Moving Backwards on Pension Reform

Tobash Plan Does Little to Reduce Pension Debt But Will Erode Quality of Public Schools and Services, Hurt Retirement Security

By Stephen Herzenberg

Keystone Research Center • 412 North 3rd St., Harrisburg, PA 17101 • 717-255-7181

Keystone Pension Primers: *As Pennsylvania policymakers, media, and citizens have evaluated pension proposals since the start of 2013, the Keystone Research Center's "pension primers" have sought to demystify the often complex details at the heart of the pension debate. This is the ninth installment in that series.* **June 2, 2014**

Executive Summary

Pennsylvania's state pensions for teachers, nurses, and other public servants continue to be the subject of substantial public discussion. Over the past two years, four different proposals for modifying the Public School Employees' Retirement System (PSERS) and the State Employees' Retirement System (SERS) have been introduced:

- Governor Tom Corbett's 2013-14 budget proposal;
- Representative Glen Grell's September 2013 proposal;
- Representative Mike Tobash's new proposal, one variant of which ("Corbett-Tobash") would combine the Tobash proposal with the Governor's proposal to reduce pension contributions (via reductions in the "pension collars" that cap pension rate increases annually made by the state and school districts); and
- A Senate Democratic proposal introduced in March 2014.

In prior policy briefs, the Keystone Research Center has analyzed Governor Corbett's 2013-14 pension proposal and the Grell proposal. This brief focuses on the Tobash proposal and its Corbett-Tobash variant, which have recently become the focus of discussion in Harrisburg. The Tobash proposal would replace Pennsylvania's existing defined benefit pensions with a so-called hybrid proposal that includes a defined benefit pension covering a portion of the salaries (up to $50,000 initially) and years of service (up to 25 years) of school and state employees, and a 401(k)-style defined contribution plan that covers the other portions of employees' salary and service and to which small contributions are made below the $50,000 and 25-year thresholds. The end of the brief compares all four pension proposals and offers a new framework for Pennsylvania pension policy going forward.

The starting point for any changes to Pennsylvania's public pension must be the reforms enacted by the Pennsylvania General Assembly in Act 120 of 2010. These changes reduced pensions for future employees by more than 20%, lowered the taxpayer cost of future pensions to less than 4% of payroll with employees paying nearly twice as much (7%), and locked in a risk-sharing provision that increases employee contributions further if future investment returns fall below 7.5% per year over any five-year period.

Since the centerpiece of Act 120 was deep cuts in pensions for new employees, that well is now dry. To address a pension underfunding problem caused primarily by a decade of low employer contributions, there is a need to tap a different well rather than "cut pension benefits for new employees." One other well that should be tapped is "new revenue," including revenues that result from reversing recent corporate tax cuts – and avoiding additional cuts – that the state cannot afford and that do not deliver job growth.

A limitation of Act 120 is that it did not increase contributions to state pensions sufficiently or quickly enough. In fact, because the Act ramped up employer contributions only gradually, Pennsylvania's employer underfunding problem persisted, increasing Pennsylvania's pension debt further. Building on Act 120 requires addressing the employer funding problem and not exacerbating it through further reductions in near-term employer contributions.

In analyzing Corbett-Tobash and other Pennsylvania pension proposals, we use five criteria, the first four of which have also been articulated on a bipartisan basis by Senators Michael Brubaker and John Blake, the chairman and minority chair of the Senate Finance Committee, as the basis for evaluating pension proposals. These four criteria are:

- Impact on taxpayers;
- Constitutionality;
- Impact on retirement security for public employees (including new employees); and
- The impact on near-term budgets, especially for public schools (with the goal being to provide some relief to school districts without violating the other criteria – no easy task).

We add a fifth criterion in this brief – impact on the quality of public services – because pensions have an important impact on the ability of schools and the state to attract and retain qualified and experienced teachers and other public servants. This impact should be weighed when evaluating alternative pension proposals.

One obstacle to fully comparing competing pension proposals is the incomplete information available on all of their impacts – on taxpayers, retirement security, and the quality of public services. For example, no actuarial assessment of the impact of Governor's 2013 proposal on retirement security has been done. Three new actuarial studies of the Tobash proposal, and an actuarial synthesis, did become public in the middle of last week – 149 pages in total – and this brief draws heavily on these new studies. Even so, given the complexity of the pension issue, any legislative action requires comprehensive analysis and comparison of all serious proposals – including the new framework in this brief – with sufficient transparency and time that lawmakers and the public can evaluate their impacts.

Based on the actuarial studies released last week, the Corbett-Tobash proposal would:

- *Cut retirement benefit substantially, in many cases by more than 40%.* The Governor's pension consultant, Milliman, and the actuary for Pennsylvania's public school pension plan both find that cuts for many employees (relative to Act 120s already diminished benefits) would exceed 40% for many employees. The actuary for the Public Employee Retirement Commission (PERC) also notes that "the loss retirement security is greater than the value of the cost savings for the Commonwealth."

- *Cut benefits more each year and lead Pennsylvania's defined benefit pensions to vanish over time.* Cuts in benefits under the Corbett-Tobash proposal would grow every year for many employees because the defined benefit portion of the hybrid plan would cover a shrinking portion of employees' salaries. (This is a result of increasing the $50,000 cap covered by the defined benefit pension by 1% annually, an amount lower than the projected rate of inflation and of salary increases.) In two generations, the defined benefit pension would deliver retirement income that amounts to only a small fraction (one sixth or less) of most employees' final average salary.

- *Risk a transition cost that digs a deeper pension hole for Pennsylvania*. Actuarial studies last year concluded that Governor Corbett's proposed switch of new employees to 401(k)-type retirement savings plans would cost $40 billion. The Tobash proposal would have a lower transition cost because it keeps a substantial portion of new employee salaries in the existing defined benefit pool. Nonetheless, by reducing and then gradually eliminating the defined benefit pension, the Tobash plan, in the words of the PSERS actuary, leads to a "…shift in liability towards retirees." This could, the actuary adds, prompt PSERS to invest in a less risky and more liquid portfolio which "…may result in a lower expected return…This would increase the accrued liabilities and contribution requirements of the System."

- *Make little progress on Pennsylvania's pension debt*. Even with deep benefit cuts, the Corbett-Tobash proposal does not solve Pennsylvania's pension debt problem. In addition to the risk of a transition cost, by combining the Tobash plan with the Governor's 2014 proposed collar reductions, the Corbett-Tobash variation would use additional benefit cuts like a new credit card, spending a substantial portion of the savings in the first four years and leaving the state with a similar amount of debt but ratcheted down pension benefits. In addition, once it is fully phased in, the PSERS actuary finds that the Tobash plan would have a slightly higher (normal) cost for pensions for new employees, combining this higher cost with lower retirement security because defined-contribution retirement savings deliver "less bang for buck" (they deliver lower returns, and have higher costs for administration, financial management, and purchasing annuities that convert savings into a monthly pension check).

- *Impose an additional hidden cost as a result of future wage increases*. The benefit cuts under the Tobash plan would make uncompetitive the compensation of higher-wage, more educated Pennsylvania public employees. These employees already earn much lower wages plus benefits than comparable private-sector workers. To maintain competitive public sector compensation would likely require higher salaries than employees would receive under Act 120.

- *This plan will erode the quality of public schools and services*. Higher-wage, longer-tenure employees would face a weaker incentive to remain in public service once they have 25 years of service (their defined benefit would increase only 1% per year), as well as eroded compensation relative to their private-sector counterparts. The combination is likely to lead to a higher rate of turnover among the highest quality (and most marketable) mid-career professionals that hold our schools and public agencies together.

In sum, the Corbett-Tobash proposal does not represent forward movement on Pennsylvania public-sector pensions. It would weaken retirement security while failing to make progress on Pennsylvania's pension debt.

The last part of this brief reviews all of the existing pension proposals against our five criteria. It concludes that none of the proposals satisfy all of these criteria but that elements of the Grell and Senate Democratic proposals represent potential steps forward, partly because they propose to inject additional revenue into the pension systems to compensate for inadequate past employer contributions. Building on these elements, we offer a new framework for pension progress that includes

- pension bonds
- revenue increases dedicated in part to pension contributions and/or paying off pension bonds, and
- a negotiated search for other compromises acceptable to current employees (hence constitutional) and that bolster pension fund financial sustainability.

The Current Status of Pennsylvania Pensions

Table 1 (on page 5) profiles the current status of Pennsylvania's two state pension plans. Box 1 (on page 5) summarizes some key points from earlier research on Pennsylvania pensions. One key point on which there is a broad consensus is the central role of inadequate employer contributions in creating the state's pension debts, estimated at $47.3 billion in the most recent pension system annual financial reports (see source note to Table 1).[1] Another key point is the modesty of Pennsylvania's pensions, especially after the deep Act 120 cuts. Average pensions for members of both SERS and PSERS equal about $25,000. Moreover, unlike in many other states, Pennsylvania's public sector pensions have no automatic inflation adjustment: there has been no ad hoc inflation adjustment to Pennsylvania pension benefits since 2002 and none is likely in the foreseeable future. Under Act 120, assuming an inflation rate of 3% annually, 30-year public employees who retire at age 62 receive pensions by 82 with a purchasing power below a third of their final salaries.

With one exception, Pennsylvania pension plans now follow the best practices for public pension plans identified by the National Institute on Retirement Security.[2] The exception: Pennsylvania's pension plans still do not make annual pension contributions equal to the amounts that pension experts say is necessary each year to ensure long-term financial sustainability. Even under Act 120, the adequacy of funding has remained below recommended levels because of the annual caps – or collars – that limit annual increases in employer contribution rates to 4.5%. Since inadequate past employer funding is the Achilles Heel of the Pennsylvania pension systems, an employer injection of funds into the pension system should be the core of any real pension reform.

---

[1] Pennsylvania ranks 48th out of the 50 states since 2003 in making its annual required contributions (ARC) payment, with contribution shortfalls accounting for nearly half of Pennsylvania's pension debt. If Pennsylvania employers had made adequate contributions, the state's pension funds would now be well above the 80% funded level considered financially healthy. Greg Mennis, Pew Charitable Trusts, and Josh McGee, Laura and John Arnold Foundation, "Letter to Senators Brubaker and Blake," January 24, 2014, p. 1. The Pew/Arnold estimate is similar to a Keystone Research Center estimate made last April of how much lower Pennsylvania's pension debt would be if employers had made sufficient contributions to bring the PSERS and SERS employee/employer contribution ratio up to the national average. See the source in the next footnote, pp. 4-5.

[2] Jun Peng and Ilana Bolvie, *Lessons from Well-Funded Public Pensions: An Analysis of Six Plans that Weathered the Financial Storm*, National Institute on Retirement Security, Washington, D.C., June 2011, online at http://www.nirsonline.org/index.php?option=com_content&task=view&id=613&Itemid=48.

Table 1. Pennsylvania's State Pension Plans			
	PSERS (June 30, 2012)	*SERS (December 31, 2012)*	*Total*
Active Members	273,504	106,048	379,552
Retired Members (including beneficiaries)	202,015	117,061	319,076
Employee Contribution	7.43%	6.25%	7.15%
Employer Contribution	16%	11.59%	14.94%
Average Annual Benefit	$24,122	$25,083	$24,475
Assumed Rate of Return (2013)	7.5%	7.5%	7.50%
Actuarial Value of Assets (billions)	$58.3	$25.3	$83.60
Unfunded Liabilities (billions)	$29.5	$17.8	$47.30
Funded Ratio	66.4%	58.8%	63.9%

Note. The employee and employer contributions are weighted by payroll; the average annual benefit is weighted by the number of retired members including beneficiaries.

Sources. Pennsylvania Public School Employees' Retirement System, *Comprehensive Annual Financial Report Fiscal Year Ended June 30, 2013*; at http://www.psers.state.pa.us/content/publications/financial/cafr/cafr13/2013CAFR.pdf. Commonwealth of Pennsylvania State Employees' Retirement System, *Comprehensive Annual Financial Report Fiscal Year Ended December 31*; online at http://www.portal.state.pa.us/portal/server.pt?open=514&objID=701628&mode=2

Box 1. Key Facts About Pennsylvania Pensions

- **The biggest cause of Pennsylvania's pension debt is public employers' failure to make annual required contribution (ARC) payments** to ensure long-term financial sustainability.

- **Pennsylvania's pension debt is not the responsibility of Pennsylvania employees, who have contributed about 7% on average of every single paycheck to their own pensions.** In the 2000s, Pennsylvania employees contributed nearly twice as much to their own pensions as their employers, whereas in most other states employers pay nearly twice as much as employees.[3]

- **Pennsylvania does not have a "pension" problem – public pensions cost taxpayers little going forward. Pennsylvania has a pension "debt" problem due to employers' failure to make adequate contributions**. Act 120 already lowered the employers' cost of pensions for employees hired after 2010 to about 3.9% of salaries.[4]

- **Pennsylvania's public-sector pensions are modest, averaging less than $25,000**.[5] Even with good benefits, Pennsylvania public workers earn wages plus benefits per hour that are 3.7% less than

---

[3] Stephen Herzenberg, *There You Go Again ... Governor's Proposal Delays Public Pension Payments, Repeating Short-Sighted Practices That Drove Up Pension Debt*, Keystone Research Center Pension Primer #4, April 16, 2013, online at http://keystoneresearch.org/publications/research/pension-primer-4-there-you-go-again-governor%E2%80%99s-proposal-delays-public-pension-

[4] This 3.9% is slightly revised based on new estimates which show the PSERS normal cost for new employees at 3.25%. (See Kenneth A. Kent and Janet Cranna, Cheiron, Letter to James L. McAneny, Executive Director, Public Employee Retirement Commission, May 26, 2014, p. 2.) Assuming the SERS is 5.1% and weighting the PSERS cost by two thirds and the SERS cost by one third produces a weighted average of 3.9%.

[5] The PSERS average benefit is $24,603. See Pennsylvania Public School Employees' Retirement System, *Comprehensive Annual Financial Report Fiscal Year Ended June 30, 2013*, p. 99; online at http://www.psers.state.pa.us/content/publications/financial/cafr/cafr13/2013CAFR.pdf. The SERS average benefit is $25,083; see Commonwealth of Pennsylvania State Employees' Retirement System, *Comprehensive Annual*

equivalent private-sector workers.[6]

- **Corporate tax breaks have a bigger impact on the state budget than pensions**. The annual taxpayer cost of funding the retirement benefits of current Pennsylvania employees is only 36% of the cost to the state of economic development subsidies and corporate tax breaks and loopholes.[7]

The Corbett/Tobash Pension Proposal

Box 2 (on page 7) outlines Representative Tobash's pension proposal, consisting of a "hybrid" retirement plan that includes both defined benefit and defined contribution components. The defined benefit portion would cover the first 25 years of service up to a final average salary of $50,000 (increased annually by 1%). The defined contribution plan would apply to salary above $50,000 and beyond 25 years of service, with the employer and employee contributing a combined 11% of salary over these thresholds. Employees would also contribute 1% of their first $50,000 in salary towards their defined contribution accounts, while employers would contribute 0.5%. The end of Box 2 describes Governor Corbett's pension contribution (or collar) reductions, which he proposed in his 2014-15 budget to be combined with a then-unspecified pension proposal that delivers savings.

Box 2. The Corbett/Tobash Plan[8]

General Structure[9]

- Benefits of current employees will not change (unless they leave then return to public service)
- Shared risk provisions from Act 120 will apply to all new employees
- Public and school employees hired/re-hired on/after January 1, 2015 (for SERS) or July 1, 2015 (for PSERS) must enroll in a defined benefit/defined contribution hybrid retirement plan
- If a former employee is rehired on or after January 1, 2015 (for SERS) or July 1, 2015 (for PSERS), all new service earned is in the new plan

Defined Benefits and Contributions

- The defined benefit plan applies to final average salaries of up to $50,000 (indexed 1% annually), with final average salary computed over the five highest-pay years not three years as under Act 120
- Defined benefit accrues for only the first 25 years of service
- 2% "multiplier" (or "accrual rate") for each year of eligible service. With the cap of 25 years, the

---

Financial Report Fiscal Year Ended June 30, 2013, p. 80, online at http://www.portal.state.pa.us/portal/server.pt?open=514&objID=701628&mode=2

[6] Jeffrey H. Keefe, *Public versus private employee costs in Pennsylvania: Apples-to-apples study provides accurate comparison of compensation*, Economic Policy Institute, August 18, 2011; online at http://www.epi.org/publication/public_versus_private_employee_costs_in_pennsylvania/

[7] Good Jobs First, *Putting State Pensions in Context: Pennsylvania*, January 30, 2014, online at http://www.goodjobsfirst.org/sites/default/files/docs/pdf/statepensions_pennsylvania.pdf

[8] For one description of the current version of the Tobash bill, see Public Employee Retirement Commission, "Actuarial Note Transmittal: Amendment Numbers 06917, 07089, and 07096 to House Bill Number 1353, Printer's Number 2152; Hybrid Retirement Benefit Plan," May 28, 2014, pp. 6-17.

[9] This summary is based on information on Representative Tobash's website, online at http://www.reptobash.com/Display/SiteFiles/139/OtherDocuments/PensionPlan_5_14.pdf

maximum benefit would be $25,000 (indexed 1% annually)

- 6% employee contribution (versus 6.25% currently for most SERS employees and 7.5% for most PSERS employees) on the salary to which the defined benefit pension applies (i.e., up to $50,000 indexed 1% annually); zero employee DB contribution above that cap
- Employers contribute the actuarially required amount necessary to fund the new defined benefit plan plus the legacy defined benefit tiers
- Employees vest after 10 years of service (the same vesting period as with Act 120) but cannot apply for early retirement unless they have 25 years of service
- Members with less than 25 years of service cannot retire until age 65
- If employees interrupt public service and then return, they become part of the new pension system when they return and the vesting clock starts again at zero

Defined Contribution plan

- Employee contribution of 1% and employer contribution of 0.5% on compensation up to $50,000 (indexed 1% annually)
- Employee contributions of 7% and employer contribution of 4% on salary above $50,000 (indexed 1% annually)
- Employee contributions vest immediately; three-year vesting of employer contributions
- Additional employer contribution of 6% for employees not covered by Social Security

Governor Corbett's Proposed Pension Collar Reductions

- The maximum increase in pension contribution rates would fall from the current 4.5 percentage points of salary under Act 120 to 2.25 percentage points in 2014-15, with an increase in the maximum collar of half a percentage point (2.75 percentage points in 2015-16, 3.25 percentage points in 2016-17, etc.) until the employer contribution rate returns to the Act 120 maximum.

The Impact of the Tobash Proposal on Retirement Security

What would be the impact of the Corbett-Tobash plan on retirement security? According to the Public Employee Retirement Commission (PERC) report released last week, "The overall impact [of the Tobash Plan] will be to reduce from current levels the potential future retirement benefits of the affected members." [10]

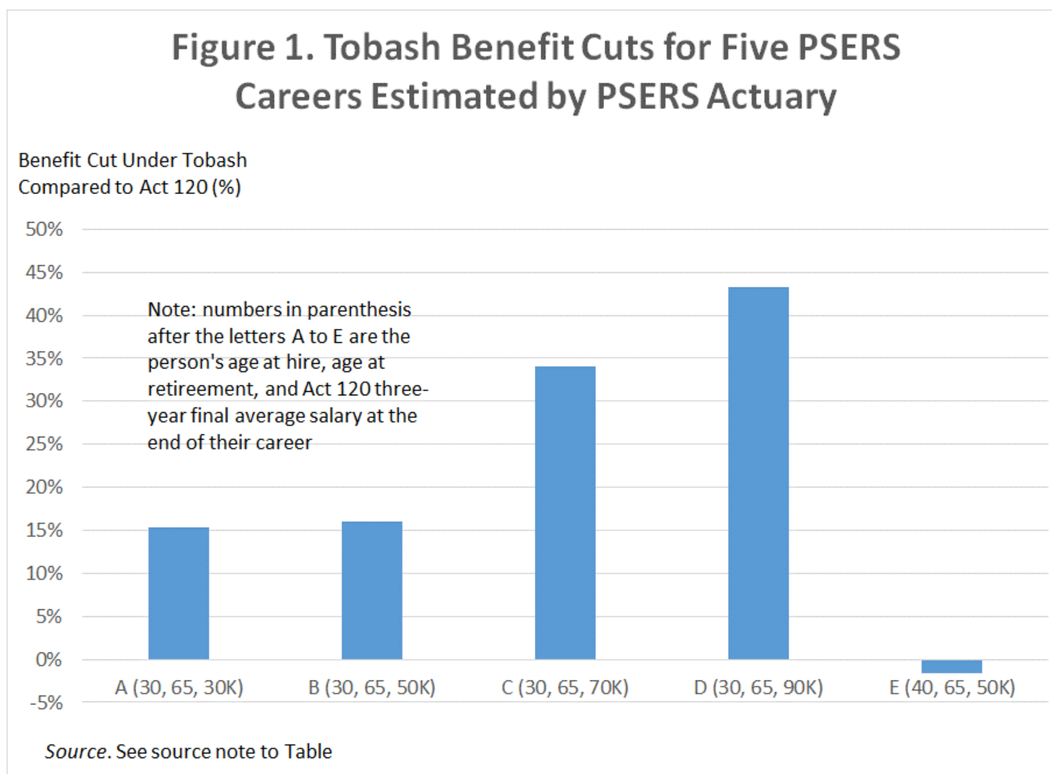
Cuts in the defined benefit part of the hybrid for new employees result primarily from two features of the Tobash Plan: the cap of 25 years on service counted towards the defined benefit pension; and the cap of $50,000 (increased 1% annually) on the final average salary that can be used in computing the defined benefit pension. For employees whose salary remains below the $50,000 salary cap (increased 1% annually), the increase from three to five years in the period used to compute final average salary will reduce benefits by about 4% (assuming 4% average salary growth).[11] The cut in the defined benefit

[10] For one description of the current version of the Tobash bill, see Public Employee Retirement Commission, "Actuarial Note Transmittal: Amendment Numbers 06917, 07089, and 07096 to House Bill Number 1353, Printer's Number 2152; Hybrid Retirement Benefit Plan," May 28, 2014, pp. 6-17.

[11] If salaries increase steadily at a few percent per year (e.g., 3% or 4%) at the end of a career, then the cut due to using a five-year rather than three-year final average salary equals roughly the annual increase in salary (e.g., 3% or 4%). If someone receives a bigger increase in salary within the last three years, then the cut can be larger.

pension is offset to some degree by the defined contribution retirement savings component of the hybrid plan.

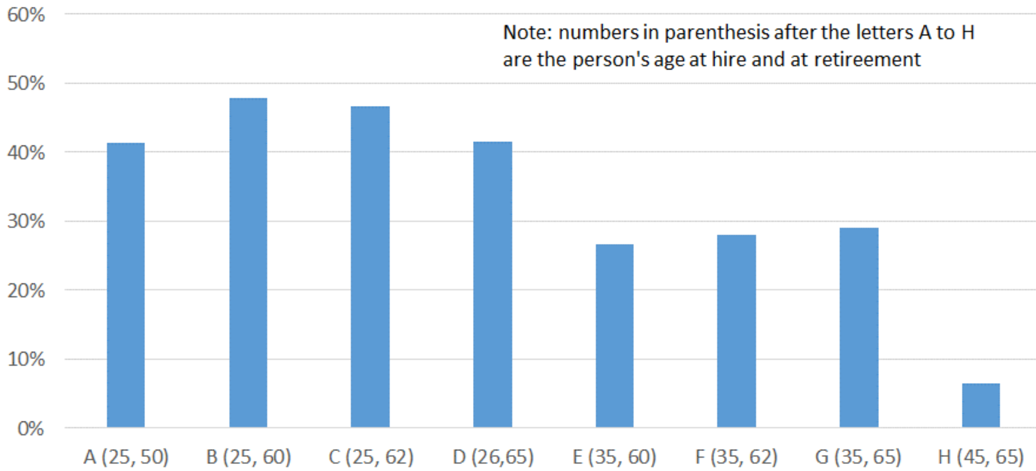
Large benefit cuts for new employees. What is the net result on retirement benefits? Figures 1-3 show numerical estimates of benefit cuts under the Tobash plan based on two of the actuarial reports released last week. Figure 1 (based on Table A1) shows estimated benefit cuts (and, in one case, a small benefit increase) for PSERS employees taken from the actuarial study by Buck Consulting, the PSERS actuary. Figures 2 and 3 show cuts for SERS employees derived from the study of the Tobash plan done by the Governor's pension consultant, Milliman.[12] Figures 1-3 show that most employee careers modelled by the two actuaries would experience large cuts in benefits. For about half of employee careers modelled by Milliman, the cuts are around or greater than 40%. (Given the more than 20% cuts under Act 120, benefits for these careers would be half or less what they would have been under Act 9, the law that governed benefits before Act 120.) For most other careers shown, the cuts are in the range of 15% to 40%.



[12] The Milliman report provided estimates of benefits (expressed as "replacement income" – retirement benefits as a share of salary in the last year before retirement) under the Tobash plan but did not directly compare these benefits to those under Act 120. Scott Porter and Glenn Bowen, "Memorandum Regarding Actuarial Cost Note on HB 1353, A06917, PN2152," Milliman, May 23, 2014. To create Figures 2 and 3 we computed benefits under Act 120 for the careers used by Milliman and then to compare those with the Tobash benefits. For the details, see Table A1. Figures analogous to Figure 2 and 3 for PSERS employees, and also based on the Milliman report, are presented as Appendix Figure A1 and A2. As these two figures and Table A1 show, Milliman's estimated replacement income for PSERS employees under Tobash – and estimated benefit cuts compared to Act 120 – are similar to the cuts shown for SERS employees in Figures 2 and 3.

Figure 2. Tobash Benefit Cuts for 8 SERS Careers Based on Governor's Actuary: Starting Salary $35,000
(4% salary growth, 6% DC interest rate)

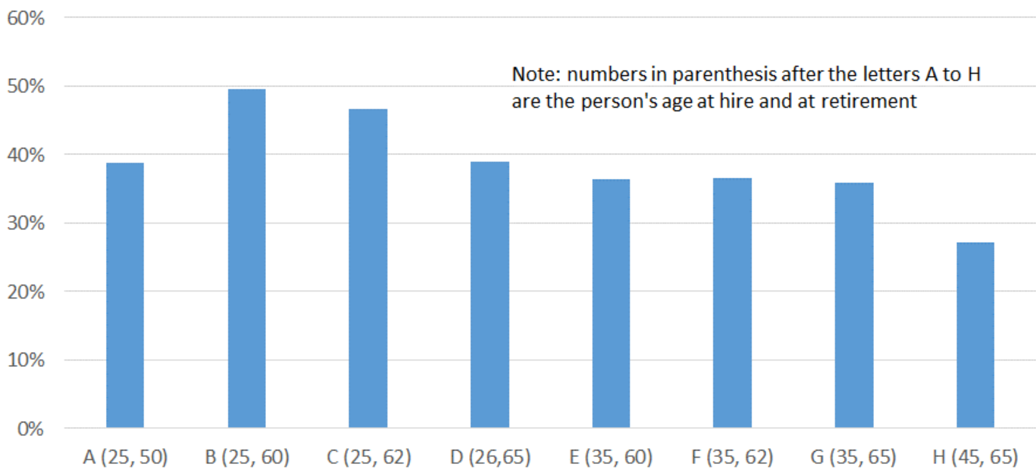
Benefit Cut Under Tobash
Compared to Act 120 (%)



Source. Table A2

Figure 3. Tobash Benefit Cuts for 8 SERS Careers Based on Governor's Actuary: Starting Salary $60,000
(4% salary growth, 6% DC interest rate)

Benefit Cut Under Tobash
Compared to Act 120 (%)



Source. Table A2

Bucks shows smaller cuts than Milliman (compare Figure 1 and Figures A1 and A2) but that likely results from a methodology that Buck acknowledges underestimated the likely benefit cuts under Tobash. (See the note to Table A1 for the technical reasons the Buck estimates are conservative.) The cuts tend to be greater for higher-wage employees (compare Figure 3 to Figure 2), not surprising because the $50,000 cap on the defined benefit pension has a greater impact on higher-wage employees.

Some lower-wage employees with 10 to 25 years of service. A small share of employees with atypical career trajectories (i.e., less than 25 years of service, salaries low enough that they never reach the salary cap for participation in the defined benefit pension, and departures from state service mid-career, allowing any defined contribution savings to compound for a longer period) could end up with higher benefits under the Tobash proposal. The share of school and state workers with higher benefits under the Tobash proposal would shrink every year because the cap on the share of employee salaries covered by the defined benefit pension declines every year.

Benefit cuts for new employees that increase each year and a defined benefit pension that gradually vanishes. Cuts in benefits under the Tobash proposal would grow every year because the defined benefit portion of the hybrid plan would cover a shrinking portion of employees' salaries. This is a product of increasing the $50,000 cap covered by the defined benefit pension by an amount (1%) that is lower than the projected rate of salary increases. PERC made this point in its report last week: "Because the 1% index is, and can be expected to be, significantly less than either the cost-of-living index or inflation, the effect will be to cause a gradual erosion in the value of the defined benefit component of the hybrid plan over time."[13]

A Vanishing Defined Benefit Pension. While the Tobash pension plan is presented as a compromise between maintaining the existing guaranteed pensions and eliminating defined benefit pensions in favor of defined contribution retirement savings, in fact the DB portion of the hybrid would gradually vanish.

Imagine a new employee who has a starting salary of $60,000 on the first day in 2015 that the Tobash plan becomes effective for new employees. Now imagine this employee works 25 or more years and experiences 4% annual growth of salary.[14] By the end of the 25th year (the maximum period for which employees earn service credit towards the Tobash defined benefit), the Tobash defined benefit pension would cover only 40% of the employee's (five-year) final average salary.[15] For an employee who starts 10 years later, in year 2025, the maximum Tobash defined benefit pension after 25 years of service shrinks to less than one third of final average salary.[16] In a generation or two, under reasonable assumptions about inflation and salary growth, the Tobash defined benefit would replace a small fraction of salary for most employees; ultimately, it disappears completely.

***A Family Unfriendly Plan*.** One other concern about the Tobash plan is that employees who interrupt public service but then come back to a school or state job must start the vesting clock at zero again. If

---

[13] Since the "cost-of-living index" and "inflation" are the same thing, it is possible that the word "wage" was omitted in this quote before the word inflation. With or without the word "wage," the point about a gradually vanished defined benefit stands. PERC, "Actuarial Note Transmittal House Bill Number 1353," p. 26.

[14] This is the salary growth rate assumed by Governor Corbett's pension actuary in estimates of benefits under the Tobash Plan.

[15] The precise share is 40.5%. If the employee had higher (6%) average wage increases, then the maximum Tobash defined benefit would cover only a quarter (25.6%) of the person's final average salary.

[16] With 6% salary growth, the maximum Tobash defined benefit after 25 years of service shrinks to less than one sixth for an employee starting in 2025.

people just miss vesting under Act 9 or Act 120 and then return to public service in 2015, they could end up with as much as 14 to 15 years of public service before they vest (up to four or five years of experience under Act 120 or Act 9 followed by up to 10 years when they return). One common reason for leaving public service but then returning to the workforce is to raise children and/or to care for an aging parent. By penalizing people who move in and out of the public sector more than once in a career, the Tobash Plan thus inadvertently hurts families. There are also questions about the constitutionality of placing returnees who began public service under Act 9 or Act 120 in the a new pension plan.

The Impact of the Corbett/Tobash Proposal on Taxpayers

The push for pension changes over the past several years has been waged in the name of taxpayers and the need to reduce Pennsylvania's pension debt. Do the Tobash or Corbett/Tobash plans make significant progress on Pennsylvania's unfunded pension liability? The answer is no.

Table 1 summarizes why. One reason is that savings from the Tobash hybrid retirement plan are modest – as much as $11.2 billion on a cash flow basis, but only $3.1 billion on a present-value basis. (That is, the savings are equivalent to having $3.1 billion in hand today.[17]) The second reason that the Corbett/Tobash variant, and even the Tobash plan alone, do not make progress on Pennsylvania's pension debt is that there are offsetting increases in costs that could end up being as large or larger than any savings. What are these offsetting cost increases?

Table 1. The Offsetting Impacts of the Corbett-Tobash Plan on the Taxpayer

Policy Change	**Estimated Savings or Cost (on a cash flow basis except where noted) and Source of Estimate**
Tobash Hybrid Pension Plan Replaces Current PSERS Defined Benefit Plan	• $3.35 billion savings from 2015-44: Buck Consulting (PSERS actuary) (Table 2) • $3.5 billion: Cheiron (PERC consulting actuary). • $7.2 billion savings from 2015-44: Milliman (Corbett Administration consulting actuary)
Tobash Hybrid Pension Plan Replaces Current SERS Defined Benefit Plan	• $6.5 billion savings from 2015-44: Hay Group (SERS actuary) • $7.2 billion savings from 2015-44: Milliman • $5.7 billion savings from 2015-44: Cheiron
Elimination of the Health Insurance Premium Assistance Program	$2.2 billion savings: Buck Consultants (Table 2)
Total Savings	**$11.2 billion savings: Cheiron** **This $11.2 billion on a cash flow basis equals an estimated $3.1 billion on a present value basis (see note 17)**

[17] This estimates relies on Buck Consultants, Table 2, which notes that $5.524 billion savings (from the Tobash Plan and elimination of Health care premium assistance) on a cash flow basis equals $1.525 on a present value (PV) basis. See David L. Driscoll, Buck Consultants, Letter and Attachments to Jeffrey B. Clay, Pennsylvania Public School Employees' Retirement System, May 2, 2014, Table 2. We extrapolated the PSERS ratio of cash flow savings to PV savings to SERS estimated cash flow savings. This extrapolation will not be exact because the distribution of savings over time will differ between SERS and PSERS.

Governor's proposed reduction in the collars	• $4.7 billion: Buck Consulting and Hay Group • $13 billion: House Appropriations Committee (D)
Reduction in funds for young workers going into PSERS and SERS DB plans and shift of liabilities toward retirees	Potential change in asset allocation of SERS and PSERS defined benefit plans leading to reduction in investment earnings and a transition cost: not yet estimated by actuaries. If this transition cost is as little as one sixth of the $40 billion cost estimated with closing the state's defined benefit plans (and switching to a 401(k) than this cost plus the cost of a collar reduction wipe out any savings from lower benefits under Tobash
A higher long-term normal cost for PSERS under the Tobash plan	Buck Consulting (cited by Cheiron, p. 2) projects the long-term normal cost under the Tobash plan at 3.5% of salary versus 3.25% under Act 120
Hidden wage increase	Erosion of retirement benefits and of incentive for marketable individuals with 25 years of experience to remain in schools or public service: leads to need for offsetting wage increases to make overall public compensation more competitive. Wage increases are a less efficient tool for improving retention because wages are subject to federal income tax whereas pension contributions are not subject to tax when first made.
Total Costs	**$4.7 billion to indeterminate**
Net Savings or Costs	**Indeterminate**

- ***Costly Collar Reductions.*** The Corbett Administration continues to advocate for combining pension plan changes with reductions in pension contributions over the next four or five years and, in fact, baked these savings into the Governor's budget plan. Moreover, even if the initial Tobash legislation has no collars, there is nothing to prevent the Legislature from separately enacting collar-reduction legislation after enacting the Tobash plan without collar reductions. By increasing Pennsylvania's pension debt in the near term, collar reductions would increase the long-term cost to taxpayers of paying down the pension debt – by as much as roughly $13 billion, according to estimates by the staff of the minority chair of the House Appropriations Committee, and by $4.7 billion according to pension system actuaries.[18] In effect, collar reduction would use the Tobash plan benefit reductions like a new credit card, running up new debt that quickly undercuts a portion of the savings.

- ***Potential Transitions Costs.*** Actuarial studies last year concluded that Governor Corbett's proposed switch of new employees to 401(k)-type retirement savings plans would cost $40 billion. The Tobash proposal would have a lower transition cost because it keeps a portion of pension contributions for new employee salaries in the existing defined benefit pool. The share of employee salaries covered by the defined benefit plan shrinks every year, however, along with contributions to the defined benefit plan for new and younger employees relative to those under Act 120. Buck Consulting in its actuarial report to PSERS on the Tobash Plan says: "It is possible that, under House Bill No. 1353, liquidity considerations may arise due to the shift in

[18] See House Appropriations Committee (D), *Governor Corbett's Plan: Short-Term Gain, Long-Term Pain*, March 31, 2014. The "roughly $13 billion" assumes – based on past experience – that, after reducing payments over the next four years, employers would NOT be able increase payments above the amounts required under Act 120 in subsequent years. As a result, the higher debt accumulated in years 1-4 continues to compound over 30 years. The smaller, $4.7 billion, cost assumes that the pension systems are able to increase payments after years 1-4.

liability towards retirees. At such time, the Board may change the asset allocation policy to reduce the risk of the portfolio and reflect the need to hold a growing portion of its assets in more liquid, less volatile asset classes. In general, lowering the riskiness of the portfolio may result in a lower expected return…This would increase the accrued liabilities and contribution requirements of the System."[19] Given the modesty of the savings from the Tobash plan, even a small transition cost (small compared to $40 billion) would wipe out any savings.

- ***A gradual shift to a less efficient retirement savings option.*** The Tobash plan would gradually shift Pennsylvania's public-sector employees from a cost-effective defined benefit pension to an inefficient defined contribution pension. Defined contribution pensions are less cost-effective than defined benefit pensions because they have lower annual returns, higher administrative and management fees, and require individuals to buy annuities that guarantee a regular check until death.[20] According to estimates from the National Institute on Retirement Security, defined contribution plans required 45% to 85% more in contributions to deliver the same level of retirement security as defined benefit pensions. Both Buck Consulting and the Governor's consulting actuary, Milliman, assumed an average investment return of 6% on the DC portion of the Tobash hybrid, an acknowledgment that these accounts will not match the projected 7.5% assumed for the PSERS and SERS DB pools. Moreover, even this 6% could be optimistic because the structure of the Tobash plan backloads contributions to the 401(k)-type defined contribution portion of the hybrid. Thus, the lion's share of the savings would be made as individuals approach retirement – a time when individuals investing on their own are advised to adopt conservative investment strategies that deliver lower returns.

- ***Slightly higher long-term normal cost for PSERS***. Buck consulting (p. 4) notes that savings under the Tobash plan would shrink as time goes: "…Table 1 shows a trend to decreasing cost savings towards the end of the examination period: as more employees receive compensation exceeding the indexed $50,000 cap, more employer contributions are made to the DC plan at the 4% rate. Consequently, the trend to decreasing cost savings would be expected to continue beyond 2045." [21] PERC consulting actuary, based on Bucks analysis, notes: "The employer DB normal cost under the existing plan at the end of the 30-year projection, when most of the members are Act 120 members, is approximately 3.25% of salary. Under the hybrid plan, total DB plus DC employer contribution is approximately 3.5% of salary."[22]

- *Hidden costs in the form of wage increases*. The inefficiency of defined contribution savings plans hurts employees. In combination with other Tobash impacts, it could also hurt taxpayers by requiring public-sector employers to increase wages to maintain competitive compensation. This is particularly likely because the shift to inefficient defined contribution savings plans and the deepest cuts in defined benefit pensions under Tobash are both concentrated on higher-wage, more educated employees. This more educated group within Pennsylvania schools and state agencies already has lower compensation (wages plus benefits) than comparable private workers. Moreover, since salaries are subject to federal tax, unlike pension contributions,

---

[19] Driscoll, Buck Consultants, Letter and Attachments to Jeffrey B. Clay, p. 4.

[20] Annuities are more expensive for individuals who don't have the benefit of pooling longevity risk; i.e., insurers give a lower monthly benefit because there is a risk that a particular individual will live a long life, whereas with a large pool, the insurer knows that the group will live, on average, the expected amount

[21] Driscoll, Buck Consultants, Letter and Attachments to Jeffrey B. Clay, p. 4.

[22] Kent and Cranna, Cheiron, Letter to James L. McAneny, May 26, 2014, p. 2

> shifting compensation from pensions to salaries is a less cost-effective way to deter turnover among the experienced public servants that hold our schools and state agencies together.

Considering the impact of the Tobash plan on costs and on retirement benefits, Cheiron, the PERC consulting actuary, concludes (emphasis added): "In summary this hybrid proposal does provide for future cost savings as new employees participate under the Systems because their retirement benefits will be lower and less costly to the Commonwealth…***For new employees the loss of retirement security is greater than the value of cost savings for the Commonwealth.*** They not only take on the investment and longevity risk [associated with DC plans], but lose the value of risk pooling (shared risks of large groups anticipated under insurance type arrangements) that is achieved under both the investment return opportunities of large trusts versus individual accounts and having to manage their defined contribution plans over their retirement lives." [23]

The Impact of the Tobash Proposal on the Quality of Schools and Public Services

At the outset, we added as an additional criterion for evaluating pension proposals, their impact on the quality of schools and public services. The Tobash plan is likely to have a negative impact on school and service quality. Higher-wage, longer-tenure employees would face a weaker incentive to remain in public service once they have 25 years of service. Their defined benefit would increase only 1% per year in subsequent years and their total compensation will be lower relative to private-sector employees with the same education and experience. Buck Consulting (p. 4) suggests that a lower DB pension "may lead affected members to retire at later ages…" In fact, the 25-year (and $50,000 salary) DB pension caps could have different impacts on two different groups, neither positive for school or service quality. They could increase turnover among the most marketable mid-career professionals, who now leave for better paying private jobs in their late forties or early fifties. They could also, as Buck suggest, lead some long service professionals to work longer, in some cases even though they would like to retire.

A Comparison of Four Pension Proposals

In addition to Corbett-Tobash, three other pension proposals have been advanced in the last two years.

Governor Corbett's 2013 Proposal. In 2013, Governor Corbett proposed that Pennsylvania close its existing defined benefit pension plans to new employees and replace them with a 401(k)-style defined contribution plans. The details of this plan and its impacts were analyzed in a series of Keystone Research Center pension briefs in 2013, key findings from which are summarized in Table 3 (on pages 13-15).[24]

Representative Grell's Proposal. Representative Glen Grell in September 2013 unveiled a three-pronged pension proposal: up to $9 billion in pension bonds to compensate for the state's failure to make adequate pension contributions over the past dozen years, a "Cash Balance pension" for new employees, and voluntary pension reductions from current employees. Some versions of the Grell

---

[23] Kent and Cranna, Cheiron, Letter to James L. McAneny, May 26, 2014, p. 14.

[24] See KRC Pension Primers #1, #2, #4, #6, and #7, online at http://keystoneresearch.org/issues-guides/pensions

proposal also lower the PSERS and SERS collars to 1.5 percentage points for the next five years,[25] although Representative Grell has also explored variants with lower, or no, collar reductions. The Keystone Research Center analyzed the "cash balance" component of the Grell proposal in a pension brief released last fall, key findings from which are summarized in Table 3 below.[26]

The Senate Democratic Proposal. The Senate Democrats earlier this year outlined their own three-pronged pension proposal: refinance $9 billion in existing unfunded pension liability and directly reinvest proceeds in SERS & PSERS to reduce long-term payments by $23 billion; reform state funding for charter schools to end pension "double dip" payments; and lower collars on current state and school district payments to provide short-term budget relief, but provide for a responsible soft landing to manage future cost increases

Table 3 below compares all four of the existing pension proposal using five criteria. The first four of our criteria have been articulated on a bipartisan basis by Senators Brubaker and Blake as the basis for evaluating pension proposals:

- Impact on taxpayers;
- Constitutionality: does the proposal risk a court suit that could introduce uncertainty in pension payments and potentially reverse savings some years down the road? and
- Impact on retirement security for public employees (both current and new employees);
- The Impact on near-term budgets, especially for public schools – the goal being to provide some relief to school districts without violating the other criteria

We add a fifth criterion, impact on schools and the state government as employers, and on the quality of public services: retirement plan design and adequacy have an important impact on the ability of schools and the state to attract and retain qualified and experienced public servants. This impact should be considered when evaluating alternative pension proposals.

Table 3. An Evaluation of Four Pension Proposals	
Taxpayer Impacts	
Corbett (2013) Defined Contribution (DC) Proposal	• Actuaries projected a transition cost of $40 billion because of a decline in investment returns on SERS and PSERS assets once most plan members are retired or approaching retirement • Shifts employees from a more cost-effective defined benefit to a less cost-effective defined contribution retirement savings option, increasing costs for equivalent retirement security by an estimated 45% to 85%. Employees and employers would share the cost of this inefficiency • Collar reductions would increase the long-term cost of paying off unfunded liabilities • Could result in future wage increases to compensate for eroded pensions that would increase the amount by which public trails private wages plus benefits for comparable individuals (with similar education and experience) • Shifts financial market risk to new employees, reducing taxpayer exposure
Grell Proposal	• Buy-down of pension debt using pension bonds would lower the long-term cost of pensions • Cuts in benefits for new employees would reduce employer costs, with new employees paying for almost all of their own pensions going forward • Voluntary current employee pension reductions could lower taxpayer costs but take-up rate likely to be small unless part of a negotiated solution

[25] See, for example, the charts online at www.repgrell.com/pensionreform.aspx.
[26] See KRC Pension Primer #8, online at http://keystoneresearch.org/issues-guides/pensions

	• Shifts additional financial market risk to new employees, reducing taxpayer exposure • Could lead to transition costs by eroding investment returns on pension plan assets below the current projected 7.5%. Once many employees are enrolled in the new plan, plan managers may invest more conservatively because they will be on the hook to deliver a 4% guaranteed investment return, increasing the cost of paying down any remaining unfunded liabilities • Could result in a less efficient retirement plan if the cash balance plan has lower long-term returns than the current PSERS and SERS plans because plan managers are only obligated to meet a 4% guaranteed return rate • Any collar reductions would increase the long-term cost of paying off unfunded liabilities
Corbett-Tobash Hybrid Proposal	• Deep benefit cuts would reduce employer costs modestly • Collar reductions would increase the long-term cost of paying off unfunded liabilities • Lower investment returns for the existing defined benefit plans down the road – leading to a transition cost – because the plan shrinks (ultimately to zero) the share of new employee salaries covered by the defined benefit plan • Potentially higher wages in the future than under Act 120, as employers must compensate for benefit cuts, a hidden cost that makes any on-paper savings illusory • Shifts financial market risk to new employees, reducing taxpayer exposure
Senate Democratic Proposal	• Buy down of pension debt using pension bonds would lower the long-term cost of pensions • One percentage point collar reductions would increase long-term cost of paying off unfunded liabilities, although this is less than larger collar reductions contained in other proposals • An end to charter schools' pension double dip would result in taxpayer savings
Retirement Security Impacts	
Corbett DC Proposal	• Lower returns and higher costs (for plan administration, financial management, and purchase of annuities) of defined contribution retirement accounts would erode retirement benefits • This plan fully exposes employees to financial market risk
Grell Proposal	• Large cuts in retirement benefits overall and very large (in excess of 50%) cuts for career employees who retire from public service • Cuts in retirement benefits would increase further if investment returns on cash balance accounts shrink over time towards the guaranteed amount of 4% • It exposes new employees to additional financial market risk, although less than with a 401(k)-style defined contribution plan
Corbett-Tobash Hybrid	• Makes large cuts in retirement benefits overall and very large (40% or more) cuts for higher-wage career employees who retire from public service • Gradually erodes retirement benefits by shifting more of retirement savings to the defined contribution part of the hybrid, which will have lower returns and higher costs • Gradually exposes employees to more financial market risk
Senate Democratic Proposal	• No change in retirement benefits
Constitutionality	
Corbett DC Proposal	• The original proposal risked constitutional challenge because it proposed lower benefits for current employees' future service. The legislative vehicle did not include this provision
Grell Proposal	• Avoids constitutional issues by making any reductions in benefits for current employees "voluntary"
Corbett-Tobash Hybrid	• Shift current employees who separate then return to public service to the new pension plan, starting the clock at zero for vesting purposes. Could be subject to a legal challenge
Senate Democratic Proposal	• No risk of constitutional challenge
Impact on Near-Term School District Budgets	

Corbett DC Proposal	• Collar reductions would save school districts money in the short run but be more than offset by higher contributions down the road
Grell Proposal	• Pension bonds would buy down peak school district contribution rates slightly. • Collar reductions, if included, would save school districts money in the short run but be offset by higher contributions down the road
Corbett-Tobash Hybrid	• Collar reductions would save school districts money in the short run but be offset by higher contributions down the road
Senate Democratic Proposal	• Pension bonds would buy down peak school district contribution rates slightly • Collar reductions would save school districts money in the short run but be offset by higher contributions down the road
Impact on Schools and State Government as Employers, and on the Quality of Public Services	
Corbett DC Proposal	• Eliminates the traditional defined benefit pension, a powerful staff retention tool; gives public employees less economic incentive to remain in public service for a full career and could lead to higher mid-career turnover, eroding the quality of public education and other public services.
Grell Proposal	• Eliminates the traditional defined benefit pension, a powerful staff retention tool; gives public employees less economic incentive to remain in public service for a full career and could lead to higher mid-career turnover, eroding the quality of public education and other public services.
Corbett-Tobash Hybrid	• Higher-wage, longer-tenure employees would face a weaker retirement benefit incentive to remain in public service once they have 25 years of service; would erode compensation for public relative to private-sector employees, which would also increase turnover among mid-career professionals
Senate Democratic Proposal	• No change in the basic pension plan design or impact on public-sector employers and quality of public services

What is the bottom line that emerges from Table 3? First, when it comes to taxpayer costs, none of the proposals has a major positive impact. Several proposals could have large negative impacts because of transition costs and/or shifting retirement away from the existing defined benefit plans, which have a long track record as the most cost-effective retirement plan design. The Grell and Senate Democratic proposals make some positive progress by buying down pension debt with pension bonds: these proposals are the only ones that address the core problem of employer underfunding. A broader point is that there are limits to how much taxpayer costs for the unfunded pension liability can be reduced: that liability was run up by a decade of budgets negotiated under several governors. The commonwealth chose to run up the state's pension credit card debt, and now it's time to pay the bill. The best guidance is to address that payment problem and not continue to run up more debt or higher interest charges by delaying the day of reckoning.

Second, savings that do result from two of the four plans (Representatives Grell's and Tobash's) result from lowering pension benefits below the modest level established by Act 120. While lowering the cost of new-employee pensions frees up commonwealth contributions to pay down the unfunded liability, this is not equitable to new employees who bear no responsibility for accumulating that liability, and as Table 3 shows, probably unsustainable as policy. On paper, savings could end up being illusory because wages will have to increase to offset eroded pensions. The broader point here is that lawmakers should stop trying to cut pensions further. They already cut pensions for new employees to the bone in Act 120 of 2010. It is now time to move on and address the revenue issue.

A Framework for Reform

How might the General Assembly draw on elements of the existing pension proposals and other ideas to build on Act 120 and better meet the five criteria above? There is no escaping the difficulty of this challenge, which suggests that surmounting it depends in part on the process leading to pension changes. That process should involve negotiation – give and take among all pension stakeholders – and enough time and technical support to evaluate all the impacts of alternative proposals. That process should not involve a rushed legislative process designed to avoid scrutiny of complex pension proposals so that they can be passed before stakeholders and the public know what hit them.

Based on the analysis here, the following elements could offer a framework for building on Act 120.

- **First, the judicious use of pension bonds as proposed by Representative Grell and Senate Democrats could help buy down the state's pension debt** and partially compensate for employers' failures to make adequate pension contributions in the past. Bond purchases should be spaced out over time and made only if there is a reasonable spread (e.g., at least 1.5 percentage points) between the bond interest rate and the 7.5% projected investment returns of the state pension plans.

- **Second, the state should consider dedicating specific additional tax revenue to making pension contributions and paying off pension bonds.** This revenue could be a portion of revenue generated by closing corporate tax loopholes, increasing the tax rate on high-end income, or enacting a real natural gas drilling tax.

- **Third, the state could explore a trade with employees that lowers near-term employer contributions – and raises near-term employee contributions – but then does the reverse down the road.** By maintaining total contributions this does not repeat the mistakes of past employer contribution holidays. Instead, this idea recognizes that employer contributions are extremely unbalanced currently over time – very high near term because of the unfunded liability (20% to 33%) but very low long term (as low as 3.5%) because of the deep Act 120 pension benefit cuts. This idea thus asks employees to share an additional funding burden when total contributions peak but only in exchange for lower contributions down the road.

- **Fourth, the state could try to capture some of the savings in the Grell and Senate Democratic proposals.** Specifically, in the context of a negotiated solution, the state could explore whether employees subject to the Act 9 pension rules would accept some modest modifications to pension benefits such as those proposed by Representative Grell, in exchange for a sufficient infusions of funds into the pension plans and potentially lower employee (and higher employer) contributions down the road. The state should also end the pension double dip by charter schools as proposed by the Senate Democrats.

- **Fifth, the state could explore caps on high-end pensions** such as a New Jersey change that made the maximum pension the Social Security wage going forward. This would not save a great deal of money because, despite media reports to the contrary, the vast majority of pension payments go to middle-class retirees, but it would save some.

- **Finally, with a sufficient infusion of new revenues from bonds and dedicated taxes, the state may be able to buy down the total pension contribution sufficient to explore an Arizona and Missouri pension plan practice of dividing annual required contributions (ARC) payments between employees and employers.** In these two states, splitting the ARC resulted in both employer and employee contributions rising quickly and automatically when financial markets declined in the dot.com bust, and then rising further after the financial meltdown that triggered and deepened in the great recession.[27] As a result of the quick and shared increase in contributions, employer contributions in both states are now peaking at about 12%-14%, a manageable level under half the projected peak for the PSERS employer contribution currently.

Institutionalizing the sharing of ARC contributions – even if only possible some years down the road – would help ensure against future contribution holidays that lead to underfunded pensions. It would also make more transparent to the public sharing of financial market risk between taxpayers and employees. Ultimately, such sharing might allow Pennsylvania to stabilize for the long term a "best of both worlds" retirement system that safeguards retirement security for public employees and is cost-effective for taxpayers (even if that has been forgotten in the wake of financial market meltdowns and ill-advised employer contribution holidays). Lastly, stabilizing Pennsylvania's pensions for the long term would allow lawmakers to focus on a much more important retirement crisis – the collapse of retirement security in the private sector.

[27] On the Arizona example, see Dave Wells and Stephen Herzenberg, *On Track to Financial Sustainability with Retirement Security*, Grand Canyon Institute; online at http://grandcanyoninstitute.org/research/arizona%E2%80%99s-pensions-track-financial-sustainability-retirement-security; on the Missouri example, see Stephen Herzenberg, forthcoming Missouri pension brief.

Table A1. Public School Employees' Retirement System of Pennsylvania (PSERS) Comparison of Benefits Under Act 120 and House Bill 1353 (the Tobash Plan)					
Employee	A	B	C	D	E
Age at Hire	30	30	30	30	40
Age at Termination	65	65	65	65	65
Retirement Age	65	65	65	65	65
Salary at Termination	$31,111	$51,582	$72,592	$93,333	$51,582
Act 120 3-Year Final Average Salary	$30,000	$50,000	$70,000	$90,000	$50,000
HB 1353 5-Year Final Average Salary	$28,942	$47,771	$49,000	$49,000	$47,771
Act 120 Benefit	$21,000	$35,000	$49,000	$63,000	$25,000
HB 1353 Benefit	$17,777	$29,395	$32,344	$35,762	$25,408
Benefit Ratio Act 120/HB 1353	118%	119%	151%	176%	98%
Projected Tobash Benefit Cut	15%	16%	34%	43%	-2%

Notes.

1. To compute benefits under the Tobash proposal, Defined Contribution balances are assumed to grow at 6% annually and benefits are converted to an annuity based on a 3% annual interest rate

2. The benefit comparisons above were based on current compensation levels and assume the member was hired 25 or 35 years ago. The $50,000 pay cap on the defined benefit pension was discounted back by 1% per year and the current pay levels were discounted back by the salary increase assumption used for the June 30, 2013 PSERS actuarial valuation.

3. If the benefit comparisons were assumed to be 25 or 35 years into the future, the differences in benefits would generally be greater due to future salary increases being greater than the annual 1% indexing of the $50,000 pay cap, and thus the ratios of the Act 120 benefits to the Tobash/HB1353 benefits would be higher than those shown.

Source. The data in the table and the explanatory notes come from David L. Driscoll, Letter and Attachments to Jeffrey B. Clay, Pennsylvania Public School Employees' Retirement System, May 2, 2014, Table 3.

Table A2. Comparison of Replacement Ratios Under Tobash Plan and Act 120
Pennsylvania Public School Employees' Retirement System (PSERS)

Based on 4% Salary Scale Assumption DC Return = 6%, Starting Salary = $30,000									
	Hire Age 25			Hire Age 35			Hire Age 45		
Retirement age	Tobash	Act 120	Tobash Cut	Tobash	Act 120	Tobash Cut	Tobash	Act 120	Tobash Cut
25 years, min 55	25%	41%	39%	32%	41%	22%	N/A	N/A	N/A
35 years	34%	63%	46%	N/A	N/A	N/A	N/A	N/A	N/A
62, min 25 years	38%	71%	47%	36%	47%	24%	N/A	N/A	N/A
65	45%	77%	42%	44%	58%	24%	39%	38%	-1%
Based on 4% Salary Scale Assumption DC Return = 6%, Starting Salary = $50,000									
	Hire Age 25			Hire Age 35			Hire Age 45		
Retirement age	Tobash	Act 120	Tobash Cut	Tobash	Act 120	Tobash Cut	Tobash	Act 120	Tobash Cut
25 years, min 55	23%	41%	44%	26%	41%	36%	N/A	N/A	N/A
35 years	31%	63%	51%	N/A	N/A	N/A	N/A	N/A	N/A
62, min 25 years	35%	71%	51%	29%	47%	39%	N/A	N/A	N/A
65	42%	77%	45%	35%	58%	39%	29%	38%	25%

Table A2 (continued) PSERS Comparison of Replacement Ratios Under Act 120 and the Tobash Plan									
Based on 4% Salary Scale Assumption									
DC Return = 7.5%, Starting Salary = $30,000									
	Hire Age 25			Hire Age 35			Hire Age 45		
Retirement age	Tobash	Act 120	Tobash Cut	Tobash	Act 120	Tobash Cut	Tobash	Act 120	Tobash Cut
25 years, min 55	26%	41%	36%	33%	41%	19%	N/A	N/A	N/A
35 years	36%	63%	43%	N/A	N/A	N/A	N/A	N/A	N/A
62, min 25 years	41%	71%	42%	37%	47%	22%	N/A	N/A	N/A
65	50%	77%	35%	45%	58%	22%	40%	38%	-4%
Based on 4% Salary Scale Assumption									
DC Return = 7.5%, Starting Salary = $50,000									
	Hire Age 25			Hire Age 35			Hire Age 45		
Retirement age	Tobash	Act 120	Tobash Cut	Tobash	Act 120	Tobash Cut	Tobash	Act 120	Tobash Cut
25 years, min 55	25%	41%	39%	27%	41%	34%	N/A	N/A	N/A
35 years	35%	63%	45%	N/A	N/A	N/A	N/A	N/A	N/A
62, min 25 years	40%	71%	44%	31%	47%	34%	N/A	N/A	N/A
65	49%	77%	36%	38%	58%	34%	30%	38%	22%
Based on 4% Salary Scale Assumption									
DC Return = 4.5%, Starting Salary = $30,000									
	Hire Age 25			Hire Age 35			Hire Age 45		
Retirement age	Tobash	Act 120	Tobash Cut	Tobash	Act 120	Tobash Cut	Tobash	Act 120	Tobash Cut
25 years, min 55	24%	41%	41%	32%	41%	22%	N/A	N/A	N/A
35 years	32%	63%	49%	N/A	N/A	N/A	N/A	N/A	N/A
62, min 25 years	36%	71%	49%	36%	47%	24%	N/A	N/A	N/A
65	42%	77%	45%	42%	58%	27%	39%	38%	-1%
Based on 4% Salary Scale Assumption									
DC Return = 4.5%, Starting Salary = $50,000									
	Hire Age 25			Hire Age 35			Hire Age 45		
Retirement age	Tobash	Act 120	Tobash Cut	Tobash	Act 120	Tobash Cut	Tobash	Act 120	Tobash Cut
25 years, min 55	21%	41%	49%	24%	41%	41%	N/A	N/A	N/A
35 years	28%	63%	56%	N/A	N/A	N/A	N/A	N/A	N/A
62, min 25 years	31%	71%	56%	28%	47%	41%	N/A	N/A	N/A
65	37%	77%	52%	33%	58%	43%	28%	38%	27%

Note. Early retirement penalty under Act 120 assumed to be 15% for individuals hired at age 25 with 25 years of service (who begin collecting retirement at 55); 15% for employees hired at age 35 who retire at 60; and 6% for employees hired at 25 who retired after 35 years (age 60). "Members who seek early retirement, but who are below normal retirement age can receive an annuity reduced by a 3% penalty per year (15% maximum penalty) provided the member is both 55 years of age and has at least 25 years of service." On line at http://www.qcsd.org/cms/lib04/PA01000005/Centricity/Domain/7/Pension_Crisis_PSERS_FAQs.pdf. It is assumed that the early retirement penalty under the Tobash plan is included in the Milliman estimates. (Early reports on the Tobash plan suggested that employees could not collect their DB benefit at all until age 65 but we have not made that assumption here.)

Sources. Replacement ratios under Tobash plan taken from Milliman, p. 43; Keystone Research Center estimates of Act 120 benefits = Years of Service x 2% x 0.96 x Early Retirement Penalty (if any)

Table A3. Pennsylvania State Employees' Retirement System (SERS)									
Comparison of Replacement Ratios Under Tobash Plan and Act 120									
Based on 4% Salary Scale Assumption									
DC Return = 6%, Starting Salary = $35,000									
	Hire Age 25			Hire Age 35			Hire Age 45		
Retirement age	Tobash	Act 120	Tobash Cut	Tobash	Act 120	Tobash Cut	Tobash	Act 120	Tobash Cut
25 years, min 55	24%	41%	41%	30%	41%	27%	N/A	N/A	N/A
35 years	33%	63%	48%	N/A	N/A	N/A	N/A	N/A	N/A
62, min 25 years	38%	71%	47%	34%	47%	28%	N/A	N/A	N/A
65	45%	77%	42%	41%	58%	29%	36%	38%	6%
Based on 4% Salary Scale Assumption									
DC Return = 6%, Starting Salary = $60,000									
	Hire Age 25			Hire Age 35			Hire Age 45		
Retirement age	Tobash	Act 120	Tobash Cut	Tobash	Act 120	Tobash Cut	Tobash	Act 120	Tobash Cut
25 years, min 55	25%	41%	39%	26%	41%	36%	N/A	N/A	N/A
35 years	34%	67%	50%	N/A	N/A	N/A	N/A	N/A	N/A
62, min 25 years	38%	71%	47%	30%	47%	37%	N/A	N/A	N/A
65	47%	77%	39%	37%	58%	36%	28%	38%	27%
Based on 4% Salary Scale Assumption									
DC Return = 7.5%, Starting Salary = $35,000									
	Hire Age 25			Hire Age 35			Hire Age 45		
Retirement age	Tobash	Act 120	Tobash Cut	Tobash	Act 120	Tobash Cut	Tobash	Act 120	Tobash Cut
25 years, min 55	26%	41%	36%	31%	41%	24%	N/A	N/A	N/A
35 years	36%	63%	43%	N/A	N/A	N/A	N/A	N/A	N/A
62, min 25 years	41%	71%	42%	35%	47%	26%	N/A	N/A	N/A
65	51%	77%	34%	43%	58%	26%	36%	38%	6%
Based on 4% Salary Scale Assumption									
DC Return = 7.5%, Starting Salary = $60,000									
	Hire Age 25			Hire Age 35			Hire Age 45		
Retirement age	Tobash	Act 120	Tobash Cut	Tobash	Act 120	Tobash Cut	Tobash	Act 120	Tobash Cut
25 years, min 55	28%	41%	32%	28%	41%	32%	N/A	N/A	N/A
35 years	40%	63%	37%	N/A	N/A	N/A	N/A	N/A	N/A
62, min 25 years	46%	71%	35%	33%	47%	30%	N/A	N/A	N/A
65	57%	77%	26%	41%	58%	29%	30%	38%	22%
Based on 4% Salary Scale Assumption									
DC Return = 4.5%, Starting Salary = $35,000									
	Hire Age 25			Hire Age 35			Hire Age 45		
Retirement age	Tobash	Act 120	Tobash Cut	Tobash	Act 120	Tobash Cut	Tobash	Act 120	Tobash Cut
25 years, min 55	23%	41%	44%	29%	41%	29%	N/A	N/A	N/A
35 years	31%	63%	51%	N/A	N/A	N/A	N/A	N/A	N/A
62, min 25 years	35%	71%	51%	33%	47%	30%	N/A	N/A	N/A
65	42%	77%	45%	39%	58%	32%	35%	38%	9%

Table A3 (continued). SERS Comparison of Replacement Ratios Under Tobash Plan and Act 120									
Based on 4% Salary Scale Assumption									
DC Return = 4.5%, Starting Salary = $60,000									
	Hire Age 25			Hire Age 35			Hire Age 45		
Retirement age	Tobash	Act 120	Tobash Cut	Tobash	Act 120	Tobash Cut	Tobash	Act 120	Tobash Cut
25 years, min 55	22%	41%	46%	25%	41%	39%	N/A	N/A	N/A
35 years	29%	63%	54%	N/A	N/A	N/A	N/A	N/A	N/A
62, min 25 years	33%	71%	54%	28%	47%	41%	N/A	N/A	N/A
65	39%	77%	49%	34%	58%	41%	27%	38%	30%

Note. Early retirement penalty under Act 120 assumed to be 15% for individuals hired at age 25 with 25 years of service (who begin collecting retirement at 55); 15% for employees hired at age 35 who retire at 60; and 6% for employees hired at 25 who retired after 35 years (age 60). *SERS Retirement Guide*, p. 3. http://www.calu.edu/faculty-staff/hr/employment/forms-documents/_files/sers-retiring-guide.pdf notes that early retirement penalties can be 3% to 6% but has a numerical example in which it is 3%. It is assumed that the early retirement penalty under the Tobash plan is included in the Milliman estimates. (Early reports on the Tobash plan suggested that employees could not collect their DB benefit at all until age 65 but we have not made that assumption here.)

Sources. Replacement ratios under Tobash plan taken from Milliman, p. 43; Keystone Research Center estimates of Act 120 benefits = Years of Service x 2% x 0.96 x Early Retirement Penalty (if any)