A Misguided "Solution" to a Nonexistent Problem

The High Cost to Taxpayers of Forcing Florida Public Employees Into Lower-Quality Retirement Plans

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Executive Summary

The Florida House of Representatives on March 22 approved a major restructuring of Florida's public employee retirement system that would raise costs to taxpayers while forcing teachers, police officers, and other public servants into an inferior retirement plan. This action flies in the face of the research and experience in more than a dozen states that have considered or implemented similar retirement plan changes.

If it became law, the House bill would eliminate for new public employees the option of a guaranteed pension that provides a defined retirement benefit based on the employee's salary and years of service. The proposal would require new employees to join the state's 401(k)-type plan, which defines only the amount contributed by employer and employee each year.

The House bill would increase the taxpayer cost of Florida's public-employee pensions by lowering the investment returns on the assets of the Florida Retirement System (FRS). Even since 2001, a difficult period for financial markets, investment returns have covered two-thirds of the costs of public-sector pensions in Florida, lowering the pension contributions required by public employers and hence by taxpayers. Under the House proposal, pension fund assets would have to be invested in a less risky and more liquid portfolio as remaining plan participants age and retire as a group. As a result, investment returns would fall—and the cost to taxpayers rise. The House proposal could also harm current members of Florida's defined benefit plan because future financial difficulties for the pension fund could lead to benefit cuts and employee contribution increases beyond those already enacted in 2011.

This policy brief reviews in more detail:

- The analytical reasons that pension plan investment strategies change, and investment returns fall, once a defined-benefit plan is closed to new employees.
- Studies in 12 states that highlight the decline in investment returns once defined-benefit plans stop taking in new hires.
- The disappointing real-world outcomes in three states that have closed defined-benefit plans to new hires.

All three types of evidence—logic, studies in other states, and actual experience—point to the same conclusion: closing Florida's defined-benefit pension to new employees will increase the costs of public-sector pensions for taxpayers.

Enacting the House proposal would not only be costly. It is also unnecessary. Florida has one of the most well-funded defined-benefit retirement systems in the country, and the fund's financial condition will improve as the FRS gradually reflect recent financial market gains and the cost savings in Florida's 2011 pension changes.

Key Facts About Florida Pensions

This policy brief focuses on one key issue in Florida's pension debate, the transition costs that result from closing the state's defined benefit pension plan. Below is a more complete summary of key facts that lawmakers, members of the media, and the public should consider in evaluating the Florida House pension proposal:

- **Florida has one of the most well-funded defined-benefit pension plans in the nation.**
- **Florida's 2011 pension changes substantially lowered future pension costs to taxpayers**.
- **The House proposal would increase the cost to taxpayers of meeting current pension obligations.**
- **The House proposal would require all new employees to participate in a defined contribution pension that is less cost effective than the current defined benefit plan**. Studies show that defined contribution plans deliver only about half as much retirement security for any given level of employer and employee contributions.[1]
- **The House proposal would deny new employees the secure pension option—a defined benefit pension plan—in which three of four recent new employees participate**. (See footnote 2.)
- **By eroding the quality of pensions, the House proposal would make it more difficult to attract and retain high quality teachers and other public employees**. Since Florida public school teachers already earn a salary nearly $10,000 below the national average, lower-quality pensions will make more acute the challenge of recruiting effective teachers into every classroom.[2]

The Florida Retirement System

The Florida Retirement System (FRS) was established in 1970 when the Legislature consolidated the Teachers' Retirement System, the State and County Officers and Employees' Retirement System, and the Highway Patrol Pension Fund. The FRS currently provides retirement income benefits to 623,011 active members, 334,682 retired members and beneficiaries, and 40,556 members of the Deferred Retirement Option Program.

Employees in FRS have two primary retirement options. They may participate in a defined benefit plan, known as "the pension plan," or a defined contribution plan, known as "the investment plan," an option available since July 1, 2002. As of June 30, 2012, 83% of plan members (517,756) participated in the defined benefit plan, and 17% (105,255) participated in the defined contribution plan.[3]

FRS has one of the most well-funded defined-benefit pensions in the nation. According to the most recent FRS annual report, the system has 87% of the funds needed to pay current pension obligations, not far from the 100%

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[1] Beth Almeida and William B. Fornia, *A Better Bang for the Buck*, National Institute on Retirement Security, August 2008, online at http://www.nirsonline.org/index.php?option=com_content&task=view&id=121&Itemid=48. See also Mark Olleman, "Public Plan DB/DC Choices," *PERiSCOPE,* January 2009, Milliman, online at http://publications.milliman.com/periodicals/peri/pdfs/PERi-01-01-09.pdf.

[2] National Education Association (NEA) Research, *Rankings & Estimates: Rankings of the States 2012 and Estimates of School Statistics 2013*, December 2012; online at http://www.nea.org/assets/img/content/NEA_Rankings_And_Estimates-2013_(2).pdf, p. 18. Florida has the 7th lowest teacher salaries in the nation.

[3] Florida Department of Management Services/Division of Retirement (FDOMS/DORS), *The Florida Retirement System Annual Report: July 1, 2011 – June 30, 2012*, p. 22, online at https://www.rol.frs.state.fl.us/forms/2011-12_Annual_Report.pdf. In 2010-11, new employees entered the defined benefit option by a ratio of 3:1. Mark Olleman and Ilana Boivie, *Decisions, Decisions: Retirement Plan Choices for Public Employees and Employers*, National Institute on Retirement Research and Milliman, p. 5, online at http://www.nirsonline.org/index.php?option=content&task=view&id=641 The defined benefit plan is currently the default option for employees who fail to explicitly select one of the two pension options.

fully funded level and above the 80% funded ratio that pension experts regard as financially healthy.[4] The Pew Center on the States rates Florida's pension system as one of only 11 "solid performers" in the country—Pew's highest ranking.[5] Two recent developments should further improve the health of Florida's defined-benefit pensions: the recent stock market gains, which have not been factored into estimates of the FRS funded ratio, and the cost-saving pension changes implemented in 2011. These changes included an increase in the retirement age, the phase-out of automatic 3% annual cost-of-living increases in retiree benefits, an increase to eight years in the vesting period (the years of service required before employees become eligible to receive a pension), an increase also to eight years in the period over which final average salaries are determined (employees, based on years of service, receive a pension equal to a share of "final average salary"), and a sharp reduction in the interest rate earned on deferred benefits received through the Deferred Retirement Option Program, or DROP.[6]

The House Pension Proposal

The Florida House pension bill would close the defined benefit plan to new enrollees effective January 1, 2014 and require all new employees to participate in the defined contribution plan. The proposal would also expand the investment choices available to defined contribution plan members. Current FRS enrollees would retain the right to participate in either the defined benefit or defined contribution plans. Changes included in the bill only pertain to new enrollees enrolled in the system on or after January 1, 2014.

Lower Investment Returns = Higher Taxpayer Costs

Investment returns are the most important source of revenues for paying FRS benefits, far outpacing employer and employee contributions. Even over the past decade of volatile financial markets, investment returns accounted for two-thirds of revenue for the FRS.[7] By reducing the investment returns on Florida's defined benefit pension assets, the House bill would drive up the amount that public employers—hence taxpayers—must pay to cover current pension commitments.

Many policymakers recognize that switching to a defined contribution plan for all future employees, as the House proposes, will not make Florida's unfunded pension liabilities (currently estimated at $19.3 billion) vanish: the state and other public employers will still be responsible for the pension benefits of current and retired employees.[8] Few policymakers recognize, however, that transitioning new employees into defined contribution plans will increase costs for taxpayers by reducing investment earnings on defined benefit plan assets. Here are the main reasons why.

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[4] FDOMS/DORS, *The Florida Retirement System Annual Report: July 1, 2011 – June 30, 2012*, p. 51.
[5] Pew Center on the States, *The Widening Gap Update*, June 2012, p. 3, online at http://www.pewstates.org/research/reports/the-widening-gap-update-85899398241.
[6] Under Florida's Deferred Retirement Option Program, or DROP, employees who already qualify for retirement benefits can defer receipt of their benefits while they continue to work for up to five years for an FRS employer. The deferred benefits are held in the pension trust fund and then paid out upon the employee's actual retirement. Under the 2011 changes, the interest rate earned on deferred benefits while held in the trust fund was reduced dramatically, from 6.5% to 1.3%.
[7] The share of revenues due to investment earnings was despite a $25 billion financial market loss in 2008-09. Calculated based on FDOMS/DORS, *The Florida Retirement System*, Schedule A, p. 41.
[8] Figures on the current pension debt as of July 1, 2012, from Milliman, *Study Reflecting 30-Year Projection of Open Defined Benefit Plan and Revised Study Reflecting the Impact of Closing the Defined Benefit Plan to New Members Effective January 1, 2014 Including Projected Blended Rates for the next 30 Fiscal Years*, online at http://miamiherald.typepad.com/files/close-db-prospectively-with-baseline.pdf.

A shortening investment horizon.[9] A defined benefit 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 or private equities), as well as some low-risk investments (such as bonds) that have lower returns. In defined benefit plans that no longer take in new employees, remaining plan participants gradually age and the plans' investment horizons shorten. 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. The shift of pension funds to lower-return assets reduces investment earnings. In Florida, lower investment earnings will force the state and other public employers to make additional contributions to cover defined pension benefits already promised to retiring employees.

A need for more liquid assets. As participants in the FRS defined benefit plan age, more of them will begin to tap into their retirement benefits. As this happens, remaining funds in the plans must be removed from illiquid assets, such as private equities, and invested in more liquid assets, such as bonds, which are easy to convert into pension checks for retirees. This shift to more liquid assets will also lower the rate of return, increasing the taxpayer contributions needed to honor existing defined pension obligations.

Reduced contributions from employees and employers to the defined benefit asset pool. Under the House proposal, all new employees will contribute 3% of salary to their own individual defined contribution accounts. All employer contributions to new employees' retirement plans will also go into the employees' individual accounts. By contrast, under the current FRS, about three-quarters of all employee and employer contributions go into the defined benefit plan asset pool. Since the House bill lowers the flow of new contributions into the FRS defined benefit assets pool, it will lower investment earnings and require larger employer contributions to meet existing pension obligations.

In its actuarial study of the FRS released March 1, Milliman recognized that closing the state's defined benefit pension plan could lower its investment earnings. Page 13 of this report says (emphasis added):

> "Over time, the State Board of Administration may lose the ability to invest with a long-term perspective as annual cash flow becomes more and more negative. Under a closed plan, as the active population shrinks and the retired population continues to grow, benefit payments will exceed the contributions made to the plan by continually increasing amounts. This will possibly necessitate future changes in asset allocation in order to provide sufficient sources of cash for benefit payments, which in turn could impact the rates of return earned by the Fund's assets. Although any changes may not necessarily need to occur for many years (sic). This could jeopardize the ability of FRS's assets to earn the assumed valuation rate of return of 7.75% per annum long-term, thereby putting upward pressure on costs towards the end of the projection period. **Our study does not consider the impact of potential asset allocation changes or the impact of the soft freeze on the assumed asset rate of return**."

According to a legislative staff analysis of the House pension bill, FRS actuary, Robert Dezube of Milliman, "verbally confirmed that the rate of return would start experiencing downward pressure starting after the 10th

[9] For the arguments in this and the next paragraph, see, for example, California Public Employees Retirement System, *The Impact of Closing the Defined Benefit Plan at CalPERS*, March 2011, online at http://www.calpers.ca.gov/eip-docs/closing-impact.pdf.

year and other assumptions would start proving increasingly unreliable between the 5th and 10th years."[10] In verbal testimony before the House Appropriations Committee, Mr. Dezube modified his position, stating that the rate of return would start experiencing downward pressure between five and 10 years.[11] Milliman's acknowledgements that it disregarded a critical factor likely to have a major impact on long-term pension costs means that that the study is not of practical use for the current policy debate.

Given the importance of investment earnings to growing pension assets over time, even a modest decline in investment earnings—e.g., 1%—can result in a large increase in the cost to taxpayers of meeting existing pension commitments. While Milliman did not model the impact of a lower rate of return on pension fund assets, ignoring this will not spare taxpayers added costs down the road. (Appendix A analyzes some other problems with the Milliman analysis.)

Studies Confirm That Closing Defined Pension Plan Costs Taxpayers More

Many states that have considered a transition to defined contribution plans from existing defined benefit plans have commissioned studies of this option. In almost all cases, the studies conclude that such a transition is not the best approach, in part because it would lower investment returns on pension assets.[12] These studies indicate that modifying defined benefit pension plans to lower long-term costs and increase employee contributions—as Florida did in 2011—is a more cost-efficient way to reduce taxpayer costs and any unfunded liabilities. Appendix B contains an annotated bibliography that summarizes many of the recent studies (and contains complete source notes). Some highlights:

- In California, the state Legislative Analyst's Office acknowledged that closing defined benefit plans to new employees would require changes in investment asset mix, increasing expenses in the short and medium term. A study for the California Public Employees' Retirement System also concluded that closing the defined benefit 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.
- In Kansas, an actuarial study concluded that closing the defined benefit 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."
- In Minnesota, a 2011 study estimated a transition to a defined contribution plan would cost the state $2.8 billion.
- 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.
- In New Mexico, an analysis for the state legislature found that, when a defined benefit plan is closed to new hires, "…a growing portion of assets will likely be held in short-term securities, thereby reducing investment returns."
- In Texas, the Employee Retirement System of Texas (ERS) in 2012 concluded that it made sense to "modify the existing plan design instead of switching all employees to an alternative plan structure." A

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[10] See *House of Representatives Staff Analysis Bill# PCB GVOPS 13-01*, p. 9, online at http://www.myfloridahouse.gov/Sections/Documents/loaddoc.aspx?FileName=h7011c.SAC.DOCX&DocumentType=Analysis&BillNumber=7011&Session=2013

[11] The second author attended the Appropriations Committee hearings and heard this statement first hand.

[12] Nari Rhee and Diane Oakley, *Issue Brief: On the Right Track? Public Pension Reforms in the Wake of the Financial Crisis,* National Institute on Retirement Security, p. 12; online at http://www.nirsonline.org/index.php?option=com_content&task=view&id=734&Itemid=49

study by the Texas Teacher Retirement System (TRS) concluded that freezing the defined benefit pension could cause the liability to grow by an estimated $11.7 billion—49% higher than the current liability—due to lower investment returns from shifting to more liquid assets.

Actual Experiences in Other States Also Point to Higher Taxpayer Costs

The idea that switching to a defined contribution plan will increase costs to taxpayers is not just theory. It is the experience of the states that have moved in that direction. There are three states that have closed off their defined benefit plans and put all new hires in 401(k)-type plans: West Virginia (1991), Michigan for its state employees (1997), and Alaska (2006).

Michigan: Michigan began enrolling all new state employees in a 401(k)-type plan in 1997. Since then, the system's unfunded liabilities have skyrocketed, from $697 million in 1997 to $4.078 billion in 2010.[13] This increase partly reflects inadequate employer contributions to pay for the unfunded liability. (Michigan has not made its annual required contributions suggested by the Governmental Accounting Standards Board (GASB) in nine of the last 10 years.)

Alaska: Alaska adopted a 401(k)-type plan for both new state and public school employees that became effective in 2006. Although sold as a way to reduce the employer contribution rates, these rates have increased. For state employees, the actuarially determined employer contribution rate required to pay off the unfunded liabilities increased from 12.39% of salary in 2006 to 22.48% in 2012. For teachers, this rate increased from 24.57% to 36.04%. Across the two plans, the unfunded liabilities associated with the closed defined benefit plans have increased from $3.8 billion in 2006 to $7 billion in 2011 (the latest year for which data are available).[14]

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[13] Data for 2001 to 2010 from Michigan State Employees Retirement System (MSERS), *Comprehensive Annual Financial Report (CAFR) for the Fiscal Year Ended September 30, 2011*, p. 43, online at http://www.michigan.gov/documents/orsstatedb/State_Employees-2011_CAFR_375807_7.pdf; data for 1997 to 2000 from MSERS, *CAFR for the FY Ended September 30, 2007*, p. 43, online at http://www.michigan.gov/documents/orsstatedb/CAFR_StateEmployees_221902_7.pdf. There are two estimates for the Michigan unfunded liability in the 2000 CAFR, the second showing that the defined benefit fund had a *surplus* of $733 million when the fund was closed to new employees (not a deficit of $697 million).

[14] The analysis in this paragraph is based on data in Alaska Department of Administration (ADA), Division of Retirement and Benefits (DRB), Public Employees' Retirement System (PERS), *Comprehensive Annual Fiscal Report for the Fiscal Year Ended June 30, 2012*, pp. 117-118, online at http://doa.alaska.gov/drb/pdf/pers/cafr/2012PersCafr.pdf; and ADA/DRB/PERS, *Teachers' Retirement System Comprehensive Annual Financial Report For the Fiscal Year Ended June 30, 2012*, pp. 110-11, online at http://doa.alaska.gov/drb/pdf/trs/cafr/2012TrsCafr.pdf. There is a three-year lag in Alaska between the actuarial determination of required employer contribution rates and their application. It could therefore be argued that rather than comparing the 2012 and 2006 rates, we should compare the 2014 (which is based on 2011 financial data) and 2009 rates (based on 2006 financial data when Alaska switched to defined contribution plans). During this alternate period, the employer contribution rate for unfunded pension liabilities has increased from 21.5% to 24.19% for state workers; for teachers the rate has increased from 34.8% to 43.51%. Thus, the qualitative finding remains that employer contribution rates to pay off the unfunded liabilities have increased since the switch to a defined contribution rate. (Note also that employer contributions to pay off the unfunded liabilities in Alaska continue to be imposed on total salaries, including those of new employees.)

West Virginia: West Virginia adopted a 401(k)-type plan in 1991, but reversed course in 2006, reopening its defined benefit plan to all new hires in 2005 and allowing the members of the 401(k)-type plan to switch into the defined benefit plan. There were several reasons cited for the switch back, including a study done by West Virginia's Consolidated Public Retirement Board. The study found that the average investment return for employees with individual accounts equaled 3.39% from 2001 to 2006, compared to 6.13% from the teachers' defined benefit retirement system. In addition, for five out of six members over age 60 with individual accounts, the average account equaled $23,193. With many individual accounts not on track to generate adequate retirement income, the defined contribution plan was perceived to be driving up taxpayer costs for means-tested public programs.[15]

First, Do No Harm

Florida's defined benefit pension plan is healthy. It has weathered the financial market storms since 2001 much better than most states and is well positioned to return to full health as a result of recent financial market performance and the pension savings achieved in 2011.

Requiring all new Florida public employees to have 401(k)-type individual retirement accounts and denying them the option of the current defined benefit plan will damage a high-performing public pension system by lowering the investment returns on pension fund assets. It will increase rather than reduce the Florida Retirement System's unfunded pension liabilities and the cost to taxpayers of meeting pension obligations. If the goal is to lower the cost of pensions further—but without eroding retirement security—policymakers should instead look at closing the current defined contribution plan to new members and requiring all new employees to participate in the defined benefit plan.

About the Authors

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[15] West Virginia Consolidated Public Retirement Board, "TDC Membership, Balance and Return Analysis For Experience July 1, 2005 thru June 30, 2006, " presented to the Joint Standing Committee on Pensions and Retirement, July 28, 2007

Appendix A. The Milliman Projections

Recent actuarial projections for the Florida Retirement System (FRS) by the consulting firm Milliman have been a subject of some controversy. The firm's initial projections of the impact of the Florida House proposal to close the defined-benefit plan, released February 15, 2013, omitted employee contributions in its estimates of the market value of assets.[16] In addition, the February 15 report did not include a baseline projection for the current system that includes both a defined-benefit plan and a defined-contribution retirement option. To make comparisons between the House proposal and the current system requires careful projections of both options using reasonable and compatible ("apples-to-apples") assumptions.

The second Milliman report, released March 1, 2013, aimed to address the two limitations of the earlier Milliman report. Unfortunately, this second Milliman report retains important limitations that mean it still cannot be used to compare the House proposal with the current system. As noted in the body of this brief, Milliman leaves out of its projections the loss of investment earnings that would result from closing the defined benefit plan. Beyond this omission, several other aspects of the Milliman March 1 report raise concerns, pointing to a need for further revisions to its modeling or setting aside the report in the current policy debate. In particular, Brad Heinrichs, CEO of Foster & Foster Actuaries and Consultants based in Fort Myers, raises the following additional questions regarding the Milliman report.

Why did Milliman infuse billions of dollars of future losses into its Open DB Plan projections? Milliman's March 1 projections conclude that unfunded liabilities of the defined benefit plan would actually grow if the plans remained open, in spite of over $148 billion in contributions made to eliminate the liabilities over 29 years.[17] The present value (value in today's dollars) of the $148 billion is $37.2 billion, enough to pay off the $19.3 billion unfunded liability nearly twice. Yet somehow after all these contributions, the Milliman model still shows Florida's defined benefit plan having a $20.4 billion unfunded liability in 2042-43. According to Mr. Heinrichs, in an apparent departure from standard actuarial practice, Milliman injected the system with losses totaling approximately $38 billion in present value and did not offer a plausible explanation.[18] Milliman mentions that the funding of the Deferred Retirement Option Program (DROP) causes some future losses to occur, and also cites an aging workforce as increasing pension costs, but neither, according to Mr. Heinrichs, would plausibly explain the magnitude of the losses.[19] In fact, Mr. Heinrichs states that "I struggle to understand how you can make $148

[16] Milliman acknowledges this omission on page 1 of its March 1 report. See Milliman, *Study Reflecting*, March 1, 2013, p. 1, paragraph 2.

[17] For simplicity, the rest of this Appendix focuses on one of two projections for the current system made in Milliman's revised study, the results of which are presented on pages C-1 to C-39 of Milliman, *Study Reflecting*, March 1, 2013. The contributions to eliminate unfunded liabilities in the Milliman projections are shown in the last column of line D-3 of charts C-10 to C-39.

[18] Building any actuarial model requires making a large number of assumptions, including about the rate of return on plan assets, when employees will retire, the ages at which retirees pass away, how many employees leave employment before of after vesting, and so on. In a 30-year model of the impact of closing a defined benefit plan, the model can be used to project—assuming all other assumptions prove accurate—the level of contributions required to pay off the unfunded liability at the end of 30 years (just as a simpler financial model is used with a mortgage to determine the monthly payments necessary to pay off the mortgage after 30 years). In standard actuarial practice, when the model is run, "all assumptions are met" (i.e., prove accurate), and the model projections show the unfunded liabilities to be paid off after 30 years. When Milliman's projection ends the 30-year period with a higher unfunded liability than at the beginning, it indicates that all assumptions are *not* met and that additional unfunded losses have been added to the pension fund somehow. Such unusual results demand full and clear explanation.

[19] The DROP program allows defined benefit plan participants to retire and accumulate interest in the Florida Retirement System Trust Fund, while the member continues to work for an FRS employer for a period of up to 60 months. Milliman's own projections also show DROP to be a relatively small part of total employer unfunded liability costs, always less than a

billion in payments on $19.3 billion in debt and wind up with $20.4 billion in debt after 29 years. If most of these phantom losses were removed from the study and the projections included the loss of investment earnings from closing the defined benefit plan, Milliman's conclusion would be 180 degrees different. Closing the plan would actually cost taxpayers money."

Were savings from the benefit modifications for new employees hired after July 1, 2011 disregarded? As discussed in the body of this brief, effective July 1, 2011 FRS made a number of changes aimed at lowering the future costs of pension benefits.[20] These included requiring new hires to work eight years instead of five to be eligible to receive a defined-benefit pension and gradual phasing out of annual 3% Cost of Living Adjustments (COLAs). Mr. Heinrichs believes that these changes lower the normal cost for individuals hired post July 1, 2011 below those hired before that date. (Normal cost is the added cost of defined benefit pensions earned by active employees accruing an additional year of service.) Yet Mr. Heinrichs notes that the overall (or "composite") normal cost rate shown in the Milliman study is 4.68% for Fiscal 2013-2014, but increases steadily over time to 5.79%.[21] This is counterintuitive since the share of active employees hired post- 7/1/2011 will steadily INCREASE over time (reaching close to 100% by 2042-43), thereby lowering normal cost.[22] Milliman maintains that the increase in normal cost over time is attributable to its assumption that members of the defined benefit pension plan would be hired at later ages than in the past. Mr. Heinrichs says, "While I agree that an increasing hire age will tend to result in higher normal costs, I struggle to understand how that assumption can outweigh the fact that these members have lower—hence less costly—benefits. How can the composite normal cost be over 20% higher? Furthermore, is it really a good assumption that the average age at hire for an individual in the defined benefit plan would increase substantially? What conditions have changed that would bring this about?"

What factors cause the cost of DROP to increase substantially over time? Milliman suggests that the way the DROP is funded adds losses over time, but does not adequately explain, in Mr. Heinrichs' opinion, the dramatic increase projected in the cost of the DROP program over the next 29 years, especially in light of 2011 pension changes. "How can the normal cost of the DROP plan change from being similar to the composite normal cost (4.34% vs. 4.66% of payroll) in 2013-2014, but then eventually spike to an amount that is four times higher (19.48% vs. 5.79%) over time? Did the 2011 pension changes not take care of the cost of DROP and how is that not reflected in the Milliman projections?"[23]

Summing Up. In addition to their choice to not analyze the impact of lower investment returns on a closed defined benefit plan, the Milliman March 1 report produces implausible projections. Between billions of dollars of mysterious actuarial losses being infused over time, to puzzling increases to the pension (normal) costs that should diminish because of the 2011 pension changes, the Milliman study cannot be relied upon as a guide to the impact on taxpayers of closing the state's defined benefit pension plan.

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quarter of the costs and in some years only one-sixteenth of the cost. See Milliman, *Study Reflecting*, March 1, 2013, pp. C-10 to C-39, line D3, second-to-last column.

[20] For details on the changes and actuarial estimates of the savings, see Milliman, *Study Reflecting the Impact to the Florida Retirement System of Senate Bill #2100, 3rd Engrossed, Enrolled*, July 1, 2011.

[21] In the Milliman report, these "composite normal costs" (for all active employees across all classes in the Florida Retirement System defined benefit plan) are shown on pages C-10 to C-39 in the last column of the first row of numbers.

[22] A numerical example drives home that the elimination of COLA can have a BIG impact on pension costs: 24 years from retirement, the elimination of an annual 3% COLA adjustment cuts the dollar value of benefits in HALF.

[23] As noted, the 2011 pension changes lowered the DROP interest rate from 6.5% to 1.3%. In the Milliman report, the changes over time in "composite normal costs" for DROP plan participants are shown on pages C-10 to C-39 in the second-to-last column of the first row of numbers.

Appendix B. High Cost to Taxpayers of Transitioning to Defined Contribution Plans

Public officials who are considering moving from a defined benefit pension plan to a defined contribution plan should be aware of the potential effects. Actuaries and benefit experts who have analyzed proposed changes in other states have found that closing a defined benefit plan and transitioning to a defined contribution plan can result in significant additional costs to the state (and to schools), hence to taxpayers. Aside from transition costs and the impact on unfunded liabilities, most of the studies in other states also find that new defined contribution plans are substantially less cost-effective in the long term—i.e., they deliver less retirement security for any given level of employee plus employer (or taxpayer) contributions than defined benefit plans. In this annotated bibliography, we highlight primarily findings that relate to the fall of investment returns in defined benefit plans closed to new entrants, as under the Florida House plan.

Arizona
An analysis of the defined benefit and defined contribution plans conducted by the Arizona Retirement System in 2006 concluded: "If the goal of a retirement plan is to provide the least expensive method of providing a basic guaranteed replacement income to the members, then the defined benefit plan appears to provide a significant advantage for the majority of participants if the plan choices are mutually exclusive."[24]

California
A 2011 study for the California Public Employees' Retirement System concluded that closing the defined benefit plan would lower investment returns of plan assets due to a shrinking investment time horizon and the need for more liquid assets.[25] The study also concluded that freezing the defined benefit plan would incur the increased administrative costs of a defined contribution plan and the costs associated with having two systems concurrently.

In 2005, Milliman, serving as actuary for the Los Angeles County Boards of Retirement, studied the fiscal impact of placing Los Angeles County employees hired after July 1, 2007 into a new defined contribution retirement plan instead of the current defined benefit pension. Milliman estimated that the county's defined benefit plan contribution rate would increase by 3.66%, increasing county contributions to the closed defined benefit plan by $206 million in 2008. While the contributions would gradually decline over time, the county would have to wait until 2018 to see any savings in defined plan costs as a result of the change. The actuary found that investments of assets may need to be more conservative because no new members will be added after July 1, 2007, reducing investment returns and requiring the employer to pay more to fund retirement benefits.

Colorado
A study by Buck Consultants under contract to the State Auditor in 2001 concluded that "…it is more expensive for a defined contribution plan to provide a career employee with the same level of retirement benefits as a defined benefit plan..."[26]

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[24] Paul Matson and Suzanne Dobel, *A Comparative Analysis of Defined Benefit and Defined Contribution Retirement Plans*, Arizona Retirement System, 2006, online at http://www.nasra.org/resources/ASRS%20DBDC%20White%20Paper.pdf.
[25] California Public Employees Retirement System, *The Impact of Closing the Defined Benefit Plan at CalPERS*, March 2011, online at http://www.calpers.ca.gov/eip-docs/closing-impact.pdf.
[26] Buck Consultants, Incorporated, Study of Retirement Plan Designs for the State of Colorado Pursuant to Senate Bill 01-049, online at http://www.leg.state.co.us/OSA/coauditor1.nsf/All/5F3AC8C645174C5087256E30007BC1D8/$FILE/1409%20PERA%20Fin%20FY%2002.pdf

Kansas
An actuarial study examined questions related to closing the defined benefit plan (with no new hires becoming members of the defined benefit plan).[27] The study concluded, "The System's current asset mix reflects its position as an institutional investor with a very long time horizon. In anticipation of the closed plan moving into a negative cash flow situation, the target asset mix would be rebalanced to produce a greater degree of liquidity, reflect a shorter time horizon for investment, and the resulting lower risk tolerance level. The System's ability to invest in illiquid asset classes, such as private equity and real estate, would be reduced. The System's shorter time horizon for investment would dictate a reduction in the higher return producing asset classes, which produces more volatility of returns. The System's need to hold more cash equivalents to meet outgoing cash flows would also reduce the total return of the investment portfolio. As a result, the return on the portfolio would be expected to be lower than the investment return assumption on an ongoing basis. The lower investment return would result in higher contributions needed to provide the same benefits."

Kentucky
An actuarial analysis in Kentucky done by the actuarial firm Cavanaugh Macdonald in 2011 found that a conversion to a defined contribution plan would increase the state's costs for nearly two decades.[28]

Minnesota
A 2011 study for the Minnesota State Legislature found that the transition costs of switching new hires from defined benefit pensions to defined contribution plans "…would be approximately $2.76 billion over the next decade for all three systems."[29] The analysis explained that costs increase during a transition period because once a plan is closed to new members any unfunded liabilities remaining in the existing defined benefit plan must be paid off over a shorter timeframe.

Nevada
A 2010 Segal Company study of Nevada's proposal to put new hires in a defined contribution plan found that the state's total pension costs would increase.[30]

New Hampshire
The New Hampshire Retirement System performed an analysis on proposed 2012 defined contribution legislation related to the benefit plan design and funding.[31] The report found that closing the defined benefit plan to new hires would increase the unfunded liability by an additional $1.2 billion, and closing the defined benefit plan to new workers will likely lead to changes in investment allocations, including an increase in more conservative investments with lower returns, because over time it will become a retiree-only system.

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[27] Kansas Public Employees Retirement System (KPERS or the System) and Cavanaugh Macdonald Consulting LLC (Cavanaugh Macdonald), *Fiscal Impact Report: Senate Substitute for HB 2194 and House Substitute for HB 2333 Conference Committee on Senate Substitute for HB 219*, online at http://www.kpers.org/legislation_fiscalimpactreport.pdf

[28] Kentucky Retirement Systems, *Actuarial Analysis of Senate Bill 2 GA*, online at http://www.google.com/url?sa=t&rct=j&q=actuarial%20analysis%20of%20senate%20bill%202%20ga%2C%20letter%20to%20mr.%20william%20a.%20thielen%2C%20coo%20kentucky%20retirement%20systems%2Cfebruary%2025%2C%202011&source=web&cd=6&ved=0CDwQFjAF&url=http%3A%2F%2Fwww.lrc.ky.gov%2Frecord%2F11rs%2FHB480%2FSCS1AA.doc&ei=QLUNT-TrKsbw0gGZqu3dBQ&usg=AFQjCNE9PiL-TMquoWWT-1Qrt7gb6nh7VA&cad=rja

[29] Retirement Systems of Minnesota, *Retirement Plan Design Study*, June 1, 2011, online at http://www.msrs.state.mn.us/pdf/Study6-1-2011web.pdf

[30] Segal Company, *Public Employees' Retirement System of the State of Nevada: Analysis and Comparison of Defined Benefit Contribution Retirement Plans*, online at http://www.nvpers.org/public/executiveOfficer/2010-DB-DC%20Study%20By%20Segal.pdf.

[31] Gabriel, Roeder, Smith, and Company, *New Hampshire Retirement System, Defined Contribution Retirement Plan Study*, January 11, 2012, online at http://www.nhrs.org/documents/GRS_DC_Plan_Study_01_11_11_FINAL.pdf.

New Mexico
The New Mexico legislature requested analysis on the implications of moving from a defined benefit program to a defined contribution program for all new education employees in 2005.[32] The analysis was conducted by Gabriel, Roeder, Smith & Company, and as the report explained, when a defined benefit plan is closed to new hires, "…since a growing portion of plan assets must be used to pay benefits, a growing portion of assets will likely be held in short-term securities, thereby reducing investment returns."

New York
In 2011, a study was conducted by the National Institute on Retirement Security and Pension Trustee Advisors on behalf of the Office of New York City Comptroller John C. Liu. The study found that costs associated with traditional pensions range from 36% to 38% less than a defined contribution plan providing equivalent benefits. Longevity risk pooling saves from 10%-13%, maintenance of portfolio diversification saves from 4%-5%, and superior investment returns saves from 21%-22%.
http://www.nirsonline.org/storage/nirs/documents/NYC%20BB%20Report/final_nyc_report_oct_2011.pdf

Texas
The Employee Retirement System of Texas (ERS) in 2012 noted that, in many cases, the increased cost of freezing a defined benefit plan, combined with the inefficiencies of defined contribution plans made it sensible to "modify the existing plan design instead of switching all employees to an alternative plan structure."[33] The Teacher Retirement System of Texas (TRS) concluded that even if contributions remained the same as in the current defined benefit plan, participants in an individually directed defined contribution plan would have only a 50% chance of earning investment returns high enough to get 60% or more of the defined benefit plan benefit.[34] The study found that it would cost 12% to 138% more to fund a target benefit through alternative retirement systems. Individually directed defined contribution accounts were found to be the most costly, and a defined benefit system the least costly. Finally, the study estimated that freezing the defined benefit pension could cause the liability to grow by nearly an estimated $11.7 billion—49% higher than the current liability—due to lower investment returns resulting from a transition to a more liquid asset allocation.

Wisconsin
A 2011 study for the state legislature analyzed the impact of establishing a defined contribution plan as an option, among other potential changes to the Wisconsin Retirement System (WRS). The final report stated: "Actuarial analysis indicates that to provide a benefit equal to the current WRS plan, an optional DC [defined contribution] plan would require higher contributions than employers and employees currently pay." The study recommended: "Given the current financial health and unique risk-sharing features of the WRS, neither an optional DC plan nor an opt-out of employee contributions should be implemented in Wisconsin at this time. Analysis included in this study from actuaries, legal experts, financial experts, and information from similar studies conducted in other states show that there are significant issues for both study items in terms of the actual benefit provided and potential for negative effects on administrative costs, funding, long term investment strategy, contribution rates, and individual benefits."
http://etf.wi.gov/publications/wrs-study.pdf

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[32] Gabriel, Roeder, Smith, and Company, *Defined Contribution Retirement Plan Study* for the New Mexico Educational Retirement Board, October 14, 2005, online at http://www.nasra.org/resources/New%20Mexico%20ERB-DC.pdf
[33] Employee Retirement System of Texas, *Sustainability of the State of Texas Retirement System*, Report to the 82nd Texas Legislature, September 4, 2012.
[34] Teacher Retirement System of Texas, *Pension Benefit Design Study*, online at http://www.trs.state.tx.us/about/documents/pension_study_benefit_design.pdf