b). The slope of c also increases with age, implying that the probability of older members sticking to the default option is more sensitive to their account balance.

Number of options effect

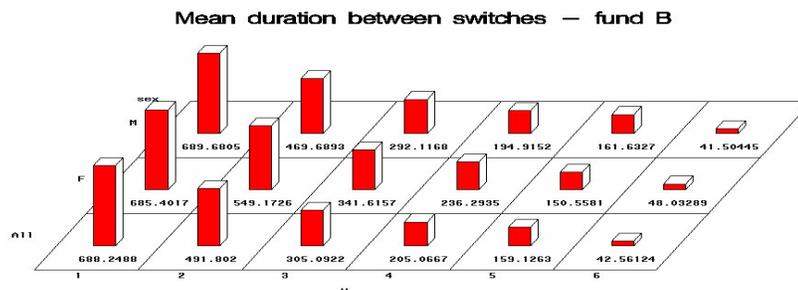
The number of options available to members also affects members' decisions whether to invest purely in the default option. For each new option introduced into the fund, the odds of default option participation fell by 14.9%.



Looking at the graph, we see a sudden and substantial fall on the sixth year. We were informed that Fund B made a change to the fund structure in 2002, and encouraged members to reconsider their choice given that the default option was also changing. Hence, we see some sort of information flow to members that may have triggered a drastic change in members' behaviour. Other papers have found similar results, in that when investors are faced with new information, even if irrelevant to the issue at hand, people make some form of decision that differs to their previous decision.

Time between switches

We were interested to see if there was any pattern emerging as to the time period between switches as this may be an indicator of a "learning" process. We looked at the first 6 switches for each member and grouped all observations beyond the seventh switch together. The results are shown in the following graph.



Average time between $(V-1)^{th}$ and V^{th} switch for Fund B. Figures are in number of days. First row provides mean statistics for male members. Second row provides mean statistics for female members. Third row provides mean statistics for all members. Last column shows average duration between 6th and successive switches.

From the graph, we see that members took an average of 1.8 years to make a second investment choice besides from their initial asset allocation. If members made a third investment decision, the average time taken was 1.4 years. The average time between switches subsequently was approximately 0.6 years.

We also tested for the significance of gender on the length of time it took a member to choose a different asset allocation and for the effect of the introduction of web based access, given that Choi, Laibson and Metrick (2000) documented that portfolio turnover increased with web trading being available to 401(k) investors.

In addition to online access, we suggest that an increase in the number of free switches could incite members to adjust their asset allocations more frequently and hence, reduce the amount of time between switches. For Fund B, the analysis of the aggregate sample shows statistical significance at the 1% level for all independent variables, except for the gender and change in fee structure variables.

The results also confirmed that as a member switches more often, the mean duration decreases. There is no evidence that males and females have different expected duration between switches. In Fund B, the time between switches for the Pre-1997 is on average 29.6% longer than that of the Post-1997 member group.. Interestingly, the change in fee structure did not reduce the length of time between switches. This is an indicator that the increase in the number of free switches does not incite members to adjust their asset allocations on a more frequent basis.

As implied in Choi, Laibson and Metrick (2000), online trading should decrease the time taken to make investment switches. When online access was introduced in Fund B, the average time between switches decreased by almost half.

The increase in the number of free switches for Fund B members seemed to have reduced the duration between the initial switch and the second, but not so for all switches. The same is true for the gender variable for both funds. Subsequent to their second switch, there is no statistical significance between members with different age, gender or account balance. The expected duration between Pre-1997 and Post-1997 member groups is also not statistically different beyond the second switch. Across the different subgroups, the presence of online access for members decreases the expected duration between members. It is the only variable that is consistently significant for all sample groups.

Conclusion

Several results in this paper document the inertia effect. Members have a high propensity to select the default option as their initial choice. Members are also

relatively slow to make a second investment switch, but subsequently they gradually increase their pace of switching.

Fees associated with investment choices do not seem to be a major factor in member investment choice which may only indicate that transaction costs at current levels do not appear to be a big impact on member's decisions.

Our results are largely consistent with other research. Our analysis shows that older members with large account balances are less likely to follow the default option. They also have a higher probability in making at least one investment switch in a particular year, and conditional on at least one switch, make more choices. These results suggest that older members with large balances are more active, which is consistent with Agnew, Balduzzi and Sunden (2003), and others. Our data also show that members take a shorter time to switch with each subsequent switch they make. This is exacerbated by the introduction of online access. This is consistent with Choi, Laibson and Metrick (2000) who document an increase in portfolio turnover with web trading.

Our research shows a small gender difference in the propensity of members making at least one investment choice in a year. However, amongst members who switch at least once in a particular year, there is no statistical difference in the number of switches between males and females. Also, unlike previous papers, we find no gender difference in the likelihood to follow the default option. A member's gender also does not appear to affect the time between switches. From all these results, there needs to be more scrutiny into the significance of gender.

Overall, our analyses suggest that there may be generational issues involved in determining the propensity of members to make changes to their investment strategy or to not select the default option or to select the default option positively as evidenced by the result that education has played some part in the propensity of members to make changes and that older members has a lower tendency to select the default option.

From the member's perspective of "feeling good" or feeling in control, member investment choice would seem to be working and desirable. Our analysis is not concerned with the issue of whether members have made the best investment decisions, i.e. maximising return at retirement, and the analysis would need to be judged against this criteria as well.

Our analysis is broadly consistent with US results which indicates that investor behaviour is not geopolitically sensitive, which in itself is surprising given potential differences that could occur. The analysis clearly indicates drivers for members of superannuation funds to make investment decisions which would provide a direction for further education of any undesirable results. It is quite possible that some of the factors are covering other deeper issues and further research will help to determine the deeper issues in member choice. Until then, it is open to debate whether members with investment choice will be better off at retirement.

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