

State-Boston Retirement System

*Actuarial Valuation and Review
as of January 1, 2010*

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December 21, 2010

*Board of Trustees
State-Boston Retirement System
City Hall, Room 816
Boston, MA 02201*

Dear Board Members:

We are pleased to submit this Actuarial Valuation and Review as of January 1, 2010. It summarizes the actuarial data used in the valuation, establishes the funding requirements for fiscal 2011 and later years and analyzes the preceding two years' experience.

The census information and financial information on which our calculations were based was prepared by the staff of the State-Boston Retirement System. That assistance is gratefully acknowledged. The actuarial calculations were completed under my supervision.

The report shows the results of the valuation for the State-Boston Retirement System as a whole, and separately for the Teachers and All Other Employees.

This actuarial valuation has been completed in accordance with generally accepted actuarial principles and practices. To the best of our knowledge, the information supplied in this actuarial valuation is complete and accurate. Further, in our opinion, the assumptions as approved by the Board are reasonably related to the experience of and the expectations for the Plan.

We look forward to reviewing this report at your next meeting and to answering any questions.

Sincerely,
THE SEGAL COMPANY

By: 

*Kathleen A. Riley, FSA, MAAA, EA
Senior Vice President and Actuary*

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SECTION 1: Valuation Summary for the State-Boston Retirement System

Purpose

This report has been prepared by The Segal Company to present a valuation of the State-Boston Retirement System as of January 1, 2010. The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits. The contribution requirements presented in this report are based on:

- The benefit provisions of M.G.L. Chapter 32;
- The characteristics of covered active participants, inactive participants, and retired participants and beneficiaries as of January 1, 2010;
- The assets of the Plan as of December 31, 2009;
- Economic assumptions regarding future salary increases and investment earnings; and
- Other actuarial assumptions, regarding employee terminations, retirement, death, etc.

Significant Issues in Valuation Year

The following key findings were the result of this actuarial valuation:

- The actuarial valuation report as of January 1, 2010 is based on financial information as of that date. Changes in the value of assets subsequent to that date are not reflected.
- The report shows the results of the valuation for the State-Boston Retirement System (SBRS) as a whole, and separately for the Teachers and All Other Employees.
- During the plan years ended 2008 and 2009, the market value rates of return for the SBRS were -25.41% and 18.76%, respectively. The actuarial rates of return for the plan years ended 2008 and 2009 were -7.44% and 6.17%, respectively. The actuarial value of assets as of December 31, 2009 was \$4.271 billion, or 107.5% of the market value of assets of \$3.973 billion. As of December 31, 2007, the actuarial value of assets was 96.6% of the market value.
- As indicated in Section 2, Subsection B of this report, the total unrecognized investment loss as of December 31, 2009 is \$271,106,990. This investment loss will be recognized in the determination of the actuarial value of assets in the next few years, to the extent it is not offset by recognition of investment gains derived from future experience. This implies that earning the assumed rate of investment return of 8.00% per year (net of expenses) on a market value basis will result in

SECTION 1: Valuation Summary for the State-Boston Retirement System

investment losses on the actuarial value of assets in the next few years. The funding schedules shown in this report reflect the deferred investment losses in accordance with the asset valuation method adopted by the Board.

- Both the market value of assets and the actuarial value of assets as of December 31, 2009 were reduced by \$26,344,573 to reflect the transfer on September 17, 2010 of the Annuity Savings Fund of certain Suffolk County employees to the State Retirement System. In addition, 544 Suffolk County employees included in the active participant data were transferred to the State Retirement System on November 1, 2010. For purposes of this valuation, these employees were treated as inactive participants entitled to a return of their employee contributions.
- This valuation reflects the following:
 - Calendar year 2009 salaries were increased by 11.46% for firefighters to reflect a bargaining contract that was settled after January 1, 2010. Calendar year 2009 salaries were reduced for police superior officers to reflect retroactive payments that were included in the salary data.
 - The investment return assumption for the Teachers was increased from 8.0% to 8.25% to reflect the transfer of assets to the PRIT Fund and the asset allocation of those funds. The change in the assumption lowered the normal cost by \$2,481,803 and the actuarial accrued liability by \$60,774,103.
 - The fiscal 2011 - 2014 expense assumption includes an additional allowance for the new computer system.
- The unfunded liability was expected to decrease from \$2.138 billion as of January 1, 2008 to \$2.084 billion as of January 1, 2010. An experience loss of \$797.1 million (see page 7), partially offset by a decrease in liabilities of \$60.8 million due to the change in the investment return assumption for the Teachers, resulted in an unfunded liability of \$2.820 billion as of January 1, 2010.
- The recommended contributions for the SBRS are based on a 15-year amortization (4.5% increasing) of the unfunded actuarial accrued liability. The System will be fully funded by June 30, 2025 if all assumptions are met. Because fiscal 2011 has already been budgeted at \$336,784,237 (including the \$82,000,000 additional payment expected to be made on December 31, 2010), the results of this valuation will first be reflected in the fiscal 2012 appropriation of \$303,826,199. The funding schedule for the SBRS is shown in Exhibit 3-F.
- Sections 2 and 3 show participant and asset information, the experience analysis, liabilities and a funding schedule for the SBRS, with comparisons to 2008. Sections 4 and 5 show participant information, liabilities and a funding schedule for the Teachers with comparisons to 2008 and Sections 6 and 7 show the same information for All Other Employees.

SECTION 1: Valuation Summary for the State-Boston Retirement System

- The assets allocated to the Teachers as of December 31, 2009 were \$1,013,552,440 on a market value basis and \$1,088,927,156 on an actuarial value basis. These amounts reflect the transfer of assets to the PRIT Fund of \$1,043,405,434 on July 1, 2010 and an estimated additional transfer of \$3,300,000 made on December 1, 2010, discounted for interest to January 1, 2010.
- The fiscal 2012 appropriation is \$303,826,199. Of this amount, \$148,945,526 is attributable to the Teachers and \$154,880,673 is attributable to All Other Employees.

SECTION 1: Valuation Summary for the State-Boston Retirement System

Summary of Key Valuation Results - SBRS

	January 1, 2010	January 1, 2008
Contributions:		
Recommended for fiscal 2011 and 2009	\$336,784,237**	\$244,298,788
Recommended for fiscal 2012 and 2010	303,826,199	375,460,771*
Recommended for fiscal 2013 and 2011	323,964,911	261,226,861
Funding elements for plan year beginning January 1:		
Normal cost, including administrative expenses	\$178,481,378	\$175,312,953
Market value of assets	3,973,441,764	4,613,555,905
Actuarial value of assets	4,270,893,327	4,458,002,174
Actuarial accrued liability	7,091,017,681	6,596,148,098
Unfunded actuarial accrued liability	2,820,124,354	2,138,145,924
GASB 25/27:		
Annual required contributions	\$336,784,237	\$244,298,788
Actual contributions	--	244,298,788
Percentage contributed	--	100.00%
Funded ratio	60.23%	67.58%
Demographic data for plan year beginning January 1:		
Number of retired participants and beneficiaries	13,958	13,939
Number of inactive participants entitled to a return of their employee contributions	6,662	5,444
Number of inactive participants with a vested right to a deferred or immediate benefit	951	796
Number of active participants	20,015	21,748
Total payroll***	\$1,244,785,379	\$1,239,486,678
Average payroll***	62,193	56,993

* Includes crossover payment of \$111,827,321.

** Includes \$82,000,000 additional payment expected to be made on December 31, 2010.

*** Calendar year 2007 payroll figures were increased for firefighters and police superior officers to reflect unsettled bargaining contracts. Calendar year 2009 payroll figures were increased by 11.46% for firefighters to reflect a bargaining contract that was not settled until after December 31, 2009. Calendar year 2009 payroll figures were reduced for police superior officers to reflect retroactive payments that were included in the salary data.

SECTION 1: Valuation Summary for the State-Boston Retirement System

Summary of Key Valuation Results - SBRS

	January 1, 2010	
	Teachers	All Other Employees
Contributions:		
Recommended for fiscal 2011	\$121,290,000	\$215,494,237*
Recommended for fiscal 2012	148,945,526	154,880,673
Recommended for fiscal 2013	156,868,128	167,096,783
Funding elements for plan year beginning January 1:		
Normal cost, including administrative expenses	\$55,083,678	\$123,397,700
Market value of assets	1,013,552,440	2,959,889,324
Actuarial value of assets	1,088,927,156	3,181,966,171
Actuarial accrued liability	2,538,948,170	4,552,069,511
Unfunded actuarial accrued liability	1,450,021,014	1,370,103,340
GASB 25/27:		
Annual required contributions	\$121,290,000	\$215,494,237
Actual contributions	--	--
Percentage contributed	--	--
Funded ratio	42.89%	69.90%
Demographic data for plan year beginning January 1:		
Number of retired participants and beneficiaries	3,914	10,044
Number of inactive participants entitled to a return of their employee contributions	1,285	5,377
Number of inactive participants with a vested right to a deferred or immediate benefit	139	812
Number of active participants	5,566	14,449
Total payroll	\$435,215,882	\$809,569,497**
Average payroll	78,192	56,029**

* Includes \$82,000,000 additional payment expected to be made on December 31, 2010.

** Calendar year 2009 payroll figures were increased by 11.46% for firefighters to reflect a bargaining contract that was not settled until after December 31, 2009. Calendar year 2009 payroll figures were reduced for police superior officers to reflect retroactive payments that were included in the salary data.

SECTION 2: Valuation Results for the State-Boston Retirement System - All Employees

A. PARTICIPANT DATA

The Actuarial Valuation and Review considers the number and demographic characteristics of covered participants, including active participants, inactive participants, retired participants and beneficiaries.

This section presents a summary of significant statistical data on these participant groups.

More detailed information for this valuation year and the preceding valuation can be found in Exhibits 3-A and 3-B.

A historical perspective of how the participant population has changed over the past eight valuations can be seen in this chart.

CHART 2-1
Participant Population: 1995 – 2009

Year Ended December 31	Active Participants	Inactive Participants	Retired Participants and Beneficiaries
1995	21,128	1,425	13,339
1996	18,641	3,703	13,492
1999	19,953	1,459	13,381
2001	22,003	3,560	13,144
2003	20,456	5,294	14,034
2005	20,917	6,178	13,783
2007	21,748	6,240	13,939
2009	20,015	7,613	13,958

SECTION 2: Valuation Results for the State-Boston Retirement System - All Employees

Active Participants

Plan costs are affected by the age, years of service and payroll of active participants. In this year's valuation, there were 20,015 active participants with an average age of 45.7, average years of service of 13.5 years and average payroll of \$62,193. The 21,748 active participants in the prior valuation had an average age of 44.9, average service of 12.8 years and average payroll of \$56,993.

Among the active participants, there were three participants with unknown service information. The actuarial calculations were adjusted for the missing information by assuming that it was the same as information provided for other active participants with similar known characteristics.

Inactive Participants

In this year's valuation, there were 951 participants with a vested right to a deferred or immediate vested benefit and 6,662 participants entitled to a return of their employee contributions. This includes 544 Suffolk County employees who were included in the active participant data and transferred to the State Retirement System on November 1, 2010.

These graphs show a distribution of active participants by age and by years of service.

CHART 2-2
Distribution of Active Participants by Age as of December 31, 2009

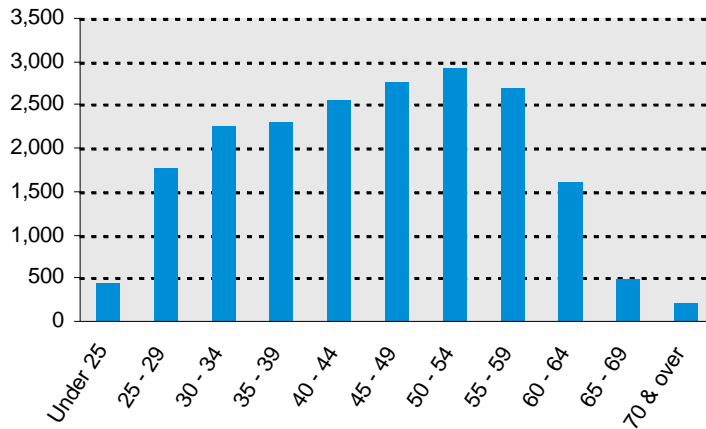
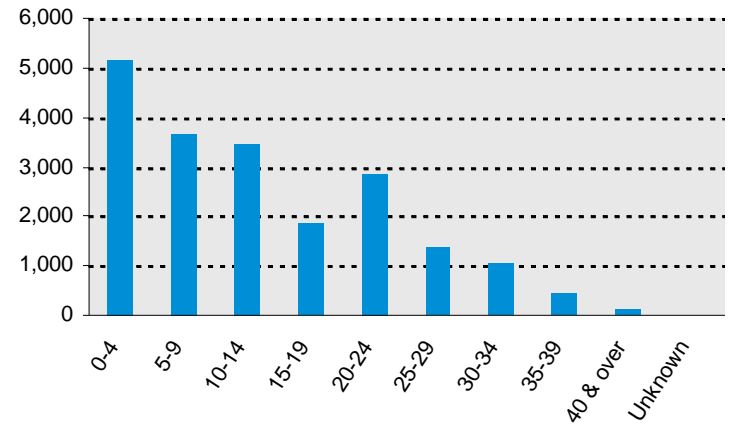


CHART 2-3
Distribution of Active Participants by Years of Service as of December 31, 2009



SECTION 2: Valuation Results for the State-Boston Retirement System - All Employees

Retired Participants and Beneficiaries

As of December 31, 2009, 11,268 retired participants and 2,690 beneficiaries were receiving total monthly benefits of \$34,419,957, excluding COLAs reimbursed by the Commonwealth. For comparison, in the previous valuation, there were 11,198 retired participants and 2,741 beneficiaries receiving monthly benefits of \$30,923,143, excluding COLAs reimbursed by the Commonwealth.

These graphs show a distribution of the current retired participants and beneficiaries based on their monthly amount and age, by type of pension.

CHART 2-4
Distribution of Retired Participants and Beneficiaries by Type and by Monthly Amount as of December 31, 2009

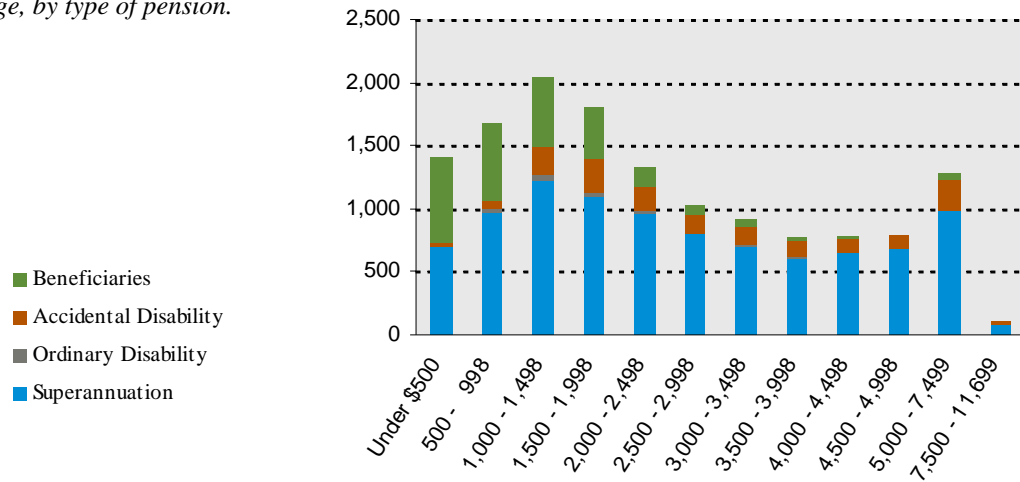
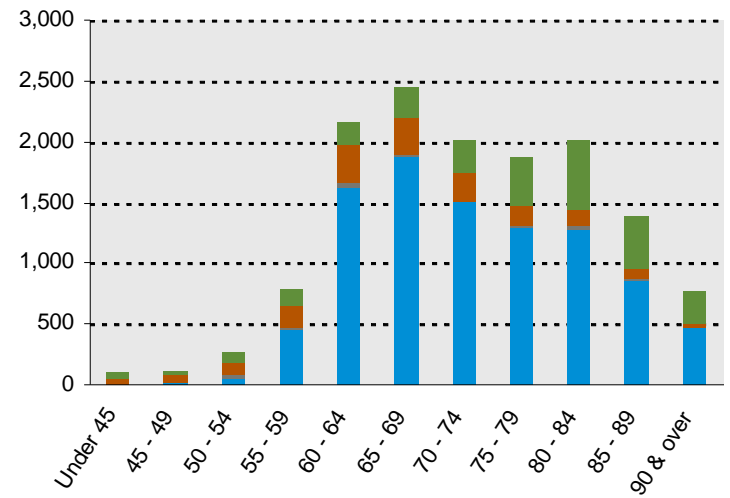


CHART 2-5
Distribution of Retired Participants and Beneficiaries by Type and by Age as of December 31, 2009



SECTION 2: Valuation Results for the State-Boston Retirement System - All Employees

B. FINANCIAL INFORMATION

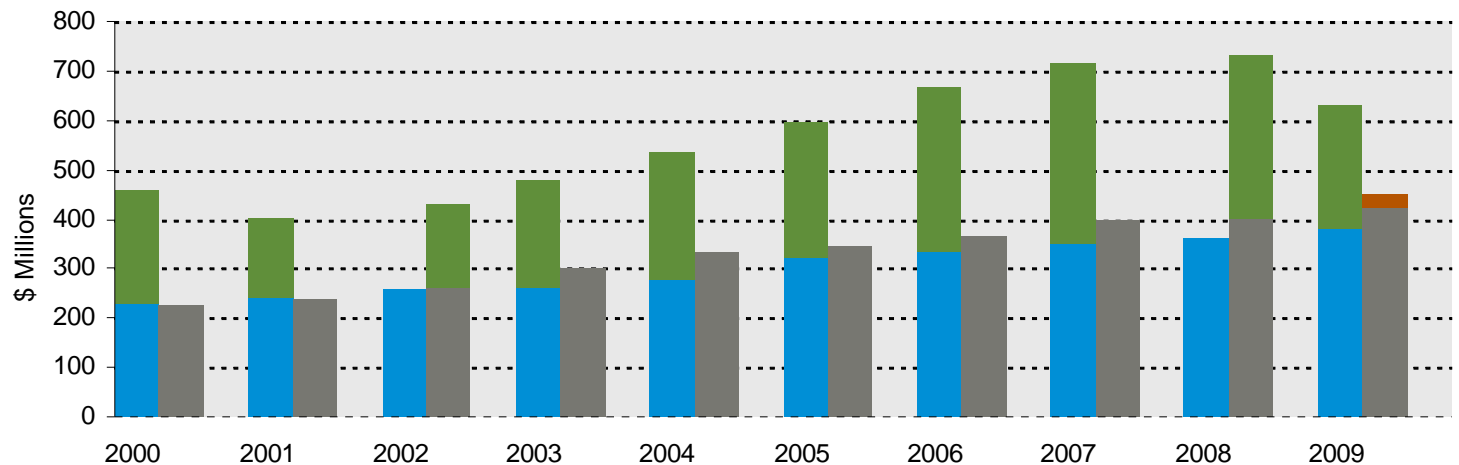
Retirement plan funding anticipates that, over the long term, both net contributions (less administrative expenses) and net investment earnings (less investment fees) will be needed to cover benefit payments.

Retirement plan assets change as a result of the net impact of these income and expense components. Additional financial information, including a summary of these transactions for the valuation year, is presented in Exhibits 3-C and 3-D of Section 3.

The chart depicts the components of changes in the actuarial value of assets over the last ten years. Note: The first bar represents increases in assets during each year while the second bar details the decreases.

CHART 2-6
Comparison of Increases and Decreases in the Actuarial Value of Assets for Years Ended December 31, 2000 – 2009

- Suffolk County transfer
- Net investment income
- Benefits paid
- Net contributions



SECTION 2: Valuation Results for the State-Boston Retirement System - All Employees

It is desirable to have level and predictable plan costs from one year to the next. For this reason, the Board has approved an asset valuation method that gradually adjusts to market value. Under this valuation method, the full value of market fluctuations is not recognized in a single year and, as a result, the asset value and the plan costs are more stable.

The amount of the adjustment to recognize market value is treated as income, which may be positive or negative. Realized and unrealized gains and losses are treated equally and, therefore, the sale of assets has no immediate effect on the actuarial value.

The chart shows the determination of the actuarial value of assets as of the valuation date.

CHART 2-7 Determination of Actuarial Value of Assets

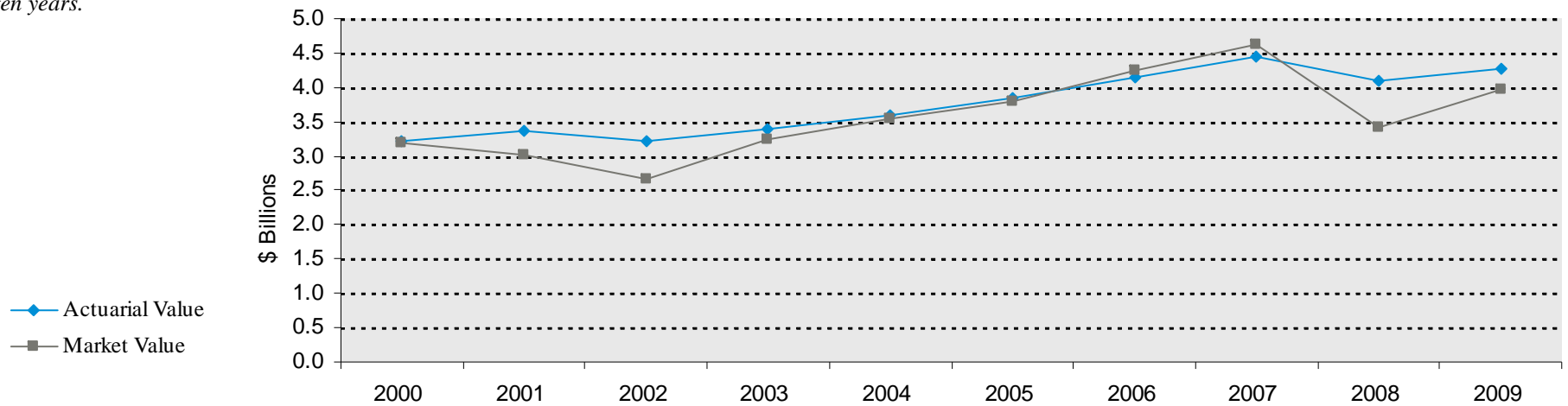
	Year Ended	
	December 31, 2009	December 31, 2008
1. Actuarial value of assets at the beginning of the year	\$4,089,988,837	\$4,458,002,174
2. Contributions, less benefit payments and expenses during the year	-43,833,801	-37,668,441
3. Average actuarial value of assets: (1) + 50% of (2)	4,068,071,937	4,439,167,954
4. Expected investment income: .08 x (3)	325,445,755	355,133,436
5. Preliminary actuarial value of assets at the end of the year: (1) + (2) + (4)	4,371,600,791	4,775,467,169
6. Market value of assets at the end of the year	3,999,786,337	3,408,324,031
7. Adjustment toward market value: 20% of [(6) - (5)]	-74,362,891	-273,428,628
8. Adjustment to be within 20% corridor	0	-412,069,704
9. Suffolk County transfer	-26,344,573	0
10. Final actuarial value of assets: (5) + (7) + (8) + (9)	<u>\$4,270,893,327</u>	<u>\$4,089,988,837</u>
11. Actuarial value as a percentage of market value: (10) ÷ [(6) + (9)]	107.5%	120.0%

SECTION 2: Valuation Results for the State-Boston Retirement System - All Employees

Both the actuarial value and market value of assets are representations of the State-Boston Retirement System's financial status. As investment gains and losses are gradually taken into account, the actuarial value of assets tracks the market value of assets. The actuarial asset value is significant because the State-Boston Retirement System's liabilities are compared to these assets to determine what portion, if any, remains unfunded. Amortization of the unfunded actuarial accrued liability is an important element in determining the contribution requirement.

This chart shows the change in the actuarial value of assets versus the market value over the past ten years.

CHART 2-8
Actuarial Value of Assets vs. Market Value of Assets as of December 31, 2000 – 2009



SECTION 2: Valuation Results for the State-Boston Retirement System - All Employees

C. ACTUARIAL EXPERIENCE

To calculate the required contribution, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year actual experience is measured against the assumptions. If overall experience is more favorable than anticipated (an actuarial gain), the contribution requirement will decrease from the previous year. On the other hand, the contribution requirement will increase if overall actuarial experience is less favorable than expected (an actuarial loss).

Taking account of experience gains or losses in one year without making a change in assumptions reflects the belief that the single year's experience was a short-term

development and that, over the long term, experience will return to the original assumptions. For contribution requirements to remain stable, assumptions should approximate experience.

If assumptions are changed, the contribution requirement is adjusted to take into account a change in experience anticipated for all future years.

The total experience loss for the two-year period ended December 31, 2009 is \$797,065,775, including a \$814,679,490 loss from investments and a \$17,613,715 gain from all other sources. A discussion of the major components of the actuarial experience is on the following pages.

This chart provides a summary of the actuarial experience over the past two years.

**CHART 2-9
Actuarial Experience for Two-Year Period Ended December 31, 2009**

1. Net loss from investments*	-\$814,679,490
2. Net loss from administrative expenses	-155,105
3. Net gain from other experience**	<u>17,768,820</u>
4. Net experience loss: (1) + (2) + (3)	-\$797,065,775

* Details in Chart 2-10

** Details in Chart 2-13

SECTION 2: Valuation Results for the State-Boston Retirement System - All Employees

Investment Rate of Return

A major component of projected asset growth is the assumed rate of return. The assumed return should represent the expected long-term rate of return, based on the State-Boston Retirement System’s investment policy. For valuation purposes, the assumed rate of return on the actuarial value of assets is 8.00%. The actual rates of return on an actuarial basis for the 2009 and 2008 plan years were 6.17% and -7.44%, respectively.

Since the actual return for the year was less than the assumed return, the State-Boston Retirement System experienced an actuarial loss of \$814,679,490 during the two-year period ending December 31, 2009 with regard to its investments, including an adjustment for interest.

This chart shows the loss due to investment experience.

**CHART 2-10
Actuarial Value Investment Experience**

	Year Ended	
	December 31, 2009	December 31, 2008
1. Actual return	\$251,082,864	-\$330,344,896
2. Average value of assets	4,068,071,937	4,439,167,954
3. Actual rate of return: (1) ÷ (2)	6.17%	-7.44%
4. Assumed rate of return	8.00%	8.00%
5. Expected return: (2) x (4)	\$325,445,755	\$355,133,436
6. Actuarial loss: (1) – (5)	<u>-\$74,362,891</u>	<u>-\$685,478,332</u>

SECTION 2: Valuation Results for the State-Boston Retirement System - All Employees

Because actuarial planning is long term, it is useful to see how the assumed investment rate of return has followed actual experience over time. The chart below shows the rate of return on an actuarial basis compared to the market value investment return for the last ten years, including five-year and ten-year averages.

Based upon this experience and future expectations, we have maintained the assumed rate of return of 8.00% for the assets and liabilities of All Other Employees. We have increased the assumed rate of return to 8.25% for the assets and liabilities of the Teachers.

The change in the assumption lowered the normal cost by \$2,481,803 and the actuarial accrued liability by \$60,774,103.

CHART 2-11

Investment Return – Actuarial Value vs. Market Value: 2000 - 2009

Year Ended December 31	Actuarial Value Investment Return		Market Value Investment Return	
	Amount	Percent	Amount	Percent
2000	\$230,167,878	7.72%	-\$57,650,028	-1.78%
2001	163,719,630	5.10	-176,101,089	-5.54
2002	-169,224,346	-5.01	-330,387,570	-11.00
2003	217,873,886	6.84	604,025,038	22.78
2004	258,709,415	7.71	367,429,123	11.45
2005	273,445,360	7.65	262,427,939	7.42
2006	335,622,622	8.79	506,115,642	13.43
2007	368,013,791	8.95	403,369,820	9.53
2008	-330,344,896	-7.44	-1,167,563,433	-25.41
2009	<u>251,082,864</u>	6.17	<u>635,296,107</u>	18.76
Total	\$1,599,066,204		\$1,046,961,549	
	Five-year average return	4.49%		3.28%
	Ten-year average return	4.43%		3.01%

Note: Each year's yield is weighted by the average asset value in that year.

SECTION 2: Valuation Results for the State-Boston Retirement System - All Employees

Subsection B described the actuarial asset valuation method that gradually takes into account fluctuations in the market value rate of return. The effect of this is to stabilize the actuarial rate of return, which contributes to leveling pension plan costs.

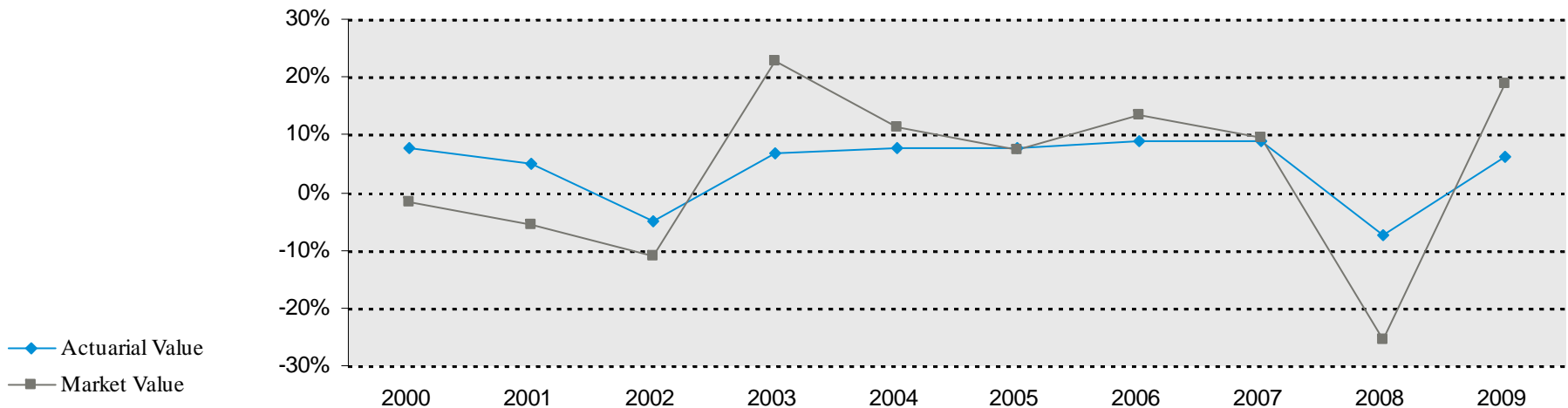
Administrative Expenses

Administrative expenses for the years ended December 31, 2008 and 2009 were \$3,656,990 and \$4,568,120, respectively, compared to the assumption of \$3,800,000 for calendar year 2008 and \$3,971,000 for calendar year 2009. This resulted in a loss of \$155,105 for the two-year period, including an adjustment for interest. We have maintained the assumption of \$3,800,000 for calendar year 2010.

In addition, fiscal 2011 through fiscal 2014 include an additional expense allowance to reflect the costs associated with the new computer system (see Exhibit V of Section 9).

This chart illustrates how this leveling effect has actually worked over the years 2000 - 2009.

CHART 2-12
Market and Actuarial Rates of Return for Years Ended December 31, 2000 - 2009



SECTION 2: Valuation Results for the State-Boston Retirement System - All Employees

Other Experience

There are other differences between the expected and the actual experience that appear when the new valuation is compared with the projections from the previous valuation. These include:

- the extent of turnover among the participants,
- retirement experience (earlier or later than expected),
- mortality (more or fewer deaths than expected),
- the number of disability retirements, and
- salary increases different than assumed.

The net gain from this other experience for the two-year period ending December 31, 2009 amounted to \$17,768,820, which is 0.3% of the actuarial accrued liability.

A brief summary of the demographic gain/(loss) experience of the State-Boston Retirement System for the two-year period ending December 31, 2009 is shown in the chart below.

The chart shows elements of the experience gain/(loss) for the most recent years.

CHART 2-13
Experience Due to Changes in Demographics for Two-Year Period Ended December 31, 2009

1. Deaths among retired members and beneficiaries	-\$12,828,197
2. Salary increases greater than expected for continuing actives	-5,547,604
3. Net 3(8)(c) reimbursements to other systems	-15,493,733
4. Gain due to transfers of Suffolk County employees to the State Retirement System	87,811,144
5. Miscellaneous loss	<u>-36,172,790</u>
6. Total	\$17,768,820

SECTION 2: Valuation Results for the State-Boston Retirement System - All Employees

D. RECOMMENDED CONTRIBUTION

The amount of annual contribution required to fund the System is comprised of an employer normal cost payment and a payment on the unfunded actuarial accrued liability.

The fiscal 2011 appropriation has already been budgeted at \$254,784,237. This does not include the additional \$82,000,000 payment to be made by the City (refer to Section 1). The results of this valuation will first be reflected in the fiscal 2012 appropriation. Exhibit 3-F in

Section 3 shows the recommended contribution through fiscal 2028 based on a funding schedule that fully funds the System by June 30, 2025 with increasing amortization payments (4.5% per year) and annual recognition of deferred losses. The prior funding schedule fully funded the System by June 30, 2023.

**CHART 2-14
Recommended Contribution**

The chart compares this valuation's recommended contribution with the prior valuation.

	Year Beginning January 1			
	2010		2008	
	Amount	% of Payroll	Amount	% of Payroll
1. Total normal cost	\$169,281,378	12.96%	\$171,512,953	13.20%
2. Administrative expenses	9,200,000	0.71%	3,800,000	0.29%
3. Expected employee contributions	<u>-124,443,803</u>	<u>-9.53%</u>	<u>-121,534,236</u>	<u>-9.35%</u>
4. Employer normal cost: (1) + (2) + (3)	\$54,037,575	4.14%	\$53,778,717	4.14%
5. Actuarial accrued liability	7,091,017,681		6,596,148,098	
6. Actuarial value of assets	<u>4,270,893,327</u>		<u>4,458,002,174</u>	
7. Unfunded actuarial accrued liability: (5) - (6)	\$2,820,124,354		\$2,138,145,924	
8. Employer normal cost projected to July 1, 2010 and 2008, adjusted for timing	55,358,218	4.15%	59,432,136	4.48
9. Projected unfunded actuarial accrued liability	2,802,772,359		2,222,026,425	
10. Budgeted appropriation	<u>254,784,237</u>	<u>19.08%</u>	<u>244,298,788</u>	<u>18.40%</u>
11. Projected payroll	\$1,335,122,734		\$1,328,020,847	

*Notes: Recommended contribution for fiscal 2011 is assumed to be paid on December 31 for the Teachers and on July 1 for All Other Employees.
Recommended contribution for fiscal 2009 is assumed to be paid monthly.
Amortization payments increase at 4.5% per year.*

SECTION 2: Valuation Results for the State-Boston Retirement System - All Employees

E. INFORMATION REQUIRED BY THE GASB

Governmental Accounting Standards Board (GASB) reporting information provides standardized information for comparative purposes of governmental pension plans. This information allows a reader of the financial statements to compare the funding status of one governmental plan to another on relatively equal terms.

Critical information to the GASB is the historical comparison of the GASB required contribution to the actual contributions. This comparison demonstrates whether a plan is being funded within the range of the GASB reporting requirements. Chart 2-15 below presents a graphical representation of this information for the Plan.

The other critical piece of information regarding the Plan's financial status is the funded ratio. This ratio compares the

actuarial value of assets to the actuarial accrued liabilities of the plan as calculated under the GASB. High ratios indicate a well-funded plan with assets sufficient to pay most benefits. Lower ratios may indicate recent changes to benefit structures, funding of the plan below actuarial requirements, poor asset performance, or a variety of other factors.

Although the GASB requires that the actuarial value of assets be used to determine the funded ratio, Chart 2-16 shows the funded ratio calculated using both the actuarial value of assets (60.23%) and the market value of assets (56.03%).

The details regarding the calculations of these values and other GASB numbers may be found in Section 9, Exhibits II, III, and IV.

These graphs show key GASB factors.

CHART 2-15
Required Versus Actual Contributions

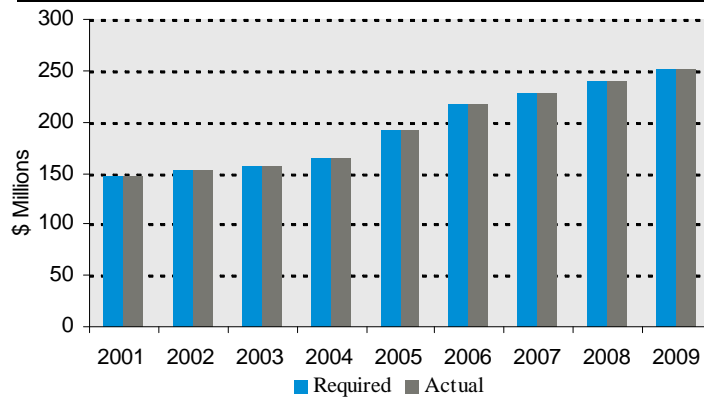
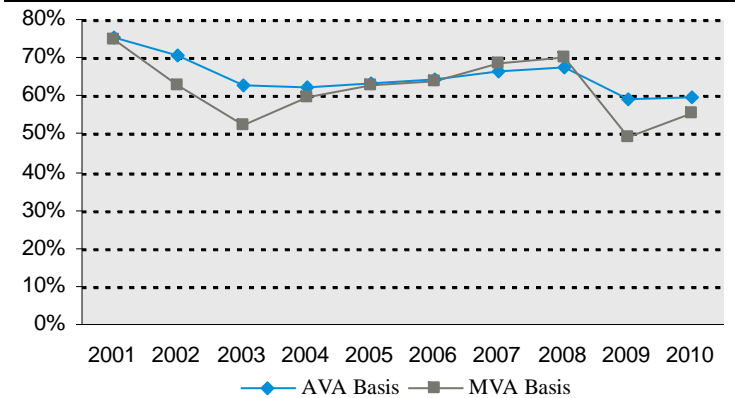


CHART 2-16
Funded Ratio



SECTION 3: Supplemental Information for the State-Boston Retirement System - All Employees

EXHIBIT 3-A

Table of Plan Coverage

Category	Year Ended December 31		Change From Prior Year
	2009	2007	
Active participants in valuation:			
Number	20,015	21,748	-8.0%
Average age	45.7	44.9	N/A
Average service	13.5	12.8	N/A
Total payroll*	\$1,244,785,379	\$1,239,486,678	0.4%
Average payroll*	62,193	56,993	9.1%
Member contributions	1,155,731,389	1,096,173,895	5.4%
Number with unknown age and/or service information	3	12	-75.0%
Inactive participants with a vested right to a deferred or immediate benefit	951	796	19.5%
Inactive participants entitled to a return of their employee contributions**	6,662	5,444	22.4%
Retired participants:			
Number in pay status	9,431	9,450	-0.2%
Average age	72.9	72.7	N/A
Average monthly benefit	\$2,690	\$2,445	10.0%
Disabled participants:			
Number in pay status	1,837	1,748	5.1%
Average age	67.0	67.1	N/A
Average monthly benefit	\$3,046	\$2,655	14.7%
Beneficiaries in pay status	2,690	2,741	-1.9%

* Calendar year 2007 payroll figures were increased for firefighters and police superior officers to reflect unsettled bargaining contracts. Calendar year 2009 payroll figures were increased by 11.46% for firefighters to reflect a bargaining contract that was not settled until after December 31, 2009. Calendar year 2009 payroll figures were reduced for police superior officers to reflect retroactive payments that were included in the salary data.

** Includes 544 Suffolk County employees who were included in the active participant data and were transferred to the State Retirement System on November 1, 2010.

SECTION 3: Supplemental Information for the State-Boston Retirement System - All Employees

EXHIBIT 3-B

**Participants in Active Service as of December 31, 2009
By Age, Years of Service, and Average Payroll**

Age	Years of Service										
	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over	Unknown
Under 25	447	435	12	--	--	--	--	--	--	--	--
	\$37,352	\$37,674	\$25,669	--	--	--	--	--	--	--	--
25 - 29	1,783	1,475	287	21	--	--	--	--	--	--	--
	\$51,358	\$51,474	\$51,527	\$40,897	--	--	--	--	--	--	--
30 - 34	2,246	1,086	863	281	16	--	--	--	--	--	--
	\$59,453	\$53,991	\$65,118	\$62,940	\$63,422	--	--	--	--	--	--
35 - 39	2,293	572	661	807	199	53	--	--	--	--	1
	\$63,753	\$51,482	\$61,508	\$72,302	\$71,358	\$64,463	--	--	--	--	\$118,040
40 - 44	2,554	465	481	643	448	473	44	--	--	--	--
	\$63,800	\$43,001	\$55,975	\$68,116	\$75,999	\$74,644	\$65,317	--	--	--	--
45 - 49	2,767	393	415	501	365	824	246	21	--	--	2
	\$64,863	\$41,863	\$48,422	\$60,641	\$72,709	\$80,339	\$72,184	\$90,153	--	--	\$79,835
50 - 54	2,915	322	401	470	326	662	443	282	9	--	--
	\$64,801	\$40,591	\$44,604	\$54,864	\$63,057	\$76,574	\$81,098	\$85,753	\$88,203	--	--
55 - 59	2,701	253	277	355	258	467	360	512	206	13	--
	\$69,152	\$43,298	\$51,773	\$56,511	\$60,523	\$69,290	\$78,679	\$89,407	\$89,010	\$77,897	--
60 - 64	1,603	110	172	233	179	266	214	164	207	58	--
	\$65,801	\$36,723	\$44,296	\$53,929	\$58,460	\$63,484	\$71,513	\$84,671	\$95,794	\$84,215	--
65 - 69	493	40	68	97	44	90	48	43	23	40	--
	\$51,095	\$23,573	\$34,167	\$45,490	\$46,861	\$56,517	\$62,465	\$58,295	\$71,332	\$80,428	--
70 & over	213	13	29	42	24	39	20	14	16	16	--
	\$37,714	\$12,455	\$18,885	\$31,040	\$33,106	\$44,157	\$56,048	\$47,039	\$34,711	\$73,022	--
Total	20,015	5,164	3,666	3,450	1,859	2,874	1,375	1,036	461	127	3
	\$62,193	\$47,640	\$55,015	\$62,377	\$67,399	\$73,649	\$75,859	\$85,814	\$89,274	\$80,965	\$92,569

Notes: Calendar year 2009 salaries were increased by 11.46% for firefighters to reflect a bargaining contract that was not settled until after December 31, 2009.

Calendar year 2009 salaries were reduced for police superior officers to reflect retroactive payments that were included in the salary data.

SECTION 3: Supplemental Information for the State-Boston Retirement System - All Employees

EXHIBIT 3-C

Summary Statement of Income and Expenses on an Actuarial Value Basis

	Year Ended December 31, 2009	Year Ended December 31, 2008
Contribution income:		
Employer contributions	\$257,347,986	\$244,298,788
Employee contributions	127,333,386	122,720,308
Other contributions	0	124,178
Less administrative expenses	<u>-4,568,120</u>	<u>-3,656,990</u>
Net contribution income	\$380,113,252	\$363,486,284
Net investment income	<u>251,082,864</u>	<u>-330,344,896</u>
Total income available for benefits	\$631,196,116	\$33,141,388
Less benefit payments:		
Pensions and annuities	-\$405,440,049	-\$379,706,255
Net 3(8)(c) reimbursements	-7,459,228	-8,034,505
Refunds to members	<u>-11,047,776</u>	<u>-13,413,965</u>
Net benefit payments	-\$423,947,053	-\$401,154,725
Transfer of Annuity Savings Fund of Suffolk County employees to State Retirement System	-\$26,344,573	\$0
Change in reserve for future benefits	\$180,904,490	-\$368,013,337

SECTION 3: Supplemental Information for the State-Boston Retirement System - All Employees

EXHIBIT 3-D

Development of the Fund Through December 31, 2009

Year Ended December 31	Employer Contributions	Employee Contributions	Other Contributions	Net Investment Return*	Administrative Expenses	Benefit Payments	Preliminary Actuarial Value of Assets	Transfer to State Retirement System	Actuarial Value of Assets at End of Year
2000	\$143,856,789	\$82,030,990	\$4,381,849	\$230,167,878	\$1,787,246	\$226,911,018	\$3,211,692,085	--	\$3,211,692,085
2001	149,820,000	88,766,628	2,945,817	163,719,630	2,129,838	238,636,445	3,376,177,877	--	3,376,177,877
2002	156,085,648	98,611,982	4,826,625	-169,224,346	2,145,099	259,440,141	3,204,892,546	--	3,204,892,546
2003	158,243,772	100,900,869	4,942,603	217,873,886	1,996,345	300,043,792	3,384,813,539	--	3,384,813,539
2004	170,043,070	103,058,989	5,300,071	258,709,415	2,415,427	332,391,543	3,587,118,114	--	3,587,118,114
2005	212,307,963	107,336,415	3,303,180	273,445,360	2,399,871	344,304,190	3,836,806,971	--	3,836,806,971
2006	221,746,521	110,896,863	3,220,540	335,622,622	2,694,034	367,453,914	4,138,145,569	--	4,138,145,569
2007	233,897,163	118,156,250	0	368,013,791	3,457,556	396,753,043	4,458,002,174	--	4,458,002,174
2008	244,298,788	122,720,308	124,178	-330,344,896	3,656,990	401,154,725	4,089,988,837	--	4,089,988,837
2009	257,347,986	127,333,386	0	251,082,864	4,568,120	423,947,053	4,297,237,900	\$26,344,573	4,270,893,327

* Net of investment fees

SECTION 3: Supplemental Information for the State-Boston Retirement System - All Employees

EXHIBIT 3-E

Development of Unfunded Actuarial Accrued Liability and (Gain)/Loss

	Year Ended	
	December 31, 2009	December 31, 2008
1. Unfunded actuarial accrued liability at beginning of year	\$2,116,706,582	\$2,138,145,924
2. Normal cost at beginning of year	183,202,036	175,312,953
3. Total contributions	-384,681,372	-367,143,274
4. Interest		
(a) For whole year on (1) + (2)	\$183,992,690	\$185,076,710
(b) For half year on (3)	<u>-15,387,254</u>	<u>-14,685,731</u>
(c) Total interest	<u>168,605,436</u>	<u>170,390,979</u>
5. Expected unfunded actuarial accrued liability	\$2,083,832,682	\$2,116,706,582
6. Changes due to:		
(a) Experience loss	\$797,065,775	
(b) Change to 8.25% investment return assumption for Teachers	<u>-60,774,103</u>	
(c) Total changes	<u>736,291,672</u>	
7. Unfunded actuarial accrued liability at end of year	<u>\$2,820,124,354</u>	

SECTION 3: Supplemental Information for the State-Boston Retirement System - All Employees

EXHIBIT 3-F

Funding Schedule

(1) Fiscal Year Ended June 30	(2) Employer Normal Cost	(3) Amortization of Unfunded Inactive Sheriff Liability	(4) Amortization of Remaining Unfunded Liability	(5) Crossover Payment Savings	(6) Additional Payment for Fiscal 2011 and Future Savings	(7) Total Employer Contributions: (2) + (3) + (4) + (5) + (6)	(8) Unfunded Actuarial Accrued Liability at Beginning of Fiscal Year	(9) Percent Increase in Cost Excluding Supplemental Payments
2011	\$55,358,218	\$4,342,909	\$202,255,110	\$(7,172,000)	\$82,000,000	\$336,784,237	\$2,802,772,359	-3.36%
2012	54,906,337	3,923,831	269,431,786	(14,865,892)	(9,569,863)	303,826,199	2,805,297,492	19.25%
2013	57,255,623	3,923,831	287,221,212	(14,865,892)	(9,569,863)	323,964,911	2,830,519,891	6.63%
2014	58,910,625	3,923,831	305,506,596	(14,865,892)	(9,569,863)	343,905,297	2,832,019,492	6.16%
2015	59,576,104	3,923,831	324,384,213	(14,865,892)	(9,569,863)	363,448,393	2,808,328,888	5.68%
2016	62,257,029	3,923,831	343,954,378	(14,865,892)	(9,569,863)	385,699,483	2,757,615,093	6.12%
2017	65,058,595	3,923,831	364,329,738	(14,865,892)	(9,569,863)	408,876,409	2,677,699,737	6.01%
2018	67,986,232	3,923,831	385,639,207	(14,865,892)	(9,569,863)	433,113,515	2,566,008,123	5.93%
2019	71,045,612	3,923,831	402,992,971	(14,865,892)	(9,569,863)	453,526,659	2,387,858,991	4.71%
2020	74,242,664	3,923,831	421,127,655	(14,865,892)	(9,569,863)	474,858,395	2,176,828,731	4.70%
2021	77,583,584	3,923,831	440,078,400	(14,865,892)	(9,569,863)	497,150,060	1,929,417,353	4.69%
2022	81,074,846	3,923,831	459,881,927	(14,865,892)	(9,569,863)	520,444,849	1,641,803,169	4.69%
2023	84,723,214	3,923,831	480,576,615	(14,865,892)	(9,569,863)	544,787,905	1,309,814,971	4.68%
2024	88,535,759	3,923,831	502,202,562	(14,865,892)	(9,569,863)	570,226,397	928,901,861	4.67%
2025	92,519,869	3,923,831	524,801,677	(14,865,892)	(9,569,863)	596,809,622	494,100,566	4.66%
2026	96,683,263	-	-	-	-	96,683,263	-	-83.80%
2027	101,034,009	-	-	-	-	101,034,009	-	4.50%
2028	105,580,540	-	-	-	-	105,580,540	-	4.50%

Notes: Items (2) and (4) increase at 4.50% per year.

Anticipates deferred investment losses.

Recommended contribution for fiscal 2011 reflects actual payments made or anticipated.

Recommended contribution for fiscal 2012 and later years is assumed to be paid on December 31 for the Teachers and July 1 for All Other Employees.

Includes additional expense allowance for fiscal 2011 - 2014 to reflect the costs associated with the new computer system.

SECTION 4: Valuation Results for the State-Boston Retirement System - Teachers

A. PARTICIPANT DATA

The Actuarial Valuation and Review considers the number and demographic characteristics of covered participants, including active participants, inactive participants, retired participants and beneficiaries.

This section presents a summary of significant statistical data on these participant groups for the Teachers of the State-Boston Retirement System.

More detailed information for this valuation year and the preceding valuation can be found in Exhibits 5-A and 5-B.

A historical perspective of how the participant population has changed over the past two valuations can be seen in this chart.

CHART 4-1
Participant Population: 2007 – 2009

Year Ended December 31	Active Participants	Inactive Participants	Retired Participants and Beneficiaries
2007	5,805	1,281	3,693
2009	5,566	1,424	3,914

SECTION 4: Valuation Results for the State-Boston Retirement System - Teachers

Active Participants

Plan costs are affected by the age, years of service and payroll of active participants. In this year's valuation, there were 5,566 active participants with an average age of 44.0, average years of service of 12.9 years and average payroll of \$78,192. The 5,805 active participants in the prior valuation had an average age of 43.8, average service of 12.5 years and average payroll of \$72,201.

Among the active participants, there was one participant with unknown service information. The actuarial calculations were adjusted for the missing information by assuming that it was the same as information provided for other active participants with similar known characteristics.

Inactive Participants

In this year's valuation, there were 139 participants with a vested right to a deferred or immediate vested benefit and 1,285 participants entitled to a return of their employee contributions.

These graphs show a distribution of active participants by age and by years of service.

CHART 4-2

Distribution of Active Teachers by Age as of December 31, 2009

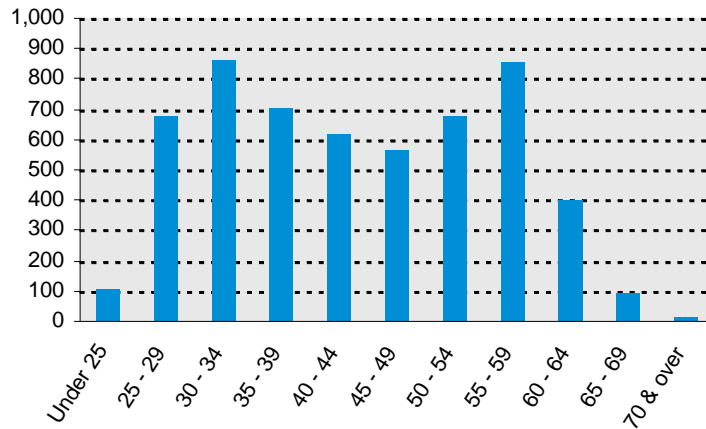
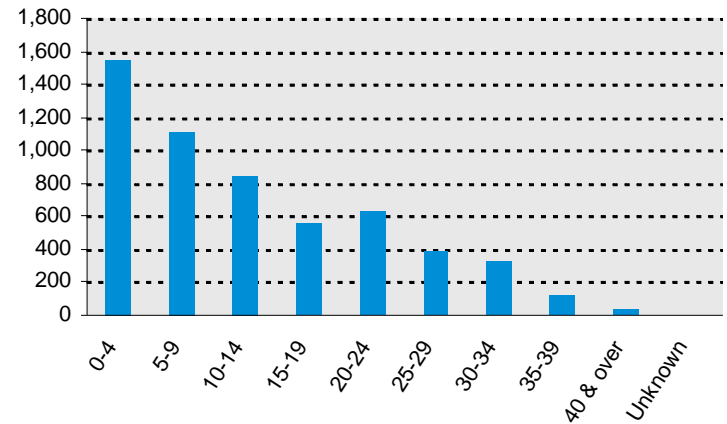


CHART 4-3

Distribution of Active Teachers by Years of Service as of December 31, 2009



SECTION 4: Valuation Results for the State-Boston Retirement System - Teachers

Retired Participants and Beneficiaries

As of December 31, 2009, 3,629 retired participants and 285 beneficiaries were receiving total monthly benefits of \$13,742,273, excluding COLAs reimbursed by the Commonwealth. For comparison, in the previous valuation, there were 3,430 retired participants and 263 beneficiaries receiving monthly benefits of \$12,027,780, excluding COLAs reimbursed by the Commonwealth.

These graphs show a distribution of the current retired participants and beneficiaries based on their monthly amount and age, by type of pension.

CHART 4-4
Distribution of Retired Teachers and Beneficiaries of Teachers by Type and by Monthly Amount as of December 31, 2009

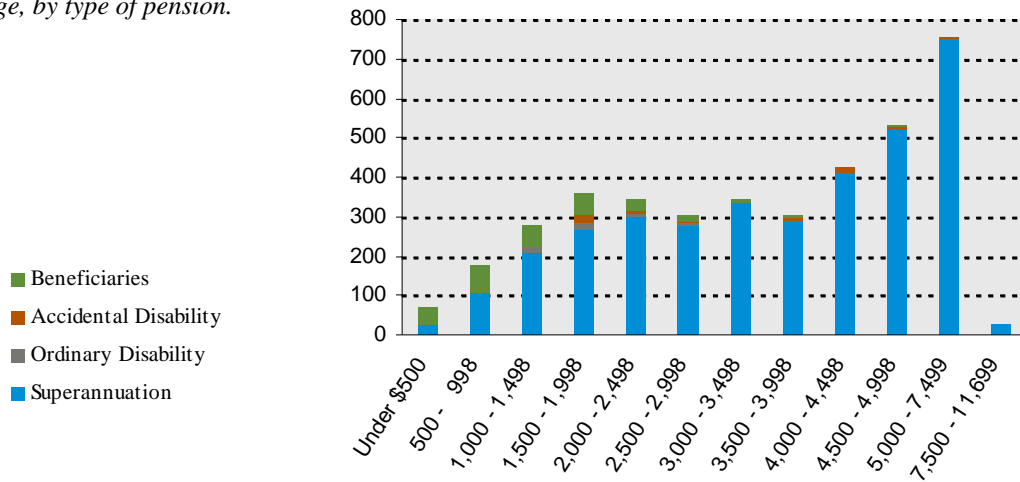
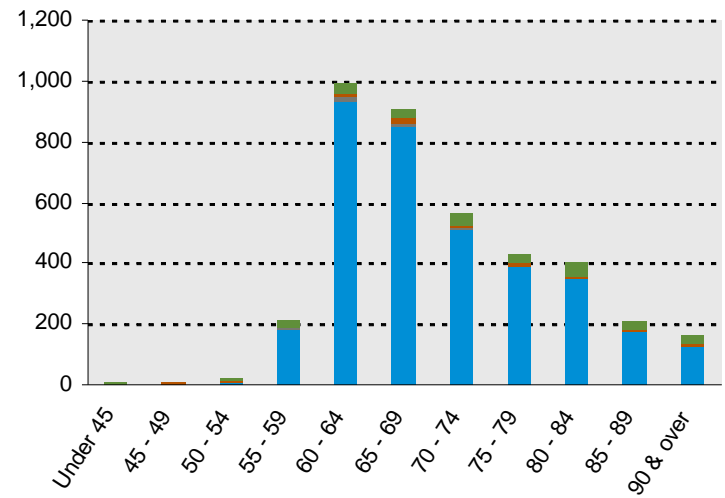


CHART 4-5
Distribution of Retired Teachers and Beneficiaries of Teachers by Type and by Age as of December 31, 2009



SECTION 4: Valuation Results for the State-Boston Retirement System - Teachers

B. FINANCIAL INFORMATION

The assets allocated to the Teachers as of December 31, 2009 were \$1,013,552,440 on a market value basis and \$1,088,927,156 on an actuarial value basis. These amounts reflect the transfer of assets to the PRIT Fund of \$1,043,405,434 on July 1, 2010 and an estimated additional transfer of \$3,300,000 made on December 1, 2010, discounted for interest to January 1, 2010.

Income and expenses on behalf of the Teachers and All Other Employees will be accounted for separately in 2010 and later years. Future valuation reports will provide a reconciliation of the assets for the Teachers.

SECTION 4: Valuation Results for the State-Boston Retirement System - Teachers

C. ACTUARIAL EXPERIENCE

To calculate the required contribution, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year actual experience is measured against the assumptions. If overall experience is more favorable than anticipated (an actuarial gain), the contribution requirement will decrease from the previous year. On the other hand, the contribution requirement will increase if overall actuarial experience is less favorable than expected (an actuarial loss).

Taking account of experience gains or losses in one year without making a change in assumptions reflects the belief that the single year's experience was a short-term

development and that, over the long term, experience will return to the original assumptions. For contribution requirements to remain stable, assumptions should approximate experience.

If assumptions are changed, the contribution requirement is adjusted to take into account a change in experience anticipated for all future years.

The total experience loss for the two-year period ended December 31, 2009 is \$261,187,060, \$219,048,486 from investments and \$42,138,574 from all other sources.

This chart provides a summary of the actuarial experience over the past two years.

CHART 4-6
Actuarial Experience for Two-Year Period Ended December 31, 2009

1. Net loss from investments	-\$219,048,486
2. Net gain from administrative expenses	528,327
3. Net loss from other experience	<u>-42,666,901</u>
4. Net experience loss: (1) + (2) + (3)	-\$261,187,060

SECTION 4: Valuation Results for the State-Boston Retirement System - Teachers

D. RECOMMENDED CONTRIBUTION

The amount of annual contribution required to fund the System is comprised of an employer normal cost payment and a payment on the unfunded actuarial accrued liability.

payments (4.5% per year) and annual recognition of deferred losses. The prior funding schedule fully funded the System by June 30, 2023.

The fiscal 2011 appropriation has already been budgeted as \$121,290,000. The results of this valuation will first be reflected in the fiscal 2012 appropriation. Exhibit 5-C in Section 5 shows the recommended contribution through fiscal 2028 based on a funding schedule that fully funds the System by June 30, 2025 with increasing amortization

The chart compares this valuation's recommended contribution with the prior valuation.

CHART 4-7 Recommended Contribution

	Year Beginning January 1			
	2010		2008	
	Amount	% of Payroll	Amount	% of Payroll
1. Total normal cost	\$51,868,540	11.37%	\$52,679,996	12.00%
2. Administrative expenses	3,215,138	0.70%	1,284,175	0.29%
3. Expected employee contributions	<u>-47,430,124</u>	<u>-10.39%</u>	<u>-45,235,496</u>	<u>-10.30%</u>
4. Employer normal cost: (1) + (2) + (3)	\$7,653,554	1.68%	\$8,728,675	1.99%
5. Actuarial accrued liability	2,538,948,170		2,390,182,086	
6. Actuarial value of assets	<u>1,088,927,156</u>		<u>1,203,660,587</u>	
7. Unfunded actuarial accrued liability: (5) - (6)	\$1,450,021,014		\$1,186,521,499	
8. Employer normal cost projected to July 1, 2010 and 2008, adjusted for timing	8,020,210	1.72%	10,050,223	2.24%
9. Projected unfunded actuarial accrued liability	1,508,649,138		1,233,069,312	
10. Budgeted appropriation	<u>\$121,290,000</u>	<u>26.00%</u>	<u>\$112,638,290</u>	<u>25.10%</u>
11. Projected payroll	\$466,587,389		\$448,792,352	

Notes: Recommended contribution for fiscal 2011 is assumed to be paid on December 31.

Recommended contribution for fiscal 2009 is assumed to be paid monthly.

Amortization payments increase at 4.5% per year.

SECTION 5: Supplemental Information for the State-Boston Retirement System - Teachers

EXHIBIT 5-A

Table of Plan Coverage

Category	Year Ended December 31		Change From Prior Year
	2009	2007	
Active participants in valuation:			
Number	5,566	5,805	-4.1%
Average age	44.0	43.8	N/A
Average service	12.9	12.5	N/A
Total payroll	\$435,215,882	\$419,124,229	3.8%
Average payroll	78,192	72,201	8.3%
Member contributions	394,164,781	359,746,906	9.6%
Number with unknown age and/or service information	1	2	-50.0%
Inactive participants with a vested right to a deferred or immediate benefit			
	139	146	-4.8%
Inactive participants entitled to a return of their employee contributions			
	1,285	1,135	13.2%
Retired participants:			
Number in pay status	3,517	3,316	6.1%
Average age	70.4	70.0	N/A
Average monthly benefit	\$3,708	\$3,441	7.8%
Disabled participants:			
Number in pay status	112	114	-1.8%
Average age	68.8	67.3	N/A
Average monthly benefit	\$2,555	\$2,460	3.9%
Beneficiaries in pay status			
	285	263	8.4%

SECTION 5: Supplemental Information for the State-Boston Retirement System - Teachers

EXHIBIT 5-B

**Participants in Active Service as of December 31, 2009
By Age, Years of Service, and Average Payroll**

Age	Years of Service										
	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over	Unknown
Under 25	104	104	--	--	--	--	--	--	--	--	--
	\$53,394	\$53,394	--	--	--	--	--	--	--	--	--
25 - 29	678	586	90	2	--	--	--	--	--	--	--
	\$59,286	\$58,319	\$65,364	\$69,114	--	--	--	--	--	--	--
30 - 34	860	395	381	81	3	--	--	--	--	--	--
	\$70,614	\$63,699	\$75,431	\$81,332	\$79,801	--	--	--	--	--	--
35 - 39	701	167	227	247	54	5	--	--	--	--	1
	\$77,341	\$66,780	\$78,680	\$81,680	\$83,079	\$84,896	--	--	--	--	\$118,040
40 - 44	621	98	135	167	156	57	8	--	--	--	--
	\$79,809	\$66,920	\$78,530	\$82,977	\$83,820	\$84,988	\$78,043	--	--	--	--
45 - 49	563	71	103	107	115	137	28	2	--	--	--
	\$81,406	\$64,716	\$75,623	\$81,326	\$87,647	\$87,469	\$89,739	\$85,360	--	--	--
50 - 54	679	54	70	94	98	174	124	65	--	--	--
	\$86,003	\$64,664	\$79,792	\$84,571	\$85,176	\$89,617	\$89,664	\$97,075	--	--	--
55 - 59	855	52	66	92	84	154	132	210	65	--	--
	\$88,271	\$68,472	\$82,598	\$85,423	\$89,126	\$89,675	\$89,671	\$91,988	\$94,616	--	--
60 - 64	401	13	31	47	44	79	75	41	52	19	--
	\$89,777	\$92,727	\$84,067	\$84,448	\$86,567	\$88,901	\$88,771	\$96,035	\$94,491	\$98,904	--
65 - 69	89	1	7	9	6	21	14	5	9	17	--
	\$89,506	\$74,706	\$73,035	\$83,567	\$89,447	\$91,517	\$87,574	\$90,615	\$95,625	\$95,864	--
70 & over	15	--	--	1	1	3	4	3	--	3	--
	\$86,344	--	--	\$83,256	\$78,545	\$87,491	\$81,259	\$82,668	--	\$99,284	--
Total	5,566	1,541	1,110	847	561	630	385	326	126	39	1
	\$78,192	\$61,990	\$76,601	\$82,731	\$85,809	\$88,671	\$89,093	\$93,364	\$94,636	\$97,608	\$118,040

SECTION 5: Supplemental Information for the State-Boston Retirement System - Teachers

EXHIBIT 5-C

Funding Schedule

(1) Fiscal Year Ended June 30	(2) Employer Normal Cost	(3) Amortization of Unfunded Liability	(4) Total Employer Contributions: (2) + (3)	(5) Unfunded Actuarial Accrued Liability at Beginning of Fiscal Year	(6) Percent Increase in Cost
2011	\$8,020,210	\$113,269,790	\$121,290,000	\$1,508,649,138	-0.80%
2012	7,352,624	141,592,902	148,945,526	1,530,408,191	22.80%
2013	7,641,032	149,227,096	156,868,128	1,522,227,570	5.32%
2014	7,662,840	157,167,264	164,830,104	1,504,274,800	5.08%
2015	7,313,792	165,444,980	172,758,772	1,475,604,613	4.81%
2016	7,642,913	174,093,796	181,736,709	1,435,131,024	5.20%
2017	7,986,844	183,152,715	191,139,559	1,381,635,135	5.17%
2018	8,346,252	192,667,135	201,013,387	1,313,739,100	5.17%
2019	8,721,833	201,337,156	210,058,989	1,221,665,407	4.50%
2020	9,114,315	210,397,328	219,511,643	1,112,975,062	4.50%
2021	9,524,459	219,865,208	229,389,667	985,891,265	4.50%
2022	9,953,060	229,759,142	239,712,202	838,472,364	4.50%
2023	10,400,948	240,098,304	250,499,252	668,597,432	4.50%
2024	10,868,991	250,902,727	261,771,718	473,950,617	4.50%
2025	11,358,096	262,193,350	273,551,446	252,004,166	4.50%
2026	11,869,210	-	11,869,210	-	-95.66%
2027	12,403,324	-	12,403,324	-	4.50%
2028	12,961,474	-	12,961,474	-	4.50%

Notes: Items (2) and (3) increase at 4.50% per year.

Anticipates deferred investment losses.

Recommended contribution is assumed to be paid on December 31.

Fiscal 2011 appropriation set to the prior budgeted amount.

Includes additional expense allowance for fiscal 2011 - 2014 to reflect the costs associated with the new computer system.

SECTION 6: Valuation Results for the State-Boston Retirement System - All Other Employees

A. PARTICIPANT DATA

The Actuarial Valuation and Review considers the number and demographic characteristics of covered participants, including active participants, inactive participants, retired participants and beneficiaries.

This section presents a summary of significant statistical data on these participant groups for All Other Employees of the State-Boston Retirement System.

More detailed information for this valuation year and the preceding valuation can be found in Exhibits 7-A and 7-B.

A historical perspective of how the participant population has changed over the past two valuations can be seen in this chart.

CHART 6-1
Participant Population: 2007 – 2009

Year Ended December 31	Active Participants	Inactive Participants	Retired Participants and Beneficiaries
2007	15,943	4,959	10,246
2009	14,449	6,189	10,044

SECTION 6: Valuation Results for the State-Boston Retirement System - All Other Employees

Active Participants

Plan costs are affected by the age, years of service and payroll of active participants. In this year's valuation, there were 14,449 active participants with an average age of 46.4, average years of service of 13.8 years and average payroll of \$56,029. The 15,943 active participants in the prior valuation had an average age of 45.3, average service of 12.9 years and average payroll of \$51,456.

Among the active participants, there were two participants with unknown service information. The actuarial calculations were adjusted for the missing information by assuming that it was the same as information provided for other active participants with similar known characteristics.

Inactive Participants

In this year's valuation, there were 812 participants with a vested right to a deferred or immediate vested benefit and 5,377 participants entitled to a return of their employee contributions.

These graphs show a distribution of active participants by age and by years of service.

CHART 6-2
Distribution of Active Participants by Age as of December 31, 2009

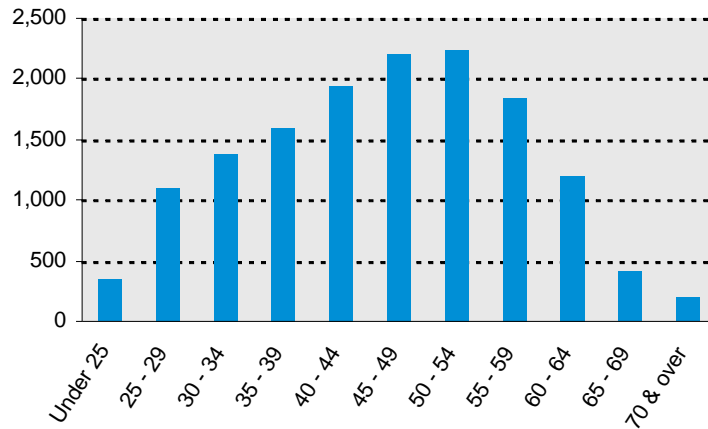
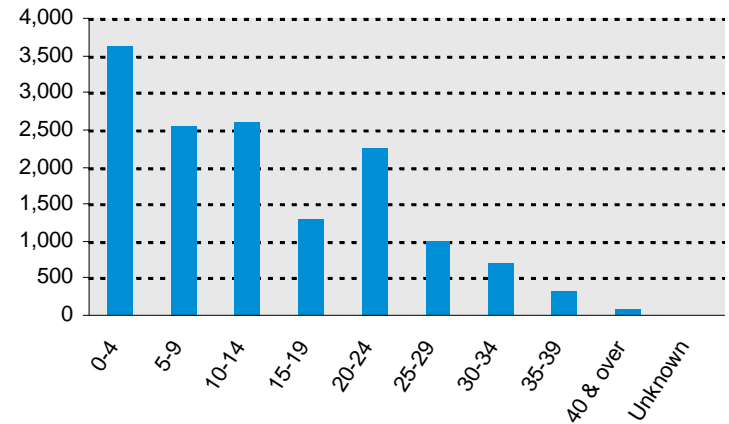


CHART 6-3
Distribution of Active Participants by Years of Service as of December 31, 2009



SECTION 6: Valuation Results for the State-Boston Retirement System - All Other Employees

Retired Participants and Beneficiaries

As of December 31, 2009, 7,639 retired participants and 2,405 beneficiaries were receiving total monthly benefits of \$20,677,684, excluding COLAs reimbursed by the Commonwealth. For comparison, in the previous valuation, there were 7,768 retired participants and 2,478 beneficiaries receiving monthly benefits of \$18,895,361, excluding COLAs reimbursed by the Commonwealth.

These graphs show a distribution of the current retired participants and beneficiaries based on their monthly amount and age, by type of pension.

CHART 6-4
Distribution of Retired Participants and Beneficiaries by Type and by Monthly Amount as of December 31, 2009

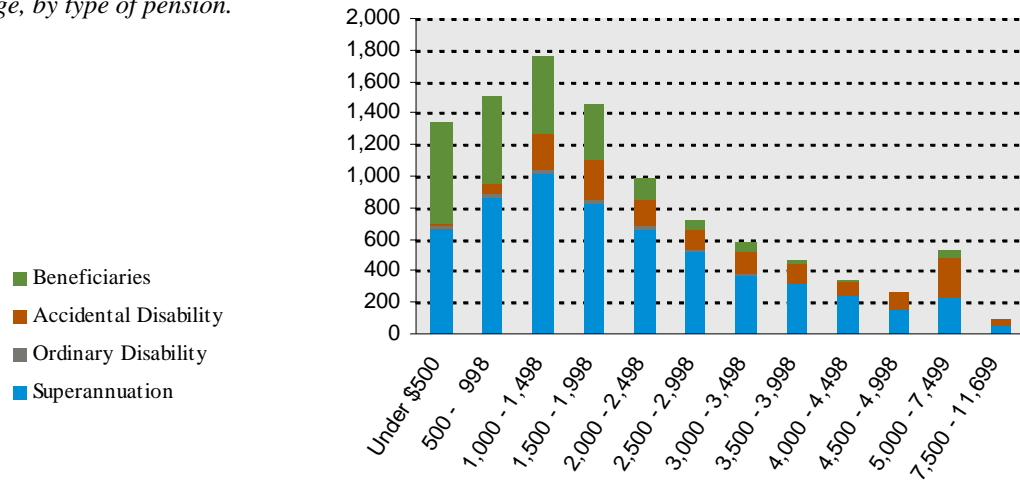
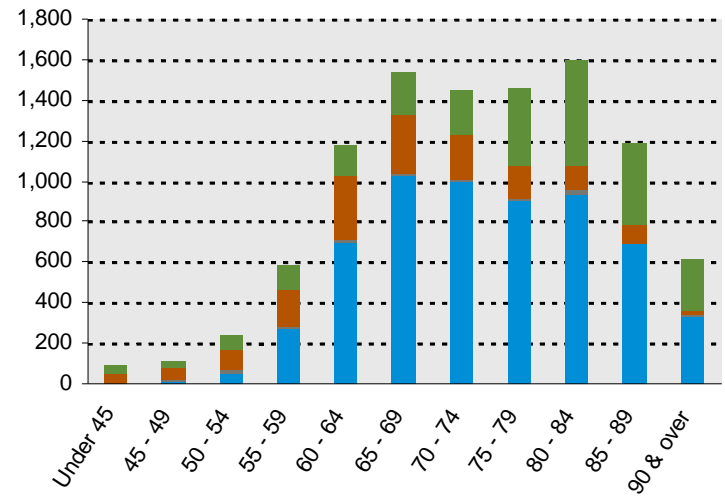


CHART 6-5
Distribution of Retired Participants and Beneficiaries by Type and by Age as of December 31, 2009



SECTION 6: Valuation Results for the State-Boston Retirement System - All Other Employees

B. FINANCIAL INFORMATION

The assets allocated to All Other Employees as of December 31, 2009 were \$2,959,889,324 on a market value basis and \$3,181,966,171 on an actuarial value basis.

Income and expenses on behalf of Teachers and All Other Employees will be accounted for separately in 2010 and later years. Future valuation reports will provide a reconciliation of the assets for All Other Employees.

SECTION 6: Valuation Results for the State-Boston Retirement System - All Other Employees

C. ACTUARIAL EXPERIENCE

To calculate the required contribution, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year actual experience is measured against the assumptions. If overall experience is more favorable than anticipated (an actuarial gain), the contribution requirement will decrease from the previous year. On the other hand, the contribution requirement will increase if overall actuarial experience is less favorable than expected (an actuarial loss).

Taking account of experience gains or losses in one year without making a change in assumptions reflects the belief that the single year's experience was a short-term

development and that, over the long term, experience will return to the original assumptions. For contribution requirements to remain stable, assumptions should approximate experience.

If assumptions are changed, the contribution requirement is adjusted to take into account a change in experience anticipated for all future years.

The total experience loss for the two-year period ended December 31, 2009 is \$535,878,715, including a \$595,631,004 loss from investments and a \$59,752,289 gain from all other sources.

This chart provides a summary of the actuarial experience over the past two years.

CHART 6-6
Actuarial Experience for Two-Year Period Ended December 31, 2009

1. Net loss from investments	-\$595,631,004
2. Net loss from administrative expenses	-683,432
3. Net gain from other experience	<u>60,435,721</u>
4. Net experience loss: (1) + (2) + (3)	-\$535,878,715

SECTION 6: Valuation Results for the State-Boston Retirement System - All Other Employees

D. RECOMMENDED CONTRIBUTION

The amount of annual contribution required to fund the System is comprised of an employer normal cost payment and a payment on the unfunded actuarial accrued liability.

2025 with increasing amortization payments (4.5% per year) and annual recognition of deferred losses. The prior funding schedule fully funded the System by June 30, 2023.

The fiscal 2011 appropriation has already been budgeted at \$133,494,237. An additional payment of \$82,000,000 is expected to be made on December 31, 2010. The results of this valuation will first be reflected in the fiscal 2012 appropriation. Exhibit 7-C in Section 7 shows the recommended contribution through fiscal 2028 based on a funding schedule that fully funds the System by June 30,

The chart compares this valuation's recommended contribution with the prior valuation.

CHART 6-7
Recommended Contribution

	Year Beginning January 1			
	2010		2008	
	Amount	% of Payroll	Amount	% of Payroll
1. Total normal cost	\$117,412,838	13.82%	\$118,832,957	13.82%
2. Administrative expenses	5,984,862	0.70%	2,515,825	0.29%
3. Expected employee contributions	<u>-77,013,679</u>	<u>-9.06%</u>	<u>-76,298,740</u>	<u>-8.87%</u>
4. Employer normal cost: (1) + (2) + (3)	\$46,384,021	5.46%	\$45,050,042	5.24%
5. Actuarial accrued liability	4,552,069,511		4,205,966,012	
6. Actuarial value of assets	<u>3,181,966,171</u>		<u>3,254,341,587</u>	
7. Unfunded actuarial accrued liability: (5) - (6)	\$1,370,103,340		\$951,624,425	
8. Employer normal cost projected to July 1, 2010 and 2008, adjusted for timing	47,338,008	5.45%	49,381,913	5.62%
9. Projected unfunded actuarial accrued liability	1,294,123,221		988,957,112	
10. Budgeted appropriation	<u>\$133,494,237</u>	<u>15.37%</u>	<u>\$131,660,498</u>	<u>14.97%</u>
11. Projected payroll	\$868,535,345		\$879,228,494	

*Notes: Recommended contribution for fiscal 2011 is assumed to be paid on July 1.
Recommended contribution for fiscal 2009 is assumed to be paid monthly.
Amortization payments increase at 4.5% per year.*

SECTION 7: Supplemental Information for the State-Boston Retirement System - All Other Employees

EXHIBIT 7-A

Table of Plan Coverage

Category	Year Ended December 31		Change From Prior Year
	2009	2007	
Active participants in valuation:			
Number	14,449	15,943	-9.4%
Average age	46.4	45.3	N/A
Average service	13.8	12.9	N/A
Total payroll*	\$809,569,497	\$820,362,449	-1.3%
Average payroll*	56,029	51,456	8.9%
Member contributions	761,566,608	736,426,989	3.4%
Number with unknown age and/or service information	2	10	-80.0%
Inactive participants with a vested right to a deferred or immediate benefit			
	812	650	24.9%
Inactive participants entitled to a return of their employee contributions**			
	5,377	4,309	24.8%
Retired participants:			
Number in pay status	5,914	6,134	-3.6%
Average age	74.3	74.2	N/A
Average monthly benefit	\$2,085	\$1,907	9.3%
Disabled participants:			
Number in pay status	1,725	1,634	5.6%
Average age	66.9	67.1	N/A
Average monthly benefit	\$3,077	\$2,669	15.3%
Beneficiaries in pay status			
	2,405	2,478	-2.9%

* Calendar year 2007 payroll figures were increased for firefighters and police superior officers to reflect unsettled bargaining contracts. Calendar year 2009 payroll figures were increased by 11.46% for firefighters to reflect a bargaining contract that was not settled until after December 31, 2009. Calendar year 2009 payroll figures were reduced for police superior officers to reflect retroactive payments that were included in the salary data.

** Includes 544 Suffolk County employees who were included in the active participant data and were transferred to the State Retirement System on November 1, 2010.

SECTION 7: Supplemental Information for the State-Boston Retirement System - All Other Employees

EXHIBIT 7-B

**Participants in Active Service as of December 31, 2009
By Age, Years of Service, and Average Payroll**

Age	Years of Service										Unknown	
	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over		
Under 25	343	331	12	--	--	--	--	--	--	--	--	--
	\$32,487	\$32,734	\$25,669	--	--	--	--	--	--	--	--	--
25 - 29	1,105	889	197	19	--	--	--	--	--	--	--	--
	\$46,494	\$46,962	\$45,206	\$37,927	--	--	--	--	--	--	--	--
30 - 34	1,386	691	482	200	13	--	--	--	--	--	--	--
	\$52,528	\$48,442	\$56,965	\$55,491	\$59,642	--	--	--	--	--	--	--
35 - 39	1,592	405	434	560	145	48	--	--	--	--	--	--
	\$57,770	\$45,174	\$52,526	\$68,165	\$66,992	\$62,334	--	--	--	--	--	--
40 - 44	1,933	367	346	476	292	416	36	--	--	--	--	--
	\$58,658	\$36,613	\$47,175	\$62,902	\$71,822	\$73,227	\$62,489	--	--	--	--	--
45 - 49	2,204	322	312	394	250	687	218	19	--	--	--	2
	\$60,637	\$36,825	\$39,441	\$55,024	\$65,838	\$78,917	\$69,930	\$90,658	--	--	--	\$79,835
50 - 54	2,236	268	331	376	228	488	319	217	9	--	--	--
	\$58,362	\$35,741	\$37,163	\$47,438	\$53,550	\$71,923	\$77,769	\$82,362	\$88,203	--	--	--
55 - 59	1,846	201	211	263	174	313	228	302	141	13	--	--
	\$60,297	\$36,785	\$42,132	\$46,398	\$46,715	\$59,261	\$72,315	\$87,612	\$86,425	\$77,897	--	--
60 - 64	1,202	97	141	186	135	187	139	123	155	39	--	--
	\$57,802	\$29,217	\$35,552	\$46,217	\$49,299	\$52,747	\$62,202	\$80,883	\$96,231	\$77,059	--	--
65 - 69	404	39	61	88	38	69	34	38	14	23	--	--
	\$42,634	\$22,262	\$29,707	\$41,596	\$40,136	\$45,865	\$52,126	\$54,042	\$55,715	\$69,018	--	--
70 & over	198	13	29	41	23	36	16	11	16	13	--	--
	\$34,030	\$12,455	\$18,885	\$29,766	\$31,130	\$40,546	\$49,745	\$37,322	\$34,711	\$66,961	--	--
Total	14,449	3,623	2,556	2,603	1,298	2,244	990	710	335	88	--	2
	\$56,029	\$41,536	\$45,641	\$55,754	\$59,441	\$69,432	\$70,712	\$82,347	\$87,257	\$73,590	--	\$79,835

Note: Calendar year 2009 salaries were increased by 11.46% for firefighters to reflect a bargaining contract that was not settled until after December 31, 2009. Calendar year 2009 salaries were reduced for police superior officers to reflect retroactive payments that were included in the salary data.

SECTION 7: Supplemental Information for the State-Boston Retirement System - All Other Employees

EXHIBIT 7-C

Funding Schedule

(1) Fiscal Year Ended June 30	(2) Employer Normal Cost	(3) Amortization of Unfunded Inactive Sheriff Liability	(4) Amortization of Remaining Unfunded Liability	(5) Crossover Payment Savings	(6) Additional Payment for Fiscal 2011 and Future Savings	(7) Total Employer Contributions: (2) + (3) + (4) + (5) + (6)	(8) Unfunded Actuarial Accrued Liability at Beginning of Fiscal Year	(9) Percent Increase in Cost Excluding Supplemental Payments
2011	\$47,338,008	\$4,342,909	\$88,985,320	\$(7,172,000)	\$82,000,000	\$215,494,237	\$1,294,123,221	-5.57%
2012	47,553,713	3,923,831	127,838,884	(14,865,892)	(9,569,863)	154,880,673	1,274,889,301	16.02%
2013	49,614,591	3,923,831	137,994,116	(14,865,892)	(9,569,863)	167,096,783	1,308,292,321	7.89%
2014	51,247,785	3,923,831	148,339,332	(14,865,892)	(9,569,863)	179,075,193	1,327,744,692	7.17%
2015	52,262,312	3,923,831	158,939,233	(14,865,892)	(9,569,863)	190,689,621	1,332,724,275	6.49%
2016	54,614,116	3,923,831	169,860,582	(14,865,892)	(9,569,863)	203,962,774	1,322,484,069	6.96%
2017	57,071,751	3,923,831	181,177,023	(14,865,892)	(9,569,863)	217,736,850	1,296,064,602	6.75%
2018	59,639,980	3,923,831	192,972,072	(14,865,892)	(9,569,863)	232,100,128	1,252,269,023	6.60%
2019	62,323,779	3,923,831	201,655,815	(14,865,892)	(9,569,863)	243,467,670	1,166,193,584	4.90%
2020	65,128,349	3,923,831	210,730,327	(14,865,892)	(9,569,863)	255,346,752	1,063,853,669	4.88%
2021	68,059,125	3,923,831	220,213,192	(14,865,892)	(9,569,863)	267,760,393	943,526,088	4.86%
2022	71,121,786	3,923,831	230,122,785	(14,865,892)	(9,569,863)	280,732,647	803,330,805	4.84%
2023	74,322,266	3,923,831	240,478,311	(14,865,892)	(9,569,863)	294,288,653	641,217,539	4.83%
2024	77,666,768	3,923,831	251,299,835	(14,865,892)	(9,569,863)	308,454,679	454,951,244	4.81%
2025	81,161,773	3,923,831	262,608,327	(14,865,892)	(9,569,863)	323,258,176	242,096,400	4.80%
2026	84,814,053	-	-	-	-	84,814,053	-	-73.76%
2027	88,630,685	-	-	-	-	88,630,685	-	4.50%
2028	92,619,066	-	-	-	-	92,619,066	-	4.50%

Notes: Items (2) and (4) increase at 4.50% per year.

Anticipates deferred investment losses.

Recommended contribution for fiscal 2011 reflects actual payments made or anticipated.

Recommended contribution for fiscal 2012 and later years is assumed to be paid on July 1. Interest will be charged if payments continue to be made monthly.

Includes additional expense allowance for fiscal 2011 - 2014 to reflect the costs associated with the new computer system.

SECTION 8: Definition of Terms

The following list defines certain technical terms for the convenience of the reader:

Assumptions or actuarial assumptions:

The estimates on which the cost of the Plan is calculated including:

- (a) Investment return — the rate of investment yield that the Plan will earn over the long-term future;
- (b) Mortality rates — the death rates of employees and pensioners; life expectancy is based on these rates;
- (c) Retirement rates — the rate or probability of retirement at a given age;
- (d) Turnover rates — the rates at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement.

Normal cost:

The amount of contributions required to fund the benefit allocated to the current year of service.

Actuarial accrued liability for actives:

The equivalent of the accumulated normal costs allocated to the years before the valuation date.

Actuarial accrued liability for pensioners:

The single sum value of lifetime benefits to existing pensioners. This sum takes account of life expectancies appropriate to the ages of the pensioners and the interest that the sum is expected to earn before it is entirely paid out in benefits.

Unfunded actuarial accrued liability:

The extent to which the actuarial accrued liability of the Plan exceeds the assets of the Plan. There are many approaches to paying off the unfunded actuarial accrued liability, from meeting the interest accrual only to amortizing it over a specific period of time.

Amortization of the unfunded actuarial accrued liability:

Payments made over a period of years equal in value to the Plan's unfunded actuarial accrued liability.

SECTION 8: Definition of Terms

Investment return:

The rate of earnings of the Plan from its investments, including interest, dividends and capital gain and loss adjustments, computed as a percentage of the average value of the fund. For actuarial purposes, the investment return often reflects a smoothing of the capital gains and losses to avoid significant swings in the value of assets from one year to the next.

SECTION 9: Reporting Information for the State-Boston Retirement System

EXHIBIT I

Summary of Actuarial Valuation Results

The valuation was made with respect to the following data supplied to us:

1. Retired participants as of the valuation date (including 2,690 beneficiaries in pay status)	13,958
2. Participants active during the year ended December 31, 2009 (including 3 participants with unknown years of service, total accumulated contributions of \$1,155,731,389 and projected payroll of \$1,306,059,752)	20,015
3. Inactive participants as of December 31, 2009 with a right to a return of their employee contributions	6,662
4. Inactive participants as of December 31, 2009 with a vested right to a deferred or immediate vested benefit	951

The actuarial factors as of January 1, 2010 are as follows:

1. Total normal cost	\$169,281,378
2. Administrative expenses	9,200,000
3. Expected employee contributions	<u>-124,443,803</u>
4. Employer normal cost: (1) + (2) + (3)	\$54,037,575
5. Actuarial accrued liability	7,091,017,681
Retired participants and beneficiaries	\$3,673,142,115
Active participants	3,254,216,219
Inactive participants	163,659,347
6. Actuarial value of assets (\$3,973,441,764 at market value)	4,270,893,327
7. Unfunded actuarial accrued liability: (5) – (6)	2,820,124,354

The actuarial factors projected to July 1, 2010 are as follows:

1. Projected employer normal cost, adjusted for timing	\$55,358,218
2. Projected unfunded actuarial accrued liability	2,802,772,359
3. Budgeted appropriation	254,784,237
4. Projected payroll	1,335,122,734

SECTION 9: Reporting Information for the State-Boston Retirement System

EXHIBIT II

Supplementary Information Required by the GASB – Schedule of Employer Contributions

Plan Year Ended December 31	Annual Required Contributions	Actual Contributions	Percentage Contributed
2000	\$145,541,000	\$145,541,000	100.0%
2001	146,882,000	146,882,000	100.0%
2002	152,882,000	152,882,000	100.0%
2003	157,064,000	157,064,000	100.0%
2004	164,069,000	164,069,000	100.0%
2005	191,132,000	191,132,000	100.0%
2006	217,088,000	217,088,000	100.0%
2007	227,822,000	227,822,000	100.0%
2008	239,039,000	239,039,000	100.0%
2009	250,823,000	250,823,000	100.0%

SECTION 9: Reporting Information for the State-Boston Retirement System

EXHIBIT III

Supplementary Information Required by the GASB – Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded/ (Overfunded) AAL (UAAL) (b) - (a)	Funded Ratio (a) / (b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll* [(b) - (a)] / (c)
01/01/2001	\$3,211,692,000	\$4,256,714,000	\$1,045,022,000	75.45%	\$990,325,000	105.52%
01/01/2002	3,371,716,000	4,796,130,000	1,424,414,000	70.30%	1,052,420,000	135.35%
01/01/2003	3,204,893,000	5,121,319,000	1,916,426,000	62.58%	1,099,779,000	174.26%
01/01/2004	3,384,814,000	5,420,842,000	2,036,028,000	62.44%	1,067,492,000	190.73%
01/01/2005	3,587,118,000	5,664,288,000	2,077,170,000	63.33%	1,115,529,000	186.20%
01/01/2006	3,836,807,000	5,957,373,000	2,120,566,000	64.40%	1,168,808,000	181.43%
01/01/2007	4,138,146,000	6,223,154,000	2,085,008,000	66.50%	1,221,404,000	170.71%
01/01/2008	4,458,002,000	6,596,148,000	2,138,146,000	67.58%	1,299,112,000	164.59%
01/01/2009	4,089,989,000	6,900,229,000	2,810,240,000	59.27%	1,364,068,000	206.02%
01/01/2010	4,270,893,000	7,091,018,000	2,820,124,000	60.23%	1,306,060,000	215.93%

* *Not less than zero*

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EXHIBIT IV

Supplementary Information Required by the GASB

Valuation date	January 1, 2010
Actuarial cost method	Entry Age Normal Cost Method
Amortization method	Payments increasing 4.50% per year
Remaining amortization period	15 years remaining as of January 1, 2010
Asset valuation method	Sum of actuarial value at beginning of the year, contributions and investment earnings based on the actuarial interest assumption less benefit payments and operating expenses plus 20% of market value at end of year in excess of that sum, plus additional adjustment toward market value as necessary so that final actuarial value is within 20% of market value. Similar formula used for negative adjustment toward market value if actuarial value exceeds market value.

Actuarial assumptions:

Investment rate of return	8.25% for Teachers, 8.00% for All Other Employees (Previously, 8.00% for all employees)
Projected salary increases	5.00%
Cost of living adjustments	3.00% for the first \$12,000 of retirement income

Plan membership:

Retired participants and beneficiaries receiving benefits	13,958
Inactive participants entitled to a return of their employee contributions	6,662
Inactive participants with a vested right to a deferred or immediate benefit	951
Active participants	<u>20,015</u>
Total	41,586

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EXHIBIT VI

Actuarial Assumptions and Actuarial Cost Method

Mortality Rates:

Healthy: RP-2000 Combined Healthy Mortality Table
Disabled: RP-2000 Combined Healthy Mortality Table set forward five years

Termination Rates before Retirement:

Age	Groups 1 and 2 - Rate (%)			
	Mortality		Disability	Withdrawal
	Male	Female		
20	0.03	0.02	0.06	6.58
25	0.04	0.02	0.09	5.27
30	0.04	0.03	0.11	4.83
35	0.08	0.05	0.15	4.47
40	0.11	0.07	0.22	3.84
45	0.15	0.11	0.36	3.21
50	0.21	0.17	0.61	1.52
55	0.36	0.27	1.01	0.33
60	0.67	0.51	1.63	0.00

*Notes: 50% of the disability rates shown represent accidental disability.
 20% of the accidental disabilities will die from the same cause as the disability.
 20% of the death rates shown represent accidental death.*

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Age	Group 4 - Rate (%)			
	Mortality		Disability	Withdrawal
	Male	Female		
20	0.03	0.02	0.12	0.00
25	0.04	0.02	0.17	0.00
30	0.04	0.03	0.22	0.00
35	0.08	0.05	0.29	0.00
40	0.11	0.07	0.44	0.00
45	0.15	0.11	0.72	0.00
50	0.21	0.17	1.21	0.00
55	0.36	0.27	2.02	0.00
60	0.67	0.51	3.25	0.00

*Notes: 90% of the disability rates shown represent accidental disability.
 60% of the accidental disabilities will die from the same cause as the disability.
 50% of the death rates shown represent accidental death.*

Retirement Rates:

Age	Rate (%)			
	Groups 1 and 2	TARP	Age	Group 4
55	3.0	3.0	50	1.0
56	3.0	7.5	51	1.0
57	3.0	25.0	52	1.0
58	3.0	25.0	53	1.0
59	3.0	25.0	54	1.0
60	8.0	18.0	55	10.0
61	8.0	18.0	56	5.0
62	15.0	25.0	57	5.0
63	10.0	20.0	58	5.0
64	10.0	20.0	59	5.0
65	35.0	35.0	60	10.0
66	20.0	20.0	61	15.0

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Retirement Rates (continued):

		Rate (%)			
Age	Groups 1 and 2	TARP	Age	Group 4	
67	20.0	20.0	62	15.0	
68	20.0	20.0	63	15.0	
69	20.0	20.0	64	25.0	
70	100.00	100.0	65	100.00	

Unknown Data for Participants: Same as those exhibited by participants with similar known characteristics.

Age of Spouse: Females three years younger than their spouses.

Percent Married: 75%

Net Investment Return: 8.25% for Teachers, 8.00% for All Other Employees (previously, 8.00% for all employees)

Salary Increases:

Age	Present salary as a percent of salary at 65	Annual increase rate (%)
20	11.13%	5.0
25	14.20	5.0
30	18.13	5.0
35	23.14	5.0
40	29.53	5.0
45	37.69	5.0
50	48.10	5.0
55	61.39	5.0
60	78.35	5.0

Includes allowance for inflation of 4.5%.

Interest on Employee Contributions: 3.5%

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Administrative Expenses: \$3,800,000 for calendar 2010, increasing 4.5% per year plus the following amounts to reflect the costs associated with the new computer system:

Fiscal 2011	\$5,400,000
Fiscal 2012	2,700,000
Fiscal 2013	2,700,000
Fiscal 2014	1,900,000

2009 Salary: 2009 salary equal to salaries provided in the data, except salaries for new hires were annualized.

Calendar year 2009 salaries were increased by 11.46% for firefighters to reflect a bargaining contract that was not settled until after December 31, 2009. Calendar year 2009 salaries were reduced for police superior officers to reflect retroactive payments that were included in the salary data.

Total Service: Total creditable service based on date of hire.

Actuarial Value of Assets: A preliminary actuarial value is first determined by taking the actuarial value of assets at the beginning of the year and adding assumed investment earnings (at the assumed actuarial rate of return) and the net new money during the year (contributions less benefit payments and administrative expenses). Twenty percent of the difference between the market value of assets and the preliminary actuarial value of assets is added to the preliminary actuarial value. In order that the actuarial value not differ too significantly from the market value of assets, the final actuarial value of assets must be within 20% of the market value of assets. Reduced by \$26,344,573 to reflect the transfer on September 17, 2010 of the Annuity Savings Fund of certain Suffolk County employees to the State Retirement System.

Market value of assets as reported in the Annual Statement, reduced by \$26,344,573 to reflect the transfer on September 17, 2010 of the Annuity Savings Fund of certain Suffolk County employees to the State Retirement System.

Actuarial Cost Method: Entry Age Normal Actuarial Cost Method. Entry Age is the age of the participant at Date of Hire. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are allocated by salary.

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Changes in Assumptions:

The investment return assumption for the Teachers was increased to 8.25% to reflect the assumptions of the State System.

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EXHIBIT VII

Summary of Plan Provisions

This exhibit summarizes the major provisions of Chapter 32 of the Laws of Massachusetts.

Plan Year: January 1 – December 31

Retirement Benefits

Employees covered by the Contributory Retirement Law are classified into one of four groups depending on job classification. Group 1 comprises most positions in state and local government. It is the general category of public employees. Group 4 comprises mainly police and firefighters. Group 2 is for other specified hazardous occupations. (Officers and inspectors of the State Police are classified as Group 3.)

The annual amount of the retirement allowance is based on the member's final three-year average salary multiplied by the number of years and full months of creditable service at the time of retirement and multiplied by a percentage according to the following table based on the age of the member at retirement:

Age Last Birthday at Date of Retirement			
Percent	Group 1	Group 2	Group 4
2.5	65 or over	60 or over	55 or over
2.4	64	59	54
2.3	63	58	53
2.2	62	57	52
2.1	61	56	51
2.0	60	55	50
1.9	59	--	49
1.8	58	--	48
1.7	57	--	47
1.6	56	--	46
1.5	55	--	45

TARP – Chapter 114 of the Acts of 2000 provides enhanced retirement benefits to teachers who elect to participate in the program and to all teachers hired on or after

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July 1, 2001. The retirement allowance of a participating teacher with 30 or more years of service is increased by an additional 2 percent for each full year of creditable service in excess of 24 years, up to the statutory maximum of 80 percent of the member's three-year salary average.

A member's final three-year average salary is defined as the greater of the highest consecutive three-year average annual rate of regular compensation and the average annual rate of regular compensation received during the last three years of creditable service prior to retirement. The \$30,000 cap on salary used in a benefit determination for any employee hired after January 1, 1979 has been removed.

The maximum annual amount of the retirement allowance is 80 percent of the member's final three-year average salary. Any member who is a veteran also receives an additional yearly retirement allowance of \$15 per year of creditable service, not exceeding \$300. The veteran allowance is paid in addition to the 80 percent maximum.

Employee Contributions

<u>Date of Hire</u>	<u>Contribution Rate</u>
Prior to January 1, 1975	5%
January 1, 1975 – December 31, 1983	7%
January 1, 1984 – June 30, 1996	8%
July 1, 1996 onward	9%

In addition, employees hired after December 31, 1978 contribute an additional 2 percent of salary in excess of \$30,000.

Employees hired after 1983 who leave with less than five years of credited service receive no interest on their contributions, and employees who leave with five but less than ten years receive one-half the rate of regular interest otherwise payable.

Retirement Benefits (Superannuation)

Members of Group 1, 2 or 4 may retire upon the attainment of age 55. For retirement at ages below 55, twenty years of creditable service is required.

Members who terminate before age 55 with ten or more years of creditable service are eligible for a retirement allowance upon the attainment of age 55 (provided they have

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not withdrawn their accumulated deductions from the Annuity Savings Fund of the System).

Ordinary Disability Benefits

A member who is unable to perform his or her job due to a non-occupational disability will receive a retirement allowance if he or she has ten or more years of creditable service and has not reached age 55. The annual amount of such allowance shall be determined as if the member retired for superannuation at age 55, based on the amount of creditable service at the date of disability. For veterans, there is a minimum benefit of 50 percent of the member's most recent year's pay plus an annuity based on his or her own contributions.

Accidental Disability Benefit

For a job-connected disability, the benefit is 72 percent of the member's most recent annual pay plus an annuity based on his or her own contributions, plus additional amounts for surviving children. Benefits are capped at 75 percent of annual rate of regular compensation for employees who become members after January 1, 1988.

Death Benefits

In general, the beneficiary of an employee who dies in active service will receive a refund of the employee's own contributions. Alternatively, if the employee were eligible to retire on the date of death, a spouse's benefit will be paid equal to the amount the employee would have received under Option C. The surviving spouse of a member who dies with two or more years of credited service has the option of a refund of the employee's contributions or a monthly benefit regardless of eligibility to retire, if they were married for at least one year. There is also a minimum widow's pension of \$500 per month, and there are additional amounts for surviving children.

If an employee's death is job-connected, the spouse will receive 72 percent of the member's most recent annual pay, in addition to a refund of the member's accumulated deductions, plus additional amounts for surviving children. However, in accordance with Section 100 of Chapter 32, the surviving spouse of a police officer, firefighter or corrections officer is killed in the line of duty will be eligible to receive an annual benefit equal to the maximum salary held by the member at the time of death.

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"Heart And Lung Law" And Cancer Presumption

Any case of hypertension or heart disease resulting in total or partial disability or death to a uniformed fireman, permanent member of a police department, or certain employees of a county correctional facility is presumed to have been suffered in the line of duty, unless the contrary is shown by competent evidence. Any case of disease of the lungs or respiratory tract resulting in total disability or death to a uniformed fireman is presumed to have been suffered in the line of duty, unless the contrary is shown by competent evidence. There is an additional presumption for uniformed firemen that certain types of cancer are job-related if onset occurs while actively employed or within five years of retirement.

Options

Members may elect to receive a full retirement allowance payable for life under Option A. Under Option B a member may elect to receive a lower monthly allowance in exchange for a guarantee that at the time of death any contributions not expended for annuity payments will be refunded to the beneficiary. Option C allows the member to take a lesser retirement allowance in exchange for providing a survivor with two-thirds of the lesser amount. Option C pensioners will have benefits converted from a reduced to a full retirement if the beneficiary predeceases the retiree.

Post-Retirement Benefits

The Board has adopted the provisions of Section 51 Chapter 127 of the Acts of 1999, which provide that the Retirement Board may approve an annual COLA in excess of the Consumer Price Index but not to exceed a 3% COLA on the first \$12,000 of a retirement allowance. Cost-of-living increases granted prior to July 1, 1998 are reimbursed by the Commonwealth and not reflected in this report.

Changes in Plan Provisions

There have been no changes in plan provisions since the last valuation.