Actuarial Research Centre
Institute and Faculty of Actuaries

Pension Trustee Decision Making

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This research was commissioned by the Institute and Faculty of Actuaries through its Actuarial Research Centre (ARC). The two-year project ran from 2018 – 2020, led by a multidisciplinary research team from City, University of London, IPSOS and Reverence Limited, with additional researchers from the University of Leeds and the University of East London.

Foreword by the Behavioural Finance Steering Group on behalf of the Institute and Faculty of Actuaries

We are delighted to introduce this report, which is the first extensive research programme on the decision making processes of pension trustees. It moves away from pure rational economic agent thinking into the reality of human behaviour. This programme has culminated in a multidisciplinary study reviewing existing psychology and behavioural economics literature, alongside a combination of experimental and qualitative research techniques to explore the potential for and types of biases that may be present in pension trustee decision making. We hope pension trustees, actuaries and other advisers find the report useful and that it encourages further discussion within trustee boards.

Delivered through the IFoA's Actuarial Research Centre (ARC), this was one of five areas of research commissioned by the IFoA's Research and Thought Leadership Board to consider pressing actuarial issues over recent years. The work was led by Professor Peter Ayton, Director at the Centre for Decision Research at Leeds University, who has worked on behavioural decision theory and how judgements are formed under conditions of risk, uncertainty and ambiguity.

Recent regulatory changes have strengthened the governance of trust-based pension arrangements. This has placed additional requirements and scrutiny on the skills, knowledge and experience of trustees. Further consolidation of trust-based arrangements is expected to continue, implying that a reducing number of trustees will be responsible for increasing monetary amounts of members' pension savings. This report is therefore timely in raising awareness of potential risks and providing practical suggestions of steps trustees can take to improve their decision making in discharging their legal obligations and, ultimately, supporting good member outcomes.

While the report indicates a "menu" of areas to probe within an organisation and items for consideration in trustee decision making, it is not intended to be a prescriptive or exhaustive survey. Not all of the potential challenges and risks described in the report will be relevant for all decision makers and their advisers. Readers should focus on the aspects that they believe are most relevant to their own circumstances to determine specific organisational remedies. Below we highlight some key themes emerging from the research which have particular resonance with the Steering Group.

- Behavioural biases appear to exist at the investor *group* level – as opposed to at just the individual level.
- The potential for governance bodies to apply more focus and attention to one area or scheme over another, for example, the tendency for trustees to focus more on their DB plans than on their DC plans.
- The increased onus of the trustee role over time, as noted by several of the interviewees in the study.
- The potential for various communication techniques, such as the 'Devil's Advocate role' or the 'Delphi technique', to enhance the decision-making framework. This is discussed more below.

The report may support trustees and actuaries advising trustees to consider further ways to optimise their decision making. For example, this could include how information is presented to ensure that trustees are not placed under excessive cognitive load leading to a less optimal outcome. There is also scope for more targeted and focused agendas for trustee meetings, where information is clearly segregated from advice so trustees can clearly consider unbiased options prior to receiving advice.

Actuaries can work with trustees to build a relationship that leads to an open environment, where the advisor’s advice can be scrutinised without trustees being worried about appearing to be critical. Also further education and training of trustees and consideration of how the Chairperson facilitates meetings and discussions may help deeper consideration of alternative scenarios at play.

For example, the official introduction of a Devil’s Advocate role or the use of the Delphi technique prior to trustee discussions, where participants are canvassed for individual opinions prior to meetings and the Chairperson feeds back an anonymous summary to aid and direct the subsequent discussion, can help to move away from consensus style decision making, or at least encourage a broader range of views to be discussed and potentially secure more robust outcomes.

Regular reviews of, and documentation of, decision making may provide specific organisational learnings. A hindsight analysis of decisions taken can assess the quality of information on which the decision was based, the factors which led to it and whether the decision was in fact appropriate for the organisation.

Lastly, it is important to be aware when the decisions are actually made. Alongside the formal processes guiding the work of any organisation, there are a wide variety of norms, customs and practices that will also operate. These often influence as much, if not more, how the final judgements and decisions are made, but are very difficult to formalise. We would encourage regular reviews of both formalised processes and unspoken practices, as they can have unintended impacts on outcomes.

We note that this has been very much an initial study of this fascinating area. While possible recommendations have been explored, they have not been tested nor have best practice remedies been identified. We consider this field ripe for further investigation: to identify effective solutions to the problems raised by the report and the potential effectiveness and feasibility of any potential remedies.

Finally, we wish to highlight that while the research is focused on trustee decision making, the findings may be equally relevant for anyone who is involved in group decision making, operates within a judge-advisor system (acts as an advisor to a decision maker) or is a surrogate decision maker (makes decisions on behalf of others). Consequently, its application is very broad. In particular we observe there are many parallels with board decision making more generally and consider many of the insights equally relevant to this area.

PENSION TRUSTEE DECISION MAKING

Executive Summary

Judgment and decision making processes in pension trustees have been investigated in a multi-centre project using quantitative experimental as well as qualitative ethnographic and in-depth interview methodologies. The qualitative research examined the social and cultural context for decision making within trustee boards, which offered an understanding of the ways in which the decision biases are formed and as such how these can be addressed. Three distinct characteristics of trustee decision making were the focus for this initial investigation into pension fund trustee board behaviour:

- Firstly, recognising that trustees make decisions as a group, we focus on *group decision making*, and the potential biases that can be activated within that environment.
- Second, recognising that advisors and consultants are extremely influential in the decision making process, we focus on the concept of *judge-advisor systems* (JAS).
- Finally, considering trustees are making decisions for others (i.e. workers and employees who are beneficiaries of the pension fund), we focus on the concept of surrogate decision making, and how this can potentially lead to deviations in normative financial decisions.

Despite extensive training, and displaying higher financial literacy than a lay person, trustees are not immune from decision biases, in particular when comparing member-nominated trustees with professional trustees. Furthermore, trustees make surrogate decisions on behalf of members that can vary from members' preferences.

A number of recommendations are made for enhancing trustee decision making given the following challenges:

- **Capacity challenges:** Trustees were found to struggle with the amount of information to review and prepare for board meetings.
- **Capability challenges:** Member-nominated trustees showed stronger biases than employer-nominated, with the weakest biases by professional trustees.
- **Risk biases**: Judgments around risk as well as risk-taking appear to be unduly influenced by three factors: First, members of trustee boards have very similar backgrounds and seem to form a relatively homogeneous group, which can lead to higher risk-taking. Second, trustees make surrogate decisions, which often leads to different risk-taking than if the surrogate were asked. Similarly, the perception and knowledge of personal liability may also affect risk-taking.
- **Board management:** There are two aspects of board management we identify as relevant – the role of the Chair and the tendency towards consensus decision making.
- **Dealing with Advisors:** Given the importance of third-party advisors to decisions made by trustee boards, there is a case for reviewing best practice in the selection of advisors but also the manner in which their advice is considered.

This report outlines the research that was undertaken and offers a set of proposed best practice recommendations for consideration.

Contents

1. Introduction

This paper provides a summary of the main research findings of a research project designed to investigate institutional investors' – pension fund trustees' - decision making and, based on our findings, offers recommendations for best practice. The research reported here was carried out by a multi-disciplinary consortium and exploited three basic methodologies. Firstly we carried out reviews of the cognate research literature – focusing on the research on the psychology of judgment and decision making, behavioural finance and the more limited literature on pension trustee decision making. Secondly we conducted qualitative research: a set of ethnographic interviews of a sample of individual pension trustees were conducted along with structured interviews with professional pension board advisors. Thirdly we conducted a series of behavioural experiments that recruited pension trustees as participants to study their decision making on tasks designed to mimic some aspects of investment decisions.

While these three methods of enquiry were carried out separately the research was co-ordinated across the consortium to maintain focus. The literature review provided a context for both strands of the empirical work facilitating interpretation of the findings and, for the experimental work, provided rationales for specific experimental hypotheses. In considering recommendations for best practice we have considered the findings from all three research methods which in several instances have provided converging lines of evidence to support our conclusions.

Although behavioural research analysing pension trustee decision making is rather scant, concerns over the quality of pension trustees' decision making are both long standing and persistent. For over 20 years a range of commentators and investigators have expressed doubts about the competence and performance of trustees (Bunt, Winterbotham & Williams 1998; Clark, 1998; Clark, Caerlewy-Smith & Marshall, 2007; Myners, 2001; Stapleton, 2004; Tilba, Baddeley, & Liao, 2016).

These concerns have not been minor or insignificant. A prominent event in the UK's pension regulatory history was the Myners report (Myners, 2001) the review of institutional investment commissioned by the UK government which questioned whether institutional investors were acting in the best interests of their beneficiaries. Reflecting recently on that review Paul Myners commented: "The Review ran to a couple of hundred pages, but the key message can be captured in a single sentence: There needs to be a step change in the competency and the quality of decision making by asset owners (pension trustees, etc.)." (Myners, 2019, p. 6). According to Clark, et al. (2007): "…many decry the amateur status of pension trustees; it is widely believed they lack the competence to make investment decisions consistent with the best interests of plan sponsors and beneficiaries in a financial world of increasing complexity that demands high levels of expertise" (p. 92).

The evidence driving these concerns has not, in the main, been derived from analysis of the quality of actual decisions taken by trustees but instead is inferred from analyses of trustees' working practices and their qualifications, experience and understanding - often informed by surveys of and/or interviews with trustees which probe trustee attitudes and viewpoints as well as seeking trustees' accounts of their own decision making (as in Bunt et al 1998; Clark, 1998a; 1998b; Clark & Urwin, 2008a; Myners, 2001; Tilba et al. 2016).

Some research studies have evaluated trustee decisions by measuring performance of funds and analysing how this is affected by differences in the organization, policy or strategy of pension trustees (e.g.; Ambachtsheer, Capelle, & Scheibelhut, 1998; Ambachtsheer, & McLaughlin, 2015; Brinson, Hood & Beebower, 1986) but direct and systematic studies of trustees' decision performance, while not non-existent (e.g. Clark, Caerlewy-Smith & Marshall, 2006; 2007; Van Dalen, Henkens, Koedijk & Slager, 2012), are rare. Moreover those few studies that do directly assess trustee decision making are laboratory based studies of individuals solving reasoning problems deemed to capture key elements of trustee reasoning (Clark et al. 2006; 2007) or evaluate responses to hypothetical scenarios that a fictitious pension fund might encounter.

No experimental study of trustee decision making has investigated decisions made in a group context or the actual decisions made by trustees in the course of their work.

At the same time most experimental research into behavioural finance, i.e. behaviour and decision making in the context of financial choices, has been focused on evaluations of the characteristics of decisions of individuals. While reviews of behavioural finance have often pointed to studies of market behaviour that reveal economic puzzles or anomalies (e.g. Shiller, 2003; Subrahmanyam, 2008; Thaler, 1999) the behavioural finance research program draws heavily on behavioural research on individual judgment and decision making as reviews have repeatedly emphasised (e.g. Barberis & Thaler, 2003; De Bondt, Forbes, Hamalainen & Muradoglu; 2010; De Bondt & Thaler, 1995; Muradoglu & Harvey 2012). However research studies in behavioural finance have rather overlooked another, crucial, group of investors: institutional investors. In the UK, 79% of assets under management are held for institutional clients (Investment Association, 2018). In turn, over half of these assets are held for pension funds. It is a similar story in Europe; 70% of assets under management are with institutional investors, with pension funds representing 40% of that figure (European Fund & Asset Management Association, 2019). Investment decisions made by pension trustees have significant market impact. As a result, and as they have come to play critical roles in under-writing the welfare of huge swathes of the population, increasing attention has been paid to the way institutional funds perform.

Despite the fact that the price of poor performance is very high there is clear evidence of substantial variation in the sophistication of institutional investors (see Ambachtsheer, 2007 and Lerner, Schoar & Wongsunwai, 2007). The research evidence indicates that performance is influenced by the practices of bodies responsible for governance of these funds; indeed, Clark and Urwin (2008a) cite estimates that the impact of good governance may be as high as 100–300 basis points per year. Ambachtsheer (e.g. 2007) has been particularly critical arguing that many pension and retirement income institutions are not ‘fit-for-purpose’, that board oversight function in many organizations needs to be more clearly defined and executed and, corroborating the notion that decrements in board performance could be addressed, also reports several surveys each showing significant correlations between measures of pension fund governance quality and investment performance (Ambachtsheer, Capelle & Lum, 2008; Ambachtsheer, Capelle & Scheibelhut, 1998; Ambachtsheer & McLaughlin, 2015) – see also Abinzano, Muga, & Santamaria, 2017; Ammann & Ehmann, 2017).

The importance of governance

In his analysis of the economic impact of institutions North (1991) identified governance as the capacity of an organisation to operate in a manner consistent with desired outcomes and critical for an institution’s functional performance. Most institutions are managed by formal arrangements of authority and accountability. Many organisations can map the tasks and functions to the different roles of the institution but Clark and Urwin (2008a) argue that their evidence indicates that formal governance rules are not sufficient as a description of the life of pension organisations. In regard to pension boards Clark and Urwin (2008a) claim that actual practices can be influenced by a wide range of factors including inherited relationships and systems of control, a lack of clarity of a-priori defined tasks and functions, and distinctive national political traditions. As Clark and Urwin (2008a) point out, “Institutional structure is, however, not the only driver of outcomes: even ‘ideal’ institutions do not succeed if they not well governed.” (p. 3).

According to this analysis any attempt to formulate prescriptions for best-practice needs to acknowledge and understand the unwritten aspects of governance – understanding how the institution operates in practice is essential for the institutional design process. As such, constructing a clearer view of the decision making processes of institutional investors is arguably long overdue, considering both the paucity of research and the significant role of this group of decision makers.

This paper provides a contribution to this important task. More specifically, we focus on pension fund trustees (Defined Benefits as well as Defined Contributions) as key institutional decision-makers. There is a growing interest in the performance of trustees in the context of significant structural changes to how pensions operate in the UK, and the increasingly complex demands being placed upon trustees. However, while pension fund trustees are legally responsible for the management of the fund, they rely heavily on external advice, in the form of investment consultants and fiduciary managers. Nonetheless – and despite the fact that there is no legal requirement for trustees to have any particular level of expertise in investment matters - the decisions for appointing these advisors and managers are taken by the trustees themselves.

Despite the importance of this activity, the Competition and Markets Authority (CMA) has pointed out that little has previously been known about the workings of the markets for investment consultants and fiduciary managers. (Competition and Markets Authority, 2018a). Concern over the lack of visibility of these markets recently led the Financial Conduct Authority to request the CMA to investigate the extent to which the markets for investment consultancy services and fiduciary management in the UK are competitive. The CMA report (Competition and Markets Authority, 2018a) concluded that the behaviour of pension trustees had an adverse effect on competition within the investment consultancy market, which, in turn, had adverse effects of investment consultancy services “from which substantial customer detriment may be expected to result”.

The CMA report concluded that, with respect to investment consultancy, there is a low level of engagement by some customers in choosing and monitoring their provider. It is also difficult for customers to access and assess the information needed to evaluate the quality of their existing investment consultant and to identify if they would be better off using an alternative provider. This reduces their ability to drive competition and reduces providers’ incentives to compete. In turn, this may be expected to result in substantial customer detriment in the market. The main type of customer for investment consultants are trustees of workplace pension schemes - pension schemes represent over 90% of investment consultants’ revenues (Competition and Markets Authority, 2018a).

After summarising adverse effects on the investment consultancy market, the CMA report noted “We have greater concerns about the fiduciary management market due to the features we have found.” The concerns about the fiduciary management market again stem from low engagement from pension trustees. The report noted that firms which provide both investment consultancy and fiduciary management have an incumbency advantage deriving from low customer engagement. Due to a lack of comparable information on providers’ historic performance, or clarity on their fees, there was found to be a lack of competition and choice in fiduciary management. The consequence of this was found to be that trustees often ended up with the fiduciary offering of the same firm that provided other advisory services.

The CMA report also noted that in the increasingly prevalent Defined Contribution (DC) schemes it is the individual members who bear the risk of poor investment outcomes, rather than employers (who bear the risk of underperformance of Defined Benefit (DB) pension schemes), it is even more important that DC schemes take good investment decisions. However, they found evidence that DC pension scheme trustees spend less time on investment matters than those of DB schemes.

The noting of a low level of ability to effectively monitor and benchmark their fiduciary management investments/allocations by pension trustees underlines the importance of obtaining greater understanding of pension trustees’ decision making customs and practices in order to identify reforms. The CMA report proposed a number of procedural remedies – for example the introduction of mandatory tendering when pension trustees first purchase fiduciary management services and requirements on fiduciary management firms to provide better and more comparable information on fees. In this report we focus on the decision making of trustees and consider how this could be improved.

There has been a range of previous work exploring governance best practice for institutional funds, much of which has been undertaken by Gordon Clark, Emeritus Professor at the Smith School of Enterprise and the

Environment, Oxford. In a series of papers Clark and his colleagues have produced a number of critiques of the operation of pension funds – for example Clark (2004) argued that "…pension fund governance reflects, more often than not, its nineteenth-century antecedents rather than the financial imperatives of the twenty-first century." Clark and colleagues have also produced proposals for reforms and Clark and Urwin (2008a) identified several factors that should be considered for governance best practice for institutional funds, as set out in Table 1 below.

Table 1: Governance best-practice for institutional funds

Core Best-Practice Factors	
Mission clarity	Clarity of the mission and the commitment of stakeholders to the mission statement.
Effective focusing of time	Resourcing each element in the investment process with an appropriate budget considering impact and required capabilities
Leadership	Leadership, being evident at the board / IC level, with the key role being the IC Chairman
Strong beliefs	Strong investment beliefs commanding fund-wide support that align with goals and in formal investment decision making
Risk budget framework	Frame the investment process by reference to a risk budget aligned to goals and incorporates an accurate view of alpha and beta.
Fit-for-purpose manager line-up	The effective use of external managers, governed by clear mandates, aligned to goals, selected on fit for purpose criteria.
Exceptional best-practice factors	
Investment executive	The use of a highly investment competent investment function tasked with clearly specified responsibilities, with clear accountabilities to the IC
Required competencies	Selection to the board and senior staff guided by: numeric skills, capacity for logical thinking, ability to think about risk in the probability domain
Effective compensation	Effective compensation practices used to build bench strength and align actions to the mission, different strategies working according to fund context
Competitive positioning	Frame the investment philosophy and process by reference to the institution's comparative advantages and disadvantages
Real-time decisions	Utilize decision making systems that function in real-time not calendar-time
Learning organisation	Work to a learning culture which deliberately encourages change and challenges the common place assumptions of the industry

Note: IC = Investment Committee

In order to establish these principles and practice of good governance, Clark and Urwin (2008a) used a set of ten case studies of pension funds. Acknowledging that "it is not self-evident what works nor is it self-evident what does not work", Clark and Urwin conducted their ten case study pension funds by interviewing key personnel in each fund – usually the CEO or CIO. Their selection of the ten pension funds was somewhat judgmental inasmuch as it relied on the authors' "extensive knowledge of organisations over a sustained period of time but with clear evidence of strong decision making accompanying success in performance".

The current research project addresses a somewhat narrower set of issues than those set out by Clark and Urwin (2008a), as our research is largely based on our investigations of the decision making of trustees using methodology adapted from psychological research into behavioural decision making. Our goals are to investigate the nature of trustee decision making; and to draw implications from these results for the governance of trustee boards and their relationships with advisers.

To this end, this document is structured as follows: in the next section we review the concept of behavioural finance in terms of how it is distinct from normative – i.e. economically rational - decision making in finance and present our conclusions from reviewing relevant research literature. This allows us to identify three distinct characteristics of pension trustee decision making which we have used to organise our analyses.

In the following sections we detail the mixed methods we employed – utilising reviews of research literature with both quantitative and qualitative empirical methods - to conduct the research for this project. In what follows we present the results from the research, reporting the qualitative insights followed by the quantitative results. In addition, and in recognition of this paper's possible role in initiating wider discussion of the decision making performance of pension fund trustees, we discuss the limitations of this research.

It should be clear that we acknowledge that the pension trustees that participated in this research programme were clearly intelligent, conscientious, hardworking, committed to their responsibilities as trustees and altruistically motivated. Nonetheless our research chimes with calls from others that there is a case for the reappraisal of the nature of pension trustees' task as there is reason for concern about the quality of decision making. By applying a lens based on the behavioural science of judgement and decision making to pension trustees alongside a consideration from the ethnographic understanding of the social and cultural context, we have been able to identify a basis for justifying the consideration of recommendations concerning best practice for governance of trustee decision making.

2. Behavioural finance and trustee decision making

Behavioural finance is the application of psychology to financial decision making and financial markets and is a relatively new academic subject of study. Shefrin (2010) dates the start of the field to a 1972 paper by the psychologist Paul Slovic in the Journal of Finance (Slovic, 1972) entitled: 'Psychological study of human judgment: Implications for investment decision making'. Shefrin notes however that, despite this clear landmark, financial economists did not begin to apply the concepts pioneered by Slovic and other psychologists working in behavioural decision making until the early 1980s – no doubt at least in part because the development of behavioural finance has entailed such a fundamental transformation of the financial paradigm from one based in neoclassical economics to a psychologically based approach. Shefrin claims that the first published work in behavioural finance by economists was by himself and Statman (Shefrin and Statman, 1984) – a paper which drew on the work of psychologists Kahneman and Tversky (1979) to explain an economically anomalous phenomenon – investors' strong preference for cash dividends.

The majority of subsequent research into behavioural finance has focused on systematic biases found in the decisions made by individual investors (Shefrin, 2010). By biases in decision making we refer to anomalous departures from normative decisions as defined by economic and financial theory. A vivid example of such a departure is 'naive diversification' (Benartzi & Thaler (2001), whereby investors tend to follow a "1/n strategy" by allocating their investment allocations evenly across each of the available funds offered in a plan - but irrespective of the underlying fundamentals of those options. As a result of this behaviour the proportion that individuals invested in stocks (or bonds) depended strongly on the proportion of stock (or bond) funds in the plan. That is to say, the array of options presented to the investor determined the riskiness of the investment choices made by the investor.

While the research studies carried out by Benartzi and Thaler (2001) identified a particular (1/n) "heuristic" being used by decision makers and a concomitant decision bias, their discovery of this heuristic in the context of real pension investment decisions made by employees selecting funds for their pensions is also indicative of the likelihood of other naïve heuristics being invoked leading to other biases and consequent non-normative decisions. Indeed Benartzi and Thaler (2007) later identified evidence for a number of different heuristics in American employees determining the investments for their employee pension plan. The particular heuristics people use evidently depend on the complexity of the situation and subtle details of the layout of the information available to them. While the poor design of information displays can lead to deleterious decisions, more optimistically and by the same token, the judicious use of design features could also be used to improve investors' portfolio choices.

Although naive diversification has (prior to our research) only been identified within individual investor decision contexts, it would be wrong to assume such heuristic behaviour is necessarily filtered out within the context of a board of trustees advised by sophisticated investment consultants. It may be noted that pension fund trustees operate under significant fiduciary pressures and the risk of legal action in the case of poor decisions made on behalf of those dependent on the pension fund. Nevertheless despite these facts - indeed because of them – what the Myners review identified as 'inertia' could result (Myners, 2001). According to Myners no one in this situation has a clear mandate for taking decisive action or changing direction: trustees tend to feel that they lack the expertise to do so, and advisers that they lack the authority to make decisions.

The resulting inertia closely resembles what psychologists (Ritov & Baron, 1992) and behavioural economists (Kahneman, Knetsch & Thaler, 1991) refer to as 'status quo bias', the strong tendency to remain at the status quo, which Kahneman et al (1991) attribute to loss aversion – the tendency to weight prospective losses greater than prospective gains. Loss aversion - a key feature of Kahneman & Tversky's (1979) prospect theory – accounts for status quo bias because the disadvantages of abandoning the status quo loom far larger than advantages. By experimentation with choice Samuelson and Zeckhauser (1988) showed that that an alternative became significantly more popular when it was designated as the status quo. Also, consistent with the idea that inertia arises in response to difficulty, the popularity of the status quo increases with the number of alternatives. Neuroscience research (Fleming, Thomas & Dolan, 2010) has established evidence that different neural circuits, located in a region known to be more active for difficult decisions, are invoked when decisions switch away from the status quo and that such mechanisms may contribute when rejecting the default.

Under the significant pressures they face, another possible decision strategy is that trustees could become more reliant on ‘expert’ views to guide their choices (Pratten & Satchell, 1998) in order to off-set responsibility, or begin to rely disproportionately on non-financial criteria and metrics (Del Guercio & Tkac, 2002). In addition, the timescale of investment outcomes is such that the impacts of the trustees’ investment decisions may take many years or even decades to clearly present themselves. As such, any causal link between these investment decisions and the outcomes for pension holders can be extremely hard to discern within the board, a state of affairs which has been shown to lead to poor or non-existent learning, or indeed increased learned behavioural inertia (Sutton & Barto, 1990).

Pension fund trustee boards in the UK are obliged to contain a proportion of trustees who are nominated by members of the pension fund. These trustees are typically employees of the company, with the other trustees nominated by the employer. The former group, while more financially literate than lay persons, are often lacking in financial knowledge and experience compared to professional trustees, and whilst the fund itself is obligated to provide training, in many cases this training is deemed insufficient by this group (Myners, 2001). This perceived lack of training - together with onerous fiduciary duties - often leads to trustees being seen as relying heavily on the input and advice of advisors and consultants (Myners, 2001)[1].

These advisors and consultants may influence the decisions made by trustees of the pension fund in two ways. Firstly, they will carry expertise and experience in specific areas relevant to the fund and its decisions, with this expertise providing input to the decisions subsequently being made by trustees. One specific way in which this expertise could steer decisions is that consultants provide lists of potential funds in which to invest to the trustees. Whilst trustees are free to consider other funds, there is evidence that trustees rarely go beyond this list (Clacher, McNair & Hogett, 2017). Del Guercio and Tkac (2002) posit that this reluctance to deviate from the list is driven by a desire to be able to justify investment decisions ex-post.

Second, these advisors and consultants may also be influential in how information is presented to trustees ahead of decisions needed to be made; for example, how the information for a decision, or the decision itself, is framed.

Based on the causes and contexts for potential biases in financial decision making discussed above, we chose three distinct characteristics of trustee decision making to focus on for this investigation into pension fund trustee board behaviour: Firstly, recognising that trustees make decisions as a group, we focus on group decision making, and the potential biases that can be activated within that environment. Second, recognising that advisors and consultants are extremely influential in the decision making process, we focus on the concept of judge-advisor systems and consider research into the influence of advice. Thirdly, considering trustees are making decisions for others (i.e. workers and employees who are beneficiaries of the pension fund), we focus on the concept of surrogate decision making, and how this can potentially lead to deviations in normative financial decisions.

[1] While the situation with respect to the training of trustees has undoubtedly improved since and, indeed, as a result of, the Myners review the pensions regulator’s (2019) industry consultation on the future of trusteeship and governance (The Pensions Regulator, 2019) found in their survey of trustees that the most common reason across all scheme types for not meeting their standards of 21st century trusteeship, was that schemes did not believe it was relevant to a scheme like theirs (e.g. they were too small). The proportion giving this reason ranged from 66% of those not having trustee training and development plans in place, to 68% of those not assessing the fitness and propriety of trustees.”.

These three areas - group decision making, judge-advisor systems and surrogate decision making - are all explored through a combination of reviews of research literature, ethnography and depth interviews, with the fieldwork being carried out by IPSOS in 2018. In addition, a series of quantitative studies (using on-line experimental procedures) were also conducted. These studies focused on a number of the biases identified within the literature, which we experimentally investigate within the trustee-specific decision making contexts we have identified. More specifically, this series of experimental studies tested for the presence of deviations from normative behaviour within trustee decision making in relation to several different issues: a) naive diversification, b) menu-effects, c) surrogate decision making, d) the influence of advice, and e) fund selection.

3. Methodology

To investigate decision making processes for pension fund trustees, we used both qualitative and quantitative methods. Such a mixed methods approach enabled us to establish the contextual and task-related factors in the trustees' decision making landscape to help understand and frame the behavioural biases that were tested by experimental approaches.

In addition, as part of this stage of research, telephone interviews were also undertaken with twenty-three professionals who are advisors to pension boards. Although the interviews were structured, sample availability constrained the total number undertaken and as such we need to consider these to be qualitative.

Overall, the qualitative research provides first-hand insights into the decision making process and a clear understanding of how the three principal contexts identified from the literature (group decision making, judge-advisor systems and surrogate decision making) manifest (or not) in the actual routines and behaviours of trustees.

The quantitative (experimental) research allows us to rigorously test for the presence of specific and relevant effects which could lead to suboptimal decision making, and which could increase as a function of the group decision making context.

Qualitative Research

The qualitative research entailed recruiting a sample of trustees to engage in ethnography and in-depth telephone interviews. Six trustees were recruited to take part in the ethnographic interviews, and eighteen trustees were recruited for the telephone interviews.

The six ethnographic interviews typically ran for 3 hours, and the eighteen in-depth phone interviews typically ran for 1 hour. There was a mix of trustees including independent, employee nominated, employer nominated, trustee chairs, and a member of an independent governance committee. The responsibilities were a mix of Direct Benefit (DB), Direct Contribution (DC) and both forms of pension fund. All those interviewed were involved in managing pension schemes in businesses employing over 500 people across a mixture of industry sectors.

Across both interview formats, four areas were explored: i) who they were, and what motivated them, ii) how decisions were made, iii) the relationship with advisors, and iv) influences and attitudes towards investment and risk.

In a separate exercise structured telephone interviews were also undertaken with twenty-three professional advisors to pension boards.

Quantitative Research

The quantitative research entailed recruiting 253 pension trustees to participate in experiments conducted online. The sample was recruited from AON, Invesco and the Association of Member Nominated Trustees (AMNT). Sample members were member-nominated (133), employer-nominated (61) and professional (58)[2]. The sample consisted of more males (84%), indicative of the population of trustees. There were also significant differences in expertise metrics; employer-nominated and professional trustees are more likely to have relevant qualifications (55% vs. 26%), are more likely to hold a role in finance (54% vs. 21%) and to have been a trustee for longer (11yrs vs. 8yrs). In terms of the type of fund they administered the trustees

[2] One trustee did not report a trustee type.

reported that they were DB exclusively (83); DB mostly (119); Balanced (34); DC exclusively 11; DC mostly (6).

We also collected data for a study on surrogate decisions from 139 pension scheme members who were recruited via the online research platform Prolific Academic. Despite being members of a pension scheme most members (51%) were unable to report whether it was DB or DC; 41% reported DB and 9% DC (note some rounding in results).

4. Results of the qualitative research

Before reviewing the findings from each of the three areas of decision making we have focused on, it is perhaps useful to consider some context about the role of trustees, gained from the research.

The trustees we spoke to give a strong sense of being very committed and see their role as altruistic, in terms of being responsible for 'giving back' in some way:

"*I think it felt like an opportunity to make a difference and be involved with something very significant. Not just for myself but to my colleagues around me. I guess there's something in me that wants to stand up for everybody else*."
Member nominated trustee

"*I'm extremely lucky to have been born in a country and family where these opportunities have been presented to me. It seems beholden on me to make [the] most of that if I can*."
Independent trustee.

Commitment and altruistic motivations notwithstanding, the environment in which pension trustees are operating is considered to have substantially changed over the past few years. Due to the shift from DB to DC pensions, there is a great deal more focus on the individual pension member making more active choices. This was reflected on by one of the trustee chairs we interviewed:

"People in this country are not used to making their own decisions in life. America it's completely different because they never had Final Salary Schemes (sic). They've never had a National Health Service. They've always had to make their own decisions. It's all very complicated now. And if you do it by yourself you'll be struggling. It's a completely new concept. It's going to take a generation to work through until it becomes business as usual, in my view."
Chair of trustees

The move from DB to DC has led to a very different set of tasks for the pension trustee:

"We put out a communication at the time to say you know this is what we're planning to do as a default but by all means you can do whatever you want, in terms of fund choices….And we made it quite clear to the members…..Aside from that, it really amounts to making sure that it's properly governed, that we get the payroll in properly, all the administration is done properly and then we start talking about things like communication matters….it's much simpler really than the DB where we're mainly talking about the strength of the sponsor, the covenant, the PPF levy, all that fairly macro stuff."
Chair of trustees

The task that they can seem to struggle with is pension communication to members. As one trustee put it, this can be hard for those with typical trustee profiles to understand how to navigate:

"Do people respond or react to it? They don't. It seems when you are in your 20s and your 30s you really are not going to focus on it and it is a problem. I mean you can talk to us and we send our letters and communications every week, but whether people are reading it we don't know. I think the majority of people are just picking it up and it goes in the basket."
Member nominated trustee

At the same time, the responsibilities of the role are perceived to have changed quite substantially:

"They [used to] have quite an interesting experience in terms of learning about pensions and investment matters and so on but basically they could discharge the job without professional qualifications. Without

undue time and so on. One of the things the new regulatory regime did was to create …. was strong encouragement for people to train more. That meant the time commitment grew and it became much more sensitive to regulator concerns on the funding position of schemes and so investment risk and response of covenant issues. So the incentive for trustees shifted and they faced the problem …. that if they didn't discharge their jobs in a certain way they could be criticised and in the extreme actually held liable for the quality of the decisions they were making."
Chair of trustees

Despite this, the view from the majority of the professional advisors we spoke to was that they are satisfied with the decisions made by trustees. They also typically think that trustees play an important role in the world of corporate pensions. They see trustees as a key group in driving the strategy of the board, and have the most influence on pension decision making, placing them marginally above the investment consultants themselves.

"I think they are improving, the communication and education piece particularly - the support network they have is drastically improved. You could argue that the Pensions Act of 1995 brought that. Most trustees are definitely more aware of their duties and responsibilities."
Trustee advisor

Other advisors, however, expressed reservations:

"Highly variable in competency and highly variable in motivation to take responsibility to make judiciary decisions. Very pressed for time."
Trustee advisor

"They like to delegate as much as possible, they're a bit worried about litigation so like to have someone they can push it over to."
Trustee advisor

All of this suggests a rather mixed picture in terms of trustee performance. Despite the importance of the governance of pension funds, there has been relatively little exploration of the way in which institutional decision making can influence performance. We now turn to consider the evidence on decision making.

4.1 Group Decision making

4.1.1 Key Characteristics

Pension trustees take investment decisions as a group. Clearly in many contexts organised groups produce and achieve far more than collections of independent, isolated individuals ever could. Appreciation of the benefits of the division of labour goes back to at least Adam Smith (1776/1991). Babbage (1835) also explained how breaking a manufacturing job into separate tasks, each performed by a different specialist, increased productivity thereby reducing labour costs and also, because of specialization, improved quality. Nonetheless, and whilst there are frequently cited benefits to making decisions in a group context, the research on group decision making is replete with examples of the group context having detrimental effects on decision making.

Reviews of group decision making have established that groups are typically not as efficient as the sum of their parts (Stroebe & Diehl, 1994; Kerr & Tindale, 2004); in fact, an exceptional individual 'deciding alone' can often perform better than a group including that individual (Hill, 1992). Most interacting groups are outperformed by their most capable members and in judgment tasks, group performance usually does not exceed the average of individual performance (Kerr & Tindale, 2004).

Research on “brainstorming” has shown an "illusion of group effectivity" (Diehl & Stroebe, 1991; Paulus, Dzindolet, Poletes, & Camacho, 1993; Stroebe, Diehl, & Abakoumkin, 1992). In these studies, participants believe that their performance is greatly enhanced through group interaction, though such is actually not the case.

The literature on group decision making is vast and our summary is necessarily brief but it should also be noted that there are have been some studies showing advantages of group decisions in terms of susceptibility to some decision biases. For example Stahlberg et al. (1985) found that groups do better than individuals on the hindsight bias (also known as the ‘I-knew-it-all-along’ effect), where the extent to which, in hindsight, people judge that they had more foresight than they actually had was significantly smaller for groups compared with individuals. Sniezek & Henry (1989) also report for a judgment task where groups were more accurate than individuals that the groups were less overconfident.

Nevertheless, and by contrast, Heath and Gonzalez (1995) hypothesized that group interaction might prompt people to generate explanations for their own beliefs, which would only serve to increase their confidence without increasing accuracy. Heath and Gonzalez (1995) performed several experiments which demonstrated this effect. In one experiment football fans made predictions concerning upcoming games and stated their confidence in their own predictions. Participants then discussed their predictions on these games with another participant. Following discussion after which a consensus was not required, participants again made predictions and assigned confidence levels. Although accuracy did not increase after the discussion, confidence did increase. This result indicates that interaction may be dangerous, since it serves to increase confidence. This research suggests that organizational meetings can result in more confidence generation than idea generation

With the belief intact that groups are more effective, there is a risk that groups will manifest more overconfidence in judgments than individuals (Heath & Gonzalez, 1995; Zarnoth & Sniezek, 1997 leaving decision makers even more susceptible to poor decision outcomes. The term overconfidence is used to describe a number of quite distinct phenomena – here we refer to the overestimation of one’s actual ability, performance, level of control, or chance of success (Moore & Healy, 2008; Moore & Schatz, 2017), a related phenomenon is over-placement of one’s performance relative to others as classically evidenced by 80% of drivers believing themselves to be better than average (McCormick, Walkey and Green 1986).

Other decision biases found stronger in groups than individuals include the decoy effect (Slaughter, Bagger & Li, 2006) - a non-normative choice pattern whereby preferences between two alternatives reverse as a result of the manipulation of a third alternative (the decoy) typically when the decoy is dominated by only one of the two original alternatives. For example most people may prefer A to B in the presence of a third (decoy) option C_1 but then prefer B to A when the third (decoy) option is C_2 – this pattern has been observed even in experiments when no-one chooses the decoy option in either condition (e.g. Highhouse, 1996).

Escalation of commitment - the sunk cost fallacy - has also been shown to be stronger in groups than individuals (Teger, 1980; Whyte, 1993) though in a separate study Whyte (1991) found that individual respondents invested less money in escalation contexts when they felt that responsibility was shared (decision was made as a group) than when they evaluated the escalation dilemmas in- dividually. Whyte speculated that the group responsibility alleviated some of the internal pressure to continue which suggests that issues as to the “ownership” of prior decisions may be critical to the decision to persist with an arrangement - e.g. Staw, Barsade & Koput (1997) using data collected from 132 banks found that the turnover of senior bank managers lead to a de-escalation of commitment to problem loans. Moon et al (2003) find that sunk cost effects are larger in groups when group members engaged in consideration of the problem before meeting as a group.

There are other characteristics of group-decision making worthy of consideration when contemplating research relevant for understanding pension fund trustee decision making. Research using the 'hidden profile' paradigm (Stasser & Titus, 1985; 2003) has revealed that groups are inefficient at utilizing the information that is available to the members of the group to the detriment of decision making. A large number of studies of group decisions (Lu, Yuan & McLeod, 2012 identified 65 'hidden profile' studies) have investigated how groups decide when, prior to any group discussion, group members are briefed with information such that certain information is shared with the group as a whole while other information is only given to individual members. This is typically arranged such that the shared common information favours a suboptimal decision alternative, whereas only when all the unique information is combined can the optimal alternative be revealed; thus the optimal decision choice is hidden from the group as a whole and can only be discovered when all individuals share their unique information and the group applies the information to the decision under consideration.

The originators of this paradigm predicted that decision makers would be more interested in hearing novel information contributed by the other members, should be more persuaded by that information, and therefore should readily discover the hidden profile. However, and calamitously, these studies have consistently found that the group members talk about the information they all have in common, and the individually held bits of information get left out of the discussion and decision making processes. Hence, committees make inferior decisions because they fail to capitalize on the differentiated knowledge of individual members. A meta-analysis by Lu et al. (2012) found that these effects are quite large. Groups talked about shared information far more than individually held information. Group size varied in these studies between 3 and 10 and, the larger the group, the more group members focused on the information they had in common and the more that tendency damaged the quality of the decision. In short, hidden profiles generally remained hidden, especially in larger groups. Although larger groups should encourage more information sharing and knowledge-building, as there are more individuals to share, the evidence indicates that this does not happen; indeed smaller groups are apparently more open to sharing and discussing novel inputs in the decision process (Cruz, Bosta & Rodriguez, 1997). Relevant to Clark's (1998a) discussion of how norms influence trustee decision making (discussed in section 4.2.2 below) Postmes et al. (2001) found that inducing a group norm for critical thought improved attention to unique information and the quality of decisions – but that inducing a consensus norm did not.

One explanation of this behaviour is that 'new' information is harder to evaluate by the group, as it is not known by the group, and this in turn reduces the likelihood for consensus. As such, 'already shared' information is more openly discussed, as it is known, and individuals' assessment and interpretation of that information allows for clearer evaluation of both the assessment and the individual. It is also the case that this effect is stronger still when the group is operating under a high cognitive load (Stasser & Titus, 1987), which could certainly apply to the case of trustee decision making.

These findings bring to mind Janis's (1972, 1991) well known identification of "Groupthink" - a set of conditions and processes that can lead to disastrous outcomes for decision making groups. A central proposal is that, in order to minimize conflict and maintain cohesiveness, group members are less critical in analyzing or assessing ideas, which in turn, leads to defective decision making. Groupthink has been invoked in case studies of a wide array of disastrous decisions such as NASA's decision to launch the Challenger space shuttle (Esser & Lindoerfer, 1989), the Watergate cover-up (Cline, 1994; Raven, 1998) and the decision to market the drug thalidomide (Raven & Rubin, 1976). Nevertheless, despite its evident intuitive appeal and the very widespread application of this concept, experimental findings supporting the notion of groupthink are sparse (Turner & Pratkanis, 1998).

In spite of this there *is* experimental evidence that group decision making can push the opinion of groups to an extreme not held by any one member of the group (Moscovici & Zavalloni, 1969; Myers & Lamm, 1976). This is particularly relevant for financial decision making as risk-seeking, or risk-avoiding, behaviour may become more extreme within the group, depending on individual group member views. Whilst the process by which the group ends-up with a more extreme position compared to its members' views can be attributed - at least in part - to selective information sharing and subsequent confirmation bias (Nickerson, 1998), the willingness of the group to accept this extreme position is likely buttressed by the sense of diffused responsibility should that position prove to be wrong in some way (Pruitt, 1971). Consistent with this notion there is empirical evidence that, in terms of their ethical and legal behaviour groups are less compliant than individuals (Kocher, Schudy & Spantig, 2018; Fochmann et al, 2019.)

According to Baumeister, Ainsworth & Vohs (2016) decision making groups often treat cohesion as a goal which research has demonstrated can result in deleterious consequences. Although cohesion may seem especially desirable when consensus is sought, it does not necessarily improve, and can harm, the quality of group decisions. However, if group members know there is dissent among them, they become more likely to bring up their unshared knowledge, improving the quality of group decision (Brodbeck et al. 2002). Research on minority influence has shown that a persistent minority can stimulate the majority to think more carefully about the issue facing the group, thus ultimately improving the group (Nemeth 1986). Disagreeing minorities may thus reduce cohesion (by undermining consensus), but in the long run they can facilitate better information and decision making processes. Nemeth (1986) also found that dissenting minorities could benefit the group even if the majority were not won over to the minority's view because the majority would respond to dissent with divergent thinking and thereby might discover new facts and options.

4.1.2 What Our Research Tells Us

From the qualitative research conducted, there are several findings that point to the group decision making characteristics detailed in section 4.1.1 above being salient in the context of trustee board decision making.

Absorbing information

In interviews, trustees recounted the need to prepare carefully for board meetings, acknowledging that there is a considerable amount of paperwork to read ahead of the meeting. These information packs are perceived to be dense and take considerable time to read through. Although all trustees claimed they conscientiously worked through all material, some alluded to a sense of dutiful accomplishment from merely digesting the material (irrespective of their perception of the quality of any decisions made as a result of the information):

'I have to go through [the information packs] several times. I can't just go through the pack once.'
Member-nominated trustee

These observations, in terms of preparation ahead of meetings, draw our attention to the high cognitive load of the information presented within the packs. This clearly presents a challenge for trustees attempting to absorb and consider all the information.

'I don't believe most people are good trustees. It's too much to take on.'
Member-nominated trustee

"What's happening is the burden; the legislative burden on trustees is increasing. And there will come a point when trustees will say, I am sorry I am not doing this, I've got a life to live, I am not going to spend all of my free time meeting the latest requirements from the Regulator."
Chair of trustees

"I have been a trustee and increasingly I think trustees have found that it is not only the complexity of the roles issue but the assumptions of their responsibilities, very subtly changing over time. So you go back ten

or fifteen years a trustee was fairly similar to any kind of trustee of a financial trust but now there is this additional regulatory overlay which is becoming more significant for trustees. So, it is a demanding role in terms of knowledge, but it is also demanding in terms of the client responsibility."
Chair of trustees

The comments on workload point to the risk of the cognitive load limiting trustee boards to consideration of the presented information and advice, and potentially reducing the opportunity to consider alternative points of view or introduce other information in the board meeting discussions. The sheer volume of information required to be absorbed by trustees and the consequent cognitive load may amplify this effect. This also prompts consideration of the finding from the group decision making literature that groups tend to make decisions based on the information already established in the group. In addition, the limited capacity of the meetings themselves can also mean that new information does not necessarily have a chance to emerge:

"When I first started, they were interminable, they would start at probably nine o'clock and they would end at five o'clock and we'd use every minute of it and run out of time to complete the agenda. Which is terribly dangerous cause you can end up rushing decisions on important things at the back end or just not doing things. So, once upon a time, when I started, that was always the story. Our meetings always overran and there was always more to deal with than we had time."
Member nominated trustee

In some ways the member-nominated trustee potentially has an important role to play in challenging the received wisdom and shared understanding of the more knowledgeable members:

"You can say in front of all the advisors, all around the table I don't understand, I am thick, I don't understand any of that. And probably and I am the one, I am the one who can say that very easily, because all the others are all employed by the company and of course you know what it is like, if you got so and so, doesn't understand anything about pensions and they are a pension trustee. And it can affect their career."
Member nominated trustee

Consensus

This inability or reluctance to inform discussions with the full range of expertise available within the trustee group is further illustrated when looking at how trustees described the decision making process. Consensus rather than voting is typical on boards, and most trustees interviewed could not recall a situation where there was conflict or even strong differing opinions, and they were unable to reach a decision:

'Disagreements are few and far between.'
IGC Member

"In fact, I can't think of a decision where we've not achieved consensus. Okay, we certainly haven't had you know it's not just a case of box ticking or anything, we often have discussions where we start from a position of non-alignment I'd say on issues. But we pretty much always reach a consensus view that we're all quite happy with."
Employer nominated trustee

These comments on the reaching of consensus unsettlingly recall the research suggesting potentially pernicious effects of consensus seeking discussed in section 4.1.1 above. There is also a sense by which informal contact outside of meetings e.g. going for a coffee can ingrain the culture of consensus, with advisors suggesting that decisions between themselves and trustees are often made outside the formal process e.g. in social settings, on the phone, or in corridors. Indeed, most advisors we interviewed also exchange emails, have face-to-face meetings, and speak on the phone with trustees outside of formal meetings.

The trustees themselves (and indeed the chairs we interviewed) tended to mention the importance of contact outside of meetings to facilitate decision making. Although meetings last all day, there is a lot of material to cover and isn't always time for debate so they have their workarounds for this, e.g. they prepare the ground with colleagues offline and in advance of meetings (via email, corridor chats or more formal subcommittee meetings). Socialising and informality also play a role in decisions - some describe discussions continuing in social settings e.g. 'the pub' if not finalised within meetings.

Clark (1998) has outlined the way in which rules of proprietary conduct often regulate the process of collective decision making by trustees. These rules guide 'correct' behaviour not related to pension beneficiaries' interests. Clark makes this point with reference to investment decision making, but it is just as relevant to the more 'unofficial' practices of group decision making, as these can just as easily have an impact on investment practice, albeit indirectly.

Homogeneity

A consensus-driven approach to decision making certainly makes for easier meetings but could lead to outcomes which are suboptimal for members of the pension fund. This desire for consensus is likely further strengthened by the relative homogeneity of trustee demographics: older, white, male, financially secure. In addition, one of the characteristics identified within trustees by the trustee interviewees was self-confidence:

'Most of the trustees on our board are over 50 and, you know, most people who join the trustee board are quite, shall we say, self-confident. They are not shy and retiring types.'
Member nominated trustee

The demographic homogeneity of pension trustee boards may create a culture that can limit the scope for influence of trustees from other demographics. Sayce (2012) has explored the experiences of women pension trustees operating in a "white, grey and male" world. Acknowledging that more women were becoming trustees and more employers were seeing more diversity on their pension boards, Sayce claims that the "male and grey" domination of pension boards makes the role more challenging for many women who may be unused to working in executive managerial environments and points out that that men and women communicate differently which, because of the masculine nature of pension trusteeship, can unconsciously reduce women's agency, unless they embrace masculine values - as apparently one woman trustee interviewee had quite deliberately done. While the necessary wider research has not been conducted it is not difficult to imagine that there will be challenges to trustees who differ from the demographic profile of the prototypical trustee in other ways – for example trustees who are from different ethnic groups, younger and, perhaps, a little less "clubbable".

Restricted trustee membership to its current narrow demographic profile is not only unrepresentative of most pension fund memberships, but also means pension boards are potentially excluding a large section of available talent. Moreover the indications from decision research are that increased diversity could also increase the decision making performance of the board. As Sayce (2012) put it: "…research has demonstrated the importance of having diversity on pension boards to avoid the risk of its discussion becoming a "cosy club" within which assumptions are not fully questioned and challenged." (p. 312).

Deference to the Chair

A significant moderating effect on how the board of trustees makes decisions appears to be the standing and perceived credibility of the chair. Whilst there are positive reports about many Chairs, there are also some sources of concern which raise questions about the extent to which those occupying the Chair role are discharging their duties in a way that facilitates effective decision making:

'I have seen groups where the Chair is dominant and will make it known that ultimately it's their decision that calls the day.'
Independent trustee

"I think the chairman is probably the scariest person to call out, he's a force of nature and he's tremendous and he's very knowledgeable but there are times when he really knows his own mind on it and that's the answer. And often it is and obviously he's very good but on occasion he's taken a wrong tack and reversed later on, after challenge but not necessarily quickly after challenge. And if you do have a dominant personality, there is a risk that the group then follows them, that person."
Member nominated trustee

The Chairs themselves can recognize the impact of the way in which they perform their role:

"I have to be very careful to give the framing of the issue in such a way that people can understand the nature of the choice they are making and give them the opportunity to talk about their feelings about that choice to the extent that they have got experience or something else they want to bring to that table, they have the opportunity to deploy it."
Chair of trustees

The role of the Chair was also identified by Clark and Urwin (2008a) as being a key factor in effective trustee governance, stating that "Leadership has a strong and demonstrable effect on institutional performance, being evident at the board level (particularly in the activities of the chair person) through to the execution of delegated tasks and functions". The critical role of leadership is further elaborated in Clark and Urwin (2008b).

The dangers of over-confidence were recognised by at least one of the Chairs we spoke to:

"One of the dangers on any investment governance process is that people ….can fall into the trap of sort of taking views based on their intuitions when it is beyond their competence."
Chair of trustees

The influential nature of the Chair is also recognised by the professional advisors we surveyed, most of whom believe that the chair has greater influence than any other trustee board member and sets the tone for the rest of the board. The advisors we spoke to tended to have the most confidence in professional trustees and the least in member-nominated trustees:

"Professional trustees have greater qualifications and knowledge as well as more realistic views."
Investment consultant

"Member nominated tend to have less knowledge than is ideal albeit better motivation to do a job I suppose. The employer side usually have more knowledge than the members but less open to taking advice."
Investment consultant

A further challenge to effective participation by all board trustees is posed by the wide range of levels of understanding across trustees which may also inhibit effective participation by all trustees – Clark & Urwin (2010) claimed that: "the ideal of collegial decision-making and responsibility is rarely realised, given the co-existence of very different levels of trustee knowledge and understanding".

4.1.3 In summary: group decision making

The literature on group decision making shows that contrary to what we might expect, group decision making can often lead to poor decision outcomes. Overall, the customs and practices of decision making in the trustee context - as reported by the interviewees of the qualitative research - certainly supports the argument that there are a number of factors in this context that can be regarded as sub-optimal. These are specifically around (1) the large amount of information presented to trustees by advisors and the resulting cognitive overload, (2) the conduct of meetings - in particular the use of consensus decision making processes and (3) the homogeneity of trustee boards. Separately and in combination these three features may have detrimental effects on the quality of trustee decisions.

4.2 Judge-Adviser Systems

4.2.1 Key Characteristics

An area of decision making research which looks at the relationship and influence of advisers on the decisions made by those ultimately making decisions is referred to as the study of Judge-Adviser Systems.

There are different motivations which may underly why the ultimate decision-maker (the 'judge') would take advice from an advisor; they may feel their own knowledge or expertise is lacking, they may want to reduce effort, or reduce uncertainty, or indeed leave open the opportunity to share or pass-on blame in the event of the decision being considered problematic or a failure in some way. Consistent with this notion research has found that the propensity for advice to be influential varies according to circumstances. Expert medical advice for example is found to be extremely influential on patients' decisions (Gurmankin, Baron & Hershey 2002), even when that advice seemingly directly contradicts the view of the patient [Gurmankin et al. 2002; Siminoff & Fetting, 1991]. Experimental studies have shown that advice carries more weight when the adviser is considered an expert and the judge perceives a weakness or failing in their own ability to make the decision in question (Harvey & Fischer, 1997).

That said, there is strong evidence that points to judges typically downplaying the advice given by advisers, with the views already held by the judge maintaining their weight or influence (Yaniv & Kleinberger, 2000). This egocentric influence is strong and persistent, even in cases where the judge recognises their lack of knowledge and the expertise of the adviser (Sniezek, Schrah & Dalal, 2004). When estimating quantities, experimental participants adjust, on average, about 30% of the distance between their initial estimate and advice (Harvey & Fischer, 1997; Lim & O'Connor, 1995; Yaniv, 2004; Yaniv & Kleinberger, 2000). Various explanations have been offered for this particular level of opinion change, including anchoring (Lim & O'Connor, 1995), privileged access to one's own reasons (Yaniv & Kleinberger, 2000), and social norms against ignoring advice (Harvey & Fischer, 1997). Soll and Larrick (2009) and Soll and Mannes (2011) report evidence that, rather than discounting advice to a degree, people may, on different occasions, be either adopting the offered advice or completely ignoring it.

The different explanations for advice discounting imply different possible mitigation strategies – for example the idea that it is caused by privileged access to one's own reasons - that we are party to our own reasoning to arrive at our judgement, but we're not privy to the reasoning of advisers - suggests that if advisers share their reasoning, their advice would stand a greater chance of being influential in the judges' decisions (Soll & Mannes 2011).

Egocentric discounting may also occur as a result of judges protecting their sense of self-esteem or, relatedly, self-efficacy, since to accept advice from another could result in one's own opinion being considered of lesser importance. In support of this argument, when, in their own area of expertise, judges reject advice in favour of their own opinions, thus preserving their self-esteem and self-efficacy as decision-makers, they become more likely to accept other advice from another external source in other areas of expertise (Soll & Larrick, 2009).

There are other factors that can moderate the influence of advisors' inputs on judge decision making. When the advisor's opinion is close to the judge's opinion, advice is more likely to be taken (Yaniv, 2004b), meaning that advisors looking to move judges' opinions incrementally, rather than in one large step, will have greater influence. That said, the 'shock' of a dramatically different opinion can also cause judges to take-on that advice, potentially as the stark difference prompts the judge to lose confidence in their own opinion through believing they've mis-read the decision, or that the decision is far more complex than they had thought (Sniezek & Buckley, 1995).

Further, less confident judges are found to be more susceptible to advisor input (Bonaccio & Dalal, 2006) and there is also evidence that low confidence could signal a limited ability to accurately discern the quality of the advice being given by the advisor, this increasing the possibility of relying heavily on poor advice (Soll & Larrick, 2009). This suggests the possibility that if pension fund trustees are not very confident about their roles, tasks and responsibilities and lack appropriate training, they are likely to be influenced more by poor advice.

The informational context in which judges receive advice also has implications for its impact – in particular whether advice is provided before or after the judge has formed their own initial opinion. If advice is provided to judges before they have had a chance to form an initial opinion, then their decision is considered as being "cued" by the advice. This cueing creates an initial starting position for consideration, akin to an "anchoring" effect (Chapman and Johnson, 1994; Epley & Gilovich, 2006; Tversky and Kahneman, 1974) whereby judgments insufficiently adjust from an established anchor point. Cueing - namely the provision of advice ahead of the judge forming any firm opinion - can exert a strong influence on the final decision made, specifically because of the timing of advice, rather than the content or quality of the advice (Wilson & Brekke, 1994).

Wilson & Brekke (1994) have called this external influence and its effect on decisions "mental contamination" suggesting that this process is unconscious and unwanted, and that judges would prefer not to be cued; indeed subsequently Schrah et al. (2006), found that, if given the option, judges will delay advice acquisition until after they have had an opportunity to form their initial position, and thus prefer to be independent rather than cued judges. Cued judges tend to give more weight to advice (Rader et al., 2015) perhaps because cued judges engage in less information processing overall, focusing their informational search around the given advice and biasing their information processing by reducing the proportion of their attention dedicated to the non-cued alternatives (Schrah et al., 2006; Sniezek and Buckley, 1995). By comparison, if judges are not cued, and only receive the advice after forming their initial opinion, they are more independent of the advice. Note also in this context the study cited (in section 4.1.1) above by Moon et al (2003) who also found effects of pre-meeting deliberations on decisions: sunk cost effects are larger in groups when group members engaged in consideration of the problem before meeting as a group.

As a result of the impact of advice on the amount and focus of information processing independent judges are likely to make better informed, less biased decisions and allocate lower weight to advice than cued judges (Rader et al., 2015; Schrah et al., 2006).

One final factor is whether the advice was paid for and the weight of advice is increased considerably when it is provided by paid advisors (Gino, 2008), as payment is likely seen as a robust proxy for credibility and reliability. The likelihood to accept advice is also increased when judges feel particularly accountable for their decisions, possibly because of wanting the option of being able to explain their decisions after the event (Yaniv, 2004a). Crucially, these conditions lead to advisors exerting greater influence, and as such the advice given has the propensity to be influential irrespective of its quality.

One significant issue relevant for investment consultants providing advice for trustees relates to the fact that these advisers are paid by the pension funds. Studies have shown that in general judges are significantly more receptive to paid advice than to free advice (Gino, 2008; Sniezek et al., 2004). This increase in importance given to paid advice appears to affect its credibility, with payment for advice increasing its credibility (Patt, Bowles & Cash 2006). These studies suggest that the sunk-cost fallacy (Arkes and Blumer, 1985) may apply to the relationship between payment and usage of advice: paid advice has the propensity to be influential independently of its quality perhaps in order that trustees can maintain a sense that they have not wasted any money.

The research evidence suggests that according to circumstances decision makers react differently to advice. In many situations advice is typically - and inappropriately - heavily discounted. However if judges have a lack of confidence in their abilities, or the task in question is more complex than they had anticipated, they will likely rely more heavily on the advice given. Moreover advice will be particularly influential on evaluation of information and decision making if it is given prior to the judge forming their own initial conclusion or is paid for.

4.2.2 What Our Research Tells Us

From the qualitative research undertaken, there are several insights from the interviews which point to concepts identified within the Judge Advisor System literature as being relevant to trustees' decision making.

Deference to advisors

Several trustee interviewees clearly set out the regard in which advisors are held importance and their impact on decision making:

'They (advisors) have got the expertise; they are first class. They really are top professionals; very academic…'
Member nominated trustee

"In other words, talking about asset allocation, making decisions about manager selection and that kind of thing, we've delegated all of that to investment consultants. We're still responsible for it so we're still responsible for the outcome of the investment choices and decisions but we delegate all of the day to day handling and all of the asset allocation within a framework that is, we have, we do have an investment policy with a framework about allocation. But our investment advisors are free to work within that framework and trade and change managers as they see fit."
Member nominated trustee

Given the role that advisors play is clearly very important, it is hardly surprising that trustees talk frequently of the challenges in appointing appropriate and valuable advisors and managers, likening it to – indeed describing it as - a 'beauty parade' perhaps signalling that the process is viewed as inherently judgmental. In particular, trustees talked about the challenges of judging potential advisors' performance, vis-a-vis the market in general, as well as weighing-up short-term versus long-term performance. Moreover, changing advisors and managers is seen to be extremely risky, expensive and disruptive, with no guarantees that a new appointment will be any better. This seemingly encourages inertia and little advisor turnover:

'It's expensive to do, there are charges - it's expensive to appoint a new manager. You've got to go through the beauty parade, it's tens of thousands of pounds just to appoint them.'
Member nominated trustee

The advisors we interviewed themselves commented on the selection process. Most state that the credibility of their firm is the most important decision criteria when choosing a new pension scheme advisor. Perhaps more concerning regarding the rigour of the trustees judgmental scrutiny is that half of the advisors surveyed state that their performance on the day of a beauty parade is a key decision criteria. Whilst this is perhaps not uncommon, it does also suggest that some attention should be given to ensure that superficial aspects of presentations do not disproportionately influence trustee selection.

Two of the challenges identified at the opening of this section were clearly reflected in the interviews; the problem of accurately objectively assessing advisor performance, and the proxy effect of these advisors being well-paid:

“Everything in life is about chemistry, do we feel comfortable with these people? And you know what they say you have got to look at the whites of the eyes, do I trust you? Explain your strategy to me. Sometimes the strategy might sound a bit odd, I think that actually doesn’t quite fit with what we want.”
Company nominated trustee

‘You’ve got to trust your advisors; that’s what you pay them for…”
Company nominated trustee

The perceived risks of going against the advisors’ recommendations was frequently and clearly identified within the interviewees:

‘What’s the company going to say [if you cause a deficit]: ‘hang-on, you’ve made the investment outside of the advisor’s advice, there you must be accountable, Mr Trustee’.’
Company nominated trustee

“We pay massive accord to our advisors and we’re very, very conscious that if we do anything that goes against our advisors, then we have to be really sure it’s right., you know, if it came to a court case and our fund has underperformed and that it was demonstrated that we just ignored our advisors because we didn’t like what they were saying. Unless we could back up our decision, we’d be in the doghouse.”
Company nominated trustee

The advisors themselves tend to recognise their degree of influence with the majority of those surveyed considering that trustees relied on their advice ‘a great deal’. Advisors also feel that they have a greater influence than trustees over investment decisions in general, and for DC funds the selection of the default fund and the choice of funds, whereas they consider trustees have more of an influence on member communications and scheme strategy.

Again, as Clark (1998a) pointed out, many professional relationships clearly involve social norms that will operate outside of formal governance procedures. Clark states: “In the pension fund industry, at least, norms are not so well defined. Although norms are social customs and conventions internalised by individuals, they do not have the power of rules of propriety conduct nor do they have the immediate significance of prudential habits. Their significance is to be found in the fact that trustees *necessarily* rely on others for expertise in managing risk and uncertainty, recognising that others' interests may not be consistent with trustee responsibilities *and* though concealed, may be deeply antagonistic to those responsibilities.”

Given the impact of judge-advisor systems outlined in the research literature, it would be worth examining more closely the social norms customs and practices of the relationships with advisors to establish whether it is necessary to consider more guidance on the way these relationships are conducted.

4.2.3 In summary: judge-adviser systems

Overall, the qualitative research appears to uncover several facets of trustee decision making which relate to research on judge advisor systems and which appear pertinent for understanding decision making within pension trustee boards.

Trustees are judges in their relationship to advisors. There are undoubtedly and necessarily a wide range of social norms in place operating alongside more formal governance rules to manage these relationships. Nevertheless, given the way in which judge advisor systems can impact decision making, this appears to be important area for consideration for best practice guidance.

A strongly established finding from research studying judge advisor systems is the tendency for advice to be discounted in favour of decision maker's own judgments. However the research also shows that under certain circumstances, that can arise with pension trustee decision making, advice will be particularly influential: when judges have a lack of confidence in their abilities, or the task in question is complex, or if it is given prior to the judge forming their own initial conclusion or is paid for. Moreover advice can bias the attention and information processing that decision makers use to attend to all of the options they need to evaluate. The qualitative research found evidence of trustees showing considerable deference to their advisors, devoting a lot of effort to processing the advice in advance of their decision making meetings and a consciousness of the cost of the advice in their consideration of how to respond to it.

4.3 Surrogate decision making

4.3.1 Key characteristics

Surrogate decision making describes the process whereby a decision is made on behalf of others and has mainly been studied in the context of physicians making decisions on behalf of incapacitated patients (e.g. Fagerlin et al., 2001). However, the concept is more general and is also applicable to pension fund trustees who, in effect, are making surrogate decisions on behalf of pension fund members.

Two normative theoretical reference points are commonly cited to frame how surrogates should make decisions for those persons for whom they decide—the substituted judgment standard and the best interest standard (Whitton & Frolik, 2012). The substituted judgment standard directs the surrogate to choose the alternative that the individual - who, in medical contexts, is typically incapacitated - would have chosen if still able to make decisions; the best interest standard requires the surrogate to choose the alternative that produces the greatest benefit for the individual. The two standards are not strictly mutually exclusive: on occasion, the best interests of an individual will not just merely coincidentally be the individual's own preference but will be defined as the individual's own preference. In some circumstances substituted judgment and best interest may conflict. Quite how the surrogate should proceed in such cases is not clear: clear and prescriptive guidance is scant.

In the pensions context a basic objective set by the present legal structure of UK pension funds is that trustees act in the best financial interests of beneficiaries; trust law requires trustees to act in the best interests of members. Nevertheless, trustees of DC schemes are also legally obliged to: "understand the characteristics of their members and, where possible, their preferences and financial needs, and to take this into consideration when exercising their judgement" (The Pensions Regulator, 2016, p.27 §116).

The Myners review (Myners, 2001) noted the potential for tension between the two standards particularly in the management of defined contribution schemes: "…in defined contribution schemes, the risk falls on individuals, each of whom is likely to have very different risk preferences. It is not practical for trustees to take account of the individual risk preferences of each individual member. This would seem to point towards giving members maximum choice. But it is quite clear that many members have only limited understanding of and interest in the management of their pension, and are neither particularly competent nor in many cases willing to take investment decisions themselves. Offering a very wide range of options might lead to even greater confusion." (p.103). Myners also noted that: "There is no easy way of resolving this tension." And: "There is no guidance on these issues and little in the way of legal precedent. (p.103).

While private pension schemes members often have the flexibility to choose many investment parameters, such as the level of contributions they make, where their funds are invested, and how to withdraw their pension at retirement, most members accept the default fund as set by trustees (Byrne, Blake, Cairns, & Dowd, 2007; Madrian & Shea, 2001). Studies of decision-making indicate that individuals tend to accept defaults after limited consideration (Smith et al., 2013), even when there are better alternatives available (Handel, 2013). Defaults are powerful tools for directing saving decisions (Inkmann & Shi, 2016), and how these default options - such as the default contribution level and default investment strategy - are set by the trustees can have massive long-term repercussions on the pensions drawn by the members. By accepting default options, members essentially outsource their decisions to trustees. Pension scheme investment choices are therefore mostly made by trustees on behalf of members (Clark, 2004), and consequently trustees act as surrogate decision-makers.

In most (though not all) medical contexts the ideal gold standard for surrogate decision making is for surrogates to apply "substituted judgement," which occurs when they make the same decision that a patient would make if they were not incapacitated. However, this does not appear to happen in practice. Reviews of the research on surrogate decision making have concluded that surrogates are typically very poor at making decisions on behalf of others; that is, they are no better than chance at predicting what the incapacitated individual would decide, were they able to make the decision (Sulmasy et al., 1998; Tunney & Ziegler, 2015a; Uhlmann et al., 1988).

Several studies have shown that surrogates use different decision strategies when deciding on behalf of others, compared to when making decisions for themselves. For example, doctors tend to make more rational, analytic and utilitarian decisions on behalf of their patients, while they rely on simpler heuristics and are more susceptible to cognitive biases when deciding for themselves (Garcia-Retamero and Galesic, 2012; Ubel et al., 2011). As a result, doctors make more conservative treatment decisions, taking less risk, on behalf of patients than for themselves, and also than the patients would have selected (Garcia-Retamero and Galesic, 2014). In contrast, Beisswanger et al. (2003) found that when deciding for others, participants used less information and focused more on single dominant attributes, making certain dimensions much more salient, such as the negative aspects of taking risks for example. In all cases, surrogates made different choices for themselves than they made for others (see also Kray and Gonzalez, 1999).

One of the key findings from medical surrogate decision making is that surrogates tend to project their own preferences onto others, and as a result their decisions are closer to the surrogate's own wishes than to the patient's (Fagerlin et al., 2001; Pruchno et al., 2005). This might be explained by a belief of the surrogates that the others' preferences would be the same as their own, an assumption of similarity (Cronbach, 1955), which is related to the false-consensus effect (Marks and Miller, 1987) whereby people tend to overestimate the extent to which their own opinions, beliefs, preferences and values, are typical of those of others. This cognitive bias – thinking that others also think the same way - creates the perception of a consensus that does not exist, hence the "false consensus" effect.

Research has shown that because surrogates project their preferences, similarities in taste allow for better matched predictions of other's preferences and attitudes (Hoch, 1987): similar surrogates make the best surrogates. Plainly though surrogates relying on assumptions of similarity to decide on behalf of others will only make good decisions when they have similar preferences. This approach works well in certain scenarios in which preferences overlaps, such as between spouses, but can also lead to lower quality decisions where there is limited overlap of preferences, such as doctors predicting for patients. When family members are the surrogates, performance does increase, but decisions are still frequently inappropriate (Moorman, Hauser & Carr, 2009). In the context of pension trustee decisions it is worth noting research showing that surrogate decision makers are also more likely to know, or be able to predict, decisions for people with whom they are more familiar (Tunney & Ziegler, 2015b; Ziegler & Tunney, 2012).

Conversely, when the surrogate holds very different views and beliefs, then the overlap is minimal at best, and the resulting decision is likely to be of poor quality from the perspective of the surrogate's charge. Furthermore, research shows that it is difficult to increase this overlap even with extensive contact between the surrogate and their charge (Matheis-Kraft & Roberto, 1997). This may be due - in part at least - to the persistence of 'egocentric discounting' as discussed earlier in section 4.2.1.

Making accurate predictions of other people's risk preferences is an important aspect of the role of a pension fund trustee. However, research has shown that surrogates are very poor at this task (e.g. Faro and Rottenstreich, 2006; Hsee and Weber, 1997). Although a common assumption has been that, when assessing risks, people assess the desirability and likelihood of possible outcomes of choice alternatives and integrate this information through some type of expectation-based calculus to arrive at a decision, the "risk as feelings" account of risky decisions (Loewenstein et al., 2001) highlights the role of emotions experienced at the moment of decision making. The idea that emotions – rather than cognitions – drive risky decisions can help to account for why predicting others risky choices is difficult: because it is easier to understand one's own feelings than other people's which can create the presence of an "empathy gap" between the self and others (Loewenstein, 1996).

The "risk as feelings" theory proposes that any departures away from risk neutrality are driven by how intensely individuals feel the pleasure or dread of the outcomes of their risky choices. Therefore, an empathy gap reducing the strength of these feelings should lead to a more muted response toward risk taking or risk avoidance, depending on the domain. Because surrogates find it difficult to empathize with others, their decisions tend to be more regressive toward risk neutrality, which might also appear more normative and socially expected (Hsee and Weber, 1997). Empirical research has confirmed: surrogate decisions are more risk averse in situations in which safety is socially desirable (Faro and Rottenstreich, 2006; Fernandez-Duque and Wifall, 2007; Garcia-Retamero and Galesic, 2012) and more risk seeking in situations in which risk is more socially desirable (Andersson et al., 2016; Beisswanger et al., 2003; Hsee and Weber, 1997). Both directions of deviations of surrogate decisions are inefficient, as the true risk preferences of the individuals are not being accurately represented. And because individuals project their own preferences, this would imply that surrogates who are more risk seeking would recommend more risk taking than a surrogate who is more risk averse.

Surrogate decision makers may not always have as their goal to match what they perceive to match the wishes of the recipient, but instead to make what they perceive to be an optimal or benevolent decision – or a decision that minimises reputational risk for the surrogate. One of the ways that surrogates can adjust their own judgments while deciding on behalf of others, according to Epley et al.'s (2004) theory of egocentric adjustment, is to adjust according to perceptions of social values to make the decision more socially acceptable. This "social value theory" posits that individuals decide for others not based on what they think the others would do, but instead on what is valued by society as the best action to take (see also Kray, 2000; Stone and Allgaier, 2008). This leads to behavior that is more conservative and more regressive to the mean, toward a more neutral and thus more socially accepted norm (Garcia-Retamero and Galesic, 2012). Surrogates make what is essentially an egocentric decision benefiting their own reputation, regardless of what might be best for the other person (Tunney and Ziegler, 2015b). Fear of ex post guilt for bad outcomes from poor decision making can also be a cause of more normative regressive behavior (Stone et al., 2002).

There is considerable evidence in support of the notion that surrogate decision-makers are poor at making high quality decisions on behalf of others. In short, surrogate decision-makers typically make very different decisions compared to those clients would make for themselves, with those differences not respecting an accurate understanding of the wishes or preferences of the individual.

4.3.2 What Our Research Tells Us

One aspect of surrogate decision making is addressed in the quantitative experimental research described in section 5 below. Our empirical results show that, when setting the acceptable level of pension replacement income, trustees projected their own preferences instead of reflecting member preferences. As a result trustees chose significantly higher pension replacement rates for members than members chose for themselves. As trustees are typically more male, older, retired, richer, and better educated than members (Clark, Caerlewy-Smith, & Marshall, 2007; Myners, 2001), they may lack a good understanding of the needs of members or the economic situation that most members find themselves in.

In interviews with trustees, it emerged that trustees acknowledged themselves as demographically distinctive from the people they managed the fund on behalf of – and also characterised themselves as distinctive personalities: more confident, workaholic, and altruistic.

'Most of the trustees on our board are over 50 and, you know, most people who join a trustee board are quite…self-confident.'
Chair of trustees

'I'm extremely lucky to have been born in a country and family where these opportunities have been presented to me.'
Independent trustee.

The homogeneity of trustee boards suggests that, when decisions require some acknowledgment of the preferences of members, trustees are less likely to have significant overlaps in preferences and opinions with what must be a highly heterogenous fund member population.

Making decisions on behalf of others means more caution

As discussed in section 4.3.1 above there is research evidence that surrogate decision makers can be driven to make conservative decisions. In our interviews with trustees they frequently talk of the weight of responsibility they feel towards members. Given the findings of the surrogate decision making research one could speculate that this sense of responsibility would increase the salience of prevalent social norms around pension-fund investing, potentially leading to more conservative investment choices in line with social norms. While we could not directly observe the trustees' decision making process, or the effects of conservative decisions, comments from trustees hint at this with many trustees confirming their risk aversion and their awareness of personal liability in the event of poor decisions, especially where those decisions involve acting against the advice of advisors:

"It's really tricky, 99% - more than 99% - of 13,000 members are in the default fund, so if there's one decision to make, that is it. On the default fund….we've gone for the middle level."
Member nominated trustee.

"In some Trustee Bodies there are egos at play. I like to actually play the stock market with somebody else's money, I've got a million pounds here, I am enjoying this. I am sure that there are egos, which is completely wrong. It's not your money. You're managing this on behalf of somebody else whose life will depend upon the decisions you make. I get wound up by this."
Chair of trustees

There is also consistency across trustees that certain asset classes or trading behaviours are inherently risky, such as certain classes of equities, and that others are inherently safe, such as infrastructure or property. This is consistent with the trustee advisors' perspective on trustee risk taking with the majority considering that trustees are too cautious.

Concerns over accountability

In terms of feedback from members, there was limited awareness of this - or indeed its importance - amongst trustees. On the occasions feedback was mentioned, it was in the context of accountability:

'You don't want members coming back after 10 years…saying if I'd stayed in [the] previous default I'd be better off.'
Member nominated trustee

One issue that was voiced during the interviews was the desire to show short-term performance growth within DC default funds, in order to ensure new member sign-up. Whilst this might suggest a move away from highly defensive or conservative decisions (in order to secure short-term growth) it does suggest still a potential compromise in the trustee decision making, as the decision may be being influenced not by member preference, but rather by the need to ensure the employer is able to continue to promote enrolment. In this context it is interesting to note that while the majority of advisors think that maximising long-term growth is very important in DB funds, this compares to a minority that consider this to be the case for DC funds.

In summary: surrogate decision making

The qualitative research reveals a series of indicators suggesting trustees' decision making is aligned with the wider research conducted into surrogate decision making behaviour. Namely that the overlap between trustees' and members' preferences and attitudes is likely small (partly due to the difference in profile between the two groups, but also due to the homogeneity of the trustee group), and that trustees favour more conservative and lower risk investment opportunities. This is likely in part due to prevailing social norms around 'responsible' pension fund investment strategies. There is a risk that a concern for reputation; little or no feedback; and a lack of empathy for fund members will produce conservative decisions and that this will be amplified by advisors then recognising this preference in trustee boards, and subsequently making recommendations in line with that preference. Curiously, however, it would appear that the actual preferences of fund members are absent from the process.

Despite the research into surrogate decision making concluding that surrogate choices are typically more subdued, risk-averse and normative compared to the choices made by those decision-makers for themselves, the experimental study of trustees' surrogate decisions discussed in section 5 next shows that trustees selected a replacement rate higher than that preferred by members which could only be achieved through increased risk and/or contributions.

5. Quantitative Research

Alongside the qualitative research reported and discussed above, we undertook a series of quantitative experimental studies - in the form of scenario-based experimental designs, in order to focus specifically on certain biases within decision making, and to understand if these biases present themselves in trustee decision making. We explored a series of well-documented behavioural finance biases, which had been explored before with less sophisticated investors, but never before with pension scheme trustees. There is no reason to believe that pension trustees would be immune from decision making biases, and we test the extent in which these biases might affect the quality of their decisions.

Naive diversification

Benartzi and Thaler (2009) showed us that individuals diversify their pension assets naively, by allocating the same proportion to each of the alternatives available. If there are N alternatives in which to invest, they allocate 1/N of the assets in each alternative, regardless of the underlying characteristics of each alternative available. When there were more bond funds than equity funds in the menu of alternatives, participants' allocations were more bond-heavy, and vice-versa – a phenomenon they called "naïve diversification."

We tested if trustees also diversified naïvely when distributing assets across different mixes of investment alternatives. Trustees (N=119) were asked how they would distribute the assets of a hypothetical pension scheme across a selection of mutual funds, which were either balanced, equity-heavy, or bond-heavy.

Pension scheme trustees displayed naïve diversification, changing the investment balance across bonds and equities according to the mix of options provided, seemingly without basing it on informed principles. Each alternative tended to receive 1/N of the assets, as the original work by Benartzi and Thaler (2009) showed. Changes to the mixture of fund options presented to trustees (e.g., more bond funds, or more equity funds), changed the final allocation. When more bond funds were available, more of the assets were allocated to bond funds. This shows that they ignored any underlying overarching assumption on how to invest across different asset classes.

Framing

Research shows that choice is influenced when the same options are labelled differently, changing the context in which the options are evaluated. We tested if a similar extraneous labelling of fund options would affect investment decisions.

We investigated whether labels attached to specific mixes of underlying assets in a fund influenced the likelihood of allocating monies to those funds. Trustees (N=111) were asked to choose a single asset mix across bonds and equities for their pension scheme. We labeled funds either as Conservative, Moderate, or Aggressive. Crucially, the labelling of the funds changed from participant to participant. For some participants the Moderate fund had 30% of its assets in bonds and 70% in equities, while for some participants, the Moderate fund had a 70% bonds 30% equities mix. In the Control condition, options were not labelled.

The results reveal that member-nominated trustees are significantly influenced by the labels provided, choosing the funds labelled as Moderate more often, regardless of its underlying mix. The other types of trustees, which are more sophisticated, were not as influenced, and chose the same funds regardless of how they were labelled. Therefore, the less sophisticated trustees were influenced by non-financial, essentially meaningless descriptor attached to a choice.

Surrogate decision making

We asked both trustees (N=120) and members (N=116) of pension schemes what would be the appropriate level of pension income replacement rate for themselves, and for an average member of a fund. Pension replacement rates are defined as the pension income post-retirement as a percentage of final income before retirement. Participants were told to exclude state pensions from their responses (currently at £7,200 per year), and to assume no additional income from savings or inheritance.

We observed that trustees, who tend to be relatively more affluent and either expecting or already in receipt of more generous pensions, selected higher replacement rates for themselves than the members did. We also observed that trustees also selected higher replacement rates for an average member than the members did for themselves. Trustees projected their own preferences when deciding on behalf of members – the recommendations offered by individual trustees correlated with their own personal pension replacement preference – and, because their preferences were higher, recommended member replacement rates misaligned with the ones members chose for themselves.

The replacement rates chosen by trustees of around 55% were not only higher than members' rates, they were also higher than the benchmarks suggested by the Pensions Commission (2004), of around 35%, (excluding state pensions). In fact, the replacement rates of 32% chosen by the members for themselves were closer to and, statistically, not significantly different from the benchmark proposed by the Pensions Commission.

Higher replacement rates will require higher risk taking or higher contribution rates, neither of which are ideal, and which can influence the long-term outcomes for the pension scheme members.

In the context of defined benefit (DB) pensions, given the guaranteed nature of the promise, poor investment decisions by trustees ultimately fall on the employer as the corporate sponsor through increased contributions, and may result in scheme closure for new members, and renegotiation of benefits for existing members. In comparison, for defined contribution (DC) pensions, what notional targets trustee boards have in terms of replacement rates (i.e., the amount of pension income received as a percentage of final salary) will drive the investment options presented to employees, in particular the default option, as well as the contributions required from employers and employees to try to achieve this target. However, if a DC scheme fails to achieve these notional targets, the cost of this falls solely on the member, in the form of lower retirement income.

Fund Selection Criteria

We asked trustees (N=122) to participate in an on-line task where they were required to choose between two different funds across ten different asset classes. In order to compare the funds, a table with nine characteristics were presented (for a total of 18 items). These characteristics were initially hidden, and trustees had to click on them to display each item. This way, we could evaluate which items of information are considered most important to trustees.

We observed that the less sophisticated trustees followed the menu of options provided, in the order provided, clicking in order the first item of information, the second one, and so on, for each fund. They also went through every single of the 18 items of information. More sophisticated trustees instead went directly to more relevant information, such as fees and long-term returns. They also clicked on fewer items, choosing not to display all items every time.

We also restricted the number of items that some participants could click to reveal. They were not allowed to see every single piece of information, only a subset, for example by restricting their clicks to 6 or 10 items.

This approach appears to have helped focus the less sophisticated trustees, who chose to click on more relevant items such as fees and long-term returns, avoiding following the choices as they were presented.

This study (Weiss-Cohen, Ayton & Clacher, 2020) shows that the layout of the menu of choices presented can influence how information is prioritized and searched, which could ultimately influence the decision itself.

In Summary: Quantitative Research Findings

The experimental studies show evidence that pension trustees draw on simple decision “heuristics” to inform their financial decision making. While these experiments studied individual hypothetical decisions made outside the rather different group context of pension trustee decision making our studies provide the first clear behavioural evidence that pension trustees are not immune from decision making biases when contemplating investment choices. We also obtained evidence that there is some variation across trustees in their susceptibility to decision biases with less experienced and qualified member nominated trustees being more vulnerable. While a concern, this variance also demonstrates the potential for the mitigation of decision biases; clearly the level of bias exhibited by some trustees is not inevitable.

The application of judgment and decision heuristics is expected in circumstances where decisions are complex and/or time or requisite effort is constrained (Shah & Oppenheimer, 2008). While the use of heuristics is not inherently a bad thing, and indeed, heuristic choices can be very effective (Gigerenzer, 2008; Gigerenzer & Gaissmaier, 2011) and sometimes even superior to “rational” strategies that exhaustively search and process information (Luan, Reb & Gigerenzer, 2019), the concomitant biases associated with the heuristics observed here are clearly not desirable. The consequences of these particular behavioural biases, if manifested in real trustee decisions, would be to the detriment of pension members’ interests.

The experimental studies recruited pension trustees to serve as participants in experiments where they were required to make decisions in response to hypothetical scenarios designed to closely resemble decisions that trustees are required to make. However, as well as utilising hypothetical decisions, our experimental studies involved the trustees making decisions as individuals and not in the group context in which they actually work. While we have no reason to suspect that the decision biases revealed here would not occur in the trustees’ working environments, further research may establish the extent to which these and other decision biases are exhibited in the decisions taken by trustee boards.

6. Limitations of the research

This paper provides an account of our research findings on pension trustees' decision making which, despite its critical function in the lives of many people has not been extensively studied previously; indeed, while there have been some surveys and interviews of trustees that probe trustees' own views of their decision making, there are only a very few experimental studies of trustees' decision making. While our research has provided some new insights it is important to acknowledge limitations to the work relating to both the qualitative work, and the quantitative (experimental) work.

Firstly, the qualitative insights were gleaned entirely from reports from trustees, rather than being based on actual observations of trustees in their respective decision making environments. As such, we should be a little cautious of the information they presented, as it may be influenced by reconstructed memory and some post-rationalisation for reputation protection. Having said that, the perspectives presented were typically aligned with those of the advisors, giving us greater confidence.

A further caveat to be borne in mind in weighing up the qualitative research largely reflects a common characteristic of many qualitative research studies – the necessarily limited sample size. When conducting research to understand the behaviour of a target population, there is often a trade-off to be made between depth of understanding of an issue and the degree to which the accounts of those studied can be assumed to have statistical robustness. To have a depth of understanding, small sample sizes are inevitable given the need for an intense qualitative examination of the target population and the way they engage with the behaviour of interest. An obvious limitation of this is that we are vulnerable to lack of representativeness of the sample selected; we do not have access to the degree to which the issues that emerge from the limited number of research participants engaged with will be reflected across the entire target population. Nevertheless there are some significant mitigations to, and compensations for, this limitation of qualitative research.

The quotes sometimes provide evidence of issues where the existence of the issue, even in the absence of evidence of its prevalence in the population, is of some significance: the mere existence of an issue can sometimes be telling. For example, comments quoted here about the dominance of some trustee chairs and the self-confident manner of trustees indicate something about how some pension boards operate that, almost irrespective of its prevalence, can suggest that reforms would be appropriate. In other cases evidence of some themes (for examples the comments about trustees' work ethic, their heavy and increasing workload and the search for consensus without formal votes) was sufficiently consistent across even the modest sample to indicate that the comments did not simply reflect an unusual idiosyncratic experience.

We can also see clear evidence that some of our findings chime with other research findings; in several respects we can observe a broad consistency with the wider literature we have reviewed, as well as the results of the experimental studies, which give us confidence that the qualitative findings are not askew. The qualitative approach is also capable of delivering vivid comments in the research participants' own words something not available via other methods. Another consideration is that access to this relatively small target population for such a demanding exercise – the ethnographic interviews lasted for three hours - is problematic, so that large sample sizes are simply not achievable. As such, a qualitative approach which is designed for depth of understanding has clear merits.

Second, in relation to the quantitative component of the studies to date, it is important to appreciate that participant trustees were asked to make decisions based on realistic but artificial hypothetical scenarios. This methodology reflects the strong constraints on investigations of trustees' operations.
As we have noted, some research studies have attempted to evaluate trustee decision performance by measuring performance of pension funds and analysing how this is affected by differences in the organization, policy or strategy of pension trustees. Studies of this type however can, necessarily, only give

a very high level view of decision performance over a very extended period where economic and other conditions may have varied significantly. They are also open to interpretation, being dependent on judgmental summary evaluations of descriptions of the organization, policy and strategy of pension trustees.

Clearer insights into decision making processes can be obtained from direct and systematic studies of discrete decisions using experimental methods established by decision research. However, obtaining the control required for the experimental manipulation of key variables requires the use of laboratory methods, in particular the use of purpose-built experimental problems - hypothetical scenarios designed to capture key elements of trustee decisions – rather than study the actual decisions made by trustees in the course of their work. Research studies of this type which experimentally examine trustees' decision making are very few and far between – not least, no doubt, because of the difficulties in setting up experiments and recruiting participants.

It is implausible that the decision heuristics and their associated biases that were revealed in these experiments would be somehow replaced by more normative decision strategies in trustees' board meetings but, of course, the usual caveats that are applied when seeking to apply laboratory research to the wider world apply to our studies. A further issue is the fact that we studied individual trustees' decisions when of course their modus operandum for decision making is a group meeting. However there is scant comfort to be gained from the thought that trustees make decisions in groups, as our review of group decision making research makes clear.

That said, we see this combination of studies and their findings as a significant but initial look at how this under-researched decision environment behaves. Investment decisions by those who control pension funds have an enormous impact not just on those for whom the pension provides income and security post-working life, but also on global stock markets as a whole. There remains plenty of scope for further research into this field to gain further visibility into how trustee decisions are made. However gaining access to the naturalistic group decision making context that defines pension fund trustee board decision making is unlikely to be achievable.

Finally, before turning to consider the recommendations that can be drawn from the research, we should indicate a general limitation of the research in terms of its suitability for identifying best, or perhaps more modestly and realistically, better practice. The empirical studies we carried out examined various aspects of trustees working practices and decision making. While we have clear evidence that a number of shortcomings would benefit from interventions and reforms we have not tested the impact of any specific remedies on the performance of trustees. As a consequence, our recommendations, while framed as clearly as we are able, are sometimes expressed somewhat generally: while in multiple respects we have clear evidence of problems that could be addressed by a generally defined intervention we have not always been able to identify specific evidence-based solutions.

In some instances our research has provided clear and specific evidence regarding the locus of a problem - for example our discovery that member-nominated trustees exhibit decision biases associated with simple heuristics to a greater extent than professional or employer-nominated trustees. For other aspects our review of the decision research literature has provided strong evidence of the efficacy of potential remedies for problems - for example, Postmes et al.'s (2001) finding that inducing a group norm for critical thought improved attention to information and the quality of decisions. However often the effective implementation of solutions will require some further exploration with practitioners about their working practice and their facility for changing them as well as an evaluation of the impact of change. For these reasons we view our research not as offering definitive prescriptions, but as a basis for engaging with trustees and other practitioners working with them in order to establish better ways of managing the demanding challenges they face.

7. Recommendations for best practice

Reviewing the findings from across the research programme, we identified a number of areas which appeared to merit taking steps to address in order to enhance the quality of decision making:

- **Capacity challenges:** Trustees were found to struggle with the amount of information to review and prepare for board meetings. This is important in the light of findings that trustees were showing judgment and decision-biases:

- **Capability challenges:** There was some variance in decision performance: member-nominated trustees showed stronger biases than employer-nominated trustees, with the weakest biases by professional trustees. Governance practices should consider these differences when determining the composition of trustee boards, the distribution of responsibilities to the members of the board and training needs.

- **Risk biases:** Three ways in which risk decision making appears to be potentially adversely influenced on trustee boards is through homogeneity of the trustee board, surrogate decision making and perceived personal liability.

- **Board management:** There are two aspects of board management we identify as relevant – the role of the chair and the tendency towards consensus decision making.

- **Third party management:** Given the importance of third-party advisors to decisions made by trustee boards, there is a case for reviewing best practice in the selection of advisors but also for consideration of the way their advice is considered.

7.1 Capacity challenges:

It is well documented that people are more likely to rely on intuitive heuristically driven thought processes when they face extreme time pressures which leads often to biased judgments and decisions (De Dreu, 2003; Edland & Svenson, 1993; Kaplan, Wanshula, & Zanna, 1992; Maule, Hockey, & Bdzola, 2000; Suri & Monroe, 2003). People are also more likely to give socially desirable answers if they are asked to work quickly (Protzko, Zedelius, & Schooler, 2019). Time pressure reduces the quality of decision making (Kocher & Sutter, 2006; Sutter, Kocher, & Strauß, 2003) and can lead to taking more risky decisions (Kirchler et al., 2017). Acute stress also has a detrimental effect on judgments (Lempert, Porcelli, Delgado, & Tricomi, 2012; Porcelli & Delgado, 2009).

Recommendations:

- In general, review training needs analysis, training provision, and mentor schemes to address the issue of biases in decision making, including e-learning programmes. A simple first step to raise awareness and provide an introduction to the psychology of decision making would be recommending trustees to read one of the excellent non-technical popular books on decision making such as “Predictably Irrational” by Dan Ariely (Ariely, 2008) or “Thinking fast and slow” by Nobel Prize laureate Daniel Kahneman, (Kahneman, 2011). Shorter review articles targeting lay readers are also available (e.g. Hammond, Keeney & Raiffa (2006).

- There are generic evidence-based guides for improving decision making that can be used as a part of the training for trustees. Texts designed to provide instruction on effective decision making (e.g.

Hammond, Keeney & Raiffa (2002) Heath & Heath (2013) Keeney & Raiffa (2008)) are based on the premise that insights from the decision sciences can be applied to improve decision making in any applied area and enable groups to improve the way they discuss and progress the issues they face.

- The way in which information is presented needs to be carefully considered so as not to put the trustees under excessive cognitive load and so influence their decisions towards a suboptimal alternative. Trustees currently get a ‘dump’ of information not all of which is necessarily relevant to some of the decisions. There may be scope for a more targeted and focused agenda structure. This may need interventions from specialists such as human factors experts, information architects, educational specialists, etc.

- Consider changing structure and timing of meetings (e.g., allowing more time for considered discussions, or perhaps organise online prep-meetings possibly using management software for structuring decisions.)

- Ensure trustees receive information segregated from advice *before* advice is given, so that they are less easily biased (‘cued’) by early information. This might benefit from the expertise of behavioural economists and cognitive psychologists to ensure information is prepared in a way to reduce inadvertent bias through this channel.

- Consider devising guidelines and training to advisors and fund managers as to how to present information in a user-friendly way to reduce cognitive load as much as possible. Many studies have found that decomposing and restructuring the decision-related information have a beneficial influence on the accuracy and correctness of decisions (Ashton & Kennedy, 2002; Coupey, 1994). In the case of trustees, that would need some research (e.g., task-analysis, requirements-analysis) on their workload before more detailed recommendations can be made.

    - e.g., Order of information given could be carefully considered to avoid simple position effects.

    - We observed in our experimental research that restricting information search, a type of environmental nudge, helped participants focus on more relevant information (see also Payne, Bettman, & Johnson, 1988).

- Increase decision readiness:

    - Trustees may be trained to better consider their decision readiness. Intense emotional states, fatigue, hunger etc. can contribute to a lack of decision readiness and question whether a decision should be made at all (Soll et al, 2015). Patsalos and Thoma (2019) found for example that dehydrated (12 hours) participants performed better on judgment-and-heuristics tasks after they had water to drink compared to a control condition without a drink. When people’s memory load is high (Shiv & Fedorikhin, 1999) they are more impatient and rely on stereotypes in judgments (Gilbert & Hixon, 1991). Time pressure is another temporary condition that can impede deliberative thought and cause greater reliance on heuristic thinking (Payne, Payne, Bettman, & Johnson, 1993). Hunger (Read & Van Leeuwen, 1998) and arousal (Ariely & Loewenstein, 2006) can similarly affect human judgements and decisions. Actuaries may be told this and be given a preparation checklist to make sure they are decision-ready, ideally with some additional training.

- Team activity: Empirical research (Maruping, Venkatesh, Thatcher, & Patel, 2015) on the effects of job demands, including time pressure, has found support for an inverted-U shape relationship with various employee outcomes (Baer & Oldham, 2006; Ohly, Sonnentag, & Pluntke, 2006) and job satisfaction (Zivnuska, Kiewitz, Hochwarter, Perrewé, & Zellars, 2002). For example, Maruping et al. (2015) found that under strong team leadership, the indirect effect of time pressure on team performance is mostly positive, while, under conditions of weak team leadership, the indirect effect is positive at low levels of perceived time pressure and negative at intermediate to high levels. Strong team leadership enables teams to use time pressure as a motivator for, rather than a discourager of, interdependent task management activities.

- Team leaders, who have a high-level view of their teams' tasks and objectives, are in an ideal position to draw team members' attention to temporal issues as well as to provide guidance for efficacious responses under existing time constraints.
    - Allocating temporal resources (e.g., building in time for dealing with problems)
    - Allow team members to think about and discuss resolving task-related conflicts within the context of existing time constraints (e.g., task prioritization)
    - Teams are better enabled to achieving their objectives when they have time to discuss their task strategies within the context of existing time constraints (Gevers, Van Eerde, & Rutte, 2009)
    - Leaders should acknowledge temporal constraints to their teams. This should happen early enough in order for the teams to have sufficient time to adapt and act accordingly (Maruping et al.,2015).

7.2 Capability issues

Our qualitative research found clear testimony from trustees that their work was extremely challenging and that they doubted that many trustees were capable of meeting that challenge effectively. Barton (2017) argues that since the introduction of auto-enrolment the expectations for DC trustees have been raised making it a more challenging role. Our experimental studies found clear evidence of variability in the decision quality of trustees with the more qualified and experienced trustees (often professional or employer nominated) making less biased decisions than the employee nominated trustees. The presence of this variance in decision making quality across trustees indicates that there is a potential for improving trustee decision making capability.

In their review on best practice in pension funds (Clark & Urwin, 2008) stress the importance of selecting colleagues with demonstrable numerical skills, a capacity for logical thinking, and an ability to think about risk in the probability domain. Verma and Weststar (2011) cite a lack of training in American employee nominated trustees' limits their contribution to investment-based fiduciary tasks.

Recommendations:

- Consider employing a higher percentage of professional trustees (within government-guidelines).
- Consider more stringent requirements for selecting prospective trustees to ensure that they are capable in meeting the demands of the role.
- Consider revising training for trustees, including modules on judgment biases

  - Knowing about the existence of the bias should reduce its effect ((Babcock & Loewenstein, 1997). However, knowing about the bias alone is not sufficient; understanding the underlying decision mechanisms has a more direct debiasing effect (Mowen & Gaeth, 1992).

- Reduce judgment and decision biases
  - Herzog and Hertwig (Herzog & Hertwig, 2009) suggest that when we have to guess about something measurable e.g., the age of someone, we should assume that our first guess is wrong and we should guess again. This way decision-makers 'bracket the truth' and the average of the two guesses is more likely to be closer to the truth than either guess.
  - Thaler and Sunstein (2008) propose "choice architecture", a range of methods (e.g., social norms, salience, commitment) that can nudge people's decisions in a wiser direction by changing the way options are presented.
  - Drawing attention to alternative outcomes also had a general positive effect on several biases (e.g., Lowe & Reckers, 1994). This technique can effectively counteract people's tendency to consider only supportive evidence for their hypothesis (Nickerson, 1998).
  - Anchoring biases can be countered by providing different contexts, and/or by training trustees.

- Consider a mentor scheme or specific knowledge training modules for member-nominated trustees.

7.3 Risk biases

Three ways in which risk decision making appears to be potentially compromised on trustee boards is through homogeneity of the trustee board, surrogate decision making and perceived personal liability. Each of these is discussed in turn below.

7.3.1 Homogenous groups

Trustees are a relatively homogenous group. Demographic research shows a major gender imbalance in the composition of pension boards with women only make up 18% of pension trustees in the UK and ethnic minorities 3%. Trustees are predominantly over the age of 50 (60%) and only 12% are less than 40 years old (see Sayce, 2016). Swinkels and Ziesemer (2012) also find that Dutch pension fund boards mainly consist of males close to retirement.

Groupthink is a psychological phenomenon that occurs within a group of people that are similar to each other, and highly insular, with a desire for harmony or conformity in the group results in an irrational or dysfunctional decision making outcome (Janis, 1991). Group members try to minimize conflict and reach a consensus decision without critical evaluation of alternative viewpoints by actively suppressing dissenting viewpoints, and by isolating themselves from outside influences.

Groups usually do not make decisions efficiently, with lower productivity per person than separate individuals (Fifić & Gigerenzer, 2014). Groups are not as efficient as the sum of their parts, with actual performance considerably below the potential of their pooled resources (Stroebe & Diehl, 1994). Group process losses can also impact effectiveness by reducing the amount of information shared during group discussions (Stasser & Titus, 1985). As a result, commonly available information is substantially more discussed. High information load makes the bias even stronger, with an increased focus on shared information and lower tendency to exchange unique information when there is more information overall (Stasser & Titus, 1987).

Group size is a factor: Smaller groups discuss unshared information more (Cruz, Boster, & Rodríguez, 1997; Stasser, Taylor, & Hanna, 1989).

Group polarization occurs when individuals' views become more extreme after discussion than they were prior to the interaction (Moscovici & Zavalloni, 1969; Myers & Lamm, 1976). These discussions can enhance the initially dominant point of view, reinforcing it and making it more salient. Any previously shared information gets excessively more attention and disproportionately more discussion time. While there was early research arguing that group discussions would lead to a "risky shift," with even greater risk-taking compared to individual decision making; while in the gains domains, if individuals are more naturally risk-averse, then a "cautious shift" would be observed following group discussions, with lower risk-taking (Stoner, 1968). The Group polarisation effect is relatively well established (Isenberg, 1986; Sunstein, 2002).

There is also research that finds that increasing group size amplifies certain issues. Levine and Moreland (1990) report that people who belong to larger groups are "less satisfied with group membership, participate less often in group activities, and are less likely to cooperate with one another (Kerr & Tindale, 2004). Furthermore, group size may increase coordination problems and decrease motivation in group work (Albanese & Van Fleet, 1985; Gooding & Wagner III, 1985; Harkins & Szymanski, 1987).

Recommendations:

- Make groups more heterogeneous regarding the background of its constituents (including e.g. more female members, therefore also being more representative regarding member composition).
- Consider implementing some advice on preventing Groupthink effects, such as at least one group member should be assigned the role of Devil's advocate, or all effective alternatives should be examined. The 'Devil's advocate' technique focuses on the dissent from a decision maker. It is a formalized dissent with the goal of identifying inadequacies and uncovering biases (Herbert & Estes, 1977) provided the Devil's advocate is perceived to be non-emotional. Research finds that a dissenting opinion voiced by a Devil's advocate from early on in a decision process can reduce or even prevent a biased information search (Schulz-Hardt, Jochims, & Frey, 2002). Consistent with this notion, Postmes et al. (2001) found that inducing a group norm for critical thought improved attention to the often overlooked "unique information" and improved the quality of decisions.
- Devil's advocate needs to be sufficiently equipped to fulfil the role effectively (including position and knowledge). Given the time demands of this activity this should be done around major decisions and not marginal activities.
- Reduce group size of trustees where possible, to reduce potential negative effects (e.g., group polarisation and heuristic thinking that is increased in groups). Clark and Urwin (2008a) recommend the number of 6-8 for investment committees.
- These findings support the approach of larger trustee boards to rely on smaller sub-committees for certain decisions. However, we acknowledge that this is not going to be possible for small schemes given time and cost.
- Consider employing procedures that make certain tasks in group decision making (e.g., judgment of forecasts) less susceptible to bias. For example, the Delphi technique (Linstone &. Turoff, 1975; Rowe & Wright, 2011) is often used in which members of a group give independent and anonymised estimates of to be judged variables (e.g. a forecast) in multiple rounds of responses without discussions. Questionnaires are sent out to a selected group of experts, and the anonymous responses are collated and aggregated, and then shared with the group after each round. The experts can then adjust their answers in the next rounds based on their contemplation of the

response in the previous round. The Delphi method seeks to reach a normative correct response through consensus because after each round the expert panel receives feedback about what the group thinks as a whole. This can be done as an exercise before or even during a board meeting, perhaps then augmented by live discussion at the end.

7.3.2 Surrogate Decisions

Systematic reviews of scholarly research conclude that individuals are very poor at making surrogate decisions: surrogates tend to incorrectly predict the subject's (e.g. patient's) judgments (Sulmasy et al., 1998; Uhlmann, Pearlman, & Cain, 1988). Making accurate predictions of other people's risk preferences is an important aspect of the role of a pension fund trustee. However, research has shown that surrogates are very poor at such a task (Faro & Rottenstreich, 2006; Hsee & Weber, 1997). One reason for this so-called empathy-gap is explained by the fact that judgment of risks and risk-taking is driven by feelings (Loewenstein, Weber, Hsee, & Welch, 2001). Because feelings about oneself are more salient than feelings about others (and others' feelings). Surrogate decision making is also more public than an individual deciding for themselves, and therefore perceived social acceptance is a factor: People make riskier decisions for others in domains where risk taking is valued, and less riskier decisions in those where risk is not valued (Stone & Allgaier, 2008).

Recommendations:

- In general, review training needs analysis, training provision, and mentor schemes to include the issue of surrogate decision making, including e-learning programmes

- Make surrogate decisions by trustees less susceptible to social acceptance bias. E.g., the Delphi-technique (described in section 7.3.1above) or other ways of obtaining judgment, votes, or forecasts from trustees could be employed.

- Provide feedback or appropriate examples from actual pension clients to calibrate trustees surrogate decisions. Feedback presented in a manner that provides judges information about how their judgments and decisions can be improved is known to enhance decision makers' judgments and forecasts (e.g., (Fischer & Harvey, 1999; Harries & Harvey, 2000; Harvey & Fischer, 2014).

- Member feedback loops could be employed by trustees to mitigate projection in subsequent decisions – for example, members should be surveyed on relevant topics and input provided to the board where there is a risk of surrogate bias

- Changing the 'perspective' strategies aim at swapping a person's self-centred perspective for the perspective of an outsider or another involved party. This method can reduce misprediction about others' behaviour (Faro and Rottenstreich, 2006; Bazerman and Neale, 1982). For example, predicting the choices of a close friend, with whom forecasters can empathize well, are not as regressive (too risk-averse or too risk-seeking). Also, explicitly instructing trustees to consider their own emotional reactions can be an effective debiasing technique: such instructions reduce the magnitude of mispredictions (Faro and Rottenstreich, 2006).

- We should, also consider whether in fact surrogates would in some instances actually 'know better'. For example, many members are likely to be too risk averse and thereby invest too conservatively only to then regret this when they approach retirement

7.3.3. Personal liability

Our qualitative research found evidence that trustees concerns about their liability affected their attitudes to risk and increased their dependence on financial advisors' advice.

Del Guercio and Tkac (2002) looked at how US pension funds select where to invest their assets. They claim that because of the fiduciary duties of pension fund trustees and their responsibility towards pension scheme members, the financial decisions that are made are those that can be defended ex-post by blame being transferred to others (see also Lakonishok, Shleifer & Vishny, 1992). This agency issue leads to pension trustees basing their investment decisions on non-financial and non-performance characteristics of asset managers, such as their personality, credibility, reputation and attentiveness. It also increases their reliance on external advice.

Recommendations:

- Clarify the degree and likelihood of personal liability to trustees.

- Ensure professional advisors also know the liabilities of pension trustees, and that information packs may be designed accordingly.

7.4 Board management

There are two aspects of board management we identify as relevant – the role of the Chair and the tendency towards consensus decision making.

7.4.1 Role of the Chair

The boards are usually chaired by an experienced trustee, who can exert a great deal of influence and pressure which impedes due diligence in reviews and decision making. In general, the hierarchical structure of a group can influence information sharing (Stasser & Taylor, 1991). Group members with lower status are often less likely to express their opinions because of less confidence or social reputation concerns. On the other hand Wittenbaum (Wittenbaum, 1998) observed that group members with higher status were more likely to share new information - which means those members can dominate the discussion, even if their information is not more valid or important than that of lower status members (Hinsz, 1990).

This has implications for group decision making because unshared information is not brought to the table, while shared information is discussed repeatedly. The latter is likely to be viewed as more valid and is therefore likely to have greater influence on decisions.

Clark & Urwin (2008) in their review of best practice stress that leadership (including and in particular that of the chairperson) has a strong and demonstrable effect on institutional performance. They influence the quality of execution of delegated tasks and functions. In particular, chairpersons should encourage a culture of accountability and responsibility among board members, as well as in the selection of senior staff.

Recommendations:

- Review guidelines for the role and selection of Chair. The Chair should not be seen to be 'served' but rather to ensure/facilitate good discussion and decision making

- Consider specialised training needs for the role of Chair

- Review guidelines for how the Chair communicates with board members before, during, and after board meetings

- Create facility for anonymous feedback for Chair from trustees and advisors.

7.4.2 Consensus

As the research on Groupthink shows, homogeneous group consistency can lead to a climate of consensus seeking. Group members try to minimize conflict and reach a consensus decision via “premature closure” without the necessary level of critical evaluation of alternative viewpoints and instead suppressing dissenting viewpoints (Janis, 1991). Janis wrote: “members of any small cohesive group tend to maintain ‘esprit de corps’ by unconsciously developing a number of shared illusions and related norms that interfere with critical thinking and reality testing (Janis, 1972, p. 20).

Although the Groupthink phenomenon has not always received empirical support group influence can lead to polarisation of judgments and risk-taking compared to a more normative or individual benchmark (Moscovici & Zavalloni, 1969; Myers & Lamm, 1976). However, if teams adopt certain safeguards, such as assigning a dedicated role of critical advisor (devil’s advocate’) and practising critical dissection of assumptions in discussions then this can lead to superior judgment performance in teams compared to individuals (Tetlock & Gardner, 2016).

Recommendations:

- Introduce a formal voting system. Consensus can be achieved by default but voting requires engagement so should be encouraged so that all individuals register their participation in decisions.

- Consider investing in applied research into developing guidelines for Chairs to hold voting rather than consensus confirmation

- Consider secret ballot voting thereby avoiding pressure to conform with consensus

7.5 Third party management

Given the importance of fund managers to trustee boards, there is a case for reviewing best practice in their selection.

7.5.1 Selection of managers:

According to Clark and Urwin (2008a) best-practice for pension funds is to find and employ fund external managers to increase chances of long-term performance and decrease risk to the pension provisions. However, pension board members need knowledge and skill in assessing the choices of investment firms, and the selection process varies widely in its systematicity and is a challenge to select the managers and other relevant agents. For example, a recent (2017) survey of pension trustees found that 80 percent of those surveyed had low confidence in the clarity of costs for investment activities, trading, and operations. For operational and trading costs specifically 86 % had little or no confidence. A majority surveyed were also concerned about being charged "unnecessary" fees (Willis Towers Watson, 2017).

Clark and Urwin describe the effective use of external managers as a core best-practice goal, which should be determined by clear mandates to the managers, which should be aligned to set goals, selected on the basis of defined criteria. They recommend a “large line-ups of managers” (p.16).

Recommendations:

- Consider general training and mentoring in selection of managers (the job interview literature has some potentially valuable guidelines, e.g. caveats such as serial position effects, asking the same questions in the same order, scoring guidelines, etc.).

- As trustees found it challenging to judge potential managers’ performance, the development implement training and mentoring programmes in making these judgments (and their potential pitfalls) should be considered.

- Standardizing fee information, as the FCA has proposed, could be asked from advisors and managers, and generalised to other categories of information.

7.5.2 The use of advice

Trustees rely heavily on external advice, in the form of consultants and advisers (Myners, 2001; Pratten & Satchell, 1998). Trustees admit that they rarely reject the consultant’s recommendations and that they are very reliant on their advice (Clacher et al., 2017a).

Much research on advice shows that decision makers typically do not fully integrate the advice into their own decision, but tend to discount it, putting more weight on their own ideas and opinions and underweighting advice (Harvey & Fischer, 1997; Mannes, 2009; Yaniv & Kleinberger, 2000). However less confident judges are more receptive to advice than more confident ones (Bonaccio & Dalal, 2006; Gino & Moore, 2006; Savadori et al., 2001). Accordingly if pension fund trustees are not very confident about their roles, tasks, responsibilities, and lack appropriate training, they are likely to be influenced more by advice.

Moreover advice will be particularly influential on evaluation of information and decision making if, as with investment advice to trustees, it is given prior to decision makers reviewing options to form an initial conclusion (Wilson & Brekke, 1994) or is paid for (Gino, 2008; Sniezek et al., 2004).

Recommendations:

- As discussed, the way in which the choices and associated advice are presented need to be carefully considered so not to unduly influence the decisions of trustees towards a suboptimal alternative. Advice should be segregated from information so trustees can review options prior to receiving advice. It is important that mechanisms are put in place to ensure that advisers setting the decision architecture do not use that to their own advantage.

- Make judging advice decoupled from self-esteem (e.g., by using anonymous rating systems in certain phases).

- Consider varying the detail and related difficulty of advice provided.

8. Final thoughts

This report is a wide-ranging piece of work attempting to throw light on an aspect of institutional decision making that, despite its obvious importance for the well-being of millions of pension fund members, has been subject to relatively little scrutiny. Whilst there is a wide range of regulatory guidance concerning the way in which pension trustees dispense their duties, this will only ever be part of the story. Alongside the formal processes guiding the work of any institution, there are a wide variety of norms, rituals, customs and practices that will also operate, often conferring as much, if not more importance on the final judgements and decisions that are made.

Evaluation of the quality of the decision making capability of a trustee, particularly with reference to investment decision making is clearly difficult. The timelines involved in determining whether the decision made was the ‘right’ one are long and so assessment is often inconclusive.

The findings of the research nevertheless give some cause for concern about trustee judgement and decision making. Whist it is important to emphasise that the trustees that we encountered were honourable, hard-working and committed individuals who had the well-being of pension fund members very much at front of their minds, the experimental research suggests that trustees are as vulnerable to biases in their decision making as others and the qualitative research identified ways in which the operating environment appears unhelpful for optimal decision making.

It may well be that the more pressing regulatory burden placed on trustees has had unintended consequences. In order to comply with the increased workloads and (at least perceptions of) greater liabilities, then a range of activities are adopted including deeper and more trusting relationships with advisors as well as a drive towards consensus style decision making to facilitate the ease of meetings. It is not easy to unpick the possible causes of working styles or indeed to confirm for certain if these working arrangements are harmful in practice. But at the very least they are identified as areas of legitimate concern which need to be subject to possible best practice remedies.

We emphasise our earlier remarks that the research reported here has not tested or even identified definitive prescriptions for best practice remedies. Accordingly, the implementation of effective solutions will depend on further research focussed on evaluation of mitigating measures as well as active exploration with practitioners to establish the feasibility of mitigations. We repeat our call for engagement with trustees and other practitioners working with them in order to establish improvements in trustees’ decision making.

A new agenda for pension trustees

There is a challenge for trustee managed pension schemes to adapt to the fundamentally different demands of DC pensions compared to DB. The considerations of managing risk in relation to fund performance alongside the company covenant are rather different to those relating to managing risk in relation to fund performance and employee perceptions and engagement.

The rise of DC pensions means there is a need for new skill sets on trustee boards to consider: communication to employees, not on the pressing importance of maintaining pensions but also to help them understand the necessarily inherent nature of investment risk. It is surely the job of pension trustees and their advisors to avoid throwing up their hands at the lack of employee engagement. Employees will always struggle with making effective long-term decisions independently. Pension trustees therefore have a critical role to play, finding ways to manage investment risk in a way that works alongside members using the latest insights on financial capability to inform their activity

Without the engagement and education, then employees are unlikely to be willing to consider the necessary levels of risk for long term pension provision. Therefore, there is an intricate and important role for trustees to play in facilitating engagement and judging the opportunity for enhanced risk.

Arguably, this study has shown how pension trustees are complying with the processes for decision making which have become so onerous that the most important decisions are left to third parties, who may have little or no understanding of the nuances of the workforce. Further, the demographic differences between trustees and the employees means that trustee decisions, even made with the best of intentions, may not necessarily reflect needs for the long term well-being of the majority of members.

What is understood as the ‘proper running of the scheme’ clearly needs review. The decisions made about investment and risk management are not simply about what funds to invest in and compliance with process. Instead, proper running of the scheme also needs to encompass reflection on the part of trustee boards about the way in which current processes may unintentionally shape the appetite for risk. And just as importantly, proper running of the scheme also needs to consider the way in which engagement with members also shapes risk decisions.

There will always be a need for norms, rituals, customs and practices to work alongside formalised processes – it is impossible to formalise all activity. But both formalised processes and unspoken practices need to be regularly reviewed as they inevitably have unintended impacts on outcomes. The outcomes of poor pension investment decisions are far too important for millions of people for these not to be explored and understood. Our research presents a contribution to this issue, and we urge consideration of the ways in which the recommendations of this report can offer effective remedies.

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