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Keystone Research Center (KRC) (www.keystoneresearch.org) conducts research and policy analysis focused on key indicators of well-being such as jobs, unemployment, wages and incomes. This includes analyses of pensions and retirement security in Pennsylvania and half a dozen other states.

Switch to 401k-Type Plan for Kentucky Public Employees Will Cause More Harm

Kentucky's public pension systems remain a critical concern for the state's policymakers. Taken as a whole, Kentucky's plans are one of the two worst-funded public pension systems in the country.[1] In particular, the plan for most state employees (the Kentucky Employees' Retirement System (KERS) non-hazardous plan) is severely underfunded, possessing only 16 percent of the assets it needs to pay future benefits — and even less under new assumptions the Kentucky Retirement Systems (KRS) board recently adopted.

Governor Bevin says he plans to call a special session to address the issue. His administration has hired the consulting group PFM to do an analysis of the pension systems and develop recommendations. The special session comes on the heels of a budget in which the legislature made significant strides to better fund the plans. However, those additional dollars were possible only through deep cuts to other public services and by relying substantially on one-time funds unlikely to be available next time around.[2] Without generating more revenue, it will be extremely difficult for Kentucky to maintain its current level of payments and make other needed public investments critical to moving the state forward.

The lack of funds is creating pressure for much-needed tax changes to generate additional revenue, but also for possible changes to pension benefits. However, Kentucky's large unfunded pension liability is for existing retirees and current employees, and those benefits are legally and morally obligated to them. The legislature clearly does have the authority to change benefits for new employees. But those workers do not add to the unfunded liability and, as shown in this report, have benefits whose cost to the state is already low.

Costs are low in part because the General Assembly has already reduced benefits for new workers through several rounds of cuts in recent years. In 2008, the legislature cut benefits and required more years of service for retirement eligibility in the KRS and Teachers' Retirement System (TRS) plans. Starting in 2012, the state ended cost of living adjustments for state worker retirees, and in 2013 the General Assembly moved new state and local employees into a hybrid cash balance plan that shifts risk to those workers.[3]

Despite prior cuts, one possible proposal under consideration involves ending the existing defined benefit (DB) plans and moving new employees into a 401k-style defined contribution (DC) plan. Governor Bevin said he intended to propose that change in a recent radio interview.[4]

As outlined in this report, however, a shift to a DC plan will not save money because its cost for new workers and teachers would be similar to the already-inexpensive defined benefit plans. In fact, closing the DB plans will increase the cost of paying off those plans' unfunded liabilities. At the same time, a shift to a less efficient DC plan will reduce the level of benefits workers receive for the same level of employer contribution, making it harder to attract and retain skilled public sector workers. That will increase employee turnover and the costs to recruit and train new workers while reducing the quality of public services. And it will result in an inferior retirement that will lower the quality of life for more of Kentucky's seniors and reduce the dollars circulating in the economy of every Kentucky community.

Kentucky needs a responsible revenue and funding plan that allows the state to meet its obligations to existing retirees and current workers while also putting the dollars into its schools and other public services needed to make Kentucky a better state. Elected leaders should not make the existing situation worse by moving to an inefficient DC plan that adds new costs and results in other harmful consequences.

Pension Design Is Not the Problem So Pension Redesign Is Not the Answer

As in previous rounds of discussions on this issue, much of the focus is on the design of Kentucky's pensions. However, as described in more detail below, Kentucky's current pensions are not generous and the legislature has already reduced benefits through multiple rounds of cuts. The large employer contributions now required for the systems stem not from the size of the benefits themselves but primarily from failing to make adequate contributions to the plans compounded by the financial losses in the Great Recession.

Underfunding of the pension system began in earnest in 2004 for the severely underfunded KERS non-hazardous plan and continued through 2014, for a total of 11 consecutive years.[5] In many of those years, the employer contribution was less than half of the actuarially required contribution (ARC). The state finally made the full contribution in 2015 and 2016 and is contributing an amount above the ARC in 2017 and 2018. Similarly, the state did not make the full ARC for the teachers' pension plan from 2009 through 2016. By 2016, the state was underfunding the TRS ARC by about $400 million per year, and that plan's funded ratio had dropped to 55 percent.[6] The state came close to paying the full contribution to TRS in the 2017 and 2018 budgets, providing about 94 percent of the ARC.[7]

While failing to pay the ARC is not the only challenge the systems face, if the ARC had been paid in the past the systems would be in much better health and on the way to full funding (as is the County Employees Retirement System (CERS), where the full ARC was paid). Another factor PFM indicates contributed to pension liabilities is failing to include cost of living adjustments in the ARC calculation.[8] PFM also notes payroll growth below projections reduces contributions to the plans from employers and employees and thus increases unfunded liabilities. But the underlying cause of low or negative payroll growth, like below-ARC contributions, is the state's lack of revenue. Round after round of state budget cuts have meant a reduction in the workforce and denied raises, and years of ARC underfunding led to rising employer contributions that resulted in some employers in the KERS non-hazardous system seeking ways around paying the liabilities through privatization and outsourcing.

The systems' actuarial assumptions and benefit levels have not been unusual; they line up closely with systems in other states around the country. Those systems as a whole are a healthy 76 percent funded and their financial status is improving.[9] That is because most states — unlike Kentucky — made required annual payments to those systems.

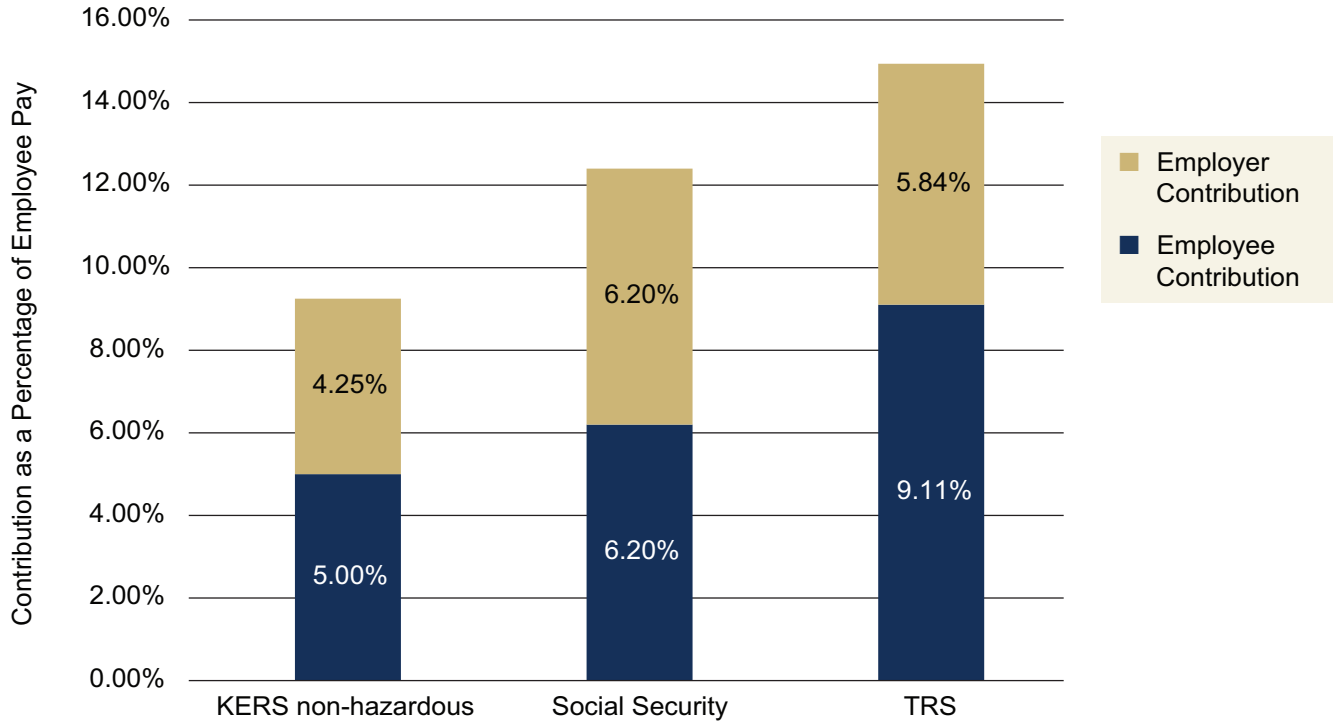
Shift Won't Save Money Because Current Plan is Inexpensive If It Is Funded

It is difficult for benefit cuts or changes for new employees to save money because the unfunded liability is not for those workers, and because the existing plan is inexpensive if it is properly funded on time.

Actuaries refer to the regular cost of a pension plan as the "normal cost." The normal cost is the annual cost that must be contributed each year an employee works so enough dollars are available in the system when he or she retires to pay benefits. The remainder of the required payments to a system each year are catch-up contributions to pay for past liabilities if employer payments have fallen behind or assumptions have not panned out. The graph below shows the normal costs as calculated by the pension systems' actuaries for the state's two biggest plans, the KERS non-hazardous plan and the TRS plan.

The total normal cost for the KERS non-hazardous pension plan is 9.25 percent of employees' pay.[10] Of that, the employee contributes the majority by putting in 5 percent, making the employer contribution only 4.25 percent of pay. For teachers, who are not part of Social Security (saving the employer and employee 6.2 percent of pay each in contributions), the normal cost is 14.95 percent of pay for new (non-university) members.[11] Again, workers pay the bulk of the cost, 9.11 percent, with the employer chipping in only 5.84 percent. In other words, the state contributes less to new teachers for retirement than a private sector employer with no pension plan at all (not even an inadequate 401(k)) but who must contribute 6.2 percent of pay to Social Security. Such a low cost is very hard to beat for a new pension design.

Cost of State Pension Plans Is Modest If Payments Are Made on Time



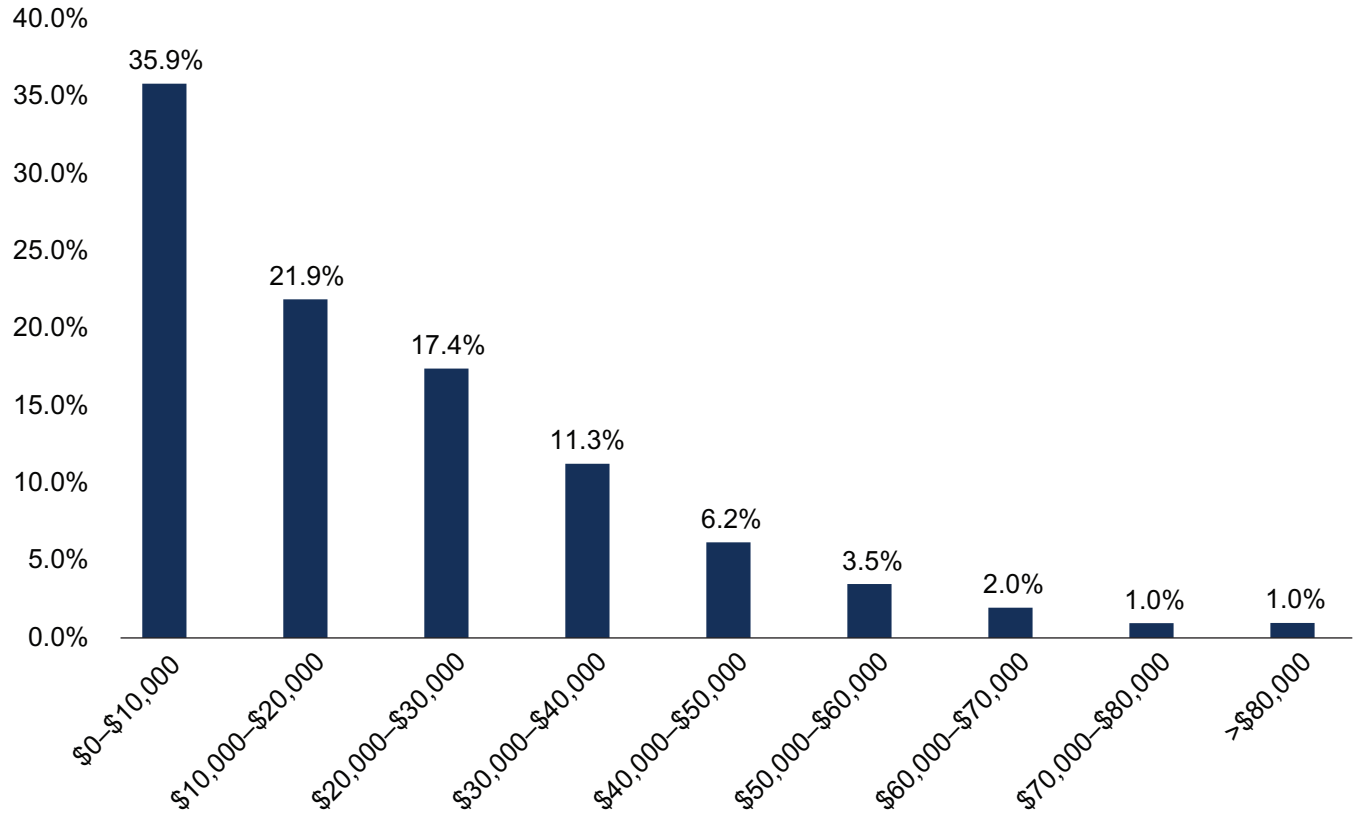
Source: KCEP analysis of KRS, TRS data.

Normal costs are low in part because, as elaborated in this report, defined benefit pension plans are efficient and effective ways to provide a decent and predictable retirement. They especially make sense for governments as a tool to attract and retain skilled workers. As large, permanent employers, governments can build big investment pools that can earn high returns over long periods of time due to low administrative costs and the ability to access a broad set of investments at low fees. Nationally, employers ultimately pay only about 25 percent of the cost of public employees' pension benefits, with the rest coming from the investment returns the system earns and employee contributions.[12]

Along with defined benefit plans' efficiency, normal costs are low because Kentucky's pension benefits are modest. The average non-hazardous state employee receives an annual pension of only $20,633.[13] As shown in the graph below, 58 percent of KERS hazardous and non-hazardous employees receive less than $20,000 a year in retirement benefits. Also, the average teacher receives only $37,368 a year in pension benefits and as noted Kentucky teachers do not receive Social Security, which averages $16,320 a year across all workers (and more for teachers that participate in Social Security in other states because their pay, as college-educated workers, exceeds the overall average).[14]

2016 Annual Benefits Received Kentucky Employees Retirement System

(Includes Non-Hazardous and Hazardous)



Source: KCEP analysis of Kentucky Retirement Systems data.

Cash Balance Plan Wasn't Projected to Save Money

Kentucky has looked at moving away from the existing defined benefit plans in the past, and analyses showed that a new plan design would not save the state money because of the low cost of the existing plans.

For example, in 2012 the General Assembly's Task Force on Kentucky Public Pensions recommended moving new workers into a cash balance option that contains elements of a defined contribution plan but technically remains a defined benefit plan. The hybrid cash balance plan was adopted for new workers in the KRS plans with the passage of Senate Bill 2 in the 2013 session.[15]

But the cash balance plan was not designed to be cheaper than the existing defined benefit plan. This fact was clearly laid out in materials presented to the task force in 2012 showing that the normal cost for new employees under the defined benefit plan was approximately the same as that of the cash balance plan proposed by the consultants and ultimately recommended by the task force.[16]

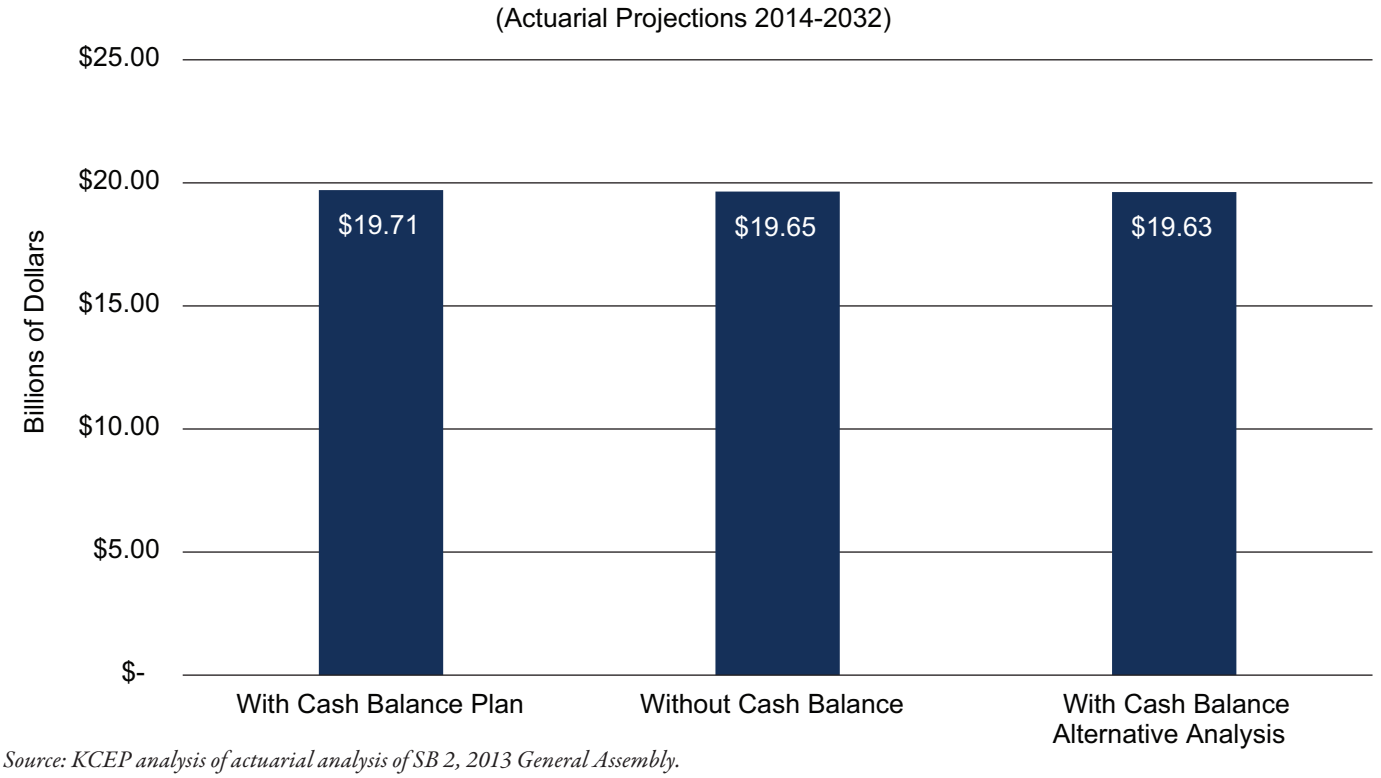
Official actuarial analysis of Senate Bill 2 filed during the 2013 legislative session reached similar conclusions. That analysis found that accelerating paying down the unfunded liability — a major component of Senate Bill 2 — would result in big savings over time, so that the legislation as a whole showed $6 billion in savings over a couple of decades (prior to Senate Bill 2, statutes only required the state to gradually phase in to paying the full ARC over a period of years).[17]

The cash balance plan component of Senate Bill 2, however, was not predicted to save money, according to the actuary. An initial analysis showed that the cash balance plan would add $59.2 million in state costs over the next 20 years for the KERS non-hazardous, hazardous and police plans combined (and $147 million in local costs to the CERS plan) compared to keeping the existing defined benefit plan.[18]

In a March 22, 2013 letter indicating there were "discussions" between the system's actuary and an actuary used by the consultant Pew — the organization that designed the cash balance plan — an "alternative analysis" was presented.[19] That analysis said the cash balance was cheaper than the defined benefit plan, showing savings that totaled $20.5 million over the 20 years for the KERS non-hazardous, hazardous and state police systems combined. The actuary stressed in the letter that the alternative projection "**does not** take the place of the earlier analysis" (emphasis in original).

As shown in the graph below, the bottom line is both analyses showed little difference for future employer costs whether the cash balance plan was in place or not.[20] The two estimates range from 0.1 percent savings for switching to the cash balance plan to 0.3 percent in additional costs from making the switch. The cash balance plan was never designed to save the state money.

Employer Contribution to Pension Plans Very Similar With or Without Cash Balance



Source: KCEP analysis of actuarial analysis of SB 2, 2013 General Assembly.

Past Look at Defined Contribution Plan Showed No Savings

In addition, Kentucky has looked in the past at closing the existing defined benefit plan and moving Kentucky to a defined contribution plan. The official actuarial analysis for that proposal showed the move would not save money.

Senate Bill 2 in the 2011 Kentucky General Assembly included a proposal to close the existing plan and replace it with a defined contribution plan. Under the proposal, the state would provide an employer match of 100 percent of what employees put into the plan up to 5 percent of pay. The actuary estimated 95 percent of employees would participate in the plan and that the average contribution would be 3 percent. The actuary then compared the resulting employer cost to the cost of the existing defined benefit plan. As shown in the table, the plan was predicted to be slightly more expensive to the state than the estimate at the time for the large non-hazardous employee plan. It would be less expensive for the hazardous and state police plans, but would constitute a major benefit cut for those groups. Cost for all plans were already inexpensive, as the table shows given assumptions in place at the time, giving little room for savings to be found.

Employer Pension Contribution Rates as Percent of Pay

Fund	Current	Defined Contribution	Change
KERS Non-Hazardous	2.67%	2.96%	+0.29%
KERS Hazardous	4.30%	3.14%	-1.16%
CERS Non-Hazardous	2.50%	2.97%	+0.47%
CERS Hazardous	5.89%	3.09%	-2.80%
SPRS	6.30%	3.05%	-3.25%

Source: Thomas Cavauagh, Actuarial Analysis to Senate Bill 2, 2011 Kentucky General Assembly. Cost of defined contribution plan includes a small line of duty benefit.

This analysis led the actuary to note, "as shown, there is a possibility that the bill would result in greater longterm costs for most employers."

A Switch to Defined Contribution Plans Would Introduce New Costs

In addition to evidence from Kentucky's existing plans and state-based research showing new plan designs do not result in savings, moving to a DC plan introduces new costs, other research shows. First, DC retirement plans cost more than existing pensions to deliver any given benefit. Second, draining the existing pensions of contributions from younger employees will increase the cost of paying off the DB pension obligation to retirees and current employees.

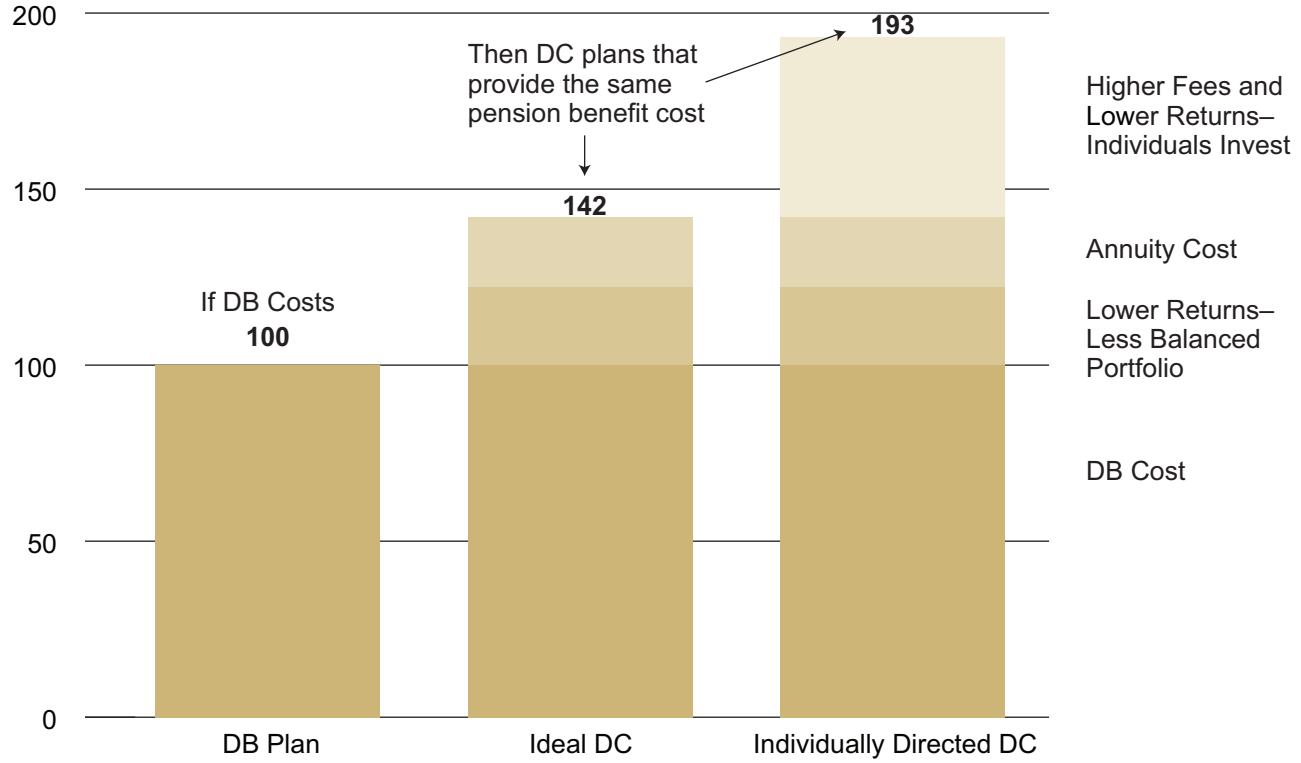
Defined Contribution Plans Cost More to Deliver the Same Retirement Benefit

It takes more in contributions to achieve any given level of retirement benefit through 401(k)-style retirement plans than DB pensions because DC accounts have higher costs and lower investment returns. The reasons for this can be seen in the chart below, which relies on cost modeling done by the National Institute on Retirement Security (NIRS).

- DC savings options available to individuals typically charge higher fees than pooled DB pension plans can achieve because of economies of scale and the bargaining leverage provided by billions of dollars in assets. Typical DB plans spend on the order of half a percentage point of assets in administrative and investment fees whereas for DC savings options the cost can be one or even two percentage points.
- When individuals, not professional fund managers, make investment choices they achieve lower investment returns on average.
- Individuals also achieve lower investment returns because as they approach retirement it makes sense to invest more conservatively (e.g., in bonds rather than stocks). DB pension plans retain a mix of young, experienced and retired members that allows them to maintain a balanced portfolio that includes some higher-risk, higher-return components.

- DC retirement plans also cost more because, to ensure that savings do not run dry if they live longer than expected, individuals have to buy annuities. When they do, they receive a lower monthly check because the company selling the annuity wants to insure itself against the possibility of a long life.[21]
- DB pension plans, by contrast, know that retirees as a group will match predicted life expectancies; everyone can receive a monthly pension check that is not reduced to protect against the chance that the particular individual will live a long time.[22]

Cost of DB and DC Plans Compared



Note: This figure is based on Figure 1, p. 8 of the source below, with two modifications. First, instead of the cost of "no longevity risk pooling" (oversaving by individuals so that they are less likely to run out of savings before death), we substitute the cost of an annuity based on an average of two simulations shown in Table 2, p. 16. Second, we normalize everything to the DB plan cost = 100 so that it is easier to see the percentage increase in costs associated with DC plans.

Source: Keystone Research Center based on William B. Fornia and Nari Rhee, "Still a Better Bang for the Buck: an Update on the Economic Efficiencies of Defined Benefit Pensions," December 2014, http://www.nirsonline.org/index.php?option=content&task=view&id=871.

Taking all these factors into account, it takes nearly twice as much in contributions to a typical individually directed DC savings plan to match a DB pension. An "ideal" DC plan can eliminate some DC cost and investment return disadvantages by using a large pool of accounts to buy down fees and having professionals select a small number of high-quality/low-cost savings options. But an ideal plan would still cost 42 percent more for DC than DB.

If employer contributions do not increase, employees may bear the cost of this inefficiency. Assuming the same level of contributions, benefits would decline by 30 percent to 48 percent. But even in this case, public dollars are not saved because contributions remain the same. The bottom line is it is hard to save money with a less efficient retirement plan. In the long run, if a switch to DC amounts to a big cut in retirement benefits, it is likely that the public will bear a cost: salaries would have to increase to enable schools and the state to attract great teachers, nurses, safety inspectors and other public servants.

Eliminating DB Pension Contributions from Younger Employees Will Increase the Cost of Paying Down the Unfunded Liability

A switch to DC plans for new employees would close the existing pension plans to new members. Many studies by actuaries and public pension experts over the past decade indicate that this would lower investment returns on the existing pension plans' assets, increasing unfunded liabilities and adding billions of dollars in costs.

Investment returns are the most important source of revenues for pension benefits, typically paying for two thirds of benefits, twice as much as employer and employee contributions combined. By reducing the investment returns on Kentucky's DB pension assets, closing the existing DB pensions would drive up the amount that public employers must pay to cover current pension commitments.

A DB plan that continues to take in new employees has a balanced mix of young, middle-age and retired members. This balance gives such plans the ability to diversify their portfolios over a long investment horizon, including large amounts of high-risk, high-return investments (such as stocks), as well as some low-risk investments (such as bonds) that have lower returns. In DB plans that no longer take in new employees, remaining plan participants gradually age and the plans' investment horizons shorten.[23] As a result, investment managers must shift plan assets from higher-return to safer assets — just as individual investors approaching retirement shift savings away from risky assets to protect themselves against sudden market drops shortly before withdrawal of the money. As more (and ultimately all) pension plan participants retire, more of the remaining plan assets must also be removed from illiquid assets and into liquid assets which are easy to convert into pension checks. The shift of pension funds to lower-return assets reduces investment earnings. In Kentucky, lower investment earnings will force the state and other public employers to make additional contributions to cover DB pension benefits already promised to retiring employees.

Given the importance of investment earnings to growing pension assets over time, even a modest decline in investment returns — e.g., one percent — can result in a large increase in the cost to the state of meeting existing pension commitments. Studies in 14 states that have considered a switch to defined contribution plans projected that closing a defined benefit plan lowers investment returns and increases unfunded liabilities. Some highlights from the research on these transition costs.[24]

- In **Michigan**, a study earlier this year found that closing the Michigan Public School Employees' Retirement System to new members would lower the projected invested return from 7.5 percent to 7.25 percent in 2034 and 5 percent by 2038, increasing the cost of paying off the state's unfunded liability by $22.6 billion.[25]
- In **Pennsylvania**, three different actuaries concluded that closing the state's DB plans to new employees would gradually erode investment returns leading to a $40 billion increase in unfunded liabilities.[26]
- A study for the **California** Public Employees' Retirement System also concluded that closing the DB plan to new employees would lower investment returns of plan assets due to a shrinking investment time horizon and the need for more liquid assets.[27]
- In **Kansas**, an actuarial study concluded that closing the DB plan would lead to a change in asset mix to "produce a greater degree of liquidity, reflect a shorter time horizon for investment, and the resulting lower risk tolerance level…The System's need to hold more cash equivalents to meet outgoing cash flows would also reduce the total return of the investment portfolio…The lower investment return would result in higher contributions needed to provide the same benefits."[28]

- In **Minnesota**, a 2011 study estimated a transition to a DC plan would cost the state $2.8 billion.[29]
- The **New Hampshire** Retirement System in 2012 found that closing its defined benefit plan to new hires would likely lead to more conservative investments and lower returns, and would increase the unfunded liability by an additional $1.2 billion.[30]
- A study by the **Texas** Teacher Retirement System concluded that freezing the DB plan could cause the liability to grow by an estimated $11.7 billion — 49 percent higher than the current liability — due to lower investment returns from shifting to more liquid assets.[31]

The idea that switching to a DC plan will introduce new costs is not just theory. It is the experience of the three states that have closed their DB plans and put all new hires in 401(k)-type plans: West Virginia (1991), Michigan for its state employees (1997) and Alaska (2006).[32]

For example, West Virginia adopted a 401(k)-type plan in 1991, but reversed course in 2006, reopening its DB plan to all new hires in 2005 and allowing the members of the 401(k)-type plan to switch into the DB plan. There were several reasons cited for the switch back, including inadequate savings among DC plan participants. The National Institute on Retirement Security (see previous note) found that "as of April 30, 2005, the average account balance was just $41,478, and only 105 of the 1,767 teachers over age 60 had balances over $100,000. This was largely due to the fact that DC member accounts had achieved much lower investment returns than TRS. Between 2001 and 2010, for example, the average West Virginia DB return was 1.6 percent higher than the average DC return." With many individual accounts not on track to generate adequate retirement income, the DC plan was perceived to be driving up costs for means-tested public programs.

Actuary Found a DC Plan for Kentucky Teachers Would Be More Expensive than Current Plan

Here in Kentucky, an actuary hired by the bipartisan Teachers' Retirement System Funding Work Group in 2015 examined the potential impact of shifting Kentucky teachers from a DB to a DC plan. The actuary found both that there would be transition costs from closing the existing DB plan and that inefficient DC plans for new teachers would either cut benefits substantially or also result in additional costs.[33]

The actuary looked at two scenarios. In the first scenario, the state would maintain its current normal costs of employer contributions (which the consulting actuary calculated at 6.6 percent of pay, similar to the TRS actuary's estimation of 5.8 percent referenced above). Because the DB plan would be closed, the actuary estimated that plan assets would earn lower investment returns and require an additional contribution of 4.9 percent of pay to retire the unfunded liability. The actuary also calculated that the DC plan would provide a benefit equal to only 71 percent of the current DB pension benefit. Because that would mean more retirees ending up with low incomes, he also calculated it would add 0.6 percent of pay in public assistance costs to the state to support those impoverished workers who now qualify for public programs. Combined, those factors would result in transition costs and public benefit costs totaling an additional 5.5 percent of pay.

In the actuary's second scenario, the state increased its contribution to offset the inefficiency of DC accounts and achieve the same level of benefit for retired teachers received now under the DB plan. Again, as in the first scenario, investment returns in the closed DB plan would be lower. The result from scenario 2 was a plan adding 11.3 percent of pay in employer cost to provide the same benefit as the existing DB plan.

	State Cost (Percent of Teacher Pay)	Benefit Relative to Current
Scenario 1: Maintain Contribution at Current Normal Cost		
Basic State Contribution	6.6%	71%
Increased TRS Cost If Changed Asset Allocation	4.9%	
Public Assistance Costs	0.6%	
Total Potential Employer Costs	12.1%	
Increase in Employer Costs	5.5%	
Scenario 2: Increase Contributions to Maintain Benefits		
Basic State Contribution	13.0%	100%
Increased TRS Cost If Changed Asset Allocation	4.9%	
Total Potential Employer Costs	17.9%	
Increase in Employer Costs	11.3%	

Source: Teachers' Retirement System Funding Work Group.

Switch to DC Plan Would Undermine Ability to Attract Skilled Workforce and Would Weaken Local Economies

Another factor that warns against moving workers to DC plans is its impact on the state's ability to attract a qualified workforce. Compensation of public sector workers in Kentucky is already modest. Less efficient DC plans will make it even more challenging to attract skilled workers, leading to higher turnover, greater training costs and a reduction in the quality of public services.

Rutgers University economist Jeffrey Keefe produced an analysis in 2012 comparing the compensation of Kentucky public sector workers to their private sector counterparts. That report showed public workers in Kentucky receive 12.8 percent less in total compensation (wages plus benefits) on an annual basis and 9.2 percent less on an hourly basis than comparable workers in the private sector.[34] The report makes an apples-to-apples comparison that controls for differences — such as levels of education and experience — between the two workforces. Analyses that fail to control for those differences ignore the fact that public sector workers as a whole are more educated and experienced than workers in the private sector. Controlling for those differences reflects the reality of how workers make employment choices in the labor market.

The report shows that while public employees' benefits are somewhat better than those in the private sector, wages are far worse, resulting in somewhat lower overall compensation for Kentucky public sector workers. Since the report was produced, most public employees have not been receiving raises, cuts have been made in health benefits and as noted above pension benefits have been reduced.

Not only is Kentucky's existing compensation including benefits low compared to the private sector, pension benefits are low compared to surrounding states. That fact is confirmed by the state's consultant PFM in its 2017 report. The report compares the retirement benefits in each state for a 62 year old with 30 years of service. New Kentucky workers coming in under the cash balance plan receive benefits that rank 5th of the eight surrounding states, and are below average for the surrounding states as a whole.[35]

Research shows DB pension benefits are a key tool in attracting qualified workers to lower paying public sector jobs. Polls show public sector workers strongly prefer DB plans, and in states that give workers the choice of a DB or DC plan they overwhelmingly choose the DB option.[36] Workers in positions that provide DB pensions tend to have lower turnover and longer average tenure, meaning lower recruitment, hiring and training costs for employers.[37] Switching to a DC plan will mean greater reliance on a less experienced workforce, thereby reducing productivity. Research shows switching to a DC plan would reduce workers' commitment to their jobs, making them less willing to invest in nontransferable skills important to productive work.[38] DB pensions are also important to public sector recruitment because tools the private sector uses to attract and retain skilled workers, like stock options, are not available to the public sector.

A DC plan will also worsen the retirement security of workers and harm local economies, where pension benefit checks play a major role. This fact was noted by the system's actuary in its 2011 analysis of the proposal in the General Assembly to move workers to a 401k plan. The actuary stated that its report "addresses the impact from the employer standpoint. The impact on employee benefit levels is not covered in this fiscal note but it must be recognized that a change to a voluntary 401(k) plan will significantly reduce the retirement income security of employees. The ultimate impact on the Commonwealth in terms of future increases in other social costs and reductions in economic activity by retiree spending is beyond the scope of this analysis."

That harm to the economy is a critically important yet unrecognized consequence from a shift to a DC plan. Pension benefits inject $3.4 billion into the Kentucky economy every year, and each Kentucky county receives millions of dollars in benefits annually, as shown in the table below.[39] As those monies are spent at local businesses, they have a multiplier effect that results in the creation of jobs. Nationally, each dollar in pension benefits supports $2.21 in total economic output, according to the National Institute on Retirement Security.[40]

Total Pension Benefits Paid in 2016

Adair	$14,275,484	Grant	$16,605,389	McLean	$8,166,483
Allen	$10,776,375	Graves	$26,516,754	Meade	$12,218,087
Anderson	$37,692,748	Grayson	$18,678,107	Menifee	$4,929,823
Ballard	$5,470,956	Green	$7,819,381	Mercer	$20,558,367
Barren	$29,570,358	Greenup	$21,375,828	Metcalfe	$6,880,174
Bath	$9,102,624	Hancock	$5,473,981	Monroe	$7,667,220
Bell	$22,515,716	Hardin	$63,485,277	Montgomery	$20,341,574
Boone	$66,376,899	Harlan	$22,442,394	Morgan	$15,127,421
Bourbon	$14,889,542	Harrison	$13,077,880	Muhlenberg	$20,994,829
Boyd	$35,045,934	Hart	$8,900,015	Nelson	$29,339,450
Boyle	$30,232,399	Henderson	$31,343,661	Nicholas	$4,601,134
Bracken	$6,207,405	Henry	$24,914,872	Ohio	$13,106,978
Breathitt	$14,575,359	Hickman	$3,118,728	Oldham	$42,383,266
Breckinridge	$11,905,976	Hopkins	$33,603,761	Owen	$14,622,975
Bullitt	$39,044,748	Jackson	$8,425,333	Owsley	$6,673,587
Butler	$7,612,232	Jefferson	$600,716,111	Pendleton	$9,718,942
Caldwell	$13,667,013	Jessamine	$29,841,197	Perry	$24,063,172
Calloway	$37,364,432	Johnson	$21,395,906	Pike	$44,669,769
Campbell	$51,501,163	Kenton	$76,462,001	Powell	$8,480,820
Carlisle	$3,043,718	Knott	$14,412,550	Pulaski	$58,412,055
Carroll	$8,078,156	Knox	$17,944,783	Robertson	$1,891,780
Carter	$21,844,992	Larue	$11,026,271	Rockcastle	$11,654,864
Casey	$9,490,657	Laurel	$40,938,844	Rowan	$30,414,056
Christian	$43,994,795	Lawrence	$8,248,788	Russell	$15,110,258
Clark	$24,641,448	Lee	$5,662,088	Scott	$36,045,147
Clay	$18,228,272	Leslie	$8,656,212	Shelby	$52,630,183
Clinton	$7,684,540	Letcher	$18,116,170	Simpson	$8,638,799
Crittenden	$4,560,608	Lewis	$9,583,844	Spencer	$13,427,686
Cumberland	$6,112,916	Lincoln	$17,617,485	Taylor	$18,564,543
Daviess	$80,204,748	Livingston	$6,895,383	Todd	$6,171,958
Edmonson	$6,483,086	Logan	$17,297,949	Trigg	$13,359,454
Elliott	$4,281,872	Lyon	$9,814,207	Trimble	$5,535,696
Estill	$10,261,821	Madison	$84,452,728	Union	$7,492,482
Fayette	$216,749,277	Magoffin	$10,681,479	Warren	$101,381,448
Fleming	$13,311,810	Marion	$13,395,479	Washington	$8,667,185
Floyd	$30,998,839	Marshall	$24,288,015	Wayne	$14,203,947
Franklin	$213,738,703	Martin	$7,233,627	Webster	$7,903,545
Fulton	$4,305,521	Mason	$13,277,106	Whitley	$36,220,845
Gallatin	$2,902,210	McCracken	$52,956,559	Wolfe	$8,355,037
Garrard	$13,126,202	McCreary	$10,865,799	Woodford	$31,801,847
				Total In State	**$3,441,860,382**

Source: KCEP analysis of Kentucky Retirement Systems, Teachers' Retirement Systems data.

Conclusion

Kentucky lawmakers face a major challenge in finding ways to pay down the state's pension liabilities while also funding the public investments in schools, health, infrastructure and other building blocks of a strong state. To meet that challenge, Kentucky needs solutions that work. Closing the existing DB plans and moving workers into DC plans will not help with this challenge.

A DC plan is not significantly cheaper for the state because the existing DB plans are very inexpensive as long as they are properly funded. In fact, a DC plan would introduce substantial new costs in paying down the unfunded liabilities of the closed plans. And a DC plan is less efficient than a DB plan, resulting in inferior benefits to workers for the same employer contribution. A switch will make it harder for Kentucky to attract and retain the skilled workforce needed to provide vital public services, lower the quality of life for retirees and harm local economies.

Endnotes

[1] Pew Charitable Trusts ranks Kentucky second worst to New Jersey and Standard & Poor's ranks Kentucky worst. See Pew Charitable Trust, "The State Pension Funding Gap: 2015," April 2017, http://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2017/04/the-state-pension-funding-gap-2015; and Standard & Poor's, "U. S. State Pensions: Weak Market Returns Will Contribute to Rise in Expense," September 12, 2016, http://www.nasra.org/files/Topical%20Reports/Credit%20Effects/SPGlobalstates1609.pdf.

[2] Jason Bailey, "Budget's Reliance on One-Time Funds Presents Challenge Next Time Around," Kentucky Center for Economic Policy, August 30, 2016, http://kypolicy.org/budgets-reliance-one-time-funds-presents-challenge-next-time-around/.

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[5] Kentucky Retirement Systems, "KRS Inflows Vs. OutFlows," Public Pension Oversight Board, April 22, 2016.

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[9] National Conference on Public Employee Retirement Systems, "Economic Loss: The Hidden Cost of Prevailing Pension Reforms," May 2017, http://www.ncpers.org/files/NCPERS_2017%20Economic%20Loss.pdf.

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[12] NASRA, "State and Local Government Spending on Public Employee Retirement Systems," April 2017, http://www.nasra.org/files/Issue%20Briefs/NASRACostsBrief.pdf.

[13] Kentucky Retirement Systems, 2016 Comprehensive Annual Financial Report, https://kyret.ky.gov/Publications/Books/2016%20CAFR%20(Comprehensive%20Annual%20Financial%20Report).pdf.

[14] Teachers' Retirement System, 2016 Comprehensive Annual Financial Report, https://trs.ky.gov/wp-content/uploads/2016/12/2016.CAFR-FINAL.pdf. Social Security Administration, Fact Sheet, https://www.ssa.gov/news/press/factsheets/basicfact-alt.pdf.

[15] The cash balance plan applies to new employees hired beginning in 2014 for the KERS non-hazardous and hazardous, CERS non-hazardous and hazardous, and State Police systems.

[16] Pew Center on the States/Laura and John Arnold Foundation, "Testimony to the Kentucky Pension Task Force," September 18, 2012. Task Force on Kentucky Public Pensions, "Draft—Proposed Changes to Kentucky Retirement Systems," November 20, 2012.

[17] Thomas Cavanaugh, "Alternative Actuarial Analysis of SB 2," March 22, 2013, http://www.lrc.ky.gov/record/13rs/SB2.htm.

[18] Jason Bailey, "New Projections Say Senate Pension Bill Is $206 Million More Expensive than House Plan," Kentucky Center for Economic Policy, March 2, 2013, http://kypolicy.org/new-projections-say-senate-pension-bill-206-million-expensive-house-plan/. Jason Bailey, "Proposed Cash Balance Pension Plan for New Workers Projected to Increase Costs," Kentucky Center for Economic Policy, February 8, 2013, http://kypolicy.org/proposed-cash-balance-pension-plan-new-workers-projected-increase-costs/. While the cash balance plan guarantees workers at least a four percent rate of return on their individual accounts, the system itself benefits from only 25 percent of investment returns above that amount (in contrast with the defined benefit plan, in which all returns above the then-assumed rate of 7.75 percent are banked by the system to help make up for periods of lower returns). That led the actuary to predict the cash balance plan would credit accounts at a rate higher than the assumed rate of return for the existing plan, costing the state more money than the defined benefit plan. See also Jason Bailey, "Cash Balance Plan Likely to Increase Costs, Impact the Quality of Public Services and Reduce Retirement Security," Kentucky Center for Economic Policy, February 11, 2013, http://kypolicy.org/cash-balance-plan-likely-increase-costs-impact-quality-public-services-reduce-retirement-security/.

[19] Thomas Cavanaugh, "Alternative Actuarial Analysis of SB 2," March 22, 2013, http://www.lrc.ky.gov/record/13rs/SB2.htm.

[20] Graph includes estimated employer costs for the KERS non-hazardous, KERS hazardous and SPRS plans.

[21] Individuals can also save larger amounts before they retire to increase the chance that their money won't run out.

[22] The technical term for this advantage of DB pensions is that they "pool longevity risk" while DC savings accounts do not.

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[32] On the Alaska, Michigan, and West Virginia examples, see National Institute on Retirement Security, "Case Studies of State Pensions Plans That Switched to Defined Contribution Plans," February 2015, http://www.nirsonline.org/storage/nirs/documents/Case%20Studies/public_pension_resource_guide_-_case_studies_of_state__pension_plans_that_switched_to_defined_contribution_plans.pdf.

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