Optimal Contribution and Accumulation 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 multi-pillar 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 paper provides an overview of the retirement systems of the United States and Australia. Next, this paper compares the rules governing defined contribution plans in the United States and Australia. In particular, this paper focuses on the rules governing the contribution and accumulation 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.
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by Jonathan Barry Forman¹ and Gordon D. Mackenzie²

Both the United States and Australia have multi-pillar retirement systems that include a public component and a privately-managed component. Increasingly, the private component consists of individual retirement accounts and other defined contribution plans, as opposed to more traditional defined benefit pension plans. In order to achieve a high level of retirement income with individual account systems, it is necessary to make significant contributions to those individual accounts, those contributions need to be invested well and retained until retirement, and the balance in those accounts needs to be managed to provide income support throughout retirement.

At the outset, this paper provides an overview of the retirement systems of the United States and Australia. Next, this paper compares the rules governing defined contribution plans in the United States and Australia. In particular, this paper focuses on the rules governing the contribution and accumulation 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.

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I. A Defined Contribution World

Both the United States and Australia have multi-pillar retirement systems loosely based on the World Bank three-pillar model for retirement savings consisting of 1) a government pension, 2) an occupational pension, and 3) personal savings. 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- 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. These are discussed in turn.

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

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

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provide that a worker’s annual retirement benefit is equal to two percent, times the number of years of
service, times final average compensation \(B = 2 \text{ percent} \times yos \times fac\). Under this final-average-pay
formula, a worker with 30 years of service would receive a retirement benefit equal to 60 percent of her
pre-retirement earnings \(B = 60 \text{ percent} \times fac = 2 \text{ percent} \times 30 \text{ yos} \times fac\). Final average compensation
is typically computed by averaging the worker’s salary over the last three or five years prior to
retirement. Of note, while many defined benefit plans allow for lump sum distributions, the default (and
by definition) benefit is retirement income stream in the form of an annuity for life.

2. Defined contribution plans

Under a typical defined contribution plan, the employer simply contributes a specified
percentage of the worker’s compensation to an individual investment account for the worker. For
example, contributions might be set at 10 per cent of annual compensation. Under such a plan, a
worker who earned $30,000 in a given year would have $3,000 contributed to an individual investment
account for her \(($3,000 = 10 \text{ per cent} \times $30,000)\). Her benefit at retirement would be based on all
such contributions plus investment earnings. Figure 1 illustrates that contributions are made to defined
contribution fund, that the fund derives earnings on those contributions, and that the benefits ultimately
paid from the fund come from those contributions and earnings.

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4 Defined contribution plans are also known as “individual account” plans because each worker 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.
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, in any event, relatively few participants elect those annuity options.5

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 defined benefit plan that looks like a defined contribution plan.6 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).7  

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7 Sometimes, these hypothetical accounts are referred to as “notional accounts.”
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 $30,000 in a given year would get an annual cash balance credit of $3,000 ($3,000 = 10 percent × $30,000), plus an interest credit equal to five percent of the balance in her hypothetical account as of the beginning of the year.

B. THE DOMINANCE OF DEFINED CONTRIBUTION PLANS

In recent years, defined contribution plans have come to dominate the pension landscape. According to a recent study, in 2010, 81 percent of pension assets in Australia were held by defined contribution plans (and the same percentage in 2000). Similarly, 57 percent of pensions assets in the United States were held by defined contribution plans in 2010 (up from just 49 percent in 2000). All in all, the era of the traditional defined benefit plan is largely behind us.

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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. Consequently, many analysts have expressed doubts as to whether current and future generations of retirees will have adequate retirement incomes.

C. THE LIFE CYCLE MODEL

Economists typically use a life cycle to model the work, saving and retirement choices of individuals. 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 can live off their savings until death and die exactly when they run out of money. See Figure 2.

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10 See, e.g., VanDerhei, Jack (2011), ‘The Importance of Defined Benefit Plans for Retirement Income Adequacy,’ Washington, DC: Employee Benefit Research Institute, EBRI Notes 32(8): 7-20 (showing that having a defined benefit plan at age 65 reduces the significantly reduces the risk that retirement income will be inadequate).
Figure 2. 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: Following Clark, Robert L., Richard V. Burkhauser, Marilyn Moon, Joseph F. Quinn, and Timothy M. Smeeding (2004), *The Economics of an Aging Society*, Malden, MA, US, Blackwell Publishing, at p.100 (Fig. 4.2).
II. OVERVIEW OF THE UNITED STATES RETIREMENT SYSTEM

A. SOCIAL SECURITY

The current Social Security system includes two programs that provide monthly cash benefits to workers and their families. The Old-Age and Survivors Insurance (OASI) program provides monthly cash benefits to retired workers and their dependents and to survivors of insured workers, and the Disability Insurance (DI) program provides monthly cash benefits for disabled workers under full retirement age and their dependents. 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.

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. Workers over the age of 62 generally are entitled to Social Security retirement benefits if they have worked in covered employment for at least 10 years. Benefits are based on a measure of the worker’s earnings history in covered employment. 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 for workers born after 1959 (reaching age 62 in or after 2022 and reaching 67 in...
or after 2027). In June of 2011, OASI paid benefits to more than 40 million retired workers and their families, and the average monthly benefit paid to a retired worker was about $1,182.\textsuperscript{13}

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. Also, workers who retire before their full retirement age have their benefits actuarially reduced. 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). 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.

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 typically entitled to a monthly spousal benefit equal to 50 percent of the worker’s benefit. Also, a retirement-age widow or widower of the worker is entitled to a monthly surviving spouse benefit equal to 100 percent of the worker’s benefit.

In addition, a means-tested Supplemental Security Income (SSI) program provides monthly cash benefits to certain low-income elderly, disabled, or blind Americans. In 2012, the maximum federal benefit for a single individual is $698 per month, and the maximum for a couple is $1,048 per

month.\textsuperscript{14} In September of 2011, over two million elderly Americans received SSI benefits from the federal government, and the average monthly benefit was $401.90.\textsuperscript{15}

\textbf{B. The Pension System}

The United States has a “voluntary” pension system.\textsuperscript{16} 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).\textsuperscript{17}

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.\textsuperscript{18} Moreover, the pension fund’s earnings on those contributions are tax-exempt.\textsuperscript{19} Workers pay tax only when they receive distributions of their pension benefits, and, at that point, the usual rules for taxing annuities apply.\textsuperscript{20} Nevertheless, the employer is allowed a current deduction for its contributions (within limits).\textsuperscript{21} See Figure 3.

\begin{itemize}
  \item \textsuperscript{14} Social Security Administration (2011), ‘SSI Federal Payments for 2012,’ Washington, DC: Social Security Administration, \url{http://www.ssa.gov/oact/cola/SSI.html}.
  \item \textsuperscript{15} Social Security Administration, ‘Monthly statistical Snapshot, September 2011’, \textit{supra} note 13.
  \item \textsuperscript{17} Public Law No. 93-406. See generally Joint Committee on Taxation (2011), ‘Present Law and Background Relating to the Tax Treatment of Retirement Savings’, Washington, DC: Joint Committee on Taxation, Report No. JXC-44-11 (September 13), \url{http://www.jct.gov/publications.html?func=fileinfo&id=4357}.
  \item \textsuperscript{18} Internal Revenue Code (I.R.C.) § 402.
  \item \textsuperscript{19} I.R.C. § 501(a).
  \item \textsuperscript{20} I.R.C. §§ 72, 402.
  \item \textsuperscript{21} I.R.C. § 404.
\end{itemize}
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; and 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, stock bonus plans, and employee stock ownership plans (“ESOPs”).

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 Internal Revenue Code § 401(k). Consequently, these plans are sometimes called “401(k) plans,” and they are the most popular type of retirement plan in the United

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States. The maximum annual amount of such elective deferrals that can be made by an individual in 2012 is $17,000, although workers over the age of 50 can contribute another $5,500 (for a total of up to $22,500).

Favorable tax rules are also available for certain individual retirement accounts (IRAs). Almost any worker can set up an IRA with a bank or other financial institution. In 2012, individuals without pension plans can contribute and deduct up to $5,000 to an IRA (individuals over age 50 can contribute and deduct up to $6,000), and spouses can contribute and deduct similar amounts. If a worker is covered by another retirement plan, however, the deduction may be reduced or eliminated if the worker’s income exceeds $58,000 for a single individual or $92,000 for a married couple. Like private pensions, IRA earnings are tax-exempt, and distributions are taxable.

Also, since 1998, individuals have been permitted to set up Roth IRAs. 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. See Figure 4.

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27 Also, 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 an IRA.
28 I.R.C. § 408A.
Also, of note, since 2002, certain low- and moderate-income individuals have been able to claim a tax credit of up to $1,000 for certain qualified retirement savings contributions.\(^{29}\) The credit equals a percentage (50 percent, 20 percent, or 10 percent) 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-savings effects.\(^{30}\)

**C. Other Voluntary Savings Mechanisms**

In addition to voluntary saving through such 401(k) elections and Individual Retirement Accounts, individuals can also save money outside of the retirement system. In general, investment

\(^{29}\) I.R.C. § 25B.

income is subject to personal income taxation at rates up to 35 percent in 2012.\textsuperscript{31} Of note, however, dividend income and capital gains are generally taxed at a 15 percent rate,\textsuperscript{32} and various tax advantages are also associated with investments in homes,\textsuperscript{33} state and local bonds,\textsuperscript{34} and annuities.\textsuperscript{35}

**III. OVERVIEW OF THE AUSTRALIAN RETIREMENT SYSTEM**

**A. THE AGE PENSION**

The Age Pension is a means-tested income support benefit for seniors that is funded from general revenues.\textsuperscript{36} To qualify for an age pension, recipients must have lived in Australia for at least 10 years.\textsuperscript{37} Effective September 20, 2011, workers who qualify for the full Age Pension receive a maximum of AUD$689.00 every fortnight for singles and AUD$1,038.80 for couples.\textsuperscript{38} The single

\textsuperscript{31} I.R.C. § 1; Revenue Procedure 2011-52, 2011-45 Cumulative Bulletin __, at § 1.
\textsuperscript{32} I.R.C. § 1(h).
\textsuperscript{33} For example, home mortgage interest is generally deductible, and gains from the sale of a personal residence are often excludable. I.R.C. §§ 163(a), 121.
\textsuperscript{34} I.R.C. § 103 (interest excluded).
\textsuperscript{35} Under I.R.C. § 72, 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 to deferral of taxation.
benefit is designed to provide about 25 percent of average male earnings.\textsuperscript{39} Benefits are reduced by both an asset test and an income test.\textsuperscript{40} For example, effective March 20, 2011, the income test reduces the Age Pension by 40 cents for each dollar of income over AUD$146 per fortnight for singles and 20 cents for each dollar of income over AUD$256 for couples. In 2008 just of 56 percent of recipients received the maximum rate Age Pension.\textsuperscript{41}

The current qualifying age is 65 years for men and 64 years and 6 months for women and will be 65 years after July 1, 2013.\textsuperscript{42} Starting in 2017, the pension age for both men and women will gradually increase until it reaches 67 years on July 1, 2023.\textsuperscript{43}

\textbf{B. 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. Working taxpayers, their employers and the self-employed generally contribute to superannuation funds, which are administered by superannuation fund trustees. The superannuation savings cannot be generally accessed until retirement after reaching their preservation age (see below), earlier death or disablement.

\textsuperscript{43} Id.
At that time, the savings can be taken in the form of a lump sum or pension, or combination thereof depending on what the trust deed provides.

Contributions by employers for their employees were made compulsory from superannuation in 1992.\footnote{Superannuation Guarantee (Administration) Act of 1992; OECD, Pensions at a Glance 2011: Retirement-Income Systems in OECD and G20 Countries, supra note 36, at p. 194.} 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, and financial service companies or even by individuals themselves. The mandatory contribution rate has been 9 percent of employee earnings since the 2002-03 tax year. Employers do not have to make superannuation contributions for workers earning less than AUD$450 a month (equivalent to AUD$5,400 a year), but they can choose to contribute for those workers. There is also an upper limit: employers do not have to make superannuation contributions for employees’ pay above this threshold. For each quarter of the financial year 2011-12, this limit was AUD$43,820 per quarter.\footnote{Australian Taxation Office (2011), ‘Key superannuation rates and thresholds: Superannuation guarantee webpage,’ http://www.ato.gov.au/superfunds/content.aspx?menuid=0&doc=/content/60489.htm&page=19&H19 (last modified 22 August). This limit is indexed to a measure of average earnings, and is worth around 2½ times average wages. OECD, Pensions at a Glance 2011: Retirement-Income Systems in OECD and G20 Countries, supra note 36, at p. 193.}

Employer contributions are deductible regardless of the amount,\footnote{\S\S 290-60 through 290-80 (ITAA 1997).} and employees are not taxed on those contributions. However, if contributions are made for an employee in excess of certain amounts (currently AUD$25,000 per year for those under age 50 and AUD$50,000 per year for those over age 50, until 2012) the employee pays tax of 31.5 percent.\footnote{For example, Tiffy works for a merchant bank and earns a wage of AUD$300,000. She decides to ask her employer to salary sacrifice AUD$25,000 into her self-managed superannuation fund. Tiffy’s assessable wage income is reduced to AUD$275,000. The AUD$25,000 is taxed at 15 per cent in the superannuation fund, but had it been paid as salary it would have been taxed at 45 per cent plus Medicare levy. The Australian Government has proposed that}
Individuals who receive less than 10 percent of their income from employment activities can get a tax deduction for contributing to a fund regardless of the amount. However, contributions in excess of AUD$25,000 per year (and AUD$50,000 per year for those over age 50, until 2012) are taxed at 31.5 percent.

The Government will contribute on AUD$1 for each AUD$1 that an individual contributes to their fund after tax where their adjusted income is less than AUD$31,920. If their adjusted income exceeds that amount that the Government will contribute to their fund is reduced by AUD$.33 per AUD$1 that that level is exceeded.

The superannuation fund typically pays tax at a 15 percent rate on the receipt of contributions made by employers and individuals who have claimed a deduction, and it also has to pay tax at a 15 percent rate on the income earned by it (10 percent for capital gains on assets held for at least one year). Funds do not pay any tax on income from assets that are used by it to pay pensions.

However, certain pension funds run by government agencies do not pay tax on contributions or earnings because of constitutional reasons. These make up about 10 percent of all pension funds in Australia.

employees over age 50 be able to have contributions paid by employers after 2012 provided that their account balance is less than AUD$500,000.

48 Note that the Australian government has proposed that, from 2013, it will contribute 15% of the amount of these contributions up to AUD$37,000 of income. In effect, no tax will be paid by the fund on those contributions as the 15% Government contribution cancels the 15% tax paid on them by the fund. Because of Australia’s imputation tax system for corporate income taxes, the superfund 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 superfunds is typically far less than the 15% statutory rate. Also of note here and in connection with the beneficiary’s choices, superannuation providers pay no tax on income from the assets that support the payment of benefits in the form of a retirement income stream, once that income stream has commenced.
Where the fund has paid tax, benefits paid, either as a lump sum or pension, are generally tax-free for people age 60 and over. See Figure 5. Where the fund has not paid tax, lump sum payments are taxed at a rate of 15 percent up to $160,000 and at 30 percent above that; and pension payments are fully taxed but are entitled to a 10 percent tax credit.
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. This can be advantageous, as the 15 percent tax on the superannuation fund is often less than the tax the employee would have paid if she had taken the money as salary.\(^4^9\)

Individuals can make additional after-tax (non-concessional) contributions to their superannuation funds of up to AUD $150,000 per year. A person’s non-concessional contributions are generally contributions that are not included in the assessable income of the superannuation fund; that is, not taxed at the superfund’s 15 percent rate. However, the individual member is liable for tax on excess

non-concessional contributions that exceed the AUD$150,000 cap at 46.5 percent.\(^{50}\) In addition, they can make up to AUD$450,000 of non-concessional contributions over any 3 year period until the year after they turn 65.

In the benefits phase, these contributions, plus earnings from investing them and less any fund expenses, are usually paid as benefits to the member when she retires after reaching her preservation age. The preservation age is the earliest that retirement benefits can be paid from a superannuation fund and still get concessional taxation treatment. This was initially set at age 55 but for people born after 1964 this is age 60. In the event of death before retiring, the benefits are usually paid to the member’s dependents.\(^{51}\)

**C. Other Voluntary Savings Mechanisms**

In addition to voluntary concessional and non-concessional 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 percent in 2011.\(^{52}\) Of note, however, capital gains on investments that have been held at least 12 months are taxed at half the normal rate.

Also, Australia is unique, as tax losses made by individuals from investing in income producing assets, such as residential housing or company equity, can be offset against any other income, including employment income. Generally, these arrangements are called ‘negative gearing’ as the financing and other capital cost deductions exceed the rental or dividend income annually on the expectation that,

\(^{50}\) § 292-80 of the Superannuation (Excess Non-concessional Contributions Tax) Act 2007.

\(^{51}\) § 280-5.

\(^{52}\) Australian Government, Australian Tax Office (2011), 'Individual income tax rates’, [http://www.ato.gov.au/content/12333.htm](http://www.ato.gov.au/content/12333.htm) (last modified 26 July). Resident individuals may also have to pay a
ultimately, the rental or dividend income will exceed those costs. The tax benefits are therefore twofold in that the individual gets an immediate tax write-off on the annual tax loss, which reduces the cost of funding, and, in addition, only half the capital gain is taxed if the asset is owned for at least 12 months. Where the asset that is acquired with the 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.

Changes were made in the mid-1980’s to quarantine the annual tax loss such that it could only be recouped by the individual when the asset was sold. However, those changes only lasted two years because the residential housing stock dried-up as individuals ceased investing in residential housing.

The Australian Government’s recent review of its tax and transfer system noted that 70 percent of private investment in residential property is in tax loss, in other words, negatively geared. That Government Review expressed concern that negative gearing led individuals to take on excessive risk to get those tax benefits and so distorted their investments decisions. The Government Review recommended that investors only be entitled to deduct 40 percent of the annual losses from negatively-gearred residential property and, also, only be taxed on 40 percent of the rental income. This recommendation was qualified however, with the caution that it not be introduced until there was certainty about the supply of residential housing stock.

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54 Id.
IV. OPTIMAL CONTRIBUTION RULES

Ensuring that adequate contributions are made to individual retirement savings accounts is perhaps the most critical mechanism for ensuring that people 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.55 Under current law, almost all workers will see 9 percent of salary contributed to their super funds.

Of note, the Australian Government has proposed increasing the superannuation guarantee rate from 9 to 12 percent.56 See Table 1. At the same time, however, Australia might want to consider revising the tax treatment of superannuation contributions, accruals, and investments, perhaps, along the lines of the exempt-exempt-taxable approach followed by many of the world’s pensions.57


Table 1. Increasing the Australian superannuation guarantee rate from 9 to 12 percent

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<th>Year</th>
<th>Percent</th>
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<tbody>
<tr>
<td>2013-14</td>
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<td>11.5</td>
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<td>2019-20</td>
<td>12</td>
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On the other hand, as already mentioned, the United States has a voluntary pension system.

Only about half of U.S. workers have pension plans, and few can be confident that they will have enough income to meet their economic needs throughout retirement.\(^{58}\) It would probably make sense for the United States to follow Australia’s example and adopt a mandatory pension system,\(^{59}\) but American politicians seem unwilling to impose such a mandate on workers.

To be sure, the United States has tax incentives for retirement savings. As mentioned, amounts set aside for retirement and pension earnings are exempt from tax. This certainly provides incentives for high-income, high-tax-bracket taxpayers to save for retirement, and the saver’s tax credit provides an incentive for moderate-income taxpayers to save for retirement. In that regard, many believe that making the saver’s tax credit refundable would increase the incentives for low-income workers to save for retirement.\(^{60}\) Another approach for encouraging more households to save for retirement would be to

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\(^{58}\) See, e.g., Forman, Making America Work, supra note 16, at pp. 219-222.


replace the current system of deductions (and exclusions) for contributions to retirement saving accounts with a flat-rate refundable credit that would be deposited directly into the saver’s account.\textsuperscript{61}

Also, the United States has been experimenting with automatic enrollment systems. For example, many 401(k) plans automatically enroll employees. This means that employees become participants in the plan unless they choose to opt out. The plan will deduct a set contribution level from each employee’s paycheck 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 levels of their contributions can dramatically increase their level of savings.\textsuperscript{62}

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 employer have a pension plan or require that employers, at least offer their employees a 401(k) plan or a payroll-deduction IRA coupled with auto-enrollment features.\textsuperscript{63}

In the end, however, the United States should eventually move towards a mandatory pension system.\textsuperscript{64}


\textsuperscript{64} See, e.g., Forman, Making America Work, supra note 16, at 242.
V. OPTIMAL ACCUMULATION STAGE RULES

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 employees tend to be pretty poor investors. They tend to invest too heavily in bonds and guaranteed investment contracts.65 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.66 Individuals also tend to invest too heavily in stocks of their home country (as opposed to foreign stocks). High and hidden administrative costs and management fees can also reduce the investment returns, particularly on individual accounts.67 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.68 Accordingly, pension rules need to encourage better investments by participants and need to help participants minimize the fees associated with their account.

65 Moreover, individuals tend to reduce their equity holdings as they get older, while large pension funds can continue to collect the equity premium in perpetuity.
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 taking 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.

(1) Investment limits in the United States

While the United States government does not provide a list of approved investments for retirement plans, the Employee Retirement Income Security Act of 1974 (ERISA) contains many rules that apply to retirement plan investments.\(^\text{69}\) 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 his or her own retirement.\(^\text{70}\) 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.\(^\text{71}\)

Also of note, under the “exclusive benefit” rule, a qualified retirement plan must be maintained for the exclusive benefit of employees, and the assets of the plan must be held in a trust (or custodial

\(^{69}\) Internal Revenue Service (2010), ‘Retirement Plans FAQs regarding Plan Investments’ [http://www.irs.gov/retirement/article/0, id=163722,00.html](http://www.irs.gov/retirement/article/0, id=163722,00.html) (last reviewed or updated 17 November).

\(^{70}\) ERISA § 404, 29 U.S.C. § 1104.

\(^{71}\) 29 Code of Federal Regulations § 2550.404c-1.
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.\textsuperscript{72}

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.\textsuperscript{73} Pertinent
here, neither participant-directed accounts nor IRAs can invest in collectibles, such as art, antiques,
gems, coins, or alcoholic beverages; and they can invest in certain precious metals only if they meet
specific requirements.\textsuperscript{74} Also, IRAs are not permitted to invest in life insurance.\textsuperscript{75} Finally, IRA trustees
can impose additional restrictions on investments.\textsuperscript{76} For example, while U.S. pension law does not
permit investing in real estate, in order to avoid administrative burdens, many IRA trustees do not
permit their IRA account holders to invest 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.\textsuperscript{77} For example, an employer usually cannot sell, exchange, or lease any property to a
pension plan; and, 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

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\textsuperscript{72} Joint Committee on Taxation, \textit{supra} note 17, at 17.
\textsuperscript{73} ERISA § 407, 29 U.S.C. § 1107.
\textsuperscript{74} I.R.C. § 408(m). See also Internal Revenue Service (2011), ‘Retirement Plan FAQs regarding IRAs,’
http://www.irs.gov/retirement/article/0,,id=111413.00.html (last reviewed or updated 8 July).
\textsuperscript{75} I.R.C. § 408(a)(3).
\textsuperscript{76} Internal Revenue Service (2011), ‘Retirement Plans FAQs regarding IRAs,’ \textit{supra} note 74.
\textsuperscript{77} I.R.C. § 4975; ERISA § 406, 29 U.S.C. 1106. See also Internal Revenue Service (2011), ‘Retirement Plans for Small
Business (SEP, SIMPLE, and Qualified Plans),’ Washington, DC: Internal Revenue Service, Publication No. 560;
Internal Revenue Service (2011), ‘Individual Retirement Arrangements (IRAs),’ Washington, DC: Internal Revenue
Service, Publication No. 590.
accountants. An exception permits plan participants to borrow from their defined contribution accounts under certain circumstances, but borrowing from an IRA is always prohibited transaction.\footnote{78 Internal Revenue Service (2011), ‘Retirement Topics – Loans,’ \url{http://www.irs.gov/retirement/participant/article/0,,id=21143600.html} (last review or updated 21 July).}

\textbf{(2) Investment limits in Australia}

The regulations governing pension funds in Australia do not mandate investment by the funds. However there are a number of broad investment principles by which the fund should be invested and, in addition, there are a number of specific prohibitions in respect of investment by the fund.

Fundamental to any investment by the fund is that it must comply with the “sole purpose” test.\footnote{79 § 62 Superannuation Industry (Supervision) Act 1993 (the SIS Act).} 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, it is mostly 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 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.\footnote{80 § 52(2)(f) SIS Act.}

The trustees are also charged to invest the funds with the same skill, care and diligence that an ordinary prudent person would exercise in dealing with property of another for whom the person felt morally bound to provide.\footnote{81 § 52(2)(b) SIS Act.}
In terms of prohibition on investments by pension funds:

- they cannot invest more than 5 percent by market value, with employers or related parties or with members and related parties (the “in-house asset” rules),\(^82\)
- they cannot intentionally acquire assets from members of the fund, with four exceptions. In particular, they are permitted to acquire real property that is used for business purposes (“business real property”),\(^83\)
- they cannot lend money or give financial assistance to members,\(^84\)
- all investments by the fund must be at arm’s length transaction,\(^85\)
- they cannot charge the assets of the fund,\(^86\)
- funds are prohibited from borrowing, although funds are permitted to borrow provided, amongst other things, that the rights of the lender on default are limited to the asset that was acquired with the borrowings,\(^87\) and,
- if the investment of the fund is a “collectable” it must be in the name of the fund, cannot be used by a member of the fund, and must be insured.\(^88\)

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.

(1) Recent efforts in the United States

For example, in the United States, in recognition of the historically poor investment choices made by individual employees, the Pension Protection Act of 2006 amended ERISA § 404(c) to improve the default investments, and 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

\(^82\) § 71 SIS Act.
\(^83\) § 66 SIS Act.
\(^84\) § 65 SIS Act.
\(^85\) § 109 SIS Act.
\(^86\) § 13.15 SIS Regulations.
\(^87\) § 67A SIS Act.
\(^88\) § 62A SIS Act.
life cycle funds (funds which gradually shift their investments from stocks towards bonds as workers age). More specifically, the final regulation provides for four types of qualified default investment alternatives (QDIAs) for workers who do not direct their own investments:

- a product with a mix of investments that takes into account the individual’s age or retirement date (e.g., life-cycle or targeted-retirement-date funds);
- an investment service that allocates contributions among existing plan options to provide an asset mix that takes into account the individual’s age or retirement date (e.g., a third-party 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 (e.g., 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).

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

(2) Recent efforts in Australia

New legislation released by the Australian Government would create a new single, low-cost default superannuation product called MySuper.

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Approximately 80 percent of almost 12 million Australians who currently hold a pension fund account have their employers’ compulsory contributions paid into a default fund. 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 recognizes that many workers do not have the interest, information or expertise required to make informed choices about their superannuation; consequently, the Government decided to give those workers access to a safe, low-cost and simple default superannuation product to replace the existing default funds.

Superannuation funds will be allowed to provide this new product from 1 July 2013. It is expected that most trustees of superannuation funds will choose to provide a MySuper product, subject to meeting the new requirements. Superannuation funds will still be able to offer different products, and will not be compelled to offer a MySuper product.

These new products will have a simple set of product features, irrespective of who provides them, that will enable members to compare funds more easily based on a few key differences—cost, investment performance and the level of insurance coverage. These new products will also ensure that members do not pay for unnecessary “bells and whistles” they do not use.

In addition, trustees of MySuper products will face higher performance requirements which will be enforced by the Government regulator, including a specific duty to deliver value for money. Failure to meet these duties means that the license to offer them will be revoked.
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 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
- life, and total and permanent disability (TPD) insurance (where available, depending on occupational and demographic factors) offered on an opt-out basis.\(^93\)

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.”\(^94\)

Moreover, the Australian Government estimates that MySuper will reduce the total fees paid by superannuation fund

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\(^94\) Id.
members by around in the short term and by around $1.7 billion per year over the long term. For a 30 year old worker with average weekly earnings, that means that MySuper could result in an extra AUD$40,000, or 7 per cent, in retirement savings.

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 3 percent. 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.

Of note, 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. To qualify for the exemption, the investment advice must be given through the use of an unbiased computer model or through an adviser compensated on a “level-fee” basis.

Greater attention also needs to 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

95 Id.
annuity, defined contribution plans typically make benefits available in the form of a lump sum
distribution that can be all too easily dissipated. It might make sense to encourage (or require)
individuals to allocate a portion of their contributions and/or investments to annuities or annuity-like
products. 97 Of note, the Internal Revenue Service and the U.S. Department of Labor recently mounted
a joint effort to gather research and recommendations about so-called “Lifetime Income Options for
Retirement Plans.”98 Australia is also concerned about its role in expanding the range of lifetime income
products.99 At the same time, the private sector is also busy developing new types of lifetime income
products.100

2. Minimizing Fees

Minimizing fees can also help increase investment returns and defined contribution
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

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Washington, DC: American Council of Life Insurers, White Paper (September),
99 See, e.g., Australia’s future tax system (2009), The Retirement income system: Report on strategic issues (May), at
retirement at age 65. If those assets earn a 6.5 per cent net annual return—a 7 per cent investment return minus a 0.5 per cent charge for fees, that $20,000 will grow to $70,500 at retirement. On the other hand, if fees are instead 1.5 per cent annually, that $20,000 investment will grow to just $58,400. That additional 1 per cent annual fee will reduce the account balance at retirement by around 17 per cent.

Accordingly, efforts need to be made to regulate the fees and expenses associated with defined contribution plans. Extending fiduciary rules to more of those involved in managing investments, as the U. S. is trying to do by expanding its definition of who is a fiduciary seems like a sound approach. Pension rules should also 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.

In Australia, the MySuper proposal would also put limits on the fees that funds can charge. The fees that could be charged in MySuper products would be limited to:

- administration fees;
- investment fees (including a performance-based fee, subject to the limitations outlined below);
- buy and sell spreads (limited to cost recovery);
- exit fees (limited to cost recovery); and
- switching fees (limited to cost recovery).

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102 See infra note 107.
All fees charged for MySuper products would have to fall within these standard descriptions. This would make it simpler for members to understand what they pay and to compare fees against other MySuper products.\textsuperscript{103}

Performance based fees arrangement with a fund manager in respect of assets of the MySuper product, trustees would 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).

If a performance based fee arrangement do not contain each of these provisions, a trustee would have to justify that the differing arrangement was in the best financial interests of the members of the MySuper product.\textsuperscript{104}

\textbf{B. FIDUCIARY RULES}

\textit{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;

\textsuperscript{103} Australian Government, \textit{Stronger Super Information Pack, supra} note 92, at p. 5
\textsuperscript{104} Id., at p. 6
• Follow the plan documents (unless inconsistent with ERISA);
• Diversify plan investments; and
• Pay only reasonable plan expenses.\textsuperscript{105}

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

2. Fiduciary Rules in Australia

Trustees of superannuation funds are also charged with meeting certain fiduciary standards, largely similar to those that apply in the US (immediately above). As more fully described above, they are expected to comply with the “sole purpose” test, and they are required to invest the funds with the same skill, care and diligence that an ordinary prudent person would exercise in dealing with property of another for whom the person felt morally bound to provide.\textsuperscript{106}

3. Optimal Fiduciary Rules

Toughening the fiduciary standards that govern pension fund managers may also result in marginal gains in investment returns. In the United States, for example, the U.S. Department of Labor is developing regulations that would impose fiduciary duties on brokers and financial advisers who provide investment advice for a fee to retirement plans and IRA holders.\textsuperscript{107} Along the same lines, the new


\textsuperscript{106} See supra Part V.A.1.a (2).

MySuper legislation in Australia would also establish the Australian Prudential Regulatory Authority’s ability to make prudential standards for superannuation funds.  

C. DISTRIBUTION RULES

1. Preserve Benefits until Retirement

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

To be sure, I.R.C. § 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. Distributions from an Individual Retirement Account can even be used for education, health, and first-time homebuyer expenses. All in all, a significant portion of these distributions and loans may end up dissipating before retirement. Accordingly, it could make sense to prohibit premature distributions and loans from pension plans and IRAs.

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Australia approached this issue using tax incentives. From the mid-1980’s the age at which pension fund benefits could be paid was, generally, from age 55. However, from 2007 workers are able to access their funds after age 60 completely tax-free, provided that the fund has paid tax. It appears that that has had the desired effect in that workers are staying in their funds until that age to get the benefit of the tax-free payments.

2. Raise the Retirement Age

Governments should also discourage early retirements. Working longer increases retirement savings and reduces the number of years that retirement savings need to cover.\textsuperscript{111} One way to encourage later retirements would be to raise the retirement age. In the United States, for example, the I.R.C. § 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.\textsuperscript{112} Pertinent here, “full retirement age” under the Social Security system is currently age 66, but it is


\textsuperscript{112} ERISA § 3(24), 29 U.S.C. § 1002(24); I.R.C. § 411(a)(8).
gradually increasing to age 67.\textsuperscript{113} It would make sense to gradually increase the normal retirement age for pension plans to 67 and keep it tied to the Social Security’s full retirement age, even if that full retirement age is increased.\textsuperscript{114}

Australia also has a higher retirement age for its Age Pension than for its Superannuation Guarantee, and better coordination is called for.\textsuperscript{115}

\textbf{VI. Conclusion}

Over time, both the United States and Australia are looking to individual account plans to provide the lion’s share of retirement income for their citizens. Consequently, both countries are considering ways of increasing the contributions made to those accounts and maximizing the accumulations in those accounts. 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 individual retirement savings accounts is critical. Here, we think that Australia’s system of mandatory contributions has the advantage over the


\textsuperscript{115} In fact this issue has been recommended as part of a broad ranging review of the tax and transfer system. See generally, Australian Treasury (2010), ‘Australia’s future tax system web page,’ http://taxreview.treasury.gov.au/content/Content.aspx?doc=html/home.htm (also known as the \textit{Henry Review} because the review panel was chaired by Dr. Ken Henry, then the Australian Secretary to the Treasury).
U.S. system of tax incentives and automatic enrollment. The optimal system should probably combine mandatory contributions and tax subsidies. For example, an ideal individual account system might collect contributions of at least 10 percent of compensation from every worker, and it might 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 next eggs. The optimal individual account 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 reasonable old retirement age.