Retirement Security and Financial Literacy in New Zealand: Policy Lessons from Abroad

R. Kent Weaver

Georgetown University and the Brookings Institution[i]

Most industrialized countries have in recent decades seen their long-standing retirement income policies challenged by demographic challenges (longer life expectancy and lower fertility rates), accompanied by slower and uneven economic growth and fiscal stress. These challenge have forced most of these countries to reconsider the sustainability of their pension commitments. Countries have responded in a number of ways. For countries with contributory pension systems, policy changes generally began with payroll tax increases, and continued with "stealth" reforms to benefits and eligibility and phase-out of early retirement. Reform initiatives in many countries have become more aggressive in the past decade, and have further transferred longevity risk from government to current and future pensioners, notably by increasing pensionable ages (the minimum age at which a state pension could be received without a benefit reduction), and by lowering pension benefit levels. There has been a widespread breaking of the 65 "upper limit" on standard retirement ages. Some countries have even put in place mechanisms that will increase pension ages or reduce benefits automatically in the future if life expectancy grows further or economic growth slows (OECD, 2011: chapters 1, 5; OECD, 2012). A number of wealthy countries have also shifted part of their retirement income system away from benefits defined by statutes to mandatory or quasi-mandatory retirement savings vehicles that create an increased market risk for retirees.

New Zealand has not been immune from the demographic and fiscal challenges posed by an aging population, though its demographic challenge is not as strong as in many other wealthy

countries. New Zealand remains distinct in important ways: it stands out among the wealthy countries for its high reliance on a single, universal flat-rate pension paid out of general revenues as its primary government-sponsored vehicle for providing retirement income. However, like most other industrialized countries, New Zealand has responded to demographic and fiscal challenges by making a number of changes in its retirement income system. The most notable changes are a large and very swift increase in the age of eligibility for New Zealand Superannuation from 60 to 65 beteen 1992 and 2001, a reintroduction of tax incentives for retirement savings through KiwiSaver, the introduction of and subsequent modifications to the KiwiSaver program, and the introduction and later suspension of government contributions to the New Zealand Superannuation Fund to help smooth the burden of financing NZ Super across generations.

The diversification of instruments for promoting retirement income in recent years in New Zealand means that lessons from a variety of foreign countries are potentially useful for policymakers in New Zealand. This paper examines some of these lessons. The first section of the paper addresses general constraints on retirement income policy suggested by the experience of other industrialized countries that may limit the range and practicality of choices that are open to New Zealand policymakers. The second section focuses on specific policy choices, and the trade-offs that international experience suggests that New Zealand policymakers will confront in making those choices.

CONSTRAINTS

In revising its retirement income system, policymakers in New Zealand—and other countries—face a variety of constraints that influence which reform proposals get on the agenda for consideration, which proposals move forward to adoption, whether they are implemented

successfully, and whether they can be sustained politically or are subject to reversal or modification at a later date. Four broad sets of constraints on retirement income policy need to be kept in mind: the inevitability of trade-offs in a policy sector with multiple objectives, the weight of past policy choices, the decisionmaking processes and constraints on individuals, and the incentives and interests of politicians.

Multiple Objectives

Retirement income systems attempt to balance a number of objectives, some general and some more specific (Weaver, 2010; Hurnard, 2012; Whitehouse et al, 2009). These multiple objectives include providing an income that gets most or all seniors out of poverty, providing gender equity, replacement of pre-retirement income, long-term affordability for the government budget and the economy, increasing administrative efficiency, protection of current and projected future retirement income streams against risk of market volatility, and protection against the "political risk" of changes in government policy.

There is great variation across national retirement income systems in the trade-offs that government make in pursuing these multiple objectives. New Zealand's retirement income system does relatively well on some of these criteria and less well on others (Weaver 2010). In particular, New Zealand Superannuation's universal, flat-rate benefit financed by general revenues does a good job of removing most Kiwi seniors from poverty. Indeed, a recent OECD survey ranked New Zealand as having the lowest senior poverty rates of any OECD country, at just 1.5 percent, using the standard international poverty measure of fifty percent of median household income (OECD, 2011:149). This record is very sensitive to the measure of poverty that is used, however. New Zealand also does better than most western pension systems in promoting gender equality, because New Zealand Superannuation benefits are not based on

employment and earnings history. The modest flat-rate nature of NZS also means that it does a poor job of income replacement for prior earnings for all but the lowest-income workers: even at the 75th percentile of former mean earnings, the percentage of earnings replaced by pension benefits in New Zealand is significantly below the OECD average, and the gap between New Zealand and other OECD countries is even larger at higher earnings levels (OECD 2009, 117).

New Zealand's long-term affordability projections for its public pensions are also less alarming than those of many other OECD countries: the OECD estimates that New Zealand will spend 8.0 percent of GDP on its pension system in 2050—a steep increase from 4.7% in 2010, but much less than the OECD average of 11.4 percent projected for 2050 (OECD, 2011: 159). However New Zealand, like other countries, will also face other cost pressures from an aging population, notably with respect to health and long-term care for the frail and disabled elderly.

New Zealand also wins high marks for the low administrative costs associated with NZS. KiwiSaver earns more mid-range marks for its administrative costs, however. Having Inland Revenue act as a clearinghouse for contributions clearly lowers administrative costs for employers. But in comparison to a number of other individual account systems, such as the Thrift Savings Plan for federal employees in the United States and the Premium Pension in Sweden, the cost structure for KiwiSaver (and thus the reduction in contributors' eventual account totals upon retirement) is relatively high. The overall challenge that New Zealand faces is how to improve performance of its retirement income system in areas where it is relatively weak and that it chooses to prioritize, without substantially endangering performance where it already does relatively well.

Policy Inheritances

Only rarely do governments completely overhaul the structure of their public pensions. It is much more common for changes to be incremental, adapting current policies to changed circumstances and layering new policies on top of old ones (e.g., KiwiSaver on top of New Zealand Superannuation). This reflects a profound political logic: interests and expectations of a flow of benefits tend to grow up around policies once they are in place (Hacker, 2004; Beland, 2007), making major breaks in policy politically costly and prone to reversal if the political coalition that enacted them is turned out of office. In modifying retirement income policy, it is necessary for policymakers to start from they are and build on the system that is already in place.

The weight of past policy choices is particularly constraining in New Zealand. Because of deeply imbedded expectations of generations of workers, and choices made over the life-cycle flowing from those expectations, major changes in the universal Superannuation are unlikely. It will almost certainly continue to play a central role in proving income to Kiwi seniors for the forseeable future. And dispersion of labor market outcomes since 1970s makes universal Super even more important in preventing senior poverty than in the past.

It should also be noted that heavy reliance on universal Superannuation financed by general revenues also restricts retirement income reform options in New Zealand in ways that are different from many other countries. Because it is a universal flat-rate benefit, reform options like a downward adjustments in benefit levels for later birth cohorts while "grandfathering" those who are retired or close to retirement age are more politically difficult than in systems where public benefits already vary widely across individuals. (New Zealand, did, of course, lift the age of New Zealand Superannation eligibility for younger cohorts from 60 to 65 over a very brief period). And the absence of a payroll tax to finance New Zealand Super means that raising revenue for it, or for KiwiSaver, through a payroll tax is not a matter of an incremental

adjustment to a levy already in place, but a much more visible and contentious change in policy principle.

Individual Behavior

The study of retirement income systems has been dramatically influenced by insights from the field of behavioural economics (for a review, see Bailey et al, 2003). This field focuses on how characteristics on individual's decisionmaking process frequently deviate from the simple model of a rational fully-informed actor. For example, individuals often procrastinate in making initial decisions to save for retirement and in developing and reviewing retirement savings plans. They are frequently myopic: they fail to consider adequately how today's decisions (e.g., to consume rather than to save for retirement) may affect future outcomes, and they discount future benefits relative to those received today. They use simple decisionmaking heuristics (e.g., dividing savings equally between each of two available savings vehicles) rather than doing a comprehensive search for information. And they may "follow the herd" in deciding which retirement savings vehicles to use or when to retire.

Behavioural economics provides a powerful set of insights into saving, investment and labour market behavior. It also has provided an important source of policy advice. In particular, policymakers in many countries have been captivated by the notion, popularized by Richard Thaler and Cass Sunstein's book *Nudge*, that substantial changes in human behavior are possible without a high degree of compulsion by improving information and manipulating what they call "choice architecture": the set of options that the targets of policies are given, the incentives that are attached to those options, and which options are set as the default—that is, what happens if the target does nothing. Examples of relatively non-coercive "nudges" include having a worker automatically enrolled in a retirement savings plan when starting a new job unless they explicitly

opt out, and lowering the information costs associated with improving financial literacy about retirement and savings. Nudging was a major influence on the design of KiwiSaver, with individuals automatically enrolled in KiwiSaver unless they opt out.

International experience in pension policy also suggests, however, that while gentle "nudges" may be sufficient to produce modest behavioural change from some members of a target population, they are may also be insufficient to produce large behavioural changes from all of the target population (i.e., universal "compliance"), especially when that behavioral change is perceived as costly. Delaying retirement—working longer--and increased retirement savings may both be necessary in the future to maintain a balance between pension adequacy and affordability. Both require individuals to defer gratification (leisure in retirement, and saving rather than current consumption) in ways that are likely to be unwelcome for many, not least because it is perceived as unfair that earlier generations (their parents and older siblings) did not have to do so. Moreover, individuals are likely to be very uncertain about how much longer they need to work and how much more they need to save—and anxious or fearful about finding out. For those in poor health or with low incomes, there is the additional fear that the added years of work or savings is something that they simply cannot do.

Major changes in individuals' retirement behavior and retirement savings behavior are likely to require clear signals and relatively intrusive instruments to effect behavior (e.g., strong penalties for non-compliance), *consistently applied over a long period of time* rather than gentle and intermittent "nudges." It is, of course, possible to combine gentle nudges with more powerful and persistent shoves when a particular behavior is seen as particularly critical: the Swedish premium pension system of retirement savings accounts, for example, has a powerful shove--all workers must participate, with the same mandatory payroll tax rate. But workers are

only modestly nudged to make an active choice of a fund provider and to change funds over the course of their working career. Indeed a very low-cost default fund is provided for them, as will be discussed further below.

In deciding when gentle nudges are sufficient and when they are not, governments in New Zealand and elsewhere need to consider how strong the barriers to behavioral change are for all components of their of their very diverse citizenry, not just the median citizen. They also need to keep in mind that some elements of the population may face very strong barriers to the behavior change that government seeks. If universal compliance is important, lowering information costs and choice architecture are likely to be insufficient. This is particularly true with respect to retirement income policy, because the level of uncertainty faced by future retirees is so high. They do not know how long they will live, how healthy they will be, what the future return on their retirement savings will be, or how much their home will be worth in the future if they are current homeowners and plan to sell to meet part of their retirement income needs. Given this uncertainty, there is likely to be quite a bit of variation across individuals in the choices that they make on retirement, savings, etc. Some individuals will be excessively cautious, others will not. Some will acquire lots of information, others will not. And these responses are unlikely to be randomly distributed. Those with higher incomes and assets and higher educational attainment are likely to face both easier choices (it is easier to work longer in jobs that are not physically strenuous, and easier to save at a higher rate when your income is higher) and likely to have better information about the consequences of those choices. In this situation, governments will need to consider whether it is more appropriate to give individuals more choices, or to protect individuals against the consequences of poorly informed and highly constrained choices.

Politicians

Individuals and businesses need a stable set of retirement income policies so that they can plan for the long term. They also need policies that are cognizant of future changes in society and democracy so that in doing their planning, they do not make decisions based on policy commitments that turn out to be unsustainable. Unfortunately, there is frequently a poor alignment between the electoral incentives of politicians and the type of policymaking that is required to develop and implement a stable retirement income security system.

This poor alignment can take several forms. Politicians may be tempted to delay (especially until after an election) or to avoid completely tough reform decisions that impose politically unpopular visible losses on voters. Politicians may also lower the visibility of painful changes in ways that serve their electoral interests but that do not serve the public's interest in having a clear, consistent set of rules and signals that allow the public to make better- informed decisions in adapting their behavior to the new environment created by an aging population. Encouraging and subsidizing retirement savings without requiring them, for example, may be an appropriate policy choice if a universal flat-rate benefit will be kept at a level that provides an adequate income for all seniors, but not if that benefit level is allowed to erode over time. Allowing individuals to divert their retirement savings to other purposes, such as buying a house, is electorally popular, but erodes dedicated retirement savings and may cause individuals' assets to become too concentrated in a single asset. Establishing a flexible retirement age (with the pension benefit reduced in the case of earlier retirement) rather increasing the minimum age at which a public pension can be obtained sends a fuzzy signal about whether working longer is needed to enjoy an adequate income in retirement. Politicians like these "nudges" because they avoid compulsion—telling voters they have to do something that they don't want to do—even

when a firmer shove may be the more responsible response to secure more universal behavioral change needed to secure adequate retirement incomes.

Politicians' incentives may also increase the "political risk" of policy instability. Governments may make a politically difficult decision after an election and then renege on it as the next election approaches. Retrenchment is often timed early in the electoral cycle as politicians hope to take advantage of voter's tendency to forget or discount policy changes that occurred longer ago. Postponement of the initial effects of retrenchment measures until after the next election has also been a common strategy. Moreover, the lag times between when a retrenchment measure is enacted and when it began to take effect often is quite substantial, and the phase-in period until it takes full effect even longer. And because politicians have incentives to compete for votes and disagreements on the substance of policy, opposition parties may promise to reverse unpopular policies after an election--and do so.

While there are steps that can be taken to insulate retirement income policy from the poor alignment between politicians' incentives and the imperative of policy stability, there is no such things as a "politician-proof" pension system. Nor is there a single path toward building consensus on politicians on a durable and sustainable pension reform. In Sweden, for example, pension reform was developed and has been sustained by a multi-party working group that crosses the ideological divide between the centre-right parties and the Social Democrats; the "social partners" (business and labor) were largely excluded from direct participation in those negotiations. In Germany, informal "signaling" between the major parties after breakdown of consensus in 1990s has helped to reduce—but not eliminate—policy reversal. In Canada, closed negotiation between federal and provincial governments helped to build and sustain policy agreement. In the U.K., the Turner Commission played a major role in building support for a

simplified, universal system of retirement savings. In all of these cases, building engaged commitment from leadership of the major parties has been critical to stabilizing pension policy.

SPECIFIC POLICY DECISIONS

Debates in retirement income policy revolve around a series of specific decisions on matters such as retirement ages, benefit levels, financial literacy campaigns, and the structure of default funds in defined contribution individual account systems. This section of the paper provides an overview of international patterns and trends on a number of these issues. Rather than making specific policy recommendations for New Zealand in these areas, it addresses some of the major debates that have arisen, and raises concerns and "warning flags" suggested by international evidence about problems that may arise if particular options are pursued. It also suggests some potential ways to prevent or address those problems.

Increasing Pension Eligibility Ages

Increasing the labor market participation of older workers is one way to address both affordability concerns of retirement income systems and the income needs of those seniors who continue to work. And as the OECD noted in a recent review (2011: 20) "the "'retirement age' is the most visible parameter of the pension system…it sends a clear signal for people in choosing when to cease work."[1] While standard and minimum ages for receiving a pension declined in a number of OECD countries in the latter half of the twentieth century, the more recent pattern has been the reverse. Several countries have recently enacted measures to increase pension eligibility ages, sometimes equalizing retirement ages that had previous been lower for women than for

[1] Retirement age is in itself a fuzzy concept in many countries, because in some countries pension eligibility is linked to years of work as well as reaching a minimum age—those who have worked a specified number of years may be eligible for a pension before reaching that age. Special retirement ages may also be set for particular occupations, or on other grounds. Because New Zealand Superannuation has neither a work not a retirement test, these complications are less relevant in New Zealand than elsewhere.

men. Some of these have already taken effect in whole or in part. As of 2011, moreover, fourteen OECD countries had legislated retirement age increases that were scheduled to take effect in later years (OECD, 2011: 222). Some of these increases were scheduled to increase retirement ages past the once seemingly sacrosanct age of 65. Overall, the pensionable age for men averaged across the OECD member countries rose from 62.4 in 1999 to 62.9 in 2010, and under current legislation will rise to 64.6 in 2050, though actual changes will presumably be higher. The equivalent figures for women are 61.1, 61.8 and 64.4 (OECD, 2011: 25-26). Canada's change in its quasi-universal Old Age Security (OAS) and the income-tested Guaranteed Income Supplement (GIS) is perhaps most relevant to New Zealand because of the strong parallels between OAS and New Zealand Superannuation as a basic residence-tested income floor financed through general revenues. Canada will phase in an increase the age of eligibility for OAS and GIS from 65 to 67 between 2023 and 2029. Canadians will also be able to defer their OAS benefits for up to five years and receive a higher benefit upon take-up when they do so.

Changes in minimum pension ages usually occur with very long lead times, both to avoid disadvantaging workers who may find it difficult to adjust their retirement and savings behavior late in their careers and to limit political repercussions. It should be noted, moreover, that both past and already-legislated future increases in the minimum pensionable age have not and will not keep up with increases in life expectancy in most OECD countries. Life expectancy for those reaching pensionable averaged 18.5 years for men in 2010 and is expected to reach 20.3 years by 2050; the expected increase for women is slightly less dramatic because pensionable ages for women are rising faster (from a lower base): from 23.3 years in 2010 to 24.6 years by 2050. The New Zealand figures for expected increases over the coming decades in life

expectancy at pensionable age are much higher than average OECD trends. Life expectancy at 65 (the current pensionable age) is expected to rise from 18.1 years in 2010 to 21.3 years in 2050 for men, while women's life expectancy at that age is expected to rise from 20.9 years to 24.3 years (OECD, 2011: 29-30). Thus despite important increases in retirement age policy in many counties, the burden of pension expenditures in New Zealand and other OECD countries is expected to increase unless benefits are reduced.

While the politically feasibility of increases in the pension age has increased in recent years, those increases raise important social concerns that need to be addressed by policymakers who are considering such steps. A first concern is its impact on populations who are disadvantaged. Evidence from the United States, for example, suggests that minority workers who experienced difficulties in entering the labor market are also especially likely to experience job dislocations and involuntary labor market exit as they approach retirement age (Flippen and Tienda, 2000). This effect is likely to be especially pronounced during economic downturns (Coile and Levine, 2007). In addition, studies of West European countries have found differences at age 65 between high-education and low-education groups (a proxy for socio-economic status) in both life expectancy and disability-free life expectancy (DFLE) that are strong and consistent across countries (Majer et al, 20011). Moreover, those disparities appear to be increasing over time in many countries (Singh and Siahbush, 2006; Kibele et al, 2013), as better off groups benefit disproportionately from increases in life expectancy.

Thus if increased inequality of outcomes is to be avoided, policies that require longer working lives must be balanced by policy initiatives that provide adequate disability coverage to those who cannot work longer, especially many people who spent their working lives in manual occupations.

Encouraging Longer Working Lives

Both the average age at which workers exit the labor market and the level of labor force participation of older workers have changed substantially over time, generally falling from around 1970 through 2000 and then stabilizing and (in some countries) increasing slightly since then (OECD, 2011, chapter 2). Both age of labor market exit and labor force participation rates of older workers vary substantially across OECD countries.

Minimum pensionable ages are probably the most important component of policy that influences the labor market participation of older workers, but other policies also play a role. Policies that prevent employers from discriminating against older workers—and enforcement of those policies—can also have a major influence on labor market exits. Employment policies that allow those who want to work longer to do so without fear of being forced into retirement by their employers before they reach pensionable age are especially important. Again, this is likely to be of concern especially for those engaged in physical work.

Automatic Stabilizing Mechanisms

Given the political difficulties of enacting pension retrenchment, it would not be surprising for election-seeking politicians to be interested in putting in place automatic stabilizing mechanisms (ASMs) that make pension cutbacks or raise revenues in the future without direct intervention by politicians (see Turner, 2009)—for example by automatically increasing public pension eligibility ages or lowering benefits when life expectancy increases or the ratio of workers to retirees declines. Such ASMs essentially change the "default": painful policy changes go into effect unless politicians take positive action to block them, so politicians have "clean hands." Automatic increases in the retirement age have been enacted in several

European Union countries, and a 2010 European Commission Green Paper (2010: 9) suggested that this mechanism be considered for broader adoption.

Although ASM policies may be politically attractive, it is not obvious, given the high financial and political stakes involved, that politicians will be able to win adoption of those mechanisms. It is even less clear that politicians will be able to sustain the ASMs if they are triggered. It may be politically easier to stand by and do nothing while visible "automatic" cuts go into effect than to enact those cuts directly, but it may be even more politically expedient to block the cuts when they are about to be triggered rather than allowing them to go into effect, especially if they are scheduled to occur at politically sensitive times in the electoral cycle.

In practice, automatic stabilizing mechanisms in public pension systems are difficult to enact and also difficult to sustain. Although these mechanisms are quite new, emerging evidence suggests mixed effects. Outright reversal of the adoption of an ASM is unusual, although the Kohl government's "demographic factor" was abolished in Germany in 1998 after a change in government. ASMs are more vulnerable to erosion, especially when the losses that the ASM would impose are substantial (notably during financial crises), and when elections are impending. In both Germany and Sweden, governments softened scheduled cuts that had been triggered by an automatic stabilizing mechanism in the lead-up to elections in 2009 and 2010, respectively. Continued collusion by parties to keep an ASM in place is more likely when there is no threat of defection or low threat of entry by new parties who see the elderly as a potential constituency. Spreading out the effects of ASMs on current beneficiaries over time so that they are less visible (e.g., not resulting in nominal cuts) is likely to make gradual erosion of benefit levels more acceptable, especially when those cuts are triggered as a result of financial crises. Use of insulating mechanisms (e.g.,

supermajority requirements) should in theory be useful in avoiding ad hoc interventions by politicians, but recent German and Swedish experience does not give much hope about the reality: once a proposal to ease ASM-imposed cuts is made by a large party, the incentives for other parties to climb on the bandwagon are strong, especially as elections near.

Financial Literacy and Engagement

As financial pressure on both public pension systems and employer-sponsored defined benefit (DB) pension schemes increased in recent decades in most wealthy countries, both mandatory and voluntary-but-subsidized retirement savings schemes have increased in importance, and responsibility for retirement savings and planning has shifted to individuals. So have important risks—notably financial market investment risk and longevity risk.

Evidence from a number of countries suggests that individuals' levels of financial literacy and engagement in retirement savings planning affects their preparedness for retirement in a variety of ways. People who are more finically literate are more likely to avoid high cost debt, diversify investment risk, engage in retirement planning, and be aware of pension fund management fees (see for example Lusardi and Mitchell, 2011a).

A number of recent studies from many OECD countries suggest that there are major gaps in individuals' financial literacy. These gaps are likely to be particularly large for the less-educated, for women and for the young and old. Historically disadvantaged racial and religious groups (for example African-Americans and Hispanics in the United States, Māori in New Zealand, Muslims in the Netherlands) are also likely to have lower levels of financial literacy (Lusardi et al, 2010; Lusardi and Mitchell, 2011b, Alessie et al 2011; Almenberg and Säve-Söderbergh, 2011; Crossan, Feslier and Hurnard, 2011, Bucher-Koenen, 2011).

A variety of strategies have been pursued in recent years to try to improve financial literacy, with the Organisation for Economic Cooperation and Development taking a strong role in encouraging cross-national diffusion of effective practices. These campaigns have used a variety of institutional vehicles and venues (e.g., schools, trade unions, pension agencies, pension fund associations.[2]

Despite some success in efforts to increase labour literacy, and increased participation in defined contribution retirement schemes, engagement of citizens in retirement planning remains low in most OECD countries, especially among young workers and those with low levels of education. Experience of a negative income or wealth shock, on the other hand, increases engagement in retirement planning (Lusardi and Mitchell, 2011a).

The patterns in Sweden, which along with the United States has the most thoroughly-studied retirement income system, illustrate well the barriers to engagement in retirement planning and actual participation in retirement savings decisions. Sweden adopted a new mandatory "premium pension" individual account system in the late 1990s. In the initial round of pension fund choice, which occurred in 2000, 67 percent of eligible individuals in Sweden made an active choice of pension funds. Even in this initial round, some individuals were much more likely than others to make an active choice of pension funds: controlling for other attributes, those who were employed in the financial services sector and had substantial private savings were much more likely (at least 1.3 times as likely) to make an active choice of pension funds than others. Individuals with high incomes and advanced education were also more likely to make an active choice. The same survey suggests that engaging non-native speakers in retirement savings schemes can be particularly difficult: those born outside the Nordic region

[2] The literature assessing specific financial education practices is extensive. See for example Atkinson, 2008; Orton, 2007; Atkinson et al, 2012; Grifoni and Messy 2012).

were less than 60% as likely to make an active choice as those from the region (Engström and Westerberg). Fund managers are unlikely to devote a lot of resources to appealing to this group because they perceive that the management fees that may result from attracting this group's savings are likely to be low.

The Swedish case also suggests potential barriers to participation that may arise over time. Active choice of a pension fund dropped rapidly after the initial year: only 8% of those eligible to choose a fund for the first time participated by the 2005 round, and active choice of funds fell further in 2007 and later years to less than 2 percent (Pensionsmyndigheten, 2012, 57). **S**tudies of the Swedish premium pension suggest that a number of reinforcing factors led to the dramatic decline in active choice between 2000 and 2007 (Weaver, 2005; Thaler and Sunstein, 2009). Perhaps most important is the fact that after the initial round, only new labour market entrants were choosing funds. The new entrants in later rounds were young, which meant that they were far from retirement and thus particularly prone to myopia about the need to start saving for retirement early. They also had little money at stake so perceived little incentive to make a fund choice, and they were presented with too many options (almost 500 in the initial round, and close to 800 in recent rounds). While Sweden's Premium Pension Authority (PPM) mounted substantial outreach campaigns in the initial rounds and tried to increase Internet accessibility for making choices, private fund managers, recognizing both the small sums at stake and the very broad field of funds available, did not mount substantial campaigns in later rounds. Moreover much of the information that was provided by fund managers was overly simplified and even inaccurate (Thaler and Sunstein, 2009: chapter 9). The media also paid much less attention to pension fund choice in the rounds held after 2000. The widespread publicity given to the negative returns experienced by most premium pension savers—

especially those in many of the most popular fund choices—may have diluted enthusiasm for making an active choice. The state-sponsored (though autonomously operated) default fund also outperformed the weighted average of actively-chosen funds in the first years of the premium pension system, which likely further decreased the attraction of active engagement and fund choice. Moreover, most Swedes have made few if any changes to their initial fund choices.

Keeping individuals engaged in retirement planning is just as challenging as getting individuals engaged in the first place—and just as important, since portfolios that are appropriate for young workers may not be appropriate for older workers. The emerging evidence on low levels of active and continuing engagement in publicly-sponsored retirement investment schemes suggests that governments need to think through how and at what stages of life (e.g., at the time that children begin school, at certain "round-numbered" birthdays) they can improve financial literacy and engage contributors, especially when individual account funds are small part of total pension expectations. Governments also need to think through more specific engagement strategies for particular sectors of the labor force who are least likely to do so on their own, and differentiated messages for different age groups. For younger workers, for example, the messages should include the need for asset diversification and a concern with long-term asset growth, while for older workers messages should include retuning of portfolios and, in some cases, potential vehicles for annuitization of assets.

Tailoring specific messages to specific groups of retirement savers is a manageable issue for informational vehicles like sorted.org.nz that are user-initiated and allow the user to provide substantial information about their personal financial situation and preferences (e.g., tolerance for risk). However, those who are most in need of information are probably not those who are most likely to use these vehicles. Reaching such groups may require enlisting the help of

institutions and civil society organizations to try to engage in them in the process of encouraging financial literacy among their core constituency (e.g., seniors, veterans, students, ethnic and linguistic minorities). Efforts to do so, however, encounter three major obstacles. First, many organizations have well defined “”organizational missions” (e.g., provision of specific kinds of social services to their members) and may be reluctant to undertake new tasks unless they are convinced that it helps them to meet that mission (see Wilson, 1991 and McDonald, 2007). Second, they are likely to perceive themselves as lacking in the expertise needed to provide this service, and believe that it will be costly for them to acquire it in an environment that is almost always resource scarce. Third, they may not see a demand from their members from their members, and believe that providing the service may blur the image that they have cultivated with their members. In short, working with civil society organizations, and even government bureaucracies like schools, can be an important vehicle for improving financial literacy. But it is likely to be a complex and long-term process in which the needs, priorities and resources constraints of those organizations need to be fully taken into account.

Employer Management versus Centralized Administration of Individual Account Systems

High management fees on fund balances and transaction fees can eat up a sizeable share of retirement savings in individual accounts over time. Fees can be kept low in several ways, notably by centralizing of some functions in government or an independent agency to take advantage of economies of scale rather than having them performed by employers or even by individuals. Among the functions that can be centralized are administration and collection of contributions, decisions on and negotiation of fee structures with fund managers, management of switches between funds, provision of default funds, and provision of information on fund

balances and likely income streams upon retirement. Which functions are performed centrally varies substantially across countries.

In addition to economies of scale, centralized management of some of the account management functions can lower costs and administrative burdens on employers. It can also facilitate provision of information to workers on expected income streams in retirement that cumulates across sources (e.g., New Zealand Superannuation and KiwiSaver). It can also give governments additional bargaining leverage in dealing with fund providers. In Sweden, for example, the Pension Authority requires that all funds participating in the Premium Pension system provide a discount on their normal fund management fees. These discounts range from 0.3 to 0.5 percent of assets annually, which the Pension Authority estimates will result in eventual increases of 10 to fifteen percent in pensions payable (Pensionsmyndigheten, 2012: 4). But shifting from a system of decentralized administration can also disrupt existing administrative relationships, cause confusion among account holders, and lead to political opposition from fund providers who fear a loss of bargaining power.

Range of Fund Offerings

There are enormous differences across national individual retirement fund systems in the degree and types of restrictions that they place on funds that can be offered. Some offer relatively open access to all funds that meet asset diversity requirements (which also vary broadly), while others offer only a few fund choices. In some countries, notably the U.K. and New Zealand, employers play a major role in determining the range of choices open to individual participants in the system.

The simplest option available to governments is to allow open access to all funds that meet minimum diversification requirements. This also has some political attractions, since it

does not require government to undertake the politically fraught role of picking and choosing fund providers. As behavioral economists have noted, however, this "just maximize choice" policy also has important disadvantages (Thaler and Sunstein, 2009). First, it may discourage some participants from making an active choice because they are overwhelmed by the range of choices. Second, if those making the choices are not highly motivated, they make poor choices. International evidence suggests several biases and flaws in the investment practices of poorly informed and intermittently engaged individuals that may lead to sub-optimal returns—and to inadequate retirement incomes (see especially Benartzi and Thaler, 2007). Moreover, because individuals differ in their preferences, biases and information levels, the types of sub-optimal investment decisions that occur will also vary. Some individuals pay too much attention to recent fund performance, believing that it is a reliable indicator of future asset performance; they thus overinvest in highly volatile funds or those that have overly concentrated assets. Some divide their retirement contributions equally between whatever funds are offered to them, naively believing that this offers an appropriate level of risk diversification (Benartzi and Thaler, 2001). Many individuals have a "home bias," overinvesting in domestic assets and with domestic fund managers with whom they are familiar, regardless of that fund's actual performance (see for example Sweden, Ministry of Finance, 2005: 37). Individuals may also be susceptible to advertising claims that provide little actual information on the performance of the fund. (Cronqvist, 2006). Given these multiple potential sources of investment bias—with different implications for return on retirement savings—there is no simple set of decision rules regarding the options offered in a retirement savings system that will protect a heterogeneous set of individuals against all of the risks. Choices must be made about which risks to protect against

and how much risk should be tolerated—or government can decide not to try to limit sub-optimal decisions and promote wiser decisions at all.[3]

A related design feature concerns ease of changing investment funds. While lack of engagement is likely to be the pattern among the vast majority of participants, fund systems that make it very easy and inexpensive (or free) to switch funds may find that a small segment of participants engage in a very high level of trading that both lowers their returns and raises the administrative costs for the system as a whole. The American financial literature, for example, finds that men tend to overtrade their investments because of overconfidence in their financial ability, resulting in lower investment returns (Barber and Odean, 2001). Additional evidence on this subject comes from Sweden's Premium Pension, which allows individuals to concentrate in very specific asset classes and make unlimited fund switches. The system also incorporates funds with differing levels of administrative fees. Although most individuals entering the system after the initial round have chosen the default or stayed with their original fund choices, it is possible for expert market timers to do extremely well and poor choosers to do very poorly. As a result, there has been tremendous variation in returns earned in the tails of the distribution: it is difficult to design a system that allows some individuals to do very well without also running the risk that others will do very badly (Premiepensionsmyndigheten, 2012).

If the New Zealand government does decide that it wishes to guide or restrict pension fund options and fund switches through KiwiSaver, it has faces two types of choices. The first concerns which choices should be constrained. Should equity funds, for example, be restricted to broad index funds or include country-specific and industry-specific funds? Should home-country bias be allowed? What about funds that are actively traded, and thus likely to have

[3] For a detailed discussion of risk management in defined contribution systems and account of national experiences, see Ashcroft and Stewart, 2010.

higher management fees? Should day-trading of funds be allowed, and if so with what charges? Ultimately the key question is how much unsophisticated or unlucky participants should be protected at the cost of restricting choice.

The second policy choice faced by government is *how* to achieve whatever objectives it sets. At the unobtrusive end of the policy instrument spectrum, governments can simply provide information about factors such as a fund's asset diversification level and past volatility (indicators of risk) and its fund management charges. This was the approach taken by Sweden in the initial years of its premium pension system (Weaver 2005). Governments can combine this information with social marketing campaigns that provide admonitions to engage in "appropriate" behavior (e.g., diversifying assets, choosing funds with low management fees, staying engaged). Alternatively, governments can provide positive incentives for behavior they wishes to encourage (e.g., providing matching funds for savings practices and fund choices that meet preferred standards), provide negative incentives for disapproved behavior (e.g., high transaction fees for fund switches) or simply ban options that are deemed unacceptable (e.g., prohibiting funds that are overly concentrated, excessively risky or have high fees).

Design of Default Funds

While a well-designed financial literacy campaign can contributed to increased citizen engagement in retirement savings planning, policymakers also need to confront the reality that many people are unlikely to become engaged. Moreover, those with low feelings of efficacy about their financial literacy are least likely to become engaged and stay engaged. These individuals will either end up as non-contributors (where contributions are not required and the default is not to contribute) or end up in whatever default option is defined by the retirement savings scheme. Internationally, the percentage of members enrolled in default funds varies

immensely, from 12 percent in Estonia to 99 percent in Mexico and Brazil (International Organisation of Pension Supervisors, 2012: 5).

The important role played by default funds means that their design is critical in determining both retirement income outcomes for many citizens and also the perceived legitimacy of the retirement saving scheme. There is to some extent a tradeoff in designing the default: the better the default, the less likely individuals are likely to feel the need to become actively engaged in retirement savings planning.

There are also important trade-offs in the specific investment strategies of default funds: they cannot simultaneously minimize risk that savings pension contributions will be lost and maximize return on those contributions over a long period. Investment strategies that are appropriate for one group (and in particular one age cohort) may not be appropriate for another. Most importantly, those who are closer to retirement, and therefore have less opportunity to recoup losses from a market downturn, may be better off in a more conservatively-invested default fund. Default funds are also subject to what has been called the advice or "endorsement" effect—that those participating in the default fund will perceive its designation as endorsement by government as the best or most prudent approach (Choi et al, 2003) while others may view it as a signal about how they should manage their own portfolios. Governments may in turn fear that the endorsement effect can have political and policy consequences—anger at the government if retirement savings principal is lost. The New Zealand government's initial decision to have KiwiSaver default funds provided by multiple private sector operators, and to have them invest in very conservative assets, was prompted in large measure by fears that those who invest in them would demand government compensation if they lost money. However, the decision to utilize multiple private sector providers can have its own biasing "endorsement

effect," leading the public to believe that those providers and their products are "better" or "safer" than those offered by competitors—i.e., branding opportunities for the provider (Ministry of Business, Innovation and Development, 2012: 22)

International experience with individual account systems suggests that the original intent of the designers of those systems regarding how default funds would be used is often a poor match with actual usage. In the case of KiwiSaver, for example, default funds were originally seen as short-term "parking space" until the fund-holder became engaged in making an active choice (Ministry of Business, Innovation and Employment, 2012: 6). This view determined a number of features of the default structure, including concentration in low-risk assets. However, both New Zealand and international experience suggests that given the low interest of many workers in making active choices about their retirement savings, many if not most of them are likely to end in whatever the default option is for a very long time. This is especially the case after the initial round of fund choice in a new retirement savings scheme, because new entrants are likely to be mostly new labor market entrants who have limited earnings and limited interest in retirement, which they see as very far away.

The characteristics of the default fund are therefore likely to be critical in determining how successful a system of retirement saving accounts is in contributing to an adequate income in old age. Recent experience from Sweden and the United Kingdom as well as the federal employee retirement fund in the United States suggests several lessons about good practices for default funds. In particular, competitive bidding for or direct provision of the default fund can lower fund charges substantially. In Sweden, for example, the default fund in 2011 charged a management fee of only 0.15 percent of fund balances (Pensionsmyndigheten, 2012: 4; overall system management fees are assessed separately, as noted above, but are also very low).

International experience also suggests that a single investment mix may not be best for all age groups of workers. Both the Swedish and the new public UK (National Endowment Savings Trust, or NEST) default funds now take a life-cycle approach. The Swedish fund moves from higher-risk-and-return asset classes to lower volatility assets as retirement nears, while NEST begins with a five-year conservative phase before moving to a higher-risk portfolio and then back as retirement nears. Other countries have retained a more conservative default. In Australia default providers are decided by the trustee; most default funds invest primarily in equities, but practices vary significantly (International Organisation of Pension Supervisors, 2012a: 10-16).

While a life-cycle or the related target-date approach to default fund investment offers significant advantages (for a recent review and assessment, see Antolin, Payet and Yermo, 2010), it can also complicate comparison of the performance of the default fund to other funds, because different age cohorts in the default fund will experience different returns in a given period as a result of the different asset mixes in their portfolios. A significant question raised by mandatory or quasi-mandatory schemes when employers set the default scheme or individuals are randomly assigned to a default (as in New Zealand) is whether individuals in the default funds of different employers should experience significantly different returns on their contributions.

Another design issue raised by international experience is whether the balance between asset classes should take into account not just the funds in the individual account scheme but the broader government-sponsored retirement income stream as well. The main Swedish default fund, for example, allocates 100% of individuals' fund balance into equities until age 55, at which point it gradually drops every year until age 75, when it reaches 33 percent of fund balances. The logic of this allocation is that about 85 percent of the individual's pension contributions go towards an income-related pension (supplemented by a guarantee pension for

those with low lifetime earnings) that does not have a high degree of market volatility: taking a higher degree of risk for the individual account portion is therefore justifiable. Because most New Zealanders will receive a New Zealand Superannuation benefit to which KiwiSaver is a supplement, a default fund with a higher risk tolerance in order to earn a higher return in retirement may also be appropriate.

It is possible for low-cost default fund providers to provide more than a single option at little extra cost for those who want to take advantage of low administrative costs but exercise some choice. The National Employment Savings Trust in the U.K. for example, in addition to its main "Retirement Date" Fund, offers funds that offer higher growth, lower risk, a concern for ethical investing (e.g., human rights, fair trade and environmental protection) and compliance with Sharia principles. Sweden's default fund offers alternatives that are higher risk, lower risk and equally balanced between equities and interest-bearing securities. In both Sweden and the U.K., the alternatives offer the same low fees as the main default option. In practice, however, but there are likely to be few takers for default fund options, since those who choose the default fund are likely to be those with low levels of engagement in retirement savings planning. The main default is what gets chosen: more than 99 percent of those who use the default fund provider in Sweden are in the main default fund.

International experience suggests that concerns about the political consequences of the endorsement effect are overstated, at least for pension systems where the individual account tier is not the exclusive or dominant tier of the pension system. Sweden's fund system, which began just before the "dot-com" bust in 2000, experienced major losses in its initial years without public demands for compensation, despite the fact that the risks associated with the fund (which invests primarily in equities) had not been clearly explained. Public information campaigns can

be used with a clear and relatively simple message: the default fund is independent of government and offers long-term growth potential appropriate for a particular age cohort but is not free of risk and not guaranteed, so if you are not comfortable with this arrangement, you should choose another fund.

Regulation of Financial Intermediaries

Given the low levels of financial literacy of many individuals and the limited success of financial literacy campaigns in addressing those gaps, it is not surprising that many people use professional investment advisors or other financial intermediaries to guide (or take over) management of their retirement savings portfolios, paying a fee for that service. How well these services do at filling the financial literacy gap depends on two factors: are they reaching the people who need them most, and do they offer good value for money?

International evidence suggests that there are potential areas for concern on both of the factors above. A study in the United States found that women were more likely than similarly situated men to seek professional retirement planning advice. But it also found that those seeking advice were also likely to be those who had higher income incomes, higher incomes, and were already exhibiting more responsible personal finance behaviors—in other words, those who need it less (Joo and Grable, 2001). Once again, this suggests that a retirement savings schemes that allow a high degree of choice and sub-optimal defaults needs to find strong vehicles for getting sound retirement planning advice to those who are potentially most vulnerable.

National regulation of these financial intermediaries vary widely.[4] Individuals who have limited financial literacy skills and feel low pension efficacy may be susceptible these appeals financial consultants to take over management of accounts in deals that offer very poor value for

[4] For a detailed review of national practices, see International Organisation of Pension Supervisors, 2012b.

money. In Sweden, for example, consultancy firms emerged after 2000 that manage individual premium pension accounts on behalf of pension savers in exchange for an annual service charges (approximately 1,000 Swedish kronor, or about NZD190). This fee is billed directly to the client and is in addition to the account and fund management fees charged by the premium pension system. There are currently more than 700,000 individuals registered with PPM consultants. These services are most commonly used by individuals with low levels of education and income. This market development is not inherently problematic: the consultancy firms could help to rectify pension savers lack sufficient knowledge for making informed investment decisions. However, premium pension consultants have taken advantage of this largely regulated market to give misleading reports on their returns, engaging in false advertisement as a means to attract clients. A lax legal framework also allows PPM consultants to receive commissions from the funds that they choose to invest their clients' money in: rather than investing the clients' premium pension money in high-return low-risk funds, some PPM consultants choose funds that guarantee them a high commission. These problems have caused many pension savers to suffer from suboptimal premium pension investment returns. High-pressure phone sales strategies used by some premium pension consultants, sometimes implying that the services are being offered by the government rather than a private firm, have also been used to persuade to purchase consultancy services without being given time to deliberate. Once an oral contractual assent has been given consumers find that they cannot withdraw. Other national experiences—notably the widespread mis-selling of personal pensions in the U.K. in the 1990s—offer additional cautions.

The broad lesson of these experiences is that profit-incentives can create perverse auxiliary markets around a retirement savings system, taking advantage of the fact that some individuals—especially those with low financial literacy--are struggling to make informed

decisions about their premium pensions. Difficulties in anticipating the precise form that these potential auxiliary market developments will take means that policymakers may be left scrambling to address them once they have developed.

Conclusions

New Zealand's retirement income system, like that of most other industrialized countries, will experience pressure to undertake significant reforms in coming years. International experience suggests that any reforms are likely to be incremental rather than involving a change in basic programmatic principles. They are also likely to occur in multiple rounds rather than a single "big bang." And they are likely to involve all of the components of New Zealand's increasingly complex set of retirement programs rather than just one. International experience can offer lessons to New Zealand policymakers on issues ranging from the broad political constraints on reform to very technical issues of programmatic design.

Perhaps the most important lessons for policymakers involve anticipating behavioral responses and non-responses—notably in labor markets, savings behavior, and financial markets—by millions of New Zealanders to a changing economy and policy environment. That environment, and the behavioral adaptations that they need to make in order to enhance their prospects of a secure retirement, remains largely opaque to many New Zealanders. International evidence suggests that it is likely to remain largely opaque, especially to those who are most disadvantaged. And if international experience is repeated, New Zealanders' responses are also likely to be heterogeneous, reflecting individual variation in factors such as levels of information, levels of assets and private savings, as well as health status, family circumstances and cultural values.

Mandatory and quasi-mandatory individual account systems like KiwiSaver may create new inequality concerns. Potential new sources of inequality associated with these schemes can take several forms, depending on how fund administration and fund choices are structured. At least three potential areas of concern have arisen. A first potential problem is that there are likely to be varying levels of engagement across different social groups. Thus if financial returns for those who take default options are significantly below the median, they may have lower incomes in retirement as a result. A second potential area of concern relates to individuals who *do* take an active role in their retirement savings but make poor choices when doing so. This raises the question of whether it is fair to place individuals with knowledge of financial markets at a competitive advantage in an activity that is mandated by government. A third potential area of concern, as noted earlier, is that individuals who have limited financial literacy skills and feel low pension efficacy may be susceptible to appeals to marketing from financial intermediaries to manage their accounts in deals that offer very poor value for money.

None of these potential inequality-enhancing problems are insurmountable: restrictions on asset specificity, frequency of fund switches and fund administrative charges are all potential ways to address these "new inequality" concerns. Regulation of financial consultants can also be useful. In any future reforms to KiwiSaver, New Zealand policymakers need to consider the extent of specific new inequality risks, their likely incidence, and how much of each risk they are willing to tolerate.

New inequality risks are just one on the many trade-offs that New Zealand policymakers cannot avoid in deciding how to address their citizens' varying circumstances and their inevitably heterogeneous responses. Building a broad and stable agreement on how to proceed, and communicating that agreement clearly to citizens, is essential.

SOURCES

Alessie, Rob, Maarten van Rooij and Annamaria Lusardi (2011) "Financial literacy and retirement preparation in the Netherlands." *Journal of Pension Economics & Finance* 10,4 (October): 527-545.

Almenberg, Johan and Jenny Säve-Söderbergh (2011) "Financial Literacy and Retirement Planning in Sweden," *Journal of Pension Economics & Finance*. 10,4 (October): 585-598.

Antolín, Pablo, Stéphanie Payet and Juan Yermo (2010), "Assessing Default Investment Strategies in Defined Contribution Pension Plans", *OECD Working Papers on Finance, Insurance and Private Pensions*, No. 2, OECD Publishing.

Ashcroft, John and Fiona Stewart (2010) "Managing and Supervising Risks in Defined Contribution Pension Systems, International Organization of Pension Supervisors Working Paper No. 12.

Atkinson, Adele (2008) *Evidence of Impact: An Overview of Financial Education Evaluations*, London: Financial Services Authority, Consumer Research 68.

Atkinson, Adele, Debbie Harrison, Flore-Ann Messy and Juan Yermo (2012), "Lessons from National Pensions Communication Campaigns", OECD Working Papers on Finance, Insurance and Private Pensions, No. 18, OECD Publishing.

Bailey, Jeffrey J., John R. Nofsinger, and Michele O'Neill (2003) "A Review of Major Influences on Employee Retirement Investment Decisions," *Journal of Financial Services Research*, 23, 2: 149-165.

Barber, Brad M., and Terrance Odean (2001) "Boys will be Boys: Gender, Overconfidence, and Common Stock Investment," *The Quarterly Journal of Economics*,116(1): 261-292.

Béland, Daniel (2007) "Ideas and Institutional Change in Social Security: Conversion, Layering, and Policy Drift" *Social Science Quarterly*, 88: 20-38.

Benartzi, Shlomo, and Richard H. Thaler (2001) "Naive Diversification Strategies in Defined Contribution Saving Plans," *The American Economic Review*, 91, 1: 79-98.

Benartzi, Shlomo, and Richard Thaler. 2007. "Heuristics and Biases in Retirement Savings Behavior." *Journal of Economic Perspectives*, 21(3): 81-104.

Bucher-Koenen, Tabea (2011) *Financial Literacy, Riester Pensions, and Other Private Old Age Provision in Germany*, Munich Center for the Economics of Aging at the Max-Planck-Institute for Social Law and Social Policy, MEA Discussion Paper 250-2011.

Choi, James J., David Laibson, Brigitte C. Madrian and Andrew Metrick (2003) "Optimal Defaults," *Papers and Proceedings of the One Hundred Fifteenth Annual Meeting of the American Economic Association*, 93,2: 180-185.

Coile, Courtney C. and Phillip B. Levine (2007) "Labor market shocks and retirement: Do government programs matter?," *Journal of Public Economics*, 91: 1902–1919.

Cronqvist, Henrik, and Richard H. Thaler (2004) "Design Choices in Privatized Social-Security Systems: Learning from the Swedish Experience." The American Economic Review, 94(2): 424-428.

Crossan, Diana, David Feslier and Roger Hurnard (2011) "Financial literacy and retirement planning in New Zealand," *Journal of Pension Economics & Finance.* 10. 4 (October): 619-635.

Engström, Stefan, and Anna Westerberg (2003) "Which Individuals Make Active Investment Decisions in the New Swedish Pension System?" *Journal of Pension Economics and Finance* 2(3): 225–245.

European Commission. 2010. *Toward Adequate, Sustainable and Safe European Pension Systems*. SEC(2010)830.

Fernandez, Juan J. (2010) *Economic Crisis, High Public Pension Spending and Blame-Avoidance Strategies: Public Pension Retrenchments in 14 Social-insurance Countries, 1981-2005*, Köln: Max Planck Institute for the Study of Societies Discussion Paper 10/9.

Flippen, Chenoa and Marta Tienda (2000) "Pathways to retirement: patterns of labor force participation and labor market exit among the pre-retirement population by race, Hispanic origin, and sex," *Journal of Gerontology: Social Sciences* (2000) 55,1: S14-S27.

Fornero, Elsa and Chiara Monticone, *Financial Literacy and Pension Plan Participation in Italy*, Network for Studies on Pensions, Aging and Retirement, Discussion Paper 01/2011-019.

Fox, Jonathan, Suzanne Bartholomae, and Jinkook Lee (2005), "Building the case for financial education," Journal of Consumer Affairs, 39: 195–214.

Grifoni, Andrea and Flore-Anne Messy (2012), "Current Status of National Strategies for Financial Education: A Comparative Analysis and Relevant Practices", OECD Working Papers on Finance, Insurance and Private Pensions, No. 16, OECD Publishing.

Hacker, Jacob S. (2004) "Privatizing Risk without Privatizing the Welfare State: The Hidden Politics of Social Policy Retrenchment in the United States," *The American Political Science Review*, 98: 243-260.

Hurnard, Roger (2012) "The Assessment of Retirement Income System Options." Wellington: The Treasury, paper prepared for the External Panel on Treasury's Lon-Term Fiscal Statement (October).

International Organisation of Pension Supervisors (2012a) *Supervising Default Investment Funds.* IOPS Working Papers on Effective Supervision, No. 18, December.

International Organisation of Pension Supervisors (2012b) *Supervision of Pension Intermediaries*, IOPS Working Papers on Effective Supervision, No. 17, December.

Joo, So-hyun, and John E. Grable (2001) "Factors Associated with Seeking and Using Professional Retirement-Planning Help." *Family and Consumer Sciences Research Journal*, 30: 37–63.

Kibele, Eva, Domantas Jasiolonis, and Vladimir M. Shkolnikov (2013) "Widening socioeconomic differences in mortality among men aged 65 years and older in Germany," *Journal of Epidemiology & Community Health*, 67:5 453-457

Lusardi, Annamaria, Olivia S. Mitchell and Vilsa Curto (2010), "Financial Literacy among the Young," *Journal of Consumer Affairs*, 44: 358–380.

Lusardi, Annamaria and Olivia Mitchell (2011a) "Financial Literacy Around the World: an Overview," *Journal of Pension Economics & Finance.* 10, 4 (October): 497-508.

Lusardi, Annamaria and Olivia Mitchell (2011b) "Financial Literacy and Retirement Planning in the United States," *Journal of Pension Economics & Finance*. 10, 4 (October): 509-525.

Lusardi, Annamaria, Punam Anand Keller, and Adam M. Keller (2009) "New Ways to Make People Save: A Social Marketing Approach," NBER Working Paper No. 14715.

Majer, Istvan M., Wilma J. Nusselder, Johan P. Mackenbach, and A.E. Kunst (2011) "Socioeconomic inequalities in life and health expectancies around official retirement age in 10 Western-European countries" *Journal of Epidemiology & Community Health*, 65: 972-979.

McDonald, Robert E. (2007) "An Investigation of Innovation in Nonprofit Organizations: The Role of Organizational Mission," *Nonprofit and Voluntary Sector Quarterly*, 36, 2: 256-281

New Zealand Ministry of Business, Innovation and Employment (2012) *Review of KiwiSaver Default Provider Arrangements: Discussion Document.* MBIE-MAKO-3295467.

OECD (2009), *Pensions at a Glance 2009: Retirement-Income Systems in OECD Countries*. Paris: OECD Publishing.

OECD (2011) Pensions at a Glance 2011: Retirement-Income Systems in OECD and G20 Countries. Paris: OECD Publishing.

OECD (2012), "Putting Pensions on Auto-pilot: Automatic-adjustment Mechanisms and Financial Sustainability of Retirement-income Systems", in *OECD Pensions Outlook 2012*, Paris: OECD Publishing.

Orton, Larry (2007) *Financial Literacy: Lessons from International Experience*, Ottawa: Candian Policy Research Networks, 2007.

Pensionsmyndigheten (2012) *Pensionsspararna och Pensionärerna 2011*. May 28. Available at http://www.pensionsmyndigheten.se/PensionsspararnaOchPensionarerna2011.html.

Social Epidemiology:

Gopal K Singh and Mohammad Siahpush (2006) "Widening socioeconomic inequalities in US life expectancy, 1980–2000," International Journal of Epidemiology, 35,4: 969-979.

Sweden, Ministry of Finance, Premium Pension Committee, Swedish Government Official Report (2005) *Svårnavigerat? Premiepensionssparande på rätt kurs?*, SOU 2005:87 27.

Thaler, Richard H., and Cass Sunstein (2008) Nudge:Improving Decisions About Health, Wealth and Happiness. New Haven: Yale University Press.

Turner, John. 2009. *Social Security Financing: Automatic Adjustments to Restore Solvency*, AARP Research Report #2009-01, February 2009.

Weaver, R. Kent (2010) "The Political Economy of Retirement Income Policy: New Zealand in International Perspective," in Judith Davey, Geoff Rashbrooke and Robert Stephens, eds., *Retirement Income Policy and Intergenerational Equity*, Wellington, NZ: Institute for Policy Studies, 2010

Whitehouse, Edward, Anna D'Addio, Rafal Chomik, and Andrew Reilly (2009) "Two Decades of Pension Reform: What has been Achieved and What Remains to be Done," *Geneva Papers on Risk and Insurance*, 34, 4: 515-535.

Wilson, James Q. (1991) *Bureaucracy: What Government Agencies Do and Why They Do It*, New York Basic Books.

[i] The author would like to thank Alexander Willén and Ana Yancheva for excellent research assistance in preparing this paper.