

## Public Pensions: Unfair to State Employees, Unfair to Taxpayers

### Public Employee Benefits Series: Part 1



BY **KEN ARDON**

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## Executive Summary

The Public Employee Retirement System covers all state and local government employees and retirees in Massachusetts. The state is responsible for retirement costs not only for state employees, but also for teachers. In total, these groups account for 176,000 employees and 96,000 retirees who are covered by the system's main feature, a mandatory defined benefit pension, jointly funded by employer and employee contributions.

While the pension system is not overly generous for typical employees, it is riddled with exceptions, ambiguities, and loopholes that allow some of them to abuse the system and collect unwarranted benefits, resulting in tremendous cost to the state and ultimately to taxpayers. The root of these problems is that the calculation of benefits is not based on the simple concept of contributions but the complicated interplay of four factors—years of eligible service, maximum three years of compensation, “group” or job classification, and retirement age.

Each of these factors can distort benefits:

- Years of service can be manipulated by early retirement incentives, special provisions for teachers, the ability to buy service credit, and the provision of a full year of service for less than a year's work.
- Salary calculations depend on the definition of compensation and can be inflated with second jobs, temporary raises, or with large raises near the end of an employee's career, all of which can lead to unreasonable jumps in benefits.
- The job classification system, which is presumably meant to provide more generous pensions to employees in more hazardous positions, provides arbitrary increases in benefits to many employees.
- Retirement age introduces changes in benefits that are unrelated to life expectancy.

The system is fundamentally flawed: the structural weaknesses and loopholes result in a capricious system that rewards employees arbitrarily and allows the Legislature to push costs onto future taxpayers. Moreover, the complexities of the system reduce transparency and encourage questionable and costly legislation.

Determining the total cost of these unfair practices is an imprecise science; many loopholes and exceptions are not tracked by any oversight body. However, it is estimated that these loopholes raise the state's current liability by more than three billion dollars and increase the required annual payment into the pension system by more than \$125 million, a number that will grow over time. The bulk of this cost comes from specific retirement programs, but the wide array of other gaming techniques adds millions more in annual costs.

While the list of problems is long, two major reforms could address the most serious abuses: enacting pay-as-you-go language to require full funding of legislative changes, and tying benefits more closely to employee contributions. These modifications, combined with other minor changes, would dramatically improve the system.

The weaknesses in the current pension system have already cost the state billions of dollars and reduced public confidence in the system. Until they are addressed, taxpayers will continue to pay.

This is the first in a four-part series on the Public Employee Retirement System from Pioneer Institute. This paper will focus on the core of the system, the defined benefit pension plan, and explore whether the system is fair to employees and taxpayers. The second paper will examine the inefficiency of operating 106 separate retirements systems within the state and highlight the costs of these practices. The third will examine the incentives in the current system and alternatives. The final paper will consider the provision of health care to retirees.

## Introduction

The Public Employee Retirement System covers all state and local government employees and retirees in Massachusetts. The system's main feature is a mandatory defined benefit pension, jointly funded by employer and employee contributions, although it also provides disability benefits and subsidized health care for retirees.

Chapter 32 of the Massachusetts General Laws defines the system and describes eligibility requirements and benefits. The law contains more than 500 pages of dense legal language that affects hundreds of thousands of employees and retirees. Chapter 32 dates back to the early 1900s, and since then there have been countless amendments and modifications. The current statute still contains sections on pensions for veterans of the Indian Wars and for scrubwomen in the State House hired prior to

1921 (who are to receive pensions of \$3 per week).

The law is complemented by hundreds of regulations as well as thousands of administrative and court decisions. The product is a complex system of rules and regulations called “notoriously difficult and sometimes tortuous”<sup>1</sup> by the Appeals Court.

While Chapter 32 describes one overarching structure, there are 106 separate retirement systems within the system, including those for state employees, state teachers, employees of the city of Boston, the Turnpike Authority, Lawrence, the Minuteman Regional Vocational Technical School District, and many other institutions. Each retirement system is governed by a separate board that makes rulings on eligibility for benefits and supervises investment of retirement fund assets.

The state has long been responsible for retirement costs not only for the state employee retirement system, but also for the state teacher retirement system and the Boston teacher retirement system. This paper focuses on these three systems, with their 176,000 employees and 96,000 retirees.

The pension system has two important components—funding and benefits. Funding consists of employee contributions, investment earnings, and payments from the state. Benefits are based on four factors—years of eligible service, maximum three years of compensation, “group” or job classification, and retirement age.

A well-designed public pension system would provide pensions that are fair and equitable for employees at a reasonable cost to taxpayers. The current system fails this test: Chapter 32 is riddled with loopholes, ambiguities, and exceptions that allow some employees benefits far greater than their peers and distorts incentives, the costs of which will be burdening many generations of taxpayers.

## The Basics—Defined Benefit Pensions and the Massachusetts Public Employee Retirement System

Public employees contribute a portion of their salary into a retirement fund that is invested in securities and other assets. When an employee retires, the contributions and

investment earnings in the fund are used to pay benefits, with the government topping up the investment fund to the extent that it cannot cover benefit costs. As in all defined benefit systems, pension benefits are not directly related to the amount that employees contribute into the system. Instead, benefits are based on years of eligible service, age, and final salary. (Retirees also receive subsidized health insurance, a topic that will be addressed in a later paper in this series.)

The employee contribution has changed over time. During the 1970s the state began to raise the contribution to require employees to assume a greater share of the cost of retirement benefits. However, the Supreme Judicial Court ruled that the contribution rate is part of a contract in which the employee has a property right, meaning that the state could only raise contribution rates for newly hired employees. Over time, the contribution rate for new employees has been raised repeatedly so that contribution rates today vary from 5 percent to 12 percent, depending primarily on the date an employee was hired.

**Table 1: Contribution Rates by Date of Hiring<sup>2</sup>**

Date of Hiring	Contribution Rate as % of Salary
Pre 1945	0%
1945 to 1974	5%
1975 to 1978	7%
1979 to 1983	7% + 2% over \$30,000
1984 to 1996	8% + 2% over \$30,000
1996 to present	9% + 2% over \$30,000
Teachers under Retirement Plus	11%
State Police hired after 7/1/1996	12%
Judges hired between 1975 and 1988	7%
Judges since 1988	8%+ 1% over \$30,000 +1% over \$45,000

(Source: Commonwealth Actuarial Valuation Report, January 2005)

For the majority of recently hired state employees, the two-part contribution rate means that the effective contribution rate on an employee earning \$30,000 is 9 percent of his or her salary, while it rises to 9.7 percent for an employee earning \$45,000 and 10 percent for an employee earning \$60,000.

### ***How generous is the pension system?***

While the public may view the retirement benefits as overly generous, for most state employees the reality is now quite different, particularly for recently hired employees.<sup>3</sup> Because the contribution rates are higher for new employees, in some cases the state will actually pay out less in pension benefits than it receives in contributions and investment, making a profit.<sup>4</sup> Although this profit is more than offset by the cost of the disability system and the health care provided for retirees, the fact remains that many employees now face a system where their pension may be worth less than the accumulated value of their contributions with investment returns.

For example, an employee hired at 25 at an annual salary of \$25,000 would be eligible for the pensions listed in the chart below, with present values calculated using the employee's life expectancy at retirement. Employees who stay a short time lose money in the system; those who stay long enough will see a benefit, although if they stay too long the value of their pension declines again. However, none of these long-term employees would receive an unreasonable windfall.

**Table 2: Expected cost of pension at retirement by age and years of service<sup>5</sup>**

Years of Service	Age at retirement	Annual Benefits as % of Final Salary	Expected net cost to state @ 8.25%
10	35	14% (available at 55)	(\$32,590)
20	45	10%	(\$82,711)
30	55	45%	\$18,089
35	60	70%	\$129,639
40	65	80%	(\$93,485)

(Source: Author's calculations)

The expected cost to the state of eventually providing retirement benefits for all current employees is less than 3 percent of payroll.<sup>6</sup> This figure includes the state's share of the cost for many employees who were hired before 1996 and make smaller contributions. Barring any fundamental changes to the retirement system, as these older workers retire and are replaced with employees who contribute at a higher rate, the state's share of pension costs will decline over the next 20 years.

According to data provided by the Public Employee Retirement Administration Commission (PERAC), during 2005 approximately 1,300 state employees retired and became eligible for a pension payment. The median retiree was 58 years old and had been working for the state for almost 22 years, and on retirement the median pension was just under \$27,000 per year. Fourteen percent of retirees qualified for payments of more than \$50,000 per year.<sup>7</sup> Retirement patterns differ across employee groups (which will be described in detail later), with State Police in Group 3 retiring earlier and with significantly larger pensions.

**Table 3: State Employees Retiring in 2005**

Description	Number	Median Age	Median Service	Median Payment	% greater than \$50,000
All	1,295	58.5	21.8	\$26,958	14.4%
Group 1	799	60.0	20.2	\$19,691	13.1%
Group 2	225	60.3	22.6	\$32,647	8.0%
Group 3	52	55.2	27.4	\$55,038	65.4%
Group 4	219	53.5	23.8	\$32,814	13.7%

(Source: PERAC disclosure)

While the majority of state employees receive reasonable retirement benefits, others take advantage of Chapter 32's weaknesses to create advantages along each of the four dimensions of the pension calculation to receive excessive benefits. While some of the flaws affect only a handful of employees, others have an impact on thousands.

The abuses, loopholes, and exceptions chronicled below create disparities among employees, distort incentives, increase the cost to taxpayers, and contribute to a lack of public faith in the system.

## State Contributions and the Unfunded Liability

A defined-benefit pension system faces liabilities for benefits paid to retirees over their remaining lifetime as well as benefits current employees will receive once they reach retirement. The cost of this liability varies with several factors:

- Benefits—which themselves depend in part on the future work experience and salary growth of current employees
- Life expectancy—longer lives lead to higher costs
- Assumed rate of return on pension fund investments—the higher the rate of return, the less money the fund needs today to cover costs in the future

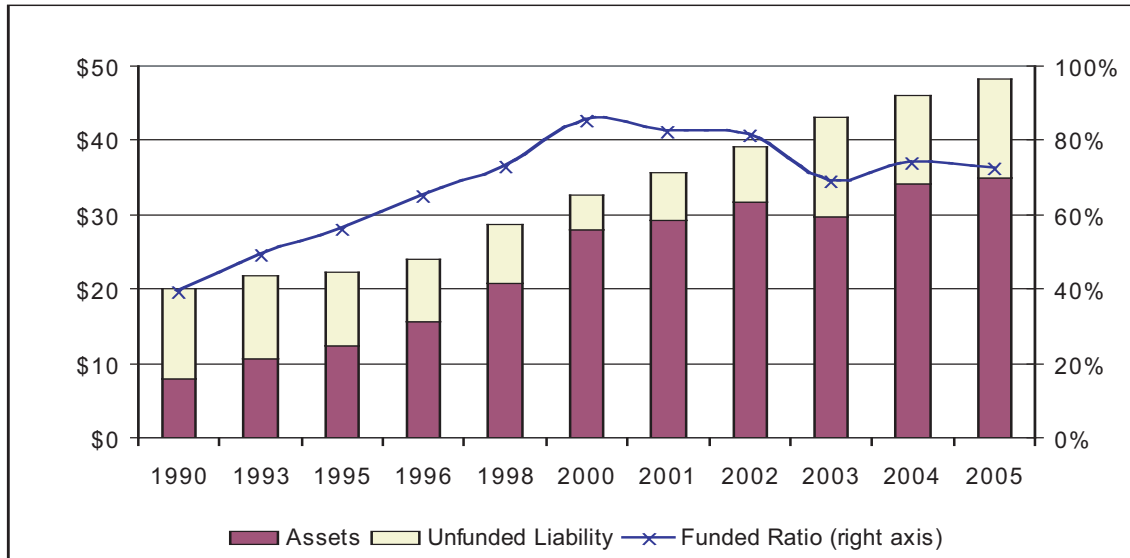
The Public Employee Retirement Advisory Commission (PERAC) calculates the actuarial liability using assumptions for each of these factors. In a “fully-funded” system, the investment fund would have enough assets to cover the expected actuarial liability. As of January 1, 2005, the Commonwealth’s actuarial liability for current and future retirees stood at \$48 billion, while the pension fund investments were valued at \$35 billion. This left a gap, or unfunded liability, of \$13 billion.

The unfunded liability represents the amount that the state would have to put into the investment fund today so that the fund, with assumed annual investment earnings of 8.25 percent, could expect to pay previously accrued benefits in the future. The unfunded liability today stems primarily from the fact that for many years the state operated on a pay-as-you-go basis and did not put aside money to cover future liabilities.

The state currently allocates funds each year to cover the expected future benefits for current employees (the “normal” cost) as well as additional funding on a schedule designed to pay down the unfunded liability by 2023. The more slowly the state pays down the liability, the more it will ultimately have to contribute, much like a loan. All else equal, a \$100 million unfunded liability today will grow to \$108.25 million in one year because the state missed the opportunity to invest the \$100 million and earn the 8.25 percent return.

The unfunded liability will increase if the investment fund loses money or returns less than its goal of 8.25 percent. It also grows if liabilities increase, either through changes in actuarial factors such as life expectancy and projected salary growth or changes in the number of employees or modifications to the retirement system. Legislative changes that increase benefits to some or all retirees, whether by broadening membership, allowing for service buybacks, providing early retirement incentives, or any other mechanism would therefore increase the unfunded liability and require higher contributions from the state.

The unfunded liability has changed significantly over the past 15 years. As Figure 1 shows, the unfunded liability declined throughout the 1990s to reach a low of less than \$5 billion in 2000. At that point, the system was more than 85 percent funded. Since then, the unfunded liability has grown, and as of the beginning of 2006, the system was only 72 percent funded.

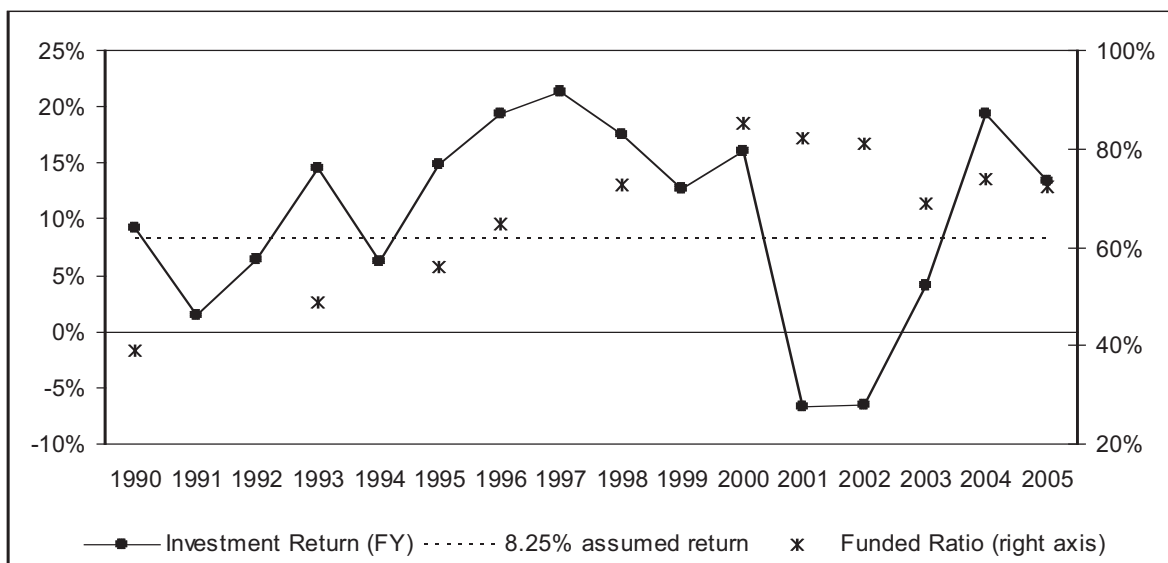


**Figure 1:** Pension Assets, Unfunded Liability, and Funding Ratio, selected years

(Source: Commonwealth Actuarial Valuation Report, January 2005)

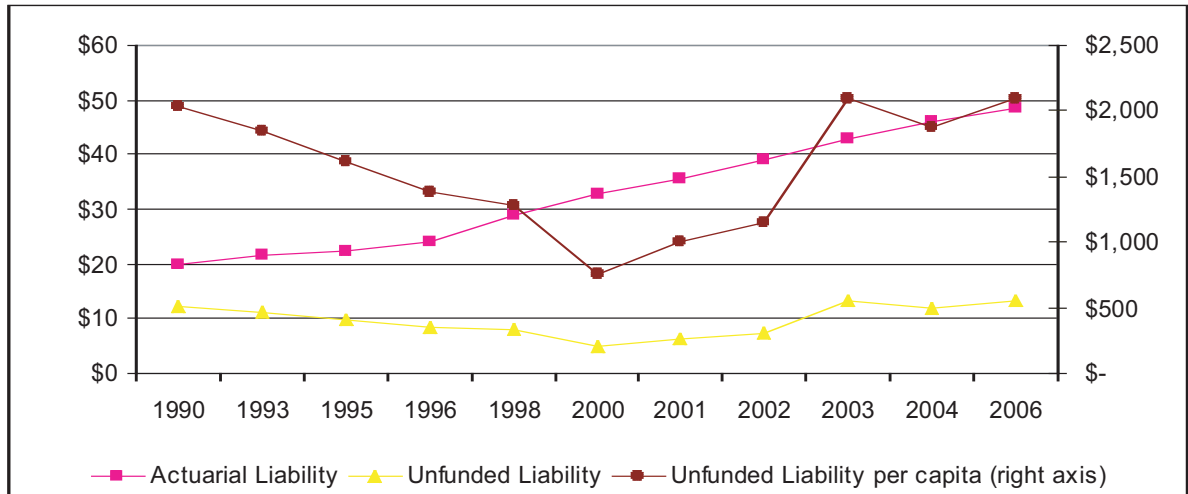
The increase in unfunded liability over the past few years has been driven by a combination of the factors discussed above, including the underperformance of the investment fund. As Figure 2 shows, in several recent years the investment returns lagged well below the 8.25 percent target, with the fund assets actually losing value in FY 2002 and 2003. Unless these losses are made up in future years, they will increase the unfunded liability and the required annual payments.

The increase in the unfunded liability shifts costs onto future taxpayers, since the liability will be paid off gradually, with interest, until 2023. As Figure 3 shows, the unfunded liability per capita now amounts to roughly \$2,000 for each resident of Massachusetts.



**Figure 2:** Pension Fund Investment Return and Funding Ratio

(Source: PRIM Annual Reports, various years)



**Figure 3:** Pension Fund Liability, Unfunded Liability, and Unfunded Liability per capita

(Source: Commonwealth Actuarial Valuation Report, January 2005)

To put the cost of this liability in context, in FY 2006 the state paid more than \$1 billion, or the equivalent of 4 percent of the total budget, into the pension fund towards paying off the unfunded liability. Based on the current funding schedule, the required annual payments will rise to more than \$2 billion by 2023. These payments are for a liability that has already been incurred through benefits promised to past or current employees. Any increase in unfunded liability will require additional funding—a \$1 billion increase in the unfunded liability today would require payments of approximately \$115 million per year for the next 17 years.

Massachusetts is not the only state with a large unfunded liability, but the problem is larger here than in many other states. According to Standard & Poors, in 2004 the median state retirement system was 85.4 percent funded and faced an unfunded liability of \$3 billion, while Massachusetts had an unfunded liability more than three times as large. In a comparison across states, Massachusetts had the 14<sup>th</sup> lowest percentage funded, the 8<sup>th</sup> largest unfunded liability overall, and the 17<sup>th</sup> largest unfunded liability per capita.<sup>8</sup>

## Gaming the System Along the Four Dimensions of Benefits

### *Dimension 1: Years of Service and Eligibility*

To collect a state pension, employees must work for a minimum number of years in government service. Most employees vest after ten years of service<sup>9</sup>—although elected officials vest after only six years. Employees who leave public service with less than five years of service receive a refund of their contributions with no interest, while those who stay between five and ten years receive a refund with a small amount of interest. For short-term employees the retirement system does not provide a benefit—instead the employees, in essence, provide interest-free or low-interest loans to the state pension fund.

When employees vest, they are not immediately eligible to receive retirement benefits. To retire with a pension and health insurance, an employee generally must have 20 years of creditable service or have 10 years of service and be 55 or older. Those who leave

state employment with less than 20 years of service must wait until they reach 55 and then start drawing a pension.

The idea of years of service sounds straightforward—how many years has someone worked for the state? However, the Legislature has inserted exemptions into Chapter 32 that allow a variety of strategies to add on years of service and broaden the definition of eligible service years:

#### “BONUS” YEARS

- **Early Retirement Incentive Plans**—In recent years, several early retirement incentive programs (ERIPs) caused large increases in the unfunded liability. In 2001 and again in 2003, the state offered public employees who retired the opportunity to use an extra five years of creditable service or age in the calculation of their retirement benefits.

This bonus provides a substantial increase in pensions for some employees; for a 60-year-old employee earning \$50,000 after 30 years of service, retiring under an ERIP would increase her annual benefits from \$30,000 to \$37,500 each year. Based on her age and life expectancy, this employee could expect to receive an additional \$175,000 in benefits over the course of her life.

The ERIPs were implemented to address the looming budget crisis by reducing payroll. Approximately 4,500 employees retired under the ERIP in 2001, and the second ERIP, two years later, was taken by another 3,000 employees. The two ERIPs reduced annual payroll by approximately \$400 million.<sup>10</sup> However, the reduction in payroll is not an accurate measure of the immediate savings to the state because some of the employees would have retired without the ERIP and some of the positions are immediately “backfilled” with new employees. Nevertheless, the ERIPs did significantly reduce payroll.

While these ERIPs saved money in the short-run, they explicitly shifted costs to the future by expanding the pension liability. The bulk of the employees who took the ERIP were between 50 and 60 years old and can therefore be expected to receive benefits for many years into the future. In total, the ERIPs could increase benefit payments by \$1 billion over the next 30 years.

The actuarial estimate of the cost of the ERIPs relies on their impact on the unfunded liability. This measurement shows an impact much less than \$1 billion because investment earnings should cover a portion of the benefits in future years. According to PERAC, the 2001 ERIP increased the unfunded liability by \$312 million and the 2003 ERIP increased it by an additional \$225 million.

This \$537 million represents the amount that would have been expected to cover the enhanced benefits had it been invested immediately. However, because the state was in no position to pay off the increase in the unfunded liability, the increased liability will instead be funded over 20 years. In other words, funding the ERIPs was essentially equivalent to borrowing \$527 million at 8.25 percent interest, which requires payments of \$55 million a year through 2023 to pay down the new liability.

- **Retirement Plus**—In 2000, the Legislature passed a massive enhancement of retirement benefits for teachers. Chapter 114 of the Acts of 2000 installed a program called “Retirement Plus” that increased contribution rates for new teachers to 11

percent of salary and significantly increased retirement benefits for long-time teachers. The law stipulates that at retirement, qualifying teachers with 30 or more years of service would have their pensions increased by 2 percent of their final average salary for each year of service in excess of 24 (e.g., at 30 years, a teacher would receive an additional 12 percent  $[(30 - 24) \times 2]$  of average salary). While Governor Cellucci vetoed the law, the Legislature overwhelmingly overrode the veto, with no plan on how to pay for the massive increase in benefits.

Increased pay or retirement benefits for teachers could be justified if it helped fill a shortage or attracted more highly qualified people into teaching. However, Retirement Plus imposed huge costs on taxpayers to provide benefits to teachers near retirement, with teachers closest to retirement earning the biggest windfall.

Teachers already in the system were able to opt-in, and if they were near retirement they could pay the 11 percent rate on five years of prior salaries in a lump-sum to immediately qualify for the higher benefits. Thus a 30-year veteran aged 60 with a final average salary of \$60,000 would have been able to retire under the old system with a pension of \$36,000 per year. However, the teacher could opt-in to Retirement Plus by contributing approximately \$18,000 (5 years at 11 percent rather than 5 years at 5 percent). This choice would immediately increase her pension by \$7,200 per year for life, meaning the \$18,000 payment would return almost \$165,000 based on a life expectancy of 23 years.

Retirement Plus also introduces an unreasonable jump into the retirement benefits calculation. The 30-year veteran described above would be eligible for an annual pension of \$43,200. However, if this teacher had retired one year earlier, after 29 years of service, he or she would receive only \$33,060 per year. The extra year of teaching increases the value of the pension by more than \$100,000 and penalizes anyone wishing to retire after 29 years.

Only five years after the law was passed, the Teachers Retirement Board has already submitted legislation to reduce the contribution rate for teachers. If passed, this would leave teachers with significantly more generous pensions than the majority of public employees while paying a lower contribution, with taxpayers left to pick up the cost. Reducing the contribution rate for teachers to 9 percent would increase the state's unfunded liability by hundreds of millions of dollars and require significant additional funding from the state to make up the shortfall.

In addition to the cost to taxpayers, Retirement Plus exacerbated the looming teacher shortage. Throughout the 1990s, approximately 1,800 teachers retired each year. In the first year of eligibility for Retirement Plus, more than 1,500 teachers retired under the regular retirement program and another 1,745 students retired under Retirement Plus. The spike in retirements (from 1,800 per year to in excess of 3,000) has continued throughout the decade. PERAC implicitly acknowledges the impact of Retirement Plus in its assumptions about incentives; it assumes that 7 percent of the 58-year-old teachers not in Retirement Plus will retire, while 40 percent of those eligible for Retirement Plus will retire.

Faced with increased levels of retirement (and resulting increases in pension liability), districts can rehire retirees if a "critical shortage" is deemed to exist. Normally, state law restricts retired teachers who return to work from earning more in total (pension plus new salary) than their prior position pays. However, districts with a

critical shortage may rehire recent retirees at full salary, allowing retired teachers to “double dip” and earn both a full pension and a salary. Teachers who retired under Retirement Plus may not take advantage of this provision for the first two years after their retirement, but after that they too may earn a salary and a pension.

In total, Retirement Plus will result in the state paying several billion dollars in additional benefits; PERAC estimated the net increase in liability at \$1.25 billion.<sup>11</sup> This increase in the liability will require the state to contribute approximately \$125 million each year until 2023 into the pension system to fund a program that may have caused teacher shortages. Although a significant portion of the additional cost will be offset as new teachers pay more into the system (lowering the state’s share of teacher retirement costs in the future), the net cost is still more than \$50 million per year.

### BUYING SERVICE YEARS

- Chapter 32 contains provisions that allow employees to purchase credit for years that they did not work for state or local governments, or for years during which they did not contribute into the retirement system. Employees may purchase service for time spent at a number of jobs, including:
  - Time spent on leave to serve in the military or the State Department.
  - Service as an unpaid, elected selectman, alderman, city councilor, or school committee member (also the library trustee if the city or town approves). Town moderators were added to the list in 2002.
  - Service in certain federal-funded jobs.
  - Years as permanent-intermittent police officers or firefighters and call firefighters.
  - Teachers may buy service for some of the years they taught in another state, at a private school, or at an educational collaborative, time spent on maternity leave before 1975, and up to three years spent in the Peace Corps (added in 2002). In 2005, the provision was expanded to allow vocational school teachers to purchase creditable service for prior work experience. This year, a bill has been filed that would allow teachers to buy back service for time during which they were laid off.

To purchase creditable service, employees must generally pay an amount into the retirement system that represents what they would have contributed had they been working for the government, plus interest. For example, a teacher who was in the Peace Corps before teaching could choose to buy the years of service by making a contribution based on the salary he or she received in the first year teaching.

To purchase credit for service as an unpaid local official (selectman, moderator, etc.), an employee has to pay into the system as if he or she had been earning \$2,500 per year during those years, which requires a contribution of only \$125 to \$225 for each year of service depending on when the employee was hired. This small payment for a part-time job then provides the employee with as much credit in the retirement system—and as big of a boost to benefits—as full-time work. Depending on an employee’s group, final salary, and tenure with the state, a \$225 payment into the retirement system could easily increase annual pension benefits by more than \$1,000 per year for life.

Employees who buy creditable service must generally pay interest on their buy-back. In other words, if the teacher described above had been in the Peace Corps in 1995 and decided to buy the service in 2000, the required contribution would include five years worth of interest. Until 2004, the interest rate used in service buy-backs was based on the average rate on savings accounts in Massachusetts. Over the past 15 years, this rate averaged 2.5 percent.

Because this rate is so low, many employees benefited from putting off any service buybacks until near the end of their careers. The delays meant that the pension fund was not able to invest the contributions, sacrificing the assumed rate of return of 8.25 percent. The cost of this missed opportunity can be significant.

For example, suppose an employee is eligible to buy back several years of service for \$10,000 and has a choice of buying it immediately or waiting 25 years until just before retirement. If the \$10,000 is deposited into the pension fund immediately, the investment earnings could be expected to increase it to \$73,000 after 25 years. If instead the employee waits 25 years and is charged 2.5 percent annual interest, he or she would be required to contribute \$19,000, leaving the pension fund with \$54,000 less than it would have had otherwise. In 2004, the interest rate on purchases of creditable service was changed to 4.125 percent, which would increase the required payment at retirement to \$27,000 but still leave the pension fund short by \$45,000.

#### ELIGIBILITY EXPANSION

- As stated above, Chapter 32 allows people who serve as uncompensated elected officials to purchase years of creditable service by making a small payment into the pension fund. Until 2002, this section of Chapter 32 only applied to local officials elected prior to 1976. At that time, the Legislature added town moderators to the list of eligible positions, and they also changed the law to extend the benefits to those first elected by 1986.

Part of the explanation for these changes to Chapter 32 may be found in the fact that approximately one-third of the Legislature stands to directly benefit from these provisions and will receive higher pension benefits. According to the legislators' biographies on the General Court website, at least 62 out of 200 representatives and senators served in one or more of these local positions before becoming members of the Legislature. Fifteen legislators had 10 or more years in these positions and several had more than 20. For these members in particular, the credit for additional years of service can be extremely valuable. A representative with 10 years of service as a selectman could see a pension boost of \$12,000 or more, while with 20 years of service, benefits could increase by as much as \$25,000 per year for life.

#### LEGISLATION FOR INDIVIDUAL EMPLOYEES

- The Legislature regularly passes laws that adjust pensions for specific individuals, often by increasing the amount of creditable service an employee receives. More than one dozen individuals were specifically identified in pension legislation in 2004, including four former employees laid off from Holyoke before the 2003 ERIP went into effect that were retroactively allowed to retire under the ERIP.<sup>12</sup> While legislation naming individuals is often meant to help disabled employees or others in need, an employee's benefits should not depend on legislative favors.

**FULL CREDIT FOR PARTIAL YEARS**

- Elected officials receive a full year's credit for even a single day of service in a calendar year. Because a representative or senator who decides not to run for reelection or loses an election is not officially replaced until the new Legislature convenes in January, the outgoing official gets credit for an entire year of service. This rule can also be exploited by politicians that resign, since by leaving in January rather than December, they receive credit for an entire year of service. This extra year of service for a few days in January could increase a legislator's annual pension by more than \$3,000 per year for the rest of his or her life.

**EARLY ELIGIBILITY**

- Another loophole allows some workers to begin collecting a portion of their pension before normal employees. According to Section 10 of Chapter 32, employees with 20 years of service who are fired (including legislators who are not reelected) or whose positions are eliminated can begin collecting pension payments before the standard minimum retirement age of 55. According to a *Commonwealth Magazine* report in 2002, one-third of the 1,100 'Section 10' pensions granted since 1990 were to employees who had passed the 20 years of service minimum requirement by less than a year, and a remarkable 10 percent were granted to employees who had passed the milestone by less than a month. In addition, several legislators who left service voluntarily had applied for and incorrectly received the early pension.<sup>13</sup>

The story of one 42-year-old political activist working under Governor Weld demonstrates the distortions this loophole makes possible. Had she resigned, she would have been eligible for a pension of less than \$4,000 per year. Instead, by a curious coincidence, her position was eliminated two days after she reached 20 years of service. She was approved for a pension of \$28,814 per year, \$24,000 per year more than she would have otherwise received.<sup>14</sup> In total, Section 10 is estimated to cost taxpayers well over \$1 million every year.

**Dimension Two: Maximum Three Years of Compensation**

An employee's salary history is important because the pension generally replaces a fraction of the employee's average "regular compensation" during the three highest-paid consecutive years of service.

Linking the pension to a limited three-year period, as opposed to lifetime earnings, produces a powerful incentive to maximize earnings over that period. A variety of techniques are employed to raise that figure:

**CLAIMING COMPENSATION BEYOND SALARY**

- One difficulty with the formula is the determination of what constitutes regular compensation. When William Bulger retired from his position as president of the University of Massachusetts, he successfully argued that his housing allowance, retirement annuity, and transportation allowance should be included as part of his regular compensation in the calculation of his pension benefits, which increased his annual pension by \$29,000, from \$179,000 to \$208,000.<sup>15</sup> Four of the nine presi-

dents of state colleges and five of the thirteen presidents of community colleges continue to receive housing allowances today that range from \$18,000 to \$40,000 per year and will benefit from increased pensions based on Bulger's success in including non-salary items as regular compensation.<sup>16</sup>

#### **HOLDING MULTIPLE JOBS**

- Between 2001 and 2004, a career police officer in Brockton took a second full-time job at the Plymouth County jail. When he retired in 2004, he had his three years of service with both salaries counted towards his maximum three years of earnings. At the time, his salary as a police officer was in excess of \$80,000 and his pay from the county was \$74,816. The additional job allowed him to boost his pension from \$69,164 per year to over \$130,000, free of state taxes<sup>17</sup>. He can expect to receive an additional \$1 million over the course of his life.

#### **SECOND PENSIONS**

- A variant on the multiple job approach to padding a pension is available for a small subset of state workers who qualify for multiple pensions. Because Chapter 32 provides judges with a separate pension calculation (described below), a public employee who qualifies for a regular pension and later becomes a judge can collect two pensions.

#### **SALARY SPIKING OR "THE HOCKEY-STICK"**

- In the "Hockey Stick", a long-time employees in low-paid positions (e.g., town moderator or state board or commission member) closes out their government service at a much better paying position to use as the maximum three years of compensation, causing a sharp increase in their pensions.

In 2003, Governor Romney appointed a new chair for the state's Civil Service Commission.<sup>18</sup> Although the appointment was rescinded after public pressure, the case demonstrates how the system can provide some employees with preposterous benefits.

The new appointee's 24 years as a selectman in Belmont entitled him to a pension of less than \$4,000, based on the data contained in a *Boston Globe* article and assuming he had no other creditable public service. However, if he had spent three years on the Civil Service Commission, the compensation used to compute his pension benefits would have jumped from the \$6,000 per year he earned as chair of the board of selectmen to the more than \$80,000 he would have earned as chair of the Civil Service Commission. Those three years of service would have increased his annual pension from \$4,000 per year to \$58,000, or expected payments of \$700,000 over the following years for his additional \$12,000 contribution into the retirement system. This amounts to almost one million dollars between salary and pension benefits for three years of work.

While this is an unusual example, any employee who receives a large raise near the end of his or her career will see a jump in pension benefits. For a 60-year-old employee, a \$10,000 raise for the last three years of his or her career would generate not only an additional \$30,000 in salary, but also an expected \$176,000 in pension payments over the course of his or her life in retirement. To purchase an annuity to

provide the same increase in retirement income would cost this employee approximately \$120,000. Although it is impossible to determine how many employees receive unwarranted raises late in their careers, the practice undoubtedly costs the state many millions of dollars.

#### TEMPORARY RAISES

- As the previous section demonstrates, a raise near the end of a career will increase pension benefits for the rest of an employee's life. Many teachers' contracts have institutionalized the practice of boosting pensions with raises near the end of a career. They accomplish this when a district offers enhanced longevity benefit options [also known as enhanced longevity buy-outs], or ELBOs. These collectively bargained provisions call for a temporary, three-year raise to be paid to a small number of teachers. A teacher receiving this payment then receives a higher pension, often at great cost to taxpayers.

For example, a long-time teacher near retirement who received a three-year raise of \$5,000 per year would pay an extra \$1,650 into the retirement system (11 percent of \$5,000 for three years). Upon retirement, this teacher's pension would increase by \$4,000 per year for life, or more in one year than the total additional contributions. A retiring teacher could then receive the higher payments for 20 or even 30 years, at a cost to the state of more than \$40,000.

ELBOs cost local districts very little because the district is responsible only for the additional salary, while the state picks up the cost of the higher pensions. Perhaps as a result, as of January, 2006, approximately 100 districts had agreed to ELBOs, with some calling for payments of over \$10,000 per year.<sup>19</sup> The Massachusetts Teachers Retirement Board is disputing the validity of roughly half of the plans, but to this point the courts have ruled that ELBOs should count in the calculation of pensions. While the state does not track the number of teachers who have received higher pensions due to ELBOs, the provision is costing taxpayers a minimum of several million dollars per year in additional benefits.<sup>20</sup>

In March 2006, PERAC filed regulations with the Secretary of State that would effectively end the use of ELBOs to enhance pensions once the current contracts expire. If this regulation is upheld against potential court challenges, this loophole will be closed.

These techniques all serve to inflate the compensation used to calculate pensions. Although some of the examples are extreme, the pattern holds true for all employees—those that receive large salary increases near the end of their careers gain much more from the system than those that have relatively stable salaries. This disadvantages the vast majority of employees while helping relatively few, yet accounts of employees who receive outsized pensions contribute to a lack of public trust and the perception that the retirement system is overly generous.

#### ***Dimension Three: Group Membership***

Chapter 32 divides employees into four groups, with important consequences. Because each group has a different benefit calculation, the distinction between Group 1 and

Group 4 can be worth hundreds of thousands of dollars in retirement benefits to employees who have worked the same number of years at the same range of salaries.

**Table 4: Distribution of State Employees by Group**

Group	Number	Average Age	Average Salary	Average Service
1	64,574	46.4	\$51,408	12.3
2	10,677	44.9	\$41,307	11.8
3	2,191	43.6	\$63,994	17.6
4	5,736	40.3	\$52,250	11.9
Total	83,178	45.7	\$50,501	12.4

(Source: Commonwealth Actuarial Valuation Report, January 2005)

Group 1 contains the majority of state employees, including clerical, administrative, and technical employees, and whoever else does not qualify for Groups 2, 3, or 4. Groups 2, 3, and 4 were meant to cover more hazardous occupations, and therefore those in these groups are rewarded with more generous pensions earlier in their careers. However, while Group 3 is clearly defined as the State Police, Groups 2 and 4 contain an assortment of seemingly arbitrary positions.

According to the state board of retirement, Group 2 consists of employees who “provide direct care, custody, and/or supervision to parolees and/or mentally challenged individuals.”<sup>21</sup> Chapter 32 maintains a longer, more irregular list, which includes among others: permanent watershed guards, signal maintenance repairmen, municipal licensed electricians, and elevator maintenance men employed by a county, employees of Cushing Hospital, and officers and employees of the general court having police powers (who were added in 1998).

PERAC describes Group 4, which covers many public safety employees, as “Police officers, firefighters, and certain correction officers, and other specified hazardous positions.”<sup>22</sup> Among the “hazardous positions” included in the lengthy list in Chapter 32 are district attorneys and assistant district attorneys; some supervisors at MassPort; switchboard operators, supervisors, and managers at a municipal electrical generating plants; and the conservation officer in Haverhill.

Upon retirement, employees in Groups 1, 2, and 4 receive a fraction of their three-year average regular compensation. The fraction, called the benefit rate, depends on an employee’s years of service, age at retirement, and group (see Table 4 below) and can reach as high as 80 percent. For example, a Group 1 employee with 30 years of service who retires at age 60 would receive a pension equal to 60 percent ( $30 \text{ years} \times 2.0$ ) of her average salary during her three highest paid consecutive years.

Group 3 employees (State Police) may retire after 20 years with 60 percent of their final year’s salary; after 20 years, they continue to gain 3 percent per year up to a maximum of 75 percent. Thus a State Police officer with 25 years of service could retire at age 47 and receive 75 percent of his former pay for the rest of his life. With a life expectancy of more than 30 years, this retiree would most likely receive pension benefits for longer than he actually worked. The benefits for State Police are significantly more generous than those for local police or firefighters, who with the same age and work experience

**Table 4: Benefit Rate % per year of service**

Age	Employee Group		
	1	2	4
65	2.5	2.5	2.5
64	2.4	2.5	2.5
...	...	2.5	2.5
60	2.0	2.5	2.5
59	1.9	2.4	2.5
...	...	...	2.5
55	1.5	2.0	2.5
54	1.4	1.4	2.4
53	1.3	1.3	2.3
...	...	...	...
41	0.1	0.1	1.1

(Source: Commonwealth Actuarial Valuation Report, January 2005)

would only be eligible for benefits equal to 42 percent of their salary. Although State Police pay a higher contribution rate, 12 percent of salary, the higher benefits more than offset the additional cost.

The system is generally meant to reward employees who work in more hazardous occupations—though one might wonder whether power plant managers or county elevator maintenance men face the same level of danger as a Boston police officer or a corrections officer at a maximum security facility. However, the complexity of the system makes it far from transparent for lawmakers or the public to see how much the benefit of changing groups is worth—or how much it costs the state when an individual or group is moved from one group to another.

Consider four employees hired at 30 years of age for \$25,000 per year, one in each group. As Table 5 shows, if these workers have identical 5 percent annual raises and retire after 25 years, the employees in Groups 2 to 4 will have pensions 33 percent, 75 percent, and 67 percent greater than the Group 1 employee. These higher pensions increase the state's liability by between \$115,000 and \$380,000 more than the Group 1 employee's pension.

**Table 5: Pension variability by group**

Group	Annual Pension	% above group 1	PV at retirement @ 8.25%	Increase in state liability over group 1
1	\$30,259	NA	\$380,818	NA
2	\$40,345	33%	\$496,309	\$115,491
3	\$63,494	110%	\$761,384	\$380,566
4	\$50,432	67%	\$611,813	\$230,995

(Source: Author's calculations)

The tremendous impact of the distinction between groups introduces yet another lever for the Legislature to manipulate the system. The tactics used to take advantage of this dimension include promoting individuals or employee classes into groups with better pensions, arbitrary benefit jumps, group jumping at the end of a career, and making exceptions to the group structure:

#### PROMOTION OF INDIVIDUALS OR EMPLOYEE CLASSES INTO GROUPS WITH BETTER PENSIONS

- The fine print in Chapter 32 embeds numerous exceptions into the simple logic of ascending group designations according to work hazard. For example, unlike any other municipal conservation officer in the state, the conservation officer of Haverhill is designated as a Group 4 employee. As such, if he were to retire at age 55 with 32 years of service the pension would be equal to 80 percent of the average salary, whereas any conservation officer elsewhere in the state with the same years of service and at the same age would receive a pension equal to only 48 percent of salary. To reach a benefit level of 80 percent, these other conservation officers would have to work for an additional six years.

The conservation officer in Haverhill currently earns approximately \$49,000 per year. A pension at 80 percent of salary would therefore be worth \$39,200 per year, while retiring Group 1 conservation officers would receive only \$23,520, a difference of \$15,680 per year. It would currently cost a conservation officer in another town approximately \$240,000 to buy an annuity to provide this additional income during retirement.

The Legislature also occasionally redefines membership in Groups 2 and 4, as workers and unions lobby to move out of Group 1. In 1998, “officers and employees of the general court having police powers” were promoted from Group 1 to Group 2. As Table 5 shows, an employee with 25 years of service who was nearing retirement at the time could have seen his or her pension increase by 33 percent. Depending on final salary and age at retirement, this change could have been worth more than \$10,000 per year and cost the state more than \$150,000.

Beyond the redefinition of groups, the Legislature also considers 150 petitions per year for individual employees to move from one retirement group to another.<sup>23</sup>

It is unlikely the Legislature would pass a bill explicitly providing a group of workers or an individual conservation officer with a \$200,000 payout upon retirement, but they have effectively done the equivalent by tinkering with the job classifications in Chapter 32.

#### ARBITRARY BENEFIT JUMPS

- Another oddity in the system is the jump in the pension when a Group 2 employee reaches 55 years of age. This leads to a 50 percent increase in the annual pension for an employee who retires at 55 rather than 54. For an employee hired at 25 with a final salary of \$60,000, the pension jumps from \$24,000 per year after 29 years to \$36,000 after 30 years. It is difficult to imagine a rationale for this spike.

#### GROUP JUMPING AT THE END OF A CAREER

- The discrepancy between groups introduces another serious flaw into the system. An employee’s retirement allowance is calculated based on his or her group *at retirement*.

This means that employees who serve in Group 1 for many years but find a job in Group 2 or Group 4 during the final years of their careers will immediately see the huge increase in their benefits outlined in Table 5. On the other hand, moving to an administrative position in Group 1 will be very costly for a state employee.

In 2003, the outgoing Correction Commissioner petitioned the State Board of Retirement to have his position reclassified from Group 1 to Group 4, arguing that his job often required him to visit correctional institutions and come in contact with inmates. The move would have increased his pension from \$41,000 to \$82,000.<sup>24</sup> Although the State Board of Retirement denied his request, the Commissioner was able to remain on the payroll long enough to qualify for a more generous pension under Section 10 of Chapter 32 (described above) that increased his benefits by \$7,000.

#### EXCEPTIONS TO THE GROUP STRUCTURE

- Judges effectively form a separate group, with their own contribution rates and retirement benefits. As Table 1 showed, they contribute between 8 percent and 10 percent of their salary into the pension system. Their benefits increase much more quickly than other employees, so that an older judge could retire with a pension equal to 75 percent of his or her final salary after only 10 to 15 years of service, depending on age. A Group 1 employee with the same age and work experience would only qualify for a pension at 37.5 percent, or half as much. As mentioned above, the rapid availability of generous judicial pensions opens the possibility of an employee receiving two pensions.
- Because of Retirement Plus, teachers who retire after 30 years see their benefits increase dramatically, a kind of Group 1+.

## Dimension Four: Retirement Age

While the increasing benefit rate is meant to offer higher benefits to employees who work until an older age, the calculations introduce inequities into the system because the steps are not accurately connected to life expectancy.

#### PENALIZING YOUNGER EMPLOYEES

- If otherwise identical employees begin working at different ages, the value of their pensions when they retire can vary by tens of thousands of dollars—the system generally punishes those hired at a younger age.

For example, consider two employees, one hired at age 25 and one at age 26, who retire after 35 years of service with a final salary of \$60,000. The older employee will receive a pension that is \$2,100 per year higher. Although the younger retiree can expect to receive the pension for a slightly longer period, the difference in benefits is far greater than the difference in life expectancies justifies. The older employee's pension would cost the state approximately \$15,000 more than the younger employee's. If the older employee were five years older rather than one, the discrepancy grows to a benefit that is \$6,000 higher per year with a present value \$24,000 larger.

### PENALIZING YOUNGER AND OLDER RETIREES

- The benefit rates in Table 4 are not closely related to life expectancy, which distorts retirement decisions. Employees who retire at a slightly earlier age can receive significantly less in benefits, while those who continue working into their mid-60s may actually lose money.

A 55-year-old employee with 30 years of service and a final average salary of \$50,000 could retire with a pension of \$22,500. For each of the next few years of work, even without a raise, the pension increases by roughly 10 percent. This rapid run-up makes it very difficult for employees to leave state service.

At the other extreme, some older employees may lose money by continuing to work. Because the pension system caps the pension at 80 percent while continuing to require contributions, work beyond a certain point could be a financial mistake. If a 65-year-old employee with 35 years experience works for an additional year without a raise, he or she would contribute \$4,900 into the pension system and would see no increase in pension benefits. Since this employee's life expectancy will be lower at retirement, the net present value of his or her pension could fall by \$10,000 or even \$15,000.

## Conclusion

A fair and reasonable pension system would have several fundamental properties. At a minimum, it would provide benefits that are consistent across employees and are related to the value of the work the employee performed. The analysis above demonstrates how the complex calculation of contributions and benefits introduces a number of inequities into the state pension system. In each of the examples, the pension system has been abused for the benefit of select employees, in some cases at tremendous expense to the Commonwealth. The state pension system has these failings:

- It treats employees inequitably
- It burdens future generations of taxpayers
- It conceals the costs of decisions
- It distorts incentives
- It reduces confidence in the system

The myriad flaws identified in this paper combine to create a system that is unfair to employees and taxpayers. Some of the problems affect only a small number of employees and impose negligible costs on the state. Others impact tens of thousands and will cost taxpayers immensely. In total, the items discussed above raised the state's current liability by more than three billion dollars and increased the required annual payment into the pension system by more than \$125 million, a number that will grow over time. The bulk of this cost comes from Retirement Plus and the early retirement programs, but allowing the purchase of creditable service, allowing "Section 10" early retirements, moving employees into higher groups, and giving ELBOs and other raises just before retirement add millions more in annual costs.<sup>25</sup>

There are a number of ways to address the shortcomings identified by this paper. *The Boston Globe* has editorialized for capping all pensions at \$100,000.<sup>26</sup> While this would

address a small number of gross abuses (only two retirees in 2005 qualified for pensions greater than \$100,000), it would leave the vast array of unfair practices in place.

A number of more thoughtful modifications could address the most serious defects in the retirement system.<sup>27</sup> Two major reforms would address the majority of the problems:

- Enact pay-as-you-go language to require any change in benefits to be funded in full within three years. This would clarify the costs of legislative changes to Chapter 32 and reduce the incentive to push costs onto future taxpayers. It would discourage ERIPs, moving employees to higher groups, and pension enhancements such as Retirement Plus.
- Tie benefits more closely to lifetime contributions. For example, an employee's pension could be limited to no more than a multiple of the total contributions and investment earnings. This change would stop a large salary increase late in one's career from inflating pension benefits.

Smaller reforms that would deal with other aspects of unfairness include the following:

- Pro-rate pensions based on tenure in each group to eliminate large windfalls based on only a short service in Groups 2, 3, and 4.
- Limit the definition of regular compensation to pure salary.
- Eliminate "Section 10" termination benefits.
- Eliminate the favorable definition of elected official's creditable service and the ability to buy service for unpaid work.
- Reduce the jump in the Group 2 benefit rate at 55, and more generally match benefit rate increases to life expectancy.
- Eliminate separate contribution rates and benefit calculations for teachers and judiciary.

These incremental reforms would address many of the current inequities in the system. However, as the long list of problems suggests, Chapter 32 presents an almost irresistible target for the Legislature. Between 2001 and 2005, the Legislature passed almost 100 laws that dealt directly or indirectly with Chapter 32. As long as the determination of pension benefits is rooted in the four dimensions of compensation, retirement age, eligible years of service, and maximum three years of salary, rather than actual contributions, it will be almost impossible to stop new exceptions and loopholes from appearing. In fact, a law requiring that all changes to the pension system be paid for at the time of passage would not even be binding on the Legislature.

A transition from a defined benefit to a defined contribution or cash balance plan offers a more far-reaching alternative. In defined contribution plans, benefits are directly tied to contributions. This immediately eliminates the difficulties with benefit rates, creditable service, groups, and salary growth, and it makes costs transparent.

Pension giveaways have already cost taxpayers billions of dollars and sapped the public's trust. Given the complexity of the current system, it is likely that further changes to Chapter 32 will continue to advantage select groups of employees while shifting the costs into the future. The Governor and Legislature should reform the pension system to make the cost of any changes transparent and reduce the burden on taxpayers.

## Appendix—The Value of Pensions

### *How much is a pension worth to a retiree? How much does a pension cost the state?*

The state pension system provides retirees a series of payments every year for the rest of their lives. Any comparison of annual benefits inevitably requires some way to compare the value of different streams of payments. For example, consider a pension of \$50,000 per year starting today for a retiree expected to live for 20 years. This stream of payments is worth considerably less than the \$1,000,000 in total payments that it will generate. Unfortunately, the value of the stream of payments is uncertain, and the cost to the state of providing the pension may be different from the value to the retiree.

The “present value” of a stream of payments is a measurement of how much a series of future payments are worth today, or, phrased differently, the present value captures how much one would have to have on hand today to generate the stream of payments in the future. The present value depends on the discount rate used to compare the value of a payment today to the value of a payment in the future. For example, if the discount rate is 10 percent, a payment of \$110 in one year has a present value of \$100, while if the discount rate is only 5 percent, the present value rises to \$104.76 ( $\$110/1.05$ ).

There are two ways of thinking about the value of pension payments, depending on the context. In some instances it may be appropriate to consider the cost to the state of providing the benefits, while in others it may be preferable to consider the amount that an employee would have to have in a lump-sum to secure equivalent payments outside the system. These two approaches effectively use different discount rates and therefore yield different answers.

The state assumes that it will earn an annual return of 8.25 percent on its pension fund investments. This implies that the state would have to invest \$522,000 today to pay a \$50,000 per year pension for 20 years—thus the actuarial liability associated with this retiree’s pension is \$522,000.

Alternatively, one could look at how much it would cost an individual to secure equivalent payments outside the pension system. Insurance companies sell annuities whereby an individual pays a lump-sum today and receives annual payments in the future. The discount rate used by insurance companies varies with changes in long-term interest rates, and today the rates on 20-year annuities are less than 5 percent.<sup>28</sup>

With the current low interest rates, a 20-year, \$50,000 annuity purchased from an insurance company could cost as much as \$650,000, or 30 percent more than the assumed cost to the state. The annuity calculations become somewhat more complicated when additional details are taken into account: pension benefits are free from state income taxes, so that a retiree would have to buy an annuity with a payment roughly 6 percent higher than the pension to wind up with the same after-tax income.

The dependence of annuity costs on interest rates introduces uncertainty into an analysis of a pension’s value to an employee because we cannot know what the discount rate will be in the future. Thus while purchasing a \$50,000 annuity for 20 years may cost \$650,000 today, for an employee retiring five years or even five months from now the cost could be substantially different. The expected cost to the state to provide the \$50,000 annual payments does not vary with changes in interest rates because it is based on the 8.25 percent assumed rate of return on investments.

One final complication in any calculation is that the first \$12,000 of annual benefits are subject to a cost of living allowance or COLA. This increases both the cost of the pension to the state and the value to the employee. The exact effect of a COLA depends on inflation rates in the future, and the importance of a COLA declines as the pension increases (because a smaller portion of the pension is subject to the adjustment). For the \$50,000 payment mentioned above, a 2 percent annual COLA on the first \$12,000 would increase the expected liability to the state by 3.3 percent and the cost of an annuity by 3.9 percent, while a 3 percent COLA would increase the liability by 5 percent and the cost of an annuity by 5.8 percent. For a smaller pension, the COLA would have a larger impact. The estimated costs to the state used in this paper assume a 3 percent COLA on the first \$12,000 of benefits each year.

## Endnotes

1. *Evans v. Contributory Retirement Appeal Board et al.*, Massachusetts Appeals Court (1999).
2. There are several bills before the Legislature to reduce contributions for some or all employees.
3. Public employees in Massachusetts are not covered by Social Security. The exemption allows state and local governments to avoid the 6.2 percent payroll tax—for comparison, the estimated cost to the state government of retirement benefits is less than 2.5 percent of payroll today and will probably decline over the next 20 years. Employees also avoid the payroll tax, but, of course, they lose Social Security benefits as well.
4. See appendix for an explanation of how pension costs are calculated.
5. Calculations use assumptions on salary growth for Group 1 employees contained in the Commonwealth Actuarial Valuation Report from January 1, 2005 and assume a 3 percent annual COLA.
6. “Commonwealth Actuarial Valuation Report,” Public Employee Retirement Administration Commission, January 1, 2005. Does not include health care costs. Excluding expected costs for disability liability reduces the employer normal cost to less than 2.5 percent of payroll.
7. The benefit amounts include 775 employees who chose a benefit option that slightly reduces the annual payment but also provides payments to survivors after the beneficiary’s death.
8. “Rising U.S. State Unfunded Pension Liabilities Are Causing Budgetary Stress,” *Standard & Poors*, February 22, 2006
9. An employee with ten years of service also qualifies for ordinary disability benefits, while accidental or on the job disability and death benefits begin immediately.
10. “Analysis of Early Retirement Incentive Program for the State Retirement System,” Public Employee Retirement Administration Commission, November 2002 and March 2004.
11. “Cost Analysis of Chapter 114 of the Acts of 2000,” Public Employee Retirement Administration Commission, December 2001.
12. Chapter 308 of the Acts of 2004.
13. Michael Jonas, “Pension liabilities: Special deals abound for lawmakers and bureaucrats who get ‘fired,’” *Commonwealth Magazine* (Spring 2002).
14. *Ibid.*
15. *Boston Globe*, “Bulger’s Bounty,” December, 3, 2005.

16. Raphael Lewis, "Bulger Ruling May Aid Others", p. A1, *The Boston Globe*, November 30, 2005.
17. Maureen Boyle, "Brockton Police Officer Gets Record Pension Bonanza", *Brockton Enterprise*, February 4, 2004.
18. Frank Phillips, "Romney Names Supporter to Oversee Civil Service", *Boston Globe*, August 22, 2003.
19. Massachusetts Teachers' Retirement Board.
20. If every district in the state adopted an ELBO plan, the cost to the state is estimated to be more than \$60 million per year.
21. "Benefit Guide for the Massachusetts State Employee's Retirement System," Massachusetts State Board of Retirement.
22. "Commonwealth Actuarial Valuation Report," Public Employee Retirement Administration Commission, January 1, 2005.
23. State Senator Patricia Jehlen, quoted in March 17, 2006 State House News Service website, "Commission Charged With Examining Retirement Classification System", <http://www.statehousenews.com/th013030.htm>, last accessed March 24, 2006.
24. Scott Greenberger, "Ousted Correction Chief Denied Increase in His Pension," *Boston Globe*, December 24, 2003, p.B5.
25. The large increases in liability not only increase the burden on taxpayers, but they also increase the state's exposure to investment risk—if the total liability is twice as large, the losses from a downturn in the investment fund are twice as large.
26. *Boston Globe*, "Bulger's Bounty," December, 3, 2005.
27. Many of these ideas have been proposed, some repeatedly. For example, in January 2004, Governor Romney proposed legislation that would have capped pensions in relation to a worker's entire earnings history, and this year several bills would limit the definition of regular compensation.
28. Quotes from [www.immediateannuities.com](http://www.immediateannuities.com) on January 30, 2006.

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Convention Wisdom Revisited: Boston Convention Center Projections, March 2001

Poll Finds High Satisfaction Rate Among Charter School Parents; Improvement in District Schools, October 2000

Survey Finds Majority Support for School Vouchers, May 2000

Survey of Massachusetts Municipalities Finds Competitive Contracting Widely Used, January 2000

Vertical Construction Performance in Massachusetts Lags Far Behind Other States, December 1999

Demand for Charter Schools Continues to Rise, June 1999

Study Finds Charter School Teachers Are Stakeholders, July 1998

Poll Finds Higher Satisfaction Rate Among Charter School Parents, June 1998

Survey of Massachusetts Residents Shows Clear Majority Supports School Choice, October 1996

Charter Schools: Fears and Facts, June 1995

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