This week, the Senate Finance Committee expects to consider legislation that includes part of Governor Tom Corbett’s proposed restructuring of Pennsylvania’s public employee retirement plans. One element of the Governor’s plan is his proposal to switch future teachers, emergency responders, nurses, and other school and state employees from the state’s current defined benefit pension system to 401(k)-type individual retirement accounts.

In our first pension primer and in other reports, the Keystone Research Center has pointed out that closing the state’s defined benefit pension plans would carry large costs because it would reduce the investment returns on the assets of Pennsylvania’s two existing pension funds as they wind down. If investment returns pay for less of existing pension obligations, taxpayers have to pick up the tab. Now Pennsylvania’s two retirement systems have released models—or actuarial studies—detailing the fiscal impact of the Governor’s proposal. These studies show that closing the state’s defined benefit pension plans would indeed have high costs, digging a much deeper pension hole than under the status quo.

In May, the Hay Group released a projection to 2050 of the impact of the Governor’s proposal on the State Employees’ Retirement System (SERS). Just last week, Buck Consultants released a projection to 2046 of the impact of the Governor’s plan on the Pennsylvania School Employees’ Retirement System (PSERS). (An earlier 30-year projection by Buck had noted, but not modeled, the potential of the Governor’s plan to erode future investment returns on plan assets.) Taken together, the Hay study and the latest Buck study project cost increases as a result of the Governor’s plan that total $50.8 billion. Most of these losses result from the following three impacts.

- **Closing the state’s defined-benefit pension plans to new employees would increase taxpayer costs by $40 billion as a result of lower investment returns** earned by the two pension plans as their time horizons shrink and the pension plans sell off more assets to pay for benefits.
- **The Governor’s proposed reductions in employer pension contributions over the next five years (the so-called “lowering of the collars”) would cost an estimated $3.9 billion.**
- **The taxpayer cost of retirement plans for future employees would increase by $2.3 billion**—a savings of $4.9 billion for SERS but a cost of $7.2 billion for PSERS.¹

¹ This $2.3 billion “taxpayer cost” is the difference between the employer contribution for employees (4% of payroll) under the Governor’s proposed defined contribution plan compared to the “normal cost” of pensions for new employees in the state’s existing defined benefit plans—3% on average across PSERS (2.2%) and SERS (now 5.01%) as modified by the Pension Reform Act of 2010. For a more detailed discussion why the Governor’s plan increases the cost of pensions for new employees, on average, for PSERS and SERS combined, see Stephen Herzenberg, *Paying More for Less*, Keystone Research Center, March 2013, online at [http://keystoneresearch.org/publications/research/pension-primer-2-paying-more-less](http://keystoneresearch.org/publications/research/pension-primer-2-paying-more-less).
The Buck and Hay studies estimate savings with the Governor’s plan of $28.7 billion, $24.6 billion of the savings coming from reductions in future pension benefits earned by current employees. Even with these savings, the net costs of the Governor’s plan would be $22.1 billion, essentially all of which is the net cost for PSERS. (The Hay Group found that the Governor’s plan was essentially “cost neutral,” with the cost and savings offsetting each other.) If the Governor’s pension cuts for current employees are not enacted or are ruled unconstitutional, his plan would cost about $42 billion. Eliminating the Governor’s proposed reductions in pension rate contributions over the next five years—the “lowering of the collars”—would reduce the cost of the Governor’s plan to about $38 billion.

The Hay and Buck projections are not a surprise. Their results echo studies of the impact of closing defined benefit plans in 12 other states; and with experience of the three states that have actually closed defined benefit plans.

### Key Facts About Pennsylvania Pensions

While each “Keystone Pension Primer” focuses on one issue in the pension debate, lawmakers, members of the media, and the public should consider all issues in evaluating the Governor’s proposal:

- **The Governor’s proposal would increase Pennsylvania’s pension debt (or “unfunded liability”)** by tens of billions of dollars, according to actuarial studies.
- **The Governor’s proposal would increase the cost of pensions for new employees** above the low levels (3% on average for PSERS and SERS combined) resulting from Act 120 of 2010, a cost of more than $2 billion over three-plus decades, according to actuarial studies.
- By “lowering the collars” (the increase in state pension contributions over the next five years), **the Governor’s proposal does not make the responsible contributions to pensions required by Act 120**, increasing Pennsylvania pension debt by roughly $4 billion by 2020. Lowering pension contributions is a replay of the short-sighted political decisions that helped create the current unfunded liabilities.
- **The Governor’s proposal to cut current workers’ pensions risks court reversal** for violation of a constitutionally protected contract. **It leaves the state uncertain of pension costs for years** and with potentially higher pension debt.
- **Teachers, nurses, emergency responders, and other public employees contribute heavily to their own pensions and earn lower salaries than comparable private-sector workers.** School and state employees currently contribute 7% of every paycheck, on average, to their own pension—and contributed 3.4 times as much, relative to employers, as public employees in other states from 2001 to 2011. Even with good benefits, Pennsylvania public workers earn lower wages plus benefits than equivalent private-sector workers.
- **The Pension Reform Act of 2010 reduced pensions for future employees by over 20%** and protects taxpayers through a unique “shared risk” feature that requires even higher employee pension contributions if financial markets plummet.
- **Pennsylvania’s pension debt should be kept in perspective** compared to the overall budget and the rise of income inequality in the state. Pension debt is a small share of total state funding over the decades the state has to pay it off. In addition, Pennsylvania’s “99%” lose each year an amount roughly equal to the pension debt (now $47 billion) because the richest 1% garners more of the overall economic pie than in the 1970s.
The Investment Return Assumptions in the Hay and Buck Studies

The projections of any model, including an actuarial study, depend on the assumptions built into the model. The most important assumptions in the Hay Group and latest Buck Consultants studies concern the timing and size of the impact on investment returns resulting from closing the state’s defined benefit pension plans.2 Both studies assume that, since closing the state’s defined benefit pension funds leads to plan members aging and then retiring as a group, it will gradually lead to plan managers investing in more conservative and liquid assets.3 This shift will yield investment returns below the 7.5% currently assumed if the plans remained open to new employees.4 More specifically, Buck Consultants, based on analysis performed by the PSERS investment advisor (Wilshire Associates), assumed that the rate of return would fall to 7% in 2031, 6.5% in 2036, 6% in 2039, 5.5% in 2041, and 5% in 2043.5 Hay Group assumed that the SERS rate of return would fall to 7% in 2024, 6.5% in 2034, and 6% in 2044.6

Results of the SERS and PSERS Actuarial Studies of the Governor’s Plan

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2 A May 28, 2013 Buck Consultants advisory note on the Governor’s proposal made different assumptions and thus came to different conclusions. See “Letter from Dana Spangher, Consulting Actuary, Buck Consultants, to PSERS Executive Director Jeff Clay, Transmitting an Actuarial Note on HB1350 (Printer’s No. 1760),” May 28, 2013. To quote the Buck Consulting letter transmitting its new study, the earlier study “did not address potential funding changes necessitated by the financing of a closed defined benefit plan.” See “Letter from Dana Spangher, Consulting Actuary, Buck Consultants, to PSERS Executive Director Jeff Clay, Transmitting an Actuarial Note on HB1350 (Printer’s No. 1760),” June 11, 2013, p. 1.

3 SERS explains its investment returns assumptions as follows: “With respect to future SERS DB asset fund investments...under a closed DB system...the expected future liquidity requirements for this group will most likely result in gradual limitations in fund investment opportunities and a shifting to an increasingly conservative (lower risk) investment portfolio. In time, therefore, lower future annual investment returns (than the currently assumed 7.5%) can be expected.” (Hay Group, “Actuarial Cost Note Regarding H.B. 1350, P.N. 1760,” May 2013, p. 4.) Buck Consultants explains its investment returns assumptions as follows: “Under House Bill No. 1350, as more members are covered under the DC plan, the PSERS Board may find it necessary to change the asset allocation to reduce the risk of the portfolio and reflect the need to hold a growing proportion of its assets in more liquid, less volatile asset classes. In general, such portfolio changes would lead to a reduction of the discount rate used in the System’s valuation. This increases the accrued liabilities and contribution requirements of the System. Therefore, the cost analysis results presented may change, potentially significantly, if there is a change in the asset allocation and expected asset return.” See “Letter from Dana Spangher,” June 11 2013, p. 1.

4 Milliman has acknowledged in two other recent contexts that lower investment returns might result from closing a defined benefit plan. In Pennsylvania in 2010, in an actuarial note analyzing a Pennsylvania legislative proposal to close Pennsylvania’s defined benefit pensions, two Milliman actuaries wrote: “These projections assume each of the system’s assets would earn 8% each year of the projection...[A]s membership in SERS and PSERS becomes increasingly inactive in nature, a lower valuation interest rate may be more appropriate as the investment allocation may become more conservative. Due to time and budget constraints, it was beyond the scope of our assignment to estimate the impact of changes in the valuation interest rates.” “Letter from Timothy J. Nugent and Katherine A Warren, Milliman Company, to James L. McNeny transmitting an Actuarial Note on Senate Bill 566,” August 30, 2010, pp. 10-11. In Florida, this year, a Milliman actuary also acknowledged the potential for lower investment returns once a defined benefit pension plan closes. See Stephen Herzenberg, Digging a Deeper Pension Hole, Keystone Research Center, p. 4, online at http://keystonecenter.org/publications/research/pension-primer-1-digging-deeper-pension-hole.

5 Letter from Dana Spangher, June 11, 2013, p. 3. At the request of the PSERS staff, Buck did not include in its analysis the impact of another anticipated drop in the investment return (to 4% in 2045). An additional drop would further increase the projected cost of the Governor’s plan.

6 Hay Group, “Actuarial Cost Note Regarding H.B. 1350, P.N.1760,” May 2013, p. 5. The first Buck Consultants analysis of the Governor’s proposal assumed that PSERS investment returns would remain 7.5% throughout the projection period even with the Governor’s plan. See “Letter from Dana Spangher, May 28, 2013.
Table 1 summarizes the findings of the SERS’ and PSERS’ actuarial studies. Although the two studies used somewhat different assumptions and covered slightly different time periods (30 years in the case of PSERS and until 2050 in the case of SERS), we have chosen to put their results on a single table so that readers can see all of the results in one place. Strictly speaking, the two actuarial studies have each modeled only one scenario (and set of assumptions), and the only results that the actuaries stand behind are the results in each of the first two columns of numbers in Table 1 (for PSERS and SERS each taken separately). In an ideal world, an actuary would model both systems together with consistent assumptions in order to arrive at the overall impacts of the Governor’s proposal. Since no results exist for a combined model run, we are left to look at the results of the two separate studies and draw inferences about overall results cautiously.

| Table 1. The Projected Costs and Savings of Governor Corbett’s Proposed Pension Plan |
|---------------------------------|------|------|------|
|                                  | PSERS | SERS | Total |
|                                 | (Amounts in billions) |
| **Projected Costs of the Governor’s Proposal** |       |      |       |
| Transition cost of financing a closed defined benefit plan | $30.7 | $9.4 | $40.1 |
| Decrease in amortization period | $3.2  | $1.4 | $4.5  |
| Revised pension contribution rate collar | $2.1  | $1.7 | $3.9  |
| Defined contribution plan membership for employees hired after June 30, 2015 | $7.2  | -$4.9 | $2.3  |
| **Sub-total: Projected Costs of the Governor’s Proposal** | $43.3 | $7.6 | $50.8 |
| **Projected Savings of the Governor’s Proposal** |       |      |       |
| Change in future accruals for service starting 2015 | -$10.9 | -$3.8 | -$14.8 |
| Cost neutral Option 4 | -$3.4 | -$1.2 | -$4.7 |
| Final average salary and wage base limit on compensation | -$2.7 | -$2.4 | -$5.1 |
| Employees hired after June 30, 2015 Health Care premium assistance | -$2.7 | | -$2.7 |
| Special determination of normal cost under entry age normal | -$1.5 | | -$1.5 |
| **Sub-Total: Project Savings from the Governor’s Proposal** | -$21.3 | -$7.5 | -$28.7 |
| **Total Cost of the Governor’s Proposal** | $22.0 | $0.1 | $22.1 |

Sources. Hay Group, “Actuarial Cost Note Regarding H.B. 1350, P.N.1760,” May 2013; Letter from Dana Spangher, Consulting Actuary, Buck Consultants, to PSERS Executive Director Jeff Clay, Table 2; and Public Employee Retireement Commission (PERC), Advisory Note for House Bill Number 1350, Printer’s Number 1760, Tables 3 and 4, pp. 17-18.

The top four lines of numbers in Table 1 summarize the costs of the Governor’s plan. Far and away the largest cost is the transition cost of financing the defined benefit plans once these plans close to new members. Buck estimates that the cost of lower investment returns on PSERS’ pension assets would equal $30.7 billion by 2046. Hay estimates this cost for SERS at $9.4 billion. Adding up these separately estimated costs, the total is $40.1 billion.
The next-largest cost is an accounting loss that results from shortening the amortization period for each plan. As footnote 7 explains, this “cost” relates to the Governor’s proposal to recognize in 10 years all the savings from benefit cuts for current employees. Recognizing savings quickly lowers employer contributions in the short run and thus leads to higher interest payments in the long run. Recognizing savings quickly is a subtle form of “kicking the can down the road.”

The third-largest increase in costs resulting from the Governor’s plan is the cost of reducing pension contributions over the next five budgets. Adding together the separately estimated costs from the two actuarial studies, the combined cost would be $3.9 billion, somewhat below the cost estimate developed by the Governor’s own actuary, Milliman.

The fourth-largest cost increase results from the increase in the average (“normal”) cost of pensions for new employees under the Governor’s plan. This produces a savings for SERS primarily because the 4% contribution to new employees’ defined contribution accounts is lower than the normal cost of SERS (now estimated at 5.01%). The same 4%, however, exceeds the employer normal cost of PSERS (estimated at 2.2%). The $7.2 billion cost to PSERS exceeds the $4.9 billion savings for SERS, leading to a net cost of $2.3 billion.

Turning to the savings from the Governor’s proposal, more than half of these savings—a total of $14.8 billion combining the separate actuarial estimates for each pension system—come from the lowering of the multiplier for current employees’ future years of service to 2% from 2.5%.

Two other changes would save roughly $5 billion: the modifications to the generosity of the “cash out” option if employees take their own contributions as a lump sum (“Cost neutral Option 4” in Table 1), and the savings from computing final average salary over five years instead of three.7 The last two projected savings in the actuarial studies are $2.7 billion from a rollback in health care premium assistance for new school employees effective June 30, 2015, and an accounting adjustment that Buck Consulting projects would lower “normal cost” for PSERS by $1.5 billion.

If you subtract the total savings projected with the Governor’s plan from the total costs, you end up with a net cost of $22.1 billion.

Another way to look at Table 1 is to focus separately on the column for PSERS and the column for SERS. (As noted, this approach avoids the risks associated with adding up figures from separate actuarial studies with somewhat different assumptions.) Looking at SERS by itself, the Hay Group’s projections of savings and losses are virtually identical—each around $7.5 billion, leading to a net cost of only $128 million. Thus, Hay Group concludes that the Governor’s plan would be essentially revenue neutral for the SERS system. By contrast, Buck Consulting projects a net loss for of $22 billion for PSERS.8

Another question of interest is what the costs of the Governor’s plan would be without the savings in benefits for current employees, which the courts may rule unconstitutional and the legislature, partly for that reason, may not enact. Underscoring again that the best way to generate estimates for a different packing of reforms

7 Savings from the change in the number of years over which final average salary is computed are combined in Table 1 with savings from limiting the maximum salary for pension purposes to the wage base on which Social Security taxes are paid ($113,000). Almost all the savings in this line are from the change in the final average salary computation.
8 Buck Consultants’ earlier study for PSERS, assuming no erosion of investment returns notwithstanding the closing of the defined benefit plans, found net savings from the Governor’s plan of $8.7 billion.
than the full Governor’s proposal would be to rerun the whole model, we nonetheless cautiously use Table 1 to provide a rough answer to the impact of the Governor’s plan without cuts in savings in benefits for current employees. In Table 1, these savings account for $24.6 billion. In addition, if benefit cuts for current employees are not enacted, the commonwealth would not incur a $4.5 billion cost for booking these savings in a 10-year period. If savings are $24.6 billion lower and costs are $4.5 billion lower, there is an overall loss of $20.1 billion. Thus, the cost of the Governor’s plan without benefit cuts for current employees would be about $42 billion. PSERS still accounts for most of the net costs in this scenario ($36 billion). Without the savings from benefit cuts, the Hay Group projects a cost for SERS of $6.2 billion.

A final variation of interest is what happens without the revised pension rate collars, which many legislators appear not to support. Eliminating these saves $3.9 billion, bringing the total costs of the Governor’s plan to about $38 billion.

Conclusion

The stunning price tag of the Governor’s proposal should prompt lawmakers that support a switch to 401(k)-type individual accounts to reconsider their position. As elaborated in Keystone Research Center pension primer #6, 401(k)-type retirement plans are also more expensive ways to provide any given level of retirement security.

The transition costs of closing defined benefit plans and the fact that these defined contribution plans are more expensive ways for taxpayers and employees to achieve adequate retirement explain why none of the 44 states that modified their pension plans in 2009-2012 substituted a 401(k)-type plan for defined benefit pensions. Such a switch would be bad news for taxpayers, for employees, and for public employers seeking to attract and retain great teachers, first responders, child-care workers, and other public servants. It’s time to set aside the Governor’s radical pension proposal and return to more incremental and evidence-based proposals for building on the pension savings achieved by the Pension Reform Act of 2010.

The Keystone Research Center is a nonprofit, nonpartisan research organization that promotes a more prosperous and equitable Pennsylvania economy. Learn more: www.keystoneresearch.org/pensions.

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9 Both actuaries emphasize that estimates of costs and savings of different pension plan changes depend on the order in which changes are implemented. This means caution must be used in interpreting the costs of some but not all measures included in the published studies: ideally, completely separate model runs would be run for each alternative “package” of reforms under consideration. The Buck Consulting study notes: “The cost for the benefit reforms assumes that the funding reforms are reflected first”—i.e., Buck modeled the savings from the Governor’s proposed benefit cuts for current employees last. As a result, subtracting the savings should produce reasonable estimates of what implementing the funding reforms (transition to a 401(k)-type retirement plan) by itself would cost. The Hay Group estimates were generated by modeling changes in the following order: accrual reductions first, then cost neutral Option 4, salary limitations, 20-year amortization, reduced collars, defined contribution plan, closed defined benefit plan financing implications. The Hay Group estimates of the SERS losses from the erosion of investment returns might be considerably higher if the benefit cuts are not enacted. (That is, losses from the erosion of investment returns are lower if you are already assuming that benefits are less generous.)

10 Personal communication with Diane Oakley, Executive Director, National Institute on Retirement Security.