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TRUTH IN NUMBERS? A BRIEF HISTORY OF CUTS TO THE EMPLOYEES' RETIREMENT SYSTEM OF RHODE ISLAND

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With Congress mired in partisan gridlock, states are serving as laboratories for retirement policy as well as other policy areas. While some states are making positive strides, others are moving in the wrong direction. Among the latter is Rhode Island.

There have been four rounds of benefit cuts to the Employees' Retirement System of Rhode Island (ERSRI) defined benefit (DB) pension since 2005. These cuts culminated in the Rhode Island Retirement Security Act of 2011 (RIRSA), which drastically cut back DB benefits and introduced a supplemental defined contribution (DC) plan. As shown in a separate Economic Policy Institute report (*Rhode Island's New Hybrid Pension Plan Will Cost the State More While Reducing Retiree Benefits*), the DC plan, though presented as part of a cost-saving strategy, is actually less cost-effective than the DB pension it partly replaces (Hiltonsmith 2013). The savings, rather, come from earlier cuts to the DB pension and from cutting accrued pension benefits by reducing the cost-of-living adjustment (COLA) for retirees, which is currently suspended.

Rhode Island is being held up as a model for other states, though the Rhode Island experience is unusual in many ways. Its pension system was significantly underfunded even before the recent market downturn because Rhode Island was slower than most other states to move to an advance-funded system designed to smooth pension contributions over time. As a result, at the peak of the dot-com bubble, when many other states had fully funded pensions, ERSRI's funded ratio was 78 percent (Munnell et al. 2008; author's analysis of CRR and CSLGE 2001). Even after moving toward an advance-funded system, employers in the ERSRI system sometimes neglected to make the full actuarially required con-

tribution, failed to pay for retroactive benefit increases, and adopted ill-advised accounting practices, such as switching from an asset-smoothing to a market-valuation method during the dot-com boom.

Though no one disputes these facts, there are differences in emphasis. In a report entitled *Truth in Numbers* that paved the way for RIRSA, Rhode Island State Treasurer Gina Raimondo (2011) highlighted the accounting angle to justify changes in accounting assumptions that significantly worsened the plan's funded ratio and helped usher in draconian cuts. But whether the main problem was employers' failure to fully account for the cost of benefits or simply their failure to pay the estimated costs, it is not clear why workers should bear the brunt of past policies that lowered costs for employers, and by extension, taxpayers.

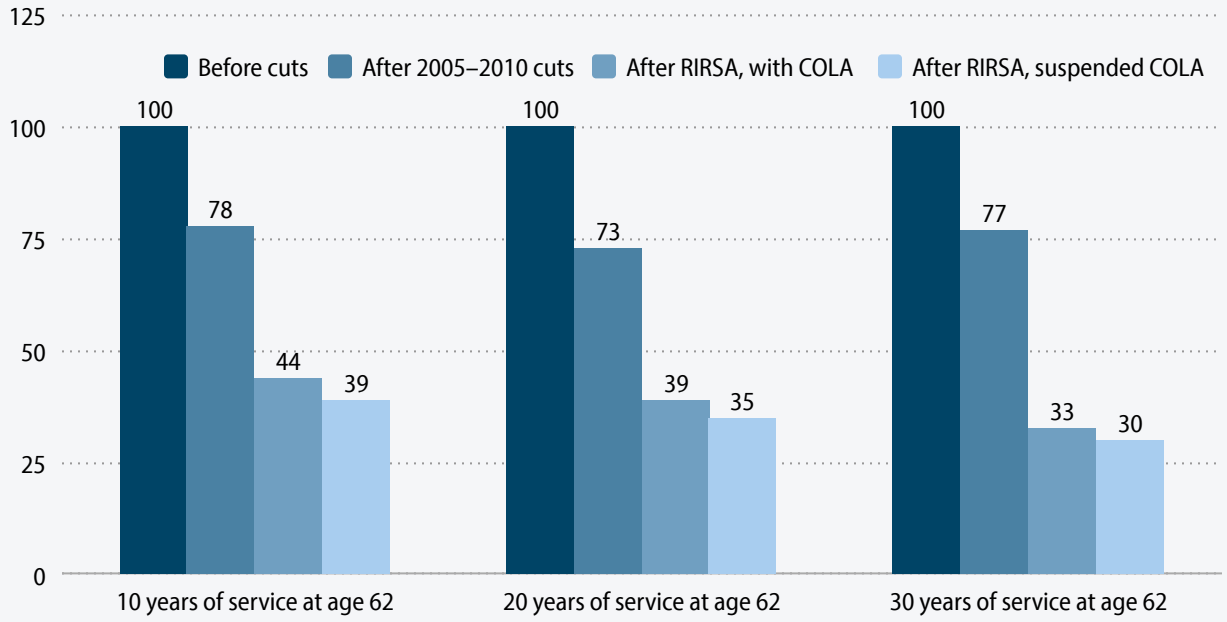
This briefing paper provides an overview of the cuts to Rhode Island's pension system since 2005. It begins by analyzing the cumulative effects on DB benefits of these cuts. It then examines ERSRI's normal cost and unfunded liability, as well as benefit levels, prior to the cuts. Following this, the paper analyzes the changes ushered in by the first rounds of cuts (those in 2005, 2009, and 2010) and by RIRSA (which took effect in 2011). This narrative description of the changes since 2005 is followed by a timeline of the changes, which includes conservative estimates of the impact of successive cuts on benefits (see Appendix B for methodological details).

Principal findings include:

- Rhode Island was slower than most other states to fund its pension system. As a result, the Employees' Retirement System of Rhode Island (ERSRI) had a shortfall even at the peak of the dot-com bubble, despite providing relatively modest benefits. Indeed, workers—many not covered by Social Security—contributed more toward these benefits than their counterparts in other states.
- While workers shouldered most of the cost of current benefits, employers failed to pay even their full (smaller) share, leaving ERSRI among the most underfunded plans in the country.
- Between 2005 and 2010, three rounds of cuts reduced pension benefits for a prototypical 30-year employee by 23 percent. Despite these cuts, the plan's funded ratio declined further as a result of the 2008 stock market downturn.
- The funded ratio was further reduced by changes in accounting assumptions in 2010 that appeared timed to justify draconian changes to the system.
- The Rhode Island Retirement Security Act of 2011 (RIRSA) slashed defined-benefit pension benefits by roughly half (less for short-tenure workers, more for long-tenure workers) and introduced a supplemental defined contribution plan.
    - This hybrid plan costs taxpayers *more* than the old system despite providing a less valuable and less secure benefit to workers.
    - When taking into account the supplemental defined contribution plan, a prototypical 30-year worker would experience a cumulative 34 percent reduction in benefits between 2005 and 2012, with a quarter of 30-year workers experiencing cuts of 40 percent or more, depending on investment returns.
    - The savings from RIRSA come not from switching to a hybrid system, but rather from cutting accrued benefits—a move that is being challenged in court.

FIGURE A VIEW INTERACTIVE *on epi.org*

Value of defined benefit pensions provided by the Employees' Retirement System of Rhode Island before and after four rounds of cuts since 2005 (2005=100)



Note: Defined contribution benefit not shown.

Source: Author's analysis of ERSRI actuarial valuations (GRS 2006, 2011c, 2012) and Bell and Miller (2005)

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Cumulative effects of defined benefit reductions

The cumulative effects on DB benefits of the four rounds of cuts to ERSRI since 2005 are summarized in **Figure A**. Since the reductions depend on years of service, among other factors, the bar chart shows workers with 10, 20, and 30 years of service at age 62, the earliest eligibility age for Social Security benefits. Thus, for example, the prototypical career worker who had 30 years of service at age 62 would receive DB benefits after the cuts equal to 33 percent (30 percent while a COLA suspension is in effect) of what his or her counterpart would have received before the cuts.

It is important to note that the chart does not illustrate the full range of benefit cuts: Those most and least affected were workers hired early and late in their careers, respectively, who were left with DB benefits ranging from 28 to 53 percent of the initial value (26 to 47 percent while the COLA suspension remains in effect). In other words, Rhode Island state employees and teachers lost roughly half to three-quarters of their DB benefits between 2005 and 2011.

Rhode Island state employees also began participating in a new DC plan put into place by RIRSA, whose value depends on investment earnings. In a companion report, Robert Hiltonsmith (2013) estimates that the average retiree with 30 years of service would replace, on average, 86 percent of pre-RIRSA DB benefits under RIRSA's hybrid DB+DC plan, and a quarter of participants (those retiring in the wake of a bear market) would replace only 78 percent. This suggests that the cumulative effect of the 2005–2011 cuts on the average 30-year worker is a benefit worth around 66 percent

(86 percent x 77 percent) of the initial value. For a quarter of these workers, however, the new system would replace 60 percent (78 percent x 77 percent) or less of initial benefits.

Although the cuts included transition provisions that exempted, or partially exempted, some workers from cuts, these provisions were weakened in successive rounds of cuts. Therefore, many of the cuts had a significant impact on midcareer workers and even retirees who had spent their careers counting on, and contributing toward, these benefits. In June 2012, lawsuits filed on behalf of workers and retirees alleged that RIRSA cuts amounted to breach of contract. Though a discussion of the legal issues lies outside the scope of this brief history, there is little doubt that RIRSA reduced the value of earned benefits, not just the value of future benefits, notably because the COLA cut affected all workers and retirees. Similar cuts in the private sector would probably run afoul of the Employee Retirement Income Security Act. In Rhode Island, the issue boils down to whether public employers had an implicit contractual obligation to their workers, and if so, whether they really had no choice but to change the terms of this agreement.

Normal cost and unfunded liability

ERSRI benefits before the first round of cuts in 2005 were not especially generous compared with those in other states, though they were more tilted to long-tenured workers because accrual rates rose with years of service. The normal cost of benefits[1] was around 10.2 percent of pay for state employees and 11.1 percent for teachers, according to the 2005 actuarial valuation (GRS 2006). By comparison, the average normal cost in the Center for Retirement Research's Public Plans Database was 12.7 percent in 2005 (author's analysis of CRR and CSLGE 2005). Notably, almost all the normal cost of current benefits was borne by state employees and teachers themselves, who contributed 8.75 percent and 9.5 percent, respectively, compared with an average of 5.5 percent for employees in other plans in the Public Plans Database (author's analysis of CRR and CSLGE 2005).

Rhode Island was slower than most other states to fund its pension system. And though workers shouldered most of the cost of current benefits, employers failed to pay their full (smaller) share. As a result, ERSRI had a shortfall even at the peak of the dot-com bubble. Thus, despite a relatively low normal cost of benefits, the total employer contribution for ERSRI was nevertheless large because it had to cover a large unfunded liability. In 2005, the ERSRI funded ratio—the ratio of the actuarial value of assets to the actuarial accrued liability—was 56.3 percent for state employees and 55.4 percent for teachers (GRS 2006). This resulted in amortization rates—the amount (expressed as a share of current payroll) needed to gradually pay down the shortfall—of 19.3 percent for state employees and 20.4 percent for teachers (GRS 2006).

The challenge of paying off this legacy cost was complicated by demographic trends. Rhode Island was one of only two states (the other being Michigan) with stagnant or declining populations between 2000 and 2010 (author's analysis of U.S. Census Bureau 2011). The public-sector workforce was also shrinking and aging, so there were fewer than 150 active public-sector workers per 100 public-sector retirees in 2005, compared with an average of around 270 workers per 100 retirees for plans in the Public Plans Database (author's analysis of CRR and CSLGE 2005). Because the amortization rate is conventionally expressed as a share of current payroll, a shrinking workforce can lead to a higher amortization rate even if costs are not rising. This is misleading, because all else equal, a decline in current obligations makes paying down unfunded liabilities easier, not harder.

Legacy costs may loom large as a share of current payroll yet be manageable as a share of taxable income. Rhode Island's per capita GDP rose faster than the national average over this period, so state GDP growth kept pace with the rest of the country despite the state's shrinking population (author's analysis of U.S. Bureau of Economic Analysis 2012a and 2012b). Though Rhode Island ranks among the states with the largest unfunded liabilities, economist Dean Baker has estimated that the cost of paying down these legacy costs would consume 0.35 percent of state income over 30 years (Baker 2011).

This assumes the shortfall is paid down over a 30-year period, the most common arrangement among public pensions (author's analysis of CRR and CSLGE 2005). However, the ERSRI amortization rate was based on a fixed (rather than rolling) 30-year period ending in 2029. RIRSA extended the amortization period from the remaining 19 years to 25 years in 2010. Had this been done prior to RIRSA (and preferably over 30 years), there would have been less pressure for additional benefit cuts.

Similarly, the timing of changes in actuarial assumptions helped justify draconian changes to the system. In 2010, the year before the passage of RIRSA, ERSRI made changes to the rate-of-return and other assumptions that increased ERSRI's unfunded liabilities by over $1.4 billion (author's analysis of GRS 2011c). The most significant of these was a reduction in the rate-of-return assumption from 8.25 percent to 7.5 percent. In comparison, the average rate-of-return assumption among public plans is 8.0 percent (author's analysis of CRR and CSLGE 2009).

The change in the rate-of-return assumption was justified by the poor performance of the fund in recent years, though the fund had exceeded the 8.25 percent assumption over a 25-year period (GRS 2011a). While reducing expected returns might have made sense in the bubble years when the market price–earnings ratio was high, it made less sense after the decline in stock prices, when the price–earnings ratio was low and stocks were a relative bargain (Rosnick and Baker 2012). It is also worth noting that the inflation assumption was reduced by a smaller amount—from 3 to 2.75 percent—even though inflation in recent years was also lower than assumed and the bond market predicted low inflation for the foreseeable future. Thus, even if the 7.5 percent rate-of-return assumption is borne out, real (inflation-adjusted) returns are likely to be higher than assumed. Similarly, salary growth projections were only reduced from 4.5 percent to 4.0 percent, even though both recent history and the state's supposedly dire fiscal situation would seem to indicate lower salary growth going forward (GRS 2011a; GRS 2012).

Benefit provisions before the cuts

Until RIRSA, ERSRI benefits were based on accrual rates that rose with tenure. For example, the benefit accrual rate in 2005 averaged 1.7 percent per year for 10-year employees, 1.8 percent per year for 20-year employees, and 2.2 percent per year for 30-year employees (thus, 10-, 20-, and 30-year employees would have benefits equal to 17, 36, and 66 percent of their final average salaries, respectively). By comparison, the average accrual rate of plans in the Public Plans Database was 2.0 percent per year regardless of tenure (author's analysis of CRR and CSLGE 2005).

Lifetime benefits were also higher for workers who were hired—and therefore became eligible for retirement—at younger ages. Though annual benefits are based on years of service, not age, workers eligible to retire at younger ages received these benefits over longer periods. Before the 2005 changes, workers were eligible to retire at age 60 with 10 years of service or at any age after 28 years of service. Thus, a worker hired just after college could have conceivably retired as early as age 50. Though eligibility requirements vary considerably between plans, ERSRI eligibility require-

ments prior to 2005 appear somewhat more favorable to workers hired at younger ages than the majority of plans in a National Education Association survey (author's analysis of NEA 2010).

Another somewhat atypical provision was a COLA not directly tied to inflation, but rather fixed at 3 percent (the inflation assumption at the time the provision was enacted) beginning the third year after retirement. Depending on actual inflation, this could amount to a real (inflation-adjusted) increase or decrease in benefits in any given year. Between 1970 and 2005, when the 3 percent COLA was in effect, consumer price index (CPI) inflation averaged 4.7 percent, so the COLA did not keep up with the cost of living. However, inflation was lower in recent decades, averaging 2.6 percent between 1992 and 2005 (author's analysis of Bureau of Labor Statistics data).

The first rounds of cuts (2005, 2009, 2010)

With a benefit structure tilted in favor of long-tenured workers, it is not surprising that the first rounds of cuts had the biggest impact on those workers, especially those eligible to retire at relatively young ages. This was done by increasing the retirement age to 65 after 10 years of service, or age 59 (later 62) after 29 years of service, and by reducing accrual rates, especially the accrual rate for those with 21–34 years of service.

The initial rounds also tied the COLA to the consumer price index (CPI), capped it at 3 percent, and limited it to benefits up to $35,000. Thus, the COLA went from being arguably over-generous in a low-inflation environment to not fully shielding retirees from cost-of-living increases. An increase in the final average salary period from three to five years, a way to both reduce benefits and minimize pension "spiking" with overtime or big pay increases just before retirement, also increased workers' exposure to inflation risk, since faster inflation creates a bigger difference between a five-year and three-year final average salary.

As shown in Figure A, the cumulative effect of these cuts was a 23 percent reduction in benefits for the prototypical career worker who had 30 years of service at age 62—with a maximum reduction of 41 percent for workers hired soon after college (not shown). Despite these cuts, the plan's funded ratio declined further in the wake of the 2008 stock market downturn.

RIRSA (2011)

RIRSA made even deeper cuts to the DB pension and introduced a new DC plan to create a hybrid DB+DC system. RIRSA slashed the DB accrual rate to 1.0 percent per year of service, half the average accrual rate among public pensions (author's analysis of CRR and CSLGE 2009). The normal retirement age, already higher than in most other public plans, was increased to 66, gradually rising to 67 (to match the normal Social Security retirement age). This is exceeded only by plans in Illinois and Missouri (NEA 2010; Walsh 2010; Johnson 2011). The "cost-of-living adjustment" was disconnected from actual or expected increases in the cost of living, and was instead made contingent on investment returns and the plan's funded ratio, and applied only to benefits up to $25,000.

The effect of the RIRSA cuts was an additional 57 percent reduction in DB benefits for the prototypical career worker who had 30 years of service at age 62 (61 percent while the COLA suspension remains in effect). As shown in Figure A, this amounts to a cumulative 67 percent reduction in DB benefits for the prototypical worker with 30 years of service at age 62 (70 percent while the COLA suspension remains in effect).

The DB benefits that were cut were partly replaced by a new DC benefit. However, as noted earlier, Hiltonsmith (2013) estimates that the hybrid DB+DC benefit would, on average, replace only 86 percent of pre-RIRSA DB benefits for the prototypical worker with 30 years of service at age 62, and less for those unlucky enough to retire in the wake of a bear market. When taking into account this supplemental defined contribution plan, the cumulative effect of the 2005–2011 cuts is a 34 percent reduction in benefits for the prototypical 30-year worker, with a quarter experiencing cuts of 40 percent or more.

The savings from RIRSA come from cutting accrued benefits, a move that is being challenged in court. The hybrid plan actually costs more than the current system even though it provides a less valuable and less secure benefit. Though the normal cost of the DB pension after RIRSA declined by around 2.0 percent of payroll for state employees and 2.9 percent of payroll for teachers, the employee share fell by 5.0 percent of payroll, as most of the employee contribution was redirected to the new DC plan. Thus, the employer share of the normal cost of the DB plan rose by 3.0 and 2.1 percent of payroll for state employees and teachers, respectively, and the total cost to employers rose by 4.0 and 3.1 percent of payroll for state employees and teachers, respectively, taking into account the 1.0 percent employer contribution to the DC plan.

The DB cost is projected to decline as workers shielded from some of the cuts pass through the system. Thus, at some unspecified point in the future, the long-term normal cost of the DB plan is projected to be around 5.2 and 5.6 percent of payroll lower than the normal cost before RIRSA. However, this is still not enough to make up for the 5.0 percent reduction in the employee contribution to the DB plan and the 1.0 percent additional employer contribution to the DC plan, so employer costs—i.e., costs to taxpayers—are projected to be slightly higher with the hybrid system even in the long term (GRS 2011b).

There are two reasons why the hybrid system is more expensive despite providing a less valuable benefit. First, DB pensions are generally more cost-effective than DC plans. Though the Rhode Island plan does not have some of the high administrative costs associated with individual accounts, the annuitization cost is higher (Hiltonsmith 2013). In addition, the hybrid plan may provide more valuable benefits to some workers, including some mid-career job leavers.[2] Workers shielded from some of the DB cuts through transition provisions may also benefit from the additional DC plan. However, overall the hybrid plan is less cost-effective and provides a less valuable benefit to most workers, especially career employees.

Conclusion

What happened in Rhode Island was remarkable in many ways, not only because state employee and teacher pensions suffered "death by a thousand cuts," but because these cuts—including cuts to earned benefits—were widely praised in the media and by many experts (e.g., Von Drehle 2011; Walsh 2011; Munnell 2012). The campaign behind RIRSA, ostensibly a local initiative, was largely funded by a Texas hedge fund billionaire and former Enron trader (Corkery and Reagan 2012; Engage Rhode Island 2013). The discussion exaggerated the challenges faced by the pension fund and the state while downplaying the damage to workers and retirees, who were the victims, not perpetrators, of pension underfunding.

The fact that workers had borne most of the cost of these benefits, and had already faced deep cuts after employers failed to fulfill their end of the bargain, was frequently lost in the discussion. The rationale was that it did not matter who

was at fault; rather, what mattered was that the state was facing a "pension crisis" that required making difficult choices, and the choices were limited to cutting the pensions of current retirees, current workers, and future workers (Raimondo 2011). By this standard, RIRSA, which reduced the taxpayer liability while spreading the pain among different groups of workers and retirees, was presented as an exemplar of "fairness" (Munnell 2012). As mentioned, the sense of crisis was exaggerated by actuarial conventions (wherein the cost of paying down legacy costs is expressed as a share of current payroll), by a fixed amortization period, and by the timing and extent of changes in actuarial assumptions.

The campaign of misinformation is encapsulated in *Truth in Numbers,* the report by Rhode Island State Treasurer Gina Raimondo that paved the way for RIRSA. This is important not just for the historical record, but because the legal case for cutting accrued benefits rests on the claim made in *Truth in Numbers* and elsewhere that, regardless of who was at fault, the state faced an imminent funding crisis and had no option but to slash benefits. However, *Truth in Numbers* is not a credible source. To cite only a few of the many false or misleading claims in it:

- *Truth in Numbers* claims that "retired public employees can routinely earn retirement benefits that exceed 100 percent of their final average earnings by the time they are several years into their retirement. Many retirees can earn more in retirement annually than a current employee in the same job position earns today" (Raimondo 2011, 5–6). This comment follows a discussion of the (old) COLA and implies that it made retirees better off than they were while they were working, or better off than current workers. In fact, even workers who retired with the maximum 80 percent replacement rate in recent decades, after the 3 percent COLA began exceeding actual inflation, would never have received a pension larger in inflation-adjusted terms than they earned when working, or than earnings of current employees with the same jobs and experience (author's analysis of Bureau of Labor Statistics CPI data).[3]
- The report contrasts investment returns for 2001–2010, which averaged 2.28 percent, with the former 8.25 percent rate-of-return assumption, never acknowledging that long-run historical returns were higher than the assumed rate over longer periods (Raimondo 2011, 6; GRS 2011a). Simply updating the 10-year period by one year to 2011, as done elsewhere in the report, increased the 10-year return to 4.4 percent.
- The report shows pension costs as a mounting share of tax revenues since 2002 without acknowledging that artificially low contributions made in the early 2000s contributed to the underfunding and caused costs to escalate (Raimondo 2011, 7). This is akin to failing to pay your bills, and then complaining about mounting debt. In addition, the projections may be inflated (Long 2011).
- The report describes a graph depicting the decline in the number of active workers and the rise in the number of retirees and beneficiaries by noting, "[A]s shown below, there are now many fewer active employees to support a growing number of retirees and beneficiaries" (Raimondo 2011, 8). Though workers are expected to contribute to their own future pensions, they are not responsible for "supporting" current retirees in an advance-funded system like ERSRI. As explained earlier, all else equal, a declining public-sector workforce makes it easier, not harder, for public employers—and by extension, taxpayers—to pay down legacy costs.
- In a section entitled "Pension fund could run out of money," the report cites a Boston College study estimating that ERSRI "could run completely out of assets between 2019 and 2023." Though acknowledging this to be an "unlikely scenario," the report continues by noting that "given the projection that Central Falls [a Rhode Island municipality] will run out of assets in its municipal pension fund in the near future, it is clear that insolvency of a state pension fund is not impossible" (Raimondo 2011, 9). Though the implication is that ERSRI could run out

of money, the Boston College study cited is a purely hypothetical exercise wherein states either terminate their pensions or only pay the normal cost of current benefits, ceasing all amortization payments (Munnell et al. 2011a). By juxtaposing this with the unrelated problem of a troubled municipal pension, the report falsely implies that experts believe ERSRI could become insolvent (Raimondo 2011, 9).

At the end of *Truth in Numbers*, Raimondo declares, "Almost every state faces a pension crisis. We have the opportunity to lead the way forward in confronting and solving this problem and, in so doing, serve as a model for other states to follow" (Raimondo 2011, 14). However, Rhode Island is a poor model for other states, not only because the situation it faces is unusual in many ways, but because the supposed solutions advanced by Raimondo were extreme, unfair, and counterproductive.

DB pensions are more cost-effective than DC plans, as the higher cost of RIRSA's hybrid plan illustrates (Almeida and Fornia 2008; Hiltonsmith 2013). DB pensions are also highly valued by workers, who accept lower pay in exchange for secure benefits (see, for example, Allegretto, Corcoran, and Mishel 2011; Bender and Heywood 2010; Boivie and Weller 2012; Keefe 2010; Morrissey 2012; Munnell et al. 2011b; Schmitt 2010). Therefore, any savings from cutting DB pensions will prove illusory, as employers are forced to offer larger pay increases or more expensive DC benefits to attract and retain a quality workforce. Though states can save money in the short run by reneging on pension promises, taxpayers will face higher costs in the long run if workers no longer believe these promises will be met.

About the author

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Appendix A: Timeline of ERSRI benefit changes

The following timeline includes conservative estimates of the impact on benefits of the rounds of changes detailed above (see Appendix B for methodological details). These estimates ignore transition provisions that exempted, or partially exempted, some workers from cuts. Therefore, the estimated reductions are not necessarily the impact on actual workers over time, but rather reductions in benefits for similar workers before and after each round of changes.

2005

- **Normal retirement age.** The normal retirement age was increased from 60 to 65, or from any age with 28 years of service to age 59 with 29 years of service. The increase from 60 to 65 is a 7 percent reduction in benefits, based on Social Security Administration (SSA) life expectancies (author's analysis of Bell and Miller 2005). For workers hired straight out of college, who would have been eligible at age 50 with 28 years of service, the increase to age 59 is a 24 percent reduction in benefits.
- **Accrual rates.** Accrual rates were reduced, especially for longer-tenured workers, as shown in **Appendix Table A1**. The maximum replacement rate was also lowered from 80 percent after 35 years to 75 percent after 38 years. The

APPENDIX TABLE A1

Employees' Retirement System of Rhode Island benefit accrual rates before and after recent reforms

BEFORE 2005 CHANGES		AFTER CHANGES		
Year(s) of service	Accrual rate	Year(s) of service	Accrual rate after 2005 changes	Accrual rate after RIRSA
1–10	1.70%	1–10	1.60%	1.00%
11–20	1.90%	11–20	1.80%	1.00%
21–34	3.00%	21–25	2.00%	1.00%
35	2.00%	26–30	2.25%	1.00%
		31–37	2.50%	1.00%
		38	2.25%	1.00%

Source: Author's analysis of GRS (2006, 2011c, 2012)

change in accrual rates in 2005 amounted to a 6–16 percent reduction in benefits, depending on years of service.

- **COLA.** The COLA was changed from a fixed 3 percent annual adjustment to one based on a consumer price index capped at 3 percent, beginning three years after retirement. This reduced the expected average COLA to 2.5 percent, below the inflation assumption of 3.0 percent, based on the actuarial valuation (GRS 2006). The effect depends somewhat on age, but is roughly a 4 percent reduction in lifetime benefits for most workers.

2009

- **Normal retirement age.** For workers with 29 or more years of service, the retirement age was increased from 59 to 62, a 10 percent reduction in benefits based on SSA life expectancies (author's analysis of Bell and Miller 2005).
- **Final average salary (FAS).** The FAS averaging period was increased from the highest three to the highest five consecutive years of salary. This is a 4 percent reduction in benefits, assuming 4 percent annual salary growth, as per ERSRI actuarial valuations.

2010

- **COLA.** The COLA was limited to $35,000 in benefits.[4]

2011 (RIRSA)

- **Normal retirement age.** The normal retirement age was raised to the Social Security normal retirement age (currently age 66, gradually rising to age 67). For workers with 29 or more years of service, the increase from age 62 to 66 is a 14 percent reduction in benefits (author's analysis of Bell and Miller 2005). For everyone else, the increase from age 65 to 66 is a 4 percent reduction.

- **Accrual rates.** Accrual rates were reduced to 1.0 percent per year of service regardless of tenure, with no maximum. This is a 37–49 percent cut in benefits, depending on tenure.
- **DC plan.** Under RIRSA, teachers and state employees contribute 5 percent and employers contribute 1 percent of pay to a new DC plan (contributions are higher for those not covered by Social Security). The plan is administered by TIAA-CREF, with a range of investment options, including mutual funds and annuities, offered by TIAA-CREF and other vendors.
- **COLA.** Post-retirement adjustments were tied to investment earnings: five-year average investment returns minus 5.5 percent, capped at 4 percent. Except for interim adjustments at five-year intervals, they were also made contingent upon ERSRI achieving an 80 percent funded ratio. The COLA also now applies only to benefits up to $25,000. The actuaries project that the COLA will be suspended for 16 years. Suspending the COLA (with an interim adjustment at five-year intervals) is roughly a 14 percent reduction in benefits. The actuaries do not provide information on the projected value of the COLA after the suspension, which is lower than 2 percent (the projected rate of return minus 5.5 percent) because of the 4 percent cap. However, if we assume for simplicity that the COLA is valued at 2 percent after the suspension is lifted, this amounts to a 4 percent reduction in benefits.

Appendix B: Methodological notes

For simplicity, the analysis focuses on DB benefits for state employees and teachers who are eligible for Social Security (about half of teachers and some state employees are not). It does not include any changes to disability, spousal, survivor, or early retirement benefits; purchase of service credits; or other provisions not related to an individual's retirement at the normal retirement age. However, it is worth noting that the COLA cut and lower accrual rates can have a bigger—potentially devastating—impact on disabled workers, especially those not eligible for Social Security. This is especially true for workers who become disabled at a relatively young age, since post-RIRSA disability benefits can be as low as 10 percent of final average salary and will decline over time in inflation-adjusted terms with a suspended or reduced COLA (author's analysis of GRS 2013).

Reductions are expressed as cuts in total expected lifetime benefits for prototypical workers. The estimated effects would be slightly different if expressed in present value terms, discounting the value of future benefits. In present value terms, raising the eligibility age constitutes a bigger reduction than shown in the analysis, cutting the COLA constitutes a smaller reduction, and reducing accrual rates has the same effect using either measure. Present values would be a more accurate way to assess the effect of changes on pension fund finances, but a less accurate way to measure the effect on retirees unless they place a lower value on future benefits, which may be true for retirees with investment income. Overall, the analysis should be viewed as a conservative estimate of the cumulative effect of these cuts on prototypical workers, because the increase in the eligibility age has a bigger impact than the COLA cut. In addition, the analysis does not take into account workers who die before attaining the new retirement age.

Estimates of the effect of raising the normal retirement age are based on the Social Security Administration's cohort life table for the 1950 birth cohort, averaged between men and women (Bell and Miller 2005). Thus, for example, if average life expectancy at age 60 is 22.82 years and at age 65 is 18.95 years, raising the age of eligibility for normal retirement from 60 to 65 is equivalent to a 17 percent reduction in benefits (because 18.95 is approximately 83 percent of 22.82).

To estimate the effect of changes in accrual rates, which vary by tenure, combined with a change in the eligibility age, the effect was estimated at the new, higher, eligibility age. Thus, for example, after the normal retirement age was raised from 60 to 65, and the accrual rates for 1–10 years of service and 11–20 years of service were reduced from 1.7 to 1.6 percent and 1.9 to 1.8 percent, respectively, the reduction for a worker with 10 years of service at age 60 would be around 6 percent, which is the decline in the replacement rate from 26.5 percent to 25 percent at age 65.

No attempt was made to quantify the effect of limiting the COLA to $35,000 in 2010 and $25,000 in 2011, since these limits would have had little impact on prototypical "before" and "after" workers with average salaries, especially after the cuts in accrual rates. However, they likely had an impact on actual workers and retirees who were shielded from changes in accrual rates.

Endnotes

1. The normal cost is the present value of projected future benefits attributed to the current year of service. The normal cost is higher than the cost would be if employees left at the end of the year or the plan were frozen, because it incorporates projected future pay increases (since service credits are multiplied by final average salary).

2. Job leavers have always been entitled to their vested DB benefits, with the option of requesting a refund of their contributions instead of waiting to receive a pension at retirement. For some job leavers, however, this may be less valuable than what they will receive under the hybrid plan, which includes investment earnings on their contributions to the DC plan, and, after vesting, the 1.0 percent employer contribution.

3. Though a few retirees might receive combined Social Security and ERSRI pension benefits that exceed their final salary in real terms, and a few might receive more than current employees following pay cuts, these are exceptions and not the rule and have nothing to do with the COLA. The more pertinent facts are that ERSRI was never a particularly generous plan, even compared with those in states where all workers are covered by Social Security, and the poor design of the COLA has mostly come at the expense of retirees.

4. As explained in the methodological appendix, no attempt was made to quantify the effect of limiting the COLA to $35,000 in 2010.

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