

DC Pension Fund Best-practice Design and Governance.

+*Gordon L Clark and #Roger Urwin.* +School of Geography and the Environment, Oxford University Centre for the Environment, South Parks Rd., Oxford OX1 3QY, UK and Faculty of Business and Economics, Monash University, Caulfield VIC 3145, Australia; #Towers Watson, London Rd., Reigate RH2 9PQ, UK

Contact. gordon.clark@ouce.ox.ac.uk; roger.urwin@towerswatson.com

Abstract. The design and governance of pension funds is an important topic of academic research and public policy and has significant implications for the welfare of participants. Here we focus upon the design and governance of defined contribution (DC) pension plans which have become the de facto model of occupational pensions in most countries. The study synthesises the findings of a year-long research project based upon in-depth interviews with the sponsors and managers of leading schemes from around the world. We begin with the dual nature of the governance problem characteristic of DC pension plans, emphasising aspects related to the self-governance of individuals in relation to their long-term interests as well as the ambivalence and conflicts of interest in plan sponsors. With those problems in mind, we focus on the design of DC pension plans and then their governance so as to challenge existing institutions in particular jurisdictions. Our findings have implications for employer-sponsored plans, multi-employer plans, and the public utilities that have been established or proposed that may transcend company-based and industry-based pension institutions. Whereas DC plans were once believed to be simple solutions to burdensome defined benefit liabilities, it is shown that there is nothing simple about a well-designed DC pension plan. In essence, the complexities associated with DB liabilities have been exchanged for complexities in the design and management of DC institutions.

Keywords. Defined contribution pensions, design, governance, best practice

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1. Introduction

Defined contribution (DC) pensions have become the standard form of employer-provided retirement income benefits amongst OECD nations. In some countries, this is the result of the closure of defined benefit (DB) plans (eg. the United Kingdom) whereas in other countries the dominance of DC reflects the evolution of industry structure, employment practices, and regulation (eg. the United States).¹ In those countries that have initiated comprehensive pension reform, mandatory or voluntary DC pension systems have been introduced to compensate for changes in state pensions systems (eg. Australia, Germany, and Sweden). Basically, DC pensions are a form of individual retirement saving often matched by the employer where the final benefit ‘value’ is the cumulative product of contributions and investment returns on those assets. In its most common form, DC pension schemes allocate the risks associated with the ‘final’ value of retirement saving to the individual participant or beneficiary (Munnell and Sundén 2004).²

DC pension plans are very important in the financial world. Among the 13 countries with the largest pension sectors, by the end of 2009 DC assets accounted for around 45% of the total global pension assets—\$10.4 trillion of \$23.2 trillion (Towers Watson 2010). Given the significance of DC pensions, there is increasing scrutiny of the governance of these types of pensions for participants and especially low-income participants. Questions have been raised about whether DC pensions can provide participants a significant supplement to discounted state benefits. Recurrent episodes of market turmoil have also prompted some analysts to question whether the average DC plan participant is equipped to deal with such volatile environments. The consequences of the global financial crisis for the average DC plan participant have been widely reported even if somewhat mitigated by recovery of the major financial markets. Questions have also been raised about the average DC participant’s

¹/ The issue of ‘frozen’ private sector DB plans in the US is also of growing significance; see the April 2010 (Vol 2 Issue 3) of the US Bureau of Labor Statistics Program Perspectives and News 09-0872 “Employee Benefits in the United States, March 2009” (see also Copeland and vanDerhei 2010).

²/ The various models of DC pension schemes include ‘collective’ (CDC) schemes that pool contributions, investment, and smooth returns. It is assumed that these schemes deliver a “better pension” less subject to “volatility of projected pensions” (Jordan and Thomas 2009, 19). CDC schemes imply some form of collective insurance like a tontine that *may* come back to the employer. For more details on risk-sharing in DC schemes see the account provided by the European Commission (2010, 14) recognising that about “60 million Europeans are enrolled in DC schemes.”

decision-making competence and financial literacy (see Lusardi 2010 and Lusardi and Mitchell 2007).

In liberal democracies, there is a presumption in favour of individual autonomy such that it is the responsibility of the participant to be an effective decision-maker consistent with his or her long-term interests (Langley 2008; Preda 2009). The results of the behavioural revolution in the social sciences associated with Kahneman and Tversky (1979) combined with practitioners' knowledge of individual behaviour in DC schemes suggests that this responsibility is misplaced. It could be assumed that employers as plan sponsors are best-placed to make-up shortfalls in participants' competence; however, there can be a considerable gap between the interests of participants (principals) and their plan sponsors (agents). Informed observers would suggest that there is a moral hazard problem deeply embedded in the relationship between principals and agents such that participants are not always best-served by the sponsors of DC pension plans.³ Plan participants lack the capacity to "regulate" plan sponsors—problems of DC design and governance need to be resolved if these institutions are to play their assigned role in underwriting retirement income.

In this paper, we explain the dimensions and significance of the two-sided governance problem characteristic of DC plans, noting the complex nature of governance particularly where plan sponsors and plan fiduciaries are reliant upon external service providers with their own commercial imperatives. We emphasise the logic and structures appropriate to the design of DC pension institutions, suggesting that best-practice solutions to the governance problem can be found in a set of widely-reported principles and practices (Clark and Urwin 2008a). Best-practice also seeks to govern external providers through bilateral contracts that must balance ongoing commitment against the possibilities of being exploited by service providers. As such, the specific details and particular traditions of different jurisdictions are eschewed in favour of a

³/. The term 'moral hazard' is drawn from the problem in insurance contracts wherein once insured the person concerned may not "behave in a fully responsible way and take appropriate risk-mitigating actions" (Williamson 1985, 47); the costs of their behaviour are borne by another party who neither knows their intentions nor can normally directly observe behaviour. In our case, agents acting on behalf of beneficiaries do not bear the costs of their actions and, as such, are unlikely to devote the same care and attention to their responsibilities as those for whom the issue is immediately salient to their welfare. See also Trebilcock (1993, 47-48 on opportunism in contracting).

design-and-governance framework applicable to a variety of settings (see Ebbinghaus and Wiß 2010). In conclusion, it is suggested that the framework is important because, in the absence of effective governance, DC pension institutions are unlikely to deliver on the expectations of participants, plan sponsors, and governments.

The analysis of DC design, institutional characteristics, and the principles of best-practice governance is informed by case study research in the UK, Europe and Africa, North America, and Australia. A total of 20 DC plans recognised as exemplars of their type were interviewed (see Appendix). The authors combine the skills and knowledge of academia with the insights and experience of the investment management of pension funds worldwide. So as to aid exposition, the argument is framed with respect to principles and practice rather than specific case studies of best-practice. In part, this is because there are few instances of comprehensive best-practice across the range of issues we deem important. Invoking specific cases would mean providing an historical account of the development of these institutions sacrificing principles for jurisdictional and cultural specificity (Roe 2006).

Our ambition is to provide a template for DC best-practice that has global application. As such, we contend that any variation against this template by claimed jurisdictional and cultural specificity must be justified in terms of the interests of beneficiaries.

2. The (Dual) Governance Problem

The governance agenda has been incorporated into many aspects of the management, oversight, and regulation of the pensions sector. In the UK see, for example, the UK Codes of Practice promulgated by The Pensions Regulator, the recent report of the Investment Governance Group (2010) on the governance of DC pension schemes, and the report of the National Audit Office (2010) on the governance of investment in the UK Pension Protection Fund. Other countries have also sought to regulate and affect governance standards albeit in rather different ways. In this section, we develop the point made above that the DC governance problem has two dimensions: one relates to the individual and the other relates to the institution.⁴

⁴. Elsewhere, Jackson (2008) maps the “trilateral dilemma in financial regulation” suggesting the complex relationships between consumers, financial advisors, and third-party providers make for a

2.1 Self-governance: liberal democracies are founded on the belief that people are substantively equal in that they deserve respect for the choices they make and the actions they take. As such, it is presumed that they are best-placed to decide amongst the available options in relation to their particular interests. It is also assumed that individuals are rational in the sense that they maximise their expected utility subject to resource constraints (which are likely to be a function of their social position as well as their human capital; see Akerlof and Kranton 2010). In much of social science, it is likewise assumed that whatever their ‘interests’ people are substantively the same in that their choices and actions are their responsibility. So, for example, if some people choose current consumption over saving for the future their right to do so is underwritten by liberal tradition and the logic of decision theory (Schick 1997).

There are two caveats to the presumption in favour of individual autonomy.⁵ It is often observed that many people do not have sufficient information to make informed decisions consistent with their best interests; that is, the costs of acquiring information may undercut their ability to make rational decisions (Gabaix and Laibson 2006). Equally, it has been observed that providers seeking to sell products and services to individuals may deliberately obscure the true costs and quality of those products and services such that the choices made by individuals may turn out to be inconsistent with their best interests (Gabaix et al. 2006). These issues are particularly acute in the purchase of investment products where the time and expertise buyers require to cope with information asymmetries are prohibitive (see Akerlof 1970). If the costs of information acquisition and the actions of interested parties compromise effective decision-making there is, no doubt, a significant role for government to intervene in the market so as to sustain individual sovereignty. Many governments have done so in the name of enhancing financial literacy particularly in areas related to the purchase

very difficult problem affecting the financial welfare of many people. We are also interested in these types of relationships though from a governance perspective.

⁵/. Liberal democracies vary in terms of the premium attributed by public policy to individual autonomy and responsibility; there is a balance to be struck, in some cases, between individual autonomy and social solidarity (see De Deken et al. 2006). More broadly, the virtues associated with individual autonomy and responsibility may be deeply embedded in culture and tradition (see Jones 2007), with implications for the apparent differences between and within countries for risk tolerance in financial matters including saving for the future (as illustrated by Henrich et al. 2005).

of financial products such as insurance, pensions, credit facilities, and banking services (Lusardi 2008).

Whatever the significance of public policy interventions, the new behavioural paradigm has changed the terms of the debate such that the presumption in favour of individual autonomy has been undercut by claims to the effect that individuals may not be effective decision-makers in the context of risk and uncertainty (Thaler and Sunstein 2008).⁶ Specifically, the new behavioural paradigm suggests that observed ‘preferences’ in favour of current consumption over saving for the future may be the result of a human predisposition in favour of the short-term over the long-term, as well as an inability to govern oneself in the face of short-term temptation as opposed to long-term interests (Ainslie 2001). Given the evidence that suggests humans find it difficult to deal with complex choices under risk and uncertainty, many people ‘satisfice’ relying upon habits and intuition drawing decision-cues or heuristics from their immediate environment rather than relying upon formal rules of decision theory (Clark 2010).

The behavioural paradigm is not the last word on financial literacy (see Berg and Gigerenzer 2007 who argue that its advocates have exaggerated the implications to be drawn from human biases and anomalies). In any event, it is apparent from research and case study evidence that some DC pension plan participants are more sophisticated than others whether because of innate ability, training, or the salience of planning for retirement (Clark et al. 2011). It has also been observed that there are a range of players in financial markets including the naive, the average player, and the sophisticated investor. The most sophisticated planners are those that impose some degree of self-governance or self-regulation on what they recognise as self-limiting and self-defeating behaviour. Notwithstanding the systematic nature of behavioural anomalies and biases, the co-existence of different types of planners within DC schemes inevitably complicates the design and governance of these plans. Further, the presumption in favour of individual autonomy and responsibility suggests that

⁶. The behavioural revolution is associated with the work of Herbert Simon, Amos Tversky and Daniel Kahneman as well as a number of other psychologists working at the interface between cognition, environment, and behaviour. Useful overviews of their contributions for understanding behaviour can be found in Kahneman (2003) and Iyengar (2010) and Schwartz (2005).

paternalism must be sensitive to different levels of participant competence and the possibility that some participants may wish to exercise their right to plan for the future. Finally, we note that risk-tolerance and confidence in financial decision-making systematically vary by gender, income, and age as well as culture and country.

2.2 Institutional governance: in their heyday, DB pensions were thought consistent with corporations' management of human resources. Unions also valued DB pensions because this type of benefit provided a means of rewarding older workers for loyalty and smoothing the transition to retirement on a modest supplementary income. There are two explanations for this alignment of interests: in terms of the acquisition of skill and labour productivity, it was assumed that older workers embodied vital on-the-job knowledge needed to exploit company-specific assets (Williamson 1995). Similarly, it was believed that the skills of older workers become increasingly non-transferable with years of service in the employ of particular companies. One way or the other, the tacit knowledge and expertise held by older workers was deemed consistent with corporations' long-term profitability. In this sense, labour and managements' interests in the nature and value of provided retirement benefits were closely aligned (see generally Konzelmann et al. 2010).

Some sectors of industry remain committed to DB pensions for these reasons. However, it is apparent that many plan sponsors and younger workers do not value DB pensions. Further, it is apparent that many companies see DB pensions as a constraint on competitive strategy as well as a drain on financial resources (Monk 2008). On the other side of the equation, younger workers do not value DB pensions like older workers; younger workers value flexibility, portability, and systems of compensation that are explicitly related to their education, expertise and job-specific performance (Clark and Monk 2008).⁷ As well, in many sectors internal labour markets have been dissembled in the face of globalisation (Konzelmann 2005). Embodied skills are now much less important to human resource management even if formal educational qualifications, training, and domain-specific knowledge dominate higher tiers of corporate employment systems (Roberts 2004).

⁷. It is arguable that the indifference shown by younger workers to DB pensions is yet another instance of myopia—a self-defeating predilection in favour of short-term benefit over long-term gain (Ainslie 2001). This is an entirely plausible argument. It is also the case, though, that with stagnating real wages and competing claims of shrinking disposable incomes short-termism becomes a necessity.

The modern corporation differentiates employees by performance-related compensation, while capital markets are pre-occupied by short-term reported earnings (Conway et al. 2008). Consequently, there is a relationship between performance-related compensation, corporate value, and the (relatively low) value attributed by corporations to employee benefits like pensions. In this context, DB pensions are an anachronism (see Dixon and Monk 2009 on the US and Japan and compare with Konzelmann 2005). There are also reasonable doubts about the value of DC pensions when there is no apparent or direct link between employer provision of benefits and workers' job-specific performance deemed relevant to the reported earnings of the corporation. It is revealing that in Roberts' (2004) treatise on corporate management and performance, the topic of workplace pensions is not discussed or listed in the index, and is ignored regarding employee motivation and incentives for innovation.

Where employers doubt the value of DC pensions, it is not surprising that the administrative costs of providing these benefits and the costs of matching employee contributions may be seen as the costs of doing business rather than an important aspect of employee motivation. On the other side of the employment relation, many employees see DC pension contributions as a 'tax' on current income whose future value is subject to great uncertainty (a sentiment amplified by employers when they make no commitments about even what might be the 'likely' long-term value of a DC pension).⁸ When respondents were asked "why do companies provide DC pensions" the answers were revealing: because other companies do so, there are valuable tax advantages on contributions that accrue to higher-paid employees, and some form of supplementary pension is needed to ensure the orderly transition from work to retirement (when desired by employers).

Employer ambivalence about DC pension provision can be amplified when responsibility for plan design and management is devolved to other entities, such as multi-employer industry and occupation plans. In many cases, these entities are often quite opaque in terms of the determination of costs and prices for even the largest

⁸/. Participants' lack of confidence in the future value of DC pensions is reflected in a recent OECD (2010) report which suggested that individuals can reasonably treat future value as a "lottery" unless steps are taken to "reduce the impact of market shocks".

participating employers. Further, the nature and quality of benefits are more often determined by reference to industry standards than the interests of leading firms. It is not surprising that DC pensions have been subject to increasing scrutiny as to the costs and the administrative burdens imposed by multi-employer plans on the companies that sponsor or participate in such plans.⁹ Inevitably, out-sourcing and corporate focus upon performance-related compensation has resulted in companies' human resource departments having less expertise in pension and retirement benefits than they might have had 20 years ago. As such, companies and their human resource departments may be more concerned to shift the costs of provision as well as the risks thereof to participants invoking arguments favouring individual autonomy and responsibility than to take responsibility for apparent shortfalls in quality and performance (Jackson 2008).

The institutional governance problem has two sides: on one side is the lack of commitment within the corporation to realising employees' retirement income aspirations while on the other side of the problem is the issue of how incentives and commitments can be or should be aligned given the apparent problems of self-governance noted above. This is a problem of institutional design (see Merton and Bodie 2005). It is also, increasingly, an issue of government policy and regulation. Recognising the ambivalence of private companies regarding the provision of pension benefits, some governments have promoted alternative delivery entities including member-profit industry consortia as well as public utilities. Courts have also become involved in this issue because participants are typically unable to oversee their interests (if recognised as such) and the actions of the plan sponsors upon whom they rely for the realisation of their retirement income objectives.¹⁰

⁹/ See, for instance, the Exposure Draft of the US Financial Accounting Standards Board regarding the disclosure of employers' commitments in multi-employer retirement benefit plans (including healthcare) (Subtopic 715-80) published September 1st 2010 and available at www.fasb.org

¹⁰/ See the opinion of Judge Wilson in *Tibble v. Edison International, et al.* CV 07-5359 (July 8, 2010) US District Court, Central District of California. But see the decision of the US District Court in *Renfro v. Unisys Corporation et al.* (No. 07-2098, April 26, 2010, p. 12) where it is asserted that "[h]aving made the decision to offer such a plan, Unisys had no incentive to waste the money that it is contributing to the plan by directing a large portion of it to a plan service provider rather than to the workers for whose benefit the plan was established. Sophisticated workers, seeing their compensation unnecessarily siphoned off to a plan administrator would ensure that workers took home a greater compensation package."

3. Institutional Design

In previous research, we took as given the inherited form of the pension delivery entity, focusing upon the principles of governance and management consistent with superior investment performance (Clark and Urwin 2008a). We emphasised the governance and risk budgets of pension delivery institutions as well as the ways in which inherited institutions have adapted to meet the challenges of the 21st century (Clark and Urwin 2010). Before returning to these principles and their relevance to the DC institution, we consider the institutional design question; in doing so, we may be able to circumvent some of the problems we have observed in translating design into best-practice governance.

3.1 The governing entity: it is axiomatic that the purpose of the governing entity should be the enhancement of participants' interests (the 'golden' rule). Where the plan sponsor does not underwrite the final value of the pension benefit and where participants may contribute more than the plan sponsor in seeking to realise their retirement income aspirations, the governing entity should have a stake in the structure and performance of the plan (Cremers et al. 2009). There are various ways of linking the interests of the governing entity with scheme participants including requiring the participation of governing entity members in the scheme and/or compensating members of the governing entity according to *a priori* standards of performance that include elements that match the interests of participants in cost-efficiency, risk-management, and long-term returns. In those institutions that take the alignment principle seriously, the governing entity is subject to fiduciary duty combining independent members with qualified representatives of participants who have 'skin-in-the-game'. Elsewhere, we have considered in detail best-practice board composition, leadership, and decision-making (Clark and Urwin 2008b): those lessons apply here, as well (see below).

Current models of DC governance commonly rely upon single investment management firms or insurance companies selected by sponsors to provide the management and over-sight functions associated with governing boards. In these instances, those 'responsible' for the pension plan typically do not have a stake in the structure and performance of the plan. In the US, large investment organisations often take responsibility for DC delivery; in the UK contract-based DC provision has

similar issues; while in Australia it is arguable that there are moral hazard problems in both industry funds and master-trusts. Where these arrangements are likely to persist, it may be necessary to use regulations to set standards, the criteria of independence, and the proper regard for participant welfare. More formally, we would suggest that the ‘responsible’ governing entity be subject to three interrelated commitments or principles: *(1) decisions taken by the entity should be evaluated with respect to their implications for participants’ wellbeing; (2) the governing entity and its members and employees together and separately are responsible for the nature, costs, and performance of pension programmes; and (3) the governing entity and its members and employees are accountable to plan beneficiaries.*

In stating obvious implications of the golden rule, we have sought to resolve the conflict that sometimes appears within plan sponsors between those that decide on the nature of offered pension benefits and those that have responsibility for overseeing the implementation of benefit programmes. Accountability is also to be found in transparency and disclosure such that the governing entity has responsibility for informing beneficiaries of their policies and practices and making accessible the information necessary to evaluate the probity of board policies and practices.¹¹

3.2 The executive entity: the purpose of the executive entity of a DC plan is to execute the declared principles and policies of the governing entity whether directly through their own resources or through contracts for service written with external providers. As a matter of best-practice, the executive entity are employees of the governing entity such that the CEO (and in some cases a CIO) are recruited and appointed by the governing entity and their actions are subject to the oversight and approval of the governing entity. This arrangement of delegated powers is designed to resolve apparent conflicts of interest in plan sponsors where human resource departments claim responsibility for both the pension benefit "offer" as well as the purchase of pension services. It may be the case, of course, that the governing entity

¹¹/. Some dispute whether disclosure and transparency are effective ‘policing’ devices, with Cain et al. (2005) arguing that disclosure may, in fact, encourage back-sliding on commitments when legitimated by a policy of disclosure. Using experimental evidence, Church and Kuang (2009) show that disclosure combined with sanctions can be an effective policing device. Litigation, or the threat of litigation, may be a relevant sanction. Even here, though, the quality of disclosure could be more important than disclosure per se, given the costs borne by those unable to verify the quality and quantity of disclosure (see more generally Choi and Triantis 2008).

would wish to outsource executive roles and responsibilities. In some jurisdictions, third party providers dominate this part of the business.

This suggests, however, a well defined "map" of decision-rights and responsibilities where principles and strategy reside with the governing entity and implementation and management reside with the executive entity. Here, though, are a number of complex issues that require resolution before setting the governing structure in motion. Elsewhere, we argue that effective decision-making depends upon time, expertise, and commitment and that the types of decisions required can be systematically differentiated according to the timeliness and the depth of expertise and experience required given a volatile external environment (Clark and Urwin 2008b). This argument is, of course, applicable to the relationships between the executive entity and service providers. We note that best-practice institutions are explicit about delegated roles and responsibilities.

3.3 Service providers: in principle, service providers are the means by which the governing entity through its executive provides the services needed to ensure that plan participants' goals can be realised in a cost-effective manner. Contract theory would have it that fee-for-service should be governed by time-dependent measures of performance such that the violation of agreed measures of performance may be sanctioned in ways consistent with the significance of those violations. Here, of course, contract theory assumes that the parties on both side of the contract are independent of one another and that rewards and sanctions are proportionate. Contract theory also assumes a competitive market for the provision of services such that it may be cost-effective to switch between service providers given the market pricing of services or bundles of services. As such, the effective governance of service contracts depends upon the integrity of the governing entity and the independence of the executive entity.

There are, however, three connected issues which complicate the robustness of any contract model of intermediation (service provision): (1) *economies of scale in the financial services industry are very significant (Bikker and Dreu 2009). DC plans are typically 'small' in relation to the size of the institutions that offer services on a fee-for-service basis to sponsors and their participants.* (2) *When large service providers*

offer the opportunities of economies of scale they may do so in ways that impede purchasers' capacity to oversee contract performance and their capacity to switch between service providers should agreed measures of performance be systematically flouted;¹² and (3) purchasers may find it difficult to obtain information on the true costs of individual services separate from the bundles of services on offer from service providers without the intervention of regulators.¹³

In some jurisdictions, pension plans have banded together to create their own service providers on the assumption that 'shareholders' have a stronger claim on the pricing policies of service providers than 'clients'. Note, however, that capture is just as possible in industry consortia and service partnerships. Furthermore, there is evidence that 'private' service providers may be more innovative on both the fee-for-service side of the equation as well as the quality of service provision than member-profit service providers owned by a number of different but cooperating pension institutions. In some cases, overlapping relationships between the members of funds' governing entities, their executive entities, and their preferred service providers may be impediments to long-term cost efficiency and the primacy of the governing entity (on behalf of participants) in relation to service providers.

Private contracts are an important but imperfect mechanism for governing the DC industry. Other institutions including the courts, regulators, and member-based lobby groups may also play a vital role in sustaining the accountability of governing entities and their service providers. We must be mindful of the prospect of capture and complacency as well as the need for innovation beyond extant industry standards.¹⁴

¹²/. Bundling can 'tie' clients to their vendors by increasing the switching costs of changing vendors. Bundling can also involve cross-subsidies between services otherwise not available at a competitive price and the shrouding of prices making comparison between vendors difficult (see Gabaix and Laibson 2006 and Iacobucci 2008). Over the long-term, this can result in higher prices charged to clients as switching costs escalate in the face of entrapment. See also Shavell (2007, 325-26) on what is termed 'hold-up' which "refers to situations in which a party to a new or existing contract accedes to a very disadvantageous demand, owing to the party's being in circumstances of substantial need."

¹³/. See the US Department of Labor's interim rule as regards the disclosure by service providers of compensation practices and possible conflicts of interest in relation to the responsibilities of ERISA plan fiduciaries; 29 CFR Part 2550, July 16th 2010.

¹⁴/. Innovation in the nature and performance of financial products is very important, given the ever-present temptation in favour of bench-marking (Clark 2000). This practice is made possible by a lack of expertise on the buyer side of the market and is legitimated by court decisions that use industry norms as reference points in determining whether agents have behaved properly with respect to the

4. Default, Choice and Service

While it may be said that the average plan participant is neither sophisticated nor likely to appreciate the salience of saving for the future, there are likely to be those that do appreciate the significance of these issues. In fact, it would seem that DC pension plans vary a great deal in terms of the sophistication of participants and their recognition of the salience of planning for the future. Industry affiliation appears to matter as does the industry standing of the company sponsoring the pension plan. Furthermore, it would appear that the culture of saving varies such that country, industry, and company factors may together encourage or discourage engagement in DC schemes. In that case, a "universal" model of DC pension plan participation may not do justice to the diversity of engagement within and between sponsored pension plans. In what follows, we provide a best-practice four-step design solution to the problem of self-governance which is sensitive to the segmentation of behaviour either side of the average participant.

4.1 Default settings: it has become accepted practice for companies to promote participant welfare by automatically enrolling employees in the offered DC or DB pension plans when first employed or when they reach some threshold in terms of hours worked and/or months employed. Not all employers are, of course, as enthusiastic about auto-enrolment as the governing entity of pension schemes (Brown 2010). For employers, auto-enrolment normally means the take-up of their matching contributions thereby adding to the compensation costs of the employee/participant. For a governing entity, their executive entity, and service providers, higher levels of enrolment allow a fund to reap scale economies and, in theory at least, discount the account costs borne by participants. Nonetheless, employers in some sectors have used tests of eligibility for enrolment and the necessity of a deliberate, expressed choice to participate as mechanisms to screen enrolment (the cost of compensation). In some jurisdictions, legislation may be necessary to overcome employer resistance.

interests of beneficiaries. See, the court opinion in *Jones v. Harris Associates* 527 F.3d 627 (7th Cir., 2008). See also the dissent led by Judge Posner where the prospect of "lower fees and higher returns" because of a commitment to best-practice in fund governance (in the mutual fund industry) is approvingly cited: *Jones v. Harris Associates* 527 F.3d 728, 731 (7th Cir., 2008).

The other common default practice of DC plans is steering the participant to the available default fund or default strategy. While default practices vary in a number of ways, often not understood by participants, a typical strategy involves a diversified portfolio designed with reference to so-called lifecycle or target date parameters.¹⁵ The availability of a default strategy can help most participants who would otherwise face imperfectly understood choices amongst the available investment options. The advantages and limitations of this default strategy are widely acknowledged (compared Viceira 2008 and Antolin et al. 2010). The most significant draw-back of the default fund framework is that the only personal characteristic brought into account is age and the expected period to the target date of retirement.

In some funds, auto-enrolment and steering to the default fund is accompanied by an automatic contribution escalator that begins with a quite low contribution rate and then, over time, slowly increases to reach a contribution rate (including employers' contributions) that the governing entity deems as likely to produce an "adequate" retirement income. In some funds, pension adequacy is an explicit consideration whereas, in other funds, if it is considered at all it is done so through the medium of investment policy and the like. Auto-enrolment, steering, and contribution settings are *entry level* policy considerations and are typically justified by reference to Thaler and Sunstein's (2008) liberal paternalism (and the 'safe harbour' provisions of the US Pension Protection Act 2006; see also Pettus and Kesmodel 2010).

More challenging is whether to allow participants to draw-down on their retirement accounts for current consumption, whether to rebalance participants' asset-allocations as they age and increase earned income, and whether to require annuitisation at retirement or some period thereafter such that the real value of accumulated assets is translated into a predictable and secure retirement income. Whereas it is reasonable to assume that younger employees are neither sophisticated nor appreciate the salience of saving for the future and, therefore, should be subject to *entry level* default settings, default settings on draw-downs, rebalancing, and annuitisation may be more

¹⁵/. In a number of jurisdictions, regulators have sought to clarify what counts as a target-date fund recognising that there are many different versions extant in the financial services industry and recognising that, as a popular option, the welfare of many millions of participants is dependent upon these types of funds. See the Investor Bulletin on Target Date Retirement published by the US Department of Labor, May 6th, 2010 and the intervention by the US Securities and Exchange Commission on advertising and marketing target date funds 17 CFR Parts 230 and 270 June 23rd, 2010.

problematic to sustain because after 20 or 30 years of participation the average participant may better understand the salience of the issue in relation to their particular circumstances.¹⁶ In these situations, it may be that the costs for future retirement income of aberrant behaviour are so significant that the governing entity should support *second level* default settings (or the government provide legislation to that effect).

4.2 Gates and hurdles: in fact, many DC pension plans provide mechanisms for participants to move from default settings or their initial choices either at-will or with appropriate notification to an active-choice stance. In some best-practice funds the choice environment is segmented into two parts: the first part provides a limited set of options or choices selected by the governing entity (often based upon the constitutive components of the institution's default fund) and the second part provides open-access to a wide range of selected products and services. By our assessment, the 'guided choice' option or decision-environment is less developed than the 'self-selector' option or decision-environment perhaps because of the investment of resources needed to understanding the particular characteristics and composition of funds' participants.

Active choice is surely the prerogative of plan participants, underwritten by liberal principles and the fact that, in many cases, accumulated assets are largely the product of individual contributions combined with investment returns. However, active choice may also be a competitive strategy of the governing entity conceived for the purpose of retaining those plan participants that carry large account balances and whose age and education are such that they recognise the salience of the issue and have confidence in their ability (for good cause or otherwise) to realise their retirement income aspirations. Such participants will find that there is a 'sweet-spot' in which the fund's investment offerings can be integrated with the process of engagement from the participant involving personal context (in keeping with

¹⁶. Draw-downs for current consumption are an especially troubling topic, not least of which because in DC plans where the participant makes the largest contribution (compared to the employer), it is arguable that account balances are properly the 'property' of participants. Policies that effectively lock-out the participant from access to their accumulated savings in adverse personal circumstances are an especially strong form of paternalism which some governments find difficult to justify. See Butrica et al. (2010) on the dimensions of this issue in the United States.

controlled choice) or investment beliefs (in keeping with active choice). Retention of these participants is important because, in many cases, the overall volume of a plan's assets determines its power in the market for services and the deals that may be struck to discount the quoted prices for account services, investment management, and related activities (including communication). In some cases, fewer than 5% of plan participants account for 50% or more of plan assets.

Here is a conflict of interest that goes to the heart of the governing entity's principles and policies. That is, the use of default settings, particularly those identified above as *second level* settings cannot be mechanisms for trapping or imprisoning plan participants whose best interests may be served in an active or controlled choice environment or, indeed, migration from the plan to other specialised service providers. In this sense, best-practice pension plans have gates that can be opened on to more sophisticated products (within the fund) and/or more sophisticated providers (outside the fund). These gates are relatively inexpensive to open, are easily accessible, and are typically accompanied by information and decision architecture and tools (if not advice) that enhance the decision-making of the participant.

At issue, however, is whether gates should be accompanied by hurdles; that is, tests of competence and financial understanding that, in a sense, measure whether the participant is "qualified" to cope with the risks and uncertainties associated with individual choice.¹⁷ In this respect, the integration of gates and hurdles into the design and governance of a pension plan is, ultimately, the responsibility of the governing entity (and probably not the plan sponsor).

4.3 Engagement: the heterogeneity of many DC plans, the range of sophistication apparent amongst participants, and their varying levels of recognition of the importance of saving for the future suggest that best-practice pension plans have programmes of engagement. At one level, engagement can be seen as an element in well-conceived strategies of retention (of participants with large account balances).

^{17/}. In some funds with significant information-processing capacity and trustee concern for the choices made by participants, monitoring systems have been established to identify participants whose decisions fall outside of what might be thought 'reasonable' triggering scrutiny and, in some cases, contact with participants by trustees as regards their actions and intentions. Of course, given the tenets of liberal democracy, it would be difficult to over-rule any aberrant decision, no matter how foolhardy or self-defeating in effect.

At another level, engagement can be a prompt for participants to re-consider their current saving strategies in relation to future plans thereby providing a point of intersection with the scheme and its available services. And at yet another level, engagement may satisfy those that question the legitimacy of *entry level* and *second level* default settings (given the presumption in favour of individual autonomy and responsibility apparent in political discourse).

Engagement policies vary by scheme, industry, and jurisdiction. Many plans offer information, websites, and briefings on current developments, retirement planning, and the range of options available to participants. It is widely noted, though, that these programmes are normally sparsely attended and lack the intimacy associated with close friends and relatives dealing with the same issues (Clark et al. 2011). Nonetheless, if done in an informative manner, matching the consumer appeal of advertising programmes aimed at specific segments of the market as utilised by providers in the retail sector, engagement may move beyond information sharing to more effective interaction (see R. Clark et al. 2010 and Gopi and Flaherty 2010). We note, however, there are few DC sponsors that have incorporated the lessons of the behavioural revolution (but see Ezra et al. 2009), into the design and management of their engagement programmes. By our assessment, ‘nudge’ is just the tip of an iceberg which may require more radical solutions than currently contemplated (compare Thaler and Sunstein 2008).

At the other end of the spectrum, independent financial advice provided by the fund or by the sponsor on behalf of the governing entity may attract those that appreciate the salience of the issue and have the confidence to declare their ignorance. We note, though, that this issue is the subject of debate in many countries pitting different sections of the finance industry against one-another in their rush to corner what is perceived to be a growing lucrative market.¹⁸ To be effective, engagement must over-

¹⁸/. Ensuring participants have access to truly independent financial advisors may be an important responsibility of the governing entity of DC pension funds. This means either searching out and identifying suitable advisors and then making them available to participants at a suitable price and/or relying upon government certification programmes of ‘independence’. As such, the recent announced New Zealand government draft consultation document on a Code of Professional Conduct for Authorised Financial Advisors (March 2010) provides a template for other governments and institutions. Available at www.beehive.govt.nz

come the apathy of many participants, demonstrate a level of independence rarely found in the advisory industry, and be relevant to the various circumstances of participants.

4.4 Retirement services: for many corporate sponsors, retirement has been seen as a means of jettisoning responsibility for employees' retirement saving and welfare. If consistent with the notion that DC pension plans are best treated as 'arms-length' entitlement programmes, only marginally related to performance-related compensation, the governing entities of best-practice schemes have sought to retain retirees offering three types of services: information and advice on related retiree benefits, preferred providers of annuities, and techniques of budget planning and income management over the life-course. The re-discovery of retirees has been prompted by the realisation that they often carry a significant portion of scheme assets, affecting the average costs borne by all participants as well as the realisation that many are vulnerable to the 'independent' financial advisory industry and the costs associated with bespoke advice and services.

In some jurisdictions, the rediscovery of retirees has also been prompted by the retreat of the nation-state from providing a high level of retirement income security and ambivalence over whether retirees who rely upon so-called money-purchase schemes should purchase annuities. Much of the academic community strongly favour the purchase of annuities. However, if given the option, retirees tend not to do so (Clark et al. 2011). In these cases, retirees' retirement income security may be better protected by their 'host' pension institution than the private market for financial services. Most importantly, it is apparent that the cognitive capacity of retirees is age-related and health-related; if largely ignored in public policy, there are significant issues to be resolved about the limits of individual autonomy and responsibility at the on-set of dementia and physical frailty (Savulescu and Hope 2006). Whether DC plans can play a significant role in this context remains to be proven.

4.5 Reporting and communication: The service model in DC has other features that are more significant than in the DB equivalent. First, investment communication plays a critical part in reinforcing the value proposition. This encompasses both explaining the investment implications of choice including default and then putting subsequent

progress in context. Second, just as many funds believe encouraging member contributions is an essential component of their mission (which can be included as one of the Key Performance Indicators), communication is central to fulfilling this function.

One aspect of the communication challenge has to do with fund reputation. It is apparent from industry respondents that DC participants respond to the clarity of reporting—the degree to which messages express clarity of purpose and the quality of execution and operation. It appears that members also respond to messages and personal leadership statements from the CEO and/or the Board. Where communication is explicitly linked to funds' reputations for quality of service, there may evolve a brand-related competitive market for pension services (as in Australia). Funds' brand strategies may be seen as a part of a wider strategy of engagement by which members may be effectively immersed in the value proposition of the plan.

A second aspect of the communication challenge is related to the demonstrating efficiency and integrity of fund administration. Communication can play a significant role in giving members the confidence that their interests are paramount, and that security of pension savings can be assured. In effect, routinely and consistently delivering on the individual attribution of account values in the context of commingled asset pools can be a test of fund effectiveness. Considerations of tax, expenses, valuation of illiquid holdings and timing make this a highly problematic area. Active platforms with significant daily activity have more issues to confront than those that impose less frequent dealing opportunities. Funds must balance these parameters by considering the costs and benefits of different designs for different member segments remembering that additional functions that are valued by a small minority segment will often entail additional costs for the majority.

5. Public Utilities

In sketching the elements that together represent a best-practice template for the design of DC pension institutions we have focused upon solutions to the dual governance problem—that is, the problem of participant self-governance and the ambivalence of employers (plan sponsors) to the so-called 'universal' provision of pension benefits to their workforces. In doing so, we began with that which has been

inherited in many jurisdictions: the trust institution with its attendant protocols as regards the proper roles and responsibilities of board members. However, we should recognise that this model is not the only model available to employers, workers, and the public at large. So, for example, as the rules and regulations affecting the provision of pension benefits, including DC pensions, have grown in complexity and obligations, employers have sought simpler solutions replacing collective provision with the offer of individualised savings contracts and the like.

Another alternative to employer provision of pension benefits is to be found in public-private partnerships which combine an overarching policy framework with private institutions charged with providing the infrastructure necessary to sustain employer participation in the provision of pension benefits (Ambachtsheer 2007). So, for example, the Australian superannuation system provides a solution to the dual governance problem through public legislation and the involvement of member-profit multi-employer industry pension plans that shift responsibility for the management and operation of the institution to an organisation that mimics conventional pension plans while being subject to market competition for the enrolment of participants, their retention, and the provision of related services.¹⁹ As such, multi-employer industry pension plans may be thought to be public utilities in the sense that their purpose is to provide benefits through the medium of regulated institutions that must negotiate their costs and prices of provision in the market for financial services.²⁰

With respect to design, the public policy framework has arguably ‘solved’ important aspects of the problem associated with self-governance; by mandating employee and employer participation, by allowing for and regulating the default fund option, and by setting the contribution rate the Federal government has the *entry level* considerations that bedevil the governance of so-called voluntary systems of participation and benefit

¹⁹/. It should be acknowledged, of course, that there remain a small number of independent, corporate sponsored pension plans. As well, there are a number of large ‘retail’ providers of pensions—what are referred to as Master Trusts. Nonetheless, the industry funds dominate the market.

²⁰/. More formal conceptions of what constitutes a ‘utility’ often stress the lack of effective competition in an industry, the reliance on single-user or provider networks, and the costs of infrastructure provision (the role of sunk costs in limiting market entry). The standard examples are telecommunications, gas, electricity, and water supply (and, in some cases, railroads). Notice, all five industries were subject to de-regulation and privatisation over the 1980s and 1990s in Anglo-American countries partly because of the costs involved in sustaining high-quality service (see Armstrong et al. 1998 on UK experience).

provision. Equally, by allowing for the formation and development of multi-employer institutions responsible for the purchase and provision of services consistent with high-quality defined contribution pensions, the Federal government may have partially "solved" the problem of employer ambivalence and the attendant problems associated with conflicts of interest. However, informed observers of the industry contend that multi-employer industry funds may not be accountable to participating companies and their employees; lack of transparency in fund decision-making combined with the high costs of switching between funds (especially significant where companies come to rely upon funds' accounting systems) may mean that participating companies are effectively locked-in. At the same time, the evidence of participant-initiated switching between funds suggests that most switching is triggered by short-term differences in results between funds rather than the long-term value proposition of one fund over others.

At its core, the Australian superannuation system was built upon an assumption that competition between providers including the financial sector would be sufficient to ensure that the government need not regulate directly the costs charged to participants. With the regular disclosure of the costs charged by pension funds, as well as the regular disclosure of fund performance, it was hoped that the prospect of individual participants switching between funds would be sufficient to ensure a process of cost discounting, high-quality service provision, and innovation in terms of the operating frameworks and services provided participants. The recent Cooper Review (2010, 10) of superannuation raised questions as to the effectiveness of this framework from the perspective of contributors whose welfare is particularly sensitive to the costs charged participants. In doing so, a plain-vanilla "MySuper" scheme was recommended based upon low costs, a default fund rather than choice, and a trustee-based governance regime. Here, "the (Cooper) Panel believes that by imposing some degree of homogeneity on the product, price competition might reasonably be expected to produce more positive outcomes for members and help trustees contain costs."

One implication from this recommendation is that the original framework did not take seriously the problem of participant self-governance: inertia reinforced by the lack of sophistication of the average participant, including the lack of awareness of the significance of minor, long-term differences in the costs of administration and the

rates of performance. Another implication is that the boards of governing entities are not as independent as they might be given apparent overlaps of board membership with industry-related consortia and membership groups. Until the publication of the Cooper Review, the government's financial regulator had financial stability as its priority rather than apparently settled matters of fund structure and performance including board membership, qualifications, and responsibilities. The Cooper Review (2010, 17) recommended that the regulator "must have a standard-setting power in relation to superannuation" thereby "overseeing and promoting industry efficiency" in a manner consistent, perhaps, with the role and responsibilities of the UK Pensions Regulator. Though path-breaking when conceived, the Australian system has yet to realise its potential and provide solutions to the scope of issues we have identified as consistent with best-practice DC pension fund governance.

By contrast, the UK government's NEST seeks to take advantage of the lessons learned from the Australian experience to provide a public utility of a different kind. In this case, instead of making participation mandatory the government has required employers to implement auto-enrolment systems leaving open the option for employers to provide their own, superior pension systems as well as the option for individuals to opt-out entirely from this form of pension saving. Like the Australian system, the UK government has set a combined minimum contribution rate: in this case 8 per cent of gross salary falling rather short of the Australian contribution rate.²¹ In the UK case, moreover, the UK government will sponsor a 'universal' default fund that together will collect perhaps as many as 6 million plan participants leaving those inclined to make their own arrangements to either their employer's plan or the market for private pensions. The government plan is designed to reap economies of scale on the costs of pension provision including the purchase of services from the global financial industry. It is not clear, at this stage, whether NEST will be a monopoly or will compete with private agents for a MySuper type of pension saving vehicle.

The Australian system is a partial solution to the dual governance problem in that it has not yet engaged with the issues we identify as *second level* elements of self-

²¹/. In the May 11th 2010 federal budget statement, the Australian government indicated that mandatory contributions will rise to 12 per cent of gross earnings with the government providing a contribution on behalf of low income earners.

governance. The proposed UK system has not yet indicated its commitment to the *second level* agenda. Furthermore, it remains to be seen whether a universal public utility would function better than a relatively decentralised system of provision subject to market competition. There are also significant governance issues involved when a single government-sponsored pension plan carries the retirement income aspirations of so many relatively lower paid individuals. While recognising the ambitious low cost framework that NEST will use as a competitive strategy, reconciling its ambitions to provide a secure and affordable pension with the possible costs of market-following by simple passive index funds (the OECD’s 2010 “lottery”) and the rather low rates of mandated contributions remains a formidable challenge. These issues may conspire to limit its effectiveness when judged against the retirement needs of low-income participants.

6. DC Best-Practice Governance

To summarise, in what follows we bring together our findings above with our best-practice governance framework Clark and Urwin (2008a). In the previous study, we were not directly focused on DC institutions although a number of DC institutions were included among exemplars selected. As such, its application to DC plans is subject to some modification although we contend it is relevant to the various models of DC pension provision noted above including public utilities. The list of twelve factors of best-practice summarised in Table 1 is apposite to DC best-practice while noting that DC institutions have particular features to address from this list. There are two areas of particular focus: the coherence of the mission of a DC plan and its delivery – centred on the mission clarity, effective focusing of time, and leadership factors from the original list; and the integrity of investment process in the DC setting – centred on strong beliefs, risk budget framework, and fit-for-purpose manager line-up taken from the list.

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 inform all 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 commonplace assumptions of the industry

The original list of twelve factors was divided into 6 ‘core’ factors associated with areas where the board would be most active and 6 ‘exceptional’ factors requiring investment executive and Chief Investment Officer level involvement. In the DC arena it is the core and board items that require the greatest consideration.

6.1 Mission clarity: a critical part of best-practice is mission clarity where DC plans have to balance considerable pressures to recognise the diversity of participant preferences and circumstances within an overarching structure in which costs and complexity are managed for the benefit of everyone. Unlike DB pension institutions, where the fund is managed to a collective mission, some form of segmentation of DC fund investments is essential. Customarily there are two segments: individuals whose capabilities or preferences lead them to rely on the fund and its default strategy (‘defaulters’) and individuals who seek to make an investment choice from the range of funds on offer (‘self-selectors’). Best-practice DC plans regard their mission as incomplete if they do not have regard for segments that can be reached through engagement and can make effective decisions from a limited range of choices. The

benefit of such engagement is to provide a framework in which individuals can be guided to a set of investment choices that is more suited to their circumstances and characteristics ('guided-selectors').

Additionally, best-practice DC mission-statements contain aspirations for how the plan is positioned to manage retirement income not just individual fund accumulation. Funds that deliver effective results in terms of accumulated assets but fail to preserve the integrity of retirement income in absolute terms or in replacement ratio terms are not consistent with a coherent long-term mission statement. DC plans have the difficult task of manoeuvring through multiple measures of success and failure. Their legitimacy is enhanced if they can demonstrate a coherent and mission-specific set of investment goals.

6.2 *Effective focusing of time*: institutional best-practice in the Clark and Urwin (2008a) model calls for the effective management of time as a scarce resource. The resourcing model must consider the specific steps in the investment process and apply governance budgets that are commensurate with the importance of each task considering impact and capabilities. These principles map well on to DC plans. A major issue arises, however, with the scarceness of time available (especially amongst participants).

Many DC pension plans (especially corporate plans) operate with the same trustee board structure as DB plans and, in practice, there may be competition between plans for board-level attention. In this context, given the historical antecedence of DB plans, DB assets are often an order of magnitude higher than DC assets and are, as a consequence, more important to the sponsor. This can result in the DB investment agenda attracting the bulk of the available time of the board with the DC plan shifted to a board sub-committee where it is unlikely to garner the same level of attention.

6.3 *Strong beliefs*: best-practice DC plans demonstrate an appreciation of the part that behavioural finance plays in the performance of DC investment programmes. Behavioural biases and anomalies clearly affect expectations and choices in fundamental ways. Whereas we suggest elsewhere that 'strong beliefs' are crucial in a structured and effective investment programme, it should be noted that in the DC

environment participants' strong beliefs may be self-defeating if not framed by institutional parameters that take seriously the nature and scope of behavioural shortcomings (Merton and Bodie 2005). In this respect, the governing entities of DC funds have a difficult job of communication and engagement, bringing to bear their own competencies to offered default funds while respecting the beliefs of participants who wish to take control of their own portfolios. The average participant tends to under- or over-react to events in ways that are quite self-defeating.

6.4 Risk budgets: the DC investment framework requires a multiple-segment participant risk orientation. Each member segment of a DC plan requires a risk budget suited to their circumstances. The customary DB application of the risk budget principle has been to deal with the questions of how much risk (reflecting risk appetite and time horizon issues) and where risk is best deployed (generally divided into asset class line-up and manager line-up) as an issue for *one* fund. In the DC setting, best-practice risk budgeting considers the risk budget for the relevant member segments, particularly with respect to age, income, and gender.

How the risk budget might progress over time can be conceived in terms of a 'journey plan'—in most other institutional funds (DB pension funds, endowment, sovereign wealth funds, etc) this notion is relatively weak. In the best-practice DC plan, however, the journey plan takes on critical significance. In this context, the journey plan has four critical elements: strategic clarity around the mission of the plan in meeting member expectations within risk, contribution and cost tolerances; strategic goals that fix a target replacement rate for retirement income and when this should be reached (retirement or target date); a changing balance of investment risk and contributions needed to get there; norms of response when circumstances and conditions change. Discussions with exemplar funds regard this approach as desirable but suggest that this approach had not yet been adopted in a systematic fashion.

6.5 Fit-for-purpose manager line-up: views vary on the proper nature of member engagement, and the relationships between members and the appointed investment managers. Increasingly, the key investment capability is presented by the executive at the fund governing entity with limited exposure necessary to the underlying delegated managers and firms. Further, best-practice has generally been seen as a 'white label'

approach in that the investment manager or managers are not a critical part of the value proposition presented to the member. They are simply presented as the best-in-class for relevant responsibilities and the DC fund presents itself as the responsible entity for the choices made through the selection process. Members could be given choices with respect to suitable managers but it is not likely that such choices would be exercised efficiently.

7. Conclusions

In this paper, we have focused upon the principles of institutional design relevant to DC pension plans. At one level, these principles are widely recognised in academic research and the industry although we are conscious of the debate surrounding those principles and the implications thereof. For example, we began by referencing findings from the behavioural revolution sweeping the social sciences noting the apparent limits of human reasoning under risk and uncertainty as well as the implications to be drawn from those findings for the design of institutions. Note, though, we also referenced recent research that suggests focus on the behaviour of the average DC plan participant could miss the range of behaviour apparent in DC plans including the relationship between financial sophistication, education, income, and age. In fact, DC schemes are often host to a range of participant behaviour, an issue of considerable importance when a relatively small group of plan participants, perhaps more sophisticated than most, contribute the majority of assets under management.

We noted that many employers discount the value of providing pension benefits for the management of human resources and, especially, the reward of individual performance. For many companies, the provision of pension benefits is more an issue of employee entitlement relative to industry standards than it is an issue of compensation linked to the performance of the individual, his or her team, or for that matter the firm. Not surprisingly informed observers point to deeply embedded conflicts of interest on the employer side of the pension's equation (Jackson 2008).

As such, there is a dual governance problem in the employer provision of DC pensions—if problems of individual self-governance are taken seriously in the management of DC pensions, it seems inevitable that employers and pension governing bodies will face a greater level of responsibility than heretofore

acknowledged in the context of an employee benefit that is of decreasing financial relevance to the employer. Nonetheless, there remain employers that take seriously the dual governance problem, providing templates for best-practice that go well beyond industry standards, public policy, and regulation. Here, two threads of argument intersect to sustain the commitment of the plan sponsor. First, in companies that rely upon human capital for their products and services commitment to employee welfare may pay dividends in terms of the long-term growth of employee productivity even if ignored by financial analysts concerned only with short-term earnings. Second, firms that are able to mobilise employee interest in these programmes may be able to capitalise on employee motivation in terms of the design and ultimately the costs and performance of their sponsored pension plans.

Even so, we suggested that the elements of best-practice governance in a DC pension plan may be quite complex and may require a level of investment in behavioural cues, incentives, and gates and hurdles that go beyond the expertise of any sponsor. As such, there would seem to be considerable advantages in joining consortia of firms that share a commitment to building sophisticated and cost-effective DC pension institutions that go beyond a simplistic conception of the average participant to an institutional form that can accommodate different types of plan participants with different types of interests. In the absence of mechanisms for creating such consortia, employers may reasonably move towards more simple individual savings plans that have neither the complexity implied by a sponsored pension plan nor the implied or explicit responsibilities for enhancing the interests of participants. Similarly, as governments better understand the costs and consequences of falling rates of pension plan coverage in the private sector, so-called public utility DC pension plans may become the default option for employers. If so, the burden of best-practice governance will shift to the public sector.

Whether the public sector is equipped to provide well-governed universal contributive pension plans is a topic that goes beyond the scope of this paper. We would observe, however, that the electoral cycle in many liberal democracies is less than five years whereas the obligations borne by pension institutions stretch far into the future measured in terms of decades and generations rather than short-term political advantage. There remains a serious research project about the ways in which

governing entities, executive entities, and the relationships with service providers may be insulated from short-term political advantage in favour of participants' long-term retirement income aspirations. These issues have been addressed, to some extent, in the design and governance of sovereign wealth funds. There are, surely, lessons to be learned from that sector for the governance of public pension utilities.

Appendix

The principles and practices of DC design and governance developed in this paper derive from our long-term interest in the governance of pension systems (see Clark 2004 and Urwin 2006), the industry experience of one of the authors, and an in-depth programme of case study research conducted by the other author over the period 2009-2010. We have explained elsewhere the logic and methods of case study research, focused as it is on the lessons learnt from exemplars of best-practice (see Clark and Urwin 2008a). Case studies have a number of virtues, including offering the opportunity to interrogate respondents about the design and governance of their own institutions and where the institution can be thought to be ineffective notwithstanding an industry-wide reputation for excellence. To better understand the nature and performance of exemplars, we have kept confidential the identity of respondent institutions; no institution is perfect, and we do not wish to offer-up two or three cases to become staples for business school teaching.

Rather, we use our own experience, our research programme, and the insights obtained from detailed knowledge of institutions to propose a series of principles and practices that, taken together, offer a template against which institutions may wish to judge themselves. Inevitably, this means focusing on institutional form rather than institutional history although we appreciate the fact that current institutions come from distinct political and economic circumstances (see Merton and Bodie 2005 and Roe 2006). In our research, detailed case studies were made of a total of 20 DC institutions: 9 UK, European and African DC institutions; 7 Australian industry funds, master trust arrangements and corporate plans; and 4 US corporate and platform DC institutions. On the sponsor side, we covered DC programmes in the banking, technology, retail, and education sectors. As for industry funds, we covered the health care, education, hospitality, metals, and government sectors. As well, we consulted regulators, consultants and service providers on three continents (going beyond Towers Watson), as well as entities that represent the collective interests of employer-sponsored pension schemes.

References

- Ainslie, G. (2001), *Breakdown of Will*, Cambridge: Cambridge University Press.
- Akerlof, G. A. (1970), 'The market for 'lemons': quality uncertainty and the market mechanism', *Quarterly Journal of Economics*, 84: 488-500.
- Akerlof, G. A. and Kranton, R. (2010), *Identity Economics: How our Identities Shape our Work, Wages, and Well-Being*, Princeton: Princeton University Press.
- Ambachtsheer, K. (2007), *Pension Revolution: A Solution to the Pensions Crisis*, New York: J. Wiley.
- Armstrong, M., Cowan, S. and Vickers, J. (1998), *Regulatory Reform: Economic Analysis and the British Experience*, Cambridge MA: MIT Press.
- Antolin, P., Payet, S., and Yermo, J. (2010), 'Assessing default investment strategies in defined contribution pension plans', Working Paper 2. Paris: OECD.
- Berg, N. and Gigerenzer, G. (2007), 'Psychology implies paternalism? Bounded rationality may reduce the rationale to regulate risk-taking', *Social Choice and Welfare*, 28: 337-59.
- Berg, N. and Gigerenzer, G. (2010), 'As-if behavioural economics: neoclassical economics in disguise?', *History of Ideas* (forthcoming).
- Bikker, J. A. and de Dreu, J. (2009), 'Operating costs of pension funds: the impact of scale, governance, and plan design', *Journal of Pension Economics and Finance*, 8: 63-89.
- Brown, S. K. (2010), *Automatic 401(k) Plans: Employer Views on Enrolling New and Existing Employees*, Washington DC: AARP Research and Strategic Analysis.
- Butrica, B. A., Zedlewski, S. R., and Issa, P. (2010), 'Understanding early withdrawals from retirement accounts', Discussion Paper 10-02. Washington DC: Urban Institute.
- Cain, D. M., Loewenstein, G., and Moore, D. (2005), 'The dirt on coming clean: perverse effects of conflicts of interest', *Journal of Legal Studies*, 34: 1-25.
- Choi, A. and Triantis, G. (2008), 'Completing contracts in the shadow of costly verification', *Journal of Legal Studies*, 37: 503-534.
- Church, B. K. and Kuang, X. (2009), 'Conflicts of interest, disclosure, and (costly) sanctions: experimental evidence', *Journal of Legal Studies*, 38: 505-532.
- Clark, G. L. (2000), *Pension Fund Capitalism*, Oxford: Oxford University Press.
- Clark, G. L. (2004), 'Pension fund governance: expertise and organisational form', *Journal of Pension Economics and Finance*, 3: 233-53.

- Clark, G. L. (2007), 'Expertise and representation in financial institutions: UK legislation on pension fund governance and US regulation of the mutual fund industry', *21st Century Society: Journal of the Academy of Social Sciences*, 2: 1-23.
- Clark, G. L. (2010), 'Human nature, the environment, and behaviour: explaining the scope and geographical scale of financial decision-making', *Geografiska Annaler B* 92:159-73.
- Clark, G. L. and Monk, A. H. B. (2008), 'Conceptualizing the defined benefit pension promise', *Benefits Quarterly* 25(1):7-18.
- Clark, G. L., Strauss, K. and Knox-Hayes, J. (2011), *Saving for Retirement*, Oxford: Oxford University Press (forthcoming).
- Clark, G. L. and Urwin, R. (2008a), 'Best-practice pension fund governance', *Journal of Asset Management*, 9(1): 2-21.
- Clark, G. L. and Urwin, R. (2008b), 'Making pension boards work: the critical role of leadership', *Rotman Journal of International Pension Management*, 1: 38-45.
- Clark, G. L. and Urwin, R. (2010), 'Innovative models of pension fund governance in the context of the global financial crisis', *Pensions: An International Journal*, 15(1): 62-77.
- Clark, R. L., Morrill, M. S., and Allen, S. G. (2010), 'Employer-provided retirement planning programs', in *Reorienting Retirement Risk Planning* edited by R. L. Clark and O. S. Mitchell. Oxford: Oxford University Press, 36-63
- Clune, M. W. (2010), *American Literature and the Free Market, 1945-2000*, Cambridge: Cambridge University Press.
- Conway, N., Deakin, S., Konzelmann, S., Petit, H., Rebérioux, A. and Wilkinson, F. (2008), 'The influence of stock market listing on human resource management: evidence for France and Britain', *British Journal of Industrial Relations*, 46: 631-73.
- Cooper Review. (2010), *Super System Review: Final Report*, Canberra: Commonwealth of Australia.
- Copeland, C. and VanDerhei, J. (2010), 'The declining role of private defined benefit pension plans', in *Reorienting Retirement Risk Planning* edited by R. L. Clark and O. S. Mitchell. Oxford: Oxford University Press, 122-136.
- Cremers, M., Driessen, J., Maenhout, P., Weinbaum, D. (2009), 'Does skin in the game matter? Director incentives and governance in the mutual fund industry', *Journal of Financial and Quantitative Analysis*, 44: 1345-73.

- De Deken, J. J., Ponds, E. and van Reil, B. (2006), 'Social solidarity' in G. L. Clark, A. Munnell, and M. Orszag (eds.), *The Oxford Handbook of Pensions and Retirement Income* (pp. 141-60). Oxford: Oxford University Press.
- Dixon, A. and Monk, A. (2009), 'The power of finance: accounting harmonization's effect on pension provision', *Journal of Economic Geography*, 9: 619-39.
- Ebbinghaus, B. and Wiß, T. (2010), 'The governance and regulation of private pensions in Europe', in B. Ebbinghaus (ed.), *Varieties of Pension Governance: The Privatization of Pensions in Europe*. Oxford: Oxford University Press (forthcoming).
- European Commission. (2010), *Green Paper: Towards Adequate, Sustainable, and Safe European Pension Systems*, COM(2010)365final SEC(2010)830. Brussels.
- Ezra, D., Collie, B., and Smith, M. X. (2009), *The Retirement Plan Solution: The Reinvention of Defined Contribution*, New York: J Wiley.
- Gabaix, X. and Laibson, D. (2006), 'Shrouded attributes, consumer myopia, and information suppression in competitive markets', *Quarterly Journal of Economics*, 113: 505-40.
- Gabaix, X., Laibson, D., Moloche, G., and Weinberg, S. (2006), 'Costly information acquisition: experimental analysis of a boundedly rational model', *American Economic Review*, 96: 1043-68.
- Gertler, M. S. (2001), 'Best practice? Geography, learning and the institutional limits to strong convergence', *Journal of Economic Geography*, 1: 5-26.
- Gertler, M. S. (2003), 'Tacit knowledge and the economic geography of context, or the undefinable tacitness of being (there)', *Journal of Economic Geography*, 3: 75-99.
- Goda, G. S. and Flaherty, C. (2010). Incorporating employee heterogeneity into default rules for retirement plan selection. Chestnut Hill MA: Boston College Center for Retirement Research Working Paper No. 2010-6. Available at SSRN: <http://ssrn.com/abstract=1611782>.
- Henrich, J., Boyd, R., Bowles, S., Camerer, C., Fehr, E., Gintis, H., McElreath, R., Alvard, M., Barr, A., Ensminger, J., Smith Henrich, N., Hill, K., Gil-White, F., Gurven, M., Marlowe, F. W., Patton, J. Q., Tracer, D. (2005), "'Economic man" in a cross-cultural perspective: behavioural experiments in 15 small-scale societies', *Behavioral and Brain Sciences*, 28: 795-815.
- HM Treasury. (2010). Removing the Requirement to Annuitise by Age 75. London.
- Iacobucci, E. (2008), 'A switching costs explanation of tying and warranties', *Journal of Legal Studies*, 37: 431-458.

- Investment Governance Group. (2010), *Investment Governance of Defined Contribution (DC) Pension Schemes*, London: HM Department for Work and Pensions.
- Iyengar, S. (2010), *The Art of Choosing*, New York: Hachette Book Group.
- Jackson, H. (2008), 'The trilateral dilemma in financial regulation' in A. Lusardi (ed.), *Overcoming the Saving Slump* (pp. 82-117). Chicago: University of Chicago Press.
- Jordan, S. and Thomas, A. (2009), *Employer attitudes to collective defined contribution pension schemes*, Research Report No 623. London: HM Department for Work and Pensions.
- Kahneman, D. and Tversky, A. (1979), 'Prospect theory: an analysis of decision under risk', *Econometrica*, 47: 263-91.
- Konzelmann, S. (2005), 'Varieties of capitalism: production and market relations in the USA and Japan', *British Journal of Industrial Relations*, 43: 593-603.
- Konzelmann, S., Wilkinson, F., Fovargue-Davies, M. and Sankey, D. (2010), 'Governance, regulation and financial market instability: the implications for policy', *Cambridge Journal of Economics*, doi:10.1093/cje/bep086.
- Langley, P. (2008), *The Everyday Life of Global Finance*, Oxford: Oxford University Press.
- Lusardi, A. (2008), 'Introduction' in A. Lusardi (ed.), *Overcoming the Saving Slump* (pp. 1-13). Chicago: University of Chicago Press.
- Lusardi, A. (2010). America's financial capacity, Washington DC: US Congress, Financial Crisis Inquiry Commission.
- Lusardi, A. and Mitchell, O. (2007), 'Baby boomer retirement security: the roles of planning, financial literacy, and housing wealth', *Journal of Monetary Economics*, 54: 205-24.
- Merton, R. and Bodie, Z. (2005), 'The design of financial systems: towards a synthesis of function and structure', *Journal of Investment Management*, 3: 1-23.
- Monk, A. H. B. (2008), 'The knot of contracts: the corporate geography of legacy costs', *Economic Geography*, 84: 211-236.
- Munnell, A. and Sundén, A. (2004), *Coming Up Short: The Challenge of 401(k) Plans*, Washington DC: Brookings Institution.
- National Audit Office. (2010), *Pension Protection Fund. Report by the Comptroller and Auditor General*. London: HM Government.

- OECD. (2010), *Assessing Default Investment Strategies in Defined Contribution Pension Plans*. Paris.
- Pettus, L. and Kesmodel, R. H. (2010). 'Impact of the Pension Protection Act on financial advice', in *Reorienting Retirement Risk Planning* edited by R. L. Clark and O. S. Mitchell. Oxford: Oxford University Press, 86-104
- Preda, A. (2009), *Information, Knowledge and Economic Life*, Oxford: Oxford University Press.
- Roberts, J. (2004), *The Modern Firm: Organizational Design for Performance and Growth*, Oxford: Oxford University Press.
- Roe, M. J. (2006), 'Legal origins, politics, and stock markets', *Harvard Law Review*, 120: 460-527.
- Savulescu, J. and Hope, T. (2006), 'The elderly and ethical financial decision-making', in G. L. Clark, A. Munnell, and M. Orszag (eds.), *The Oxford Handbook of Pensions and Retirement Income* (pp. 638-57). Oxford: Oxford University Press.
- Schick, F. (1997), *Making Choices: A Recasting of Decision Theory*, Cambridge: Cambridge University Press.
- Schwartz, B. (2005), *The Paradox of Choice: Why More is Less*, New York: Harper Perennial.
- Shavell, S. (2007), 'Contractual holdup and legal intervention', *Journal of Legal Studies*, 36: 325-354.
- Thaler, R. and Sunstein, C. (2008), *Nudge: Improving Decisions about Health, Wealth and Human Happiness*, New York: Caravan Books.
- Towers Watson. (2010), *Global Pension Assets Study*, Reigate: Thinking Ahead Group.
- Trebilcock, M. J. (1993), *The Limits of Freedom of Contract*, Cambridge MA: Harvard University Press.
- Viceira, L. (2008), 'Life-cycle funds' in A. Lusardi (ed.), *Overcoming the Saving Slump* (pp. 140-77). Chicago: University of Chicago Press.
- Williamson, O. (1985), *The Economic Institutions of Capitalism*, New York: Free Press.
- Williamson, O. (1995), *The Mechanisms of Governance*, New York: Oxford University Press.