

# Friends without Benefits:

HOW STATES SYSTEMATICALLY SHORTCHANGE TEACHERS' RETIREMENT  
AND THREATEN THEIR RETIREMENT SECURITY

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Chad Aldeman and Andrew J. Rotherham

**TeacherPensions.org**





FIXING AN UNFAIR AND INSECURE SYSTEM

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## ACKNOWLEDGEMENTS

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The authors gratefully thank all those who offered generous feedback on earlier drafts of this paper, especially Bob Costrell, Butch Trusty, Dan Goldhaber, Sandi Jacobs, and Josh McGee. Thanks also to our colleagues at Bellwether who were integral to the paper's development, in particular Sara Mead for her comments and suggestions on drafts of the report. We also thank Janice Cane for excellent editorial work and Noelle Grattan for her work on graphics and design.

The Joyce Foundation provided funding for this project. The findings and conclusions are those of the authors alone and do not necessarily represent the opinions of the foundation.

## ABOUT THE AUTHORS

**Chad Aldeman** is an Associate Partner on the Policy and Thought Leadership team at Bellwether Education Partners. He can be reached at [chad.aldeman@bellwethereducation.org](mailto:chad.aldeman@bellwethereducation.org).

**Andrew J. Rotherham** is a Bellwether Co-Founder and Partner and leads the Policy and Thought Leadership team at Bellwether Education Partners. He can be reached at [andy@bellwethereducation.org](mailto:andy@bellwethereducation.org).

ABOUT BELLWETHER EDUCATION PARTNERS



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## INTRODUCTION

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To shore up the \$46 billion pension debt the state has accrued over the past several decades, Illinois has been using its teachers as a piggy bank. New legislation adopted in December 2013 will raise the retirement age for mid-career workers and limit the amount retiree pensions can increase with inflation over time. State and national union leaders have called these changes “pension theft” and threatened to sue.

The current uproar has focused mainly on relatively senior workers, but Illinois legislators enacted even stiffer penalties for new teachers in 2010. The 2010 bill had similar elements as the 2013 version—it raised the age at which new teachers could retire and reduced the amount their pensions could adjust for inflation—but it also placed a cap on the amount of retirement benefits they could earn.<sup>1</sup> Most important, the 2010 law made it much harder for new teachers to earn a pension at all by lengthening the time they would be required to work before qualifying for a pension, from five years to ten.

The changes will collectively save the state billions of dollars over the next thirty-five years, but the “savings” will come out of the pockets of teachers entering classrooms in the coming years. If a teacher leaves before ten years, Illinois will refund his or her contributions, but it won’t pay any interest, and it won’t contribute anything on its own. The state estimates that 62 percent of its new teachers won’t make it to ten years,<sup>2</sup> meaning Illinois will be forcibly taking no-interest loans from the majority of new teachers.

Illinois's laws are particularly harmful to younger teachers and teachers who move to or from the state. But Illinois isn't alone. Collectively, the states are facing a \$1.4 trillion shortfall for public sector pensions and benefits, and they are responding by increasing out-of-pocket costs for teachers and mandatory contributions from school districts and enacting punitive policies similar to those in Illinois. State and local governments have made their pension systems less friendly to young and mobile workers by lengthening vesting periods and creating separate, less generous plans for new employees.

This is not a marginal problem. Numbering 3.3 million, public school teachers constitute the largest class of workers in the country, and teaching is by far the largest profession made up of college-educated workers. In other words, policymakers are systematically disadvantaging our largest class of bachelor's-degree-equipped workers. Saving for retirement is a nationwide problem—a recent study found that 92 percent of households do not meet retirement savings targets for their age and income.<sup>3</sup> Yet for most workers, public policies are not to blame for their lack of saving. For public school teachers, however, retirement insecurity is a problem resulting from poorly structured policies put in place over the past few decades state by state and city by city.



## WINNERS AND LOSERS

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Most observers of the current pension system point to a small group of winners: the fraction of teachers who stay in one pension plan for their career (that is, those teachers who do not change careers or decide to move and teach elsewhere). The teachers who dedicate their careers to working in public schools in the same plan do, in fact, benefit from the current system. They can earn a steady stream of income, adjusted for inflation as they age, that's guaranteed to last their entire lifetime. Employers can augment the retirement benefits for teachers committed to staying within one pension plan (which in practice means a single state or, in states with multiple pension plans, a single school district) for their entire career because of all of the ex-teachers who leave early and leave behind benefits as a result. Some might consider this a just reward for a career in service of a higher calling, for staying put while others leave, and for years of a low base salary in exchange for the promise of a secure retirement.<sup>4</sup> Where proponents see the financial security of this arrangement, critics decry the generosity or envy the fact that few private sector workers have comparable retirement benefits (See *Comparing Public and Private Sector Retirement* on page 19).

Yet this type of thinking—protecting the few at the expense of the many—ignores the plight of the millions of losers in the current system. Education is a field with significant turnover: the vast majority of teachers will not stay in teaching their entire career. Nationwide, nearly half of all teachers will leave the profession before reaching five years.<sup>5</sup> Only a small fraction of those who start out as teachers will remain in teaching throughout their entire working lives. The biggest losers under the current arrangement are ex-teachers, but mobile teachers lose out as well. Even if someone does stay in teaching, the current system advantages only those career teachers who stay put and never cross state borders, or in some cases school district lines, to teach somewhere else.

Over the years, states have instituted rules to make it more difficult for teachers to earn pension benefits at all. For example, during the recent recession, twelve states, including Illinois, lengthened their “vesting period,” the time a teacher must be employed before becoming eligible for pension benefits.<sup>6</sup> This change helps limit state funding obligations by reducing the number of teachers eligible for benefits.

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**Each year, tens of thousands of teachers will leave the profession with very little retirement savings, making it much harder for them to earn a secure retirement over their careers.**

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Figure 1 shows the various state vesting requirements. One state, Arizona, allows teachers to vest immediately. Twenty-four states and the District of Columbia required teachers to stay in the state pension plan for five years before vesting, and another seventeen required them to stay ten years.

Many teachers will never meet their vesting requirements. It's possible to get a sense of how big this problem is from the state teacher pension plans themselves. Every state publishes “withdrawal” tables that estimate how many

teachers will leave in a given year. These estimates are typically based on the state's actual turnover rates, and they are used to determine how well a pension plan is funded and how much money the state needs to contribute each year. By comparing the withdrawal rates and the vesting requirements set by states, it's possible to estimate for all fifty states and the District of Columbia the percentage of new teachers who will ever earn a pension (see Methodology section for an explanation of how to calculate these rates, and see Figure 2 for state data).

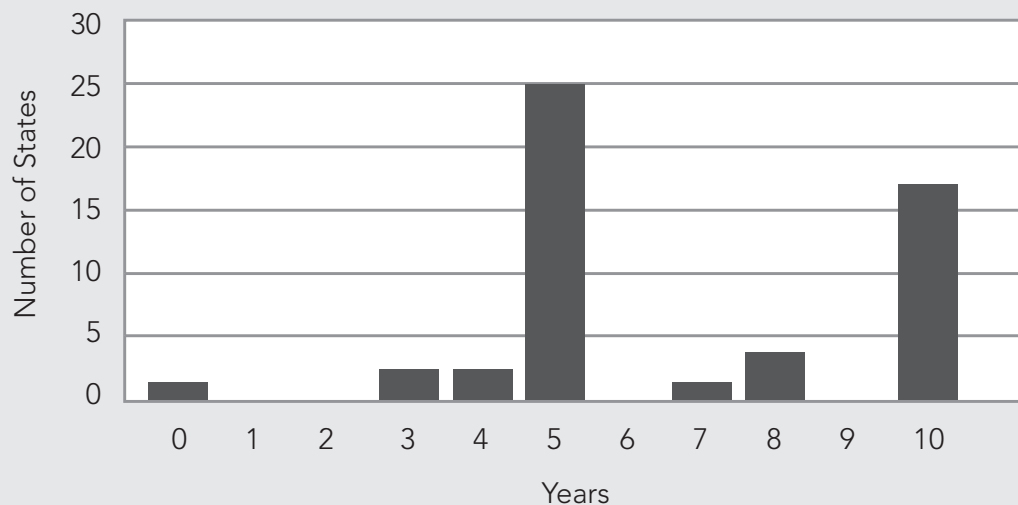
The percentage of teachers who vest in their state's pension plan varies widely depending on the length of the vesting requirement and the estimated turnover rate. Due to its

immediate vesting provision, all teachers in Arizona qualify for at least a minimal pension benefit. At least two-thirds of teachers in Idaho, California, and Kentucky will also qualify for a pension benefit. But those are the exceptions. Maine estimates that 86.1 percent of teachers will not qualify for a pension, and the District of Columbia estimates that four-out-of-five beginning teachers will not vest. According to their own data, only about 25 percent of teachers will vest in Mississippi, Pennsylvania, New Hampshire, and Hawaii, and less than 35 percent of teachers will stay long enough to qualify for a pension in Florida, Nebraska, Indiana, South Carolina, New Mexico, Ohio, Georgia, and North Carolina.<sup>7</sup> In the median state, only 44.5 percent of new teachers will stay long enough to earn a minimum pension. Each year, tens of thousands of teachers will leave the profession with very little retirement savings, making it much harder for them to earn a secure retirement over their careers.

It's possible to use these calculations to estimate how many additional teachers a state puts on a path to retirement insecurity when it lengthens vesting requirements. Going back to the Illinois example, in 2010, state legislators lengthened the vesting requirement for new teachers from five years to ten. Illinois knew that a large percentage of teachers weren't

FIGURE 1

NUMBER OF YEARS BEFORE A TEACHER QUALIFIES FOR A MINIMUM PENSION BENEFIT



making it to five years, let alone ten. According to the state's own figures, 66.6 percent of teachers were able to qualify for the old, shorter vesting requirement. With a ten-year waiting period, only 38.0 percent of teachers will meet the state's vesting requirements, a 28.6 percentage point decline. Now nearly two-thirds of new teachers in Illinois won't meet the vesting requirement and will leave Illinois's teacher pension system without qualifying for a pension and on a poor retirement savings path.

Vesting is an important milestone in state pension plans, but it guarantees only a minimum annuity in retirement. The largest rewards go to those who remain in the system for thirty or more years. This is a relatively small group. For example, a recent paper found that fewer than 10 percent of teachers will reach the maximum benefit in eight of the ten largest school districts in the U.S.<sup>8</sup> The median state estimates that only 19.7 percent of beginning teachers will stay long enough to reach the state's normal retirement age (and qualify for an unreduced pension benefit). Ten states—Maine, Vermont, South Dakota, New Hampshire, Mississippi, Wyoming, Colorado, Texas, Nebraska, and Arizona—and the District of Columbia estimate that fewer than 10 percent of teachers will remain in the state system long enough to be eligible for normal retirement benefits (See Figure 2 for every state's assumption).

Some teachers are wholly dependent on their state pension plan. All private sector workers are enrolled in Social Security so many Americans do not realize that not all public sectors workers are. Today, coverage varies across the states, and nearly 7 million government workers do not participate in Social Security, including 40 percent of all K–12 teachers. A substantial portion of teachers in fifteen states—Alaska, California, Colorado, Connecticut, Georgia, Illinois, Kentucky, Louisiana, Maine, Massachusetts, Missouri, Nevada, Ohio, Rhode Island, and Texas—are not enrolled in Social Security. Not only do many of these teachers miss out on benefits from their state's pension system, but once they transition to other jobs, they will also have fewer years of earnings from which to draw a Social Security benefit.

FIGURE 2

## STATE DATA ON TEACHER VESTING REQUIREMENTS AND RETIREMENT ELIGIBILITY

State	Years to Full Vesting	Estimated % Who Vest	Estimated % Who Do Not Vest	Normal Retirement Age	Estimated % Reaching Normal Retirement Age	Estimated % Not Reaching Normal Retirement Age
Alabama	10	39.4	60.6	62	27.0	73.0
Alaska*	5	46.9	53.1	60	12.0	88.0
Arizona**	0	100.0	0.0	55	9.9	90.1
Arkansas	5	56.6	43.4	53	30.8	69.2
California	5	69.1	30.9	62	48.2	51.8
Colorado	5	35.9	64.1	58	7.9	92.1
Connecticut	10	54.8	45.2	60	33.6	66.4
Delaware	10	35.3	64.7	55	21.3	78.7
District of Columbia	5	18.8	81.2	55	4.2	95.8
Florida	8	28.6	71.4	58	11.4	88.6
Georgia	10	34.5	65.5	55	20.6	79.4
Hawaii	10	25.5	74.5	60	11.4	88.6
Idaho	5	70.3	29.7	65	30.7	69.3
Illinois	10	38.0	62.0	67	18.5	81.5
Indiana	10	32.0	68.0	55	20.5	79.5
Iowa	7	42.1	57.9	57	24.5	75.5
Kansas	5	44.5	55.5	60	23.5	76.5
Kentucky	5	67.3	32.7	52	43.0	57.0
Louisiana	5	55.6	44.4	60	15.8	84.2
Maine	5	13.9	86.1	60	1.8	98.2
Maryland	10	42.9	57.1	58	27.1	72.9
Massachusetts	10	35.6	64.4	60	16.6	83.4
Michigan	10	43.4	56.6	60	27.3	72.7
Minnesota	3	49.7	50.3	66	22.0	78.0
Mississippi	8	23.9	76.1	55	5.9	94.1
Missouri	5	57.7	42.3	53	38.1	61.9

Note: The table is based on state assumptions for twenty-five-year-old female teachers who begin their teaching experience after August 1, 2013. Source: Authors' calculations from state Comprehensive Annual Financial Reports.

\*Alaska has offered only a defined contribution plan to teachers hired after July 1, 2006. For Alaska, we use the assumptions from its defined benefit plan offered to teachers hired before July 1, 2006.

\*\*All beginning teachers in Arizona are immediately vested in the Arizona State Retirement System.

## STATE DATA ON TEACHER VESTING REQUIREMENTS AND RETIREMENT ELIGIBILITY (continued)

State	Years to Full Vesting	Estimated % Who Vest	Estimated % Who Do Not Vest	Normal Retirement Age	Estimated % Reaching Normal Retirement Age	Estimated % Not Reaching Normal Retirement Age
Montana	5	35.3	64.7	55	18.3	81.7
Nebraska	5	31.7	68.3	65	9.8	90.2
Nevada	5	55.3	44.7	55	28.7	71.3
New Hampshire	10	25.1	74.9	65	5.7	94.3
New Jersey	10	55.0	45.0	65	41.9	58.1
New Mexico	5	33.5	66.5	55	16.5	83.5
New York	10	40.3	59.7	63	29.2	70.8
North Carolina	10	34.8	65.2	55	17.8	82.2
North Dakota	5	45.6	54.4	60	12	88
Ohio	5	33.6	66.4	55	18.8	81.2
Oklahoma	5	50.0	50.0	60	26.4	73.6
Oregon	5	56.5	43.5	60	12.0	88.0
Pennsylvania	10	24.8	75.2	60	14.0	86.0
Rhode Island	10	58.3	41.7	55	49.6	50.4
South Carolina	8	33.3	66.7	58	17.7	82.3
South Dakota	3	52.6	47.4	65	4.6	95.4
Tennessee	5	56.0	44.0	55	19.8	80.2
Texas	5	45.1	54.9	62	8.2	91.8
Utah	4	52.2	47.8	55	25.6	74.4
Vermont	5	35.2	64.8	55	3.6	96.4
Virginia	5	49.5	50.5	65	15.8	84.2
Washington	10	55.9	44.1	65	40.9	59.1
West Virginia	5	56.0	44.0	55	36.5	63.5
Wisconsin	5	63.7	36.3	57	43.8	56.2
Wyoming	4	41.5	58.5	55	7.2	92.8
<b>Median State</b>	<b>5</b>	<b>44.5</b>	<b>55.5</b>	<b>58</b>	<b>19.7</b>	<b>80.3</b>

## PENALTIES FOR MOBILITY

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School districts or the state pension plans might not be that concerned with the plight of teachers who taught for only a few years and then left. Employers are able to pass on their savings from young and mobile teachers and provide a larger benefit to those who do choose to stay. So perhaps it's no surprise that the teachers who remain in the system long enough to maximize their benefits—an ever-shrinking group—are the most organized politically, via teachers unions and other stakeholder groups.

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**Many state systems have put in place penalties for mobility that can amount to hundreds of thousands of dollars in lost pension wealth.**

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The losers are future teachers and mobile teachers who are diffuse, unorganized, and in many cases not even aware of how the system will or already has disadvantaged them. How big are their losses? The details vary by state and depend on whether the state provides non-vested teachers with only their own contributions; their own contributions plus interest; or their own contributions, the employer contributions, and interest. The chart on the next page shows how these policies affect an individual teacher. It assumes she

earns a base salary of \$40,000 a year, and it uses the median state plan's assumption for employee and employer contribution rates and for the interest rate on investments.<sup>9</sup>

In every state, if and when a teacher leaves the pension plan, she gets at least her own contributions back. In six states, including Illinois, plus the District of Columbia, that's all she would get, even though her employer has been contributing on her behalf and the pension plan has (presumably) been able to grow the money through investments. At the opposite end, teachers in only two states—Colorado and South Dakota—receive their own contributions, their employer's contributions, and some amount of interest. Forty-one states allow a teacher to

FIGURE 3

Return Policy at Withdrawal	Number of States	Annual Member Contribution	Annual Employer Contribution	Interest Rate	Value After One Year	Value After Three Year
Teacher Contributions Only	7	\$2,400	\$2,230	8%	\$2,400	\$7,200
Teacher Contributions Plus Compound Interest	41	\$2,400	\$2,230	8%	\$2,592	\$8,415
Teacher and Employer Contributions Plus Compound Interest	2	\$2,400	\$2,230	8%	\$5,001	\$16,235

*"Policy Issue: Pensions," available online at <http://www.nctq.org/statePolicy/policyIssueFindings.do?policyIssueId=4&stateId=> (accessed March 2014)*

withdraw her own contributions and grant her some interest but do not pay out her employer's contributions. The difference between the best and worst of these policies can equal up to 6.5 percent of a teacher's annual salary for one year, or, because of compound interest, 22.6 percent of a teacher's annual salary after three years. To put this in dollar terms, a hypothetical teacher earning \$40,000 a year could face a savings penalty of \$2,601 for one year and \$9,035 if they leave after three years. This money stays with the pension funds and can be used to supplement the pensions of the remaining teachers.

The media often tells stories about teachers purchasing school supplies out of their own pockets. Nationally, those out-of-pocket expenditures average \$356.<sup>10</sup> While those stories garner significant attention each fall around the start of the school year, thousands of teachers lose out on much more than that amount, every year, in retirement savings. These losses diminish the foundation for retirement savings for today's early- and mid-career teachers.

It may be hard to be sympathetic to teachers who teach for only a few years before becoming ex-teachers. But the problems do not just adversely affect people who choose to leave teaching altogether. Substantial penalties for mobility within the teaching profession affect the tens of thousands of teachers who move between states or districts for personal or professional reasons every year. Many state systems have put in place penalties for mobility that can amount to hundreds of thousands of dollars in lost pension wealth. A teacher who splits a thirty-year career between two pension plans would accumulate between 41 and 74 percent less in pension wealth, depending on the state, than a peer with the same longevity in only one pension plan.<sup>11</sup> Teachers can lose more than half of their pension wealth just for moving once; if a teacher moved multiple times—if, for example, her spouse were in the military—the losses would be even greater.



## THE TEACHING PROFESSION HAS CHANGED

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While the basic structure of teacher pension systems remain largely the same as when they were first adopted, the teaching profession itself has changed a good deal over the past quarter century. In 1988, if you asked teachers how many years of experience they had, the most common answer would have been fourteen or fifteen years. State retirement systems that favored longevity suited a large portion of the workforce.

In the intervening years, the landscape has changed significantly. In 2008, if you asked teachers the same question about how many years of experience they had, the most common answer would have been one year, followed by two years.<sup>12</sup> Today, people come in and out of the profession. They might start out as science teachers but decide to go into business, or they might be scientists and switch careers and become teachers for a while. This trend is not just evident in teaching: The Bureau of Labor Statistics followed all Baby Boomers throughout their working careers and found that the average Boomer held 11.3 jobs between the ages of eighteen and forty-six.<sup>13</sup> Although turnover decreases with age, the median adult employee in the U.S. has about five years of experience with his current employer.<sup>14</sup>

The teaching profession is likely to keep changing in the future. In recent years, state leaders have placed a renewed focus on linking effectiveness with human capital strategies around teacher recruitment, training, evaluation, and compensation. A 2012 analysis by Bellwether Education Partners found that nearly half the states had enacted new ways to evaluate teachers and link the results to key personnel decisions, such as tenure, reductions in force, dismissal of underperforming teachers, and retention.<sup>15</sup> States are also moving in the direction of setting a higher, and later, bar for earning tenure. If those efforts succeed, more teachers will be forced out of the profession. We may even start to see a different workforce, one that values efficacy, flexibility, and opportunity more than stability and predictability.

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**Pension systems need to grapple with the fact that they are providing benefits to a different workforce than they had in the past**

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Regardless of how one feels about these developments, pension systems need to grapple with the fact that they are providing benefits to a different workforce than they had in the past. As education leaders and policymakers struggle to identify highly effective teachers, increase their numbers, and distribute them equitably, many pension structures are misaligned with the changing workforce. For example, defined benefit formulas rely on age and years of experience, and are blind to teacher effectiveness. They provide few incentives for early-career teachers and strong push and pull effects that help retain some mid-career teachers who would otherwise leave and that push out late-career teachers who would otherwise remain.<sup>16</sup> To maximize their pension benefit—an understandable preference—some late-career teachers remain teaching even when they might otherwise prefer to retire. When Illinois offered an early retirement package to teachers in the mid-1990s, large numbers of older, more experienced teachers retired. With an influx of new teachers taking their place and a rapid decline in average teacher experience, we would have expected student achievement to go down. Instead, student math and English test scores either stayed the same or went up.<sup>17</sup> There may be multiple reasons for this, but it's clear that the buyouts didn't hurt student learning.

Economists and outside observers are not the only ones claiming there are perverse incentives hidden in current the current pension system. Teachers themselves report that pension incentives can have adverse effects on their colleagues. In a nationally representative sample of teachers, nearly three out of four agreed that “too many veteran teachers who are burned out stay because they do not want to walk away from the benefits and service time they have accrued.”<sup>18</sup> About the same number indicated that making it easier to leave and return to teaching without losing retirement benefits would help attract and retain high-quality teachers.<sup>19</sup>

Evidence from the states suggests that some teachers are looking for choice in retirement plans. When new Florida teachers were given the option between enrolling in the state's traditional defined benefit (DB) plan or a 401(k)-style defined contribution (DC) plan, one-quarter to one-third of all new teachers chose the DC plan, even though the DB plan was the default option.<sup>20</sup> In Washington State, when teachers were given the option between the state's traditional DB plan or a hybrid plan with both DB and DC elements, 52 to 75 percent of all new teachers chose the hybrid option.<sup>21</sup> These figures suggest that at the very least, a portion of the teaching workforce would like a different option than traditional DB plans.

## THE NATIONAL RETIREMENT CRISIS

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Over the past thirty years, private sector workers have been asked to take increasing responsibility in saving for retirement. They decide whether to participate in their employer's retirement benefits, they decide how much to save, and they decide where to invest. Public policies set tax exempt savings limits and basic rules for individuals, but ultimately, individuals must make their own decisions.

So far, the experiment in self-financed retirement is not turning out well—the latest figures suggest that millions of Americans face a “retirement insecurity” crisis whereby they'll have to work more years or survive on significantly lower incomes, a result of poor savings habits, stagnant wages, and an uneven economy. According to a June 2013 analysis by the National Institute on Retirement Security, 45 percent of working-age households have no retirement account assets at all. Using Federal Reserve data, the study found that 92 percent of all working households do not meet conservative retirement savings targets for their age and income. Worse, two-thirds of those nearing retirement have accumulated total retirement savings less than their annual income.<sup>22</sup>

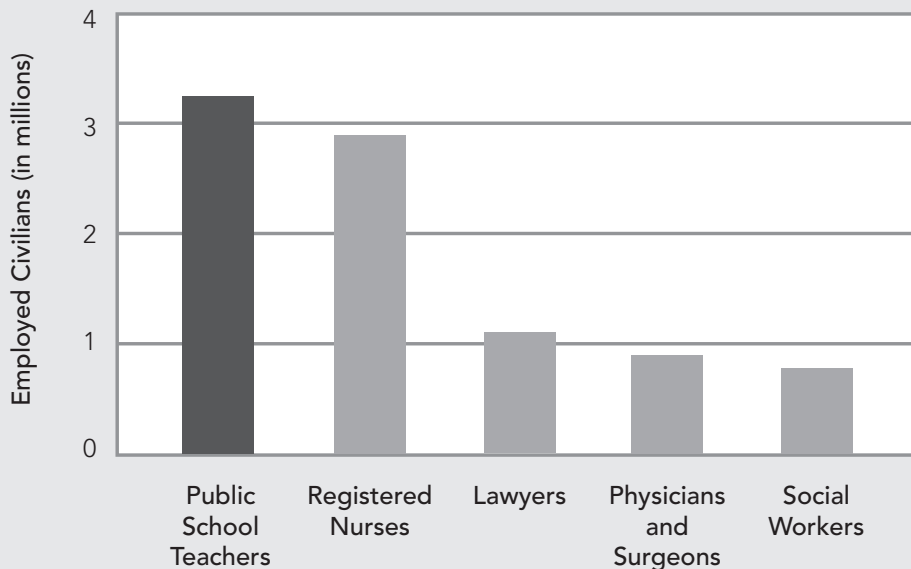
The failure of retirement saving in the private sector is a result of poor individual decisions and an absence of strong public policies supporting positive saving habits. Advocates have called for strengthening those policies by requiring employers to automatically enroll workers in 401(k) plans, subtly “nudging” employees to save more, and preventing workers from cashing out their savings before retirement. Such steps would address many of the historical problems of 401(k) plans. If policymakers create more portable, individualized retirement savings plans for public sector workers, they should learn from these mistakes as well.

But public sector defined benefit plans have their own retirement security issues. Instead of an absence of strong policies, state and local government workers, including teachers, suffer from public policies that directly impair retirement security for young and mobile workers.

At 3.3 million, public schools teachers are one of the largest professions in the U.S., and their retirement security should be a national concern. There are more public school teachers than there are retail salespersons, cashiers, or secretaries and administrative assistants.<sup>23</sup> Teachers are often compared to members of professions with similar educational levels like nurses or social workers, but public school teachers are as large a group as those two professions combined, and teachers are the single largest class of workers with bachelor's degrees or higher (see Figure 4 below).<sup>24</sup>

FIGURE 4

TEACHERS ARE THE LARGEST CLASS OF B.A. WORKERS



And yet, our public policies systematically hamper the retirement security of this enormously important group of workers. It's dreadful public policy to disadvantage the largest class of B.A. workers in the country in the early years of their careers. If we want workers to plan ahead and save for retirement, we should not have public policies that run counter to that goal.

## THE TRILLION DOLLAR GORILLA

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States have made pension plans less friendly for teachers because of financial problems. Collectively, the gap between what states have saved for teacher pensions and what they have promised totals \$390 billion.<sup>25</sup> Teacher pensions are an important part of the more than \$1 trillion shortfall states face for public sector pensions and benefits today.<sup>26</sup> When the ratio between what states have and what they have promised falls below 100 percent, the plan is said to be “underfunded.” Funding levels vary widely, but as of 2012, the teacher pension plan in forty-eight states and the District of Columbia were underfunded. In most states with significant financial problems, the current underfunding problems took years to manifest. Poor investment returns, unrealistic investment assumptions, badly timed or ill-considered benefit enhancements, the failure of elected officials to make the financial contributions they committed to, and other causes contributed to the current funding status.

One way employers have and will continue to respond to rising pension costs is to cut back on other things. Instead of hiring more teachers or paying them more money, districts have been and will continue to devote an increasing share of finite resources to pensions. For example, from 2004 to 2013 school districts increased their spending on retirement costs from 11.9 to 17 percent of teacher salaries.<sup>27</sup> These benefit decisions are often made at the state level and are mandatory for districts and participating charter schools regardless of their spending priorities.

School districts are already making tough trade-offs to address years of inadequate funding. Chicago, for example, recently laid off nearly 1,000 teachers, roughly 4 percent of its teaching workforce, to counteract rising pension costs and had its bond ratings lowered as a result of the state's.<sup>28</sup> A recent analysis found that pension costs in Philadelphia are projected to rise fivefold over the next decade, an increase that could cost 1,203 to 3,077 teacher jobs, or up to one-third of the city's teaching force.<sup>29</sup> In St. Louis, pension costs have doubled in the past seven years and now eat up 10 percent of the district's budget.<sup>30</sup>

For poorly funded plans, increasing employer and employee contribution rates, lengthening vesting periods, limiting the ways employees can "spike" their benefits by counting sick leave or vacation days toward pensions, and other reforms could put pension plans on a sounder fiscal footing. These changes would obviously be for the good. But they would be incomplete reforms, because what policymakers would have accomplished is a shoring up of a fundamentally outdated system.

## RETIREMENT BENEFITS FOR TOMORROW'S WORKFORCE

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Pension reform cannot be expected to entirely solve the human capital problems facing American elementary and secondary education. But given the link between compensation and human capital challenges, as well as the clear disincentives for entering the profession that exist today, it is essential that conversations on pension reform and improving teacher quality do not happen in isolation. Any changes will create winners and losers, but the current system creates winners and losers already. The following are guiding principles that policymakers should consider in making changes to their state's pension plan:

### JOIN SOCIAL SECURITY

While Social Security faces its own set of unique problems, enrolling all employees in Social Security is another way states and districts could provide benefits to a mobile workforce. Because it's a national retirement security program, Social Security is the very definition of portable. From the employer's perspective, Social Security also eases the burden on state or district pension plans. Participating employers are able to offer their own less expensive pension plans, which helps lower their unfunded liability and reduce funding uncertainty.

### CLEAN UP THE FINANCIAL MESS AND ADDRESS HUMAN CAPITAL PROBLEMS

By focusing only on the financial aspects of plans, policymakers neglect the main purpose of retirement plans in the first place: to offer an attractive and secure retirement to employees. While the national debate about pension reform focuses on funding and sustainability issues,

it's possible to have a fiscally sound pension plan that nonetheless doesn't meet the needs of the vast majority of workers or works at cross-purposes with efforts to improve the quality of the teaching force. States are shoring up the financial aspects of plans while making the benefits worse. State leaders must resist the temptation to fix only the most pressing financial problems, which risks making their state less attractive to current or future teachers.

States shouldn't expect to dig out of this problem overnight. Nor should they ask new teachers to bear the full burden of past mistakes. Instead, states should think long-term about how to get new employees enrolled in more fiscally sustainable and portable retirement plans. At a minimum, states should ensure that teachers leaving the pension plan can take with them their own contributions, a share of the interest those contributions accrued, and a share of the employer contributions that were made on their behalf.

#### TACKLE THE RIGHT PROBLEMS

The debate over public sector pensions is, unfortunately, too often framed in terms of outrage at the pension plans' generosity. Newspapers find and report on retired public sector workers who "spiked" their pension benefits by (legally) cashing out vacation and sick days to make their final salaries look higher than they were. The public thinks issues like these are the biggest problems with current pension plans, so these are the problems legislators tackle. While it's important to address the various perverse incentives that exist today, they are a relatively small part of the problem, and none of these fixes does anything to change the structure of pension plans and ensure that they meet the needs of today's workforce.

#### MAKE TRANSPARENCY A PRIORITY

As rising pension costs begin to cut into state and local budgets, policymakers should be transparent about the fiscal decisions they'll be forced to make. While pensions have not historically taken up a large share of state and local budgets, many states are going to have to devote more resources to addressing funding shortfalls. That money must come from somewhere, and there's already evidence that pension costs are limiting the ability of school districts to pay teachers more money and hire more teachers. At the state level, policymakers will need to make tough choices about funding pensions or providing ongoing services like parks, prisons, and higher education.



States must do a better job of informing teachers and the public about funding decisions. Many teachers are unaware of how much their district is contributing to state pension systems on their behalf. States could require that all districts show, on each educator's pay stub, exactly how much their employer is contributing toward their retirement.

#### ACKNOWLEDGE UNCERTAINTY

States project future costs of pensions plans as if they know exactly how the next thirty years will play out. But their projections are based on a number of assumptions about how well their investments will perform, how much employees will earn in the future, how long employees will work, and how long pension beneficiaries will live after they retire. If any of those projections are off—if investment returns do not match historical rates, for example—states could owe much more than they've projected. Instead of reporting one seemingly precise estimate for how much they need to save, pension plans should provide the public with a range of possibilities showing what might happen with better than expected, expected, or worse than expected results.

#### DESIGN SOLUTIONS WITH THE WEAKNESSES OF 401(K)S IN MIND

State policymakers should not merely try to force public sector workers like teachers into plans modeled after the private sector. The private sector experiment with 401(k) plans provides learning opportunities for policymakers to design better retirement benefits. That includes acknowledging that teachers are human, and humans make mistakes. Public policies should allow choice but use “nudges” to help individuals make wise decisions. For example, research has shown that the default option matters tremendously: automatic enrollment in 401(k) plans boosts participation rates in employees' first year by 45 to 58 percentage points.<sup>31</sup> Policymakers should also explore other mechanisms to encourage better saving habits, such as setting mandatory contribution rates, using automatic increases when employees get a raise, matching employee contributions to a certain level, limiting options to low fee life cycle or index funds that make investment allocations based on the individual's age and expected retirement date, and converting account balances into annuities upon retirement.

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**The debate between traditional pensions and 401(k)-style DC plans is a false one.**

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**BE CREATIVE**

The debate between traditional pensions and 401(k)-style DC plans is a false one. The federal government, for instance, has phased out its reliance on DB plans in favor of hybrid retirement benefits that combine a less generous defined benefit plan, enrollment in Social Security, and a

defined contribution plan. This model offers some of the best features of both plans, providing employees with the security of DB plans and Social Security and the portability of DC plans. Some states have adopted similar hybrid models.

Another alternative retirement structure, called a cash balance (CB) plan, combines many of the best elements of DB and DC plans. Each year, a CB plan awards employees with a salary credit (some percentage of their salary) and, on the balance already accumulated, an investment return credit (some fixed or indexed rate of return). Employers guarantee a fixed-rate investment return usually set at some relatively safe percentage or indexed to an external figure like long term Treasury bonds. Workers own their accounts and can take the entire balance with them when they are ready to leave or retire. More than 12 million workers in the private sector belong to a cash balance plan,<sup>32</sup> and state legislatures in Kansas, Kentucky, Louisiana, and Nebraska have all adopted cash balance plans for their state employees.

In other words, policymakers shouldn't feel trapped in a DB versus DC debate. There are viable alternate options that can meet the multiple goals of improving sustainability, helping teachers save for retirement, and better aligning retirement policies with today's education labor market. Most important, although policymakers face hard choices, change from traditional defined benefit plans need not be unworkable or unfavorable to teachers.

What policymakers should not do, however, is perpetuate a system that creates a small number of winners at the expense of a large number of losers. Retirement security is a serious challenge. Policymakers shouldn't make it even harder on Americans who choose to teach for part of their career, our largest class of college-educated workers.

## COMPARING PUBLIC AND PRIVATE SECTOR RETIREMENT

Over the past thirty years, there's been a growing divergence between the retirement plans offered in the public and private sectors. In 1985, four in every five private sector workers had access to pension plans, commonly referred to as defined benefit or DB plans. By 2011, private sector employers had largely abandoned DB plans, and only one in five private sector workers had access to one. Instead, employers began offering defined contribution (DC) plans. Teachers and other public-sector workers, on the other hand, are still overwhelmingly offered DB plans. Eighty-two percent of teachers and 78 percent of all state and local government employees are still enrolled in a DB plan.<sup>33</sup>

Like its name suggests, the employer in a DB plan defines the benefit or promised amount of money the employee will receive in retirement. The employer determines how much it will need to save today, and how that money should be saved, to pay benefits down the road. To calculate a DB payout for a retiring employee, the formula consists of a "multiplier" (a percentage of the employee's salary, usually about 2 percent) multiplied by salary and years of service. So a DB plan with a multiplier of 2 percent would pay an employee with a salary of \$50,000 and twenty-five years of service \$25,000 a year in retirement. The employee would receive that amount every year until he dies, whether that happens the year after retirement or at age one hundred. Also, to ensure that the amount is not worn away by inflation over the course of retirement, most DB plans include an annual cost of living adjustment. Some plans set a fixed rate (such as 2 or 3 percent) for cost of living, but others adjust their calculations annually for inflation.

Private-sector workers are more often enrolled in defined contribution plans. In DC plans, the employer communicates in advance what percentage of an employee's salary it will contribute to her retirement account. Employees own the accounts and are responsible for deciding their own contributions and investments.

In a typical DC plan, employers open 401(k) accounts for their workers and match a portion of employees' contributions. Unlike DB plans, whereby the employer promises some future benefit level at some future point in time, employers must contribute to DC plans with real-time cash contributions. In 2013, employees could contribute up to \$17,500 and workers over fifty could contribute an additional \$5,500.<sup>34</sup> Both employee and employer contributions to the accounts are pre-tax, meaning they are not subject to federal income tax prior to being deposited. This is intended as an incentive to encourage saving. Through contributions and investment returns, the account can grow substantially over time. With a few exceptions, workers are unable to access the money before they turn fifty-nine and a half without incurring tax penalties. At age seventy and a half or after retirement, whichever comes later, retirees must make certain minimum distributions, but money remaining in the account after their death can pass to their heirs.

Unlike DB plans, DC plans are in workers' names and are portable, meaning employees can take them with them when they leave a job. Along with this flexibility, however, comes additional risk. It is the worker, for instance, who decides how much to contribute and where to invest the money. Workers are directly accountable for their choices. In DB plans, in contrast, the institution responsible for operating the plans, typically the state or local government, carries all the risk.

## METHODOLOGY: CALCULATING TEACHER RETENTION RATES

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To calculate teacher retention rates, we downloaded the most recent version of each state’s Comprehensive Annual Financial Reports. Those reports include tables providing the state’s assumptions for teacher withdrawal rates. This paper focuses on turnover rates for twenty-five-year-old female teachers, but one could use the same method below to calculate turnover rates for male teachers or teachers of a different age. As an example, see Illinois’ assumptions for “terminations from active service” in Figure 5, taken from the Teachers’

**FIGURE 5**

### ILLINOIS’ TEACHER WITHDRAWAL RATE ASSUMPTIONS

Age	Nonvested Members Male	Nonvested Members Female	Vested Members Male	Vested Members Female
25	7.0	7.8	6.0	9.0
30	8.6	10.6	3.7	6.0
40	11.1	10.0	1.5	2.2
50	12.0	10.0	1.4	1.4
55	16.0	15.0	4.0	3.1
60	21.0	14.0	4.0	4.0
65	21.0	40.0	4.0	4.0

Retirement System of the State of Illinois' Fiscal 2013 CAFR.<sup>35</sup> The table shows that Illinois expects 7.8 percent of non-vested, twenty-five-year-old female teachers to depart during their first year, leaving 92.2 percent of the initial group remaining. That's the one-year retention rate. Illinois expects the same 7.8 percent annual termination rate for teachers who are ages 25, 26, 27, 28, and 29. When they reach the age of 30, in their sixth year of teaching, Illinois assumes the termination rate climbs to 10.6 percent per year (the retention rate falls to 89.4 percent a year).

Using the state assumptions, it's possible to estimate how many teachers will reach the state's vesting requirement and qualify for at least a minimum pension. In Illinois, the vesting requirement for new teachers is ten years of experience. Mathematically, it looks like this:

**1-year retention:**

100 beginning teachers X (92.2 percent retention in Year 1) = **92.2 percent retention**

**2-year retention:**

100 beginning teachers X (92.2 percent retention in Year 1) X (92.2 percent retention in Year 2) = **85.0 percent retention**

**10-year retention:**

100 beginning teachers X (92.2 percent retention in Year 1) X (92.2 percent retention in Year 2) X (92.2 percent retention in Year 3) X (92.2 percent retention in Year 4) X (92.2 percent retention in Year 5) X (89.4 percent retention in Year 6) X (89.4 percent retention in Year 7) X (89.4 percent retention in Year 8) X (89.4 percent retention in Year 9) X (89.4 percent retention in Year 10) = **38.0 percent retention**

At the end of ten years, 38 percent of Illinois teachers would vest into the pension system and qualify for at least a minimum monthly payment upon retirement. Sixty-two percent of this group of Illinois teachers will leave before vesting. They will be entitled to a refund of their own contributions to the defined benefit plan, but they will not be eligible for any interest on those funds and they must forfeit the contributions their employer made on their behalf.

Although these are state assumptions for the future, pension plans conduct occasional "experience surveys" to compare their assumptions to actual historical turnover rates. This calculation understates the rate of total turnover because it does not include teachers who leave the profession for early retirement, death, or disability.

## ENDNOTES

- <sup>1</sup> “A Report on the Financial Condition of the IL State Retirement Systems” (Springfield, IL: Commission on Government Forecasting and Accountability, March 2011), <http://www.ilga.gov/commission/cgfa2006/Upload/FinCondILStateRetirementSysMarch2011.pdf>.
- <sup>2</sup> This calculation is based on the attrition rates assumed by the Teachers Retirement System of Illinois for twenty-five-year-old females. Those rates are published on page 92 of the system’s 2012 annual financial report: <http://trs.illinois.gov/subsections/pubs/cafr/fy12/actuarial.pdf>.
- <sup>3</sup> Nari Rhee, “The Retirement Security Crisis: Is It Worse Than We Think?” (National Institute on Retirement Security, June 2013).
- <sup>4</sup> There’s an open debate about whether teachers are fairly paid compared with similarly educated workers, but there’s little argument that teachers tend to receive a relatively large portion of their total compensation from fringe benefits like health care and retirement benefits.
- <sup>5</sup> See, for example, Richard M. Ingersoll, “Is There Really a Teacher Shortage?” (Seattle: Center for the Study of Teaching and Policy, September 2003).
- <sup>6</sup> Unless otherwise stated, the data in this paper are based on each state’s defined benefit plan offered to twenty-five-year-old female teachers who began their teaching experience on or after August 1, 2013. The only exception is Alaska, which has offered only a defined contribution plan to teachers hired after July 1, 2006. For Alaska, we use the assumptions from its closed defined benefit plan.
- <sup>7</sup> While Florida’s teacher pension plan is on strong financial footing, the vesting numbers show that a well-funded plan does not necessarily mean the state doesn’t need to make changes. The fact that Florida’s pension plan is well funded provides little comfort to the young and mobile teachers it disadvantages.
- <sup>8</sup> Josh McGee and Marcus A. Winter, “Better Pay, Fairer Pensions: Reforming Teacher Compensation” (New York: The Manhattan Institute, September 2013).
- <sup>9</sup> These totals come from assuming a 6 percent employee contribution rate, a 5.6 percent employer normal cost, and an 8 percent investment return. These are the median figures from state pension plans serving teachers. Source: Public Plans Database, 2001–11 (Center for Retirement Research at Boston College and Center for State and Local Government Excellence).
- <sup>10</sup> See, for example, David Nagel, “Teachers Spend \$1.3 Billion Out of Pocket on Classroom Materials,” *The Journal*, <http://thejournal.com/articles/2010/07/08/teachers-spend-1.3-billion-out-of-pocket-on-classroom-materials.aspx>.
- <sup>11</sup> Robert M. Costrell and Michael Podgursky, “Distribution of Benefits in Teacher Retirement Systems and Their Implications for Mobility,” *The Association for Education Finance and Policy Journal* 5, no. 4 (Fall 2010): 519–57.
- <sup>12</sup> Thomas G. Carroll and Elizabeth Foster, “Who Will Teach? Experience Matters” (Washington, DC: National Commission on Teaching and America’s Future, January 2010).
- <sup>13</sup> See <http://www.bls.gov/news.release/nlsoy.nr0.htm>.
- <sup>14</sup> See [http://www.bls.gov/news.release/archives/tenure\\_09182012.htm](http://www.bls.gov/news.release/archives/tenure_09182012.htm).
- <sup>15</sup> Sara Mead, “Recent State Action on Teacher Effectiveness” (Washington, DC: Bellwether Education Partners, August 2012).
- <sup>16</sup> See Dan Goldhaber and Cyrus Grout, “Which Plan to Choose? The Determinants of Pension System Choice for Public School Teachers” (Bothell, WA: Center for Education Data and Research, March 2013); and Cory Koedel, Michael Podgursky, and Shishan Shi, “Teacher Pension Systems, the Composition of the Teaching Workforce, and Teacher Quality,” *Journal of Policy Analysis and Management* 32, no. 3 (2013): 574–96.
- <sup>17</sup> Maria D. Fitzpatrick and Michael F. Lovenheim, “Early Retirement Incentives and Student Achievement” (NBER Working Paper No. 19281, August 2013).
- <sup>18</sup> Ann Duffett et al., “Waiting to Be Won Over: Teachers Speak on the Profession, Unions, and Reform” (Washington, DC: Education Sector, May 2008).
- <sup>19</sup> Sarah Rosenberg and Elena Silva, “Trending Toward Reform: Teachers Speak on Unions and the Future of the Profession” (Washington, DC: Education Sector, July 2012).
- <sup>20</sup> Matthew M. Chingos and Martin R. West, *When Teachers Choose Pension Plans: The Florida Story* (Washington, DC: Thomas B. Fordham Institute, 2013).
- <sup>21</sup> Goldhaber and Grout, “Which Plan to Choose?”
- <sup>22</sup> Rhee, “The Retirement Security Crisis.”
- <sup>23</sup> National Center for Education Statistics, “Fast Facts,” <http://nces.ed.gov/fastfacts/display.asp?id=28>, and U.S. Bureau of Labor Statistics, “Employment and Earnings Online,” [http://www.bls.gov/opub/ee/2012/cps/annavg11\\_2011.pdf](http://www.bls.gov/opub/ee/2012/cps/annavg11_2011.pdf).

<sup>24</sup> Ibid.

<sup>25</sup> Kathryn M. Doherty, Sandi Jacobs, and Trisha M. Madden, "No One Benefits: How Teacher Pension Systems Are Failing Both Teachers and Taxpayers" (Washington, DC: National Council on Teacher Quality, December 2012).

<sup>26</sup> Pew Center on the States. "The Widening Gap Update" (Washington, DC: The Pew Charitable Trusts), <http://www.pewstates.org/research/reports/the-widening-gap-update-85899398241>.

<sup>27</sup> Robert M. Costrell and Michael Podgursky, "Teacher Pension Costs: High, Rising, and Out of Control," *Education Next* (June 25, 2013).

<sup>28</sup> CPS Layoffs Have Illinois Pension Crisis, Chicago Credit Downgrade to Blame, Rahm Emanuel Says," *The Huffington Post* (July 22, 2013).

<sup>29</sup> Robert M. Costrell and Larry Maloney, "The Big Squeeze: Retirement Costs and School District Budgets," (Washington, DC: The Thomas B. Fordham Institute, 2013).

<sup>30</sup> Stephen Sawchuk, "Teacher-Pension Costs Could Put Squeeze on More Districts," *Education Week* (June 4, 2013).

<sup>31</sup> James J. Choi et al., "Defined Contribution Pensions: Plan Rules, Participant Decisions, and the Path of Least Resistance" (NBER Working Paper No. 8655, December 2001, JEL No. J320, H550, G110, D910).

<sup>32</sup> See Table A1 at <http://www.dol.gov/ebsa/pdf/2011pensionplanbulletin.pdf>.

<sup>33</sup> Figures for 1985 come from <http://www.bls.gov/opub/cwc/cm20030325tb01.htm>. For 2011 data, see <http://www.bls.gov/ncs/ebs/benefits/2011/benefits.htm>.

<sup>34</sup> See <http://www.irs.gov/uac/2013-Pension-Plan-Limitations>.

<sup>35</sup> See page 94: <http://trs.illinois.gov/pubs/cafr/FY2013/actuarial.pdf>.