COMMONWEALTH OF MASSACHUSETTS

Postemployment Benefits Other Than Pensions Actuarial Valuation January 1, 2009

June 2009

Submitted by:
Aon Consulting
One Federal Street
Boston, Massachusetts 02110

The Honorable Martin J. Benison
Comptroller
The Commonwealth of Massachusetts
One Ashburton Place, Room 901
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This report presents the January 1, 2009 Actuarial Valuation results for the retiree benefits (health and life insurance) provided through the ***Group Insurance Commission ("the GIC").*** The purposes of this report are to:

(1) Determine the Commonwealth's January 1, 2009 obligations;

(2) Determine the Commonwealth's Fiscal Year End June 30, 2010 accrual under the *Governmental Accounting Standards Board (GASB)* standard based on GASB Statement 45;

(3) Provide disclosure information for the Fiscal Year End June 30, 2010; and

(4) Provide information that may be helpful in future planning for the Commonwealth.

A summary of the major results is shown in the Executive Summary, while the Principal Valuation Results Section provides more detail.

The Accounting Information Section summarizes GASB Other Postemployment Benefit (OPEB) accounting treatment including the Fiscal Year End June 30, 2010 Annual Required Contribution (ARC) and Annual OPEB Cost (AOC).

This report's costs and liabilities are based upon the data and plan provisions provided by the Commonwealth, as summarized in the Demographic Information and Summary of Principal Plan Provisions Sections, respectively, and the funding method and actuarial assumptions outlined in the Methods and Assumptions Section of this report. This report presents our best estimate of the costs of the Plan in accordance with accepted actuarial principles and our understanding of GASB Statement 45.

Respectfully,

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Executive Summary

The ***Commonwealth of Massachusetts ("the Commonwealth")*** provides medical, prescription drug, mental health/substance abuse and life insurance to retirees and their covered dependents. The Commonwealth pays a portion of the cost for retirees, spouses and dependents. All active employees who retire from the Commonwealth and meet the eligibility criteria will receive these benefits.

The Commonwealth also offers dental and vision care to retirees. Since these benefits are completely paid by the retirees, there is no GASB 45 liability for the Commonwealth.

The Medicare Prescription Drug, Improvement and Modernization Act of 2003 was enacted on December 8, 2003. As a result of this legislation, employers providing drug coverage to Medicare eligible members, that is at least actuarially equivalent to the standard benefit provided by Medicare, are eligible to receive a federal subsidy (the "Retiree Drug Subsidy") starting January 1, 2006.

It has been determined that the Commonwealth's drug coverage for retirees is better than actuarially equivalent to Medicare's standard coverage in the Fiscal Year Ending June 30, 2010. The Commonwealth has opted to receive the Retiree Drug Subsidy (RDS) and is complying with the requirements to do so.

Actuarial Liabilities are shown without a reduction in liability for the Retiree Drug Subsidy. In June 2006, the GASB issued the proposed Technical Memorandum on accounting for the Retiree Drug Subsidy. The Technical Memorandum requires that plan sponsors do not reduce their liability to reflect the Retiree Drug Subsidy, but rather that the RDS payment be treated as a third party payment with treatment determined by GASB 33. The effect of this accounting treatment is to have two sources of funding of the expense (Annual Required Contribution), one being the federal government.

This summary identifies the value of benefits at January 1, 2009 and costs for the Fiscal Year End June 30, 2010.

In 2006, the Office of the State Comptroller contracted with Aon to produce an actuarial valuation which calculated the liability of the present value of benefits if the Commonwealth chose to continue to fund that liability on a pay-as-you-go basis (using a discount rate of 4.50%) and what the liability would be should the Commonwealth choose to fully fund the liability over the next 30 years (using a discount rate of 8.25%).

With this information, the Commonwealth formed a Commission to study the issue. The Commission issued its report in July 2008 with a number of recommendations including a recommendation to dedicate a revenue stream toward partially funding the liability until the pension system is fully funded (currently 2023). However, legislation implementing these recommendations has not yet been enacted. Therefore, the January 1, 2009 valuation has been run at the unfunded discount rate of 4.50%, the estimate of the Commonwealth's uninvested or "free" cash flow rate. This rate is only a benchmark and should be adjusted as trends warrant.

Executive Summary (continued)

The Commonwealth determined that based on legislative action pushing back the ability to fund the obligation an appropriate discount rate would be 4.50%. They requested that Aon produce an updated liability with January 1, 2009 data for the 2010 Fiscal Year at discount rates of 4.50%, 6.40%, and 8.25%. The table that follows shows the results of these valuations:

Discount Rate	2009 Results (in millions)	2008 Results (in millions)
4.50%	$15,305.1	$15,637.7
6.40%	$11,431.9	$11,649.1
8.25%	$8,983.3	$9,126.3

The Accumulated Postretirement Benefit Obligation (APBO) increased from $11,649.1 million as of January 1, 2008 to $15,305.1 million as of January 1, 2009. The main reason for this increase in obligation was the change in discount rate from 6.40% as of January 1, 2008 to 4.50% as of January 1, 2009. Also contributing to the increase in obligation was the passage of time. Helping to mitigate the losses noted above were gains due to demographics attributed to the Active population decreasing combined with a modest increase in the Inactive population and gains due to lower than expected per capita costs.

The liability was developed as follows:

	Liability
2008 Valuation (in millions)	$11,649.1
Expected Increase	$750.1
Census Changes	-$114.5
Per Capita Adjustments	-$852.8
Discount Rate Change	$3,873.2
2009 Results (in millions)	$15,305.1

The following table shows the impact of various discount rates on the ARC & AOC calculations as of January 1, 2009:

Discount Rate	4.50%	6.40%	8.25%
ARC (in millions)	$1,221.5	$976.8	$837.0
Adjustment (in millions)	$7.4	$13.6	$18.4
AOC (in millions)	$1,228.9	$990.4	$855.4

On January 28, 2009, the Patrick-Murray Administration filed legislation to transfer seven county sheriffs to state sheriffs. This proposal would make employees of county sheriff departments' state employees. As state employees, the sheriff department employees will be eligible for health care benefits from the state. The legislation establishes a transfer date of July 1, 2009, and as of this date, all active employees would be eligible for health benefits through the Group Insurance Commission.

For purposes of this valuation, Aon did not reflect the anticipated inclusion of county sheriff departments' employees, consisting of approximately 2,598 active employees and 890 retirees.

Executive Summary (continued)

I. Summary of Benefit Obligations

GASB 45 Results for Fiscal Year End June 30,	2010 * ($ millions)	2009 ** ($ millions)
Present Value of all Projected Benefits	$21,878.5	$15,693.0
Present Value of Benefits		
Earned to Date (Actuarial Accrued Liability)	$15,305.1	$11,649.1
FY Annual Required Contribution (ARC)***	$1,221.5	$978.9
FY Annual OPEB Cost	$1,228.9	$981.4
Expected Benefit Premiums	$452.0	$421.3

* **The Fiscal Year End June 30, 2010 Present Value of Benefits was calculated on 1/1/2009 using a 4.50% discount rate.**

** **The Fiscal Year End June 30, 2009 Present Value of Benefits was calculated on 1/1/2008 using a 6.40% discount rate.**

*** **The Annual Required Contribution reflects a 30-year, 4.5% annual increasing amortization of the Unfunded Actuarial Accrued Liability.**

- The ***Present Value of all Projected Benefits*** is the total present value of all expected future benefits, based on certain actuarial assumptions. The Present Value of all projected benefits is a measure of total liability or obligation. Essentially, the Present Value of all projected benefits is the value (on the valuation date) of the benefits promised to current and future retirees. The Plan's present value of all projected benefits (at January 1, 2009) is $21,878.5 million. The majority of this liability is for current active employees (future retirees).

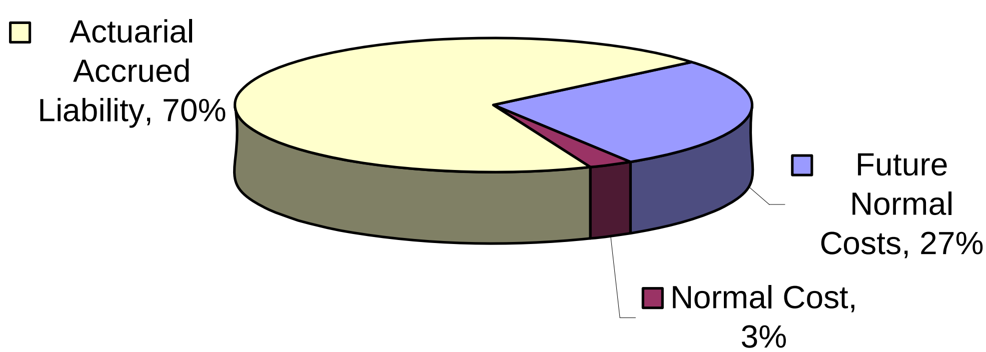
- The ***Actuarial Accrued Liability*** is the liability or obligation for benefits earned through the valuation date, based on certain actuarial methods and assumptions. The Plan's Actuarial Accrued Liability (at January 1, 2009) is $15,305.1 million assuming no prefunding of obligations. Approximately 52.9% of this obligation is for active employees. The Actuarial Accrued Liability represents approximately 70.0% of the present value of all projected benefits.

Executive Summary (continued)

- ***Normal Cost*** is the value of benefits expected to be earned during the current year, again based on certain actuarial methods and assumptions. The Fiscal Year End June 30, 2010 Normal Cost is $640.6 million as of the beginning of the plan year. In pension accounting, this is also known as "**service cost.**"

- ***Future Normal Costs*** represent the present value of the remaining balance of all projected benefits to be earned in future years.

The following graph illustrates (for the scenario assuming no prefunding) the Present Value of all Projected Benefits, the yellow area representing the Actuarial Accrued Liability in total:



Executive Summary (continued)

The results were calculated based upon plan provisions, as provided by the Commonwealth, along with certain demographic and economic assumptions as recommended by Aon, in conjunction with the Commonwealth with guidance from the GASB statement.

Demographic Assumptions

Data was provided by the Commonwealth as of January 1, 2009. Demographic assumptions used to project the data are the same as those used to value the Commonwealth's pension liabilities under GASB 27. There is no assumption for future new hires.

Economic Assumptions

The GASB statement requires that the discount rate used to determine the retiree healthcare liabilities should be the estimated long-term yield on investments that are expected to be used to finance the payment of benefits. If the Commonwealth decided not to prefund the retiree healthcare and life insurance liabilities, the discount rate would be based on the portfolio of the Commonwealth's "general assets" used to pay these benefits. Historical monthly yields for this portion of the portfolio are derived from the rate of return of the Massachusetts Municipal Depository Trust (MMDT) which is an investment pool managed by the Treasurer and Receiver – General not only on behalf of the Commonwealth, but various other governments. The rate of return calculated on a monthly basis from the inception of MMDT in September of 1978 to the present suggests a 4.0% to 5.0% discount rate. Conversely, if the Commonwealth prefunded the full obligation, we recommended using the same rate as used for valuing the Commonwealth's pension liabilities, which is 8.25%.

The Commonwealth has established a retiree benefits trust fund. In developing the 2009 budget, the Commonwealth funded OPEB initially with a transfer from the General Fund of $372 million, which was subsequently reduced to $352 million by legislative action reflecting actual cost of benefits for 2009. In fiscal 2008, the Commonwealth funded transfers from the General Fund including federally approved cost recovery on fringe benefits and a supplemental budget totaling approximately $355 million. Furthermore, the corpus of unspent master settlement agreement proceeds were also transferred amounting to approximately $329 million.

Based on its initial expected funding policy over a nine (9) year span, the Commonwealth originally assumed to fund approximately 80% of the ARC. Therefore, it was the Commonwealth's view that a percentage of ARC approach be used to determine the discount rate assumption. However, legislation prefunding this liability has not yet been enacted and the Commonwealth has decided on a 4.50% discount rate for Fiscal Year Ending June 30, 2010 representing the unfunded discount rate assumption.

The trend assumption is used to project the growth of the expected claims over the lifetime of the healthcare recipients. The GASB statement does not require a particular source for information to determine healthcare trends, but it does recommend selecting a source that is "publicly available, objective and unbiased".

Aon developed the trend assumption utilizing the short term rates expected on the Commonwealth plan along with information in published papers from other industry experts (actuaries, health economists, etc.). This amount initially is at 9.0% and decreases to a 5.0% long-term trend rate for all healthcare benefits after seven years.

The balance of this report provides greater detail for the above results.

Actuarial Certification

This report presents the results of the Actuarial Valuation for the Commonwealth of Massachusetts' Postemployment Benefits Other Than Pensions (the Plan) as of January 1, 2009 for development of accounting and financial reporting information under Statement No. 45 of the Governmental Accounting Standards Board.

This report has been prepared using generally accepted actuarial practices and methods. The actuarial assumptions (other than those strictly applicable to valuing the Plan, or as otherwise explicitly specified) used in the calculations are consistent with those used by the Commonwealth's Actuary for the pension valuation for the state retirement system. We have discussed Plan-specific assumptions with the Commonwealth and believe them to be reasonable.

Aon Consulting did not audit the employee data and financial information used in this valuation. On the basis of our review of this data, we believe that the information is sufficiently complete and reliable, and that it is appropriate for the purposes intended.

Actuarial computations under GASB 45 are for purposes of fulfilling governmental accounting requirements. The calculations reported herein have been made on a basis consistent with our understanding of the accounting standard. Determinations for purposes other than meeting governmental financial accounting requirements may be different from these results. Accordingly, additional determinations may be needed for other purposes, such as judging benefit security at termination.

This report is intended for the sole use of the Commonwealth. It is intended only to supply information for the Commonwealth to comply with the stated purposes of the report and may not be appropriate for other purposes. Reliance on information contained in this report by anyone for other than the intended purposes, puts the relying entity at risk of being misled because of confusion or failure to understand applicable assumptions, methodologies, or limitations of the report's conclusions. Accordingly, no person or entity, including the Commonwealth should base any representations or warranties in any business agreement on any statements or conclusions contained in this report without the written consent of Aon Consulting.

The actuaries whose signatures appear below are Members of the American Academy of Actuaries and together meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. They are available to answer any questions with regard to the matters enumerated in this report.

We further certify that this report is in compliance with Actuarial Standard of Practice No. 41, "Actuarial Communications".
Aon's relationship with the Plan and the Commonwealth is strictly professional. There are no aspects of the relationship that may impair or appear to impair the objectivity of our work.

Thomas G. Vicente, FSA, MAAA

Michael E. Morfe, ASA, MAAA

Principal Valuation Results

The following highlights the Commonwealth's recognition of the above amounts:

- The January 1, 2009 assets are $273.5 million.
- The Fiscal Year End June 30, 2010 Annual Required Contribution (ARC) is $1,221.5 million.
- Expected Fiscal Year Ending June 30, 2010 benefit payments are $452.0 million.

The following table shows results by active, inactive and retired employee groups as compared to what was reported in January 2008:

GASB Results ($ millions)	January 1, 2009			January 1, 2008
	(1) Health	(2) Life Insurance	Total = (1) + (2)	Total
Present Value of Projected Benefits				
Active	$14,594.0	$70.0	$14,664.0	$9,719.2
Inactive[1]	$414.0	$2.0	$416.0	$335.7
Retirees	$6,685.7	$112.8	$6,798.5	$5,638.1
Total	$21,693.7	$184.8	$21,878.5	$15,693.0
Actuarial Accrued Liability				
Active	$8,045.9	$44.7	$8,090.6	$5,675.3
Inactive [1]	$414.0	$2.0	$416.0	$335.7
Retirees	$6,685.7	$112.8	$6,798.5	$5,638.1
Total	$15,145.6	$159.5	$15,305.1	$11,649.1
Assets [2]	$270.7	$2.9	$273.5	$329.4
Unfunded Actuarial Accrued Liability	$14,874.9	$156.6	$15,031.6	$11,319.7
Normal Cost at beginning of year	$637.7	$2.9	$640.6	$425.7

[1] Inactives are certain former employees with at least the minimum required years of creditable service who have left contributions in the state retirement system.

[2] Assets shown at January 1, 2008 were not deposited into the Trust until June 30, 2008. They are shown here for illustrative purposes.

2009 figures are based on a 4.50% discount rate.

2008 figures are based on a 6.40% discount rate.

Trust Information

An OPEB Trust was established effective June 30, 2008 by an Appropriations bill. The activity of this trust through December 31, 2008 is as follows:

Market Value of Assets	
January 1, 2008 ($ millions)	$0.0
Contributions	
Employer Payments	$125.6
Employer Trust Deposit	$336.0
Expected Interest Earned	$10.5
Total	$472.1
Disbursements	
Investment Return	-$73.0
Actual Benefit Payments	-$125.6
Total	-$198.6
Net Change	$273.5
January 1, 2009 ($ millions)	**$273.5**

Accounting Information

The effective date for the new GASB OPEB Accounting Standard is the Fiscal Year beginning July 1, 2007. The following shows the Annual Required Contribution (ARC), Annual OPEB Cost (AOC), and projected June 30, 2010 Net OPEB Obligation (NOO).

Annual Required Contribution (ARC)

The Standard sets the method for determining the Commonwealth's postemployment benefits accrual, the Annual Required Contribution (ARC), to include both the value of benefits earned during the year (Normal Cost) and an amortization of the Unfunded Actuarial Accrued Liability. Accordingly, the following table shows the Commonwealth's Fiscal Year End June 30, 2010 Annual Required Contribution (ARC) based on a 30-year amortization of the Unfunded Actuarial Accrued Liability as an increasing 4.5% annual amortization compared to what was reported for Fiscal Year End June 30, 2009.

Fiscal Year Ending June 30,	2010 ($ millions)	2009 ($ millions)
Normal Cost at End of Year	$669.4	$452.9
Unfunded Actuarial Accrued Liability Amortization	$552.1	$526.0
Annual Required Contribution (ARC)	$1,221.5	$978.9

Accounting Information (continued)

Schedule of Amortization Bases

For each year the Annual Required Contribution (ARC) is calculated, a new amortization base is established. The sum of all amortization bases is shown on the preceding page as the Unfunded Actuarial Accrued Liability Amortization. The chart below illustrates the development of the total amortization calculation, when each base was established, the original amount of the base, and the payment associated with each for the current fiscal year.

Original Amount	Year Established	Years Left	Unamortized Amount	BOY Annual Payment
$9,812.2	01/01/2007	28	$10,166.7	$363.1
$1,306.8	01/01/2008	29	$1,331.0	$45.9
$3,578.1	01/01/2009	30	$3,578.1	$119.3
Total				**$528.3**

Calculation of 2009 Amortization Base	
Demographic (Gain) / Loss	-$114.5
Per Capita (Gain) / Loss	-$852.8
Discount Rate Change	$3,873.2
Asset (Gain) / Loss	$73.0
Change in NOO	$599.2
Total	**$3,578.1**

Accounting Information (continued)

Annual OPEB Cost (AOC)

The initial Net OPEB Obligation at July 1, 2007 was $0. Therefore, in Fiscal Year End June 30, 2008, *or* the first year of implementation of GASB 45, there is no adjustment to the Annual Required Contribution. As the years go forth, any cumulative unpaid ARC will result in an adjustment to the Annual Required Contribution.

Summary of Total Annual OPEB Cost (AOC)

Fiscal Year Ending June 30,	2010 ($ millions)	2009 ($ millions)
Annual Required Contribution (ARC)	$1,221.5	$978.9
Adjustment to Annual Required Contribution	$7.4	$2.5
Total Annual OPEB Cost (AOC)	$1,228.9	$981.4

Annual OPEB Cost Summary (After adoption, a 3-year display will be shown):

Fiscal Year Ending	Annual OPEB Cost ($ millions)	Percentage of Annual OPEB Cost Contributed *	Net OPEB Obligation ($ millions) *
06/30/2008	$838.7	83.7%	$136.5
06/30/2009	$981.4	38.9%	$735.8
06/30/2010	$1,228.9	37.7%	$1,501.0

* Based on expected benefit payments & contributions plus the Retiree Drug Subsidy for the applicable fiscal year end. The Retiree Drug Subsidy is not an offset to the liability, but rather another funding source that is available to the Commonwealth to fund the Annual OPEB Cost (AOC) should the Commonwealth decide to use it.

Accounting Information (continued)

Projected June 30, 2010 Net OPEB Obligation (NOO)

Based on the Annual OPEB Cost developed above, the following is the projected June 30, 2010 Net OPEB Obligation (NOO):

	Total ($ Millions)
July 1, 2008 Net OPEB Obligation (NOO)	$136.5
Plus: FYE 2009 Annual OPEB Cost (AOC)	$981.4
Less: FYE 2009 Contributions *	$382.1
Equals: Actual June 30, 2009 Net OPEB Obligation (NOO)	$735.8
Plus: FYE 2010 Annual OPEB Cost (AOC)	$1,228.9
Less: Schedule of contributions from the employer and other contributing entities *	$463.7
Equals: Expected June 30, 2010 Net OPEB Obligation (NOO)	$1,501.0

* Contributions include estimated Retiree Drug Subsidy payments.

Required Supplementary Information

Below is the projected schedule of funding progress:

Valuation Date	Actuarial Value of Assets at Fiscal Year End ($ millions) (a)	Actuarial Accrued Liability - Projected Unit Credit ($ millions) (b)	Unfunded Actuarial Accrued Liability ($ millions) (b) - (a)	Funded Ratio (a) / (b)	Covered Payroll ($ millions) (c)	Unfunded Actuarial Accrued Liability as a Percentage of Covered Payroll [(b) - (a)] / (c)
01/01/2006	$329.4	$9,812.2	$9,482.8	3%	$3,588.9	264.2%
01/01/2008	TBD	$11,649.1	TBD	TBD	$3,958.0	TBD
01/01/2009	TBD	$15,305.1	TBD	TBD	$3,686.7	TBD

***** *Required disclosure at adoption of standard.*

Accounting Information (continued)

Determination of Actuarial Gain / Loss

The following chart illustrates the development of the Actuarial Liability from 1/1/2008 through 1/1/2009.

		Total ($ Millions)
(1) Liability at 1/1/2008		$11,649.1
(2a) Service Cost	$452.9	
(2b) Interest Cost	$745.5	
(2c) Expected Benefit Payments	-$448.3	
(2d) Total Increase	$750.1	
(3) Expected Liability at 12/31/2008: (1) + (2d)		$12,399.2
(4a) Demographic (Gain) / Loss	-$114.5	
(4b) Per Capita (Gain) / Loss	-$852.8	
(4c) Assumption Change (Discount Rate)	$3,873.2	
(4d) Total (Gain) / Loss	$2,905.9	
(5) Actual Liability at 1/1/2009: (3) + (4d)		**$15,305.1**

10-Year Payout Projection

Annual payments expected based on assumptions and contributions detailed in the Methods and Assumptions Section.

I. Total Benefit Payments

Fiscal Year Ending	Health ($ millions)	Life Insurance ($ millions)	Total ($ millions)
06/30/2010	444.5	7.5	452.0
06/30/2011	495.4	7.6	503.0
06/30/2012	547.8	7.8	555.6
06/30/2013	595.6	7.9	603.5
06/30/2014	648.5	8.1	656.6
06/30/2015	703.9	8.2	712.1
06/30/2016	759.6	8.3	767.9
06/30/2017	815.0	8.4	823.4
06/30/2018	870.4	8.5	878.9
06/30/2019	924.9	8.7	933.6

II. Estimated Retiree Drug Subsidy Payments

Fiscal Year Ending	Medicare Part D Subsidy ($ millions)
06/30/2010	11.7
06/30/2011	13.4
06/30/2012	15.2
06/30/2013	17.5
06/30/2014	20.0
06/30/2015	22.8
06/30/2016	25.8
06/30/2017	29.2
06/30/2018	32.9
06/30/2019	36.7

10-Year Projection of Annual OPEB Cost (AOC)

Projections assume a closed group population (i.e., no new hires). We also assume that assets grow at a 4.50% annual rate of investment return.

Fiscal Year Ending	ARC ($ millions)	Adjustment to ARC* ($ millions)	Total AOC ($ millions)	Expected Contributions** ($ millions)	Net OPEB Obligation at end of FY ($ millions)
06/30/2010	$1,221.5	$7.4	$1,228.9	$463.7	$1,501.0
06/30/2011	$1,306.4	$15.3	$1,321.7	$516.4	$2,306.3
06/30/2012	$1,396.8	$23.4	$1,420.2	$570.8	$3,155.7
06/30/2013	$1,492.9	$32.1	$1,525.0	$621.0	$4,059.6
06/30/2014	$1,595.5	$41.3	$1,636.8	$676.6	$5,019.8
06/30/2015	$1,704.8	$51.0	$1,755.8	$734.9	$6,040.7
06/30/2016	$1,821.3	$61.4	$1,882.7	$793.7	$7,129.7
06/30/2017	$1,945.7	$72.5	$2,018.2	$852.6	$8,295.3
06/30/2018	$2,078.6	$84.3	$2,162.9	$911.8	$9,546.4
06/30/2019	$2,220.6	$97.1	$2,317.7	$970.3	$10,893.8

* Including interest on Net OPEB Obligation.

** Based on expected benefit payments & contributions plus the Retiree Drug Subsidy for the applicable fiscal year end. The Retiree Drug Subsidy is not an offset to the liability, but rather another funding source that is available to the Commonwealth to fund the Annual OPEB Cost (AOC) should the Commonwealth decide to use it.

Sensitivity Analysis

Impact of 1% Change to Health Trend Rates

	4.50% Discount Rate ($ millions)	Impact of 1.0% Health Trend Rate Plus 1.0% ($ millions)	Impact of 1.0% Health Trend Rate Minus 1.0% ($ millions)
Present Value of Projected Benefits	$21,878.5	$26,810.2	$18,132.3
Funded Status:			
Actuarial Accrued Liability	$15,305.1	$18,044.3	$13,138.6
Assets	$273.5	$273.5	$273.5
Unfunded Actuarial Accrued Liability	$15,031.6	$17,770.8	$12,865.1
Annual Required Contribution (ARC):			
Normal Cost	$669.4	$854.7	$531.4
Unfunded Accrued Liability Amortization	$552.1	$647.5	$476.6
Annual Required Contribution (ARC)	$1,221.5	$1,502.2	$1,008.0

Demographic Information

The following table summarizes active, inactive participants and retiree demographic information.

	Participants	Spouses	Total
Actives	74,189	N/A	74,189
Inactive participants[1]	1,891	N/A	1,891
Retirees	39,892	18,956	58,848
Survivors	N/A	7,707	7,707
	115,972	**26,663**	**142,635**

[1]Inactives are certain former employees with a minimum amount of years of creditable service who have left contributions in the state retirement system.

Active: Counts by Job Group					
Sex	**1**	**2**	**3**	**4**	**Total**
Female	33,467	3,697	127	784	38,075
Male	26,104	3,631	1,810	4,569	36,114
Total	**59,571**	**7,328**	**1,937**	**5,353**	**74,189**

Active: Average Age by Job Group					
Sex	**1**	**2**	**3**	**4**	**Total**
Female	47.28	45.66	44.34	38.73	46.94
Male	48.19	45.58	45.39	40.16	46.77
Total	**47.68**	**45.62**	**45.32**	**39.95**	**46.86**

Active: Average Service by Job Group					
Sex	**1**	**2**	**3**	**4**	**Total**
Female	12.84	13.18	18.43	9.03	12.81
Male	13.70	13.40	18.59	11.48	13.63
Total	**13.22**	**13.29**	**18.58**	**11.12**	**13.21**

Demographic Information (continued)

Active: Age-Service Scatter

	Service							
Age	**0: 4**	**5: 9**	**10:14**	**15:19**	**20:24**	**25:29**	**30+**	**Total**
15:19	8	0	0	0	0	0	0	8
20:24	1,383	28	0	0	0	0	0	1,411
25:29	4,590	707	15	0	0	0	0	5,312
30:34	3,548	1,985	622	21	0	0	0	6,176
35:39	2,787	2,002	2,125	638	87	0	0	7,639
40:44	2,385	1,863	2,090	1,646	1,278	120	0	9,382
45:49	2,085	1,769	1,778	1,324	2,491	1,270	121	10,838
50:54	1,778	1,715	1,769	1,214	2,178	2,043	1,261	11,958
55:59	1,278	1,494	1,477	1,030	1,889	1,594	2,439	11,201
60:64	673	974	1,046	740	1,304	923	1,625	7,285
65:69	142	307	379	250	445	287	578	2,388
70+	16	67	93	63	100	57	195	591
Total	**20,673**	**12,911**	**11,394**	**6,926**	**9,772**	**6,294**	**6,219**	**74,189**

Demographic Information (continued)

Inactive and Retiree: Participant Counts			
Sex	**Inactive**	**Retirees**	**Total**
Female	1,127	19,454	20,581
Male	764	20,438	21,202
Total	**1,891**	**39,892**	**41,783**

Inactive and Retiree: Participant Average Age			
Sex	**Inactive**	**Retirees**	**Total**
Female	49.61	72.73	71.47
Male	50.17	70.64	69.90
Total	**49.84**	**71.66**	**70.67**

Spouses: Participant Counts		
Sex	**Spouses of Retirees**	**Survivor**
Female	13,345	6,904
Male	5,611	803
Total	**18,956**	**7,707**

Spouses: Participant Average Age		
Sex	**Spouses of Retirees**	**Survivor**
Female	66.19	78.22
Male	70.29	76.68
Total	**67.40**	**78.06**

Summary of Principal Plan Provisions

PARTICIPATION

Participation in the health and life insurance programs administered by the GIC is voluntary, but requires membership in the State Retirement System. Participation in the State Retirement System is mandatory for all full-time employees. Eligibility with respect to part-time, provisional, temporary, seasonal or intermittent employment is governed by regulations promulgated by the retirement board, and approved by PERAC. Membership is optional for certain elected officials.

Differences in participation between the State Retirement System and the GIC are:

- Certain employees and retirees, who are eligible for GIC benefits, are covered by separate retirement boards and thus do not participate in the State Retirement System.
- Certain authorities, and other entities, participate in the State Retirement System, but are billed in full for their GIC benefits.

There are 4 classes of membership in the State Retirement System:

Group 1:

General employees, including clerical, administrative, technical and all other employees not otherwise classified.

Group 2:

Certain specified hazardous duty positions.

Group 3:

State police officers and inspectors.

Group 4:

Corrections officers, and other specified hazardous positions.

Summary of Principal Plan Provisions (continued)

RETIREMENT AGE CONSTRAINTS

In 2 of the 4 groups (Groups 2 and 4) there is a small subset of positions that have a mandatory retirement age of age 65. There is no subset with mandatory retirement age for employees in Groups 1 and 3. The actuarial assumptions used for this valuation were developed taking into account the small portion of the population subject to mandatory retirement provisions.

SUPERANNUATION RETIREMENT

Eligibility

A member is eligible for superannuation retirement (service retirement) upon meeting the following conditions:

- Completion of 20 years of service, or
- Attainment of age 55 if hired prior to 1978, or if classified in Group 3 or Group 4, or
- Attainment of age 55 with 10 years of service, if hired after 1978, and if classified in Group 1 or 2

Health and Basic Life Insurance Benefits

Retirees can achieve Medicare status by virtue of achieving age 65 with 40 quarters of Social Security service, by being approved for a disability, or being in a disease state that qualifies one for Medicare. The GIC provides health coverage to a small subset of retired employees who are age 65 or older who are not Medicare eligible because the Commonwealth's retirement pension system does not participate with the Social Security Administration's pension system. The retired employees are enrolled in the same health plans available to active employees under age 65. However, these employees may be covered by Medicare through a spouse's eligibility.

Both Medicare and Non-Medicare retirees, who retired on or before July 1, 1994, contribute 10% of the cost of the plan, as determined by the GIC. Those who retired after July 1, 1994 contribute 15% of the cost of the plan as determined by the GIC. Certain supplemental benefits are fully paid for by the participant.

Upon the retirees' death, all survivors, regardless of their deceased spouse's retirement date, contribute 10% of the cost of their health coverage. Survivor health

Summary of Principal Plan Provisions (continued)

coverage continues until the survivor remarries or dies. Survivors are not eligible for life insurance benefits.

For Non-Medicare retirees, the total cost of the plan, for each option, is a blend of active and retiree claims and non-claims costs. Retiree contributions to these plans, at 10% or 15% of plan cost, depending on the date of retirement, are favorably influenced by this blending. The blending of active and retired experience results in an implicit rate subsidy, and results in these retirees paying less than 10% or 15% of their cohort's expected cost. As shown below, Aon has valued the age appropriate claims costs, and the dollar amount of retiree contributions, to effectively capture the resulting costs and liabilities to the Commonwealth.

TERMINATION WITH 10 OR MORE YEARS OF SERVICE (CONTINGENT STATUS)

Eligibility

A participant who has completed 10 or more years of creditable service may be eligible for benefits on a contingent basis. Elected officials and others who were hired prior to 1978 may be eligible after 6 years in accordance with G.L. c. 32, s. 10.

If a participant does not withdraw their member pension contributions for retirement benefits upon termination of employment, the participant continues with their ability to receive retirement coverage through the GIC. If the participant withdraws their retirement contributions, their subsidized benefit eligibility ends.

Health and Basic Life Insurance Benefits

During the time period between termination of employment and retirement, the participant may continue coverage by paying 100% of the cost of coverage. Upon retirement, the participant may elect coverage. The participant contributes 10% or 15% of the cost of coverage, depending on whether retirement was before or after July 1, 1994.

If the participant has not yet retired, and dies, the survivor may apply for health coverage (if the participant had health and life coverage or life only coverage through the GIC, i.e. was paying 100% of the cost). The survivor would contribute at the 10% rate. If the participant has retired, and then dies, the survivor may elect to continue health coverage, and contribute at the 10% rate. Survivor health coverage continues until the survivor remarries or dies.

Summary of Principal Plan Provisions (continued)

TERMINATION OF EMPLOYMENT WITH LESS THAN TEN YEARS OF SERVICE

No subsidized GIC health or life benefits available. Therefore, no liability will be valued upon this event.

DISABILITY RETIREMENT

Eligibility

- Ordinary Disability: Non–veterans who become totally and permanently disabled by reason of a non-job related condition with at least 10 years of creditable service (or 15 years creditable service in systems in which the local option contained in G.L. c. 32, s.6(l) has not been adopted).

  Veterans with ten years of creditable service who become totally and permanently disabled by reason of a non-job related condition prior to reaching “maximum age”.

- Accidental Disability: Applies to members who become permanently and totally unable to perform the essential duties of the position as a result of a personal injury sustained or hazard undergone while in the performance of duties. There are no minimum age or service requirements.

Health and Basic Life Insurance Benefits

If the retiree receives an ordinary or accidental disability pension, health and basic life insurance coverage will continue, and participants will contribute either 10% or 15% of the cost of coverage (subject to the statement below regarding life insurance coverage), depending on whether the disability occurred before or after July 1, 1994.

If under age 60 at disability, basic life insurance coverage will continue, and the participant can apply for a waiver of premium within 24 months of the disability.

Summary of Principal Plan Provisions (continued)

DEATH IN ACTIVE SERVICE

Eligibility

Survivors of active employees who had GIC health coverage are eligible to continue health coverage.

Health and Basic Life Insurance Benefits

Health coverage is provided, and survivors contribute at the 10% rate. Survivor health coverage continues until the survivor remarries or dies. Survivors are not eligible for Basic Life Insurance.

Summary of Principal Plan Provisions (continued)

Summary of Plan Designs
Medical (Medicare)

	UniCare State Indemnity Plan Medicare Extension	Fallon Senior Plan	Harvard Pilgrim Medicare Enhance	Health New England MedPlus	Tufts Health Plan Medicare Complement	Tufts Health Plan Medicare Preferred
Deductible	none	none	none	none	none	none
Out-Of-Pocket Max	none	none	none	none	none	none
Physicians						
Office Visit	$35 ded/yr	$10 copay	$10 copay	$10 copay	$10 copay	$10 copay
Preventive Care	$5 copay	$10 copay	$10 copay	$10 copay	$10 copay	$10 copay
Hospitalization	$50 ded/qtr	100%	100%	100%	100%	100%
Surgery	100%	100%	100%	100%	100%	100%
Diagnostic / X-Ray	100%	100%	100%	100%	100%	100%
ER	$25 copay	$50 copay	$50 copay	$50 copay	$50 copay	$50 copay
Outpatient Mental Health	Visit 1-4:$0; Visit 5+:$10	$10 copay	$10 copay	$10 copay	$10 copay	$10 copay
Outpatient Substance Abuse	Visit 1-4 $0; Visit 5+ $10	$10 copay	$10 copay	$10 copay	$10 copay	$10 copay

Summary of Principal Plan Provisions (continued)

Summary of Plan Designs
Medical (Non-Medicare)

	UniCare State Indemnity Plan / Basic with CIC	UniCare State Indemnity Plan / Community Choice	UniCare State Indemnity Plan / Plus	Harvard Pilgrim Independence Plan	Navigator by Tufts Health Plan	Fallon Community Health Plan Direct Care	Fallon Community Health Plan Select Care	Health New England	NHP Care (Neighborhood Health Plan)
		In-Network Benefits Shown	In-Network Benefits Shown	In-Network Benefits Shown	In-Network Benefits Shown				
Deductible	none	none	none	none	none	none	none	none	none
Out-Of-Pocket Max	none	none	none	none	none	none	none	none	none
Physicians									
Primary Care Office Visit (Tier 1/2/3)	$10/$25/$30 copay	$10/$25/$30 copay	$10/$25/$30 copay	$15 copay	$15 copay	$10 copay	$10/$15/$25 copay	$15 copay	$10/$20/$25 copay
Specialist Office Visit (Tier 1/2/3)	$15/$25/$35 copay	$20/$25/$40 copay	$20/$25/$40 copay	$15/$30/$40 copay	$20/$30/$40 copay	$20 copay	$20/$30/$40 copay	$20/$30/$40 copay	$20/$30/$40 copay
Inpatient Care (Tier 1/2)*	$200	$250	$250/$500/$750	$300	$300/$700	$200	$250	$250	$250
Outpatient Surgery	$100 copay	$100 copay	$100/$100/$250 copay	$150 copay	$150 copay	$100 copay	$125 copay	$100 copay	$100 copay
ER	$75 copay	$75 copay	$75 copay	$75 copay	$75 copay	$75 copay	$75 copay	$75 copay	$75 copay
Outpatient Mental Health	$15 copay	$15 copay	$15 copay	$15 copay	$15 copay	$10 copay	$15 copay	$15 copay	$20 copay

**Copay per admission; max one copay / quarter or four copays per year, depending on plan*

Summary of Principal Plan Provisions (continued)

Summary of Plan Designs
Prescription Drugs (Medicare and Non-Medicare)

	Medicare					
	UniCare State Indemnity Plan Medicare Extension	Fallon Senior Plan	Harvard Pilgrim Medicare Enhance	Health New England MedPlus	Tufts Health Plan Medicare Complement	Tufts Health Plan Medicare Preferred
Generic						
Retail	$ 10	$ 10	$ 10	$ 10	$ 10	$ 10
Mail	$ 20	$ 20	$ 20	$ 20	$ 20	$ 20
Formulary						
Retail	$ 25	$ 20	$ 25	$ 25	$ 25	$ 20
Mail	$ 50	$ 40	$ 50	$ 50	$ 50	$ 40
Non-Forumulary						
Retail	$ 50	$ 40	$ 50	$ 50	$ 50	$ 40
Mail	$110	$ 80	$110	$110	$110	$ 80

	Non-Medicare								
	UniCare State Indemnity Plan / Basic with CIC	UniCare State Indemnity Plan / Community Choice	UniCare State Indemnity Plan / Plus	Harvard Pilgrim Independence Plan	Navigator by Tufts Health Plan	Fallon Community Health Plan Direct Care	Fallon Community Health Plan Select Care	Health New England	NHP Care (Neighborhood Health Plan)
Generic									
Retail	$ 10	$ 10	$ 10	$ 10	$ 10	$ 10	$ 10	$ 10	$ 10
Mail	$ 20	$ 20	$ 20	$ 20	$ 20	$ 20	$ 20	$ 20	$ 20
Formulary									
Retail	$ 25	$ 25	$ 25	$ 25	$ 25	$ 25	$ 25	$ 25	$ 25
Mail	$ 50	$ 50	$ 50	$ 50	$ 50	$ 50	$ 50	$ 50	$ 50
Non-Forumulary									
Retail	$ 50	$ 50	$ 50	$ 50	$ 50	$ 50	$ 50	$ 50	$ 50
Mail	$110	$110	$110	$110	$110	$110	$110	$110	$110

Summary of Principal Plan Provisions (continued)

Summary of Plan Designs

Dental/Vision Care

Upon retirement these benefits are available to participants, but the cost of these benefits are paid in full by the participants. These benefits are not included in the valuation results presented herein.

Basic Life Insurance

Retirees are eligible for $5,000 Basic Life Insurance. The plan provides for a $5,000 payment upon the death of the participant. Surviving spouses are not eligible for Basic Life Insurance.

Methods and Assumptions

Actuarial Method

Projected Unit Credit Cost Method

Normal Cost

Determined for each active employee as the Actuarial Present Value of benefits allocated to the valuation year. The benefit attributed to the valuation year is that incremental portion of the total projected benefit earned during the year in accordance with the plan provisions. This allocation is based on each individual's service between date of hire and date the individual becomes fully eligible for benefits.

Accumulated Post-Retirement Benefit Obligation

The Actuarial Present Value of Benefits allocated to all periods prior to the valuation year.

Discount Rate

As of January 1, 2009 4.50% (assuming no prefunding)
As of January 1, 2008 6.40% (assuming partial funding)

Medical Trend

Medicare Medical assumed to increase with Medical Trend

Annual Rate of Increase			
Calendar Year	Indemnity %	PPO & POS %	HMO %
2009	9.0%	9.0%	9.0%
2010	8.5%	8.5%	8.5%
2011	8.0%	8.0%	8.0%
2012	7.5%	7.5%	7.5%
2013	7.0%	7.0%	7.0%
2014	6.5%	6.5%	6.5%
2015	6.0%	6.0%	6.0%
2016	5.5%	5.5%	5.5%
2017 & Later	5.0%	5.0%	5.0%

Methods and Assumptions (continued)

Prescription Drug Trend

Medicare Prescription Drug Subsidy assumed to increase with Prescription Drug Trend

Annual Rate of Increase	
Calendar Year	**%**
2009	9.0%
2010	8.5%
2011	8.0%
2012	7.5%
2013	7.0%
2014	6.5%
2015	6.0%
2016	5.5%
2017 & Later	5.0%

Methods and Assumptions (continued)

Administrative Expenses Assumed to increase at 5.0% per year

Morbidity/Aging *Medical and Prescription Drug*

The following assumptions are assumed to follow the annual increase due to aging:

- Medical and prescription drug claims costs
- Medical and prescription drug Medicare offsets
- Retiree contributions

Age	Annual Increase %
18 - 49	3.3%
50 - 54	3.3%
55 - 59	3.6%
60 - 64	4.2%
65 - 69	3.0%
70 - 74	2.5%
75 - 79	2.0%
80 - 84	1.0%
85 - 89	0.5%
90 or Older	0.0%

GASB requires that the costs for retiree benefits be separately identified. Currently, the Commonwealth provides benefits for actives and retirees not eligible for Medicare under one rating structure. As we see in the morbidity table above, retirees utilize benefits at a greater rate than the active population, due to their age. The active employees are "implicitly" subsidizing the retiree cost of the plan of benefits in the GIC rate basis. GASB requires that the Commonwealth utilize actual experience or actuarial adjustments in order to calculate the true cost of retiree benefits in order to calculate the present value of the retiree benefits. The actuarial assessment of the best estimate of retiree cost of benefits is premised on utilizing the morbidity/aging table above and the claims costs by age shown in the tables below.

Methods and Assumptions (continued)

Cost assumptions were developed from actual GIC data for retirees. Data for the entirety of the GIC retired population was utilized, analyzed, and projected forward to Fiscal Year 2009-10. As detailed in Appendix B, the data was aggregated into three categories of like plans (called blends): The Indemnity Plans (including the CIC rider), POS and PPO plans (for non-Medicare retirees), and HMOs.

Per Member Claim Costs for Fiscal Year 2009-10

	Indemnity / Blend 1						
Age	Total Cost of Healthcare Before Subsidies and Retiree Cost Sharing	Medicare Adjustment	Total Cost of Healthcare Before Retiree Cost Sharing	Contributions for Retirees who Retired Prior to 7/1/94	Contributions for Spouses of Retirees who Retired Prior to 7/1/94	Contributions for Retirees who Retired After to 7/1/94	Contributions for Spouses of Retirees who Retired After to 7/1/94
25	$4,354	$0	$4,354	($413)	($550)	($553)	($736)
30	$5,028	$0	$5,028	($486)	($647)	($650)	($866)
35	$5,820	$0	$5,820	($572)	($761)	($765)	($1,019)
40	$6,753	$0	$6,753	($673)	($895)	($900)	($1,198)
45	$7,849	$0	$7,849	($791)	($1,053)	($1,058)	($1,409)
50	$9,139	$0	$9,139	($931)	($1,238)	($1,245)	($1,658)
55	$10,656	$0	$10,656	($1,095)	($1,456)	($1,464)	($1,950)
60	$12,614	$0	$12,614	($1,306)	($1,738)	($1,748)	($2,327)
65	$15,374	($11,852)	$3,522	($388)	($388)	($536)	($536)
70	$17,655	($13,673)	$3,982	($447)	($447)	($619)	($619)
75	$19,811	($15,395)	$4,416	($504)	($504)	($696)	($696)
80	$21,609	($16,830)	$4,779	($551)	($551)	($761)	($761)
85	$22,574	($17,601)	$4,973	($576)	($576)	($796)	($796)
90	$23,018	($17,956)	$5,062	($588)	($588)	($812)	($812)

Methods and Assumptions (continued)

Per Member Claim Costs for Fiscal Year 2009-10

	POS / PPO / Blend 2						
Age	Total Cost of Healthcare Before Subsidies and Retiree Cost Sharing	Medicare Adjustment	Total Cost of Healthcare Before Retiree Cost Sharing	Contributions for Retirees who Retired Prior to 7/1/94	Contributions for Spouses of Retirees who Retired Prior to 7/1/94	Contributions for Retirees who Retired After to 7/1/94	Contributions for Spouses of Retirees who Retired After to 7/1/94
25	$2,854	$0	$2,854	($197)	($277)	($295)	($415)
30	$3,288	$0	$3,288	($231)	($326)	($347)	($489)
35	$3,798	$0	$3,798	($272)	($383)	($408)	($575)
40	$4,398	$0	$4,398	($320)	($451)	($480)	($676)
45	$5,103	$0	$5,103	($377)	($530)	($565)	($795)
50	$5,933	$0	$5,933	($443)	($624)	($664)	($936)
55	$6,910	$0	$6,910	($521)	($734)	($781)	($1,100)
60	$8,170	$0	$8,170	($622)	($875)	($933)	($1,313)
65	$0	$0	$0	$0	$0	$0	$0
70	$0	$0	$0	$0	$0	$0	$0
75	$0	$0	$0	$0	$0	$0	$0
80	$0	$0	$0	$0	$0	$0	$0
85	$0	$0	$0	$0	$0	$0	$0
90	$0	$0	$0	$0	$0	$0	$0

Methods and Assumptions (continued)

Per Member Claim Costs for Fiscal Year 2009-10

	HMO / Blend 3						
Age	Total Cost of Healthcare Before Subsidies and Retiree Cost Sharing	Medicare Adjustment	Total Cost of Healthcare Before Retiree Cost Sharing	Contributions for Retirees who Retired Prior to 7/1/94	Contributions for Spouses of Retirees who Retired Prior to 7/1/94	Contributions for Retirees who Retired After to 7/1/94	Contributions for Spouses of Retirees who Retired After to 7/1/94
25	$2,644	$0	$2,644	($166)	($246)	($250)	($369)
30	$3,054	$0	$3,054	($196)	($290)	($294)	($434)
35	$3,536	$0	$3,536	($230)	($341)	($345)	($511)
40	$4,103	$0	$4,103	($271)	($401)	($406)	($601)
45	$4,770	$0	$4,770	($319)	($471)	($478)	($707)
50	$5,555	$0	$5,555	($375)	($554)	($562)	($832)
55	$6,478	$0	$6,478	($441)	($652)	($661)	($978)
60	$7,669	$0	$7,669	($526)	($778)	($789)	($1,167)
65	$9,349	($6,747)	$2,602	($245)	($245)	($368)	($368)
70	$10,736	($7,783)	$2,953	($283)	($283)	($424)	($424)
75	$12,046	($8,763)	$3,283	($318)	($318)	($477)	($477)
80	$13,140	($9,581)	$3,559	($348)	($348)	($522)	($522)
85	$13,728	($10,019)	$3,709	($364)	($364)	($546)	($546)
90	$13,998	($10,221)	$3,777	($371)	($371)	($557)	($557)

Methods and Assumptions (continued)

Data Assumptions

Age Difference/ % Married

Males are assumed to be 3 years older than females. 80% married. Married actives are assumed to choose family coverage at retirement.

Coverage

We have assumed that:

- 100% of all retirees who currently have healthcare coverage will continue with the same coverage, except that retirees under age 65 with POS/PPO coverage switch to indemnity at age 65.
- All current retirees, other than those indicated on the census data as not being eligible by Medicare, have Medicare coverage upon attainment of age 65, as do their spouses. All future retirees are assumed to have Medicare coverage upon attainment of age 65.
- 80% of current and future contingent eligible participants will elect healthcare benefits at age 55, or current age if later.
- Actives, upon retirement, take coverage, and will be assumed to have the following coverage:

Retirement Age:	Under 65	Age 65 +
Indemnity	50%	95%
POS/PPO	45%	0%
HMO	5%	5%

Methods and Assumptions (continued)

Mortality	Annual rates of mortality are shown on the following pages.
Retirement Age	Retirement rates are shown on the following pages.
Turnover	Turnover rates are shown on the following pages.
Disability	Disability rates are shown on the following pages.
Valuation Methodology and Terminology	We have used GASB accounting methodology to determine the postretirement medical benefit obligations. Actuarial Liabilities are shown without a reduction in liability for the Retiree Drug Subsidy, and with the Commonwealth liability reduced by Retiree Drug Subsidy anticipated payments. As of June 2006, the GASB has adopted the proposed Technical Memorandum on accounting for the Retiree Drug Subsidy. The Technical Memorandum requires that plan sponsors do not reduce their liability to reflect the Retiree Drug Subsidy, but rather that the RDS payment be treated as a third party payment with treatment determined by GASB 33. The effect of this accounting treatment is to have two sources of funding of the expense (Annual Required Contribution), one being the federal government.
Amortization Period	The amortization cost for the initial Unfunded Actuarial Accrued Liability is a level percentage of payroll for a period of 30 years. This has been calculated assuming the amortization payment increases at a rate of 4.5% per year.
Salary Scale	Assumed at a rate of 4.5% per year.

Methods and Assumptions (continued)

Pre-Retirement Mortality: RP-2000 Employees table projected forward 10 years with Scale AA (gender distinct).

Post-Retirement Mortality: RP-2000 Healthy Annuitant table projected forward 10 years with Scale AA (gender distinct).

Disabled Mortality: RP-2000 (gender distinct) set forward 3 years for males.

The following tables show sample annual rates of mortality at selected ages:

RATES OF MORTALITY – Active Members (Number of Deaths per 10,000 Members)										
	AGE									
	25	30	35	40	45	50	55	60	65	69
Active Members										
Male	3	4	7	10	13	18	25	42	66	83
Female	2	2	4	6	10	14	23	37	55	69

RATES OF MORTALITY – Retired Members (Number of Deaths per 10,000 Members)								
	AGE							
	50	55	60	65	70	75	80	85
Healthy Retirees								
Male	45	49	70	117	191	329	582	1,032
Female	20	33	59	99	159	259	428	729
Disabled Retirees								
Male	57	69	110	182	304	521	897	1,506
Female	23	35	62	104	167	281	459	774

Methods and Assumptions (continued)

The following table shows annual rates of retirement at selected ages:

RATES OF RETIREMENT (Number Retiring per 1,000 Members)	AGE				
	50	55	60	65	70
Job Group 1					
Male	15	40	80	250	1,000
Female	30	50	80	250	1,000
Job Group 2					
Male	20	100	150	200	1,000
Female	20	100	150	200	1,000
Job Group 3					
Male	50	80	110	250	1,000
Female	50	80	110	250	1,000
Job Group 4					
Male	50	250	200	650	1,000
Female	50	250	200	650	1,000

Methods and Assumptions (continued)

The following table shows sample annual rates of withdrawal for Job Groups 1 and 2:

RATES OF WITHDRAWAL (Number of Withdrawals Per 1,000 Members)											
	YEARS OF SERVICE										
Age	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10+**
20	270	250	220	150	150	120	100	95	85	80	60
25	250	220	190	140	130	110	100	95	85	80	60
30	230	180	150	130	120	100	95	95	90	80	55
35	180	140	130	120	110	90	85	80	75	65	50
40	160	120	110	95	90	80	65	70	65	50	40
45	150	100	85	80	70	70	55	55	50	40	30
50	140	90	80	70	65	60	45	50	40	40	30
55	100	100	80	60	60	50	45	35	35	35	0
60	100	100	80	75	75	50	50	45	45	45	0
65+	100	100	80	75	75	75	75	70	70	70	0

Methods and Assumptions (continued)

The following table shows sample annual rates of withdrawal for Job Groups 3 and 4:

RATES OF WITHDRAWAL (Number of Withdrawals per 1,000 Members)					
	YEARS OF SERVICE				
All Ages	1	5	10	15	20+
Job Group 3					
Unisex	8	8	6	6	6
Job Group 4					
Unisex	70	45	30	25	40

Methods and Assumptions (continued)

The following table shows sample annual rates of disability at selected ages:

RATES OF DISABILITY (Number becoming disabled per 10,000 Members)	AGE						
	25	30	35	40	45	50	55
Job Group 1							
Unisex	1	1	5	8	10	14	17
Job Group 2							
Unisex	7	8	12	17	24	43	55
Job Group 3							
Unisex	11	16	30	80	90	140	190
Job Group 4							
Unisex	20	40	70	70	100	100	90

Glossary

Actuarial accrued liability

That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of pension plan benefits and expenses which is not provided for by future Normal Costs.

Actuarial assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; changes in compensation and Government provided pension benefits; rates of investment earnings and asset appreciation or depreciation; procedures used to determine the Actuarial Value of Assets; and other relevant items.

Actuarial cost method

A procedure for determining the Actuarial Present Value of pension plan benefits and expenses and for developing an actuarially equivalent allocation of such value to time periods, usually in the form of a Normal Cost and an Actuarial Accrued Liability.

Actuarial experience gain or loss

A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two Actuarial Valuation dates, as determined in accordance with a particular Actuarial Cost Method.

Actuarial present value of total projected benefits

Total projected benefits include all benefits estimated to be payable to plan members (retirees and beneficiaries, terminated employees entitled to benefits but not yet receiving them, and current active members) as a result of their service through the valuation date and their expected future service. The actuarial present value of total projected benefits as of the valuation date is the present value of the cost to finance benefits payable in the future, discounted to reflect the expected effects of the time value (present value) of money and the probabilities of payment. Expressed another way, it is the amount that would have to be invested on the valuation date so that the amount invested plus investment earnings will provide sufficient assets to pay total projected benefits when due.

Actuarial valuation

The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a pension plan.

Actuarial valuation date

The date as of which an actuarial valuation is performed.

Actuarial value of assets

The value of cash, investments and other property belonging to a pension plan, as used by the actuary for the purpose of an Actuarial Valuation.

Amortization (of unfunded actuarial accrued liability)

The portion of the pension plan contribution which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability or the Unfunded Frozen Actuarial Accrued Liability.

Annual OPEB cost

An accrual-basis measure of the periodic cost of an employer's participation in a defined benefit OPEB plan.

Annual required contributions of the employer (ARC)

The employer's periodic required contributions to a defined benefit OPEB plan.

Covered Group

Plan members included in an actuarial valuation.

Defined benefit OPEB plan

An OPEB plan having terms that specify the benefits to be provided at or after separation from employment. The benefits may be specified in dollars (for example, a flat dollar payment or an amount based on one or more factors such as age, years of service, and compensation), or as a type or level of coverage (for example, prescription drugs or a percentage of healthcare insurance premiums).

Employer's contributions

Contributions made in relation to the annual required contributions of the employer (ARC). An employer has made a contribution in relation to the ARC if the employer has (a) made payments of benefits directly to or on behalf of a retiree or beneficiary, (b) made premium payments to an insurer, or (c) irrevocably transferred assets to a trust, or equivalent arrangement, in which plan assets are dedicated to providing benefits to retirees and their beneficiaries in accordance with the terms of the plan and are legally protected from creditors of the employer(s) of plan administrator. Employer's contributions generally *do not equate* to benefits paid.

Funded ratio

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Funding excess

The excess of the actuarial value of assets over the actuarial accrued liability.

Funding policy

The program for the amounts and timing of contributions to be made by plan members, employer(s), and other contributing entities (for example, state government contributions to a local government plan) to provide the benefits specified by an OPEB plan.

Healthcare cost trend rate

The rate of change in per capita health claims costs over time as a result of factors such as medical inflation, utilization of healthcare services, plan design, and technological developments.

Implicit Rate Subsidy

The differential between utilizing a blend of active and non-Medicare retiree experience for cost of benefits, and utilizing solely the expected retiree experience. Blending a lower cost active cohort with retirees' results in an implicit rate subsidy for the retirees of the entire group.

Inactives

Certain former employees with a minimum amount of years of creditable service who have left contributions in the state retirement system.

Investment return assumption (discount rate)

The rate used to adjust a series of future payments to reflect the time value of money.

Level percentage of projected payroll amortization method

Amortization payments are calculated so that they are a constant percentage of the projected payroll of active plan members over a given number of years. The dollar amount of the payments generally will increase over time as payroll increases due to inflation; in dollars adjusted for inflation, the payments can be expected to remain level.

Market-related value of plan assets

A term used with reference to the actuarial value of assets. A market related value may be fair value, market value (or estimated market value), or a calculated value that recognizes changes in fair or market value over a period of, for example, three to five years.

Net OPEB obligation

The cumulative difference since the effective date of this Statement between annual OPEB cost and the employer's contributions to the plan, including the OPEB liability (asset) at transition, if any, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to OPEB-related debt.

Normal cost

That portion of the Actuarial Present Value of pension plan benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method. In GASB 45, the term refers to employer normal cost.

OPEB assets

The amount recognized by an employer for contributions to an OPEB plan greater than OPEB expense.

OPEB expenditures

The amount recognized by an employer in each accounting period for contributions to an OPEB plan on the modified accrual basis of accounting.

OPEB expense

The amount recognized by an employer in each accounting period for contributions to an OPEB plan on the accrual basis of accounting.

OPEB liabilities

The amount recognized by an employer for contributions to an OPEB plan less than OPEB expense/expenditures.

Other postemployment benefits

Postemployment benefits other than pension benefits. Other postemployment benefits (OPEB) include postemployment healthcare benefits, regardless of the type of plan that provides them, and all postemployment benefits provided separately from a pension plan, excluding benefits defined as termination offers and benefits.

Pay-as-you-go

A method of financing a pension plan under which the contributions to the plan are generally made at about the same time and in about the same amount as benefit payments and expenses becoming due.

Plan assets

Resources, usually in the form of stocks, bonds, and other classes of investments, that have been segregated and restricted in a trust, or equivalent arrangement, in which (a) employer contributions to the plan are irrevocable, (b) assets are dedicated to providing benefits to retirees and their beneficiaries, (c) assets are legally protected from creditors of the employers or plan administrator, for the payment of benefits in accordance with the terms of the plan.

Plan members

The individuals covered by the terms of an OPEB plan. The plan membership generally includes employees in active service, terminated employees who have accumulated benefits but are not yet receiving them, and retired employees and beneficiaries currently receiving benefits.

Postemployment

The period between termination of employment and retirement as well as the period after retirement.

Postemployment healthcare benefits

Medical, dental, vision, and other health-related benefits provided to terminated or retired employees and their dependents and beneficiaries.

Postretirement benefit increase

An increase in the benefits of retirees or beneficiaries granted to compensate for the effects of inflation (cost-of-living adjustment) or for other reasons. Ad hoc increases may be granted periodically by a decision of the board of trustees, legislature, or other authoritative body; both the decision to grant an increase and the amount of the increase are discretionary. Automatic increases are periodic increases specified in the terms of the plan; they are nondiscretionary except to the extent that the plan terms can be changed.

Projected unit credit actuarial cost method

A method under which the benefits (projected or unprojected) of each individual included in an Actuarial Valuation are allocated by a consistent formula to valuation years. The Actuarial Present Value of benefits allocated to a valuation year is called the Normal Cost. The Actuarial Present Value of benefits allocated to all periods prior to a valuation year is called the Actuarial Accrued Liability.

Under this method, the Actuarial Gains (losses), as they occur, generally reduce (increase) the Unfunded Actuarial Accrued Liability.

Under this method, benefits are projected to all future points in time under the terms of the Plan and actuarial assumptions (for example, health trends). Retirees are considered to be fully attributed in their benefits. For actives, attribution is to expected retirement age; thus, benefits at each future point in time are allocated to past service based on a prorate of service-to-date over projected service.

Required supplementary information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Single-employer plan

A plan that covers the current and former employees, including beneficiaries, of only one employer.

Sponsor

The entity that established the plan. The sponsor generally is the employer or one of the employers that participate in the plan to provide benefits for their employees. Sometimes, however, the sponsor establishes the plan for the employees of other entities but does not include its own employees and, therefore, is not a participating employer of that plan. An example is a state government that establishes a plan for the employees of local governments within the state, but the employees of the state government are covered by a different plan.

Substantive plan

The terms of an OPEB plan as understood by the employer(s) and plan members.

Transition year

The fiscal year in which this Statement is first implemented.

Unfunded actuarial accrued liability (unfunded actuarial liability)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets.

Appendix A

Commonwealth of Massachusetts
Health Plan Providers

The following chart summarizes the various health plan providers (by type, i.e., Indemnity, POS/PPO, and HMO) utilized by the participants included in this valuation.

Indemnity (Blend 1)
Commonwealth Indemnity Plan

POS/PPO (Blend 2)
Commonwealth Indemnity Plan PLUS
Commonwealth Indemnity Plan Community CHOICE
Commonwealth PPO – Tufts Health Plan Navigator
Harvard Pilgrim POS

HMO (Blend 3)
Fallon Senior Plan (MA: Medicare Advantage)
Harvard Pilgrim Health Care First Seniority (MA)
Tufts Medicare Preferred (MA)
Health New England MedRate (RDS: Drug Subsidy)
Tufts Health Plan Medicare Complement (RDS)
Fallon Community Health Plan Direct Care (<65)
Fallon Community Health Plan Select Care (<65)
Health New England (<65)
Neighborhood Health Plan (<65)

Appendix B

Detailed Breakdown of Per Member Claim Costs for Fiscal Year 2009-10

	Indemnity / Blend 1								
Age	(1) Medical Cost	(2) Medicare Adjustment	(3) Prescription Cost	(4) Administrative Cost	(5) = (1) + (2) + (3) + (4) Total Cost of Healthcare Before Retiree Cost Sharing	Contributions for Retirees who Retired Prior to 7/1/94	Contributions for Spouses of Retirees who Retired Prior to 7/1/94	Contributions for Retirees who Retired After to 7/1/94	Contributions for Spouses of Retirees who Retired After to 7/1/94
25	$3,204	$0	$619	$531	$4,354	($413)	($550)	($553)	($736)
30	$3,769	$0	$728	$531	$5,028	($486)	($647)	($650)	($866)
35	$4,433	$0	$856	$531	$5,820	($572)	($761)	($765)	($1,019)
40	$5,215	$0	$1,007	$531	$6,753	($673)	($895)	($900)	($1,198)
45	$6,134	$0	$1,184	$531	$7,849	($791)	($1,053)	($1,058)	($1,409)
50	$7,215	$0	$1,393	$531	$9,139	($931)	($1,238)	($1,245)	($1,658)
55	$8,487	$0	$1,638	$531	$10,656	($1,095)	($1,456)	($1,464)	($1,950)
60	$10,128	$0	$1,955	$531	$12,614	($1,306)	($1,738)	($1,748)	($2,327)
65	$12,441	($11,852)	$2,402	$531	$3,522	($388)	($388)	($536)	($536)
70	$14,353	($13,673)	$2,771	$531	$3,982	($447)	($447)	($619)	($619)
75	$16,160	($15,395)	$3,120	$531	$4,416	($504)	($504)	($696)	($696)
80	$17,667	($16,830)	$3,411	$531	$4,779	($551)	($551)	($761)	($761)
85	$18,476	($17,601)	$3,567	$531	$4,973	($576)	($576)	($796)	($796)
90	$18,848	($17,956)	$3,639	$531	$5,062	($588)	($588)	($812)	($812)

Appendix B

Detailed Breakdown of Per Member Claim Costs for Fiscal Year 2009-10

	POS / PPO / Blend 2								
Age	(1) Medical Cost	(2) Medicare Adjustment	(3) Prescription Cost	(4) Administrative Cost	(5) = (1) + (2) + (3) + (4) Total Cost of Healthcare Before Retiree Cost Sharing	Contributions for Retirees who Retired Prior to 7/1/94	Contributions for Spouses of Retirees who Retired Prior to 7/1/94	Contributions for Retirees who Retired After to 7/1/94	Contributions for Spouses of Retirees who Retired After to 7/1/94
25	$1,952	$0	$507	$395	$2,854	($197)	($277)	($295)	($415)
30	$2,296	$0	$597	$395	$3,288	($231)	($326)	($347)	($489)
35	$2,701	$0	$702	$395	$3,798	($272)	($383)	($408)	($575)
40	$3,177	$0	$826	$395	$4,398	($320)	($451)	($480)	($676)
45	$3,737	$0	$971	$395	$5,103	($377)	($530)	($565)	($795)
50	$4,396	$0	$1,142	$395	$5,933	($443)	($624)	($664)	($936)
55	$5,171	$0	$1,344	$395	$6,910	($521)	($734)	($781)	($1,100)
60	$6,171	$0	$1,604	$395	$8,170	($622)	($875)	($933)	($1,313)
65	$0	$0	$0	$0	$0	$0	$0	$0	$0
70	$0	$0	$0	$0	$0	$0	$0	$0	$0
75	$0	$0	$0	$0	$0	$0	$0	$0	$0
80	$0	$0	$0	$0	$0	$0	$0	$0	$0
85	$0	$0	$0	$0	$0	$0	$0	$0	$0
90	$0	$0	$0	$0	$0	$0	$0	$0	$0

Appendix B

Detailed Breakdown of Per Member Claim Costs for Fiscal Year 2009-10

	HMO / Blend 3								
Age	(1) Medical Cost	(2) Medicare Adjustment	(3) Prescription Cost	(4) Administrative Cost	(5) = (1) + (2) + (3) + (4) Total Cost of Healthcare Before Retiree Cost Sharing	Contributions for Retirees who Retired Prior to 7/1/94	Contributions for Spouses of Retirees who Retired Prior to 7/1/94	Contributions for Retirees who Retired After to 7/1/94	Contributions for Spouses of Retirees who Retired After to 7/1/94
25	$1,879	$0	$446	$319	$2,644	($166)	($246)	($250)	($369)
30	$2,210	$0	$525	$319	$3,054	($196)	($290)	($294)	($434)
35	$2,600	$0	$617	$319	$3,536	($230)	($341)	($345)	($511)
40	$3,058	$0	$726	$319	$4,103	($271)	($401)	($406)	($601)
45	$3,597	$0	$854	$319	$4,770	($319)	($471)	($478)	($707)
50	$4,231	$0	$1,005	$319	$5,555	($375)	($554)	($562)	($832)
55	$4,977	$0	$1,182	$319	$6,478	($441)	($652)	($661)	($978)
60	$5,940	$0	$1,410	$319	$7,669	($526)	($778)	($789)	($1,167)
65	$7,297	($6,747)	$1,733	$319	$2,602	($245)	($245)	($368)	($368)
70	$8,418	($7,783)	$1,999	$319	$2,953	($283)	($283)	($424)	($424)
75	$9,477	($8,763)	$2,250	$319	$3,283	($318)	($318)	($477)	($477)
80	$10,361	($9,581)	$2,460	$319	$3,559	($348)	($348)	($522)	($522)
85	$10,836	($10,019)	$2,573	$319	$3,709	($364)	($364)	($546)	($546)
90	$11,054	($10,221)	$2,625	$319	$3,777	($371)	($371)	($557)	($557)