

Rhetoric and Reality

Pension Benefits for Retired Massachusetts State Workers

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Executive Summary

The pension system for Massachusetts state workers and retirees has recently received a great deal of attention. Governor Deval Patrick signed reform legislation in June 2009, and additional reforms may be forthcoming. Much of the media coverage of pension issues has focused on sensational accounts of pension abuse. A public discussion of potential pension reforms would benefit from additional information on pension benefit levels. In an effort to inform the public debate, this paper provides a more detailed profile of typical pensions received by retired members of the Massachusetts State Employees Retirement System (SERS). The key findings include:

- Overall and Current Average Pension: The average annual pension benefit among all retired SERS members in 2009 was \$26,516. SERS members retiring in 2009 received an average annual pension of \$37,671.
- Overall and Current Average Pension For Career Employees: Retired SERS members in Group 1 with twenty or more years of service received an average pension allowance of \$31,862. Group 1 members with twenty or more years of service retiring in 2009 received an average pension allowance of \$43,874.
- Number of Retirees Outside of Group 1: The largest set of retirees is in Group 1 (“general employees”). Group 1 retirees constitute 82 percent of all retired SERS members. Group 1 retirees retiring in 2009 constituted 70.5 percent of retiring SERS members in that year. The Commonwealth does not track the group membership of its current employees but changes in group membership significantly impact pension costs.
- Variations in Pensions By Certain Group and Retirement Years: Benefits for different groups of retirees vary significantly depending on when individuals retired and what group they retired in. The average pension, as of 2009, for members of Group 3 (“state police”) is \$58,654. The average pension of Group 3 members retiring in 2009 was \$78,289. The average pension in 2009 for all retired SERS members in Group 4 (“corrections officers”) is \$34,835. The average pension of Group 4 members retiring in 2009 was \$40,249.
- Income Replacement Rates and Social Security Comparison: Among retirees with twenty or more years of creditable service, over half receive a retirement allowance that is 60 percent or more of their pre-retirement income. Three-fourths of retirees with twenty or more years of service receive allowances that exceed 50 percent of their pre-retirement income. The average retirement benefit received by SERS members exceeds the maximum benefit levels of the federal Social Security system. The pension wealth of the average state employee at retirement is more than twice as large as the pension wealth from Social Security for the average Social Security recipient. The pension wealth of the average newly-retired SERS member exceeds \$500,000. The pension wealth of the average member of the state police retiring in 2009 exceeded \$1 million.

The intent of this report is not to suggest specific policy solutions; rather it is to enrich the debate over the various dimensions of the Massachusetts public pension system by providing data on pensions across many of those dimensions. Highlighted issues include group classification, retirement year, service years, and income replacement levels.

Introduction

This white paper examines benefit levels among retired members of the Massachusetts State Employees Retirement System (SERS). It provides statistics on state employee retirement benefit levels which go beyond those that typically appear in publications of state boards that provide management and oversight of the SERS. This

paper provides data on pension benefit levels that may be useful to policymakers and other interested parties as they assess the adequacy of retirement income to SERS retirees and evaluate the cost of the system to taxpayers.

The structure and financing of public pension plans has become the subject of considerable attention in recent years. The Massachusetts legislature has considered a variety of changes to the laws that govern eligibility and benefit levels. Governor Deval Patrick signed pension reform legislation in June 2009. However, these reforms affected only a small number of individuals who may be eligible for pension benefits, and a small portion of overall pension costs. Changes to the benefit formula were recommended by the Special Commission to Study the Massachusetts Contributory Retirement Systems.¹ Governor Patrick recently filed legislation that would alter the benefit formula for state retirees.² Other gubernatorial candidates have also advanced pension reform proposals.

State pension plans have also received much attention in the wake of the 2008-2009 financial crisis. The decline in the value of assets held by public pension plans in Massachusetts and other states has raised questions concerning the sustainability of a number of defined benefit public pension plans. Any consideration of large-scale changes to the Massachusetts SERS requires an understanding of the level of benefits provided and the economic impact of changes on plan participants.

This paper examines the level of pension benefits received by retired state workers by answering several key questions regarding pension allowances:

- How do average benefits vary among different retiree groups?
- How do average benefits of recent retirees compare to the level of benefits received by earlier cohorts of state retirees?

- What is the average pension for those workers who have spent a majority of their working lives (defined as twenty or more years) with the state? What is the average pension for workers in this category who retired in 2009?
- How do pension allowances compare to the pre-retirement compensation of state retirees?
- How does the benefit level and pension wealth of state retirees compare to the level of benefits and pension wealth of participants in the federal Social Security system?

Section I of this white paper discusses the organization of the Massachusetts SERS and the formulas used for the determination of retiree pension allowances. Section II contains results and discussion of the computation of benefit levels for various groups of state employees. Section III provides a summary and conclusions. The appendix provides greater detail regarding the distribution of retiree pension benefits.

I. Structure of the State Employee Retirement System in Massachusetts

A. Organization

The Massachusetts SERS provides retirement benefits to most retired state workers. This includes state employees who are in the Massachusetts State Police, corrections officers and members of the state judiciary. There are separate retirement systems for individuals who are employed by certain agencies and authorities.³ Employees of cities, towns and public schools are members of separate systems.

The SERS and other state retirement systems are governed by Chapter 32 of the Massachusetts General Laws, and the SERS is administered by the five-member State Retirement Board.⁴ Plan assets are held in the Pension Reserves Investment

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Trust (PRIT). The SERS and most other public employee retirement systems are subject to oversight by the Public Employees Retirement Administration Commission (PERAC).

Public employee pension plans come in two general forms. The Massachusetts SERS is a so-called “basic” benefit plan. In a basic plan, participants and employers do not make contributions to nor do they accrue credits towards the requirement of forty quarters of covered employment to become eligible for benefits from the federal Social Security system. Most other states operate a so-called “combined” benefit plan.⁵ In a combined benefit plan, participants make contributions into the federal Social Security system and are eligible for benefits. The state portion of a combined public pension plan provides an additional layer of benefits beyond that provided by Social Security. As a result of differences in plan structure, the benefit levels presented herein may not be directly comparable to benefit levels under other state plans. Additional comments on the interaction between the Massachusetts SERS and the federal Social Security system are provided in Section II below.

B. Determination of Eligibility and Benefit Levels

Membership in the SERS is determined at the time an employee is hired. Membership is mandatory; if an employee is determined to be a member of the SERS he or she cannot opt out.⁶ In addition to the SERS, active employees have the option of participating in a defined contribution plan similar in structure to a 401(k), with no match by the state.

Contributions to the SERS are based on the employee’s date of membership, employee group and compensation. Contributions are a percentage of the employee’s regular compensation. Regular compensation includes salary and wages but excludes bonuses, overtime, severance pay and certain other forms of compensation.⁷

The current contribution rates for active members of the SERS are:⁸

- (i) 5 percent of regular compensation for members whose membership commenced prior to January 1, 1975.
- (ii) 7 percent of regular compensation for members whose membership commenced between January 1, 1975 and December 31, 1983.
- (iii) 8 percent of regular compensation for members whose membership commenced between January 1, 1984 and June 30, 1996.
- (iv) 9 percent of regular compensation for members whose membership commenced on or after July 1, 1996 with the exception of members of the state police who contribute at a rate of 12 percent.

Members whose memberships commenced on or after January 1, 1979 are required to contribute an additional 2 percent of regular compensation in excess of \$30,000 per year.

Eligibility for retirement benefits is a function of an employee’s membership class, age and years of creditable service. In addition to normal retirement benefits, SERS provides disability benefits.

The SERS has four membership classes:⁹

Group 1: General employees, including clerical, administrative and technical, and all other employees not otherwise classified (“general employees”).

Group 2: Certain specified hazardous duty positions (“certain hazardous duty positions”).

Group 3: State police officers and inspectors (“state police”).

Group 4: Police officers, firefighters, corrections officers, and other specified hazardous duty positions (“corrections officers”).

Metric 1: Age Factors for SERS Members

	Group		
Age	1	2	4
65	2.5	2.5	2.5
64	2.4	2.5	2.5
...			
60	2.0	2.5	2.5
59	1.9	2.4	2.5
...			
55	1.5	2.0	2.5
54	1.4	1.4	2.4
...			

Source: Massachusetts State Board of Retirement Benefit Guide.

To be eligible for a superannuation retirement, a member must meet one of the three conditions:

- (i) Completion of twenty years of service.
- (ii) Attainment of age 55 with ten years of service if hired after 1978 and if classified in Groups 1 or 2.
- (iii) Attainment of age 55 if hired prior to 1978 or if classified in Group 4.

The benefit level at the time of retirement is determined by multiplying the age factor, which is based on the member’s age at retirement and group classification, by the member’s average annual rate of compensation and years of creditable service. The average annual rate of compensation is defined as the greater of: (i) the member’s highest average regular compensation in any consecutive three-year period; or (ii) the average rate of compensation in the three years preceding retirement whether or not those years are consecutive.¹⁰ The age factor is a function of the age of the retiree and group classification.¹¹ The group classification used to compute retirement benefits is the member’s group classification as of the date of retirement.¹²

The maximum age factor for members of Group 1 is 2.5 percent. That age factor applies to members retiring at or above the age of 65. Group 1 members retiring before age 65 experience a reduction of .1 percent in their age factor for each year below age 65. Thus, for a retiree at age 60, in Group 1 with twenty years of creditable service, the age factor used in the computation of retirement benefits is 2.0 percent and the level of benefits a person receives at retirement is 40 percent (2.0 percent times 20 years) of the average annual rate of compensation.

The age factor for members of Groups 2 and 4 reaches a maximum at a younger age than for members of Group 1. The age factor for members of Group 2 (certain hazardous duty employees) and Group 4 (corrections officers) reaches its maximum—2.5 percent—at ages 60 and 55, respectively. As is the case for members

of Group 1, the age factor is reduced by .1 percent each year that the retiree is below the minimum retirement age.

The benefit formula for SERS members in Group 3 (state police) has a higher age factor than the formulas for members of Groups 1, 2 or 4. The age factor in the benefit formula for members in Group 3 is 3.0 percent regardless of the number of years of service.

The net effect of the group classification system is that for a retiree with a given age, average annual rate of compensation and years of creditable service, the benefits received by retirees in Groups 2 and 4 will be higher than for Group 1 retirees. Similarly, Group 3 retirees at any given age will receive higher retirement benefits than retirees in Groups 1, 2 or 4 who have the same criteria. Benefits are capped at 80 percent of the average annual rate of compensation for all retiree groups.¹³

II. Benefit Levels of SERS Retirees

A. Data on SERS Retirees

The analysis herein utilizes a dataset obtained from the Office of the Treasurer of the Commonwealth of Massachusetts.¹⁴ The dataset contains benefit levels, employment record, salary history and

Table 1: Average Annual Pension Benefit Retired State Employees, By Group Classification

Panel A: All Retired SERS Members

Group Classification [a]	Number [b]	Average Benefit in 2009 [c]	Average Age at Retirement [d]	Average Years Creditable Service at Retirement [e]
1	33,623	25,097	60.5	23.2
2	4,248	26,101	59.7	23.1
3	930	58,654	52.5	27.3
4	2,361	34,825	52.7	25.5
Total	41,162	26,516	59.8	23.4

Panel B: SERS Members Retiring in 2009

SERS Members with retirement dates between January 1, 2009 and October 30, 2009.

Group Classification [a]	Number [b]	Average Benefit in 2009 [c]	Average Age at Retirement [d]	Average Years Creditable Service at Retirement [e]
1	1,143	36,038	62.1	26.2
2	231	35,097	59.9	26.6
3	48	78,289	53.7	29.6
4	198	40,249	52.2	24.8
Total	1,620	37,671	60.3	26.2

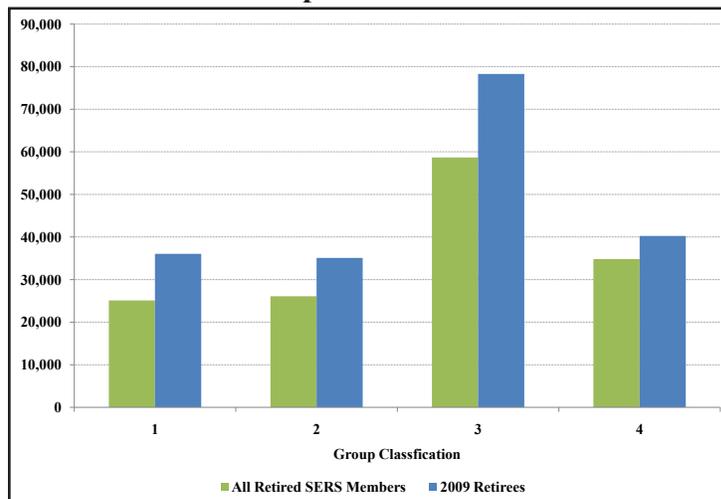
retirement status information for individuals with SERS retirement allowances.¹⁵ Individuals appearing in the dataset have retirement dates that range from June 5, 1953 through October 30, 2009. The dataset contains records for 41,177 retired state employees. A small number of observations with missing or inconsistent data are eliminated from the dataset. The elimination of these observations reduces the size of the dataset to 44,162 individual retirement records. The study contains a computation of the average level of retirement benefits for various subsets of SERS members. The appendices contain

additional statistics concerning the distribution of the retirement benefits received by retired SERS members.

B. Benefits by Group Classification

Retirement allowances are based in part on the member’s group classification at retirement. Table 1 contains statistics on benefits received in 2009 by retirees in the four group classifications. Panel A of Table 1 contains the average retirement benefit and retirement characteristics for all retired SERS members. Panel B contains

Figure 1: Average Annual Pension Allowance by Group Classification



that same data for SERS members who retired in 2009.¹⁶ Retirement allowances for the set of all SERS members may not be indicative of the benefits enjoyed by more recent retirees. The COLA for SERS retirees applies only to the first \$12,000 of the retirement allowance, and is subject to a cap that may be below the rate of salary growth for state workers. Therefore, the benefit level of earlier cohorts of retirees may differ substantially from the most recent cohort of SERS retirees.

Columns [b] and [c] of Panels A and B contain the number of retirees and average annual retirement allowance by group classification. The largest group of retirees is those in Group 1—general employees. Retirees with Group 1 classifications are 81.7 percent of all retired SERS members. Of SERS members who retired in 2009, 70.6 percent were in Group 1.

The average benefit received by a retired SERS member in 2009 was \$26,516. This is similar to the overall average allowance reported by PERAC.¹⁷ The average pension benefit among more recent retirees is higher, with an average annual retirement benefit of \$37,671 among SERS members who retired between January 1, 2009 and October 30, 2009 (Panel B).

The level of pension benefits varies substantially among retirees in different group classifications. The average benefit among retirees in Group 1 was \$25,097 in 2009. However, among Group 1 members who retired in 2009, the average benefit was \$36,038. The average benefit among retirees in Groups 3 and 4 is higher than among Groups 1 and 2. In particular, retirement pensions received by members of the state police are much larger than those of other state retirees. As discussed above, the benefit formula for members of the state police has a higher age factor than that of other group classifications. The average annual pension among retired SERS members with state police pensions was \$58,654. The average pension benefit among members with state police pensions who retired in 2009 was \$78,289.

There are also substantial differences among retirees in the average age at retirement and average years of creditable service among the four group classifications. Members of the state police and corrections officers have a lower retirement age than other state employees. The average retirement age among all retired members of the state police is 52.5 years, and for corrections officers the average age at retirement is 52.7. This compares to 60.5 for SERS members classified in Group 1 and 59.7 for members in Group 2. Members of the state police and corrections officers tend to have more years of creditable service than other SERS retirees.

C. Benefits by Retirement Plan Election

At the time of retirement SERS members have the option to select from three payout options. The payout options allow the retiree to select the combination of pension allowance and survivor's benefits that best meet his or her needs. The choice among two or more payout arrangements is common in the case of defined benefit pension plans.

Retiring SERS members choose among the following payout options:

Option A: The annual retirement allowance as determined by the benefit formula, in monthly installments, commencing at retirement and terminating at the member's death.

Option B: A reduced retirement allowance, in monthly installments, commencing at retirement and terminating at the member's death, with a lump sum payout to a beneficiary in the event that the cumulative payout to the retiree is less than the member's accumulated deductions, including interest.

Option C: Reduced annual allowance, in monthly installments, commencing at retirement. At the date of the death of the retired member, 2/3 of the allowance is paid to a designated beneficiary for the life of the beneficiary.

**Table 2: Selection of Allowance Options
Retired State Employees, By Group and Retirement Option**

Option A: Full retirement benefits, no survivors allowance.
Option B: Reduced retirement benefits, lump sum survivor's benefit.
Option C: Reduced retirement benefits, annuitized survivor's benefit.

Group Code [a]	Retirement Option [b]	All Retirees		2009 Retirees	
		Number [c]	Average Benefit [d]	Number [e]	Average Benefit [f]
1	A	17,897	25,838	426	35,223
1	B	9,634	21,497	284	32,915
1	C	6,092	28,612	433	38,889
2	A	2,074	25,941	76	35,244
2	B	1,416	24,259	69	31,787
2	C	758	29,977	86	37,624
3	A	368	59,975	13	79,395
3	B	271	52,324	4	71,341
3	C	291	62,879	31	78,722
4	A	879	34,787	48	37,532
4	B	663	33,593	37	37,430
4	C	819	35,864	113	42,326

The choice among the payout options affects the level of the retiree’s pension allowance. Option A provides the largest amount of benefits to the retiree but terminates at the death of the member. Options B and C provide reduced benefits for the retiree but include either a lump sum or a monthly payment to the member’s designated beneficiary.

Table 2 displays summary statistics on the choice of payout option and average annual allowance for the three options available to SERS members. Option A is the most popular payout option among SERS retirees in each group classification.

The results in Table 2 indicate that retirees electing payout Option C have the highest average level of benefits. This may be somewhat counterintuitive since Option C involves a reduced allowance for the retiree while Option A provides the full retirement allowance. However, the choice of retirement option depends on a number of economic and demographic factors. Retirees electing Option C have the highest average annual rate of compensation. Higher-income state workers may be more likely than lower-income state employees to have family members whom they wish to designate as beneficiaries. Therefore, retirees with higher income levels may find Option C more desirable. This may account for the higher retirement allowance among members electing payout Option C.

D. Benefits by Years of Creditable Service

The level of benefits for a retired SERS member is a function of the member’s years of creditable service. A state employee accrues credible service for time spent in state employment. However, a SERS member may also be able to purchase creditable service for time spent in activities outside of state employment.¹⁸ To qualify for a regular pension, a member must accrue ten or more years of creditable service.

Table 3 contains the average retirement allowance by group classification and years of creditable service. Panel A of Table 3 contains the average allowance received in 2009 by all retired SERS members. Panel B of Table 3 contains the average retirement allowance received by SERS members who retired in 2009. The average allowance of the most recent retirement cohort exceeds that of earlier retirees in all group classifications. As discussed above, publications by state boards charged with the oversight of the Massachusetts SERS typically report only the average benefit received by all retirees—not the average benefit of the most recent retiree cohort.

Throughout this paper there is a focus on retirees in Group 1 because they are the most numerous.¹⁹ Table 4 contains summary statistics for SERS retirees in Group 1 stratified by years of creditable

Table 3: Average Pension Benefit by Years Creditable Service and Group Code

Panel A: All Retirees

Creditable Service (Years)	Group			
	1	2	3	4
10 to 19 Years	14,620	16,792	38,058	21,710
20 to 29 Years	25,328	26,697	55,305	32,114
30 or more years	40,950	39,638	68,436	43,544

Panel B: SERS Members Retiring in 2009

Creditable Service (Years)	Group			
	1	2	3	4
10 to 19 Years	16,996	17,644	#N/A	23,405
20 to 29 Years	30,816	29,467	78,710	35,209
30 or more years	54,062	49,877	77,363	57,034

service. Benefit levels increase in conjunction with the number of years of creditable service. Surprisingly, the average age of retirees varies little between retirees with low and high years of creditable service. Among 2009 retirees with ten to fourteen years of creditable service, the average age at retirement (62.2 years) differs little from the average age of retirement among SERS members with thirty-five to thirty-nine years of creditable service (62.3 years) or the overall average (62.1 years).

The study pays particular attention to retired members with twenty or more years of service. Given the average retirement age of an employee in Group 1, approximately 60 years of age, a retiree with twenty or more years of creditable service has likely spent at least half of his or her time in the labor force in state service. Such individuals have had fewer opportunities to gain access to or accrue retirement benefits from other employer-sponsored plans or from the federal Social Security program. Among retirees with twenty or more years of service, the average retirement allowance in 2009 was \$31,862. These individuals have on average 28.8 years of creditable service. Among SERS members retiring in 2009 with twenty or more years of creditable service, the

average retirement allowance was \$43,874. The average number of years of creditable service at retirement is 31.2 years.

E. Benefits by Retirement Year

This section examines changes in the initial benefit levels over time for SERS members in Group 1, specifically those with over twenty years of creditable service at the time of retirement. Data on pension levels appearing in the Commonwealth’s Actuarial Valuation Reports generally refer to benefit levels among the entire population of retirees and often pools cohorts and retirees with different retirement types. The pooling of different retirement cohorts makes it difficult to examine changes in pension benefits over time. The dataset contains only the 2009 benefit level for each retiree. In order to estimate benefits for earlier years, the retiree’s initial benefit is determined by reversing the adjustment to benefits that would have arisen from the annual COLAs from the date of retirement through 2009. This allows a comparison of the percentage received by retirees in the most recent year with the level of benefits awarded to earlier cohorts in their year of retirement.²¹

Table 4: Average Annual Pension Benefit By Years Creditable Service Retirees in Group 1

Panel A: All Retirees

Creditable Service (years) [a]	Number [b]	Average Benefit [c]	Average Age at Retirement [d]
01 to 04	90	2,703	59.3
05 to 09	537	6,874	61.2
10 to 14	6,551	11,905	61.7
15 to 19	5,711	17,733	61.6
20 to 24	7,407	22,294	57.7
25 to 29	4,655	30,156	59.9
30 to 34	4,533	39,135	60.7
35 to 39	3,110	43,136	61.7
40 plus	1,029	42,335	65.1
Total	33,623	25,097	60.5
Note: Group 1 retirees with 20 or more years of creditable service	20,734	31,862	59.8

Panel B: SERS Members Retiring in 2009

Creditable Service (years) [a]	Number [b]	Average Benefit [c]	Average Age at Retirement [d]
01 to 04	-	-	-
05 to 09	-	-	-
10 to 14	200	13,474	62.2
15 to 19	132	22,333	62.1
20 to 24	202	26,709	60.4
25 to 29	153	36,238	61.0
30 to 34	162	49,339	63.3
35 to 39	216	57,133	62.3
40 plus	77	55,385	65.3
Total	1,143	36,038	62.1
Note: Group 1 retirees with 20 or more years of creditable service	810	43,874	62.1

Table 5 contains estimates of the average benefit levels received by new retirees with superannuation pensions and twenty years or more of creditable service in each year from 2000 through 2009. The number of retirees in each year appears in column [b]. The large increase in retirees in 2002 and 2003 is due to an early retirement incentive program (ERIP) that was made available to state employees at that time.²² The ERIP allowed eligible employees to add five years to their creditable service or five years to their age for the purpose of determination of retirement benefits. The ERIP retained the cap on retirement benefits at 80 percent of the retiree's average annual salary prior to the retirement. The enhancement of retirement benefits due to the ERIP accounts for the sharp increase in initial retirement benefits for retirees in 2002 and 2003 over previous years. The average annual salary and average years of creditable service of retirees appears in columns [d] and [e] of Table 5.

This paper examines the change in retirement allowances over time; consequently there should be an adjustment for inflation. A pattern of increasing average or median initial benefit awards over time does not necessarily mean that more recent cohorts of retirees enjoy a higher level of purchasing power. Purchasing power of more recent cohorts of retirees may actually decline if the rate of increase in consumer prices exceeds the growth of benefit awards. Column [f] of Table 5 contains the average initial benefit of Group 1 retirees expressed in 2009 dollars using the consumer price index for the Boston area.²³ For instance, the actual average retirement allowance received by Group 1 members retiring in 2000 was \$25,004. That is, the average initial benefit in 2000 was \$25,004. After adjusting for inflation, the \$25,004 received in 2000 would provide the retiree with the same level of purchasing power as \$31,837 received in 2009. The results indicate that there has been a modest uptick in benefits over the past four years. The recent increase is due in part to the increase in years of creditable service over time. In addition, as shown in column [g], after adjusting for inflation, there has been

an upward trend over time in the average annual compensation of SERS members at the time of retirement. Both creditable service and annual compensation in the final years of state service are inputs into the SERS benefit formula.

F. Retirement Benefits Relative to Pre-Retirement Income

Income replacement ratios are commonly used in retirement planning. The income replacement ratio is defined as the ratio of a retiree's gross income in retirement to the retiree's gross income prior to retirement. The ratio provides a measure of the adequacy of retirement income. Economic theory suggests that individuals seek to smooth consumption over time. That is, individuals are likely to avoid a situation in which their standard of living post-retirement is significantly lower than it was pre-retirement. To the extent that pension income is much lower than pre-retirement income, individuals may undertake additional savings prior to the date of retirement so that they can enjoy a level of consumption that is higher than it would be if they were solely reliant on pension income to meet expenses.

Studies have examined the ratio of income in retirement necessary to achieve the same standard of living as the retiree enjoyed prior to retirement. This is akin to perfectly smoothing consumption between pre- and post-retirement periods. In general, the income required in retirement to enjoy the same standard of living achieved while employed is lower than the amount of pre-retirement income. Retirees no longer incur work-related expenses such as transportation or clothing. Retirees no longer make contributions to Social Security or defined benefit savings programs.²⁴ They also benefit from differences in the tax treatment of retirement income compared to pre-retirement income. This section utilizes estimates of the income replacement ratio necessary to achieve the same standard of living in retirement developed by Aon Consulting and Georgia State University ("Aon Consulting Study").²⁵

**Table 5: Average Pension Benefit, Salary and Years Creditable Service at Retirement
By Year of Retirement**

Group 1 Retirees with 20 Years or More Creditable Service

Retirement Year [a]	Number [b]	Average Pension Benefit at Retirement (Nominal Terms) [c]	Average Annual Compensation at Retirement (Nominal Terms) [d]	Average Creditable Service at Retirement [e]	Average Pension Benefit at Retirement (2009 Dollars) [f]	Average Annual Compensation at Retirement (2009 Dollars) [g]
2000	1,139	25,004	45,960	23.0	31,837	58,520
2001	1,192	25,672	47,008	23.8	31,332	57,371
2002	4,817	31,480	49,740	25.1	37,443	59,161
2003	3,463	31,978	53,862	24.7	36,663	61,755
2004	517	32,074	59,103	24.3	35,799	65,968
2005	621	26,337	54,382	22.8	28,452	58,749
2006	806	28,117	57,576	22.5	29,463	60,332
2007	1,045	30,151	60,030	23.3	30,995	61,711
2008	1,270	33,911	63,165	25.6	33,682	62,737
2009	1,143	36,038	64,999	26.2	36,038	64,999
Total	16,013					

Note: The relatively large number of retirements in 2002 and 2003 is due in part to an early retirement incentive program (ERIP) extended to state employees.

**Table 6: Income Replacement Ratios (IRR)
Group 1 Retirees with 20 or More Years Creditable Service**

Income intervals are based on the average annual compensation at retirement adjusted for inflation to 2009 dollars. Income replacement ratio is defined as the ratio of pension benefits to average annual compensation at retirement. Column [d] is an estimate of the ratio of post- to pre-retirement income to leave the retiree equally well off in terms of standard of living from Aon Consulting. Column [b] includes all superannuation retirees with retirement dates from Jan 1, 2000 through Oct 30, 2009.

Average Annual Salary (thousands) [a]	Median: All Retirees 2000- [b]	Median: 2009 Retirees [c]	Aon Consulting Income Replacement Ratio [d]
Below 25	0.548	0.550	0.940
25 to 35	0.609	0.529	0.900
35 to 45	0.645	0.578	0.890
45 to 55	0.660	0.588	0.830
55 to 65	0.663	0.657	0.780
65 to 75	0.680	0.693	0.770
75 to 85	0.714	0.705	0.720
85 to 95	0.687	0.647	0.780
Above 95	0.684	0.654	
All	0.669	0.638	

Table 6 contains income replacement ratios for SERS retirees in Group 1 with twenty or more years of creditable service. Income replacement ratios reported in the Aon Consulting Study vary with the level of pre-retirement income.²⁶ SERS retirees are grouped by pre-retirement income. For retirees with retirement dates prior to January 1, 2009, average annual income prior to retirement is adjusted to 2009 dollars.

The median income replacement ratio is .669 among SERS members with Group 1 classifications retiring from 2000 through 2009 with twenty or more years of creditable service. That is, half of all Group 1 retirees between 2000 and 2009 with twenty or more years of creditable service received an initial retirement benefit that exceeded 66.9 percent of his or her pre-retirement income. The median income replacement ratio among 2009 retirees of .638 did not differ substantially from that of earlier years. The income replacement ratio is higher for high-income retirees than for retirees at lower income levels. The median income replacement ratio among SERS members in Group 1 who retired in 2009 and had an average annual rate of compensation between \$25,000 and \$35,000 was .529. In contrast, the median income replacement ratio among SERS members retiring in 2009 with an average annual rate of compensation in excess of \$95,000 was .654. The higher income replacement ratio for high-income state employees is a result of two factors. First, higher-paid state employees in Group 1 tend to retire at a later age. The formula for the determination of retirement benefits assigns a higher benefit rate to employees who retire at a later age. Second, higher-paid state employees tend to retire with more years of creditable service. Retirement benefits increase with the retiree's years of creditable service.

The results in Table 6 provide insights into the adequacy of public pension benefits for different groups of retirees. A comparison of the actual income replacement ratios appearing in Columns [b] and [c] of Table 6 with the ratios necessary to achieve the same standard of living in retirement

achieved prior to retirement in Column [d] provides an indication of the adequacy of pension income for the retiree. For retirees with average annual compensation of \$55,000 or more, the median income replacement ratio is within .15 of the ratio appearing in Column [d]. This indicates that high-income retirees can enjoy the same standard of living in retirement as enjoyed in state service by supplementing their pension allowances with a small amount of savings or other retirement income. The gap between retiree's actual income replacement ratios and that necessary to maintain the same standard of living in retirement is much larger for retirees with lower income levels. These results show that concern about the adequacy of state retirement benefits should focus on retirees who received lower levels of compensation while in state service.

G. Comparing SERS Pension Benefits with Social Security

Another metric to evaluate the adequacy of the level of retirement benefits received by SERS members is the level of benefits received by individuals who are part of the federal Social Security system. There are important differences between the design and benefit structure of the Massachusetts SERS and that of the federal Social Security system. Nevertheless, the federal Social Security system provides a reasonable benchmark, given the near-universal participation in Social Security among workers in the private sector and widespread participation in the Social Security system by public employees in other states.

Comparisons of the retirement wealth of SERS members and Social Security beneficiaries provide a measure of the level of retirement savings necessary for private sector workers to enjoy a level of well-being in retirement comparable to that of SERS members. Pension plans differ in a number of dimensions in addition to benefit levels, including plan characteristics such as the minimum retirement age as well as the treatment of benefits for tax purposes. A plan

**Table 7: Retirement Wealth: SERS Members and Social Security Beneficiaries
SERS Members with 20 or More Years of Creditable Service at Retirement**

Benefit Amount for Groups 1 through 4 are the average initial level of benefits for SERS members retiring in 2009

<i>SERS Members</i>					
Group	Benefit Level	Benefit Amount	Retirement Age	Retirement Wealth: Present Value of Benefits (Pre-Tax) At Retirement	
[a]	[b]	[c]	[d]	Male [e]	Female [f]
1	Average Benefit	43,874	62	547,540	609,353
2	Average Benefit	40,422	60	535,840	593,472
3	Average Benefit	78,289	53	1,169,061	1,268,562
4	Average Benefit	42,037	54	640,397	698,539
<i>Social Security Recipients</i>					
	Average Benefit	14,184	62	212,106	240,973
	Maximum Benefit	21,228	62	317,441	360,644
	Maximum Benefit	26,064	65	349,773	400,519
	Maximum Benefit	36,648	70	400,098	464,808

Notes: Survival probabilities based on Social Security Administration life tables. State retiree COLA assumed to be 3 percent of first \$12,000 of allowance in all subsequent years. Social Security COLA assumed to be the inflation rate in the intermediate case as appears in the 2009 OASDI Trustees Report. Post retirement earnings discounted at the market yield of a 20 year United States Treasury bond of 4.58 percent as of April 7, 2010.

offering lower benefits but a lower minimum retirement age may have greater value to the retiree than a plan offering higher benefit but with a higher retirement age. State employees also have the option of participating in a tax-advantaged retirement saving program similar to a 401(k); however, state employees receive no employer match. Employees in the private sector participate in the federal Social Security system, a system which is similar to a defined benefit plan. Private sector workers may participate in a tax-advantaged 401(k) plan; they may also participate in an employer-provided defined benefit retirement plan.²⁷ Both public and private sector workers can engage in other forms of saving for retirement outside of employer-based retirement plans through investments in mutual funds, annuities or other types of assets.

The United States Social Security Administration reports that the average initial benefit among those individuals who started receiving Social Security benefits in 2009 was \$14,184 per year.²⁸ Social Security benefits are subject to an upper limit. The maximum Social Security benefit assumes that an individual began working in covered employment since age 22 and had earnings at or above the maximum earnings subject to FICA taxes in every period since. As a practical

matter, few individuals are likely to have such an employment and earnings profile.

Table 7 contains summary data on the average allowances of SERS members retiring in 2009 and the average and maximum benefits available under the federal Social Security system. The initial retirement allowance for SERS members substantially exceeds the benefits under the federal Social Security retirement system. The average retirement age of SERS members in Group 1 is 62, with an average initial benefit of \$36,038. In comparison, the maximum initial level of Social Security benefits is \$21,228 for an individual who retires at age 62. The average initial benefit awarded to retirees in Group 1 in 2009 exceeds by 70 percent the maximum Social Security benefit of a 62-year-old retiree in the private sector and the average initial Social Security benefit award by 154 percent. Among SERS Group 1 retirees with twenty or more years of service, the average initial benefit of \$43,874 exceeds the maximum Social Security benefit for a 62 year old retiree by 107 percent.

The level of initial benefits provides only a rough basis for comparison between the benefits under the Massachusetts SERS and the federal Social Security system. The value of retirement income

received from a pension plan depends on a number of factors beyond the initial benefit level. This includes the age of retirement, the individual's life expectancy and the cost-of-living adjustments awarded to retirees. To compare the level of benefits, retirement wealth is first determined for SERS retirees with twenty or more years of service in each of the four group classifications. Retirement wealth is the present value of expected benefit payments for the remainder of the retiree's life. For SERS members, this study assumes that the retiree has the average initial benefit level for his or her group classification. The study also assumes that in all future years, the COLA adjustment for retired SERS members is 3 percent and is applied to the first \$12,000 of the retiree's allowance (an adjustment of \$360 per year); the future COLA for Social Security recipients is the rate of inflation (intermediate case) used by the Social Security Administration in its economic forecasts.

Actuarial studies conducted by other state pension systems have shown that the life expectancy of retired state employees is similar to that of the general population. The California Public Employees Retirement System (CalPERS) reports that a male CalPERS member at age 55 has a life expectancy of 81.4 years.²⁹ This compares to a life expectancy of 79.4 for a 55-year-old male, according to the life tables utilized by the Social Security Administration. CalPERS reports that public safety employees have the same life expectancy as other employees. Subsequently, the life tables and retirement wealth calculations used by the Social Security Administration are also used in this analysis for SERS members in all four group classifications. Since the life expectancy of public employees is slightly longer than that of the average American, my use of the life tables from the Social Security Administration will result in a somewhat lower estimate of the retirement wealth of SERS members relative to the estimate for Social Security recipients.

Estimates of retirement wealth appear in columns [e] and [f] of Table 7.³⁰ Retirement wealth for

SERS members is significantly higher than that of participants in the federal Social Security system. The estimate of retirement wealth facilitates comparison between the values of retirement benefits. The retirement wealth of the average participant in the Social Security system is approximately \$212,000 for men and \$240,000 for women. Even at the maximum benefit level for retirees at 62 years of age, retirement wealth from Social Security is \$317,000 for men and \$361,000 for women. This compares to retirement wealth in excess of \$500,000 for the average SERS member with over twenty years of service. Retirement wealth of members of the state police substantially exceeds the averages for other state employees. The average retirement wealth of a member of the state police is over \$1 million. The high level of retirement wealth is due to the combination of a low average retirement age for members of the state police and the high average level of benefits to state police retirees.

The retirement wealth calculation allows for the comparison of the total value of benefit packages among retirees. Some workers in the private sector also have access to a defined contribution or a defined benefit pension plan. In terms of the comparison of retirement wealth, one can think of the difference between the retirement wealth of a SERS member and a Social Security recipient as the amount of the balance at retirement that a participant in the Social Security system would need to have in a 401(k) plan so that his or her retirement wealth is equivalent to that of a state employee who only draws retirement benefits from the SERS. Consider the case of a male retiring at age 62 with the average level of retirement benefits. A participant in the Social Security system with a 401(k) who has a \$335,000 balance is in the same financial position as an average SERS member in Group 1.³⁰

H. Additional Considerations

There are a number of additional aspects of public sector retirement plans that are important in considering the adequacy of the benefits provided

to retirees. Many aspects of plan design are not well understood and merit additional study by the Commonwealth.

One important aspect of plan design is the flexibility provided to plan members in the selection of their retirement date. A less restrictive rule regarding the date of retirement has value to the plan participant. The SERS provides members with greater flexibility than the federal Social Security system concerning the choice of retirement date. Members of the SERS become eligible for benefits at age 55, after the completion of ten years of creditable service. Individuals covered by the federal Social Security system become eligible for benefits at age 62, after participating in the system for ten years (40 quarters).³¹ The value to the member of this option to begin receiving benefits at an earlier age than Social Security recipients is not part of the retirement wealth calculations presented above.

A second important aspect of plan design is the treatment of income from other sources. The SERS and federal Social Security system differ with respect to the treatment of income from continued employment. Under the federal Social Security system, individuals who elect to retire before full retirement age are subject to an earnings test on earnings outside of Social Security. Earnings in excess of a certain amount result in a reduction in Social Security benefits. This is effectively an additional tax on outside earnings. In contrast, SERS retirees are not subject to an earnings test. SERS retirees receive the full pension benefit award regardless of the level of outside earnings after retirement. The fact that outside income does not trigger a reduction in the retirement allowance of a SERS member is another advantage enjoyed by Massachusetts state retirees that is not available to pensioners in the private sector.

Third, the interaction between the federal Social Security system and the Massachusetts SERS is not well understood. The benefit amounts examined herein are payments received by the

retiree only from the Massachusetts SERS. An assessment of the level of retirement benefits should also include an accounting of retirement income from other sources. State employees may be eligible for retirement benefits from Social Security earnings outside of state employment. Such benefits are subject to Social Security's Windfall Elimination Provision (WEP). Such an instance may arise if an individual began his or her career in a position that was covered by Social Security and later took a position with the Commonwealth. An individual may have accumulated enough time in the private sector to become eligible for Social Security benefits while meeting the creditable service and age requirements to become eligible for pension benefits from the SERS. In such an instance, the individual will receive a full pension from the SERS along with a reduced Social Security benefit.³² However, for individuals who became eligible for Social Security in 2009 or earlier, the maximum possible reduction in Social Security benefits resulting from the WEP is \$372 per month.³³

A fourth aspect of retirement plan design that differs between the SERS and the federal Social Security system concerns the treatment of spousal benefits. Retirees in the SERS are in a more favorable position than Social Security participants since survivors receive benefits on behalf of a deceased spouse. Retirees receiving benefits from the SERS may also receive benefits resulting from the employment of a spouse in a position that was covered by Social Security. In such a case, the survivor's benefit would be subject to the Government Pension Offset (GPO). The GPO reduces the amount that Social Security survivors receive to one-third of the basic employee retirement plan.³⁴ This is not as large as the offset if both the deceased and surviving spouse were employed in the private sector. The Social Security system has a dollar-for-dollar offset of retirement benefits from a deceased spouse. That is, a surviving spouse is eligible for his or her own Social Security benefits or

survivor's benefits, whichever is greater, but not both.³⁵

The United States General Accounting Office has examined the interaction between Social Security and public employee retirement plans.³⁶ It cites an estimate by the Social Security Administration that 95 percent of state and local workers not covered by Social Security receive some form of benefits from Social Security. The interaction between Social Security and the Massachusetts retirement plans is complex, and the interaction between the two systems is not modeled in this paper. Additional work in this area would be useful to policymakers assessing potential changes to Massachusetts public employee pension systems.

III. Conclusions

- How do average benefits vary among different retiree groups?

There are large variations in benefit levels between retiree groups. The average annual benefit for a retired SERS member in Group 1 was \$26,516 in 2009. Benefit levels for retired members in Groups 3 and 4 are higher. The average pension benefit among retired members of the state police was \$58,654; the average pension benefit for corrections officers was \$34,825.

- How do average benefits vary based on time of retirement and how does that variation affect the real level of benefits?

The typical retirement allowance received by new retirees exceeds the typical allowance received by earlier cohorts of retirees. The average annual benefit among SERS members retiring in 2009 was \$37,671. The higher average benefit of more recent cohorts is due in part to the \$12,000 limitation on the amount of the allowance that is subject to a COLA. In real terms, the average initial pension benefit has

been stable over time.

- What is the average pension for those workers who have spent a majority of their working lives (defined as twenty or more years) with the state? What is the average pension for those workers in this category who retired in 2009?

The retirement benefit formula is based on age at retirement and years of creditable service. Average pension benefits are considerably higher among workers who have spent a majority of their working lives – 20 years or more – in state employment. Among all retirees in Group 1, the majority of retired state workers, the average annual benefit in 2009 is \$31,862. The average annual pension was \$43,874 for individuals in Group 1 who retired in 2009.

- What is a typical income replacement ratio for state retirees?

Among retirees with twenty or more years of creditable service, over half have income replacement ratios of 60 percent of pre-retirement income and most have income replacement ratios over 50 percent of pre-retirement income.

- How does the benefit level of state retirees compare to the level of benefits received by participants in the federal Social Security system?

Benefit levels provided most state retirees exceed the maximum benefit levels of the federal Social Security system. The retirement wealth of the typical SERS member is more than twice as large as the retirement wealth from Social Security for the average Social Security beneficiary at the date of retirement. The retirement wealth of the average SERS member retiring in 2009 was over \$500,000. The retirement wealth of the average SERS member in Group 3 (state police) retiring in 2009 was over \$1 million.

Endnotes

1. Special Commission to Study the Massachusetts Contributory Retirement Systems, Final Report, October 7, 2009.
2. An Act Providing for the Modernization and Sustainability of the Pension System, The Commonwealth of Massachusetts, January 26, 2010.
3. State authorities with separate retirement systems include the Massachusetts Housing Finance Agency, the Massachusetts Water Resources Authority, the Massachusetts Port Authority, and the Massachusetts Turnpike Authority.
4. The members of the State Retirement Board are: (i) the State Treasurer; (ii) an individual appointed by the State Treasurer; (iii) two active or retired members of the SERS who are elected by the active and retired SERS members; and (iv) a fifth individual selected by the other four members.
5. For public sector employees, participation in the Social Security system is an employer's option. However, once a public employee retirement plan becomes a combined plan, it cannot switch to a basic plan. Massachusetts is one of seven states in which state employees do not participate in the federal Social Security system. The other forty-three states operate combined plans. Combined plans also account for the majority of teachers and local employee retirement plans in other states. Wisconsin Legislative Council, 2006 Comparative Study of Major Public Employee Retirement Systems, December 2007, at 21-25.
6. There is an exception for certain employees of state colleges and universities. These employees have the option of joining the SERS or a separate defined contribution retirement plan.
7. 32 M.G.L. §1 defines regular compensation.
8. 32 M.G.L. §22(1)(b).
9. Groups classifications are defined at 32 M.G.L. §3(2)(g).
10. 32 M.G.L. §5(2)(a).
11. The age factors used in the formula for retirement allowances are specified at 32 M.G.L. §5(2)(a).
12. The use of group classification at retirement is a source of considerable controversy. Many positions outside the general definitions listed above have been added to Groups 2 and 4 through legislation. It has been suggested that a formula that considers the group classification of an employee during all or part of his or her period of service with the state may be more appropriate. *See, for instance*, Report of the Blue Ribbon Panel on Massachusetts Public Employees Pension Classification System, Report, Alicia H. Munnell, panel chair, undated; Ken Ardon, Public Pensions: Unfair to State Employees, Unfair to Taxpayers, Pioneer Institute for Public Policy Research, No. 30, May 2006; Worcester Regional Research Bureau, Massachusetts Pension Reform: What was accomplished? What remains to be done? Report 09-03, July 9, 2009.
13. 32 M.G.L. §5(2)(c).
14. The original, unedited dataset is available from the Pioneer Institute for Public Policy Research at **[hyperlink to be added]**.
15. Retirees with disability pensions are not included in the dataset.
16. The dataset ends on October 30, 2009. Therefore, the data for 2009 retirees concerns approximately 5/6th of all SERS members retiring in 2009.
17. The most recent available actuarial valuation report states that the average annual benefit for SERS members with superannuation retirements is \$25,436. Commonwealth of Massachusetts, Public Employees Retirement Administration Commission, Actuarial Valuation Report, January 1, 2009 at 16.

18. M.G.L. 32 §5 governs the computation of creditable service. In some instances, individuals may be able to have time credited towards state retirement from service rendered to public entities other than the Commonwealth of Massachusetts, from military service, or from time spent as a contract employee to the Commonwealth.

19. The appendix contains detailed statistics for retirees in each of the four group classifications.

20. See, for instance, Public Employee Retirement Administration Commission, Commonwealth Actuarial Valuation Report, January 1, 2008 at 16-17.

21. The COLA adjustment for retirement pensions provides for an increase of up to 3 percent per year on the first \$12,000 of retirement benefits. This formula for the COLA has been utilized since 1998.

22. For details concerning the ERIP, see Public Employee Retirement Administration Commission, Analysis of Early Retirement Incentive Program for the State Retirement System, November 2002, and Public Employee Retirement Administration Commission, Analysis of Early Retirement Incentive Program for the State Retirement System, March 2004.

23. United States Bureau of Labor Statistics, Consumer Price Index for All Urban Consumers (CPI-U) for the Boston-Brockton-Nashua, MA-NH-ME-CT metropolitan area.

24. The estimates of the income replacement ratio in the Aon Consulting Study are for workers in the private sector. There are differences between SERS members and private sector employees that can affect the income replacement ratio. For instance, employee contributions to the SERS are somewhat higher for state employees than for private sector workers under Social Security. The higher benefit levels of state employees in retirement means that state employees have less need than private sector workers to save for retirement to achieve the same standard of living

in retirement. The income replacement ratios appearing in the Aon Consulting Study should be considered a reasonable baseline but not an exact measure of the income in retirement necessary for state employees to achieve the same standard of living in retirement as prior to retirement.

25. Aon Consulting, 2008 Replacement Ratio Study.

26. Income replacement ratios vary with income levels in part because tax rates vary with income.

27. The United States Bureau of Labor Statistics reports that in 2006 among workers in the private sector, 43 percent participated in a defined contribution retirement plan and 20 percent participated in a defined contribution retirement plan. See <http://data.bls.gov/cgi-bin/surveymost> (last visited August 9, 2009)..

28. United States Social Security Administration website, Workers with Maximum-Taxable Earnings, Facts and Figures About Social Security, 2009 at page 15. The average new award for retired workers is \$1,182 per month ($\$14,184 = \$1,182 \times 12$).

29. David Lamoureaux, A Look into the Future – How will the Retirement of the Baby Boom Generation Affect Your Pension Plan?, California Public Employees Retirement System, 2006.

30. The value of retirement wealth of federal Social Security recipients does not include the value of employer provided retirement plans or individual savings for retirement purposes. The comparison is intended to facilitate a rough comparison of the value of retirement benefits of the SERS and the federal Social Security system. As discussed below, the difference in the value of the retirement benefits under these two plans provides a rough estimate of the value of retirement plan benefits or private savings that a worker subject to the federal Social Security system would need to accumulate to be as well off as a typical SERS member at retirement.

■ **Rhetoric and Reality**

31. See Table 7. $\$335,434 = \$547,540 - \$212,106$.
32. United States Social Security Administration, Windfall Elimination Provision, SSA Publication No. 05-10045, January 2009.
33. The schedule of WEP reductions as a function of year of retirement and years covered by Social Security appears at <http://www.ssa.gov/retire2/wep-chart.htm>.
34. United States Social Security Administration, Government Pension Offsets, SSA Publication No. 05-10084, March 2009.
35. United States Social Security Administration, Survivors Benefits, SSA Publication No. 05-10007, May 2008.
36. United States General Accounting Office, Social Security: Issues Relating to Noncoverage of Public Employees, GAO-03-710T, May 1, 2003 at 4.

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About Pioneer:

Pioneer Institute is an independent, non-partisan, privately funded research organization that seeks to change the intellectual climate in the Commonwealth by supporting scholarship that challenges the “conventional wisdom” on Massachusetts public policy issues.

Appendix

Table 1A: Annual Pension Benefits, All SERS Retirees

Panel A: All Retirees

Annual pension allowances for SERS retirees in 2009.

Group Code [a]	Number [b]	Mean [c]	Annual Pension Benefits			Creditable Service (Years)		Age at Retirement	
			First Quartile [d]	Median [e]	Third Quartile [f]	Mean [g]	Median [h]	Mean [i]	Median [j]
1	33,623	25,097	13,392	20,454	32,865	23.2	22.0	60.5	61.0
2	4,248	26,101	15,788	22,422	33,401	23.1	22.3	59.7	60.0
3	930	58,654	43,873	55,633	71,246	27.3	26.3	52.5	52.0
4	2,361	34,825	27,120	32,271	40,355	25.5	24.7	52.7	55.0
Total	41,162	26,516	14,091	22,050	34,789	23.4	22.4	59.8	60.0

Table 1B: Annual Pension Benefits, SERS Members Retiring in 2009

Panel B: 2009 Retirees

2009 retirees are defined as retired SERS members with retirement dates between January 1, 2009 and October 30, 2009.

Group Code [a]	Number [b]	Mean [c]	Annual Pension Benefits			Creditable Service (Years)		Age at Retirement	
			First Quartile [d]	Median [e]	Third Quartile [f]	Mean [g]	Median [h]	Mean [i]	Median [j]
1	1,143	36,038	17,176	31,702	49,960	26.2	26.0	62.1	62.0
2	231	35,097	19,418	31,531	48,509	26.6	27.8	59.9	60.0
3	48	78,289	67,194	74,879	89,446	29.6	28.1	53.7	53.0
4	198	40,249	31,484	34,756	47,751	24.8	23.6	52.2	54.0
Total	1,620	37,671	19,668	33,296	51,391	26.2	26.1	60.3	61.0

Table 2: Retiree Annual Pension by Years Creditable Service

Panel A: All Retired SERS Members in Group 1 (General Employees)

Creditable Service (years) [a]	Number [b]	Mean [c]	Annual Pension Benefits			Creditable Service (Years)		Age at Retirement	
			First Quartile [d]	Median [e]	Third Quartile [f]	Mean [g]	Median [h]	Mean [i]	Median [j]
01 to 04	90	2,703	1,329	1,726	2,511	3.7	3.9	59.3	59.0
05 to 09	537	6,874	2,934	4,098	6,020	7.8	8.0	61.2	62.0
10 to 14	6,551	11,905	7,461	10,305	14,501	12.2	12.1	61.7	62.0
15 to 19	5,711	17,733	11,938	15,731	20,668	17.4	17.4	61.6	62.0
20 to 24	7,407	22,294	15,229	19,948	26,601	22.1	21.9	57.7	59.0
25 to 29	4,655	30,156	19,772	26,906	36,778	27.3	27.2	59.9	61.0
30 to 34	4,533	39,135	26,448	36,342	48,809	32.4	32.4	60.7	61.0
35 to 39	3,110	43,136	30,373	40,991	52,866	37.1	37.0	61.7	62.0
40 plus	1,029	42,335	28,855	38,214	51,910	42.9	41.8	65.1	64.0
Total	33,623	25,097	13,392	20,454	32,865	23.2	22.0	60.5	61.0
Note: Group 1 retirees with 20 or more years of creditable service	20,734	31,862	19,414	27,803	40,830	28.8	27.9	59.8	61.0

Panel B: All Retired SERS Members in Group 2 (Certain Hazardous Duty Positions)

Creditable Service (years) [a]	Number [b]	Mean [c]	Annual Pension Benefits			Creditable Service (Years)		Age at Retirement	
			First Quartile [d]	Median [e]	Third Quartile [f]	Mean [g]	Median [h]	Mean [i]	Median [j]
05 to 09	18	12,958	5,009	12,648	18,830	8.2	8.4	58.8	60.0
10 to 14	806	14,037	9,140	12,712	17,706	12.2	12.1	60.4	61.0
15 to 19	815	19,517	13,733	17,110	23,691	17.4	17.4	59.8	60.0
20 to 24	915	23,360	16,829	20,532	28,522	22.2	22.2	59.8	60.0
25 to 29	630	31,543	21,393	28,919	39,053	27.5	27.5	59.5	59.0
30 to 34	684	38,822	26,321	37,354	46,998	32.4	32.4	59.1	59.0
35 to 39	344	41,028	26,991	38,769	50,879	36.8	36.5	59.2	58.0
40 plus	36	41,869	29,964	38,778	53,412	42.6	41.5	65.3	64.5
Total	4,248	26,101	15,788	22,422	33,401	23.1	22.3	59.7	60.0
Note: Group 2 retirees with 20 or more years of creditable service	2,609	31,975	20,570	28,443	40,423	28.4	28.1	59.5	59.0

Panel C: All Retired SERS Members in Group 3 (State Police)

Creditable Service (years) [a]	Number [b]	Mean [c]	Annual Pension Benefits			Creditable Service (Years)		Age at Retirement	
			First Quartile [d]	Median [e]	Third Quartile [f]	Mean [g]	Median [h]	Mean [i]	Median [j]
01 to 04	1	54,979	54,979	54,979	54,979	1.7	1.7	45.0	45.0
05 to 09	2	38,142	34,504	38,142	41,780	9.5	9.5	56.0	56.0
10 to 14	1	51,442	51,442	51,442	51,442	12.6	12.6	56.0	56.0
15 to 19	9	36,570	31,618	32,370	40,450	18.4	19.4	55.0	55.0
20 to 24	296	48,272	37,981	47,798	57,356	22.0	21.9	47.9	47.0
25 to 29	368	60,961	46,001	57,775	73,286	26.9	26.7	51.8	51.0
30 to 34	153	67,661	52,802	66,915	81,526	32.4	32.3	57.0	57.0
35 to 39	80	70,582	57,158	71,902	82,166	37.1	36.7	61.1	61.0
40 plus	20	65,789	48,182	67,246	76,544	41.6	40.8	65.2	65.0
Total	930	58,654	43,873	55,633	71,246	27.3	26.3	52.5	52.0
Note: Group 3 retirees with 20 or more years of creditable service	917	58,928	44,140	55,859	71,391	27.4	26.3	52.5	52.0

Table 2 (cont)

Panel D: All Retired SERS Members in Group 4 (Corrections Officers)

Creditable Service (years) [a]	Number [b]	Mean [c]	Annual Pension Benefits			Creditable Service (Years)		Age at Retirement	
			First Quartile [d]	Median [e]	Third Quartile [f]	Mean [g]	Median [h]	Mean [i]	Median [j]
01 to 04	1	25,378	25,378	25,378	25,378	1.9	1.7	45.0	45.0
05 to 09	2	38,142	34,504	38,142	41,780	9.5	9.5	56.0	56.0
10 to 14	1	51,442	51,442	51,442	51,442	12.6	12.6	56.0	56.0
15 to 19	9	36,570	31,618	32,370	40,450	18.4	19.4	55.0	55.0
20 to 24	296	48,272	37,981	47,798	57,356	22.0	21.9	47.9	47.0
25 to 29	368	60,961	46,001	57,775	73,286	26.9	26.7	51.8	51.0
30 to 34	153	67,661	52,802	66,915	81,526	32.4	32.3	57.0	57.0
35 to 39	80	70,582	57,158	71,902	82,166	37.1	36.7	61.1	61.0
40 plus	20	65,789	48,182	67,246	76,544	41.6	40.8	65.2	65.0
Total	930	58,654	43,873	55,633	71,246	27.3	26.3	52.5	52.0
Note: Group 4 retirees with 20 or more years of creditable service	2,185	35,880	28,264	32,956	41,381	26.3	25.6	52.3	54.0

Table 3: Retiree Annual Pension by Years Creditable Service

Panel A: SERS Members in Group 1 (General Employees) Retiring in 2009

Creditable Service (years) [a]	Number [b]	Mean [c]	Annual Pension Benefits			Creditable Service (Years)		Age at Retirement	
			First Quartile [d]	Median [e]	Third Quartile [f]	Mean [g]	Median [h]	Mean [i]	Median [j]
10 to 14	200	13,474	8,934	11,381	14,398	11.9	11.7	62.2	62.0
15 to 19	132	22,333	14,094	18,169	23,432	17.4	17.3	62.1	63.0
20 to 24	202	26,709	19,083	24,880	32,551	22.3	22.3	60.4	62.0
25 to 29	153	36,238	23,369	34,904	44,965	27.3	27.4	61.0	62.0
30 to 34	162	49,339	38,289	47,484	59,407	32.4	32.4	63.3	63.0
35 to 39	216	57,133	41,061	55,081	64,751	37.4	37.2	62.3	62.0
40 plus	77	55,385	41,394	55,040	67,292	42.7	41.4	65.3	64.0
Total	1,143	36,038	17,176	31,702	49,960	26.2	26.0	62.1	62.0
Note: Group a retirees with 20 or more years of creditable service	810	43,874	27,070	41,048	56,572	31.2	31.5	62.1	62.0

Panel B: SERS Members in Group 2 (Certain Hazardous Duty Positions) Retiring in 2009

Creditable Service (years) [a]	Number [b]	Mean [c]	Annual Pension Benefits			Creditable Service (Years)		Age at Retirement	
			First Quartile [d]	Median [e]	Third Quartile [f]	Mean [g]	Median [h]	Mean [i]	Median [j]
10 to 14	27	13,618	8,345	11,728	17,494	12.0	12.3	60.6	61.0
15 to 19	27	21,669	16,106	21,006	24,935	17.2	17.1	58.9	58.0
20 to 24	42	25,857	18,006	21,910	32,142	22.5	22.9	60.8	61.0
25 to 29	40	33,259	23,449	31,233	40,668	27.8	27.8	59.2	60.0
30 to 34	56	46,324	37,149	45,611	55,171	32.5	32.7	59.5	59.0
35 to 39	35	55,020	44,884	53,632	67,175	36.8	36.7	59.9	59.0
40 plus	4	54,626	48,612	49,578	60,640	44.4	45.1	68.5	70.0
Total	231	35,097	19,418	31,531	48,509	26.6	27.8	59.9	60.0
Note: Group 2 retirees with 20 or more years of creditable service	177	40,422	25,721	39,176	52,520	30.2	30.7	60.0	60.0

Table 3 (cont)

Panel C: SERS Members in Group 3 (State Police) Retiring in 2009

Creditable Service (years) [a]	Number [b]	Mean [c]	Annual Pension Benefits			Creditable Service (Years)		Age at Retirement	
			First Quartile [d]	Median [e]	Third Quartile [f]	Mean [g]	Median [h]	Mean [i]	Median [j]
10 to 14	-	-	-	-	-	-	-	-	-
15 to 19	-	-	-	-	-	-	-	-	-
20 to 24	1	66,854	66,854	66,854	66,854	23.2	23.2	47.0	47.0
25 to 29	32	79,081	66,077	75,614	90,856	27.2	26.9	51.3	52.0
30 to 34	8	79,099	72,340	75,219	86,399	32.3	32.0	57.3	56.5
35 to 39	4	75,396	67,714	70,223	83,078	36.8	37.1	59.0	59.5
40 plus	3	75,358	67,231	77,394	81,449	41.1	41.3	64.7	65.0
Total	48	78,289	67,194	74,879	89,446	29.6	28.1	53.7	53.0
Note: Group 3 retirees with 20 or more years of creditable service	48	78,289	67,194	74,879	89,446	29.6	28.1	53.7	53.0

Panel D: SERS Members in Group 4 (Corrections Officers) Retiring in 2009

Creditable Service (years) [a]	Number [b]	Mean [c]	Annual Pension Benefits			Creditable Service (Years)		Age at Retirement	
			First Quartile [d]	Median [e]	Third Quartile [f]	Mean [g]	Median [h]	Mean [i]	Median [j]
10 to 14	7	19,685	15,674	17,703	22,353	12.8	13.4	59.0	56.0
15 to 19	12	25,575	21,070	24,747	30,673	17.4	17.6	59.0	59.0
20 to 24	100	32,703	30,607	32,277	34,205	21.5	20.6	48.1	46.0
25 to 29	23	46,107	39,298	44,148	52,019	27.8	27.3	53.2	54.0
30 to 34	51	55,802	45,667	52,420	62,674	32.1	32.0	56.3	55.0
35 to 39	5	69,593	50,877	54,946	88,658	37.9	38.0	62.2	63.0
Total	198	40,249	31,484	34,756	47,751	24.8	23.6	52.2	54.0
Note: Group 4 retirees with 20 or more years of creditable service	179	42,037	32,058	36,076	49,859	25.7	24.0	51.5	53.0

Table 4: Pension Benefit By Year of Retirement-Adjusted for COLA

Panel A: Group 1 Retirees (General Employees)

Retirement Year	Number	Annual Pension Benefits (Nominal Dollars)				Average Annual Compensation (Nominal Dollars)		Years Creditable Service		Consumer Price Index Boston Area (2009=100)	Annual Pension Benefit (2009 Dollars)	
		Mean	First Quartile	Median	Third Quartile	Average	Median	Average	Median		Mean	Median
[a]	[b]	[c]	[d]	[e]	[f]	[g]	[h]	[i]	[j]	[k]	[l]	[m]
2000	1,139	25,004	13,495	20,342	32,943	45,960	41,404	23.0	21.5	1.27	31,837	25,901
2001	1,192	25,672	13,811	20,877	33,864	47,008	41,966	23.8	22.5	1.22	31,332	25,479
2002	4,817	31,480	19,823	27,718	39,691	49,740	45,247	25.1	25.0	1.19	37,443	32,968
2003	3,463	31,978	19,767	28,935	41,649	53,862	51,088	24.7	24.7	1.15	36,663	33,175
2004	517	32,074	12,366	24,144	48,030	59,103	55,295	24.3	21.2	1.12	35,799	26,948
2005	621	26,337	11,649	19,554	36,622	54,382	51,787	22.8	20.6	1.08	28,452	21,124
2006	806	28,117	12,420	19,464	35,645	57,576	50,482	22.5	21.0	1.05	29,463	20,396
2007	1,045	30,151	13,399	22,593	42,628	60,030	55,115	23.3	21.8	1.03	30,995	23,226
2008	1,270	33,911	16,028	28,884	47,991	63,165	57,980	25.6	24.7	0.99	33,682	28,688
2009	1,143	36,038	17,176	31,702	49,960	64,999	59,664	26.2	26.0	1.00	36,038	31,702
Total	16,013											

Sources:
 [i]: United States Department of Labor, Bureau of Labor Statistics, Consumer Price Index for the Boston Metropolitan Area
 Notes:
 [j]: [c] x [i,2009] / [i]
 [k]: [e] x [i,2009] / [i]

Panel B: Group 2 Retirees (Certain Hazardous Duty Positions)

Retirement Year	Number	Annual Pension Benefits (Nominal Dollars)				Average Annual Compensation (Nominal Dollars)		Years Creditable Service		Consumer Price Index Boston Area (2009=100)	Annual Pension Benefit (2009 Dollars)	
		Mean	First Quartile	Median	Third Quartile	Average	Median	Average	Median		Mean	Median
[a]	[b]	[c]	[d]	[e]	[f]	[g]	[h]	[i]	[j]	[k]	[l]	[m]
2000	240	22,437	13,416	18,692	28,358	39,824	33,795	21.7	20.2	1.27	28,570	23,800
2001	187	24,557	14,032	21,989	33,231	41,900	37,956	22.8	22.1	1.22	29,970	26,837
2002	402	30,967	17,821	31,225	42,551	47,484	52,168	24.6	25.1	1.19	36,832	37,140
2003	228	23,923	14,546	19,355	28,758	45,424	38,842	21.6	20.1	1.15	27,429	22,191
2004	210	27,129	14,909	23,211	34,719	48,652	41,455	22.9	21.7	1.12	30,281	25,907
2005	206	29,213	17,643	26,227	38,277	51,482	49,115	24.0	23.6	1.08	31,559	28,334
2006	222	27,976	17,092	23,919	35,874	49,591	44,116	24.0	22.5	1.05	29,315	25,064
2007	252	29,560	15,686	24,934	41,185	50,705	46,370	24.6	24.0	1.03	30,388	25,633
2008	277	30,666	17,033	26,735	43,214	54,167	49,712	25.1	24.3	0.99	30,458	26,554
2009	231	35,097	19,418	31,531	48,509	58,772	56,992	26.6	27.8	1.00	35,097	31,531
Total	2,455											

Sources:
 [i]: United States Department of Labor, Bureau of Labor Statistics, Consumer Price Index for the Boston Metropolitan Area
 Notes:
 [j]: [c] x [i,2009] / [i]
 [k]: [e] x [i,2009] / [i]

Panel C: Group 3 Retirees (State Police)

Retirement Year	Number	Annual Pension Benefits (Nominal Dollars)				Average Annual Compensation (Nominal Dollars)		Years Creditable Service		Consumer Price Index Boston Area (2009=100)	Annual Pension Benefit (2009 Dollars)	
		Mean	First Quartile	Median	Third Quartile	Average	Median	Average	Median		Mean	Median
[a]	[b]	[c]	[d]	[e]	[f]	[g]	[h]	[i]	[j]	[k]	[l]	[m]
2000	34	55,261	43,745	53,730	64,311	71,652	66,845	27.9	27.5	1.27	70,363	68,414
2001	22	54,366	39,332	43,637	67,691	74,410	62,788	28.7	28.9	1.22	66,352	53,257
2002	48	62,978	51,474	56,634	76,444	82,928	74,045	28.9	28.2	1.19	74,907	67,361
2003	56	69,833	52,693	67,539	82,994	94,062	96,766	31.4	32.0	1.15	80,065	77,436
2004	43	66,719	51,468	60,707	78,036	91,179	82,065	28.7	27.5	1.12	74,468	67,758
2005	53	62,060	49,814	56,653	72,825	87,126	83,729	29.9	28.0	1.08	67,043	61,202
2006	26	73,308	55,051	65,964	84,083	102,075	96,298	28.4	27.6	1.05	76,817	69,121
2007	54	73,964	60,309	68,713	88,998	103,680	98,865	29.2	27.0	1.03	76,036	70,637
2008	82	74,213	61,152	73,491	86,225	105,154	104,007	31.3	30.4	0.99	73,711	72,994
2009	48	78,289	67,194	74,879	89,446	109,213	108,087	29.6	28.1	1.00	78,289	74,879
Total	466											

Sources:
 [i]: United States Department of Labor, Bureau of Labor Statistics, Consumer Price Index for the Boston Metropolitan Area
 Notes:
 [j]: [c] x [i,2009] / [i]
 [k]: [e] x [i,2009] / [i]

Table 4 (cont)

Panel D: Group 4 Retirees (Corrections Officers)

Retirement Year [a]	Number [b]	Annual Pension Benefits (Nominal Dollars)				Average Annual Compensation (Nominal Dollars)		Years Creditable Service		Consumer Price Index Boston Area (2009=100) [k]	Annual Pension Benefit (2009 Dollars)	
		Mean [c]	First Quartile [d]	Median [e]	Third Quartile [f]	Average [g]	Median [h]	Average [i]	Median [j]		Mean [l]	Median [m]
2000	79	32,041	26,079	30,033	37,933	50,141	47,724	25.5	23.7	1.27	40,797	38,242
2001	75	33,853	26,953	32,105	38,682	52,068	50,404	26.1	26.0	1.22	41,316	39,183
2002	138	36,833	28,662	34,953	42,464	56,304	54,927	26.3	25.6	1.19	43,810	41,573
2003	218	37,198	29,462	34,401	44,107	58,944	56,926	24.8	24.2	1.15	42,649	39,442
2004	168	38,864	30,581	36,574	45,919	61,475	59,288	25.3	24.7	1.12	43,378	40,822
2005	203	37,076	29,960	33,837	43,735	61,630	58,658	25.0	23.8	1.08	40,054	36,554
2006	191	36,467	29,328	33,003	41,739	62,000	59,146	24.7	23.6	1.05	38,213	34,582
2007	183	36,343	30,098	33,458	40,221	65,332	62,605	23.5	22.0	1.03	37,361	34,395
2008	216	38,770	30,759	35,063	47,066	67,572	64,144	24.6	23.3	0.99	38,508	34,826
2009	198	40,249	31,484	34,756	47,751	68,922	65,077	24.8	23.6	1.00	40,249	34,756
Total	1,669											

Sources:

[j]: United States Department of Labor, Bureau of Labor Statistics, Consumer Price Index for the Boston Metropolitan Area

Notes:

[j]: [c] x [i,2009] / [i]

[k]: [e] x [i,2009] / [i]

