LONGEVITY

risk

The Challenge of Longevity Risk

Making Retirement Income Last a Lifetime

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American Academy *of* Actuaries
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INSTITUTE AND FACULTY OF ACTUARIES

Actuaries Institute Australia

Contents

The Australian Actuaries Institute, the Institute and Faculty of Actuaries in the UK, and the American Academy of Actuaries believe there is a common theme in all three countries: longevity risk is not well understood by many people and this lack of understanding can have significant implications for retirement income, particularly as longevity increases.

About our organisations

AUSTRALIA
Actuaries Institute

The Actuaries Institute (Institute) is the professional body representing the actuarial profession in Australia. The Institute is committed to promoting and maintaining a high standard of actuarial practice and represents and supports its members by:

- educating the next generation of actuaries and ensuring skills and knowledge are constantly developed through continuous professional development;
- establishing and maintaining strict professional and ethical standards;
- fostering a strong professional network and promoting and advancing knowledge in specialist areas of actuarial science through research and events and seminars; and
- contributing to public policy through policy submissions, thought leadership and expert analysis.

UNITED KINGDOM
Institute and Faculty of Actuaries

The Institute and Faculty of Actuaries (IFoA) is the UK's only chartered professional body dedicated to educating, developing and regulating actuaries based both in the UK and internationally. We represent and regulate our members for the benefit of the outside world and oversee their education at all stages of qualification and development throughout their careers. As a professional body we work with employers to encourage and develop their actuarial employees to better themselves, the employer and the financial sector. As part of our core strategic objectives we aim to inform and influence existing public policy development, with contributions based on evidence and our expertise.

UNITED STATES
American Academy of Actuaries

The American Academy of Actuaries (the Academy) is the national association for the actuarial profession in the United States. The Academy is a Washington D.C.-based 18,500-member professional association whose mission is to serve the public and the US actuarial profession. Academy members include actuaries employed as consultants, corporate executives and staff, regulators, government officials, academicians, and retired actuaries. Their areas of practice cover pensions, life insurance, casualty insurance, health insurance, financial reporting, risk management, and more.

The Academy assists public policymakers on all levels by providing leadership, objective expertise, and actuarial advice on risk and financial security issues. The Academy also sets qualification, practice, and professionalism standards for actuaries credentialed by one or more of the five US-based actuarial organizations.

Overview

This paper concentrates on longevity risk in the context of the retirement income system in Australia, the United Kingdom (UK) and the United States (US). While there are differences in our social security, taxation, pension savings and retirement income frameworks, the Australian Actuaries Institute, the Institute and Faculty of Actuaries in the UK, and the American Academy of Actuaries believe there is a common theme in all three countries. Longevity risk is not well understood by many people and this lack of understanding can have significant implications for retirement income, particularly as longevity increases.

There are five principles that frame the challenges of managing longevity risk:

Adequacy
Information
Flexibility
Equity
Sustainability

With rising life expectancy, saving sufficiently for an adequate income in retirement is increasingly important. This is compounded further still as, in many countries, there has been a shift away from Defined Benefit (DB) pensions, in favour of Defined Contribution (DC) plans. This shift is transferring responsibility for managing longevity risk—alongside investment and inflation risk—to the individual.

The opportunities and challenges of an ageing population are significant for policymakers, for business and for individuals. Over the course of a lifetime people make financial decisions. Saving an adequate amount for retirement (frequently through DC plans), the "accumulation" phase of retirement, is one critical decision. An equally essential decision is how to spend down one's retirement assets—this is referred to as the "decumulation" phase of retirement. (Other terms commonly used for the decumulation phrase are the "pension phase" or "drawdown phase".)

As people save, and subsequently come to spend their retirement income, investment, inflation, and personal spending risks (such as long-term care needs) are incredibly important. Longevity presents another critical risk, particularly around the risk of living to very advanced ages with depleted financial assets.

Attempts by policymakers to tighten rules around eligibility for state benefits are increasing pressure on individuals to become more self-sufficient in retirement. All three countries have implemented policies that encourage an increase in occupational pension contributions (examples in particular countries include compulsion, auto-enrolment, tax incentives and incentives to work beyond the eligibility age for social security retirement benefits) with the policy intent of sharing the cost of funding retirement between the government, employers and individuals.

Furthermore, the political appetite for changes to the decumulation phase of retirement is evident, even if each country is not necessarily pursuing the same course in each region. The Financial Systems Inquiry (FSI) in Australia has recently concluded that decumulation of private DC schemes "*is underdeveloped and does not meet the risk management needs of many retirees*" (FSI, 2014). Meanwhile, the UK government has moved away from mandating the purchase of annuities, increasing personal choice and considering reform to the taxation of pensions. In the US, policymaking and regulatory bodies have made efforts to facilitate individuals to seek guaranteed lifetime income options for decumulation of DC plans, but as yet have not accomplished that goal. In all three countries, the transition from company pensions toward individual retirement accounts has increased employees' responsibility for ensuring the adequacy of their savings and managing those savings once they reach retirement.

In light of the mutual recognition by our respective legislators that it is important to encourage people to save for a pension and make choices at retirement that should lead to a sustainable income, we believe there are at least five principles for developing policy on DC decumulation. In the context of longevity risk, a critical element is ensuring that people can make their money last a lifetime. In supporting people to do this, products that offer an income guarantee, or decumulation processes that provide reasonable assurance that the individual will not outlive his or her assets, will be an important part of retirement income default pathways.

The five principles identified in this paper that frame the challenges of managing longevity risk are:

- Adequacy;
- Information;
- Flexibility;
- Equity; and
- Sustainability.

Further details about the principles are included in the sections below.

Managing longevity risk

In all three countries people are living longer than they were 20 years ago. Data from the World Health Organisation (2013) showed that average population life expectancy at age 60, from 1990 to 2012, increased by 4 years in Australia (81–85); 4 years in the UK (80–84); and 2 years in the US (81–83) (World Health Organisation, 2013). These life expectancies only considered factors affecting mortality at the date of measurement.

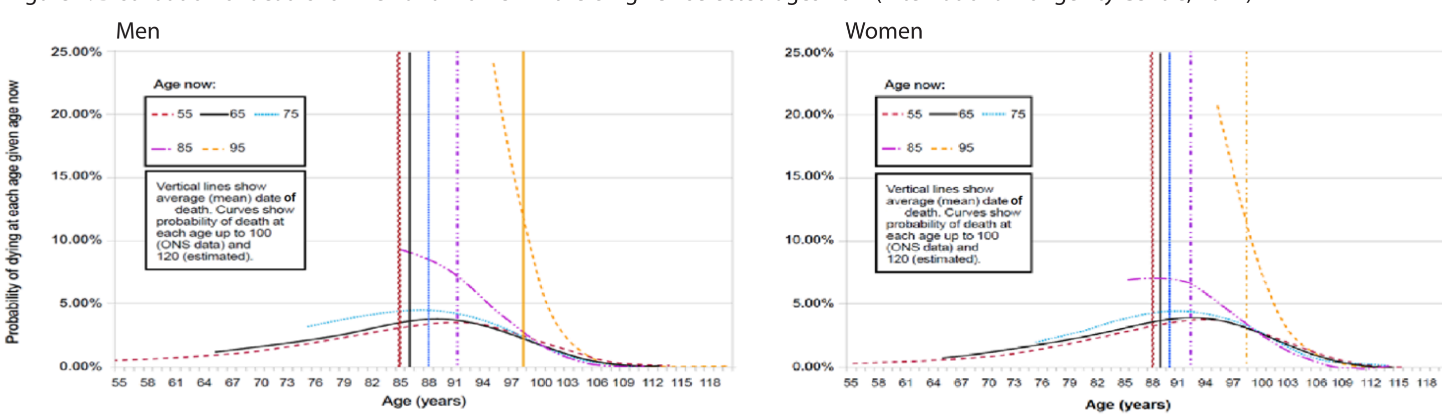
Longevity risk for the individual can be defined as the extent to which an individual's life span significantly exceeds his or her life expectancy. So while the data in the above paragraph is useful in illustrating the scale of population ageing, it cannot provide a full picture of longevity risk, which remains unpredictable at the individual level. Alongside inflation, investment and personal spending risks, longevity risk can have significant consequences for individuals with DC pension savings when they come to retire.

The financial cost of longevity risk is that either individuals will outlive their retirement savings or alternatively, they will underspend their savings, leading to a lower income over retirement and an unintentional bequest on death.

These charts demonstrate the degree of uncertainty associated with attempting to estimate how long someone will live. Furthermore, the curves in the charts below will not remain static and could shift over time, due to changes in mortality arising from healthier lifestyles, medical advances or new incidence of fatal illness.

Under DC pension arrangements, the consequences of these risks rest with the individual scheme/plan member but, for a number of reasons, individuals may not fully understand longevity risk, or consider its implications, when they come to plan their retirement income:

Figure 1: Distribution of deaths for men and women in the UK given selected ages now (International Longevity Centre, 2014)



Underestimation: Longer life expectancies lead to increased longevity risk; the impact of this is arguably exacerbated by the fact that people frequently underestimate their life expectancy and potential variability in actual lifespan:

- A recent survey by National Seniors Australia showed that 50-year-old Australians typically underestimate their own life expectancy by just over seven years (National Seniors Australia and Challenger, 2014).
- In the UK, a study by MGM Advantage found males aged 55-64 expect to live to 81, whilst females in the same age range believed they would live until they were 79. Both of these estimates were considerably below the national average life expectancies, 86 and 89 for men and women respectively (MGM Advantage, 2014).[1]
- The Society of Actuaries has found that more than half of Americans underestimate their life expectancy, and that their financial planning time horizons are too short.[2]

Uncertainty: As noted previously, we continue to see mortality improvements and life expectancy determinations do not always take into account future changes in mortality rates. Programs such as Social Security systems, life insurance annuity products and defined benefit pension plans can pool longevity risk over a large number of individuals. Looking at an average life expectancy can provide reasonably accurate and consistent results. However, longevity risk for an individual is much more uncertain. The individual who retires at age 65 may have a life expectancy of 85 but has some chance of dying at age 70 or living to age 100. For this reason, self-insuring longevity risk carries a significant cost.

Range of responses: People face an often daunting prospect of navigating a complex range of possible investment and spending decisions, when they come to retire and after retirement. It is therefore useful if a default option exists that can provide people with an appropriate level of protection against longevity risk over the course of their retirement (see next section).

1 MGM Advantage research among 2028 UK adults, 314 of which were aged 55-64, conducted by Research Plus Ltd, fieldwork 17-22 October 2013. Respondents were asked 'Being as realistic as you can, approximately how old do you think you'll live until?'

2 The Society interviewed 1,600 adults ages 45 to 60 (800 retirees and 800 pre-retirees) for the full 2011 Risks and Process Of Retirement Survey Report.

Five principles

Adequacy

Accumulating adequate savings over the course of one's working life is crucial and we support the measures to increase pension contributions, which have been proposed, encouraged, or implemented in all three countries. The idea of freedom and choice in decumulation is now at the core of all three systems. More must be done to help people understand and define an "adequate income" at an individual level so they can plan accordingly.

When it comes to decumulation, the benefit of products that offer a lifetime income guarantee can be significant, albeit at a cost. There would be value in developing intelligent default products, allowing individuals to access their pensions through an income stream that offers flexibility in the early years of retirement. Such products would in the latter years provide a lifetime income guarantee to protect against longevity risk.

Information

People need information, not just at the point of retirement, but leading up to and beyond it. We believe there would be merit in developing a common information template, in a format that reflects regional regulatory practice, serving as a consistent basis for retirement planning initiatives. Such a template could include pros and cons of different decumulation options at retirement, and a translation of pension savings accrual into income streams. This could demonstrate the monthly amount of retirement income that could be generated by an accumulated balance. People should also be aware of the consequences of making bad decisions, particularly if no default option is available.

Information on life expectancy may also be useful, although this information should include illustrations of the probability of an individual (and financial dependents) surviving to various ages beyond average life expectancy at retirement, taking into account expected future mortality improvements. It is important that this is presented in a clearly understood way.

Given that many financial products can be complex, there is merit in considering the benefits of retirement options within the information provided to individuals before, during and after retirement. A range of options presented in easily understood language should encourage retirees to obtain better outcomes for their own circumstances.

There is a large body of research to suggest that low levels of financial literacy can increase the risk of suboptimal retirement income decisions (Kehiaian, 2012; Capuano and Ramsay, 2011). We support a proactive approach to helping people understand and undertake financial planning, from early years to retirement. Alongside the provision of financial guidance and advice supported by governments, regulators and industry, we believe employers can play an important role in educating people. This can be specifically in terms of highlighting information that will help them navigate their retirement income choices within their employer-sponsored plans.

Flexibility

It is critical that regulation be sufficiently flexible to reflect individuals' different retirement needs, changing circumstances, and their varying capacity to exercise choice. A critical issue is flexibility during retirement to allow people to adjust their arrangements to suit changing circumstances. However, an appropriate regulatory framework will help ensure that individuals' retirement income is safeguarded.

A flexible regulatory framework should also support innovation. This should foster the balance between social policy objectives and cost of compliance that will ultimately fall upon the consumer.

Innovation by product providers will allow consumers to select solutions that best reflect their needs, both anticipated and actual. A range of products that attract the attention of consumers by offering practical, cost-efficient outcomes should lead to better retirement income solutions.

A critical issue is flexibility during retirement to allow people to adjust their arrangements to suit changing circumstances.

Equity

As far as possible, governments and regulators should ensure that decumulation is fair and that the concept of "fairness" is understood. For instance, governments and central banks need to be mindful of the impact of monetary policy on products that lock into the current interest rate environment.

Part of the challenge in considering equity, or fairness, is defining it. Indeed, it can be argued that any definition of equity will be subject to the heavy influence of those making the definition. Individuals will consider how they are personally impacted in defining fairness. Actuaries, in many cases, will consider fairness across a given population. However, from a government perspective, whether local or national, fairness is determined by a balance of public policies adopted in the best interest of the constituencies for which they are intended and the stakeholders that they affect.

Consequently, the practical matters that will be subject to disagreement around defining equity will include the allocation of tax relief for retirement income, during both accumulation and decumulation. The allocation of benefit (and cost) between generations will also be subject to different interpretations of what is equitable. In practice, different governments introduce policy changes affecting equity that will lead to changes in taxation and the development of retirement income solutions.

Changes to the retirement income system cannot be undertaken without consideration also of pension costs, aged care costs and all sources of potential funding, including housing wealth.

Sustainability

Changes within a retirement income market should enable a long-term sustainable market to develop. Sustainability of the retirement market over a number of generations would provide clarity to solution providers. More importantly, changes that focus on the longer term and do not encourage "tinkering" with existing systems would also offer clarity to the population at large. A stable sustainable system that enables the population to undertake financial planning would be very welcome.

Sustainability also requires an equitable intergenerational system to develop. If developments in any retirement income market put an unsustainable burden on a specific generation of taxpayers, further changes will be inevitable.

Sustainability for the individual will require an efficient system, in that one's overall level of expenses will have to be sufficiently low to make it economically viable. Possible areas of non-efficiency include excessive commissions, high investment and/or administration fees and not taking advantage of the economies of scale. With such large memberships and with such long time spans, small losses in efficiency in a retirement incomes system can result in very large leakage of benefits.

Defaults at decumulation

The conceptual shift from wealth accumulation to income replacement during the decumulation phase can be challenging. This is particularly the case when pension scheme/plan membership has been either compulsory or on an automatic/opt-out basis. This challenge is exacerbated by the myriad options regarding how an individual may choose to take their retirement income. The variety itself presents a challenge for the creation of an "intelligent default" that is able to meet a large number of DC pension holders' needs when they reach retirement. Again this is most applicable to a default that is designed to help mitigate the risk that they either over- or underspend their savings over the course of their lifetime.

Whereas solutions are common in the savings and investment of pensions in all three countries, retirement income options differ in Australia, the UK and the US—both in terms of the commonly used strategies in existence and their adoption more broadly. However, following recent changes to the taxation of pensions in the UK, which have led to a significant reduction in the predominant annuities market, we may see greater parity of experience for retirees in Australia, the UK and the US, with individuals facing a wide range of options at retirement.

Currently, although the majority of assets are directed to income stream products, around half of retirees in Austrailia choose a lump sum at retirement. The vast majority of the other half selects an account-based pension (which are investment accounts, meaning the individual account holder bears the investment, inflation, and longevity risks) and there is limited demand for products that provide insurance against longevity risk.

In the US, the default payment option in most DC plans is a lump sum payment at normal retirement date (generally age 65). If the account balance is less than $5,000, sponsors choose to pay an immediate lump sum, regardless of the participant's preference. For larger account balances the participant generally can elect an immediate lump sum, periodic distributions of any specific amount, or leave the entire balance invested until a later date.

In the UK, annuities have predominated but, following changes to the taxation of pensions from April 2015, there has already been a significant shift in the market, with annuity sales falling by 56% in Q3 2014, compared to Q3 2013 (ABI, 2014).

Currently in Australia and the US—and the UK since April 2015—lump sum withdrawals and withdrawals from both guaranteed and non-guaranteed income streams receive the same tax treatment. In addition, income streams, guaranteed and non-guaranteed, can qualify for tax-exempt investment income. There is no tax incentive to encourage retirees to choose to invest in a guaranteed income stream product at any point during their retirement, making this an unlikely default choice. The evidence supports this. In the US, it is rare for a DC plan to offer a lifetime income solution at decumulation, despite recent efforts by the government to permit, or encourage, the provision of annuity options. Similarly, in Australia, products offering a lifetime income guarantee make up a very small proportion of the retirement income market.

Furthermore, in all three countries, there is a risk that decisions made by individuals at the point of retirement will impact the level of their lifetime social security benefit. While the operation of social security systems is different in each nation, there is a risk that decisions made by individuals at the point of retirement could mean that they exhaust their pension assets.

There has been some suggestion that the situation may change in Australia, following the most recent report from the Financial System Inquiry (FSI). In December 2013, the Australian treasurer appointed an independent committee to undertake the FSI and establish the direction of the Australian financial system over the next decade. In the final report, released on 7 December 2014, the inquiry concluded that, while the superannuation system[3] is critical to helping Australia deal with the challenges of an ageing population, the "*retirement phase of superannuation is underdeveloped and does not meet the risk management needs of many retirees*."[4] The FSI also concluded that greater use of pooled longevity risk products could increase retirement incomes. It recommended that superannuation trustees be required to pre-select a Comprehensive Income Product for Retirement (CIPRs) for members and impediments to retirement income product development be removed.

In the US, recent Treasury regulations permit 401(k), and similar qualified plans, to offer Qualified Longevity Annuity Contracts (QLACs) through an exemption system (discussed in more detail in the Appendix). Longevity annuities in the US are purchased as a person nears retirement age but payments are deferred to start in the future. For example, a 65-year-old at retirement may buy a longevity annuity with a commencement of payments at age 85, thus using the majority of the portfolio to provide withdrawals until age 85. If the retiree is still alive at age 85, the longevity annuity provides the necessary living expenses until death.

How the UK's retirement income market might change following April 2015 is not yet clear but, based on the market developments since the announcements, we can expect a radical reduction in the number of people opting to purchase annuities. The review of pensions taxation may lead to further changes in decision making by new retirees.

Lifetime immediate annuities are probably the most recognised product in the longevity guarantee market. Historically demand for annuities has been low where their purchase is a voluntary option. Known as "the annuity puzzle" several behavioural factors have been identified to try to explain this lack of demand. These include: retirees view their pension savings as an investment rather than a means to fund future consumption; concern these solutions do not provide a certain return of capital, wanting to make bequests; perceived poor value; and reliance on state pensions/social security for lifetime income in retirement.

3 Superannuation is a means of accumulating private pensions savings in Australia. Minimum provisions are compulsory for employees.

4 Financial System Inquiry report

Perceived value of money is at the core of many of these behavioural factors, with solutions that offer a guaranteed income for life representing the best value for "healthy" lives, or those who have a reason to think they will live longer than expected. The underwritten annuities market in the UK has had success addressing this by offering higher annuity rates to those in ill health or with certain lifestyle factors, such as smoking, which may reduce their life expectancy.

Along with life expectancies, long-term interest rates are another key component in determining annuity rates. In a low interest rate environment, consumers are, understandably, cautious about locking their funds into an income stream determined from rates prevailing at that time.

These issues undoubtedly impact the desirability of lifetime income guarantees at particular points in time. For particular retirees, it may be that longevity insurance is not the optimal choice. However, while the UK market is shifting, there has been recognition in Australia and the US that their systems could do more to address the consequences of longevity risk. For some retirees, lifetime income guarantees are likely to offer valuable protection against the financial risk of outliving their resources. We believe there would be value in developing appropriate defaults that allow individuals to access their pensions through an income stream that offers flexibility in their early years of retirement. However in the latter years, they could provide, at a minimum, a structured lifetime payment with the potential for a lifetime income guarantee to protect against their longevity risk. Illustrations of such solutions include deferred annuities purchased at retirement age, or variable annuities that do not offer an income guarantee.

It is evident different nations have developed different retirement solutions that reflect retirement income demand and legislative frameworks. Developing new solutions as markets change should draw on the experience of other markets. The Appendices contain examples of solutions in each of the UK, Australia and the United States.

Guidance and advice

In order to help people identify the most appropriate retirement income product for their circumstances, quality information and advice is needed—not just at the point of retirement, but leading up to and beyond it. In all three countries, this need is acknowledged and, to varying degrees, support is available including public funded guidance (albeit at different levels) and paid-for, regulated, advice. Steering people toward guidance and advice is important. We would argue that governments, those who provide retirement solutions, and employers should share responsibility for helping people to navigate the retirement income choices. Any regulatory framework that protects the consumer must also encourage employers to help employees understand their retirement income options without the threat of fiduciary liability.

Outside of the means to access regulated advice, it is important that guidance exists that meets prospective retirees' needs. This is particularly the case for individuals with smaller savings for whom regulated advice may not be cost effective—either from a retiree's or a prospective adviser's perspective. The needs of retirees will be many and varied and, as a consequence, there is value in developing common information that could serve as a consistent basis for retirement planning initiatives. This information would highlight longevity risk to individuals nearing retirement. If it was available during the accumulation phase, it could provide individuals with the pros and cons of different product options at retirement, along with a translation of pension savings accrual into income streams. It would also be helpful if individuals continued to receive relevant information about longevity and other retirement risks and how to manage them for 10 to 15 years into retirement, as their circumstances change.

Information on life expectancy can also be useful, although this information should include illustrations of the probability of an individual (and financial dependents) surviving to various ages beyond average life expectancy at retirement, using a set of standard mortality tables, or considerations of how an individual's specific circumstances could affect that probability.

Conclusions

When approaching retirement, individuals are faced with complex and potentially conflicting objectives. They will also enter retirement in varying degrees of health. As people make this transition, their priorities will fluctuate and change; those with DC pension savings must negotiate these changes while mitigating the inherent uncertainties of longevity, investment and inflation risk on their retirement income. We must be conscious of the fact that individuals are making decisions within the context of a complex tax and social security system, limited product choices and, for some, without appropriate financial advice or guidance.

What is more, for many people, the management of these risks may be a relatively passive undertaking, meaning they do not make deliberate decisions. This underlines the value of considering the role of default options, as a means of supporting people to get the most out of their retirement savings over the course of their lifetimes.

In helping individuals manage this process, a greater focus on the understanding and impact of longevity risk is required, not least to help counteract the tendency for people to underestimate their life expectancy. Providing individuals with consistent and timely information on the adequacy of their savings, in relation to expected longevity, is useful; however, reliance on a central estimate for individual retirement planning is not enough. By its nature, half of retirees will outlive this age estimate, whereas the other half will not reach it. Similarly, today's best estimates and mortality improvement factors do not always allow for random fluctuations or changes in trends arising from healthier lifestyles or future medical developments.

Over the course of retirement, people's lifestyles and spending patterns change and this will impact their income needs. Products that offer a lifetime income guarantee, or some form of structured payments, may give retirees a solution, providing they are purchased at the right time, offer value for money and provide some flexibility. Of paramount importance, therefore, is the need to treat consumers fairly and for products and services to perform in the way consumers are led to believe they will. We hope the five principles set out in this paper provide a useful framework to help ensure that people are supported to make appropriate choices about their retirement income throughout the full lifecycle of pensions, from accumulation through decumulation.

APPENDIX A:

Overview of the Australian system

Australia currently employs a three-pillar retirement system— a safety net through the means tested aged pension, compulsory savings through the superannuation guarantee, and voluntary savings through the superannuation system.

Social security

Australia's aged pension system operates on a non-contributory basis and is financed by general tax revenues. Eligibility is determined by age (65+) and is means tested.

From 2017, the eligibility age for the aged pension will increase from 65 to 65.5 and will continue to increase by six months every two years—reaching 67 by July 2023 (Australian Government, Department of Human Sciences, 2014a). The government has proposed that the age be lifted to 70 by 2035 but legislation has not yet been passed.

Australians, who would be eligible for the aged pension, have some incentive to work beyond 65 through the "Work Bonus". The Work Bonus allows pensioners to keep part of their income for a short, prescribed, period; with little or no effect on their entitlement for the aged pension (Australian Government, Department of Human Sciences, 2014b).

Private pension provision

Outside the means-tested safety net operates the Superannuation Guarantee. With very limited exceptions, it is compulsory for employers to pay superannuation guarantee contributions on behalf of their employees and earning more than AUD450 per month. The superannuation guarantee charge (SGC) requires all employers to provide a set, minimum level of superannuation each quarter for each employee. Introduced in 1992, the SGC started at 3% and from, 1 July 2014, was 9.5% of ordinary time earnings. SGC is proposed to increase to 12% by around 2025. The maximum annual salary base to which SGC applies is currently AUD203,240. Individuals can contribute to their superannuation from their pre tax salary through salary sacrifice or from their post tax salary, via personal contributions.

The Australian government also offers various incentives to encourage low income earners to save for their retirement, including a co-contribution for personal contributions and a low income superannuation contribution payment.

Superannuation benefits are generally not accessible until an individual reaches their preservation age. Preservation ages depend on year of birth and currently range from 55 for someone born before 1 July 1960 through to 60 for those born after 1 July 1964. At retirement, funds can either be taken as a lump sum or an income stream, with both generally being tax free after age 60.

Taxation of private pension savings

Subject to certain limits, a tax rate of 15% applies to concessional (before tax) contributions, as these are paid from pre tax sources. Non-concessional contributions arise from post tax sources. Subject to limits, non-concessional contributions are not taxed within the fund. Investment income is also taxed at 15% (reduced by dividend imputation credits from Australian shares and some capital gains tax relief) during the accumulation phase. The tax rate on investment income reverts to zero during the decumulation phase if the benefit is taken as a pension (including an account based pension).

Decumulation

Currently, although the majority of assets are directed to income stream products, around half of retirees choose a lump sum at retirement. Of those retirees who take their accumulated balance as a lump sum, 44% use it to pay off housing or other debts, to purchase a home, or make home improvements. In contrast, 28% use their lump sum to repay loans or purchase a holiday or a new vehicle (Financial System Inquiry, interim report, 2014).

The majority of the other half opts for an account-based pension—whereby the account holder bears the investment, inflation and longevity risks. There is very low demand for products that provide protection against longevity risk, for example lifetime annuities. For those electing to purchase an income stream product, their options include guaranteed products, investment products with structured draw down, and hybrid products that combine both of these elements.

Various behavioural factors have been cited for the low take up rate of lifetime annuities in Australia, including preference for having access to capital, wanting to bequest assets, reliance on the aged pension for lifetime income at retirement, and perception that annuities do not represent value for money (Australian Government, 2014).

Historically, sales volumes for lifetime annuities in Australia have always been relatively low, despite various incentives to encourage their purchase. Over time, these incentives have either been removed or extended to encompass other income stream products. In 2007, the Australian Government finished implementing changes to make both lump and income stream withdrawals after age 60 tax exempt and equalised treatment of all income stream products under aged pension asset test rules. Today, tax incentives favouring lifetime annuities have been removed and all income stream products are admissible for means-testing (Rotham and Wang, 2013).

For those electing to purchase an income stream product, account-based products tend to be chosen, with at least 94% of current pensions assets invested in an account-based product (Australian Government, the Treasury, 2014). An account-based product is essentially a managed investment with a minimum annual drawdown. Drawdown amounts depend on the retiree's age and range from 4 to 14% per annum of the account value, as at the start of the financial year. In contrast to annuities, investors in account-based pensions bear all of the investment and longevity risk. The FSI concluded that the popularity of account-based products is a result of offering significant flexibility and higher returns than some other products (The Australian Government, the Treasury, 2014).

Financial literacy, guidance, and advice

In recognition of the value of financial literacy and the need for the public system to provide a level of guidance, the Australian Department of Human Services offers a free, confidential "Financial Information Service". This service provides education and information on financial issues and is available all Australians. Planning effectively for retirement is one area where this service can help individuals to make informed decisions.

The recently published FSI report acknowledged that, while the importance of financial literacy should not be understated, "*...increasing financial literacy is not a panacea. Further measures are needed to support the fair treatment of consumers.*"

The FSI emphasised the need to treat consumers fairly and for products and services to perform in the way consumers are led to believe they will. At the same time, consumers should also bear responsibility for their financial decisions.

The Australian regulatory framework, in respect of financial advice, is focused on point of sale. Therefore, the FSI has recommended that product issuers and distributors should take greater responsibility for the design and targeted distribution of products. The FSI acknowledged industry concerns that this recommended legislation could increase regulatory burden and compliance costs; however the potential benefit to consumers is perceived to outweigh this.

The FSI provided an outline of what this obligation should cover in relation to product design, distribution and after sale review. For product design, the FSI proposed issuers should identify target and non-target markets, taking into consideration risk/return profiles and undertake stress testing to see how consumers would be impacted under different scenarios. It also proposed issuers and distributors should agree how a product should be distributed, and controls should be put in place to ensure distributors act in accordance with an issuer's expectations. In the final loop of this control cycle, the FSI recommended issuers and distributors undertake regular reviews to ensure products continue to meet the target market's needs and that distribution is consistent with the product's risk/return profile.

The FSI also recommended that, *"to build confidence and trust in the financial system, financial firms need to be seen to act with greater integrity and accountability. The Inquiry believes changes are required not only to the regulatory regime and supervisory approach, but also to the culture and conduct of financial firms' management, which needs to focus on consumer interests and outcomes."*

The FSI suggested industry associations could lead this initiative, with stakeholder input from the regulator and consumer bodies and highlights enhancing firm or industry codes of conduct as a way to increase accountability and raise standards. The FSI also called for a level commission structure to be legislated to ensure upfront commissions are not greater than ongoing commissions, so as to align the interests of advisers and consumers.

Future of financial advice (FoFA)

The FSI recommendations relating to consumer outcomes attempt to build on FoFA reforms, which were introduced by the Government in response to a Parliamentary Inquiry into financial products and services. Mandatory since 1 July 2013, compliance with these legislative changes aims to improve the quality of financial advice in Australia and enhance retail investor protection, and in doing so improve trust and confidence in the financial planning sector.

To achieve this, the reforms cover:[5]

- A ban on conflicted remuneration structures, including commission and volume based payments.
- A duty for financial advisers to act in the best interests of their clients.
- An opt-in obligation requiring providers renew their clients' agreement to ongoing fees every two years.
- Enhanced powers for the regulator, the Australian Securities and Investment Commission (ASIC).

The current Government has made a number of amendments to the legislation and some refinements await approval by the Senate.

The final FSI report stated FoFA reforms were likely to address some of the weaknesses of the current system in respect of treating customers fairly; however, issues with adviser competency remain. Further, a level commission structure, as recommended by the FSI, attempts to address the fact that life insurance products are exempt from the FoFA's ban on commissions.

5 Overview of the FoFA reforms: http://asic.gov.au/regulatory-resources/financial-services/future-of-financial-advice-reforms/fofa-background-and-implementation/

APPENDIX B:

Overview of the UK system

The UK operates a system made up of state provision, to which working age adults contribute through the National Insurance (NI) system; a state funded 'top up' means-tested support; and private pension provision (be it personal, workplace or stakeholder pensions).

Social security

Individuals pay National Insurance contributions on earnings over £153 per week (2014/15) and their entitlement to a state pension is calculated on the basis of their contribution record over the course of their working life, with people able to claim their state pension when they reach State Pension Age (SPA). In order to qualify for a state pension in the UK, individuals must have paid the qualifying amount of NI for at least 10 years (with 35 years required for the full State Pension).

There are currently two parts to the UK State Pension: the basic State Pension, which is flat-rate; and the additional State Pension, which is partly earnings-related.[6] Alongside the State Pension, there is a mean-tested top up called "Pension Credit". Pension Credit is made up of two elements: the "guarantee credit", which supplements a person's weekly income to the guaranteed minimum level; and "savings credit" for those with some level of saving or additional income. Pension Credit will be abolished following the introduction of the New State Pension in 2016, although there will remain a means tested guarantee credit.

In the UK, SPA is currently 65 for men and 62 for women; women's SPA will increase gradually between now and 2018, when it will equalise at 65 for both genders. SPA will then increase to 66 between 2018 and 2020, 67 between 2026 and 2028, and then from 67 to 68 between 2044 and 2046 (DWP, 2013b). There are incentives to work beyond SPA.

The monthly entitlement increases if a person delays claiming their benefit. If an individual reaches SPA before 6 April 2016, the amount they ultimately receive will increase by 1% for every five weeks they put off claiming (up to 10.4% for every full year delayed). This can be taken as a lump sum (which will include interest at 2% above the Bank of England base rate) and is taxed at the marginal rate.

The rules will change after April 2016 when the new state pension is introduced. In order to receive extra pension under the new state pension regime, an individual must defer for a minimum amount of time (to be set in 2015). Furthermore, the annual rise will be reduced from 10.4% to 5%.[7] As a consequence, the incentive to defer retirement is much less.[8]

6 This will change in 2016, when the Government introduces a single tier state pension.

7 The new State Pension: https://www.gov.uk/new-state-pension/eligibility

8 Workers to lose out on thousands as bonus payout for delaying state pension is slashed in HALF from 2016: http://www.thisismoney.co.uk/money/pensions/article-2701335/Boost-deferring-state-pension-slashed-half-2016.html

Private pension provision

In the UK, the landscape of private pension provision has been changing with a decline in DB schemes and a rise in DC pension schemes. This shift has been driven by an increase in life expectancy, which inevitably increases the amount of money that DB schemes need to pay out. This, alongside volatile bond yields and equity returns and legislative changes, has led many employers to view their DB schemes as unsustainable (Pensions Policy Institute, 2012). In 2014, current pension assets in the UK totalled USD3.3 trillion, compared to USD1.3 billion in 2003 (131% and 67% of GDP respectively).[9]

In 2012, the UK Government introduced auto-enrolment to encourage more people to save through their employer for retirement. In 2012, the process of phasing in auto enrolment began (known as the staging process) and is expected to result in between 6 and 9 million (new) people saving, or saving more, in a workplace pension scheme.[10] Employers are now required to automatically enrol workers aged between 22 and SPA, who earn at least £10,000 a year (2015/16 rates) into a qualifying workplace pension scheme and, unless they opt out, make minimum contributions to that scheme.[11] Minimum total contributions through auto enrolment are currently 2%, with at least 1% contributed by the employer. These will gradually increase over time so that, by 1 October 2018, minimum contributions will be 8% (3% from the employer and 5% from the employee).

Taxation of private pension savings

Private pensions can be divided into three stages for tax purposes—contributions, investment and withdrawal. Subject to caps, the UK tax treatment of pensions broadly follows an "exempt, exempt, taxed" (EET) model; however, the recent HM Treasury consultation reviewing pension taxation may lead to future changes.

- Contributions: both individuals and employers receive tax relief on their pension contributions provided they do not exceed an annual allowance and employer contributions are exempt from NI.
- Investment: investment growth from pensions is also broadly exempt from tax.
- Withdrawal: individuals are entitled to take 25% of their pension pot as a tax free lump sum (so this element is exempt from tax); the remainder is taxed as income, unless it exceeds "lifetime allowance" in which case higher tax charges apply. From 2015 lump sums will be taxed at an individual's marginal rate.

The net cost of tax relief has been estimated to be GBP23.7 billion (2010/11 tax year) (PPI, 2013).[12] This cost includes tax relief in respect of deficit contributions for DB schemes, as well as tax relief on contributions of current provision. This can be broken down into:

- tax relief paid on employees' and employers' contributions to pension schemes (GBP22.7 billion);
- tax relief on contributions to personal schemes (GBP5.8 billion); and

9 Towers Watson Global Pension Assets Study 2014

10 DWP (2013) *Framework for the analysis of future pension incomes: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/254321/framework-analysis-future-pensio-incomes.pdf*

11 Financial Services Consumer Panel (2013), *Annuities: Time for Regulatory Reform: https://www.fs-cp.org.uk/sites/default/files/annuities_position_paper_20131203.pdf*

12 This figure does not take into account the changes to the Annual Allowance and the Lifetime Allowance announced which took place from the 2011/12 tax year where the Annual Allowance was reduced from £255,000 to £50,000.

- tax relief paid on investment returns (GBP6.5 billion).
- The tax liable on pension payments, as they are paid out is GBP11.3 billion. This is offset against tax relief given, to reach the net tax relief cost (It should be noted that the tax payable on pensions is in respect of a different cohort that receives tax relief).

The key purpose of tax relief on pensions is to encourage individuals to save for their retirement, but the evidence on the impact of tax relief as an incentive to save is limited.[13] The government has raised the question of a sustainable tax system in its 2015 consultation.

Decumulation

Prior to the 2014 Budget, notwithstanding any cash taken as a lump sum at retirement, most retirees would draw down their retirement savings as an income stream. In 2012, 420,000 new annuities were purchased and there were 6.3 million annuity policies in payment. According to the Financial Conduct Authority (FCA) (2014b), whilst drawdown products are becoming more popular, annuities have remained the predominant product: in 2012, the premium value of annuities was GBP14 billion, compared to GBP1.2 billion for drawdown. Of the annuities purchased in 2013, 68% were single-life annuities and 32% were joint-life annuities. However, following the 2014 Budget, the retirement income market profile is changing. Figures from the Association of British Insurers (ABI) in November 2014 showed that the number of drawdown contracts sold by ABI members has more than doubled compared to Q3 2013, with a reduced average pot size, demonstrating that drawdown is opening to a wider market. The value of drawdown contracts sold by ABI members was around 50% of the value of annuity sales, compared to 14% a year ago. The number of annuities sold fell by 14% on the last quarter, and by 56% compared to Q3 2013. The number of annuities sold has fallen further than the value of those annuities, suggesting that more people with smaller pension pots are deferring or taking cash.

In 2014, the FCA found that competition in the annuities market was not working well for consumers—with many missing out on a higher income by either not shopping around, or not purchasing an annuity that is most appropriate for their circumstances (for example, an medically underwritten annuity) (FCA, 2014b). The FCA's Retirement Income Market Study found that around one in five of those who purchase an annuity from an existing provider do not realise they have the option to switch (FCA, 2014b). The study found individuals are deterred from considering their options by the length and complexity of the information packs sent out by providers or because they do not believe that the sums involved make it worthwhile (FCA, 2014b).

It is estimated that around 26% of annuities are medically underwritten with an average uplift of around 20-30% (Financial Conduct Authority, 2014a). This is much lower than the estimated 60% of retirees who may be eligible for some form of enhancement, according to industry commentators.[14] In the annuities market the size of pot is the strongest predictor

13 Pensions Policy Institute (2013) *Tax relief for pension saving in the UK*

14 Annuities explained: http://www.which.co.uk/money/retirement/guides/annuities-explained/enhanced-annuities/

of whether people shop around; only 46% of those who bought an annuity with less than £10,000 shopped around as opposed to 63% overall. The availability of appropriate products is also important as shown by the increase in the proportion of people purchasing joint-life annuities—41% of these were purchased with a pot smaller than £20,000. Enhanced annuities are also on the increase amongst those with smaller pots (NEST, 2014).

The FCA has analysed the impact of the current low interest rate environment and mortality improvements on annuity rates. Its study found that an annuity provider pricing using 2006 interest rate assumptions could offer annuity rates 11% higher than the 2014 level. Similarly, if 2006 mortality improvement assumptions were used, 7% higher rates could be offered to today's retirees (FCA, 2014c).[15]

This study also examined the value of annuities, defined as Money's Worth (MW)—the ratio of the expected present value of annuity income (i.e. the value of the money in today's terms) to the annuity premium—and found that a 65 year old male single life annuitant with a GBP 50,000 pension pot could expect to receive 94% of their premium back. This ratio was lower if the annuity was provided internally by the pension accumulation provider, reinforcing the value of shopping around.

Budget 2014

The UK pensions system has also been subject to significant scrutiny and to multiple reforms. Over the last decade, successive governments have introduced legislative changes in an effort to simplify the system, increase pension savings and invigorate the retirement income market. In 2014, the Chancellor of the Exchange announced a number of tax changes that radically affect decumulation of pensions in the UK.[16] In April 2015, changes to tax rules allowed people to access their DC pension savings as they wish from the point of retirement. Subject to the Lifetime Allowance, whilst 25% of the fund will still be available tax-free, the existing 55% tax charge on full withdrawals will be replaced with a tax charge on all pension withdrawals at the individual's marginal tax rate.

The UK government hopes that providers will respond to the "freedom and choice" agenda with innovative product developments. The signs so far suggest the Budget announcements will lead to a significant diminution of the annuities market.

15 The value for money of annuities and other retirement income strategies in the UK: http://www.fca.org.uk/static/documents/occasional-papers/occasional-paper-5.pdf
16 Budget 2014: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/293759/37630_Budget_2014_Web_Accessible.pdf

Financial literacy, guidance, and advice for DC scheme members

Between two and five years prior to an individual saver's selected retirement date (SRD), a pension provider must communicate on at least one occasion with the consumers to encourage them to consider their prospective retirement options and alert them to the decisions they will need to make.

Where a consumer has not contacted the pension provider to discuss their retirement options, the provider must also send out a "wake-up" pack at least 6 months pre-SRD for trust-based occupational schemes, and at least 4 months pre-SRD for contract-based schemes. Providers should then send out a "follow-up" pack at least 10 weeks pre-SRD for trust-based occupational schemes and at least 6 weeks pre-SRD for contract-based schemes.

NEST suggests an optimum time for engaging people with their pension is between ages 55-57, ten years before retirement, as this is enough time to take action that will enable the person to align the investment of their pension with their plans to withdraw their pension.[17] At this age, people will start to have some certainty around their pot size at the point of retirement; the lack of certainty prior to this age may hinder engagement. At age 55, the pensions industry and employers could work alongside government to reach out to scheme members.

In the UK, following the 2014 Budget announcements, a new service, "Pension Wise", will be available and will provide individuals between 50 and retirement with a free 30-minute face-to-face guidance session or online guidance.

Currently, regulated financial advice is costly and informal information and guidance is largely provided by charities and independent services set up by Government. It is important that new products are designed with the likelihood of consumers seeking guidance or advice in mind. For example, traditionally drawdown required regulated (and likely expensive) advice. If this will not be the case under the new freedoms, it will be important that the right balance is struck between having solutions that are easily communicated, and those that might be more opaque and require a higher level of knowledge, but have the potential to produce better outcomes. More broadly, there is a balance to be struck between enabling positive choice and overwhelming consumers, leaving them unable/uncomfortable with making a choice, as this is likely to be a significant barrier.

17 NEST (the National Employment Savings Trust) is a defined contribution workplace pension scheme that was established by the Government to facilitate automatic enrolment as part of the workplace pension reforms under the Pensions Act 2008. Due to its public service obligation, any UK employer can use NEST to meet its new workplace duties as set out in the Pensions Act 2008.

APPENDIX C:

Overview of the US system

The US operates in a three-tier environment for retirement income, but not with the same balance as the other countries examined in this paper. The first tier is the Social Security program and the Supplemental Security Income (SSI) program. The second tier is the tax-favoured programmes available through qualified employer plans and Individual Retirement Accounts (IRAs). The third tier is voluntary savings that do not receive any special incentives or other benefits; this tier is not described in detail in this paper.

Social Security

In the US, individuals earn "credits" toward Social Security retirement benefits, which are based on annual earnings, with a maximum accrual of four credits per year. For example, in 2015, one credit is earned for each $1,220 of annual earnings up to a maximum of 4 credits for $4,880 of annual earnings. The amount of earnings required to earn a credit changes each year with wage inflation. Once an individual acquires 40 credits (approximately 10 years of employment), they are fully insured and eligible to receive retirement benefits. The amount of benefit a person receives is referred to as their Primary Insurance Amount (PIA) and is calculated by first indexing each year of a persons' earnings history, with wage inflation adjustments, and then finding the average indexed monthly earnings (AIME) for the 35 highest years. A formula is then applied to the AIME that replaces 90% of the first tier of earning, 32% of the middle tier and 15% of the highest tier of the wage inflation-adjusted average monthly earnings. Automatic cost of living increases are added to the benefit during the payout phase each year based on the Consumer Price Index for Urban Wage and Clerical Workers (CPI-W).

As in Australia and the UK, there is an incentive to work beyond the age a person becomes eligible for an unreduced Social Security benefit (referred to as Full Retirement Age (FRA), which is currently between ages 66 and 67, depending on year of birth). Where people opt to continue working, their AIME typically shifts upwards with the extra years of earnings. If a person elects to defer payment of their Social Security retirement benefit beyond their FRAs, they will be eligible for a Delayed Retirement Credit for every month deferred between FRA and aged 70 currently provides an 8% per year increase in their PIA.

The SSI program is a federal income supplement means-tested program funded by general tax revenues (not Social Security taxes). It is designed to help aged, blind, and disabled people, who have little or no income; it provides cash to meet basic needs for food, clothing, and shelter.

Private pension provision

The Employee Retirement Income Security Act of 1974 (ERISA) is landmark legislation regarding US retirement policy. It greatly increased the oversight of employer-sponsored retirement plans and provided tax incentives for personal retirement savings. ERISA first became effective in 1976. At that time, Defined Benefit (DB) plans greatly outnumbered Defined Contribution (DC) plans, but over the nearly 40 years since ERISA was enacted, DC plans have become the predominant retirement plan sponsored by employers. It should be understood that the decision to sponsor a retirement plan is entirely voluntary on the part of the employer; however, once such a plan is established it will be subject to ERISA and the corresponding regulatory oversight. In general, employer contributions to both DB and DC plans under ERISA are tax deductible when made, investment earnings accumulate tax-deferred, and participants pay income tax when benefits are paid. Plans that meet the federal requirements are termed "qualified" under federal tax law to provide these tax-deferred benefits. Tax issues related to 401(k) plans are discussed in more detail below.

The biggest change in US retirement policy since ERISA was enacted has been the development and evolution of 401(k) plans. These plans (named for the section of the Internal Revenue Code authorising such plans), allow employees to defer pay from the employer into the plan trust. Many participants have a choice between paying tax at the time the contribution is made, and withdrawing accumulations tax free, or deferring taxes on both the deferred pay and the trust investment earnings attributed to the employee, until the individual takes receipt of the accumulated benefit. Typically, employers will provide some level of matching contributions on the deferral to incentivize participation. Limits are placed on the amount of employee deferrals and employer matching contributions. In addition, the employer must demonstrate that highly paid employees are not taking a disproportionate advantage of the tax benefit.

ERISA has been amended numerous times since 1974, primarily to strengthen the employer's obligation to fund DB plans and to expand the trustee's and employer's fiduciary responsibilities to protect the employee's retirement benefits.

ERISA (and the regulations under ERISA) has also been changed over the years to encourage greater participation in 401(k) plans, through auto-enrolment, and to increase employees savings rates under these plans through auto-escalation (i.e., automatically increasing the default deferral rate for each year of participation in the plan). These changes have been embraced by some employers sponsoring 401(k) plans.

It is important to note, however, that there is no requirement for DC plan participants to annuitise their retirement income, and in fact, there is no requirement for the employer to offer an annuity option within the plan. Recent efforts by the federal government to permit the provision of annuity options within DC plans have had little impact and it is uncommon for a DC plan in the US to offer a lifetime income solution for DC plan decumulation.

Employers that choose to establish a pension program may sponsor a defined benefit plan, a defined contribution plan, or both. The number of defined benefit plans in the US peaked at over 112,000 in the mid-1980s and has been steadily declining; in 2013 there were fewer than 24,000 defined benefit plans insured by the Pension Benefit Guaranty Corporation (PBGC).[18] Over the same period the number of defined contribution plans has steadily grown.

18 Table S-31 PBGC Databook

In 2013, approximately 45% of the workforce was covered by an employer plan.[19]

Federal tax laws require that plans which employers choose to establish must benefit a broad cross section of employees and must not excessively benefit highly compensated employees. Plans are not required to cover all employees or provide covered employees with equal benefits, but the plan must demonstrate that it does not discriminate in favour of highly paid employees.

Private sector pension programs are voluntary programs in the US set up at the discretion of employers. Workers at companies that choose not to sponsor a pension program and those who do participate but earn less than certain statutory amounts ($116,000 for married filing jointly in 2015) may participate in Individual Retirement Accounts (IRAs). Individuals who participate in an IRA have the same tax choices as individuals participating in 401(k) plans (paying income tax either at the time of contribution or upon withdrawal). The contribution limit for IRAs is considerably lower than for qualified plans. In 2015, the IRA contribution limit (for other than rollover contributions) is $5,500 ($6,500 if over age 50). IRAs work much like employer DC plans but there is no employer with fiduciary responsibilities; instead, individuals establish these accounts with financial institutions that offer various investment alternatives and administer the accounts.

There are no mandatory retirement programs other than Social Security. As a result, a large percentage of US workers do not participate in employer-sponsored plans, as much as 55% by some estimates. Some employers also maintain non-qualified retirement programs for relatively small groups of highly paid employees. These programs do not receive the preferential tax treatment afforded to qualified plans and are not further considered here.

Taxation of private pension savings

Employer contributions to qualified defined benefit or defined contribution plans are tax-deductible expenses for employers and thus not subject to taxation. Consequently, limits apply to the benefits or contributions on behalf of an individual; there are also technical limits with respect to the overall contribution of the employer, but these rarely apply.

Employee contributions to the most popular type of defined contribution plan can be made on a pre-tax basis, i.e., the contribution is not subject to income tax although it is subject to Social Security tax. The maximum pre-tax contribution for an employee in 2015 is $16,000 ($24,000 if age 55 or older). Additional employee contributions can be made but are subject to income tax up to a total contribution (employer and employee) of $53,000 in 2015. Some plans have a Roth feature that enables the employee to elect to have the contribution taxed when contributed. These Roth plans provide that future distributions will be entirely tax-free provided the funds remain in the plan at least

19 Employee Benefit Research Institute (www.ebri.org/)

five years. Roth contributions are limited to taxpayers with adjusted gross income less than $193,000 if married and filing jointly. Other limits apply for other tax statuses. Employee contributions to other types of defined contribution plans, or to defined benefit plans, are made on an after-tax basis, and are relatively rare.

The investment income generated by funds accumulated in a qualified retirement program (DB or DC) is not subject to taxation while funds remain in the qualified plan. Employee contributions to a defined benefit plan are subject to current taxation. Investment income generated by these contributions is not subject to taxation while in the qualified plan.

Most benefits paid from a qualified plan are subject to taxation as ordinary income when paid (taxed at regular federal income tax rates that currently range from 10% to 39.4%, plus potential state income tax). Distributions that reflect employee contributions that have previously been taxed are exempt from taxation but the income generated by these contributions is taxable. Distributions from Roth accounts are entirely tax-exempt provided funds were invested the minimum required time period.

Benefits that are distributed early, generally before age 59.5, are subject to an additional tax of 10%. This tax is intended to discourage early distribution.

An additional tax incentive designed to encourage low-paid workers to participate in employer-sponsored plans or contribute to an IRA is the saver's credit. This credit offsets income tax otherwise due and is available to workers whose adjusted gross income is less than $36,500 (married filing jointly, other limits for other statuses). The credit is 50% of the amount contributed to the plan. Lesser credits of 20% or 10% apply to incomes over $36,500 but less than $61,000.

Decumulation

At retirement, participants in DB plans are eligible to receive lifetime income, generally with an option to take a reduced amount in return for survivor annuities that pay between 50% and 100% of the participant's benefit upon the participant's death. Many plans offer a lump sum option that can be transferred to an IRA or a DC account. If the value of the pension is less than $5,000, the sponsor can pay a lump sum regardless of the participant desires. Inflation indexing of DB annuity options is not common, but does occur (often in limited form) in some cases.

At retirement, participants in DC and IRA plans are entitled to the account balance that is highly dependent on the contributions that were made and the investment results. The default payment option in most DC plans is a lump sum payment at normal retirement age (generally age 65). If the account balance is less than $5,000, the sponsor can pay a lump sum regardless of the participant desires. For larger account balances the participant generally can elect to:

- take a lump sum;
- take periodic distributions of any specific amount; or
- leave the entire balance invested until a later date (due to tax laws, distributions must commence for the calendar year of the attainment of age 70.5; however, the first withdrawal may be deferred until April 1 of the following year).

There is no assurance of a lifetime income unless the participant elects to buy an annuity from an insurance company. Many participants take lump sums and then contribute the amount directly to an Individual Retirement Account, thus avoiding immediate taxation (referred to as a rollover contribution). Participants then make periodic withdrawals as they need the funds, although they still could use some of the funds to buy an annuity. Beginning at age 70.5, the participant must withdraw minimum amounts which are then subject to taxation.

Sponsors of DC plans have a fiduciary requirement to make decisions that are in the best interests of participants. However, virtually all sponsors refrain from providing advice to participants concerning the various options because such advice would be subject to these fiduciary requirements and, if it proved faulty or inappropriate, the sponsors could be subject to substantial penalties. As a result, sponsors typically advise participants to consult their own adviser concerning which option is best for them.

Some retirees seek out the services of professional financial advisers for advice. Frequently, the advice is to take a lump sum and roll all the funds into an IRA, thus avoiding immediate taxation. The financial adviser can help the retiree manage the IRA (for a fee). The retiree can then takes periodic distributions from the IRA to meet expenses. Distributions from the IRA are taxed as ordinary income.

Financial advisers can help the retiree plan a strategy, or the prospective retiree on their own devise a plan, for withdrawing assets designed to last a lifetime, but generally there is no assurance that funds will last that long. Some typical strategies utilized are described below:

- **Income-only distributions**—If the portfolio is large enough, the retiree can withdraw income only (generally interest, dividends and capital gains, but no principal reduction). Barring complete loss of principal through poor investments, this method does provide income for life and a bequest at death. Unfortunately, few retirees have a portfolio large enough to meet their spending needs without dipping into the principal.
- **4% Rule**—Some financial advisers suggest withdrawing 4% of the investment portfolio in the first year of retirement and increasing the withdrawal each subsequent year by the rate of inflation. This method was developed by back-testing against historic economic scenarios and was felt to provide withdrawals that are highly likely to last a lifetime, but are not guaranteed to do so. The rule is simplistic and unfortunately does not consider the age or sex of the retiree when benefits begin and it does not adjust in subsequent years for large gains or losses in the portfolio.
- **Managed withdrawals**—Some financial advisers suggest allocating most or the entire portfolio to funds specially designed to pay income to retirees. Withdrawals are structured based on the age and life expectancy of the individual. Withdrawals are examined periodically to assess whether the planned withdrawals will be able to be maintained. These strategies significantly improve on the 4% rule but still do not guarantee that funds will be sufficient to guarantee adequate withdrawals for the full lifetime.
- **Annuities**—Annuities generally will provide the greatest amount of initial income for a given investment because they are based

upon not only investment income but also the structured consumption of principal. Nevertheless, annuities are not popular in the US and many refer to this as the "annuity puzzle." Some of the reasons for the lack of popularity include the fixed nature of most annuities that do not increase as inflation increases expenses, the relatively low investment return on funds invested in an annuity, the loss of investment control, the lack of liquidity in a large investment, and fear that death may come earlier than expected and the insurance company would thus keep the funds.

- **Longevity annuities**—A relatively new approach, longevity annuities are annuities purchased when near retirement age but with the commencement of payments scheduled to start many years in the future. For example, a 65-year-old about to retire might purchase a longevity annuity with a commencement of payments at age 85. Such an annuity can be purchased for roughly 10-15%of the cost of an immediate annuity. The cost is greater if the annuity includes a return-of-premium death benefit and less if benefits are paid only if the annuitant survives to receive income payments. The concept is that the retiree uses the bulk of the portfolio to provide withdrawals until age 85. Planning for this portfolio is easier relative to some other options because there is a fixed termination date for ceasing withdrawals rather than the uncertainty of when the retiree will die. If the retiree is still alive at age 85, the longevity annuity provides the necessary living expenses for the remainder of the retiree's life. Longevity annuities can now be purchased with funds in a qualified plan or IRA. The US Treasury Department recently issued final regulations that provide a special exception to the Required Minimum Distributions (RMDs) rules to eliminate RMDs on amounts used to purchase Qualified Longevity Annuity Contracts, a form of longevity annuity. The amount of the purchase must be limited to the lesser of 25% of the qualified plan or IRA value or $125,000.
- **RMDs**—RMDs are a statutory requirement for minimum distributions from qualified retirement plans or IRAs that must begin for the calendar year of the attainment of age 70.5. (the first withdrawal may be deferred until April 1 of the following year). The withdrawal percentages start at slightly below 4% and increase each year. Some advisers suggest using the RMDs as a guide to the amount to spend each year—the RMD mandates withdrawal from the tax-sheltered account and subjects the amount to taxation, but it doesn't require that the retiree spend all the money, the withdrawn amount could be invested in an after-tax investment account.

The advantages cited for RMD withdrawals are that the amount is always based on the market value of the account at the end of the previous year, thus it responds to changes in market conditions. The percentage withdrawn each year also increases reflecting the expectation of a shorter life span than the year before. The exact RMD amount is determined by dividing the distribution period into the market value of the account at the end of the preceding year.

Financial literacy, guidance, and advice

The voluntary nature of qualified plans in the US makes consumer engagement critical to effective retirement policy. Although 45% of US workers are covered by qualified plans, in many of these plans participation of the employee is voluntary and little or no employer contribution is made unless the employee chooses to participate.

The federal Pension Protection Act enacted into law in 2006 permits employers to adopt auto-enrolment provisions that automatically enroll employees in plans at a default contribution percentage, often 3%. Employers may also adopt auto-escalation provisions that increase the employee contribution annually or when a pay increase takes place. These programs are proving effective at increasing the percentage of workers participating in plans at companies that adopt these provisions. Currently 59% of plans utilize automatic enrolment[20] and the participation rate for new employees is increased from 42% to 91%.[21] Approximately 96% of plans with automatic enrollment utilize automatic escalation. The split for automatic enrolment between opt-in and opt-out approaches is roughly equal.

The US Department of Labor recently issued an Advanced Notice of Proposed Rulemaking (an initial step in a process of implementing rules for qualified plans). The Advanced Notice outlined proposals to ensure that the annual benefit statements provided to participants of defined contribution plans include a projection of lifetime income, based on the current account balance and the projected account balance at retirement. The Department of Labor and many proponents of such statements believe that a better understanding of the relationship between the account balance and lifetime income would lead many workers to contribute more to the retirement plan.

20 Aon-Hewitt, "2013 Trends & Experience in Defined Contribution Plans," 2013.

21 Clark, Jeffrey W. et al., "Automatic enrollment: The power of the default," Vanguard Research, 2015.

References

About (2014) *Pensions in the United States.* Available from: http://economics.about.com/od/laborinamerica/a/pensions.htm [Accessed: 15 October 2014]

Actuaries Institute (2014) *Securing Adequate Retirement Incomes for an Ageing Australia*

American Academy of Actuaries Social Security Committee (2014) *Social Security Reform Options*

American Council of Life Insurers (2011) *A National Policy for Lifetime Financial and Retirement Security*

Aon Consulting (2008) *Replacement Ratio Study: A Measurement Tool for Retirement Planning*

Aon Hewitt (2013) "2013 Trends & Experience in Defined Contribution Plans"

Association of British Insurers (2013a) *The UK Annuity Market: Facts and Figures*

Association of British Insurers (2013b) *UK Insurance Key Facts 2013*

Australian Bureau of Statistics (2008) *3.3 million people looking to retire, 11.6 million covered by superannuation.* Available from: www.abs.gov.au/AUSSTATS/abs@.nsf/mediareleasesbyCatalogue/E9679A2449D49632CA2574F90010C0D1?OpenDocument [Accessed: 17 October 2014]

Australian Bureau of Statistics (2013) *Reflecting a Nation: Stories from the 2011Census, 2012-2013*

Australian Government (2014) *Review of Retirement Income Stream Regulation: July 2014*

Australian Government, Department of Human Sciences (2014a) *Age Pension.* Available from: www.humanservices.gov.au/customer/services/centrelink/age-pension [Accessed: 14 October 2014]

Australian Government, Department of Human Sciences (2014b) *Work Bonus*. Available from: www.humanservices.gov.au/customer/services/centrelink/work-bonus [Accessed: 14 October 2014]

Australian Government the Treasury *Interim report of the Financial System Inquiry.* Commonwealth of Australia 2014

Australian Prudential Regulation Authority *Annual superannuation bulletin: June 2012*

Bankrate *Financial Security Index: July 2014*

Bateman, H, Eckert, C, Iskhakov, F, Louviere, J, Satchell, S and Thorp, S (2013) Default and 1/N Heuristics in Annuity Choice, *School of Risk and Actuarial Studies Working Paper 2014/1*

Blake, D., Cairns, A.J.G., Dowd, K., and MacMinn, R. (2006) 'Longevity Bonds: Financial Engineering, Valuation and Hedging' *Journal of Risk and Insurance 73, 647-672,* American Risk and Insurance Foundation

Blake, D. *The consequences of not having to buy an annuity*, *Discussion Paper P1-1409*, The Pensions Institute, Cass Business School, London 2014

Bricker, J. *et al.* 'Changes in US Family Finances from 2007 to 20110: Evidence from the Survey of Consumer Finances' *Federal Reserve Bulletin, vol. 98, no. 2, (February 2012), pp. 1-80,* Federal Reserve Board

Brownfield, C. (2014) The Fourth Pillar—The Role of Home Equity Release in Retirement Funding

Capuano, A., & Ramsay, I. (2011). What Causes Suboptimal Financial Behaviour? An Exploration of Financial Literacy, Social Influences and Behavioural Economics. An Exploration of Financial Literacy, Social Influences and Behavioural Economics (March 23, 2011). U of Melbourne Legal Studies Research Paper, (540)

Clark, Jeffrey W., Utkus, Stephen P., Young, Jean A., (2015) "Automatic enrollment: The power of the default," Vanguard Research, 2015

Club Vita (2013) *Longevity Insights report: putting longevity assumptions into context.* Hymans Robertson

Cumbo, J. (2014) *Budget 2014: Australians dismiss fear of pension profligacy.* Financial Times 20 March 2014

Department for Work and Pensions (2011) *Guidance for offering a default option for defined contribution automatic enrolment pension schemes*

Department for Work and Pensions (2012) *New timetable clarifies automatic enrolment starting dates.* Available from: www.ssa.gov/retirement/ageincrease.htm [Accessed: 15 October 2014)

Department for Work and Pensions (2013a) *Automatic enrolment opt out rates: findings from research with large employers*

Department for Work and Pensions (2013b) *State Pension age timetables* Available from: www.gov.uk/government/uploads/system/uploads/attachment_data/file/310231/spa-timetable.pdf [Accessed: 14 October 2014]

Department for Work and Pensions (2014) *The Pensioners' Income Series—Table 3.4 The proportion of pensioner units with income from income-related benefits and the average amount for those in receipt, 1996/7 to 2012/3*

Employee Benefit Research Institute (2005) *Encouraging Workers to Save: the 2005 Retirement Confidence Survey*

Financial Conduct Authority (2014a) *TR14/2 Thematic Review of Annuities*

Financial Conduct Authority (2014b) *Retirement Income Market Study*

Financial Conduct Authority (2014c) *The Value for Money of Annuities and Other Retirement Income Strategies in the UK*

Government Actuary's Department (2014) *Investment News: Monthly News Bulletin from the Investment and Risk Team*, August 4, 2014

Gov.uk (2014) *Tax on your private pension contributions* Available from: www.gov.uk/tax-on-your-private-pension/overview [Accessed: 20 November 2014]

Hickman, B., Foroughi, K. & Armitage, M. (2014) *What a Budget! Implications for the at-retirement marker.* Presented at the 2014 IFoA Life Conference, Birmingham, 9-11 November.

Internal Revenue Service (2014) *Payroll Taxes and Federal Income Tax Withholding,* United States Department of the Treasury

Kehiaian, S. E. (2012). Factors and behaviors that influence financial literacy in US households (Doctoral dissertation, Nova Southeastern University)

Kundra, G. and Woodland, A. (2011) 'An inter-temporal general equilibrium analysis of the Australian age pension means test', *Journal of Macroeconomics 33 (2011) 61-79.* Elsevier Inc.

MGM Advantage (2014) *Retirement Nation* Available from: www.mgmadvantage.co.uk/retirement-nation [Accessed: 6 November 2014]

National Seniors Australia and Challenger (2014) *How Realistic Are Senior Australians' Retirement Plans?*

OECD (2013a) *Pensions at a Glance 2013: Retirement-Income Systems in OECD and G20 Countries*

OECD (2013b) *OECD Social Expenditure Database (SOCX); OECD Main Economic Indicators Database*

Office for National Statistics (2012a) *Labour Market Statistics, December 2012*

Office for National Statistics (2012b) *Statistical Bulletin: Occupational Pension Schemes Survey, 2012*

Pensions Policy Institute (2012) *The Changing Landscape of Pension Schemes in the Private Sector in the UK*

Pensions Policy Institute (2014) *Briefing Note 72—DC Savers' Needs Under the New Pension Flexibilities*

Ritchie, M. (2014) *Pension reforms expected to lower profits, drive innovation,* Pensions Age, August 18, 2014

Rothman, G. And Wang, H. (2013) *Retirement Income Decisions: Take Up and Use of Australian Lump Sums and Income streams.* Presented at the 21st Colloquium of Superannuation Researchers, Sydney, 9-10 July

The Pensions Advice Service (2014) *Pensions and income tax.* Available from: www.pensionsadvisoryservice.org.uk/about-pensions/saving-into-a-pension/pensions-and-tax/how-is-my-pension-taxed [Accessed: 20 November 2014]

Towers Watson (2014) *Global Pensions Assets Survey 2014*

US Department of Labor, Employee Benefits Security Administration (2011) *Private Pension Plan Bulletin: Abstract of 2011 Form 5500 Annual reports* (July 2011)

US Department of Labor, Employee Benefits Security Administration (2012) *Private Pension Plan*

Bulletin: Abstract of 2012 Form 5500 Annual reports (July 2012)

United States Department of Labour, Bureau of Labour Statistics (2013) *Monthly Labour Review December 2013*

USA Social Security Administration (2014a) *Social Security Basic Facts*

USA Social Security Administration (2014b) *Retirement Age Calculator,* Available from: www.ssa.gov/retirement/ageincrease.htm [Accessed 14 October 2014]

Wells, J. and Gostelow, M. (2010) *Annuitisation Process and Consumer Detriment: An Initial Investigation of Issues.* Financial Services Consumer Panel

Wilmington Company. *Pension Funds Online,* Available from: www.pensionfundsonline.co.uk/content/country-profiles/australia/80 [Accessed: 14 October 2014]

World Health Organisation (2013) *Global Health Observatory Data Repository,* Available from: http://apps.who.int/gho/data/view.main.680?lang=en [Accessed 6 November 2014]

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