

CHAPTER 6

High Performance Pensions for All Californians

by **Teresa Ghilarducci**

INTRODUCTION

California, like the United States (US) as a whole, faces a serious retirement security crisis. A significant proportion of California workers—including a majority of workers under 40—are at risk for serious economic hardship in old age (Allegretto, Rhee, Saad-Lessler, and Schmitz, this volume). This paper proposes state level policy measures to improve the retirement income security of all Californians.

Two facts lay at the heart of the upcoming retirement income shortfall. First, although the U.S. relies on employer-based savings and investment vehicles to help workers build retirement wealth to supplement Social Security, most private employers do not offer any type of retirement plan at all. Medium and small firms are least likely to sponsor any kind of plan mainly because retirement plans are a voluntary expense, like health insurance, and because small firms have less revenue and managerial expertise to navigate regulations and administrative burden. Thus less than 38% of private sector workers across all sized firms in California participate in an employer sponsored retirement plan (Ibid.).

Second, since the early 1980s, private employers have shifted from defined benefit (DB) pensions to defined contribution (DC), individual retirement savings plans like 401(k) plans (Ghilarducci & Sun, 2006). In California, two out of five plan participants now rely solely on a 401(k)-type plan retirement plan rather than a secure DB pension (Allegretto et al., this volume). While DB pension funds are managed expertly and efficiently by professionals, those with individual accounts face high, often invisible fees and the challenging burden of realizing their own investment returns in order to achieve adequate retirement wealth. Also, unlike workers with secure DB pension benefits, those who rely exclusively on 401(k) type accounts have no insurance against running out of money if they live longer than they anticipated, or against market collapses that erode the value of their hard-earned retirement funds.

All workers, whether or not they are covered by a 401(k) style plan or an individual retirement account (IRA), need a financial institution that will administer their retirement savings in a more efficient, low cost way that earns a secure and sufficient rate of return and preserves savings for

retirement. They need a retirement plan that guarantees a rate of return for an annuity that converts their savings into a secure income stream, and does not require financial sophistication and luck in financial markets. Commercial individual directed accounts like 401(k)s, 403(b)s, and IRAs do not meet these needs and most workers and employers end up not using them. Most workers have difficulty with the myriad risks associated with 401(k) plans and IRAs and many employers are resistant to adopt complicated 401(k) plans that do not meet the needs of their middle- and low-income workers (Ghilarducci, 2008; also see Hacker, this volume).

The policy challenge, then, is not just to expand access to existing individual account based retirement arrangements, but to address critical failures in the existing system to meet three key criteria for retirement income security: adequate contributions; low-cost, quality investment vehicles that are professionally managed and, ideally, shield individual workers from investment and market risks; and a lifetime payout of income at retirement.

This study proposes a two-part solution to improve California workers' retirement income security: one, provide access for private sector workers to functional retirement plans that include a guaranteed return on contributions and access to low-cost annuities, and two, replace the tax deductions for retirement contributions with a tax credit so that each worker receives \$145 a year at no extra expense to the State of California.

The first part of the study describes the first plank of the solution by presenting options that will provide all Californians with a choice to invest their retirement savings in a low cost, guaranteed, and accessible retirement savings vehicle. These options will help all private sector workers, especially those who do not have access to a high quality employer sponsored retirement plan, prepare for retirement.

The best option is for a large state pension fund like the California Public Employees' Retirement System (CalPERS) or the California State Teachers' Retirement System (CalSTRS) to create California Guaranteed Retirement Accounts (CGRAs) for private sector workers. Imagine that the public pension fund is a bank with public employees standing in a queue in front of a teller's window. We propose opening up another teller's window for private sector workers to deposit their retirement savings. California residents would benefit from the excellent money management skills of the fund's professional investors. This proposal would not impose a cost burden on the state. Moreover, the resulting influx of money into the California pension funds could help the California economy while it boosted the savings rates of California workers.

The CGRA would offer a guaranteed average real return ranging between 2% and 4%, as determined by its own Board of Trustees. Annuitization of the full account balance (i.e., purchase of an insurance contract for monthly income) at age 65 would generate a secure lifelong income stream to supplement Social Security. For the average full time worker in California who contributes 5% of her earnings starting at age 25 and earns a 3% guaranteed rate of return on their contributions after inflation, the CGRA will generate nearly \$1,000 a month (in today's dollars) in inflation-protected retirement income starting at age 65, replacing about one-fifth of pre-retirement income.

A less ambitious solution that is not nearly as effective but perhaps more immediately feasible, is for the State Treasurer's Office—which already sponsors ScholarShare for saving and investment toward college expenses—to create an exchange of private for-profit investment and money management entities. In order to qualify to participate in the exchange, these entities would

offer retirement savings vehicles that charge low fees; minimize investment and market risks and provide steady returns; and offer low-cost annuities. The State Treasurer's Office could provide an investment vehicle with guaranteed returns similar to those proposed for the CGRA, and workers could choose from among these different risk-return options.

The second part of the study extends discussion of the proposed retirement plan option, the CGRA, by focusing on the feasibility of the guaranteed rate of return. It demonstrates how the state guaranteeing a 3% real rate of return runs very little risk that the fund will earn less than the guaranteed rate over the long term and consequently require the state to make up a shortfall.

The third part of the study explains why the State of California should convert the income tax deduction for retirement accounts into a tax credit, which will help low and moderate income workers who now, under current law, receive no or very little government subsidies from a tax deduction. California currently mimics federal tax policy, which subsidizes the highest earners the most. The minimum wage worker obtains nothing from such tax break because their income is too low. However, states can craft their own tax incentives. California tax expenditures for retirement contributions totaled \$2.3 billion in 2010. If this amount was converted into a pension credit, every California worker would see \$145 deposited into their retirement account each year. This would be important seed money for the workers who need it most.

Principles for Retirement Security

The American system of employer sponsored retirement savings has severe problems in all three key areas: accumulation, investment, and payout. A functioning retirement system would allow employees and workers to save consistently and invest in financial vehicles that charge low fees; minimize investment and market risks while providing steady returns; and offer low cost annuities. Criteria for a functioning pension system are discussed by the Government Account Office (2009a) and detailed by Retirement USA (R-USA),¹ a coalition representing think tanks, unions, advocacy groups and academics. R-USA identifies 12 core principles for a quality pension system:²

- 1) **Universal coverage.** Every worker should be covered by a retirement plan that supplements Social Security.
- 2) **Secure retirement.** Workers should be able to count on a steady lifetime income stream.
- 3) **Adequate income.** The average worker should have sufficient income, together with Social Security, to maintain a reasonable standard of living in retirement. (Author's note: This is often defined as 70–100% of pre-retirement earnings.)
- 4) **Shared responsibility.** Employers, employees and the government should each contribute towards a worker's retirement account. The government should subsidize the contributions of lower-income workers.
- 5) **Required Contributions.** Employers and employees should be required to contribute a specified percentage of pay, and the government should subsidize the contributions of lower-income workers.

- 6) **Pooled assets.** Contributions to the system should be pooled and professionally managed to minimize costs and financial risks.
- 7) **Payouts only at retirement.** No withdrawals or loans should be permitted before retirement, except for permanent disability.
- 8) **Lifetime Payouts.** Benefits should be paid out over the lifetime of retirees and any surviving spouses, domestic partners, and former spouses.
- 9) **Portable Benefits.** Benefits should be portable when workers change jobs.
- 10) **Voluntary savings.** Additional voluntary contributions should be permitted, with reasonable limits for tax-favored contributions.
- 11) **Efficient and Transparent Administration.** The system should be administered by a governmental agency or by private, non-profit institutions that are efficient, transparent, and governed by boards of trustees that include employer, employee, and retiree representatives.
- 12) **Effective Oversight.** The system should be administered by a governmental agency dedicated solely to retirement security.

Members of Congress (GAO, 2009b) and the Obama Administration (GAO, 2009c) have recognized that the current system does not provide retirement income security and that better investment options for workers, including those with a guaranteed rate of return, are needed. On the other hand, the Obama administration has not endorsed mandating participation, which is a critical requirement to achieve universal coverage. Instead, the Administration proposes to expand already-expensive federal tax deductions for retirement contributions—over \$120 billion—and to add tax credits costing over \$50 billion a year. They also propose to automatically enroll workers into commercial retirement accounts, but continue to allow workers to opt out and to withdraw contributions and earnings before retirement.

Despite the widely recognized problem of high and hidden fees in commercial retirement accounts, the administration is silent about how workers would get improved access to a pooled annuity or investment pool that would be able to offer much lower expenses. In the absence of inadequate federal reform, and in the face of declining retirement plan coverage in the workplace, I propose that states help their residents save for an adequate retirement income.³

The most efficient way to meet the above criteria for workers who do not have access to an employer sponsored pension is through a publicly sponsored retirement savings plan. Some propose that such a plan take the form of individual accounts like IRAs or 401(k) plans. However, a system in which millions of workers carry and individually manage their own accounts is inherently inefficient, generating high administrative costs that would ultimately have to be absorbed by workers.

In addition, a system of individually directed accounts still exposes workers to a host of risks that can only be partially mitigated through careful plan design. One such design option is defaulting workers' contributions into a lifecycle or target fund that automatically re-balances in order to gradually shift from equities to bonds as workers near retirement. Provided that workers do not engage in ill-advised trading or try to time the market, this design decreases idiosyncratic investment-decision

risk (the risk of making the wrong investment decisions). However, this automatic investment design feature would still leave workers exposed to a significant degree of market risk (the risk of drastic or sustained decline in the financial market). Finally, commercial target date fund can have high fees associated with them and afford no real protection against longevity risk (the risk of living longer than expected and running out of savings).

I have proposed a national Guaranteed Retirement Account (GRA) which combines the best features of DB and DC plans, including guaranteed retirement benefits that last a lifetime, low administrative costs, and steady contributions (Ghilarducci, 2007 & 2008). It is essentially a portable, publicly sponsored cash balance plan with automatic contributions through payroll deduction; pooled, professionally managed funds; a guaranteed rate of return; and a strong annuitization component. Retirement benefits are tied to contributions rather than final pay, and the guaranteed rate of return is set high enough to be attractive to workers but low enough to pose very little risk to the guarantor. The GRA is the only reform proposal that fulfills each of the 12 core requirements outlined above. This study adapts the GRA concept to propose a California Guaranteed Retirement Account (CGRA), outlined below with consideration for what is possible at the state level.

1. CALIFORNIA GUARANTEED RETIREMENT ACCOUNT (CGRA)

I propose a version of the GRA called a California Guaranteed Retirement Account, provided by a large, prudently managed public pension fund like CalPERS or CalSTRS or, alternately, through a regulated exchange of private for-profit financial entities. The key elements of the plan are as follows:

Structure. CGRAs are like cash balance plans in which professionals invest and manage pooled savings.

Participation. Participation in the program is open to all private sector workers who do not currently participate in a comparable or better DB plan. Employers who do not offer such a plan would be required to enroll their employees in a CGRA. The state may choose between mandatory enrollment for workers or automatic enrollment with a worker opt-out provision.

Contributions. A default contribution rate of 5% of pay will be automatically deducted from payroll and deposited into each worker's CGRA. Workers may choose to reduce or opt out of contributions. Employers may voluntarily contribute to help workers reach or exceed the 5% savings rate.

Refundable tax credit. Employee contributions are offset through a \$145 refundable state tax credit, which takes the place of tax breaks for 401(k) plans and similar individual accounts and is indexed to wage inflation.

Fund management. The accounts are administered by a large public pension fund. Alternatively, they can be administered by private financial service providers through a regulated exchange created by the State Treasurer's Office, which could offer its own guaranteed investment vehicle. Though funds are pooled, each worker is able to track the dollar value of their accumulations.

Investment earnings. The pooled funds are conservatively invested in a balanced portfolio.⁴ However, participants earn a fixed rate of return—initially set at 3%—adjusted for inflation, guaranteed by the public pension fund, the state, or a private insurer who would appropriately capitalize the risk. The trustees may periodically adjust the guarantee within a range of 2–4% average real rate of return. Investment earnings in excess of the guarantee will be deposited into a Rainy Day Fund. With widespread participation and regular contributions, this guarantee would pose very little risk for the insuring institution.

Retirement age. Participants begin collecting retirement benefits at the same time as Social Security, and therefore no earlier than the Social Security Early Retirement Age. Funds cannot be accessed before retirement for any reason other than death or disability. By minimizing the fund’s liquidity requirements, this feature allows the CGRA to offer a guaranteed rate of return.

Retirement benefits. Account balances are converted to inflation-indexed annuities upon retirement to ensure that workers do not run out of retirement income while they still live. However, individuals can opt to take a partial lump sum equal to 10% of their account balance or \$10,000 (whichever is higher), or to opt for survivor benefits in exchange for a lower monthly check. A full-time worker who works 40 years and retires at age 65 can expect a benefit equal to roughly 20% of pre-retirement income, adjusted for inflation, assuming a 3% real rate of return on contributions and on their CGRA annuity.

Death benefits. Account balances of participants who die before retiring will be transferred to the CGRAs of designated beneficiaries; those who die after retiring can bequeath half their final account balance after benefits received, payable as a lump sum or transfer to another CGRA.

Table 6.1 illustrates how the CGRA can help California workers achieve significant guaranteed retirement income to supplement Social Security. The table presents estimated CGRA account balances, CGRA annuity payments (based on female life expectancy), and Social Security benefits for low- and middle-wage workers who start contributing at age 25 and 45. It shows the advantage of early participation. A 25-year old worker saving 5% over a 40-year career would receive an annuity payment equal to slightly over 20% of pre-retirement earnings. A 45-year old would have to contribute 10% of pay to achieve a slightly lower benefit at retirement. Participants can choose to increase their contributions in order to have more income in retirement. Because of the effect of compound interest, saving a small additional amount beginning early in one’s career yields a larger monthly benefit than contributing twice the amount 20 years later.

I explain below how the CGRA meets the three primary criteria for retirement income security—accumulating enough assets, investing efficiently, and lifetime income—more effectively than the current system of commercial retirement savings accounts.

Table 6.1

**Projected Income Replacement Rate from CGRA and Social Security,
Female Full Time Workers**

	45 years old today, contributing 10% of earnings		25 years old today, contributing 5% of earnings	
	Low-Wage	Middle-Wage	Low-Wage	Middle-Wage
Earning assumptions				
Current annual earnings	30,000	45,000	25,000	35,000
Final annual earnings at age 65	31,536	52,560	33,151	55,252
Final monthly earnings	2,628	4,380	2,763	4,604
CGRA balance at age 65 (with 3% guaranteed real return)	90,617	142,606	118,839	177,780
Monthly retirement income				
CGRA inflation protected annuity (3% real return)	504	794	661	990
Estimated Social Security benefit	1,204	1,631	1,208	1,627
CGRA annuity + Social Security	1,708	2,425	1,869	2,617
Percentage of final earnings replaced				
CGRA annuity	19.2%	18.1%	23.9%	21.5%
Social Security	45.8%	37.2%	43.7%	35.3%
CGRA annuity + Social Security	65.0%	55.4%	67.7%	56.8%

Source: Calculations by Joelle Saad-Lessler and Nari Rhee. See **Appendix** for detailed methodology.

Accumulating Enough for an Adequate Pension

The first major problem with the current system is that most workers do not save enough of their earnings towards retirement. The CGRA improves retirement wealth accumulation among private sector workers in California in three ways.

Access

The CGRA will expand retirement savings plan access and participation. Currently, 62% of private sector workers in California do not participate in an employer sponsored retirement plan, compared to 57% in the US as a whole. Workers in small and medium size firms are markedly disadvantaged in their access to employer sponsored retirement plans: in California, 84% of people working for employers with 25 or fewer workers do not participate in a retirement plan at work. (Allegretto et al., this volume). The CGRA can be made available to all workers whose employer does not offer a comparable retirement plan (either a DB pension or a cash balance plan with similar guaranteed returns and lifetime income benefit).

The actual extent to which the CGRA will improve participation depends on whether worker participation is mandatory, or automatic with opt-out. Universal participation requires a mandate, but it may not be politically feasible. Auto-enrollment with the opportunity for individuals to opt-out may be the next best option. Unfortunately, it is a distant second best option because the latest research (GAO, 2010; Beeferman and Becker, 2010) suggests that auto-enrollment with opt-out will not yield high enough participation rates to fund an adequate pension for most low income and middle income workers. The experience with automatic enrollment in employer sponsored 401(k) plans is that a large share of workers will likely opt out at some point and never re-start their contributions.

Assistance reaching the savings target

The second relates to helping workers achieve an adequate savings rate. In order to attain retirement income adequacy—replacement of about 80% of pre-retirement earnings—all workers need to contribute at least 20% of pay over their careers. But only the most affluent workers would be able to achieve such a savings rate without assistance. In practice, private sector workers are required to contribute 12.4%, split evenly with their employer, via the Social Security (Old-Age, Survivors, and Disability Insurance, or OASDI) payroll tax. This provides the average retiree with minimal subsistence. Workers who are enrolled in both a DB plan and Social Security are well on their way to accumulate enough retirement assets because the average DB contribution as a percent of pay is 5%.

Low-wage and middle-wage workers need employer and government assistance to help fund the savings gap between Social Security and a decent retirement. Workers in DB pensions and those in some 401(k) type plans benefit from employer contributions towards their retirement plan. Higher income workers receive the vast majority of government aid for retirement, which takes the form of an income tax deduction, because they have a higher income tax rate. Unfortunately, most California workers have neither type of help to reach their savings target because their incomes—and therefore their income tax rates—are low, and because they receive no help from their employer. Therefore I propose that, in tandem with the implementation of the CGRA, the State of California convert its income tax deduction for retirement contributions into a flat tax credit in order to help all workers save. Such a tax credit will provide important seed money for all California workers to save towards retirement, especially low wage workers who need this help the most.

Limited liquidity

Regardless of whether participation is mandatory or automatic with opt-out, or the source of contributions, CGRA account balances should only be allowed to be withdrawn at retirement except in cases of permanent disability. By limiting the fund's liquidity requirements, this restriction allows the CGRA to invest in a way that realizes a higher return over the long term and thus support a meaningful guaranteed rate of return for workers.

Investing Efficiently

Even if workers save enough, paying too much in fees and investing incorrectly can significantly erode retirement savings. Pension savings should be managed professionally in pooled accounts so that the fees are low and returns are high. The best policy is to offer a guaranteed investment vehicle.

Individuals who have self-directed accounts like 401(k) plans and IRAs have difficulty factoring in fees when comparing rates of return, to their detriment.⁵ They also tend to invest irrationally. This problem was illustrated during the period of stock market volatility following Standard and Poor's downgrade of U.S. Treasury bills on Friday, August 5, 2011. On Monday, August 8, trading in 401(k) plans was over eight times the average daily level. The most active sellers were ordinary workers, moving their 401(k) money into cash and money market funds (AON Hewitt, 2011). This behavior should not be a surprise; human beings investing their own retirement funds will always do the human thing—panic trying to protect themselves—which is usually the wrong thing. The 401(k)/IRA model expects workers with no financial expertise to do the work of professional investors, with the same unhappy results one would expect if they pulled their own teeth or did their own electrical wiring.

Ultimately, workers using 401(k) plans or IRAs or other self-directed accounts are likely facing much higher risks and lower returns than professional investors (see Munnell, Soto, Libby, & Prinzivalli, 2006; Ivkovića & Weisbenner, 2009; Barber & Odean, 2000 & 2011).

Given these realities, pooled, professionally managed accounts are the best choice for California workers. Furthermore, a guaranteed return investment option should be available similar to the TIAA portion in TIAA-CREF (Teachers Insurance Annuity Association-College Retirement Equities Fund). TIAA-CREF provides retirement plans to nonprofit sector employers and covers a large number of university professors and researchers. Most members participate in the TIAA Traditional Annuity, which takes in a defined percentage of payroll and buys an annuity that pays a minimum guaranteed rate, plus additional annual credits based on portfolio performance, during the accumulation phase. When the worker retires, they can convert the account balance into a lifelong income annuity. The rate changes each year, determined by a governing board of trustees. The guaranteed rate has ranged from a nominal rate of 2.9% to 4.2% since the TIAA inception in 1916. For the CGRA, I propose a guaranteed real rate of return instead.

The CGRA would be attractive because their contributions would be well-managed. The program would allow Californians to take advantage of professional managers that charge the lowest fees. Also, the CGRA would provide guaranteed return within a range of rates that will help smooth out returns and make retirement income more secure. The level of feasible guarantee would depend on default vs. opt-in participation and liquidity (see below).

What level of guarantee makes sense? Assuming that the state backs the CGRA, I propose an inflation-adjusted rate of 3%. This may seem low from the standpoint of individual investors, who might expect to earn a higher rate of return if they invest correctly in low-fee investment vehicles, given historic returns on equities. However, the primary objective of a retirement plan is not to maximize the account value, but to secure an adequate income replacement rate. A cash balance style retirement plan with an attractive annuitization component, detailed below, is able to replace more income at a given rate of return during the accumulation phase than a 401(k) plan in which retirees have to buy expensive annuities on the private market. Most workers would place high value on the prospect of a *guaranteed* retirement income to last a lifetime, and would be willing to trade off the possibility of higher returns leading up to retirement.

Guaranteed Retirement Income through Annuities

The third problem with most private sector retirement plans is that they do not provide an adequate payout structure. Even if workers save enough and invest well with low fees, they could pay too much in buying an annuity on the private market, use up their assets too early, or leave accidental bequests. It is worth noting here that the individual who has a secure monthly income through a DB plan or an annuity has a higher level of well being than the individual who has a lump sum with an equivalent net present value. This is because as we age, the uncertainty associated with investing our own money in a DC retirement plan detracts from our feeling of well-being (Bender, 2004).

There is a strong argument that most households would benefit from annuitizing their wealth but are deterred by the high cost of commercial annuities (see Webb, this volume). Two key reasons are high administrative costs/load fees and, importantly, adverse selection: in the same way that individual market health insurance premiums are high because sick people are more likely to participate, private annuities are expensive because people who expect to live a long time are more likely to purchase them. This results in annuities being “actuarially unfair,” in that those who live to average life expectancy do not get their money’s worth. There is a need to mitigate adverse selection and to design annuities to be more fair to lower-income, shorter-lived workers, to the extent feasible under current regulations. Significantly, Webb (Ibid.) notes that for various reasons, lower-income, shorter-lived workers may still benefit from purchasing annuities that are actuarially fair to those with population average life expectancy.

The only way to avoid adverse selection in annuity markets—and thereby price annuities more attractively for everyone—is to mandate annuities as is done in Social Security and DB plans. For this reason, it is important that at least some portion of the accounts be required to be annuitized, with reasonable provisions for partial cash-out. The proposed CGRA limits cash-out at requirement to 10% of account balance or \$10,000, whichever is greater.

2. CREDIBLE AND AFFORDABLE GUARANTEE

As mentioned above, the idea of guaranteeing a rate of return to American workers during the accumulation phase of their retirement planning has received increased interest from Congress and the Obama Administration. A guaranteed real rate of return of 3% is significant enough to be attractive to workers. The vitally important question, then, is whether a 3% average real rate of return is a safe guarantee for the state to backstop. Is the state putting itself and taxpayers at risk by guaranteeing this level of return?

To answer this question, this section relies on modeling techniques developed by David Stubbs (2010a; 2010b) to gauge the probability that the CGRA fund would ever fall short of funds and need to tap general tax revenues to meet its promises. We assume 5% of pre-tax wages contributed by every private sector worker in California, and a guaranteed return of 3% a year over inflation credited to each account holder. When a worker retires, inflows to the CGRA are assumed to drop to zero and benefits are paid. If investment earnings fall short of the guaranteed 3% real return after administrative expenses, the net worth of the system (market value of assets minus guaranteed benefits) for current participants will be negative. Faster growth in assets, however, would lead to positive system net worth for current participants.

If a CGRA holder dies before exhausting their claims, a death payment of half of their remaining claim balance is returned to the family. The other half is kept within the GRA system as part of the Rainy Day Fund (RDF). This fund exists to shield the CGRA system from prolonged periods of investment underperformance. If, however, the participant lives longer than anticipated, he or she will continue to receive payments from the CGRA system regardless of the initial contributions. That is why the rate of return guaranteed to participants (3% real) is deliberately low to help ensure that invested assets grow faster than the liabilities based on them.

The model assumes that the annual payout is simply a function of the balance of the account at retirement, the number of years of expected retirement for the individual and the rate of return on the funds as they await dispersal. That annuitization calculation is applied to the account balances accumulated—i.e., contributions plus compound interest—assuming the guaranteed rate of return. The difference between the resulting annuity benefit, and the asset value of the account based on contributions and *actual* investment earnings, helps to insure the benefit.

For example, Ms. X, a typical California worker, starts full time work in 2010 at age 25 earning \$35,000. Her income steadily grows to a peak of approximately \$55,000, in 2010 dollars, at age 65 in the year 2040. Throughout this time, 5% of her salary is being committed to the CGRA, which promises her a return of 3% after inflation. At age 65, the value of her claim on the CGRA—or the nominal account balance—is nearly \$178,000. If the fund generates a real return of 4% after costs, then the value of her contributions after actual investment return is roughly \$224,000, 26% higher than the claim she has on the CGRA.

At the point of retirement, the CGRA annuitizes her \$178,000 account balance assuming a life expectancy of 84.9 years and a retirement period of 19.9 years. The CGRA also continues to promise her a 3% real return annuity rate, resulting in an annual payment of approximately \$11,900. If Ms. X dies before she reaches 84.9 years, half the remaining actual balance of her CGRA account is returned to her family and half is retained in the CGRA's RDF. Even if she lives longer than expected, she is not a burden on others in the system or on the RDF. This is because the value of the assets associated with her account is still positive at age 85. Indeed, assuming the assets continued to grow at 4% real after costs, then by paying out \$11,900 every year, the balance of the assets would not reach zero until age 96. The RDF would be preserved to insure against the taxpayer sustained periods of low returns.

Monte Carlo simulations projected the returns of the CGRA using data from Ibbotsen that provided annual total return data on six asset classes—the S&P 500, an index of small stocks, long term corporate bonds, 30-day treasury bills, intermediate term treasury bonds and long term treasury bonds—for the years 1926 to 2008. A “balanced portfolio” allocated 25% each to the S&P 500, small stocks and corporate bonds, 25% to Treasury Portfolio composed of equal shares of each of the three different treasury maturities. All returns accounted for the Consumer Price Index. Mean and median annual compound percentage returns for every overlapping 20-, 30-, and 40-year period were calculated. The minimum annual real return and the Sharpe ratio was also calculated as was the percentage of periods in which the average real return was in excess of 3%. The 83 years of data enabled calculation of returns for 63 years overlapping 20-year periods, 53 overlapping 30 year periods and 44 overlapping 40-year periods.

Here are the results: a balanced portfolio for any 20-year period since the 1920s would have earned a median real average annual return of 5.98%. Investing for any 30- or 40-year period, on

average, produced annual compound real returns equal to 5.53% and 5.67% respectively. Indeed, even if one invested at the worst possible 20-year period, the annual average real compound return would still have exceeded 2%, while the worst 30- and 40-year periods produced average annual compound real returns of 3.24% and 4.14%, respectively.

Of most interest is the percentage of periods in which the real average annual compound real rate of return exceeded 3%, the return that a CGRA system would guarantee to participants. For over 93% of the 20-year periods in which the balanced portfolio could have been invested, the average annual real return exceeds the 3% mark. In the longer time frames of 30 and 40 years, there is not a single period in which the return was below 3%. There would be times when investment returns would undershoot the 3% real return which the CGRA owes to the account holders, but these would be balanced by the excess funds generated when returns exceeded it. Indeed, the data suggests a median long term annual real return of over 5%. A growing surplus would accumulate in the CGRA system over time, providing ever greater insurance against the possibility of a sustained period of disappointing returns. A board of trustees could, if necessary, adjust rates within the 2–4% range every three to five years in order to keep the fund and RDF solvent.

We assume a rather high 50 basis points of assets fee, which would still allow the CGRA to meet its obligations if a 3.5% real annual return was achieved. CGRA Fund management would probably be lower because of the massive economies of scale and a passive investment strategy.

While we have done our best to construct a model of feasibility using conservative assumptions, there is inherent risk associated with the unknown future.

There is some debate about how to value that risk where a government entity is concerned. Researchers at the Center for Retirement Research at Boston College (Munnell et al., 2009) examined the implications of a government entity guaranteeing a real rate of return on a retirement savings plan, assuming that workers contribute steadily between age 22 and retire at age 65. They calculate that if the government has the same level of risk aversion as the market, the cost of insuring a meaningful guarantee prospectively would be prohibitively high. (In contrast, Jefferson (2000) argues with regard to 401(k) plans that it would be feasible to a commercial insurer to guarantee a meaningful average rate of return, provided the plan was invested and managed according to strict criteria.) Ultimately, however, Munnell et al. cite evidence suggesting that the government is less risk averse than the market—in part because it has a longer time horizon—and calculate that under this assumption the state would not incur any net cost if it insured a guaranteed average real return of 3%. The model assumes that the government keeps the surplus earnings over the guaranteed rate; it is the same with the proposed CGRA (assuming the state or a public pension fund backs the guarantee), with the added detail that the surplus is held in reserve against periods when average real returns fall below 3%.

Critics say that people already have the opportunity to earn a guaranteed rate of return in a well-constructed portfolio of laddered TIPS, inflation indexed Treasury bonds. The answer is that the TIPS rate is unnecessarily low; it assumes almost 100% liquidity is required. The government is one of the few entities that could create an institution that collects funds for the dedicated purpose of paying an annuity at retirement, and that could take on more risk with a more diversified portfolio for a greater return because it is serving this function over a long period of time. The CGRA is a proposal for just such an institution that provides a convenient and safe way for ordinary workers to save for retirement.

3. FAIR AND EFFICIENT TAX SUBSIDIES FOR RETIREMENT SAVING

Government subsidies for voluntary retirement plans are indirect. They take the form of favorable tax treatment under federal and state and local tax law called “tax expenditures,” which are tax revenues not collected because a certain activity is favored by the tax code. Federal and state subsidies for retirement plans take the form of tax breaks for contributions and investment earnings during the accumulation phase. They are only taxed when a worker retires and withdraws the funds, which is usually at a much lower income tax rate. Tax breaks are incentives to engage in a desirable activity. They are generally used when a legislature does not want to mandate the activity.

A public budgetary policy problem becomes evident when tax incentives are expensive and fail to achieve the desired behavior. In this case, most tax expenditures for retirement savings go to top earners. Because those individuals would have saved for retirement even without the tax breaks, these benefits are a windfall and represent “wasted” tax dollars.

Let us take the example of a person over age 50 earning \$340,000 in combined income from a job and a consulting business. The person shelters \$93,000 in retirement funds—the combined maximum for a self-employed 401(k) and an employer sponsored 401(k), including catch-up contributions—or 27.4% of income. Their marginal income tax rate is 9.3% for California and 33% for the federal government.⁶ Thus they receive a tax subsidy of \$39,339 including \$8,649 from the State of California. In contrast, a minimum wage worker earning \$16,000 a year and contributing 27.4% of pay, \$4,376, would only get \$88 from the State of California through the income tax deduction because their marginal state income tax rate is 2%. This system is not only unfair, but wasteful because it awards hefty tax subsidies to those who do not need them in order to save, and fails to provide an effective incentive for those who truly need assistance in order to save for retirement.

Also, since tax expenditures are not appropriated in the budget, legislators are not forced to systematically scrutinize them for their efficiency or fairness. Given continued decline in retirement plan coverage despite the rapid increase in retirement plan tax expenditures, it is time to call the income tax deductions for retirement saving a failure.

California forgoes over \$2.3 billion in favoring contributions to 401(k)-type plans (**Table 6.2**). Replacing the tax deduction with a revenue-neutral tax credit would partially offset the increased savings workers currently need to set aside if they want to maintain a reasonable standard of living in retirement. Each worker in California would receive a \$145 refundable tax credit, which could be deposited directly into their CGRA or other qualified retirement account. States should advocate for the same conversion at the federal level, where the tax credits would amount to roughly \$600 per worker, and would cover a 2.5% contribution rate to a retirement account for workers earning \$24,000.

4. DISCUSSION

Californians need a CGRA because current commercial options are not serving their needs. Not only are fewer employers opting to provide a convenient way for individuals to save, but the options they have are not helping people accumulate enough, invest well, or secure an income for life.

Public sector plans earn more returns for less money than 401(k) plans and IRAs, sometimes by a significant amount; estimates of the difference in the rate of return range from 20–40% more.⁷ The

Table 6.2

**Tax Expenditure Estimates for 401(k), IRA, and Keogh Retirement Accounts,
Fiscal Year 2009/2010, US and California**

	Total tax expenditures (in millions)	Tax expenditure per worker
United States	\$68,986	\$600
California	\$2,300	\$145

Source: US (i.e., federal) estimates obtained from the White House Office of Management and Budget (2011). California estimates obtained from the Franchise Tax Board (2010). For California, 50% of reported contributions to employer sponsored pensions are assumed to be for defined contribution or 401(k) plans; IRA and Keogh plan data are reported separately.

reasons are straightforward. The scale of the investments is larger in institutional funds, the fees are lower, and professional managers understand the upside of taking on appropriate investment risk. Individuals who are not in a DB plan do not have access to the skills of these professional managers and rely on sales representatives for commercial retail providers of 401(k) plans and IRAs, or to make investment decisions by themselves. Being averse to financial risk and lacking the skills, time and resources that professional money managers take for granted, individuals do poorly managing their own individual financial accounts. We know this from more than 30 years of experience with the current 401(k) system.

Therefore, the most persuasive reason to let individuals have access to a large public pension plan like CalPERS or CalSTRS, via the CGRA, is that they can get a guaranteed return on their assets. The guarantee should be optimally set at 3%, though trustees should have the flexibility to adjust the rate between 2% and 4% in response to long term economic conditions. Perhaps federal aid could be made available to help public sector plans if they allow for the voluntary participation of individuals in their plans, providing efficient and transparent investment management services that are not available in the commercial retail markets for 401(k) and IRAs.

A government guarantee of a 3% real rate of return for CGRAs is attractive to workers, but does not put the government at significant risk of having to make up the difference with tax revenue. Monte Carlo simulations show this prediction holds up whether the government invests retirement contributions in a balanced portfolio of stocks including small stock, corporate bonds and Treasury securities, or a portfolio in which those asset classes are weighted by their total investable value. There has never been a 40-year period in which these portfolios yield an average annual real return of less than 3.5%—a rate that is adequate to cover a 3% guaranteed return on contributions plus administrative expenses. The small risk the government would bear in order to back this guarantee needs to be set against the enormous positive economic returns from improved retirement income security and, conversely, the potential fiscal consequences of a large percentage of workers entering retirement without sufficient resources to meet basic needs.

An alternative platform for the CGRA is that the state of California could engineer pension exchanges overseen by the State Treasurer's Office. The state could issue charters to commercial private firms to handle retirement accounts that meet specific rules and standards.

5. CONCLUSION

One of the biggest hurdles to spurring retirement savings is that nearly half of workers don't have access to a retirement account through their employer. Many work for small businesses, which often lack resources to navigate the relevant regulations. To help these workers, the state and federal governments should provide "off-the-shelf" options that businesses can offer to workers with limited regulatory burdens.

All Californians need access to good pension plans that includes a guaranteed return and a flow of annuity income. The CGRA can expand this access to millions of California workers, helping them to improve their retirement income security. For young workers who save 5% of their earnings, the CGRA will offer a monthly benefit equivalent to about 20% of pre-retirement earnings. A middle-wage worker can receive nearly \$1,000 in guaranteed retirement income, beginning at age 65, for the rest of her life. Replacing the tax deduction for retirement contributions with a tax credit will allocate subsidies more efficiently and fairly.

The biggest beneficiaries of the California Guaranteed Retirement Account would be workers whose employer does not sponsor any retirement plan and who only have access to an IRA, which typically charges high fees and provides substandard financial advice. Allowing private sector employees to contribute to a state managed fund in order to earn a guaranteed rate, or to pick from a limited number of funds—managed by private providers—with different risk profiles would allow private sector employees to get some of the same benefits of professional investment management that workers have with DB retirement plans in which contributions are pooled and invested by professionals who can manage risk prudently. Moreover, these private individual accounts are portable.

This proposal would increase retirement plan availability in California, thereby countering the long-term decline in rates of sponsorship by employers. It would also help raise the amount of retirement savings people accumulate by shielding them from the high fees and poor investment choices they face when they are left to fend for themselves in the retail market. If all Americans had access to this type of plan, the stock market would be less volatile, current retiree income would be more stable, Americans would save more for retirement, and the tax code would be more efficient. Commercial providers of 401(k) plans and IRAs would have to improve their performance in the face of more competition.

A lot of money is at stake to be invested and managed. The CGRA fund in 2050 will range from \$1.6 trillion to \$4 trillion in 2009 dollars (depending on the real investment return of 2–4%, representing between 36% and 89% of the California GDP (Stubbs, 2010b). While the 401(k) lobby has been a powerful force against more 401(k) regulation, the CGRA is a triple win for workers, employers and institutional managers.

Workers would benefit from a vastly improved retirement system that offers an opportunity to retire with dignity. Institutional managers and investors in hedge funds and private equity firms, currently shut out of the retail 401(k) world, would benefit from CGRA assets to help manage. And conscientious employers who would like to provide better options for their employees should also support CGRAs (Arias and Ghilarducci, 2010).

* * *

Appendix: Methodology for Estimating CGRA and Social Security Benefits

The lifetime earnings trajectory from the present until age 65 was projected for four model workers: low-wage 25-year old, middle-wage 25-year old, low-wage 45-year old, and middle-wage 45-year old. For low-wage workers and middle-wage workers, we calculated approximate 25th percentile and 50th percentile earnings, respectively, for full time/year round workers from the March 2011 CPS for the following age groups: 25–30, 45–50, and 55–64. The results were used to construct the following baseline earnings trajectories: \$25,000 at age 25, \$30,000 at age 45, and \$30,000 at age 65 for low wage workers, and \$35,000 at age 25, \$45,000 at age 45, and \$50,000 at age 65 for middle wage workers. In order to account for future economy-wide real wage growth, we assumed an additional growth factor of 0.25% per year—a rate that is close to historical median wage growth in the US since the 1970s—to final earnings at age 65 for all workers and additionally to age 45 earnings for the two 25-year old workers. We then assumed constant annual earnings growth between the above age points (25, 45, and 65) to arrive at earnings estimates for each year.

The CGRA account balance at age 65 for each worker was calculated by applying a 3% interest rate to the sum of each year’s contribution (5% of earnings for today’s 25 year olds and 10% of earnings for today’s 45-year olds) and the balance from the previous year.

The CGRA annuity monthly payout was calculated assuming population life expectancy for women at age 65 of 19.9 years (U.S. Census Bureau, 2010, Table 105), or 238.8 months; a real interest rate of 3% a year, or 0.0025% per month; and no survivor benefits. If the life expectancy for CGRA annuitant population is one year greater, the monthly annuity amount will be reduced by 3.5%. If it is 3 years greater, the amount will be reduced by 9.5%. Inclusion of survivor benefits would also reduce the annuity payment. (Survivor benefits here refer to continuing annuity payments; however, the CGRA proposal includes a death benefit payout of half the remaining account balance to designated beneficiaries.)

Social Security benefits were estimated by summing the indexed earnings from the 35 highest earnings years. Because all values in Table 6.1 are in today’s (i.e., real) dollars, the indexing factor was calculated to be 0.81% per year—the net of the 3.59% average annual growth in the Social Security Administration’s National Average Wage Index from 1989 to 2009 (SSA, 2010), less the 2.78% average inflation rate (CPI-U) over the same period. Earnings were multiplied by the indexing factor for all years until age 60. Thereafter, actual earnings were used. For the two 45-year old workers, indexed earnings for the previous 15 years were assumed to be the same as at age 45. The sum of the highest 35 years’ worth of indexed earnings was divided by 420 arrive at the AIME (average indexed monthly earnings). The PIA (primary insurance amount) was then calculated using the following bend points, inflated by 0.81% per year (the same as the indexing factor): 90% of the first \$749 of AIME + 32% of the AIME above \$749 and below \$4517 + 15% of AIME above \$4517. Finally, a reduction of 13.3% for claiming Social Security benefits two years before the full retirement age of 67 is applied in order to arrive at the estimated monthly Social Security benefit amounts in Table 6.1.

Endnotes

¹This coalition was formed in 2008; see <http://www.retirement-usa.org/>.

² Adapted from Retirement USA principles, retrieved September 11, 2011 from <http://www.retirement-usa.org/our-principles>.

³ I am not the first researcher to advocate publicly sponsored retirement plans at the state level; see Weller and Helburn (2010) and Baker (2006).

⁴ Of course, a simple balanced portfolio is not the only option for investing CGRA funds; a portion could be directed to domestic infrastructure assets which could help meet the \$2 trillion investment required in the next five years just to maintain existing infrastructure. (American Society of Engineering, 2009).

⁵ In an uncommonly frank study the firm that rates mutual funds for their performance, Morningstar, concluded that investors would have done better had they kept a portfolio of funds for 30 years, rather than sell the losers and buy the high performers every quarter. This is because performance fluctuated and trading fees greatly reduced net returns. Report available at <http://moneywatch.bnet.com/economic-news/blog/daily-money/morningstar-low-mutual-fund-fees-trump-our-star-ratings/1142/>.

⁶ The earnings will accumulate tax free and only later, when the worker retires will he pay income tax on the distributions—presumably at a much lower rate because his income will be lower.

⁷ A good summary of the studies of fee differences between institutional investors and individual investors is provided by Laidler and Robston (2007).

Resources

Arias, D. & Ghilarducci, T. (2010). Pension reform's stake in employers. SCEPA Working Paper 2011-3. New York: Schwartz Center for Economic Policy Analysis. Retrieved from <http://www.economicpolicyresearch.org/working-papers/288-pension-reforms-stake-in-employers.html>

Baker, Dean. 2006. Universal Voluntary Accounts: A step towards fixing the retirement system. Working paper. Washington, DC: Center for Economic and Policy Research. Retrieved from http://www.cepr.net/documents/publications/universal_voluntary_accounts.pdf.

Barber, B. & Odean, T. (2011). The behavior of individual investors. Working paper. Retrieved from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1872211.

Barber, B. & Odean, T. (2000). The common stock investment performance of individual investors. *Journal of Finance*, 55(2), 772-806.

Beeferman, L. & Becker, M. B. (2010, Sep.). Going on automatic: The right path toward retirement income security for all? Capital Matters Occasional Paper Series No. 6. Cambridge, MA: Harvard Law School Labor and Worklife Program.

Bender, K. A. (2004). The well-being of retirees: Evidence using subjective data. CRR Working Paper No. 2004-24. Chestnut Hill, MA: Center for Retirement Research, Boston College. Retrieved from http://crr.bc.edu/working_papers/the_well-being_of_retirees_evidence_using_subjective_data.html

- Franchise Tax Board. (2010). *2010 California Income Tax Expenditures: Compendium of Individual Provisions*. Sacramento, CA: California Franchise Tax Board.
- Ghilarducci, T. (2008). *When I'm Sixty-Four: The Plot against Pensions and the Plan to Save Them*. Princeton, NJ: Princeton University.
- Ghilarducci, T. and Sun, W. (2006, Jul.). How defined contribution plans and 401(k)s affect employer pension costs. *Journal of Pension Economics and Finance*, 5(2), 175-196.
- Ghilarducci, T. (2007, Nov.). Guaranteed Retirement Accounts: Toward retirement income security. EPI Working Paper No. 204. Retrieved from <http://www.gpn.org/bp204/bp204.pdf>.
- Government Accountability Office. (2009a). *Private Pensions: Alternative Approaches Could Address Retirement Risks Faced by Workers but Pose Trade-offs*. GAO-09-642. Washington, DC: U.S. Government Accountability Office. Retrieved from <http://www.gao.gov/products/GAO-09-642>.
- Government Accountability Office. (2009b). *Retirement Savings: Automatic Enrollment Shows Promise for Some Workers, but Proposals to Broaden Retirement Savings for Other Workers Could Face Challenges*. GAO-10-31. Washington, DC: U.S. Government Accountability Office. Retrieved from <http://www.gao.gov/products/GAO-10-31>.
- Government Accountability Office. (2009c). *Alternative Approaches Could Address Retirement Risks Faced by Workers but Pose Trade-Offs*. GAO-09-642. Washington, DC: U.S. Government Accountability Office. Retrieved from <http://www.gao.gov/products/GAO-09-642>.
- Government Accountability Office. (2005, Sep.). *Tax Expenditures Represent a Substantial Federal Commitment and Need to Be Reexamined*. GAO-05-690. Washington, DC: U.S. Government Accountability Office. Retrieved from <http://www.gao.gov/new.items/d05690.pdf>.
- Ivkovića, Z. & Weisbenner, S. (2009). Individual investor mutual fund flows. *Journal of Financial Economics*, 92(2), 223-237.
- Jefferson, R. T. (2000). Rethinking the risk of defined contribution plans. *Florida Tax Review*, 4(9), 607-683.
- Laidler, D. & Robson, W. B. P. (2007, Jun.) Ill-defined benefits: The uncertain present and brighter future of employee pensions in Canada. C.D. Howe Institute Commentary No. 250. Toronto, ON: C.D. Howe Institute. Retrieved from http://www.cdhowe.org/pdf/commentary_250.pdf.
- Munnell, A. H., Aubry, J. P., Hurwitz, J. & Quinby, L. (2011, Apr.). The role of defined contribution plans in the public sector. Center for Retirement Research Issue Brief No. 16. Chestnut Hill, MA: Center for Retirement Research.
- Munnell, A. H., Golub-Sass, A., Kopcke, R. W., & Webb, A. (2009, Feb.). What does it cost to guarantee returns? Center for Retirement Research Issue Brief No. 9-4. Chestnut Hill, MA: Center for Retirement Research at Boston College. Retrieved from http://crr.bc.edu/images/stories/Briefs/ib_9-4.pdf.
- Munnell, A. H., Soto, M., Libby, J. & Prinzivalli, J. (2006, Sep.). Investment returns: Defined Benefit vs. 401(k). Center for Retirement Research Issue Brief No. 52. Chestnut Hill, MA: Center for Retirement Research at Boston College. Retrieved from http://crr.bc.edu/images/stories/Briefs/ib_52.pdf.
- Office of Management and Budget, White House. (2011). Analytical Perspectives report for fiscal year. Washington, DC: White House Office of Management and Budget.

- Office of the Vice President. (2010, Feb.). Annual Report of the White House Task Force on the Middle Class. Washington, DC: Office of the Vice President. Retrieved from <http://www.whitehouse.gov/sites/default/files/microsites/100226-annual-report-middle-class.pdf>.
- Social Security Administration. (2010, Oct. 29). National Average Wage Index. Retrieved from <http://www.ssa.gov/oact/cola/AWI.html>.
- Stubbs, D. (2010a). What real rate of return could a Guaranteed Retirement Account credibly and safely offer? Schwartz Center for Economic Policy Analysis (SCEPA) Working Paper 2010-4. New York: New School for Social Research Department of Economics.
- Stubbs, D. (2010b). "Modelling a Guaranteed Retirement Account System in the United States." Schwartz Center for Economic Policy Analysis (SCEPA) Working Paper 2010 3 New York: New School for Social Research Department of Economics.
- U.S. Census Bureau. (2010). *Statistical Abstract of the United States: 2011* (130th Edition). Washington, DC, 2010. Retrieved from <http://www.census.gov/compendia/statab/>.
- U.S. Census Bureau. (2011). *Current Population Survey: 2011 Annual Social and Economics Supplement*. Generated on August 26, 2011 from DataFerrett at <http://dataferrett.census.gov/TheDataWeb/index.html>.
- Voorhees, J. (2010, Feb. 1). White House budget seeks \$4B for transportation infrastructure bank. *New York Times*. Retrieved from <http://www.nytimes.com/gwire/2010/02/01/01greenwire-white-house-budget-seeks-4b-for-transportation-i-444.html>.
- Weller, C. & Helburn, A. (2010). States to the rescue: Policy options for state government to promote private sector retirement savings. Working paper. Boston, MA: University of Massachusetts, Boston Department of Public Policy and Public Affairs.