Optimal Rules for Defined Contribution Plans: What Can We Learn from the U.S. and Australian Pension Systems?

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ABSTRACT

Both the United States and Australia have multipillar retirement systems that include a public component and a private component. Increasingly, the private component consists of a defined contribution plan. At the outset, this Article provides an overview of the retirement systems of the United States and Australia. Next, this Article compares the rules governing defined contribution plans in the United States and Australia. In particular, this Article focuses on the rules governing the contribution, accumulation, and distribution stages; and it discusses which public policies will best help workers maximize their defined contribution plan accumulations and, consequently, the retirement income that they will eventually receive. Ultimately, this Article develops recommendations for the optimal rules for defined contribution plans in the United States, Australia, and around the world.

I. Introduction

Both the United States and Australia have multipillar retirement systems that include a public component and a private component. Increasingly, the private component is an employer-provided defined contribution plan or other privately managed individual retirement savings account. To get adequate retirement income from these defined contribution plans, employees need to ensure that significant contributions are made to these plans (the contribution phase), that those contributions are invested well and retained until retirement (the accumulation phase), and that the accumulated retirement

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savings are used to provide benefits throughout retirement (the distribution phase).

At the outset, this Article provides an overview of the retirement systems of the United States and Australia. Next, this Article compares the rules governing defined contribution plans in the United States and Australia. In particular, this Article focuses on the rules governing the contribution, accumulation, and distribution stages; and it discusses which public policies will best help workers maximize their defined contribution plan accumulations and, consequently, the retirement income that they will eventually receive. Ultimately, this Article develops recommendations for the optimal rules for defined contribution plans in the United States, Australia, and around the world.

II. A Defined Contribution World

Both the United States and Australia have multipillar retirement systems that consist of (1) a government pension, (2) an occupational pension, and (3) personal savings.[1] Retirement income is provided through a combination of a first-tier public system, a second-tier employment-based pension system, and a third-tier of supplemental voluntary savings. Increasingly, the second-tier and third-tier components take the form of individual retirement savings accounts in the nature of defined contribution plans, as opposed to the more traditional pensions that were structured as defined benefit plans.

A. *Types of Pension Plans*

Pension plans generally fall into two broad categories based on the nature of the benefits provided: defined benefit plans and defined contribution plans.

1. *Defined Benefit Plans*

In a defined benefit plan, the employer promises employees a specific benefit payable at retirement.[2] To provide that benefit, the employer typically makes payments into a trust fund, funds contributed to the trust grow with investment returns, and eventually the employer withdraws money from the trust fund to pay the promised benefits. Employer contributions are based on actuarial valuations, and the employer bears all of the investment risks and responsibilities.

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[1] World Bank, Averting the Old Age Crisis: Policies to Protect the Old and Promote Growth xiv (1994); *see also* Robert Holzmann & Richard Hinz, *Old-Age Income Support in the 21st Century: An International Perspective on Pension Systems and Reform*, The World Bank 2–3 (2005), *available at* http://www.egm.org.tr/kutuphane/Old_Age_Income_Support_Complete.pdf (suggesting an additional pillar for informal intrafamily or intergenerational sources of both financial and nonfinancial support to the elderly, including access to health care and housing); Lans Bovenberg & Casper van Ewijk, *The Future of Multi-Pillar Pension Systems*, Network for Studies on Pensions, Aging and Ret. (Sept. 2011), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1935307.

[2] Jonathan Barry Forman, Making America Work 215 (2006).

Defined benefit plans often provide each worker with a specific annual retirement benefit tied to the worker's final average compensation and number of years of service. For example, a plan might provide that a worker's annual retirement benefit (*B*) is equal to two percent times the number of years of service (*yos*) times final average compensation (*fac)* (B = 2% × *yos* × *fac*). Under this formula, a worker who retires after 30 years with final average compensation of $50,000 would receive a pension of $30,000 a year ($30,000 = 2% × 30 yos × $50,000 *fac*). Final average compensation is often computed by averaging the worker's salary over the last three or five years prior to retirement.[3] While many defined benefit plans allow for lump sum distributions, the default benefit for many defined benefit plans is a retirement income stream in the form of an annuity for life.[4]

2. *Defined Contribution Plans*

Under a defined contribution plan, the employer typically contributes a specified percentage of the worker's compensation to an individual investment account for the worker.[5] For example, contributions might be set at ten percent of annual compensation. Under such a plan, a worker who earned $50,000 in a given year would have $5,000 contributed to an individual investment account for her ($5,000 = 10% × $50,000). Her benefit at retirement would be based on all such contributions plus investment earnings.[6]

Unlike traditional defined benefit plans, defined contribution plans usually make distributions in the form of lump sum or periodic distributions rather than life annuities. Indeed, relatively few defined contribution plans even offer annuity options, and relatively few participants elect annuities when they are available.[7]

3. *"Hybrid" Retirement Plans*

So-called "hybrid" retirement plans mix the features of defined benefit and defined contribution plans. For example, a cash balance plan is a type of

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[3] Alternatively, some plans use career average compensation instead of final average compensation. Under a career earnings formula, benefits are based on a percentage of an average of career earnings for every year of service by the employee.

[4] In the United States, defined benefit plans are generally designed to provide annuities or definitely determinable benefits over a period of years, usually for life, after retirement. Reg. § 1.401-1(b)(1).

[5] Forman, *supra* note 2, at 215.

[6] Defined contribution plans are also known as "individual account" plans because each employee has her own account, as opposed to defined benefit plans, where the plan's assets are pooled for the benefit of all of the employees. *See* 29 U.S.C. § 1002(34) (2006).

[7] *See, e.g.*, Beverly I. Orth, *Approaches for Promoting Voluntary Annuitization*, Soc'y of Actuaries 2 (Nov. 17, 2008), *available at* http://www.soa.org/library/monographs/retirement-systems/retirement2020/2008/november/mono-2008-m-rs08-01-orth.pdf; *see also* Part VII.A. *infra*.

defined benefit plan that looks a lot like a defined contribution plan.[8] Like other defined benefit plans, employer contributions are based on actuarial valuations, and the employer bears all of the investment risks and responsibilities. Like defined contribution plans, however, cash balance plans provide workers with individual accounts—albeit hypothetical individual accounts.[9] A simple cash balance plan might allocate ten percent of salary to each worker's account each year and credit the account with five percent interest on the balance in the account. Under such a plan, a worker who earned $50,000 in a given year would get an annual cash balance credit of $5,000 ($5,000 = 10% × $50,000), plus an interest credit equal to five percent of the balance in her hypothetical account as of the beginning of the year in which the contribution is made.

B. *The Dominance of Defined Contribution Plans*

In recent years, defined contribution plans have come to dominate the pension landscape. For example, 50% of full-time private industry workers in the United States participated in defined contribution plans in 2011 (up from 40% in 1989–1990); meanwhile, participation in defined benefit plans fell from 42% in 1989–1990 to just 22% in 2011.[10] In the aggregate, defined contribution plans held 57% of pension assets in the United States in 2011 (up from 52% in 2001).[11] Similarly, 81% of pension assets in Australia were held by defined contribution plans in 2011 (down slightly from 83% in 2001), 60% in Switzerland (up from 49% in 2001), and 39% in the United Kingdom (up from just 8% in 2001). All in all, the era of the traditional defined benefit plan is largely behind us.[12]

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[8] *See, e.g.*, Jonathan Barry Forman & Amy Nixon, *Cash Balance Pension Plan Conversions*, 25 Okla. City U. L. Rev. 380 (2000).

[9] Sometimes, these hypothetical accounts are referred to as "notional accounts." *See* Edward A. Zelinsky, *The Aftermath of the Cash Balance Controversy: Applying the Contribution-Based Test for Age Discrimination to Traditional Defined Benefit Pensions*, 29 Va. Tax Rev. 1, 7–8 (2009).

[10] William J. Wiatrowski, *Changing Landscape of Employment-based Retirement Benefits*, United States Department of Labor, Bureau of Labor Statistics (2011), http://www.bls.gov/opub/cwc/cm20110927ar01p1.htm; *see also* Congressional Budget Office, Use of Tax Incentives for Retirement Saving in 2006 6 (2011), *available at* http://www.cbo.gov/sites/default/files/cbofiles/attachments/2011-10-14-TaxIncentives.pdf; U.S. Gov't Accountability Office, GAO-11-333, Private Pensions: Some Key Features Lead to an Uneven Distribution of Benefits 12 (2011) (showing that 92% of the new pension plans formed from 2003–2007 were defined contribution plans, as opposed to defined benefit plans); U.S. Dep't of Labor, Employee Benefits Security Administration, Private Pension Plan Bulletin 3 (2010), *available at* http://www.dol.gov/ebsa/PDF/2008pensionplanbulletin.pdf (showing that, in 2008, there were almost 83 million participants in defined contribution plans, compared with just over 42 million participants in defined benefit plans).

[11] Towers Watson, Global Pension Asset Study 2012, 8, 34–36 (Jan. 2012), http://www.towerswatson.com/assets/pdf/6267/Global-Pensions-Asset-Study.

[12] Edward A. Zelinsky, The Origins of the Ownership Society: How the Defined Contribution Paradigm Changed America 2 (2008); Edward A. Zelinsky, *The Defined Contribution Paradigm*, 14 Yale L.J. 451, 453 (2004).

So far, however, our new defined contribution "world" appears to be producing lower rates of saving and retirement income than defined benefit plans did previously.[13] Consequently, many analysts have expressed doubts as to whether current and future generations of retirees will have adequate retirement incomes.[14]

III. Comparing the U.S. and Australian Retirement Systems

A. *Overview of the U.S. Retirement System*

The U.S. retirement system consists of a universal Social Security system, a voluntary occupational pension system, and supplemental voluntary savings.

1. *Social Security*

The Social Security system includes two major programs that provide monthly cash benefits to workers and their families.[15] The Old-Age and Survivors Insurance (OASI) program pays monthly benefits to retired workers, to their dependents, and to survivors of insured workers; the Disability Insurance (DI) program pays monthly benefits to disabled workers who are under full retirement age and their dependents.[16] A worker builds protection under these programs by working in employment covered by Social Security and paying the applicable payroll taxes. At retirement, disability, or death, monthly Social Security benefits are paid to insured workers and to their eligible dependents and survivors.

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[13] *See, e.g.*, Jack VanDerhei, *The Importance of Defined Benefit Plans for Retirement Income Adequacy*, 32 Empl. Benefit Research Inst. Notes 7, 11 (2011) (showing that having a defined benefit plan at age 65 significantly reduces the risk that retirement income will be inadequate).

[14] *See, e.g.*, *id.*; Jack VanDerhei, *All or Nothing? An Expanded Perspective on Retirement Readiness*, 33 Empl. Benefit Research Inst. Notes 11, 16 (2012), *available at* http://www.ebri.org/publications/notes/index.cfm?fa=notesDisp&content_id=5131 (finding that 44% of Gen-Xer and Baby Boom households are at risk of running short of money in retirement, and about one in five [19.4%] are projected to have less than 80% of what they will need); Alicia H. Munnell, Anthony Webb & Francesca Golub-Sass, *The National Retirement Risk Index: An Update*, Boston Coll. Ctr. for Ret. Research 3 (Oct. 2012), *available at* http://crr.bc.edu/wp-content/uploads/2012/11/IB_12-20.pdf (estimating that some 53% of households will have replacement rates that fall more than ten percent below the target); Melissa M. Favreault, Richard W. Johnson, Karen E. Smith & Sheila R. Zedlewski, *Boomers' Retirement Income Prospects*, Urban Inst. 2 (Feb. 2012), *available at* http://www.urban.org/uploadedpdf/412490-boomers-retirement-income-prospects.pdf (finding that four out of ten late baby boomers will lack sufficient income at age 79 to replace 75% of what they earned between ages 50 and 54); Simon Archer, A Report on Canadian Pension Law Reform 17 (2011), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1884307; Gordon L. Clark, *From Corporatism to Public Utilities: Workplace Pensions in the 21st Century*, Oxford Univ., Center for the Env't 2 (Apr. 14, 2011), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1809646.

[15] *See, e.g.*, Forman, *supra* note 2, at 184.

[16] *See, e.g.*, *id.*

Social Security benefits are financed primarily through payroll taxes imposed on individuals working in employment or self-employment that is covered by the Social Security system. For 2013, employees and employers each pay a Social Security OASI tax of 6.2% on up to $113,700 of wages, for a combined OASI rate of 12.4%—the lion's share of the total 15.3% collected for OASI, DI, and Medicare.[17] Self-employed workers pay an equivalent OASI tax of 12.4% on up to $113,700 of net earnings.[18]

Workers over the age of 62 generally are entitled to Social Security retirement benefits if they have worked in covered employment for at least ten years.[19] Benefits are based on a measure of the worker's earnings history in covered employment.[20] Of note, however, the benefit formula is highly progressive—that is, it is designed to favor workers with relatively low lifetime earnings.

Historically, "full retirement age" was age 65, but it is currently age 66, and it is gradually increasing to age 67.[21] In January of 2013, OASI paid benefits to more than 36.8 million retired workers, and the average monthly benefit paid to a retired worker was $1,264.03.[22]

A worker's benefits may be increased or decreased for several reasons. Most important, benefits are indexed each year for inflation as measured by the increase in the Consumer Price Index.[23] Also, workers who retire before their full retirement age have their benefits actuarially reduced.[24] On the other hand, benefits payable to workers who choose to retire after their full retirement age are actuarially increased (but only up to age 70).[25] Finally, the "retirement earnings test" can reduce the benefits of individuals who have not yet reached full retirement age and who continue to work after starting to draw Social Security retirement benefits.[26]

Spouses, dependents, and survivors of the worker may also receive additional monthly benefits. These family benefits are also based on the worker's benefit. For example, a retirement-age wife or husband of a retired worker is

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[17] Soc. Sec. Admin., 2013 Social Security Changes (2012), *available at* http://www.socialsecurity.gov/pressoffice/factsheets/colafacts2013.pdf.

[18] *Id.*

[19] *Social Security Entitlement Requirements*, Soc. Sec. Admin., http://www.socialsecurity.gov/ssi/text-entitle-ussi.htm (last updated Dec. 27, 2012).

[20] *Id.*

[21] *See Retirement Planner: Full Retirement Age*, Soc. Sec. Admin., http://www.socialsecurity.gov/retire2/retirechart.htm (last updated Oct. 18, 2012).

[22] *Monthly Statistical Snapshot, January 2013*, Soc. Sec. Admin., http://www.ssa.gov/policy/docs/quickfacts/stat_snapshot (last updated Feb. 20, 2013).

[23] *Latest Cost-of-Living Adjustment*, Soc. Sec. Admin., http://www.ssa.gov/oact/cola/latestCOLA.html (last updated Oct. 16, 2012).

[24] *Early or Late Retirement?*, Soc. Sec. Admin., http://www.ssa.gov/oact/quickcalc/early_late.html (last updated Nov. 25, 2008).

[25] *Id.*

[26] Dawn Nuschler & Alison M. Shelton, Cong. Research Serv., R41242, Social Security Retirement Earnings Test: How Earnings Affect Benefits 4 (2010).

typically entitled to a monthly spousal benefit equal to 50% of the worker's benefit.[27] Also, a retirement-age widow or widower of the worker is entitled to a monthly surviving spouse benefit equal to 100% of the worker's benefit.[28]

In addition, a means-tested Supplemental Security Income (SSI) program provides monthly cash benefits to certain low-income elderly, disabled, or blind Americans.[29] In 2013, the maximum federal benefit for a single individual is $710 per month, and the maximum for a couple is $1,066 per month.[30] In January of 2013, over two million elderly Americans received SSI benefits from the federal government, and the average monthly benefit was $422.17.[31]

2. *The Pension System*

The United States has a voluntary private pension system.[32] That is, employers are not required to have pensions. However, when employers do provide pensions, those pensions are typically subject to regulation under the Employee Retirement Income Security Act of 1974 (ERISA).[33]

Most pension plans qualify for favorable tax treatment. Basically, an employer's contributions to a tax-qualified retirement plan on behalf of an employee are not taxable to the employee.[34] Moreover, the pension fund's earnings on those contributions are tax-exempt.[35] Workers pay tax only when they receive

[27] *Retirement Planner: Benefits for Your Spouse,* Soc. Sec. Admin., http://www.ssa.gov/retire2/yourspouse.htm#a0=0 (last updated Jan. 28, 2013).

[28] *Retirement Planner: If You Are The Worker's Widow or Widower*, Soc. Sec. Admin., http://www.ssa.gov/survivorplan/ifyou2.htm (last updated Oct. 19, 2012).

[29] *A Primer: Social Security Act Programs to Assist the Disabled*, Soc. Sec. Admin., http://www.ssa.gov/policy/docs/ssb/v66n3/v66n3p53.html (last visited Jan. 28, 2013).

[30] *Federal Payments for 2013*, Soc. Sec. Admin., http://www.ssa.gov/oact/cola/SSI.html (last updated Oct. 16, 2012).

[31] *Monthly Statistical Snapshot*, *supra* note 22.

[32] Forman, *supra* note 2, at 214; Kathryn L. Moore, *An Overview of the U.S. Retirement Income Security System and the Principles and Values It Reflects*, 33 Comp. Lab. L. & Pol'y J. 5, 17 (2011).

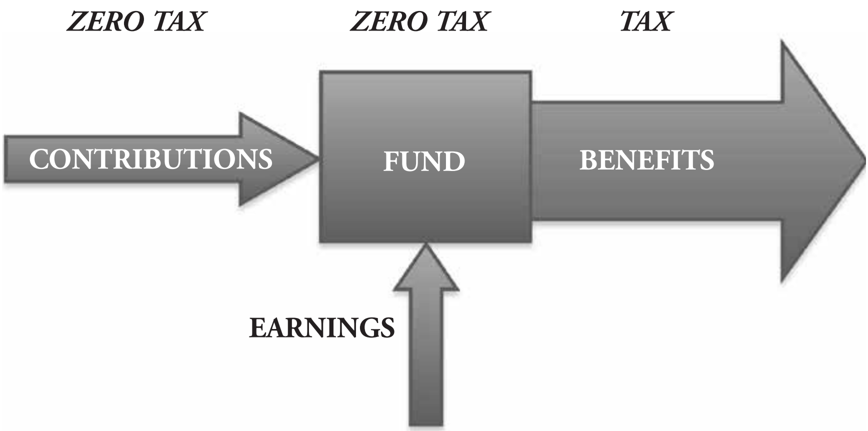
[33] Employment Retirement Income Security Act of 1974, Pub. L. No. 93-406, 88 Stat. 829; *see also* Joint Comm. on Taxation, 112th Cong., Present Law and Background Relating to the Tax Treatment of Retirement Savings (comm. print 2012), *available at* https://www.jct.gov/publications.html?func=startdown&id=4418.

[34] I.R.C. § 402.

[35] I.R.C. § 501(a).

distributions of their pension benefits.[36] Nevertheless, the employer is allowed a current deduction for its contributions (within limits).[37] Figure 1 illustrates this "Exempt-Exempt-Taxable" (EET) approach.[38]

Figure 1. U.S. Tax Treatment of a Simple Defined Contribution Plan



[36] I.R.C. §§ 72, 402. Pension benefits or annuity payments may be fully taxable or partially taxable. For example, a participant's pension benefits will be fully taxable if the participant's employer contributed all of the cost for the pension without any of the contributions being included in the employee's taxable wages. Pension benefits would also be fully taxable if the participant has already received all of her previously taxed contributions tax free in previous years. *See* Dep't of the Treasury, Internal Revenue Service, Publication No. 560, Retirement Plans for Small Business (SEP, Simple, and Qualiied Plans) (2012), *available at* http://www.irs.gov/pub/irs-pdf/p575.pdf.

On the other hand, if an individual made after-tax contributions to a pension or annuity, she can exclude part of her pension or annuity distributions from income. Under sections 72 and 402, the individual can exclude a fraction of each benefit payment from income. That fraction (the "exclusion ratio") is based on the amount of premiums or other after-tax contributions made by the individual. The exclusion ratio enables the individual to recover her own after-tax contributions tax free and to pay tax only on the remaining portion of benefits that represents income. *See* I.R.C. §§ 72, 402.

Taxpayers who began receiving annuity payments from a qualified retirement plan after November 18, 1996, generally can use the so-called Simplified Method to figure the tax-free part of their benefits. Under the Simplified Method, the Code provides a table with a fixed number of anticipated payments that depends upon the annuitant's age as of the annuity starting date. The taxpayer then divides the total cost over the applicable number of anticipated payments and excludes the amount so determined each year. *See* I.R.C. § 72.

[37] I.R.C. § 404(a).

[38] *See, e.g.*, Jonathan Barry Forman, *The Tax Treatment of Public and Private Pensions Around the World*, 14 Am. J. Tax Pol'y 299 (1997) (discussing how retirement savings around the world usually receive favorable consumption tax treatment as opposed to income tax treatment).

As already mentioned, pension plans generally fall into two broad categories based on the nature of the benefits provided: defined benefit plans and defined contribution plans; defined contribution plans are now the predominant mechanism for retirement savings. In the United States, there are a variety of different types of defined contribution plans, including money purchase pension plans, target benefit plans, profit-sharing plans, employee stock ownership plans (ESOPs), and stock bonus plans.[39]

Of particular note, profit-sharing and stock bonus plans often include a feature that allows workers to choose between receiving cash currently or deferring taxation by placing the money in a retirement account according to section 401(k). Consequently, these plans are often called "401(k) plans," and they are the most popular type of retirement plan in the United States.[40] The maximum annual amount of such elective deferrals that can be made by an individual in 2013 is $17,500, although workers over the age of 50 can contribute another $5,500 (for a total of up to $23,000).[41]

Favorable tax rules are also available for certain individual retirement accounts (IRAs).[42] Almost any worker can set up an IRA with a bank or other financial institution. In 2013, individuals without pension plans can contribute and deduct up to $5,000 to an IRA, although individuals over age 50 can contribute and deduct another $1,000 (for a total of up to $6,000); spouses can contribute and deduct similar amounts.[43] If a worker is covered by another retirement plan, however, the deduction may be reduced or eliminated if the worker's income exceeds $59,000 for a single individual or $95,000 for a married couple.[44] Like private pensions, IRA earnings are tax-exempt, and distributions are taxable.[45]

Since 1998, individuals have also been permitted to set up Roth IRAs.[46] Unlike regular IRAs, contributions to Roth IRAs are not deductible. Instead, withdrawals are tax-free. Like regular IRAs, however, Roth IRA earnings are tax-exempt. And since 2006, employers have been permitted to set up Roth

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[39] *See, e.g.*, U.S. Dep't of Labor, Bureau of Labor Statistics, *Six Ways to Save for Retirement*, *in* 3 Program Perspectives 1, 2 (2011), *available at* http://www.bls.gov/opub/perspectives/program_perspectives_vol3_issue3.pdf.

[40] *See, e.g.*, U.S. Dep't of Labor, Bureau of Labor Statistics, *BLS Examines Popular 401(k) Retirement Plans*, *in* 2 Program Perspectives 1, 1 (2006), *available at* http://www.bls.gov/opub/perspectives/program_perspectives_vol2_issue6.pdf.

[41] IR-News Rel. 2012-77, 1, *available at* http://www.irs.gov/pub/irs-news/IR-12-077.pdf.

[42] I.R.C. § 219.

[43] I.R.C. § 219.

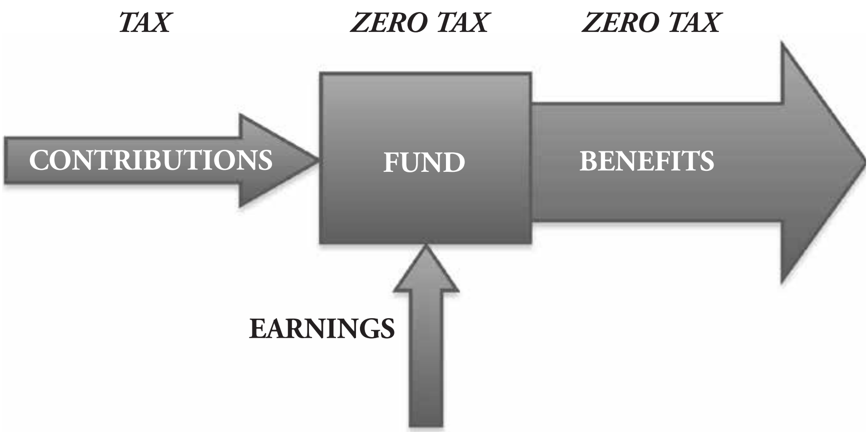
[44] IR-News Rel., *supra* note 41 at 1.

[45] Also, so-called "Keogh plans" give self-employed workers an ability to save for retirement that is similar to plans that employers sponsor, and Keogh plans allow self-employed workers to contribute more than they could otherwise contribute to a regular IRA. Dep't of the Treasury, *supra* note 36, at 12.

[46] I.R.C. § 408A.

401(k) plans that operate in a similar fashion.[47] Figure 2 illustrates this "Taxable-Exempt-Exempt" (TEE) approach.[48]

Figure 2. U.S. Tax Treatment of a Roth Defined Contribution Plan



Also, since 2002, certain low-income and moderate-income individuals have been able to claim a tax credit of up to $1,000 for certain qualified retirement savings contributions.[49] The credit equals a percentage (50%, 20%, or 10%) of up to $2,000 of contributions. In effect, the credit acts like an employer match: the government matches a portion of the employee's contributions. Employer matches encourage workers to contribute, at least up to the match level, and the saver's tax credit seems to have similar pro-saving effects.[50]

3. *Other Voluntary Savings Mechanisms*

In addition to voluntary saving through 401(k) elections and individual retirement accounts, individuals can also save money outside of the retirement system. In general, investment income is subject to personal income tax rates of up to 39.6% in 2013;[51] however, dividend income and capital gains are generally taxed at no more than 20%,[52] and various tax advantages are also

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[47] I.R.C. § 402A.

[48] Forman, *supra* note 38, at 311.

[49] I.R.C. § 25B.

[50] *See, e.g.*, Lisa Southworth & John Gist, *The Saver's Credit: What Does It Do For Saving?*, AARP Pub. Pol'y Inst. 7 (2008), *available at* http://assets.aarp.org/rgcenter/econ/i1_credit.pdf; William G. Gale & Peter R. Orszag, *Private Pensions: Issues and Options*, The Urban-Brookings Inst. 26, 30 (Apr. 2003), *available at* http://www.urban.org/UploadedPDF/310666_TPC-DP9.pdf.

[51] I.R.C. § 1.

[52] I.R.C. § 1(h).

associated with investments in homes,[53] state and local bonds,[54] annuities,[55] and life insurance.[56]

B. *Overview of the Australian Retirement System*

The Australian retirement system consists of a means-tested Age Pension, a mandatory universal superannuation system, and supplemental voluntary savings.

1. *The Age Pension*

The Age Pension is a means-tested income support benefit for seniors that is funded from general revenues.[57] To qualify for an Age Pension, recipients must have lived in Australia for at least ten years.[58] Effective September 20, 2012, workers who qualify for the full Age Pension receive a maximum of AU$712.00 every fortnight for singles and AU$1,073.40 for couples.[59] The single benefit is designed to provide about 25% of average male earnings.[60] Benefits are reduced by both an income test and an asset test.[61] For example, the income test reduces the Age Pension by 40 cents for each dollar of income over AU$152 per fortnight for singles and 40 cents for each dollar of income

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[53] For example, home mortgage interest is generally deductible, and the gain from the sale of a personal residence is often excludable. I.R.C. §§ 163(a), 121.

[54] I.R.C. § 103 (interest exclusion).

[55] Under section 72(b), the individual can exclude a fraction of each annuity payment from income. That fraction (the "exclusion ratio") is based on the amount of premiums or other after-tax contributions made by the individual. The exclusion ratio enables the individual to recover her own after-tax contributions tax free and to pay tax only on the remaining portion of benefits, which represents income. The net effect is a deferral of taxation.

[56] I.R.C. § 101(a) (excluding insurance proceeds paid by reason of the death of the insured).

[57] *See, e.g.*, David C. John & Ruth Levine, *National Retirement Savings Systems in Australia, Chile, New Zealand and the United Kingdom: Lessons for the United States*, The Brookings Inst. 9 (2009), http://www.brookings.edu/papers/2009/07_retirement_savings_john.aspx; OECD, Pensions at a Glance 2011: Retirement-Income Systems in OECD and G20 Countries 193 (2011) (examining Australia's pension system), *available at* http://www.oecd-ilibrary.org/finance-and-investment/pensions-at-a-glance-2011_pension_glance-2011-en; Soc. Sec. Admin., Social Security Programs Throughout the World: Asia and the Pacific, 2010, at 32, *available at* http://www.ssa.gov/policy/docs/progdesc/ssptw/2010-2011/asia/ssptw10asia.pdf.

[58] *Eligibility for Age Pension*, Australian Government, Department of Human Services, http://www.humanservices.gov.au/customer/enablers/centrelink/age-pension/eligibility-for-age-pension (last updated June 29, 2012).

[59] *Age Pension: Payment Rates for Age Pension,* Australian Gov't, Dep't of Human Serv., http://www.humanservices.gov.au/customer/services/centrelink/age-pension (last updated Jan. 29, 2013). These amounts exclude the Pension Supplement amounts of up to AU$60.60 every fortnight for singles and AU$91.40 for couples. *Id.*

[60] OECD, *supra* note 57, at 194.

[61] *Age Pension: Payment Rates for Age Pension*, *supra* note 59.

over AU$268 per fortnight for couples.[62] In 2008 just 56% of recipients received the maximum Age Pension.[63]

The current qualifying age for the Age Pension is 65 years for men and 64 years and 6 months for women, but after July 1, 2013, it will be 65 years for both men and women.[64] Also, starting on July 1, 2017, the pension age for both men and women will gradually increase until it reaches age 67 on July 1, 2023.[65]

2. *Superannuation (Pensions)*

The Australian pension system is called superannuation, which can be defined as a regulated and low-taxed savings scheme that is designed to encourage taxpayers to save for their retirement.[66] Working taxpayers, their employers, and the self-employed generally contribute to superannuation funds, which are administered by superannuation fund trustees. Generally, these superannuation savings cannot be accessed until retirement after reaching the "preservation age," earlier death, or disability.[67] At that time, the savings can be taken in the form of a lump sum, pension, or a combination of the two, depending on what the trust deed provides.

Contributions by employers for their employees were made compulsory in 1992.[68] The superannuation guarantee consists of a mandatory employer contribution to a private pension plan. The pension plans may be operated by the employer, industry associations, financial service companies, or even by individuals themselves. The mandatory contribution rate has been nine percent of employee earnings since the 2002–2003 tax year.[69] Employers do not have to make superannuation contributions for workers earning less than AU$450 a month (equivalent to AU$5,400 a year), but they can choose to contribute for those workers.[70] There is also an upper limit: employers do not

[62] *Income Test for Pensions*, Australian Gov't, Dep't of Human Serv., http://www.humanservices.gov.au/customer/enablers/income-test-pensions (last updated June 29, 2012).

[63] OECD, *supra* note 57, at 194.

[64] *See Eligibility for Age Pension*, Australian Gov't, Dep't of Human Serv., http://www.humanservices.gov.au/customer/enablers/centrelink/age-pension/eligibility-for-age-pension (last updated June 29, 2012).

[65] *See id.*

[66] OECD, *supra* note 57, at 193; *see also* Peggy Haines, *Australia*, *in* A Comparative Survey of Pension Law Issues 127, 127 (Jonathan Mort & Lisa Butler Beatty eds., 2d ed., 2011); Rami Hanegbi, *Improving Our Superannuation Regime: A Post-Henry Review Look at Superannuation Taxation, Raising Superannuation Balances, and Longevity Insurance*, 25 Australian Tax Forum 425, 426–27 (2010) [hereinafter Hanegbi, *Improving Our Superannuation Regime*]; Rami Hanegbi, *Australia's Superannuation System: A Critical Analysis*, 25(2) Australian Tax Forum 303, 304 (2010).

[67] For an explanation of the preservation age, see *infra* notes 86–87 and accompanying text.

[68] *Superannuation Guarantee (Administration) Act 1992* (Cth) (Austl.); OECD, *supra* note 57, at 194.

[69] OECD, *supra* note 57, at 193.

[70] *Guide to Superannuation for Employers*, Australian Gov't, Australian Taxation Office, http://www.ato.gov.au/content/00249857.htm (last updated July 10, 2012).

have to make superannuation contributions for employees' pay above this threshold. For the 2012–2013 tax year, this limit is AU$45,750 per quarter.[71]

The Australian Government recently enacted legislation to gradually increase the superannuation guarantee rate from 9% to 12%.[72]

Increasing the Australian superannuation guarantee rate from 9% to 12%

Year	Percent
2013-2014	9.25
2014-2015	9.5
2015-2016	10
2016-2017	10.5
2017-2018	11
2018-2019	11.5
2019-2020 and subsequent years	12

Source: Superannuation Guarantee (Administration) Act of 1992 (Cth) § 19(2) (as amended by the *Superannuation Guarantee (Administration) Amendment Act of 2012* (Cth) § 3).

Employer contributions are deductible regardless of the amount, and employees are generally not taxed on those contributions.[73] Employees can also make additional before-tax (concessional) contributions to their superannuation funds, and they can enter into salary-reduction agreements with their employers to exclude those contributions from tax up to certain limits.[74] This can be advantageous, as the 15% tax on the superannuation fund is often less than the tax the employee would have paid if she had taken the money

[71] *Key Superannuation Rates and Thresholds: Maximum Superannuation Rates and Thresholds*, Australian Gov't, Australian Taxation Office, http://www.ato.gov.au/super/content.aspx?menuid=0&doc=/content/60489.htm&page=23&H23 (last updated Aug. 31, 2012). This limit is indexed to a measure of average earnings and is worth around 2½ times average wages. OECD, *supra* note 57, at 193.

[72] *Superannuation Guarantee (Administration) Act 1992* (Cth) § 19(2) (Austl.), *amended by Superannuation Guarantee (Administration) Amendment Act 2012* (Cth) § 3 (Austl.); Revised Explanatory Memorandum, Superannuation Guarantee (Administration) Amendment Bill 2011 (Cth) (Austl.); *see also* Australian Gov't, Superannuation—Increasing the Superannuation Guarantee Rate to 12 Per Cent (2011), *available at* http://www.futuretax.gov.au/content/FactSheets/downloads/Fact_sheet_SG_rate_increase.pdf.

[73] *Income Tax Assessment Act 1997* (Cth) §§ 290-60 to 80 (Austl.).

[74] *Guide to Superannuation for Individuals—Overview,* Australian Gov't, Australian Taxation Office, http://www.ato.gov.au/individuals/content.aspx?menuid=0&doc=/content/00250233.htm&page=13#P319_22830 (last updated Oct. 5, 2012).

as salary.[75] However, if contributions are made for an employee in excess of AU$25,000 per year, the employee pays tax of 31.5% on that excess.[76]

Individuals can also make additional after-tax (nonconcessional) contributions to their superannuation funds of up to AU$150,000 per year.[77] A person's nonconcessional contributions are generally contributions that are not included in the assessable income of the superannuation fund; that is, they are not taxed at the superannuation fund's 15% rate. However, the individual member is liable for tax on excess nonconcessional contributions that exceed the annual AU$150,000 cap at 46.5%.[78] In addition, individuals can make additional so-called "bring-forward" contributions of up to AU$450,000 of nonconcessional contributions over any three-year period until the year after they turn 65 without incurring extra tax.[79]

The Australian government also provides two subsidies to assist low income earners in saving for their retirement ("low income super contribution" and "Government Co-contribution").[80] First, the government will contribute 15% of the amount that an individual contributes to her fund pretax, as long as her adjusted income is less than AU$37,000, up to a maximum of AU$500.[81] Second, the government will contribute AU$0.50 for each post-tax $1 contributed up to a maximum of AU$500, as long as her adjusted income is less than AU$46,920.[82]

The superannuation fund typically pays tax at a 15% rate on the receipt of contributions made by employers and individuals who have claimed a deduc-

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[75] For example, Tiffy works for a merchant bank and earns a wage of AU$300,000. She enters into a salary reduction agreement with her employer to reduce her salary to AU$275,000 and has AU$25,000 contributed into her self-managed superannuation fund. Tiffy's assessable wage income is reduced to AU$275,000. The AU$25,000 is taxed at 15% in the superannuation fund, but had it been paid as salary it would have been taxed at 45% plus the Medicare levy of up to 1.5%. *See infra* note 92 and accompanying text.

[76] *Key Superannuation Rates and Thresholds*, Australian Gov't, Australian Tax Office, http://www.ato.gov.au/individuals/PrintFriendly.aspx?ms=individuals&menuid=0&doc=/content/60489.htm&page=3&H3 (last updated Aug. 31, 2012); *see also Guide to Superannuation for Individuals—Overview: Other Contributions*, Australian Gov't, Australian Tax Office, http://www.ato.gov.au/individuals/content.aspx?doc=/content/00250233.htm&page=12&H12 (last updated Jan. 29, 2013).

[77] *Key Superannuation Rates and Thresholds: Non-Concessional Contributions Cap*, Australian Gov't, Australian Taxation Office, http://www.ato.gov.au/superfunds/content.aspx?menuid=0&doc=/content/60489.htm&page=4&H4 (last updated Aug. 31, 2012).

[78] *See Income Tax Assessment Act 1997* (Cth) § 292-80 (Austl.).

[79] *Key Superannuation Rates and Thresholds*, *supra* note 77.

[80] *Guide to Superannuation for Individuals—Overview: Government Super Contributions*, Australian Gov't, Australian Tax Office, http://www.ato.gov.au/individuals/content.aspx?menuid=0&doc=/content/00250233.htm&page=16&H16 (last updated Jan. 29, 2013).

[81] *Id.*

[82] *Id.*; *Super Co-contribution Thresholds*, Australian Gov't, Australian Tax Office, http://www.ato.gov.au/content/00281371.htm (last visited July 6, 2012).

tion, and the fund also has to pay tax at a 15% rate on the income it earns (just ten percent for capital gains on assets held for at least one year).[83]

Superannuation funds pay no tax on the income from assets that are used to support the payment of pension benefits once that income stream has commenced.[84]

Because of the Australian constitution, many pension funds run by government agencies do not pay tax on contributions or earnings.[85] These make up about ten percent of all pension funds in Australia.

In the benefits phase, the contributions, plus earnings from investing them, are usually paid as benefits to the member when he or she retires after reaching preservation age.[86] The preservation age is the earliest that retirement benefits can be paid from a superannuation fund and still get concessional taxation treatment. The preservation age was initially set at age 55, but for people born after June 30, 1964, the preservation age is age 60.[87] If the member dies before retiring, the benefits are typically paid to the member's dependents.[88]

Where the superannuation fund has paid tax on contributions and earnings, benefits paid, either as a lump sum or pension, are generally tax-free for people age 60 and over.[89] Figure 3 illustrates this "Taxable-Taxable-Exempt" (TTE) approach.[90]

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[83] *Income Tax Assessment Act 1997* (Cth) § 295 (Austl.). Because of Australia's imputation tax system for corporate income taxes, the superannuation fund will get tax credits imputed to it for the corporate income taxes paid by the Australian companies whose stock it holds. Consequently, the effective tax rate on superannuation funds is typically far less than the 15% statutory rate. *Income Tax Assessment Act 1997* (Cth) § 67-10 (Austl.); Australian Gov't, Australian Tax Office, Imputation Reference Guide 5 (2004), *available at* http://www.ato.gov.au/content/downloads/n10832.pdf.

[84] *Income Tax Assessment Act 1997* (Cth) § 301-10 (Austl.).

[85] *Income Tax Assessment Act 1997* (Cth) § 50-25 (Austl.); *Super Contributions—For Defined Benefit Funds and Untaxed Funds*, Australian Gov't, Australian Tax Office, http://www.ato.gov.au/individuals/content.aspx?menuid=0&doc=/content/00134932.htm&page=6 (last updated July 27, 2010); *see also Examples of Untaxed Super Funds*, Australian Gov't, Australian Tax Office, http://www.ato.gov.au/smsf/content.aspx?doc=/content/00119853.htm&pc=001/002/064/002/001&mnu=&mfp=&st=&cy=1 (last updated Apr. 12, 2012).

[86] *Income Tax Assessment Act 1997* (Cth) § 280-5 (Austl.).

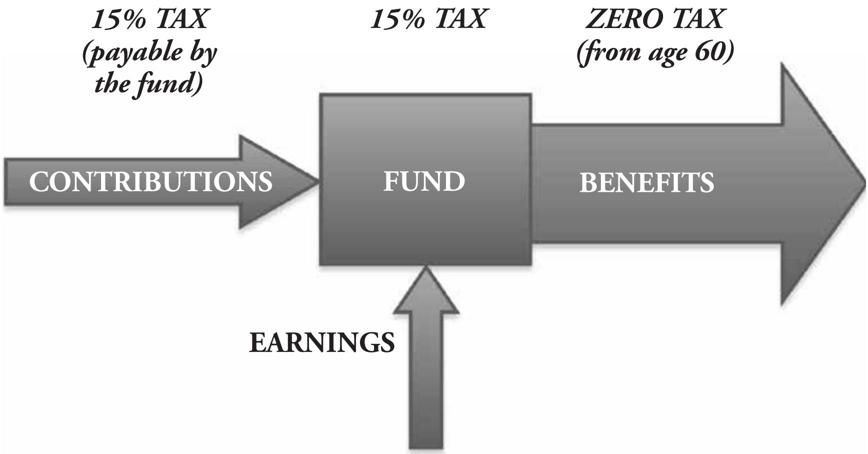
[87] *Key Factors That Affect How Your Super Payout is Taxed*, Australian Gov't, Australian Taxation Office, http://www.ato.gov.au/individuals/content.aspx?menuid=0&doc=/content/86252.htm&page=3&H3 (last updated Sept. 28, 2012); *Key Superannuation Rates and Thresholds: Preservation Age*, Australian Gov't, Australian Taxation Office, http://www.ato.gov.au/superfunds/content.aspx?doc=/content/60489.htm&page=9&H9 (last updated Aug. 31, 2012)

[88] *Income Tax Assessment Act 1997* (Cth) § 280-5 (Austl.).

[89] *Income Tax Assessment Act 1997* (Cth) § 301-10 (Austl.).

[90] Forman, *supra* note 38, at 315.

Figure 3. Australian Taxation of a Simple Defined Contribution Plan



On the other hand, where the superannuation fund has not paid tax on contributions and earnings, such as in a constitutional fund, the benefits paid from such funds are taxed.[91] For example, lump sum payments are taxed at a rate of 16.5% up to AU$1,255,000 and at 46.5% above that, and pensions are fully taxed, but these payments are entitled to a ten percent tax credit.[92]

3. *Other Voluntary Savings Mechanisms*

In addition to voluntary concessional and nonconcessional superannuation contributions, individuals can also save money outside of the retirement system. In general, investment income is subject to the normal personal income taxation rates of up to 45% in 2012–2013, plus a Medicare levy of up to 1.5%.[93] Of note, however, capital gains on investments that have been held at least 12 months are taxed at half the normal rate.[94]

Australia is unique, as tax losses incurred by individuals from investing in income-producing assets, such as residential housing or company equity, can

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[91] *Income Tax Assessment Act 1997* (Cth) §§ 301-95, 301-100 (Austl.); Hanegbi, *Improving our Superannuation Regime*, *supra* note 66, at 431.

[92] *Income Tax Assessment Act 1997* (Cth) § 301-100 (Austl.).

[93] *Individual Income Tax Rates*, Australian Gov't, Australian Tax Office, http://www.ato.gov.au/content/12333.htm (last updated July 24, 2012); *Guide to the Medicare Levy*, Australian Gov't, Australian Taxation Office, http://www.ato.gov.au/content/00250854.htm (last updated June 28, 2012); Frank Gilders, John Taylor, Michael Walpole, Mark Burton & Tony Ciro, Understanding Taxation Law 2011 35 (5th ed., 2010).

[94] *Introduction to Capital Gains Tax*, Australian Gov't, Australian Taxation Office, http://www.ato.gov.au/corporate/content.aspx?menuid=0&doc=/content/00208572.htm&page=13&H13 (last updated Jan. 30, 2013).

be offset against any other income, including employment income.[95] Generally, these arrangements are called "negative gearing" because the financing and other capital cost deductions exceed the rental or dividend income annually on the expectation that, ultimately, the rental or dividend income and proceeds on sale will exceed those costs. The tax benefits are therefore twofold: (1) the individual gets an immediate tax write-off on the annual tax loss, which reduces the cost of funding, and (2) only half the capital gain is taxed if the asset is owned for at least 12 months.[96] Where the asset that is acquired with borrowed funds is a share in an Australian company, the individual gets a third tax benefit because of the tax credit imputed to those shares for the taxes that the company itself paid, and that tax credit is refundable if the individual is in tax loss for the year.

IV. The Life Cycle Model

Economists typically use a life cycle to model the work, saving, and retirement choices of individuals.[97] The life cycle model assumes that workers try to maintain a consistent level of consumption over their lifetimes. Under the model, individuals start life with no inheritance and end it leaving behind no bequests. Individuals try to smooth out their average annual consumption by borrowing when they are young and earning enough during their working years to both repay their loans and save for retirement. Under the model, individuals have perfect foresight so they can save exactly enough so that they

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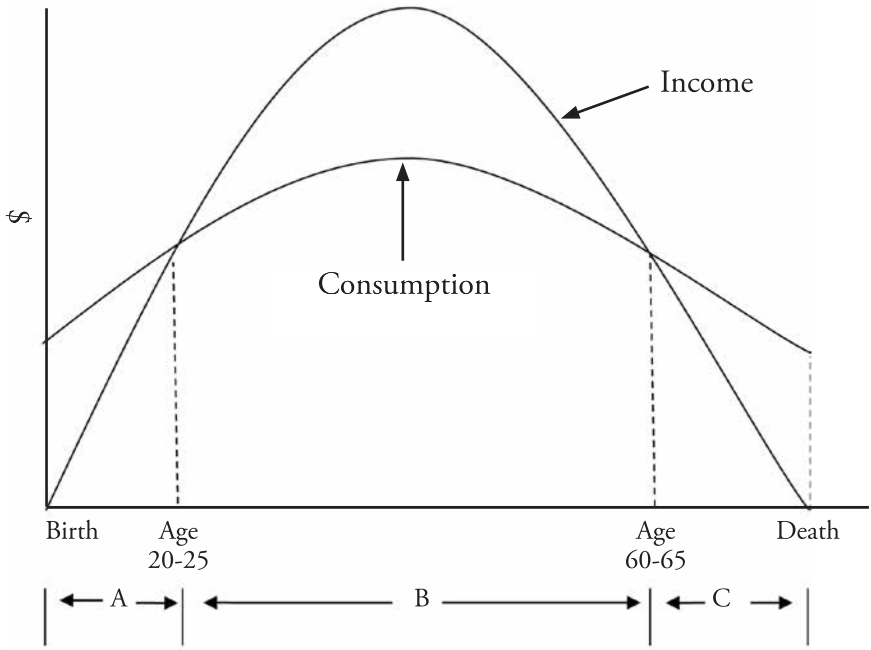
[95] Australian Gov't, Australian Tax Office, Rental Properties 2012: Guide For Rental Property Owners 24 (2012), *available at* http://www.ato.gov.au/content/downloads/IND00270214N17290611.pdf.

[96] Changes were made in the mid-1980s to quarantine the annual tax loss for investing in residential housing such that it could only be recouped by the individual when the asset was sold. However, those changes lasted for only two years because the residential housing stock dried up as individuals ceased investing in residential housing. Nevertheless, the Australian government's recent review of its tax and transfer system once again expressed concern about negative gearing. More specifically, the government recommended that investors be allowed to deduct only 40% of the annual losses from negatively-geared residential property and, also, that investors only be taxed on 40% of their rental income. That recommendation was qualified, however, with the caution that it not be introduced until there is greater certainty about the supply of residential housing stock. Australia's Future Tax System, Report to the Treasurer, Part One Overview 83 (2009). The report is also known as the Henry Review because the review panel was chaired by Dr. Ken Henry, then the Australian Secretary to the Treasury.

[97] *See* Robert L. Clark, Richard V. Burkhauser, Marilyn Moon, Joseph F. Quinn & Timothy M. Smeeding, The Economics of an Aging Society 98–99 (2004); Sharon A. DeVaney & Sophia T. Chiremba, *Comparing the Retirement Savings of the Baby Boomers and Other Cohorts*, Compensation and Working Conditions, Bureau of Labor Statistics (Jan. 24, 2005), http://www.bls.gov/opub/cwc/cm20050114ar01p1.htm; Albert Ando & Franco Modigliani, *The Life Cycle Hypothesis of Saving*, 53 Am. Econ. Rev. 55, 55 (1963).

can live off their savings until death and die exactly when they run out of money.[98] See Figure 4.

Figure 4. Stages of the Simple Economic Life Cycle



Major Life Periods:

A. 'Youth': Period when consumption exceeds income (up to age 20–25).
B. 'Working Life': Period where income exceeds consumption (20–25 to 60–65).
C. 'Retirement': Period where consumption exceeds income (60–65 and beyond).

Source: Robert L. Clark, Richard V. Burkhauser, Marilyn Moon, Joseph F. Quinn & Timothy M. Smeeding, The Economics of an Aging Society 100 fig. 4.2 (2004).

[98] Of note, the life cycle model assumes relatively level spending by retirees throughout retirement, and for simplicity most of the discussion in this Article follows that assumption. In fact, consumption patterns in retirement are different at different ages and the overall pattern is U-shaped rather than flat. In the initial *active* phase, higher incomes may be needed to meet the expenses of travel and leisure activities. This is often followed by a less expensive *passive* phase when retirees are still living independently but reduce their spending as they have a more sedentary lifestyle. Finally, many retirees will fall into a *frail* phase of declining health when more income is needed to help pay for greater assistance. *See, e.g.*, Jack Jie Ding, *Annuitization with Phased Consumption Requirements: Who, When and How Much*, 3 (Dec. 2011), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2014453.

V. Optimal Contribution Rules

Ensuring that adequate contributions are made to defined contribution plans is perhaps the most critical mechanism for ensuring that people will have adequate retirement incomes. In that regard, Australia's mandatory contribution system is virtually certain to ensure that adequate contributions are made for most workers.[99] Under current law, almost all workers will see nine percent of salary contributed to their superannuation funds, and those with favorable union contracts can see even more contributed on their behalf. Moreover, the superannuation guarantee will gradually increase to 12% by 2019–2020.[100]

Australia may also want to revise the tax treatment of superannuation contributions, accumulations, and distributions, perhaps along the lines of the Exempt-Exempt-Taxable approach that is commonly used in the United States and in so many other countries.[101] In that regard, the current Australian system of 15% taxes on contributions and annual earnings means that only 85% of contributions and earnings can be accumulated for retirement. That approach is closer to comprehensive income taxation and results in overtaxing the retirement savings of Australians relative to the consumption tax treatment that is common in the rest of the world.

On the other hand, as already mentioned, the United States has a voluntary pension system.[102] Only about half of U.S. workers have pension plans, and many Americans are just not saving enough in retirement plans or otherwise.[103] To increase pension coverage, especially for low-wage and moderate-wage workers, it would make sense for the United States to follow Australia's example and adopt a mandatory pension system.[104] At present, however,

[99] *See, e.g.*, George P. Rothman, *Projecting the Adequacy of Australian Retirement Incomes—For Whole of Population and Income and Gender Groups*, Australian Gov't, Dep't of the Treasury 21–22 (July 14, 2011), *available at* http://www.asb.unsw.edu.au/research/centreforpensionsandsuperannuation/Documents/G.%20Rothman%20-%20Projecting%20the%20Adequacy%20of%20Australian%20Retirement%20Incomes.pdf.

[100] *Superannuation Guarantee (Administration) Amendment Act* 2012 (Cth) sch 1 § 2 (Austl.).

[101] *See supra* notes 34–38 and accompanying text; *see also, e.g.*, OECD, *supra* note 57, at 122–23; Kwang-Yeol Yoo & Alain de Serres, Tax Treatment of Private Pension Savings in OCDE Countries, *available at* http://www.oecd.org/dataoecd/19/0/35663569.pdf; Forman, *supra* note 38, at 304.

[102] *See supra* note 32 and accompanying text.

[103] *See, e.g.*, *Most Middle-Income Workers Saving Less Than Five Percent of Their Income for Retirement*, Life Ins. & Market Research Ass'n (Oct. 31, 2012), http://www.limra.com/newscenter/NewsArchive/ArchiveDetails.aspx?prid=269 (finding that two-thirds of middle-income ($40,000-$99,999) American workers were saving less than five percent of their annual income for retirement, and nearly a quarter were saving nothing at all); *see also* sources cited *supra* note 14.

[104] S*ee, e.g.*, Jonathan Barry Forman, *Should We Replace the Current Pension System with a Universal Pension System?*, 16 J. of Pension Benefits 48, 48 (2009); Jonathan Barry Forman & Adam Carasso, *Tax Considerations in a Universal Pension System*, The Urban-Brookings Tax Pol'y Ctr., 2–3 (Dec. 2007), http://www.urban.org/publications/411593.html.

American politicians are unwilling to impose such a mandate on employers or workers.

To be sure, the United States has numerous tax incentives for retirement savings. As mentioned, amounts set aside for retirement and pension earnings are typically exempt from tax.[105] This system certainly provides incentives for high-income, high-tax-bracket taxpayers to save for retirement, and the nonrefundable saver's tax credit provides an incentive for moderate-income taxpayers to save for retirement.[106] In that regard, however, many believe that making the saver's tax credit refundable would increase the incentives for low-income workers to save for retirement.[107] Another approach for encouraging more households to save for retirement would be to replace the current system of deductions—and exclusions—for contributions with a flat rate refundable tax credit that would be deposited directly into the saver's retirement savings account.[108]

Recently, the United States has been experimenting with automatic enrollment systems. For example, many 401(k) plans automatically enroll employees unless they choose to opt out. The plan will deduct a set contribution level from each employee's pay check and put it into a predetermined investment. Studies have shown that automatically enrolling people into 401(k) plans can achieve higher levels of participation, and automatically escalating the level of their contributions can dramatically increase their amount of savings.[109]

At present, however, not every worker has access to a 401(k) plan. As a starting point, the United States may want to require that every employer have a pension plan or at least offer their employees a 401(k) plan or a payroll-deduction IRA coupled with automatic enrollment features.[110] In the end, however, the United States should eventually move towards a manda-

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[105] *See supra* Part III.A.2.

[106] *See supra* notes 49–50 and accompanying text.

[107] William G. Gale, J. Mark Iwry & Peter R. Orszag, *The Saver's Credit: Expanding Retirement Savings for Middle- and Lower-Income Americans*, The Ret. Sec. Project, 11 (2005), *available at* http://www.brookings.edu/~/media/Files/rc/papers/2005/03saving_gale02/20050310orszag.pdf; Stephen F. Befort, *The Perfect Storm of Retirement Security: Fixing the Three-Legged Stool of Social Security, Pensions, and Personal Savings*, 91 Minn. L. Rev. 938, 982–86 (2007); William G. Gale, David C. John & Spencer Smith, *New Ways to Promote Retirement Saving*, AARP Public Pol'y Inst. 19–24 (2012), *available at* http://www.aarp.org/content/dam/aarp/research/public_policy_institute/econ_sec/2012/new-ways-promote-retirement-saving-AARP-pp-econ-sec.pdf.

[108] *Tax Reform Options: Promoting Retirement Security: Hearing Before the Senate Fin. Comm.*, 112th Cong. (2011) (statement of William G. Gale, Brookings Institution).

[109] *See, e.g.*, Richard H. Thaler & Schlomo Benartzi, *The Behavioral Economics of Retirement Savings Behavior*, AARP Public Pol'y Inst. 2 (2007), *available at* http://assets.aarp.org/rgcenter/econ/2007_02_savings.pdf; Jack VanDerhei, *Increasing Default Deferral Rates in Automatic Enrollment 401(k) Plans: The Impact on Retirement Savings Success in Plans with Automatic Escalation*, 33 Emp. Benefit Research Inst. Notes 12, 12 (2012).

[110] *See* Barbara A. Butrica & Richard W. Johnson, *How Much Might Automatic IRAs Improve Retirement Security for Low- and Moderate-Wage Workers?*, Urban Inst. 1–2 (July 2011), *available at* http://www.urban.org/UploadedPDF/412360-Automatic-IRAs-Improve-Retirement-Security.pdf.

tory pension system, as tax incentives and automatic enrollment are unlikely to lead to universal coverage.[111]

VI. Optimal Accumulation Rules

Funds contributed to defined contribution plans need to be invested well, protected from waste and fraud by strong fiduciary rules, and preserved in individual accounts until retirement.

A. *Investment Rules*

A key investment issue has to do with how participants in defined contribution plans invest the money held in their individual accounts. On average, individual workers tend to be pretty poor investors. They tend to invest too heavily in bonds and guaranteed investment contracts.[112] Also, when they do invest in stocks, individual employees often tend to invest too heavily in the stock of their employers, as the Enron scandal in the United States showed.[113] Individuals also tend to invest too heavily in stocks of their home country as opposed to foreign stocks.[114] High and hidden administrative costs and management fees can also reduce investment returns, particularly on individual accounts.[115] All in all, one study of U.S. pensions found that traditional defined benefit plans managed by investment professionals tend to get annual returns 1.9 percentage points higher than defined contribution plans where individuals tend to choose the investments.[116] Accordingly, pension rules need to encourage better investments by participants and need to help participants minimize the fees associated with their accounts.

1. *Improving Investment Choices*

Both the United States and Australia have made steps to improve the investment decisions made by participants. Both countries have limits on how individual account assets can be invested, and both countries are tak-

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[111] *See, e.g.*, Forman, *supra* note 2, at 242; James J. Choi, David Laibson & Brigitte C. Madrian, *$100 Bills on the Sidewalk: Suboptimal Investment in 401(k) Plans*, 93 Rev. of Econ. & Stat. 748, 761–62 (2011).

[112] Moreover, individuals tend to reduce their equity holdings as they get older, while large defined benefit plans typically continue to collect the equity premium in perpetuity.

[113] *See* Susan J. Stabile, *Is it Time to Admit the Failure of an Employer-Based Pension System?*, 11 Lewis & Clark L. Rev. 305, 313 (2007); John H. Langbein, Susan J. Stabile & Bruce A. Wolk, Pension And Employee Benefit Law 638–48 (4th rev. ed., 2006); Schlomo Benartzi, Richard H. Thaler, Stephen P. Utkus & Cass R. Sunstein, *The Law and Economics of Company Stock in 401(k) Plans*, 50 J.L. & Econ. 45, 45–48 (2007).

[114] *See, e.g.*, Henrik Cronqvist & Richard H. Thaler, *Design Choices in Privatized Social-Security Systems: Learning from the Swedish Experience*, 94 Am. Econ. Rev. 424, 426 (2004).

[115] Jonathan Barry Forman, *The Future of 401(k) Plan Fees*, N.Y.U. Rev. of Emp. Benefits & Executive Compensation, 2007, at 9-1.

[116] *America's Private Retirement System: The Need for Reform: Hearing Before the S. Special Comm. on Aging*, 108th Cong. 7 (2004) (statement of John C. Goodman, President, Nat'l Ctr. for Pol'y Analysis).

ing steps to encourage individuals to make better investment choices, for example, by encouraging better default investments.

a. *Current Limits on Investment Assets.* Both the United States and Australia impose at least some limits on the kinds of investments that participants can make.

i. *Investment Limits in the United States.* While the United States government does not provide a list of approved investments for retirement plans, ERISA contains many rules that apply to retirement plan investments.[117] In general, plan sponsors are treated as fiduciaries, and, in investing plan assets, they are required to exercise the judgment that a prudent investor would use in investing for her own retirement.[118] Of note, however, plans, such as 401(k) plans, that permit participant-directed investment, can avoid at least some fiduciary responsibilities if participants are offered at least three diversified options for investment, each with different risk–return factors.[119]

Also of note, under the "exclusive benefit" rule, a qualified retirement plan must be maintained for the exclusive benefit of employees and their beneficiaries, the assets of the plan must be held in a trust or custodial account for the exclusive benefit of employees and their beneficiaries, and the plan must prohibit the diversion of assets for purposes other than the exclusive benefit of employees and their beneficiaries.[120]

In addition, various investment limits apply to specific types of plans. For example, some plans are limited in the amount of employer stock and employer real property that they can hold.[121] Also, neither participant-directed accounts nor IRAs can invest in collectibles, such as art, antiques, gems, coins, or alcoholic beverages; they can invest in certain precious metals only if they meet specific requirements.[122] Also, IRAs are not permitted to invest in life insurance.[123] Finally, IRA trustees can impose additional restrictions on investments.[124] For example, while U.S. pension law does not prohibit investing in real estate, to avoid administrative burdens, many IRA trustees bar their IRA account holders from investing in real estate.

In addition, prohibited transaction rules prevent "disqualified persons" from engaging in certain transactions with pension plans, and similar rules apply to transactions between an IRA and its owner or beneficiary.[125] For example, an employer usually cannot sell, exchange, or lease any property to

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[117] *See Retirement Plans FAQs Regarding Plan Investments*, Internal Revenue Service, http://www.irs.gov/Retirement-Plans/Retirement-Plans-FAQs-regarding-Plan-Investments (last updated Dec. 12, 2012).

[118] 29 U.S.C. § 1104 (2006).

[119] *See* 29 C.F.R. § 2550.404c-1(b)(2)(ii)(2006).

[120] I.R.C. § 401(a); 29 U.S.C. § 1104(a).

[121] 29 U.S.C. § 1107.

[122] *See* I.R.C. § 408(m); *see also Retirement Plan FAQs Regarding IRAs*, Internal Revenue Service, http://www.irs.gov/retirement/article/0,,id=111413,00.html (last updated Oct. 22, 2012).

[123] I.R.C. § 408(a)(3).

[124] *Retirement Plan FAQs*, *supra* note 122.

[125] I.R.C. § 4975; 29 U.S.C. § 1106.

a pension plan; similarly, an IRA owner cannot sell property to her IRA. Disqualified persons include employers, unions, fiduciaries, and persons providing services to a plan, such as lawyers and accountants. An exception permits plan participants to borrow from their defined contribution accounts under certain circumstances, but borrowing from an IRA is always a prohibited transaction.[126]

ii. *Investment Limits in Australia.* The regulations governing pension funds in Australia do not mandate the investments to be made by the superannuation funds. However, there are a number of broad investment principles that govern how funds are invested, and, in addition, there are a number of specific prohibitions with respect to fund investments.

Fundamental to any investment by a superannuation fund is that the trustee must comply with the "sole purpose" test.[127] Even though that test refers to "purpose" in the singular, in fact the test covers multiple purposes, such as providing for retirement, disability, and death. In terms of compliance, the sole purpose test is most relevant when members of the fund can get access or some other benefit from investments by the fund.

Trustees of pension funds are obligated to prepare and to give effect to an investment strategy of the fund, taking into account:

- the risk of each investment of the fund,
- diversification of investments,
- the fund's liquidity, and
- the fund's ability to discharge its current and future liabilities.[128]

The trustees are also required to invest the funds with "the same degree of care, skill and diligence as a prudent superannuation trustee would exercise in relation to an entity of which it is trustee and on behalf of the beneficiaries of which it makes investments."[129]

In terms of specific prohibitions on the investments made by pension funds:

- they cannot invest more than five percent by market value with employers or related parties or with members and related parties (the "in-house asset" rule);[130]
- they cannot intentionally acquire assets from members of the fund, with four exceptions. In particular, pension funds are permitted to

[126] *Retirement Topics—Loans*, Internal Revenue Service, http://www.irs.gov/Retirement-Plans/Plan-Participant,-Employee/Retirement-Topics---Loans (last updated Aug. 3, 2012).

[127] *See Superannuation Industry (Supervision) Act 1993* (Cth) § 52 (Austl.).

[128] S*uperannuation Industry (Supervision) Act 1993* (Cth) § 52(2)(f) (Austl.).

[129] *Superannuation Industry (Supervision) Act 1993* (Cth) § 52(2)(b) (Austl.); *see also Superannuation Industry (Supervision) Act 1993* § (Cth) 52A(2)(b) (Austl.). Trustees are also required to regularly review the investment strategy and each investment option, and they are also required to offer investment options that allow beneficiaries to be adequately diversified. *Superannuation Industry (Supervision) Act 1993* (Cth) § 52(6) (Austl.).

[130] *Superannuation Industry (Supervision) Act 1993* (Cth) §§ 71, 83D (Austl.).

acquire real property that is used for business purposes (business real property);[131]

- they cannot lend money or give financial assistance to members;[132]
- all investments by the fund must be at arm's length;[133]
- trustees cannot charge the assets of the fund;[134]
- pension funds are generally prohibited from borrowing, although funds are permitted to borrow provided, among other things, that the rights of the lender on default are limited to the asset that was acquired with the borrowings;[135] and
- if the investment of the fund is a "collectible", it must be held in the name of the fund, cannot be used by a member of the fund, and must be insured.[136]

b. *Recent Efforts to Encourage Better Investment Choices.* Both the United States and Australia are in the midst of reforming their pension systems to promote better investment choices by participants.

i. Recent Efforts in the United States. In the United States, for example, in recognition of the historically poor investment choices made by individual employees, the Pension Protection Act of 2006 amended ERISA section 404(c) to improve the default investments for workers who do not otherwise direct their own investments.[137] The new law encourages employers to replace their low-yield, stable-value bond funds with balanced funds (funds with an unchanging mix of stocks and bonds) and life-cycle funds (funds that gradually shift their investments from stocks towards bonds as workers age). More specifically, the final regulation provides for four types of so-called "qualified default investment alternatives" (QDIAs):

- A product with a mix of investments that takes into account the individual's age or retirement date (an example of such a product could be a life-cycle or target date fund);
- An investment service that allocates contributions among existing plan options to provide an asset mix that takes into account the individual's

[131] *Superannuation Industry (Supervision) Act 1993* (Cth) § 66 (Austl.).
[132] *Superannuation Industry (Supervision) Act 1993* (Cth) § 65 (Austl.).
[133] *Superannuation Industry (Supervision) Act 1993* (Cth) § 109 (Austl.).
[134] *See Superannuation Industry (Supervision) Act Regulations 1994* (Cth) § 13.15 (Austl.).
[135] *Superannuation Industry (Supervision) Act 1993* (Cth) §§ 67, 67A (Austl.).
[136] *Superannuation Industry (Supervision) Act 1993* (Cth) § 62A (Austl.).
[137] Pension Protection Act, Pub. L. No. 109-280, 120 Stat. 780 (2006); Olivia S. Mitchell, Gary R. Mottola, Stephen P. Utkus & Taxkeshi Yamaguchi, *The Dynamics of Lifecycle Investing in 401(k) Plans* (Population Aging Research Ctr., PARC Working Paper No. 19, Aug. 1, 2008), *available at* http://repository.upenn.edu/cgi/viewcontent.cgi?article=1018&context=parc_working_papers.

age or retirement date (an example of such a service could be a professionally managed fund);

- A product with a mix of investments that takes into account the characteristics of the group of employees as a whole, rather than each individual (an example of such a product could be a balanced fund); and
- A capital preservation product for only the first 120 days of participation (an option for plan sponsors wishing to simplify administration if workers opt out of participation before incurring an additional tax).[138]

The final regulation also clarifies that a QDIA may be offered through variable annuity contracts or other pooled investment funds.[139]

ii. *Recent Efforts in Australia.* New legislation enacted by the Australian government in 2012 creates a new single, low-cost default superannuation product called MySuper to replace existing default products.[140]

Of the almost 12 million Australians who held a superannuation account when the legislation was proposed, approximately 80% had their compulsory superannuation contributions paid into a default fund.[141] These are the funds to which the employers pay the compulsory contributions for employees who have not directed their employer to pay to a nominated fund.

The Australian government has recognized that many workers do not have the interest, information, or expertise required to make informed choices about their superannuation investments. Consequently, the government wants to give those workers access to a safe, low-cost and simple default superannuation product to replace the existing default funds. Under the new legislation, superannuation funds will be allowed to provide these new MySuper products, and the government expects that most superannuation funds will

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[138] U.S. Dep't of Labor, Emp. Benefits Sec. Admin., Regulation Relating to Qualified Default Investment Alternatives in Participant-Directed Individual Account Plans (2008), *available at* http://www.dol.gov/ebsa/pdf/fsQDIA.pdf; 29 C.F.R. § 2550.404c-5 (2006); *see also* Joseph Masterson, *Target Date Funds: Ready, Fire, Aim*, 19 J. of Pension Benefits 3 (2011).

[139] U.S. Dep't of Labor, *supra* note 138.

[140] *See Superannuation Legislation Amendment (MySuper Core Provisions) Act 2012* (Cth) (Austl.); *Superannuation Legislation Amendment (Trustee Obligations and Prudential Standards) Act 2012* (Cth) (Austl.); *Superannuation Legislation Amendment (Further MySuper and Transparency Measures) Act 2012* (Cth) (Austl.); *see also Stronger Super: Acts*, Australian Government, The Treasury http://strongersuper.treasury.gov.au/content/Content.aspx?doc=acts.htm (last visited Jan. 30, 2013); Australian Gov't, Stronger Super: Information Pack (2011), *available at* http://strongersuper.treasury.gov.au/content/publications/information_pack/downloads/information_pack.pdf; *Core Framework for MySuper Released*, Corrs, Chambers, Westgarth (Sept. 30, 2011), http://www.corrs.com.au/publications/corrs-in-brief/core-framework-mysuper-released.

[141] *Stronger Super: Key Points*, Australian Gov't, Dep't of the Treasury, http://strongersuper.treasury.gov.au/content/Content.aspx?doc=publications/government_response/key_points.htm (last visited Jan. 30, 2013).

decide to offer these new products.[142] Superannuation funds will still be able to offer other products and will not be compelled to offer a MySuper product.

These new MySuper accounts will have a simple set of features, irrespective of who provides them. These simple features will allow members to easily compare funds based on such key differences as cost, investment performance, and the level of insurance protection.[143] These new products will also ensure that members do not pay for unnecessary "bells and whistles" that they do not use.

In addition, the trustees of these new MySuper products will be subject to higher performance standards, which will be enforced by the Australian government, including a specific duty to deliver value for money.[144] Failure to meet these standards could lead to revocation of the license to offer superannuation products.[145]

These new products will also be the default product that receives the contributions of employees who have not chosen a fund.

The key features of MySuper will be:

- "a specific duty to deliver value for money as measured by long-term net returns, and to actively consider whether the fund has sufficient scale;
- "a single diversified investment strategy, suitable for the vast majority of members who are in the default option;
- "comparable data on long-term net returns published by [the Australian government regulator];
- "restrictions on unnecessary or excessive fees, including:
  - "banning commissions in relation to retail investment products and group insurance;
  - "new standards for the payment of performance fees to fund managers;
  - "a ban on entry fees charged to new members;
  - "exit fees limited to cost recovery; and
  - "switching fees not payable to the trustee in their personal capacity;
- "a fair and reasonable allocation of costs between it and other products;
- "standardized reporting requirements written in plain English;
- "a requirement to accept all types of contributions; and

[142] *Id.*
[143] *Id.*
[144] *Id.*
[145] *Id.*

- "life, and total and permanent disability (TPD) insurance (where available, depending on occupational and demographic factors) offered on an opt-out basis."[146]

The Australian Government claims that MySuper reforms "will improve outcomes for the majority of members who do not wish to be actively involved in choosing their superannuation arrangements, while maintaining freedom of choice for those members who do."[147] Moreover, the Australian Government estimates that MySuper will save superannuation fund members around AU$550 million per year in total fees in the short term and around AU$1.7 billion per year in the long term.[148] For a 30-year-old worker with average weekly earnings, that means that MySuper could result in another AU$40,000 in retirement savings.[149]

c. *Optimal Investment Rules.* Clearly, changing plan default funds can result in better returns and larger defined contribution plan accumulations. Providing investment guidance for participants can also increase their investment returns. In that regard, for example, a recent study of 401(k) accounts found that workers who got investment help improved their annual returns by about three percentage points.[150] Over 20 years that could mean the difference between having $10,000 grow to $71,400 as opposed to just $42,100 for those who handled their own affairs. For purposes of the study, help was defined to include target date funds, professionally managed funds, or online advice.

Pertinent here, pursuant to a prohibited transaction exemption under the Pension Protection Act of 2006, the U.S. Department of Labor recently finalized regulations that make it easier for plan sponsors to give investment advice to plan participants.[151] To qualify for the exemption, the investment advice must be given through the use of an unbiased computer model or through an advisor compensated on a "level-fee" basis.

Also, as more fully discussed in Part VII below, greater attention should be paid to the policies relating to annuities and other lifetime income options. In that regard, while defined benefit plans typically paid benefits in the form of a life annuity, defined contribution plans typically make benefits available

[146] *Id.*
[147] *Id.*
[148] *Id.*
[149] *Id.*
[150] Financial Engines & Aon Hewitt, Help in Defined Contribution Plans: 2006 Through 2010 9 (2011), *available at* http://www.aon.com/attachments/thought-leadership/report_help_defined_contribution_plans_092211.pdf.
[151] Investment Advice–Participants and Beneficiaries, 76 Fed. Reg. 66,136 (2011) (codified at 29 C.F.R. pt. 2550).

in the form of a lump sum distribution that can be all too easily dissipated.[152] It might make sense to encourage—or to require—individuals to allocate a portion of their contributions or investments to annuities or other lifetime income products.

2. *Minimizing Fees*

Minimizing fees can also help increase investment returns and defined contribution plan accumulations. More specifically, high fees clearly reduce the rate of return on individual account investments, and over the course of a lifetime, high fees can reduce retirement savings significantly. For example, imagine a 45-year-old employee who plans to leave $20,000 in a 401(k) account until retirement at age 65.[153] If those assets earn a 6.5% net annual return—a seven percent investment return minus a 0.5% charge for fees—that $20,000 will grow to $70,500 at retirement. On the other hand, if fees are instead 1.5% annually, that $20,000 investment will grow to just $58,400. That additional one percent annual fee will reduce the account balance at retirement by around 17%.

Accordingly, government regulation of the fees and expenses associated with defined contribution plans is critically important.[154] In that regard, it would make sense to apply the fiduciary rules to more of those involved in managing investments, as the United States is trying to do by expanding its definition of who is a fiduciary.[155] Also, as already discussed, pension rules should be designed to help ensure that participants who do not select their own investments are defaulted into funds with very low fees, such as index funds and appropriate target date funds.[156]

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[152] Indeed, one study found that 54% of those who took lump sum distributions from their retirement plans had exhausted their savings within three years of retirement. Martha L. Tejera, *Retirement Income in DC Plans: What Our Experience with DB Plans Tells Us*, 3 Inst. Ret. Council Update 1202, at 1, 3, *available at* http://www.iricouncil.org/docs/Volume%203,%20Number%201.pdf.

[153] U.S. Gov't Accountability Office, GAO-07-21, Private Pensions: Changes Needed to Provide 401(K) Plan Participants and the Department of Labor Better Information on Fees 7 (2006).

[154] *See* Forman, *supra* note 115; Stewart Neufeld, *The Tyranny of Compounding Fees: Are Mutual Funds Bleeding Retirement Accounts Dry?*, 24 J. of Fin. Planning 60, 67 (2011), *available at* http://www.fpanet.org/journal/CurrentIssue/TableofContents/TheTyrannyofCompoundingFees/ (recommending "plan fiduciaries be required to select default investments that track broad market indices (equity, money, bonds) and that have total fees (MERS [management expense ratios]) as low as possible, ideally not more than 10 bps" [10 basis points {bps} equals 0.1 percent]).

[155] *See* Melanie Waddell, *Borzi: DOL to Offer New Version of Fiduciary Rule in 'Several Months'*, AdvisorOne (December 7, 2012), http://www.advisorone.com/2012/12/07/borzi-dol-to-offer-new-version-of-fiduciary-rule-i; Aaron Lucchetti, *Labor Pains Wall Street: Rules Would Toughen Pension Oversight*, Wall St. J. Online (July 28, 2011), http://online.wsj.com/article/SB10001424053111903635604576472404135121390.html?mod=WSJ_Retirement-Planning_MoreHeadlines.

[156] *See supra* Part VI.A.1.

In Australia, the MySuper legislation also limits the fees that funds can charge.[157] The fees that can be charged in MySuper products will be limited to an administration fee, an investment fee, a buy-sell spread, a switching fee, an exit fee, and an activity fee.[158] All fees charged for MySuper products will have to fall within these standard descriptions. This should make it simpler for members to understand what they pay and to compare fees against other MySuper products.

With respect to performance-based fee arrangements with fund managers of MySuper products, trustees will generally have to include the following provisions:

- "a reduced base fee that reflects the potential gains the investment manager receives from performance-based fees, taking into account any fee cap;
- "measurement of performance on an after-tax (where possible) and after-costs basis;
- "an appropriate benchmark and hurdle for the asset class reflecting the risks of the actual investments;
- "an appropriate testing period; and
- "provisions for the adjustment of the performance-based fee to recoup any prior or subsequent underperformance (for example, high water marks, clawbacks, vesting arrangements and rolling testing periods)."[159]

B. *Fiduciary Rules*

1. *Fiduciary Rules in the United States*

The United States has extensive rules governing fiduciaries. In general, fiduciaries are expected to:

- "Act[] solely in the interest of plan participants and their beneficiaries and with the exclusive purpose of providing benefits to them;
- "Carry[] out their duties prudently;
- "Follow[] the plan documents (unless inconsistent with ERISA);
- "Diversify[] plan investments; and
- "Pay[] only reasonable plan expenses."[160]

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157 *See* sources cited *supra* note 140.

158 Australian Gov't, *supra* note 140, at 5–6; Revised Explanatory Memorandum, *Superannuation Legislation Amendment (MySuper Core Provisions) Bill* (Cth) 2012 35–36 (Austl.).

159 Australian Gov't, *supra* note 140, at 6.

160 U.S. Department of Labor, Employee Benefits Sec. Admin., Meeting Your Fiduciary Responsibilities 2 (2010), *available at* http://www.dol.gov/ebsa/pdf/meetingyourfiduciaryresponsibilities.pdf.

These fiduciary rules help to ensure that retirement savings are protected and grow for the benefit of participants.

2. *Fiduciary Rules in Australia*

As more fully described above, trustees of superannuation funds are also charged with meeting certain fiduciary standards that are largely similar to those that apply in the United States.[161] Plan trustees are expected to comply with the "sole purpose" test, and they are required to invest the funds with the same care, skill, and diligence that an ordinary prudent person would exercise in dealing with investments on behalf of beneficiaries.[162]

3. *Optimal Fiduciary Rules*

Toughening the fiduciary standards that govern pension fund managers should result in marginal gains in investment returns. In that regard, the U.S. Department of Labor is developing regulations that would impose fiduciary duties on brokers and financial advisors who provide investment advice for a fee to retirement plans and IRA holders.[163] Along the same lines, the MySuper legislation in Australia establishes the Australian Prudential Regulatory Authority's ability to make prudential standards for superannuation funds.[164]

C. *Preserve Benefits Until Retirement*

Another major problem with defined contribution plans is that they can be leaky. While defined benefit plans typically provide lifetime annuities for retirees and their spouses, defined contribution plans in the United States typically allow participants to withdraw all or a portion of their individual accounts, and many plans allow participants to borrow against their accounts.[165]

To be sure, section 72(t) generally imposes a ten percent tax on pension distributions made before an individual reaches age 59½, but there are numerous exceptions. For example, there is an exception for distributions that take the form of a lifetime annuity, and there are exceptions for distributions on account of disability or to cover high medical expenses.[166] Distributions from individual retirement accounts can also be used for health expenses and even for education and first-time homebuyer expenses.[167] All in all, a significant

[161] *See supra* Part VI.A.1.a.

[162] *Superannuation Industry (Supervision) Act 1993* (Cth) § 52(2)(b) (Austl.).

[163] *See supra* note 155 and accompanying text.

[164] *See, e.g.*, Revised Explanatory Memorandum, *Superannuation Legislation Amendment (MySuper Core Provisions) Bill* (Cth) 2012 2–3 (Austl.).

[165] *See, e.g.*, Lori Lucas, *Plug the Drain: 401(k) Leakage and the Impact on Retirement*, Defined Contribution Inst. Inv. Ass'n 1 (2011), *available at* http://www.dciia.org/info/publications/Documents/DCIIA%20Plug%20the%20Drain.pdf.

[166] *Topic 558 – Additional Tax on Early Distributions from Retirement Plans, Other Than IRAs*, Internal Revenue Service, http://www.irs.gov/taxtopics/tc558.html (last updated Jan. 31, 2013).

[167] *Topic 557 – Additional Tax on Early Distributions from Traditional and ROTH IRAs*, Internal Revenue Service, http://www.irs.gov/taxtopics/tc557.html (last updated Jan. 31, 2013).

portion of these premature distributions and loans will be dissipated before retirement.[168] Accordingly, it could make sense to prohibit premature distributions and loans from defined contribution plans and IRAs.[169]

Australia approached the issue of preserving benefits until retirement by using tax incentives. When the superannuation system started, workers could get their pension fund benefits any time after age 55.[170] Since 2007, however, workers have been able to access their funds tax-free, but only if they wait until after age 60 (provided that the fund itself has paid tax).[171] As a result, workers generally stay in their funds until at least age 60.[172]

VII. Optimal Distribution Rules

Distribution rules should encourage retirees to take their defined contribution plan distributions in the form of annuities or other lifetime income products that can insure against longevity risk (the risk of outliving one's retirement savings).[173]

A. *The Decline of Annuitization*

1. *In the United States*

The United States has a well-developed annuity market.[174] Nevertheless, over the years, there has been a significant decline in annuitization of retirement savings by American workers. The shift to defined contribution plans is a large part of the story, as defined contribution plans typically distribute benefits in the form of lump sum distributions rather than as annuities.[175] Indeed, relatively few defined contribution plans even offer annuity options,

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[168] *See, e.g.*, Lucas, *supra* note 165, at 4; Timothy (Jun) Lu, Olivia S. Mitchell & Stephen P. Utkus, *An Empirical Analysis of 401(k) Loan Defaults* 9 (Fin. Literacy Ctr., Working Paper WR-799-SSA, 2010), *available at* http://www.rand.org/content/dam/rand/pubs/working_papers/2010/RAND_WR799.pdf (finding that about 20% of 401(k) plan participants had loans and that about one in ten loans resulted in a default; of those employees who terminated employment, the loan default rate was nearly 80%).

[169] *See, e.g.*, Forman, *supra* note 2, at 233.

[170] *Key Factors That Affect How Your Super Payout is Taxed*, Australian Gov't, Australian Taxation Office, http://www.ato.gov.au/individuals/content.aspx?menuid=0&doc=/content/86252.htm&page=3&H3 (last updated Sept. 28, 2012).

[171] *See supra* notes 87–89 and accompanying text.

[172] *Cf. supra* notes 87–89 and accompanying text.

[173] *See, e.g.*, Jonathan Barry Forman, *Optimal Distribution Rules for Defined Contribution Plans: What Can the United States and Australia Learn from Other Countries?*, *in* N.Y. Univ. Rev. of Empl. Benefits & Executive Compensation 3-1, 3-3 (2012).

[174] Anthony Webb, *The United States Longevity Insurance Market*, *in* Securing Lifelong Retirement Income: Global Annuity Markets And Policy 63, 63 (Olivia S. Mitchell, John Piggott & Noriyuki Takayama eds., 2011).

[175] Towers Watson, International Pension Plan Survey: Report 2011 15 (2011), *available at* http://www.towerswatson.com/assets/pdf/6036/TW-EU-2011-22755-IPP-survey.pdf (stating that lump sum distributions are by far the most prevalent form of distribution for defined contribution plans).

and, in any event, relatively few participants elect those annuity options.[176] The problem for many retirees is that lump sum distributions can be all too easily dissipated. All in all, people rarely choose to buy annuities voluntarily, even though purchasing annuities could rationally help maximize their expected retirement incomes. That is, the demand for annuities is lower than expected, and this shortfall has come to be known as the "annuity puzzle."[177]

No doubt, there are many reasons for this low demand for annuities. Financial literacy is often low among consumers.[178] Moreover, relatively few retirees are willing to give up control over their retirement savings by buying an annuity: they would just rather have money in the bank. Many also want to leave money to their children (economists call this a bequest motive). Also, because of adverse selection—those that voluntarily purchase annuities tend to live longer than those that do not—annuities may not be priced very well for those with normal life expectancies. Finally, it is important to note that Social Security and SSI already provide inflation-adjusted monthly benefits that may crowd out private annuities.[179]

Of note, the Service and the U.S. Department of Labor recently mounted a joint effort to improve lifetime income options for retirement plans.[180] In that regard, the Treasury and the Service recently released a package of proposed regulations and rulings intended to make it easier for plans to offer

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[176] *See, e.g.*, Orth, *supra* note 7, at 2; Paul J. Yakoboski, *Retirees, Annuitization and Defined Contribution Plans*, TIAA-CREF Institute Trends and Issues, April 2010, at 1, 3, *available at* http://www.tiaa-crefinstitute.org/ucm/groups/content/@ap_ucm_p_tcp_docs/documents/document/tiaa02029462.pdf (finding that only around 19% of retirees with significant defined contribution plan assets but little defined benefit pension income annuitized a portion of their retirement savings); David L. Wray, Spend Down of Defined Contribution Assets as Retirement, Testimony before the ERISA Advisory Council Working Group (July 16, 2008), at 5, *available at* http://www.psca.org/psca-president-testified-july-16-2008-before-the-erisa-advisory-council-on-the-spend-down-of-defined-contribution-assets-at-retirement (noting that only about 20% of defined contribution plans offer annuities, and these are hardly ever utilized).

[177] *See, e.g.*, Franco Modigliani, *Life Cycle, Individual Thrift, and the Wealth of Nations*, 76(3) Am. Econ. Rev. 297 (1986); Shlomo Benartzi, Alessandro Previtero & Richard H. Thaler, *Annuitization Puzzles*, 25 J. of Econ. Perspectives 143, 143–44 (2011).

[178] *See, e.g.*, Annamaria Lusardi, Olivia S. Mitchell & Vilsa Curto, *Financial Sophistication in the Older Population* (Nat'l Bureau of Econ. Research, Working Paper No. 17,863, 2012).

[179] *See, e.g.*, Monika Bütler, Kim Peijnenburg & Stefan Staubli, *How Much Do Means-Tested Benefits Reduce the Demand for Annuities?* (Network for Studies on Pensions, Aging and Retirement, Discussion Paper No. DP 09/2011-52, 2011), http://arno.uvt.nl/show.cgi?fid=114894; *Policy Basics: Top Ten Facts About Social Security*, Center on Budget and Policy Priorities, http://www.cbpp.org/cms/index.cfm?fa=view&id=3261 (last updated Nov. 6, 2012).

[180] *Lifetime Income Options for Participants and Beneficiaries in Retirement Plans*, U.S. Dep't of Labor, Empl. Benefits Sec. Admin., http://www.dol.gov/ebsa/regs/cmt-1210-AB33.html (last visited Jan. 31, 2013).

lifetime income options for retirement plans.[181] More specifically, that guidance makes it easier for plans to offer the option of partial annuities, makes it easier for plans to offer the option of longevity annuities, clarifies how 401(k) participants can be offered the option of purchasing an annuity from their employer's defined benefit plan, and clarifies how 401(k) participants can be offered the option of a deferred annuity.[182]

2. *In Australia*

Australia does little to encourage or mandate annuities, and, not surprisingly, annuitization rates in Australia are quite low.[183] For example, in 2009, just 17 life annuity policies were sold in Australia.[184] As in the United States, the Age Pension probably crowds out annuities. Of note, however, the Australian government has expressed the need for expanding the range of lifetime income products.[185]

B. *Longevity Risk and Lifetime Income Products*

Retirees face numerous risks in managing their assets through retirement.[186] Pertinent here, longevity risk—the risk of outliving one's retirement savings—is probably the greatest risk facing current and future retirees with defined contribution plans. As life expectancy increases, accumulated retire-

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[181] *See* U.S. Department of the Treasury, Treasury Fact Sheet: Helping American Families Achieve Retirement Security by Expanding Lifetime Income Choices (Feb. 2, 2012), http://www.treasury.gov/press-center/press-releases/Documents/020212%20Retirement%20Security%20Factsheet.pdf; Executive Office of the President Council of Economic Advisors, Supporting Retirement for American Families (Feb. 2, 2012), *available at* http://benefitslink.com/articles/CEA_report_2_2_2012.pdf.

[182] Executive Office of the President Council of Economic Advisors, *supra* note 181, at 3, 7–9.

[183] Hazel Bateman & John Piggott, *Too Much Risk to Insure? The Australian (non-) Market for Annuities*, *in* Securing Lifelong Retirement Income: Global Annuity Markets and Policy, 81, 81–82 (Olivia S. Mitchell, John Piggott & Noriyuki Takayama eds., 2011); Roberto Rocha, Dimitri Vittas & Heinz P. Rudolph, *The Payout Phase of Pension Systems: A Comparison of Five Countries* 23–24 (World Bank, Policy Research Working Paper No. WPS5289, 2010), *available at* http://www-wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/2010/04/29/000158349_20100429154401/Rendered/PDF/WPS5288.pdf.

[184] Bateman, *supra* note 183, at 96.

[185] *See, e.g.*, *Australia's Future Tax System, The Retirement Income System: Report on Strategic Issues* 45–47 (May 2009), http://taxreview.treasury.gov.au/content/StrategicPaper.aspx?doc=html/Publications/Papers/Retirement_Income_Strategic_Issues_Paper/index.htm.

[186] The top risks for today's retirees include: longevity, inflation, market volatility, withdrawal rate, health care expenses, and unexpected events. Ameriprise Fin., Making Your Retirement Income Last a Lifetime 1 (Nov. 2010), *available at* http://cdn.ameriprisecontent.com/cds/alwp/advisor/david.p.weidman/cdocuments-and-settingsandrewdesktopwebsite-downloadsmaking-your-retirement-income-last-a-lifetiime634532517160486099.pdf; Youngkyun Park, *Retirement Income Adequacy With Immediate and Longevity Annuities*, Empl. Benefit Research Inst., 6–7 (May 2011), *available at* http://www.ebri.org/pdf/briefspdf/EBRI_IB_05-2011_No357_Annuities.pdf (discussing strategies for managing three types of risk: investment income, longevity, and long-term care).

ment savings in individual accounts will need to finance an ever-greater portion of retirees' ever-longer retirements. At present, a 65-year-old woman in the United States has a 50% chance of living past age 86, while a 65-year-old man has a 50% chance of living past age 84.[187]

The joint life expectancy of a 65-year-old couple is even more remarkable. There is a 50% chance that at least one 65-year-old spouse will live to age 91, and there is a 25% chance that at least one will live to 95.[188] That means married couples can easily have 25 or 30 years in retirement. Pertinent here, one study estimated that "three out of five middle-class retirees [in the United States] can expect to outlive their financial assets if they attempt[] to maintain their current pre-retirement standard of living."[189]

Retirees can use a variety of approaches to help manage their longevity risk.[190] One approach is for retirees to commit to systematic withdrawals of, say, four percent of their account balances each year—a strategy that has a relatively low risk of ruin (running out of money before death). Alternatively, traditional lifetime annuities offer another approach for spreading retirement savings out over a lifetime. Another alternative involves buying longevity insurance—for example, buying a deferred annuity at age 65 that starts making annual payments only if the annuitant lives past age 85. Finally, retirees can invest in products like variable annuities with guaranteed lifetime withdrawal benefits—funds that provide guaranteed systematic withdrawals for life, with guaranteed minimums that kick in if the underlying investment funds are ever depleted due to long life or poor investment returns. Depending on each retiree's specific circumstances, the best strategy may involve a combination of these financial products and approaches.

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[187] Bd. of Tr., Fed. Old-Age and Survivors Ins. and Fed. Disability Ins. Trust Funds, 2012 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds 91 tbl. V.A4 (2012), *available at* http://www.ssa.gov/oact/tr/2012/tr2012.pdf; *see also* Prudential, *Should Americans Be Insuring Their Retirement Income?* 3 (Oct. 2012), http://research.prudential.com/documents/rp/InsuringRetirementIncome.pdf?doc=InsuringRetirementIncome&bu=SI&ref=website&cid=1.

[188] Fred Reish, *Just out of Reish: Living "Room"? The Problem With Living Too Long*, Plan Sponsor (Aug. 2011), http://www.plansponsor.com/MagazineArticle.aspx?id=6442481375.

[189] Ernst & Young LLP, Retirement Vulnerability of New Retirees: The Likelihood of Outliving Their Financial Assets (July 2008), *available at* http://paycheckforlife.org/uploads/2008_E_Y_RRA.pdf.

[190] *See, e.g.*, Soc'y of Actuaries, Designing a Monthly Paycheck for Retirement 2 (2012), http://www.soa.org/workarea/downloadasset.aspx?id=30089; Gary C. Bhojwani, *Rethinking What's Ahead in Retirement*, Allianz Life Ins. Co. of N. Am. 11 (April 2011), *available at* https://www.allianzlife.com/content/public/Literature/Documents/ent-1154.pdf; Anthony Webb, *Making Your Nest Egg Last a Lifetime*, Boston Coll. Ctr. for Ret. Research 1 (Sept. 2009), *available at* http://crr.bc.edu/wp-content/uploads/2009/09/IB_9-20.pdf; Bonnie-Jeanne MacDonald, Bruce Jones, Richard J. Morrison, Robert L. Brown & Mary Hardy, *Research and Reality—A Literature Review on Drawing Down Retirement Financial Savings,* Society of Actuaries 2 (June 2011), http://www.soa.org/WorkArea/DownloadAsset.aspx?id=19866.

C. *Optimal Distribution Rules*

Clearly, there are a number of possible approaches for helping retirees insure against longevity risk. While lump sum distributions can be quickly exhausted, annuities and similar products can last a lifetime. Government policy should almost certainly be designed to encourage retirees to purchase such lifetime income products.[191]

1. *Encourage Annuitization*

a. Mandatory Annuitization. One approach for promoting lifetime retirement income would be for the government to require retirees to purchase annuities or similar lifetime income guarantees.[192] In that regard, President George W. Bush's Commission to Strengthen Social Security recommended that at least a portion of the balances in individual accounts should be annuitized.[193] More specifically, the Commission recommended that lump sum distributions be permitted only to the extent that the individual's Social Security benefit plus the required annuity exceeded the amount that would protect the individual from falling below the poverty line during retirement. On the plus side, if everyone had to buy an annuity with all or part of their retirement defined contribution plan savings, annuity prices would fall, both because the larger annuity market would be more efficient and because adverse selection would decline as virtually every retiree would buy an annuity, not just those who expected to live a long time.

b. *Defaults.* Alternatively, the government might just want to take steps to encourage annuitization.[194] For example, the government could require defined contribution plans to make annuity options available to plan participants.[195] The government could also require plans to default partici-

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[191] *See, e.g.*, Roberto Rocha & Dimitri Vittas, *Designing the Payout Phase of Pension Systems: Policy Issues, Constraints and Options* 7–8 (World Bank, Policy Research Working Paper No. 5289, 2010), *available at* http://www-wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/2010/05/04/000158349_20100504092303/Rendered/PDF/WPS5289.pdf; U.S. Gov't Accountability Office, GAO-11-400, Retirement Income: Ensuring Income Throughout Retirement Requires Difficult Choices 12 (2011); *The Retirement Challenge: Making Savings Last A Lifetime, Hearing before the S. Special Comm. on Aging*, 111th Cong. 194–222 (2010) (statement of the Investment Company Institute) (discussing low levels of annuitization from defined contribution plans).

[192] *See, e.g.*, Jeffrey R. Brown, *Automatic Lifetime Income as a Path to Retirement Income Security*, Am. Council of Life Insurers 6 (September 2009), *available at* http://www.wiser-women.org/pdf_files/Brown,%20Retirement%20Income%20Security.pdf; Forman, *supra* note 2, at 238–39.

[193] The President's Commission to Strengthen Social Security, Strengthening Social Security and Creating Personal Wealth for All Americans 41–42 (2001), *available at* http://govinfo.library.unt.edu/csss/reports/Final_report.pdf.

[194] *See* Jeffrey R. Brown, *Understanding the Role of Annuities in Retirement Planning*, *in* Overcoming the Savings Slump 178, 199–200 (Annamaria Lusardi ed., 2008).

[195] *See, e.g.*, U.S. Gov't Accountability Office, *supra* note 191, at 38–39.

pants into annuities or trial annuities unless plan participants affirmatively elect otherwise.[196]

The government might also try to encourage individuals to allocate a portion of their contributions to annuities.[197] Such "in-service" annuities would enable workers to obtain streams of lifetime income each year that they work, just as workers with traditional defined benefit plan pensions already do.

For that matter, the government could get into the market of selling annuities and other lifetime income products or, alternatively, guaranteeing products sold by private companies.[198] Finally, the government could use tax incentives to encourage people to take their distributions as annuities. For example, the government could exempt annuity payouts from taxation or favor them with a reduced tax rate.[199]

c. *Employer Plan Default Options.* Government regulations could also encourage employers to offer lifetime retirement income solutions. For example, the government could require plans to offer a menu of investment choices that include annuities and other lifetime income products.[200] To be sure, even if the government imposes no new requirements, plan sponsors should want to develop lifetime retirement income solutions as a way to help their employees prepare for retirement.

2. *More Financial Education About Lifetime Income Products*

The government also has a role in promoting financial education about annuities and other lifetime income products. For example, in addition to showing the total balance in a defined contribution account, benefit statements could be required to include an estimate of the "annuity equivalent"

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196 *See id.* at 39–40; George A. (Sandy) Mackenzie, The Decline of the Traditional Pension 200–02 (2010); J. Mark Iwry & John A. Turner, *Automatic Annuitization: New Behavioral Strategies for Expanding Lifetime Income in 401(k)s*, Ret. Sec. Project 6–7 (July 2009), *available at* http://www.brookings.edu/~/media/Files/rc/papers/2009/07_annuitization_iwry/07_annuitization_iwry.pdf (discussing various default strategies); William G. Gale, J. Mark Iwry, David C. John & Lina Walker, *Increasing Annuitization in 401(k) Plans with Automatic Trial Income*, Retirement Sec. Project 5 (2008), *available at* http://www.brookings.edu/~/media/Files/rc/papers/2008/06_annuities_gale/06_annuities_gale.pdf (recommending defaulting retirees into receiving at least 24 consecutive monthly payments from an annuity or similar lifetime income product).

197 *See, e.g.*, Brown, *supra* note 194, at 199–200.

198 *See, e.g.*, Henry T. C. Hu & Terrance Odean, *Paying for Old Age*, N.Y. Times, Feb. 25, 2011, at A19 (recommending that the federal government issue annuities); Lawrence A. Frolik, *Protecting Our Aging Retirees: Converting 401(k) Accounts Into Federally Guaranteed Lifetime Annuities*, 47 San Diego L. Rev. 277, 278 (2010) (suggesting that the federal government guarantee lifetime annuities for retirees).

199 *See, e.g.*, Retirement Security Needs Lifetime Pay Act of 2009, H.R. 2748, 111th Cong. (2009) (encouraging "guaranteed lifetime income payments by excluding from income a portion of such payments").

200 *See, e.g.*, Steve Vernon, *The Retirement Income Menu: An Idea Whose Time Has Come*, 2 Inst. Ret. Council Update 2011, at 1, 5, *available at* http://iricouncil.org/docs/The_Retirement_Income_Menu.pdf.

lifetime income stream of payments.[201] More specifically, individual benefit statements could be required to show the monthly annuity payment that would be made if the employee's total account balance were used to buy a single life annuity that commenced when the employee reaches age 65, and, for married employees, these individualized statements would also show the monthly annuity payments under a qualified joint and survivor annuity.

3. *Asset Tests*

Another problem has to do with the treatment of pensions under the asset tests used in means-tested public programs, such as Medicaid, food stamps, and SSI in the United States and the Age Pension in Australia. The stringent asset tests under those programs often require low-income workers to withdraw the balances in their defined contribution plans and "spend down" those assets before they can qualify for benefits.[202] Consequently, these asset tests can encourage individuals to dissipate retirement savings and may even discourage them from saving for retirement in the first place. While distributions from retirement accounts should probably count as "income" in determining eligibility for these means-tested benefits, modest amounts held in defined contribution plans and annuities should probably be excluded from the asset tests.

4. *Other Things Government Can Do*

In passing, it is worth noting that in addition to promoting annuities and other lifetime retirement income options, there are many other steps that government could take to help improve lifetime retirement incomes.

a. Encourage People to Work Longer. The government should probably do more to discourage early retirements.[203] Working longer increases retirement savings and reduces the number of years that retirement savings

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[201] *See, e.g.*, Lifetime Income Disclosure Act, S. 267, 112th Cong. § 2(b) (2011); H.R. 677, 112th Cong. § 2(b) (2011); U.S. Gov't Accountability Office, *supra* note 191, at 48–49; Advisory Council on Employee Welfare and Pension Plans, Report on the Spend Down of Defined Contribution Assets at Retirement (2008), *available at* http://www.dol.gov/ebsa/publications/2008ACreport3.html ("Recommendation 4: Encourage and allow additional participant disclosure, specifically the conversion of account balances into annual retirement income."); *The Retirement Challenge: Making Savings Last a Lifetime: Hearing Before the S. Comm. on Aging*, 111th Cong. 8 (2010) (statement of Phyllis C. Borzi, Assistant Secretary of Labor, Employee Benefits Security Administration).

[202] *See, e.g.*, Bütler, *supra* note 179, at 1–2.

[203] *See, e.g.*, Jonathan Barry Forman & Yung-Ping (Bing) Chen, *Optimal Retirement Age*, 2008 N.Y. Univ. Rev. of Empl. Benefits and Exec. Compensation 14-1, 14-3.

need to cover.[204] One way to encourage later retirements would be to raise the retirement age. In the United States, for example, the section 72(t) penalty on premature withdrawals only applies to distributions made before an individual reaches age 59½. It would make sense to toughen this penalty and raise the eligibility age to age 62, the early retirement age for the Social Security system.

Similarly, it would make sense to raise the normal retirement age for pensions. In the United States, ERISA defines "normal retirement age" as the earlier of the time specified in the plan or the later of age 65 or the fifth anniversary of the time the employee commenced participation in the plan.[205] Meanwhile, "full retirement age" under the Social Security system is currently age 66, but it is gradually increasing to age 67.[206] It would make sense to increase gradually the normal retirement age for pension plans to 67 and to keep it tied to the Social Security's full retirement age, even if that full retirement age is eventually increased.[207]

Australia also has a higher retirement age for its Age Pension than for its Superannuation Guarantee, and better coordination is called for.[208]

b. *Make It Easier to Annuitize Housing and Other Forms of Wealth.* The government might also want to help people find ways to annuitize housing and other forms of wealth. For example, the government might want to do more to encourage reverse mortgages.[209] Along the same lines, facilitating the sale or annuitization of life insurance policies could also provide additional lifetime retirement income for retirees.[210]

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[204] Stephen Blakely, *Is There a Future for Retirement?*, 32 Empl. Benefit Research Inst. Notes 13, 13 (2011); Joseph Quinn, Kevin Cahill & Michael Giandrea, *Early Retirement: The Dawn of a New Era?*, TIAA-CREF Inst. 14 (July 2011), *available at* http://www.tiaa-cref.org/ucm/groups/content/@ap_ucm_p_inst/documents/document/tiaa02030420.pdf; Alicia H. Munnell, Francesca Golub-Sass & Anthony Webb, *How Much to Save for a Secure Retirement*, Ctr. for Ret. Research at Boston Coll. (Nov. 2011), *available at* http://crr.bc.edu/images/stories/Briefs/IB_11-13.pdf.

[205] I.R.C. § 411(a)(8); 29 U.S.C. § 1002(24) (2006).

[206] *See supra* note 21 and accompanying text.

[207] *See, e.g.*, Forman, *supra* note 203, at 14-3; Ralph Stevens, *Sustainable Full Retirement Age Policies in an Aging Society: The Impact of Uncertain Longevity Increases on Retirement Age, Remaining Life Expectancy at Retirement, and Pension Liabilities*, Network for Studies on Pensions, Aging and Retirement, 2–3 (Mar. 1, 2011), *available at* http://www.netspar.nl/files/Evenementen/2011-06-17%20IPW/ralph%20stevens.pdf.

[208] *See, e.g.*, *Australia's Future Tax System*, *supra* note 185, at 35.

[209] *See, e.g.*, *Frequently Asked Questions about HUD's Reverse Mortgages*, U.S. Dep't of Hous. & Urban Dev., http://portal.hud.gov/hudportal/HUD?src=/program_offices/housing/sfh/hecm/rmtopten (last visited Jan. 31, 2013).

[210] *See, e.g.*, *Survey: Boomers Considering Cashing-In Life Insurance to Fund Retirement: Over Half the U.S. Population Postponing Retirement*, Bus. Wire (January 25, 2012), http://finance.yahoo.com/news/survey-boomers-consider-cashing-life-112500985.html.

VIII. Conclusion

Over time, both the United States and Australia are looking to defined contribution plans to provide the lion's share of retirement income for their citizens. Consequently, both countries are considering ways to increase the contributions made to those plans and to maximize the accumulations in them. Ultimately, public policy needs to be designed to ensure that workers build up large nest eggs to eventually generate adequate incomes throughout their retirement years. Pertinent here, both the United States and Australia are moving to improve retirement outcomes, but there is more to be done.

Ensuring that adequate contributions are made to defined contribution plans is critical. Here, we think that the optimal system should probably combine mandatory contributions and tax incentives for retirement savings. For example, an ideal defined contribution system might collect contributions of 10 or 12% of compensation from every worker and defer taxation on those contributions (and on investment returns) until retirement.

Maximizing investment returns on those contributions is the other key to building up significant nest eggs. The optimal defined contribution system should have strong fiduciary protections; it should encourage participants to make good investment choices; it should minimize fees; and it should preserve accumulations until a reasonably old retirement age.

Finally, retirees will need to use their retirement savings to provide income over retirements that can be expected to last 20 years and more. Retirees can best manage that longevity risk if they take their defined contribution plan distributions in the form of annuities and other lifetime retirement income products, and government policies should be designed to encourage the use of those financial products.