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Pension scheme trustees as surrogate decision makers

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Pension scheme trustees as surrogate decision makers*

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Abstract

Pension trustees make surrogate decisions on behalf of scheme members. However, prior research has not explored how this might affect pension adequacy. Our results show that when setting targets for pension replacement income, trustees project their own preferences instead of reflecting member preferences. Trustees choose significantly higher pension replacement rates for members than members choose for themselves. Trustees also choose replacement rates higher than current benchmarks. The economic consequences can be considerable, via high levels of pension contributions and incompatible risk taking. A better understanding of the dynamics of decisions made by trustees is needed to ensure better member outcomes.

Keywords: behavioral finance, decision-making, pensions, trustees, surrogate decisions

JEL: D1, H3, L2

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1. Introduction

As governments struggle to finance state provision of pension schemes due to ageing populations, most individuals will need to rely on private pension savings to achieve an adequate income in retirement (OECD, 2019). Consequently, there has been a concerted policy effort by governments to significantly increase the number of employees saving into private workplace pension schemes, using policy tools such as automatic enrolment (see Thaler and Benartzi, 2004).¹ As a result, private pension fund assets under management in many countries are now greater than 100% of their respective GDPs (OECD, 2019, p.211). In the UK, for example, private pension assets have doubled in the last decade, reaching US\$2.8tn as of 2018, equivalent to 104.5% of the country's GDP.

Private pension schemes in the UK and elsewhere are often managed by boards of trustees who make decisions on behalf of members across many dimensions (Bunt et al., 1998; Clark, 2004). This can include the default level of contributions and how the funds are invested. However, while private pension schemes members often have the flexibility to change the investment parameters, most members accept the defaults as set by trustees (Byrne et al., 2007; Madrian and Shea, 2001). Pension scheme investment choices are therefore mostly made by trustees on behalf of members and, consequently, trustees act as surrogate decision-makers.

Even though surrogate decisions can in some instances be more thorough (Ubel et al., 2011) and less biased than those made by oneself (Ziegler and Tunney, 2015), reviews of the surrogate decision-making literature strongly indicate that individuals are poor at choosing on behalf of others (Shalowitz et al., 2006; Tunney and Ziegler, 2015). For example, surrogates tend to incorrectly predict the wishes of "the other," that is, the person for whom they are making the decision (Sulmasy et al., 1998;

¹According to the OECD (2019), Italy, Germany, Lithuania, New Zealand, Poland, Quebec (in Canada), Turkey, the United Kingdom, and some companies in the United States and other provinces of Canada have automatic enrolment in place.

Uhlmann et al., 1988), and surrogates are very poor at making accurate predictions of other people’s risk preferences (Faro and Rottenstreich, 2006; Hsee and Weber, 1997). Instead, surrogates project their own preferences onto others, and as a result, their decisions are closer to what the surrogate would do themselves, than what the other would want (Fagerlin et al., 2001; Pruchno et al., 2005).

Behavioral finance research has mostly focused on decisions made by individuals with regards to their own pensions (e.g., Benartzi and Thaler, 2007), largely ignoring decisions made by institutional investors, such as trustees. Nevertheless, the limited research on trustees shows that pension scheme trustees are not immune from decision biases (e.g., Clark et al., 2007; Weiss-Cohen et al., 2020). Our research adds to this small but growing knowledge base on the impact that trustee decision-making biases can have on pension outcomes. Specifically, we investigate whether trustees project their own preferences when choosing on behalf of members. Given the scale of private pension fund assets, examining this issue is fundamentally important because the decisions made by trustees can significantly affect financial markets, investment levels in the real economy, and the future retirement outcomes of millions of people.

2. Methods

We conducted an online survey which asked both pension scheme trustees and members in the UK what they believed were appropriate levels of private pension replacement rates for themselves and for an average scheme member. Pension replacement rates were defined to participants as the pension income post-retirement as a percentage of the final salary before retirement.

The target replacement rate is an important choice in the design of a retirement pension scheme (OECD, 2013), as the rate targeted will define the levels of contributions required from employers and employees and the investment strategy for the scheme. If targeted replacement rates are too high, the scheme might require exces-

sive contributions today, or take on too much investment risk. If target replacement rates are too low, then contributions will not be adequate, or the asset allocation of the default fund will be too risk averse, and pensioners will have insufficient income in retirement.

The UK Pensions Commission² considered the issue of pension adequacy, and what should be the benchmark replacement rates, based on expenditure patterns in retirement, survey evidence of people's preferences, and international comparisons (Pensions Commission, 2004). According to their figures, the private pension replacement rate should be around 35% for individuals at median income or higher (in addition to the state pension, see Appendix A).

2.1. Participants

Access to trustees was provided by Aon UK, an investment consulting firm. We collected a total of 132 responses. Data was collected on-line using mailing lists (N=102), and in-person at pension conferences (N=30).³ Twelve participants were excluded: Nine participants were excluded for answering "no" to the question "Are you a trustee of a pension fund?" Three participants were excluded for providing nonsensically high replacement rates above 10,000%.

Pension scheme members were accessed on-line using Prolific Academic. Only individuals who were employed and resident in the UK could participate. Due to the success of automatic enrolment, 76% of UK employees are currently members of a private pension scheme (Office for National Statistics, 2019), so we expected that most participants would be private pension scheme members, which proved to be the case. We collected 150 responses, of which 11 were excluded for answering "no" to the question "do you contribute (or have you contributed in the past) towards a

²The UK Pensions Commission (2002 and 2004) was an independent body set up by the UK government to review and make recommendations on the regime for UK private pensions and long-term savings

³Our results and conclusions remain the same when excluding the data collected in-person.

workplace pension scheme?"

2.2. Design

The survey included a brief introductory explanation of private pensions, contributions, and replacement rates. We then asked participants what they believed were appropriate levels of private pension replacement rates, as percentage of final pre-retirement income, for themselves, and for an average pension scheme member. Participants were told to exclude state pensions from their responses, and to assume no additional income from savings or inheritance. The ordering of the questions (self vs. other) was randomized and did not influence the responses. For trustees only, we asked separately for replacement rates for an average defined-benefit (DB) and an average defined-contribution (DC) scheme member. For members only, we asked for appropriate levels of pension contributions before retirement, and what they believed their final pre-retirement salary would be. All participants completed a 14-question financial literacy questionnaire, adapted from Fernandes et al. (2014).

2.3. Results

Variables captured are shown in Table 1.⁴ If trustees are making appropriate surrogate decisions on behalf of members, that is, decisions that are consistent with member wishes, then the replacement rates they choose for members should be similar to the ones members choose for themselves. This was not the case. Instead, the replacement rates chosen by trustees for members (average between DB and DC responses) were significantly higher than those chosen by members for themselves (Trustee/Other: 55.0%; Member/Self: 31.6%; $t(206)=9.29$, $p<.001$).

Accordingly, the evidence shows that trustees project their own preferences (Figure 1). There was a significant positive correlation between the replacement rates trustees chose for members and the rates they chose for themselves (Trustees:

⁴Raw data and the R script for all analyses are available online at <https://osf.io/xfvqr/>.

Table 1: Means of data captured (SE in brackets). Post-retirement replacement income rates and pre-retirement pension contributions as percentages of final salary. All comparable values between trustees and members are significantly different at $p < .001$. †: The overall value for "Replacement rate: Other" for Trustees was calculated from the mean of DB and DC for each individual.

	Trustees	Members
Replacement rates:		
Self	54.8% (1.3%)	31.6% (2.2%)
Other	55.0%† (1.2%)	27.5% (2.1%)
Other (DB)	58.7% (1.3%)	
Other (DC)	51.3% (1.3%)	
Contribution rates:		
Self		9.7% (0.6%)
Other		11.9% (0.8%)
Financial literacy (Max=14)	12.3 (0.1)	7.7 (0.2)
Age (years)	60.1 (0.9)	37.3 (0.8)
Final salary (£'000)		42.1 (1.9)
N	120	139
Gender (Female)	11.7%	51.1%

$r(118)=0.51$, $p < .001$). Trustees also chose higher replacement rates for themselves than members chose for themselves (Trustee/Self: 54.8%; Member/Self: 31.6%; $t(221)=8.94$, $p < .001$). As a result, because trustees projected their higher self-replacement rate into their belief of what an average member would prefer, this led to differences between the trustee/other and the member/self-replacement rates.

There was also a significant difference between the replacement rates that trustees chose for average DB and DC members (DB: 58.7%; DC: 51.3%; $t(119)=6.60$, $p < .001$). This is perhaps a reflection of trustees' own personal experience, as trustees are older on average (Clark et al., 2007) and have largely benefited from more generous DB pension plans with historically high replacement rates. In theory, there is

no actuarial justification for setting different targets between DB and DC schemes, other than historical differences: if they are funded and invested correctly, both types should be able to generate the same level of retirement income (Samwick and Skinner, 2004).⁵ Members were significantly younger, with the average age of members matching the most commonly represented age group of workplace pension contributors (Office for National Statistics, 2019). Trustees also had higher financial literacy than members, but the observed differences in replacement rates remained even after controlling for demographic differences in gender, age, and financial literacy (see Appendix B).

Trustees also selected replacement rates for the members significantly higher than the level suggested by the Pensions Commission of 35% ($t(119) = 17.16$, $p < .001$, see Table A.2). In comparison, the replacement rates selected by members for themselves was not significantly different from the Pensions Commission figure ($t(138) = 1.53$, $p = .13$).

In fact, the levels of contributions chosen by the members are relatively well aligned to their pension replacement rate expectations, according to UK's The Money Advice Service (2020), which provides a pension prediction tool (see Appendix C for more information and the assumptions behind this tool).⁶ In contrast, to reach the higher levels of replacement income suggested by the trustees, the total contribution required (across employers and employees) would be almost twice as the members' preferences (and the benchmark, see Table C.5).

3. Discussion

Our results show that trustees project their own preferences instead of reflecting member preferences when choosing pension replacement rates for members. Trustees

⁵It is also worth noting that the trustees in our sample came from schemes that have both DB and DC plans, and should therefore be experienced with both types of plans.

⁶An equivalent tool provided by the Irish Pension Authority gave very similar results.

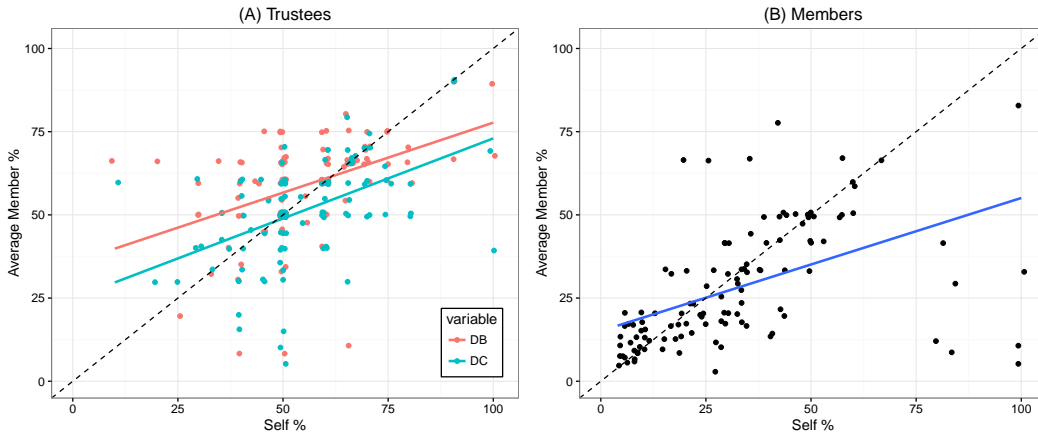


Figure 1: Responses to questions about pension replacement income rates (in percent) for self vs. average member, when asking (A) pension scheme trustees and (B) pension scheme members. The relationship between self and other is shown by the slope of the trendlines. Members' responses were significantly lower than trustees'.

consistently chose higher replacement rates than members, and these replacement rates were much closer to what trustees would like for themselves compared to members' own personal choices. One possible explanation is that trustees incorrectly predict member preferences and believe the preference of members to be close to their own.

Alternatively, trustees might be able to correctly predict member preferences but choose to ignore them. Instead of deciding based on what members *would* do, trustees choose based on what members *should* do, a common bias in surrogate decision making (Stone and Allgaier, 2008). Perhaps trustees believe that the lower rates that members choose for themselves will not be adequate for a comfortable retirement, and instead overrule member preferences with a higher target.

However, the replacement rates chosen by trustees of around 55% were not only significantly higher than members' preferred rates, they were also higher than the benchmarks suggested by the Pensions Commission (2004), of around 35%. In fact, the replacement rates of 32% chosen by the members for themselves were closer to

the proposed benchmark. The question then is not why member replacement rates are low in comparison to trustees', but instead, why are trustees' replacement rates high in comparison to those of members.

A low degree of member representativeness on trustee boards might contribute to the observed differences in target replacement rates between trustees and members. As trustees are typically male, older, retired, richer, and better educated than members (Clark et al., 2007; Myners, 2001), they may lack a good understanding of the needs of members (see Table 1). Intergenerational cohort differences might also come into play, with the older generations accustomed to the era of more generous DB pensions, while younger generations are aware that they will in all likelihood have a lower pension income in retirement in comparison to previous generations of retirees.

If trustees are targeting higher replacement rates than needed, they are likely to be demanding too much in contributions from members and/or employers, or taking too much investment risk. A review by Polman and Wu (2020) has shown how individuals can take more risk when deciding on behalf of others. Indeed, Byrne et al. (2007) observed that default funds for DC pension schemes were typically risky, with high exposures to equities. This is important for member outcomes, as higher risk taking can jeopardize overall pension adequacy, by reducing the average probability of successfully meeting retirement income targets, due to the increase in volatility associated with riskier investment strategies (Park, 2009).

3.1. Conclusions

To provide good value for members, it is important for trustees to understand member preferences. However, our survey shows disparities between trustee and member preferences, consistent with research in surrogate decision-making. Trustees of DC schemes in the UK are legally required to act in accordance with the DC Code of Practice (The Pensions Regulator, 2016), which requires schemes to "understand the characteristics of their members and, where possible, their preferences and fi-

nancial needs, and to take this into consideration when exercising their judgement" (§116, p.27). Worryingly, surveys have shown that 72% of schemes do not consult with members when defining crucial aspects of scheme management to comply with this requirement, such as investment preferences and risk appetite levels (The Pensions Regulator, 2019).

It is not obvious how this issue can best be addressed. More engagement and communication with members is a welcome move that could help to mitigate the misalignment between trustees and members. However, Matheis-Kraft and Roberto (1997) and Ditto et al. (2001) have shown that even holding ex-ante discussions between surrogates and others did not help re-align preferences. Perhaps a better alternative, proposed by West (1996), is to use ex-post feedback-loops on past decisions, which can help surrogates learn the preferences of others over time.

Ensuring that surrogates (trustees) are similar to others (members) would allow for better matching of preferences (Hoch, 1987). There have been attempts to address the homogeneity of trustee boards, and current UK regulations require that at least one third of trustees be nominated by members to try and make trustee boards more representative (Myners, 2001). Despite this initiative, the composition of trustee boards still lack diversity and remain very different from the demographics of scheme members.

While our research relied on a self-reported scenario-based survey, further field research is needed to explore how these differences in preferences between trustees and members translate into actual long-term distortions to pension fund contributions, investment risk-taking, retirement income levels, and member satisfaction. Such research would need unprecedented access to scheme-level data and long-term tracking of pension targets and actual outcomes. We highlight this, as this is an important issue that should be of concern to pension regulators worldwide. It is likely that the surrogacy biases we have observed goes beyond replacement rates and into other areas of pension scheme governance, which can detrimentally affect member

outcomes. Countries which are still building their private pension industry can use this knowledge to create more effective governance structures from the outset.

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Appendix A. Benchmark replacement rates

We replicate the UK Pensions Commission original benchmarks for pension replacement rates (Figure 4.11 Pensions Commission, 2004, p.143), updated to 2019 according to wage inflation, in Table A.2. We also split their benchmarks into two components, public and private pensions, based on the UK's public pension allowances in 2019. According to these figures, the state pension should provide most of the income for low earners, but for anyone at median income or higher (£29,400 in the UK in 2019), most of their pension income should come from private schemes, and the private replacement rate stays at around 35%.

Table A.2: Benchmark replacement rates from the Pensions Commission (2004) report, updated to 2019 income levels, and split by state and private pensions.

2004 Gross income	2019 gross income	Replacement rates		
		Total	State	Private
<£9,500	<£12,200	80%	60%	20%
£9,500 - 17,499	£12,200 - 22,399	70%	40%	30%
£17,500 - 24,999	£23,400 - 31,999	67%	30%	37%
£25,000 - 50,000	£32,000 - 51,300	60%	25%	35%
>£50,000	>£51,300	50%	15%	35%

Appendix B. Further correlation and regression analyses

We ran a regression analysis for each of the two main dependent variables (replacement rate for self and for other) in each sample (trustees and members). Within each sample, there was no correlation between financial literacy and any of the replacement rates (see Table B.3). There was no correlation between age and the metrics captured for members ($ps > .57$). There was, however, a correlation with age for trustees (see Table B.3). Older trustees chose higher replacement income rates both for themselves and for others ($ps < .01$). Such a result is again consistent

with older trustees having more generous pensions than younger trustees, which is potentially influencing their responses.

To ensure that the differences in replacement rates between members and trustees was not determined by differences in ages or financial literacy, we created subsets of the data in which the two groups were more closely matched (see Table B.4). One subset included only members and trustees with financial literacy between 10 and 13, and the other subset only included those with age between 38 and 58. These ranges were chosen as they were the overlap of the 95% percentiles of each of the two groups' data.

In the subset of participants matched by financial literacy, trustees still chose higher replacement rates for members than members for themselves ($t(55.66)=6.56$, $p<.001$). In the age-matched group, there was a significantly lower self-replacement rate for trustees. This confirms that younger trustees have lower preferences than older trustees. However, matching the ages of trustees and members did not change the results. Even within the matched subset, trustees still choose higher replacement rates for members than members chose for themselves ($t(86)=6.22$, $p<.001$). This is because while younger trustees chose lower replacement rates than older trustees, these were still higher than similarly aged members.

Appendix C. Assumptions used for the pension calculator

Table C.5 shows a series of different scenarios of the relationship between levels of pension contribution and pension income, according to The Money Advice Service (2020) in the UK. According to their standard assumptions (reproduced below), an individual who contributes 9.7% of their income throughout their entire working career can expect to earn a pension replacement income of 31.7% at retirement (if we also include a 4.1% contribution from employers, while the minimum required in the UK is currently 3%; see Scenario C in Table C.5). To reach the UK Pensions Commission benchmark replacement rate of 35%, a contribution of 11.9% would be

Table B.3: Linear regression coefficients for the replacement rates (self and other) against the demographics for each sample (trustees and members).

	<i>Dependent variable: Replacement rates</i>			
	Trustee	Trustee	Member	Member
	Self	Other	Self	Other
Age	0.36** (0.13)	0.30* (0.12)	0.15 (0.24)	0.06 (0.23)
Gender=Female	-4.61 (4.22)	-1.01 (3.72)	-2.33 (4.80)	-1.11 (4.46)
Financial Literacy	-0.39 (0.92)	0.64 (0.81)	-0.17 (0.95)	0.04 (0.88)
Contribution: Self			0.19 (0.35)	
Contribution: Other				0.12 (0.22)
Final salary (£'000)			0.03 (0.11)	0.06 (0.10)
Constant	38.71** (14.51)	29.06* (12.81)	25.80* (12.20)	21.39 (11.71)
Observations	120	120	138	138
R ²	0.082	0.064	0.007	0.005

Note: One member was excluded for not providing a valid final salary.

Significance levels: *p<0.05; **p<0.01; ***p<0.001

Table B.4: Means of subsets of data used for comparing the two groups (SE in brackets). The subsets were created to more closely match the two groups in terms of financial literacy and age. The significance levels indicate differences against their respective full samples (e.g., subset of age-matched trustees against full sample of trustees).

	Fin. Lit.-matched		Age-matched	
	Trustees	Members	Trustees	Members
Replacement rates:				
Self	55.6%	32.8%	49.0%**	32.3%
	(1.4%)	(3.0%)	(1.7%)	(2.9%)
Other		27.1%		30.1%
		(2.7%)		(3.0%)
Other (DB)	58.4%		56.6%	
	(1.5%)		(1.8%)	
Other (DC)	51.1%		49.1%	
	(1.6%)		(1.8%)	
Contribution rates:				
Self		9.6%		8.7%
		(0.8%)		(0.7%)
Other		10.9%		9.7%
		(1.5%)		(0.7%)
Financial literacy	11.9*	10.9***	12.3	8.5
	(0.1)	(0.2)	(0.3)	(0.4)
Age (years)	61.1	39.5	50.8***	45.2***
	(1.0)	(1.4)	(0.7)	(0.7)
Final salary (£'000)		52.3**		38.3
		(4.0)		(2.9)
N	91	39	45	57
Gender (Female)	9.9%	30.8%	22.2%	42.9%

Significance levels of the difference against the full sample:

*p<0.05; **p<0.01; ***p<0.001

required, which is the same as that chosen by members for others (with the minimum employer contribution; see Scenario E). What is noteworthy is that members did not simply ask for unrealistically high pension incomes with low contributions. In contrast, to reach the levels of pension replacement income of 55% suggested by the trustees, the total contribution required (across employers and employees) would be almost twice of what members prefer (and the benchmark; see Scenarios F, G, and H).

Table C.5: Estimated workplace pension income in relation to pension contributions, for an individual who is currently 37 years old and will retire at 68 and has an income of £42,100. All values are shown as percentages of salary. Figures in bold are closest matches to those from our survey.

Scenario	Contributions			Total	Pension income
	Employee	Employer	Tax relief		
(A)	8.9%	3.0%	2.2%	14.1%	27.6%
(B)	9.7%	3.0%	2.4%	15.1%	29.6%
(C)	9.7%	4.1%	2.4%	16.2%	31.7%
(D)	10.6%	3.0%	2.6%	16.2%	31.7%
(E)	11.9%	3.0%	3.0%	17.9%	35.0%
(F)	15.3%	9.0%	3.8%	28.1%	55.0%
(G)	17.7%	6.0%	4.4%	28.1%	55.0%
(H)	20.1%	3.0%	5.0%	28.1%	55.0%

To calculate the relationship between pension contributions during employment and pension income during retirement, we used an online tool provided by The Money Advice Service (2020). We inputted an age of 37 and income of £42,100 (to match that of members captured), and retirement age of 68 (the current required by law). The tool allowed us to manipulate the level of contribution, and calculates the estimated retirement income. We calculated the tax relief ourselves by using the UK's marginal tax bracket of 20%, which is the current level in which an individual with the assumed income would fall. The tool uses a series of assumptions which

cannot be changed, and we reproduce them below, verbatim, from the website.

- Monthly payments into your pension pot: Increase by 2.5% a year to reflect annual pay rises.
- Pension charges: Charges of 0.75% a year are taken from your pension pot.
- Investment growth: Your pension investments grow by 5% a year. Your actual investment growth may be higher or lower depending on the performance of the investments in your pension pot.
- Inflation: We show the value of your pension pot and your income at the start of retirement in today's money. We do this by taking off inflation at a rate of 2.5% a year.
- Retirement income: Paid monthly. We're showing income figures before tax is taken off. We've assumed you use your pension pot to purchase an annuity which pays a guaranteed level of income for life. This income stays the same throughout retirement which means it buys less over time if prices rise.
- Tax relief: Most people get tax relief on their pension contributions. We assume tax relief is already included in your contributions.



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