

**THE PUBLIC SCHOOL EMPLOYEES'  
RETIREMENT SYSTEM OF PENNSYLVANIA**

**ACTUARIAL VALUATION  
JUNE 30, 2010**

January 31, 2011

The Retirement Board  
Public School Employees'  
Retirement System of Pennsylvania  
P.O. Box 125  
Harrisburg, Pennsylvania 17108

Ladies and Gentlemen:

This report presents the results of the annual actuarial valuation of the Public School Employees' Retirement System of Pennsylvania (Retirement System or PSERS) as of June 30, 2010.

The valuation takes into account all of the promised benefits to which members are entitled as of June 30, 2010, including pension and survivor benefits, and as required by the Public School Employees' Retirement Code, 24 Pa. C.S. §8101 et. seq. (Retirement Code) is the basis for the contribution rate for fiscal year 2011/2012.

The valuation was based on the actuarial assumptions and methods as adopted by the Board of Trustees. As adopted by the Board of Trustees at their January 2009 meeting, the valuation interest rate was changed to 8.25% for the June 30, 2008 valuation and to 8.00% for all future valuation years.

The actuarial assumptions and methods for financial reporting meet the parameters set forth in Governmental Accounting Standards Board (GASB) Statements No. 25, 43, and 50, and are unchanged from the prior valuation. The actuarial assumptions and methods for GASB 25 disclosure are the same as for pension funding, except that the GASB 25 amortization payment will be determined based on 30-year level-dollar funding. The Health Insurance funding provisions of the Retirement Code differ from the GASB 43 disclosure retirements. For funding purposes the actuarial liability equals the assets in the health insurance account, and a contribution is determined that will assure the solvency of the account through the third fiscal year following the valuation date. For purposes of GASB 43 disclosure the Health Insurance actuarial liability and normal cost requirements have been determined under the entry age actuarial cost method, with 30-year level dollar funding. (The entry age actuarial cost method meets the GASB 43 parameters for determining actuarial liability and normal cost, and is the cost method specified by the Retirement Code for the PSERS pension plan.)

### **Assets and Membership Data**

The Retirement System reported the individual data for members of the Retirement System as of the valuation date to the actuary. While we did not verify the data at their source, we did perform tests for internal consistency and reasonableness. The amount of assets in the trust fund taken into account in the valuation was based on statements prepared for us by the Retirement System.

### **Funding Adequacy**

The valuation results determine that the employer contribution rate for fiscal year 2011/2012 is 8.65%. As of June 30, 2010, the total funded ratio of the plan (for Pensions and Health Insurance combined) is 75.1%, based on the accrued liability and actuarial value of assets calculated under the funding requirements of Section 8328 of the Retirement Code.

### **Financial Results and Membership Data**

Detailed summaries of the financial results of the valuation and membership data used in preparing the valuation are shown in the valuation report. The actuary prepared supporting schedules included in the Actuarial and Statistical Section of the PSERS Comprehensive Annual Financial Report (CAFR), and also prepared the trend data schedules included in the Financial Section of the CAFR.

The report does not take into account any changes in U.S. equity prices and bond yields that have occurred after the valuation date. Taking these into account may significantly change the market and actuarial value of assets shown. The effect of these events on any funded ratios shown, and on Retirement System calculations, is not known. Retirement System funding and financial accounting rules generally prohibit reflection of changes in assets and underlying economic conditions that occur after the valuation date.

Qualified actuaries completed the valuation in accordance with accepted actuarial procedures as prescribed by the Actuarial Standards Board. The qualified actuaries are members of the American Academy of Actuaries and are experienced in performing actuarial valuations of public employee retirement systems. To the best of our knowledge, this report is complete and accurate and has been prepared in accordance with generally accepted actuarial principles and practice.

Respectfully submitted,



Janet H. Cranna, FSA, MAAA, EA  
Principal, Consulting Actuary



Dana Spangher, FSA, MAAA, EA  
Principal, Consulting Actuary



Edward Quinn, MAAA, EA  
Director, Retirement Actuary

# THE PUBLIC SCHOOL EMPLOYEES' RETIREMENT SYSTEM OF PENNSYLVANIA

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## **Executive Summary**

This report presents the actuarial valuation as of June 30, 2010 for the Public School Employees' Retirement System of Pennsylvania.

The principal valuation results include:

- The employer contribution rate for fiscal year 2011/2012, which is 8.65%.
- The total funded ratio of the plan determined as of June 30, 2010 under the funding requirements of Section 8328 of the Retirement Code, which is 75.1% based on the accrued liability and the actuarial value of assets for Pensions and Health Insurance as of that date.
- The determination of the actuarial experience as of June 30, 2010, which is a loss of \$3.467 billion.
- Annual disclosures as of June 30, 2010 as required by Statements No. 25, 43, and 50 of the Governmental Accounting Standards Board.

The valuation was completed based upon membership and financial data submitted by the Retirement System. Detailed summaries of the financial results of the valuation and membership data used in preparing the valuation are included in the valuation report. The actuary prepared supporting schedules included in the Actuarial and Statistical Section of the PSERS Comprehensive Annual Financial Report (CAFR), and also prepared the trend data schedules included in the Financial Section of the CAFR.

## **Changes Since Last Year**

### **Legislative and Administrative Changes**

The valuation was completed based upon the following legislative changes:

- The valuation reflects Act 2010-46 (Act 46). Act 46 directed the Public School Employees' Retirement Board to recertify the employer contribution rate for the Fiscal Year which ends June 30, 2011 from 8.22% to 5.64%, with 5% consisting of the pension component of the rate and .64% consisting of the premium assistance component of the rate.
- The valuation also reflects the following benefit and funding reform provisions of Act 2010-120 (Act 120):

a. Benefit reforms:

1. Establish a new class of membership (“Class T-E”). Any employee who becomes a member of the Retirement System after June 30, 2011 would become a Class T-E member. A Class T-E member would be eligible for an annuity based upon an annual benefit accrual rate of 2% and would have a corresponding employee contribution requirement equal to 7.5% of compensation;
2. Establish an optional new class of membership (“Class T-F”). Any employee who becomes a member of the Retirement System after June 30, 2011 would have the option of electing Class T-F membership within 45 days of becoming a member. A Class T-F member would be eligible for an annuity based upon an annual benefit accrual rate of 2.5% and would have a corresponding employee contribution requirement equal to 10.3% of compensation;
3. Increase the superannuation requirements for Class T-E and Class T-F members to i) age 65 with a minimum of three years of service credit, or ii) any combination of age and service that totals 92 with at least 35 years of credited service;
4. Increase the withdrawal eligibility requirement for Class T-E and Class T-F members to ten years of service credit;
5. Class T-E and Class T-F can not elect to receive a lump sum payment of member contributions;
6. Establish a “shared-risk” employee contribution rate for Class T-E and Class T-F members. Members benefit when investments of the fund are doing well and share some of the risk when investments underperform. The member contribution rate will stay within the specified range allotted for Class T-E or Class T-F, but could increase or decrease every three years starting July 1, 2015 depending on investment performance. The member contribution rate can never go below the base rate of 7.5% for Class T-E members and 10.3% for Class T-F members, nor above 9.5% for Class T-E members and 12.3% for Class T-F members. If the investment rate of return (less investment fees) is equal to or exceeds the assumed rate of return based on the prior ten-year period, the member contribution rate will decrease by .5%. Likewise, the member contribution rate will increase by .5% if the investment rate of return (less investment fees) during the ten-year period is 1.0% or more below the assumed rate of return. If the Retirement System is fully funded at the time of the comparison, the member contribution rate reverts back

to the base rate for the Class. There shall be no increase in the member contribution rate if there has not been an equivalent increase in the employer contribution rate over the previous three-year period. Until a full ten-year look back is available, the investment return measurement period will begin on July 1, 2011;

7. Require Class T-E and Class T-F members who purchase most types of nonschool or non-state service credit (other than intervening military service) to pay an amount equal to the full actuarial cost of the service purchase;
  8. Limit the maximum annual retirement benefit of Class T-E and Class T-F members to not more than 100% of final average salary; and
  9. Class-E and Class T-F members have a one-year period from date of membership to purchase Non-Qualifying Part-Time Service.
- b. Funding reforms effective with the June 30, 2010 valuation:
1. Extend from five years to ten years the asset smoothing period over which the Retirement System's investment gains and losses are recognized;
  2. Re-amortize the unfunded actuarial accrued liability as of the June 30, 2010 valuation, including the cost of Act 120, over a 24-year period with the amortization payments determined as a level percentage of pay. Future valuation experience gains or losses, and changes in the unfunded accrued liability resulting from changes in actuarial assumptions and methods, will be amortized over a 24-year period as a level percentage of pay. Future increases in accrued liability enacted by legislation after June 30, 2010 will be funded over a 10-year period as a level percentage of pay;
  3. Modify the employer pension contribution requirements by imposing limits ("collars") on the rate at which employer contributions may rise from year to year. For the fiscal years ending June 30, 2012, June 30, 2013, and on or after June 30, 2014, the pension contribution rate can be no more than 3%, 3.5% and 4.5%, respectively, of total compensation of all active members, greater than the prior year's final contribution rate; and
  4. Beginning with the fiscal year in which the actuarially required contribution rate is less than the collared rate, the final contribution rate will be the actuarially determined contribution rate, but not less than the employer normal contribution rate.

The benefit provisions and contribution provisions are summarized in Table 13.

## Actuarial Assumptions and Methods

The actuarial assumptions and methods are outlined in Table 12.

### **Contribution Rates**

The results of the valuation as of June 30, 2010 determine the employer contribution rate for fiscal year 2011/2012. The calculated employer contribution rate for the 2011/2012 fiscal year is 8.65%, and the Board of Trustees certified this rate at their December 2010 meeting. This rate consists of an 8.00% pension rate (fiscal year 2010/2011 rate of 5.00% plus the Act 120 3.00% collar) plus a 0.65% health insurance contribution rate.

The average contribution rate payable by the members is 7.37%. Effective January 1, 2002, the employee contribution rate for members who elected to have prior school service and intervening military service converted to Class T-D service increased by 1.25% to 7.50%. Anyone who enrolls after June 30, 2001 and before July 1, 2011 is automatically a member of Class T-D. The average member contribution rate of 7.37% is a pay-weighted average of member rates that vary based on date of hire and based on Class T-D membership. Any employee who becomes a member after June 30, 2011 would become a Class T-E member or, alternatively, elect to become a Class T-F member. The base contribution rate for Class T-E members is 7.50% of compensation. The base contribution rate for Class T-F members is 10.30% of compensation. Class T-E and Class T-F members are subject to a “shared-risk” employee contribution rate.

### Reasons for Change in the Rate Calculated by the Actuary

The employer contribution rate calculated by the actuary increased from 5.64% for fiscal year 2010/2011 to 8.65% for fiscal year 2011/2012. The reconciliation of the employer contribution rates by source is as follows:

• FY2010/2011 Act 46 final rate	5.64%
• Deferral of FY 2011 pension contribution due to Act 46	<u>2.58</u>
• FY 2010 /2011 rate prior to Act 46	8.22%
• Increase due to change in normal rate	0.04
• Net increase due to payroll growth and liability experience	0.40
• Increase due to actuarial loss on assets	1.94
• Increase due to Act 120 funding reforms (before 3% collar)	8.31
• Deferral of FY 2012 pension contribution due to Act 120 3% collar	(10.27)
• Increase due to change in health insurance contribution rate	<u>0.01</u>
• Final FY 2011/2012 employer contribution rate	8.65%



## Summary of Principal Results

Summarized below are the principal financial results for the Public School Employees' Retirement System based upon the actuarial valuation as of June 30, 2010. Comparable results from the June 30, 2009 valuation are also shown.

Item	June 30, 2010	June 30, 2009
<b>Demographics</b>		
Active Members		
• Number	282,041	279,701
• Average Annual Pay	\$ 45,344	\$ 44,779
Annuitants		
• Number	184,934	177,963
• Average Annual Benefit Payment	\$ 23,466	\$ 22,456
<b>Contribution Rates (as a Percentage of Payroll)</b>		
	(Fiscal Year 2011/2012)	(Fiscal Year 2010/2011)
Employer Contribution Rate:		
• Total Pension Rate Calculated by Actuary	18.27%	7.58%
• Act 46 Recertification of Fiscal Year 2011 Employer Pension Rate	N/A	5.00
• Act 120 Fiscal Year 2012 Employer Pension Rate After Application of Collar	8.00	N/A
• Health Insurance Contribution Rate	<u>0.65</u>	<u>0.64</u>
• Total Contribution Rate	8.65%	5.64%
• Total Contribution Rate Certified by Board	8.65%	5.64%
Member Average Contribution Rate		
• Total Rate	<u>7.37</u> 16.02%	<u>7.34</u> 12.98%
<b>Actuarial Funded Status*</b>		
• Accrued Liability	\$ 79,122.3 Mil	\$ 75,625.9 Mil
• Actuarial Value of Assets	<u>59,423.7</u>	<u>59,886.7</u>
• Unfunded Accrued Liability	\$ 19,698.6	\$ 15,739.2
• Funded Ratio	75.1%	79.2%
*Pensions and Health Insurance combined		

## Five-Year History of Principal Financial Results

### Five-Year History of Contribution Rates (As a % of Payroll)

Fiscal Year	Member Contributions	Employer Contributions				
		Normal Cost	Unfunded Accrued Liability	Health Insurance	Preliminary Employer Contribution	Final Employer Contribution *
2011/2012	7.37%	8.12%	10.15%	0.65%	18.27%	8.65%**
2010/2011	7.34	8.08	(0.50)	0.64	8.22	5.64 <sup>∅</sup>
2009/2010	7.32	7.35	(3.72)	0.78	4.41	4.78 <sup>∅∅</sup>
2008/2009	7.29	6.68	(3.37)	0.76	4.07	4.76 <sup>∅∅</sup>
2007/2008	7.25	6.68	(0.24)	0.69	7.13	7.13

\* Certified by the Board.

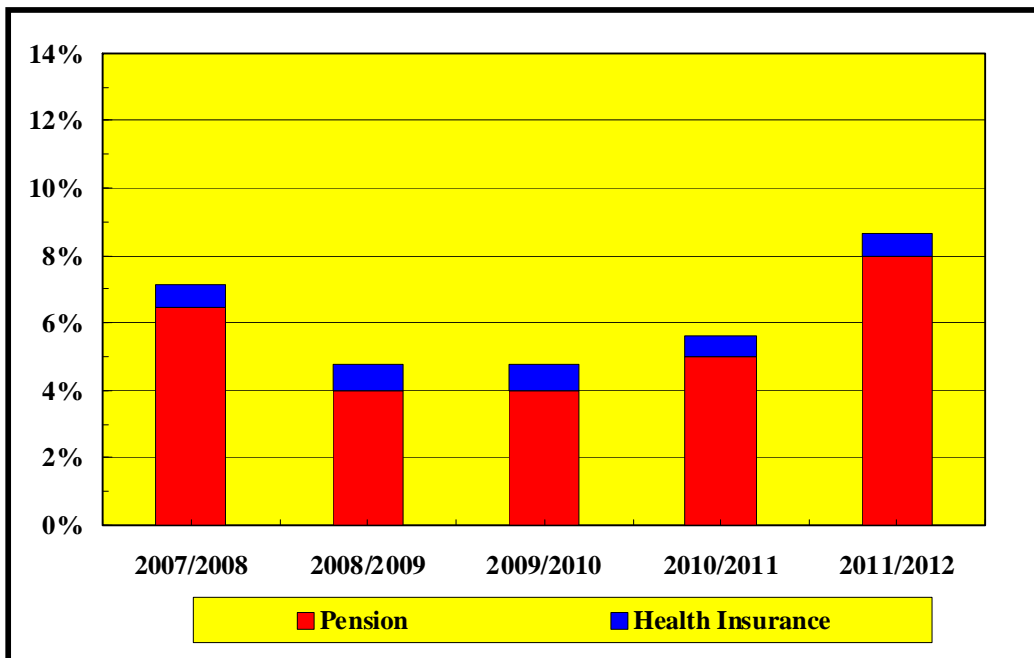
\*\* Reflects Act 120 Pension Collar.

<sup>∅</sup> Reflects Act 46.

<sup>∅∅</sup> Reflects Act 40 Pension Floor.

The following chart shows a five-year history of employer contribution rates:

### Five-Year History of Employer Contribution Rates



## **Funded Ratio**

The financing objective of the Retirement System is to:

- Fully fund all current costs based on the normal contribution rate determined under the funding method; and
- Liquidate the unfunded accrued liability based on level percentage of pay amortization schedules required by the Retirement Code as amended by Act 2010-120, i.e., a schedule of 24 years for the unfunded accrued liability as of June 30, 2010 and each change in the unfunded accrued liability due to actuarial experience after the June 30, 2010 valuation. Any legislation after June 30, 2010 that increases the liability will be funded over 10 years.
- As directed by Act 2010-120, use pension rate collars to moderate the rise of annual employer pension contribution rates to reach the full actuarially determined contribution funding level in a budgetary sound manner and within a financially responsible period of time.

The total contribution rate of 8.65% of payroll payable by employers, when taken together with the contributions payable by the members, current assets, and expected future asset returns, is sufficient to achieve the financing objective.

The Retirement System's total funded ratio on this funding basis is measured by comparing the actuarial value of assets (based on a phased-in 10-year moving average market value) with the accrued liability. The accrued liability for pensions is the present value of benefits accumulated to date under the Retirement System's funding method and reflects future pay increases for active employees. The accrued liability for Health Insurance equals the assets in the Health Insurance account.

On this basis, the Retirement System's total funded ratio (for Pensions and Health Insurance combined) is 75.1% as of June 30, 2010. This funded ratio is based on an actuarial value of assets of \$59.4 billion and an accrued liability of \$79.1 billion. The funded ratio for Pensions alone is also 75.1% as of June 30, 2010, based on an actuarial value of assets of \$59.3 billion, and an accrued liability of \$79.0 billion.

**Reasons for Change in the Total Funded Ratio**

The total funded ratio decreased from 79.2% as of June 30, 2009 to 75.1% as of June 30, 2010. This decrease is primarily due to the actuarial value of assets loss that occurred during the year. There was also a net actuarial experience loss.

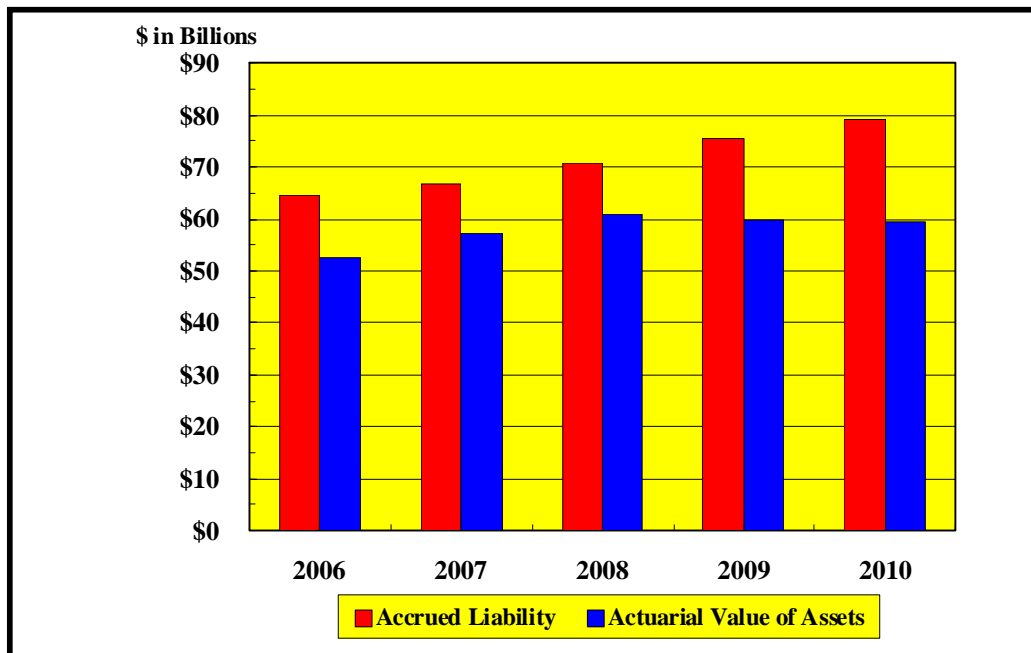
**Five-Year History of Total Funded Ratio\***  
(\$ Amounts in Millions)

Valuation as of June 30	Accrued Liability	Actuarial Value of Assets	Unfunded Accrued Liability	Funded Ratio
2010	\$ 79,122.3	\$ 59,423.7	\$ 19,698.6	75.1%
2009	75,625.9	59,886.7	15,739.2	79.2
2008	70,941.4	61,017.9	9,923.5	86.0
2007	66,593.1	57,155.1	9,438.0	85.8
2006	64,720.1	52,557.5	12,162.6	81.2

\* For Pensions and Health Insurance (under the funding provisions of the Retirement Code)

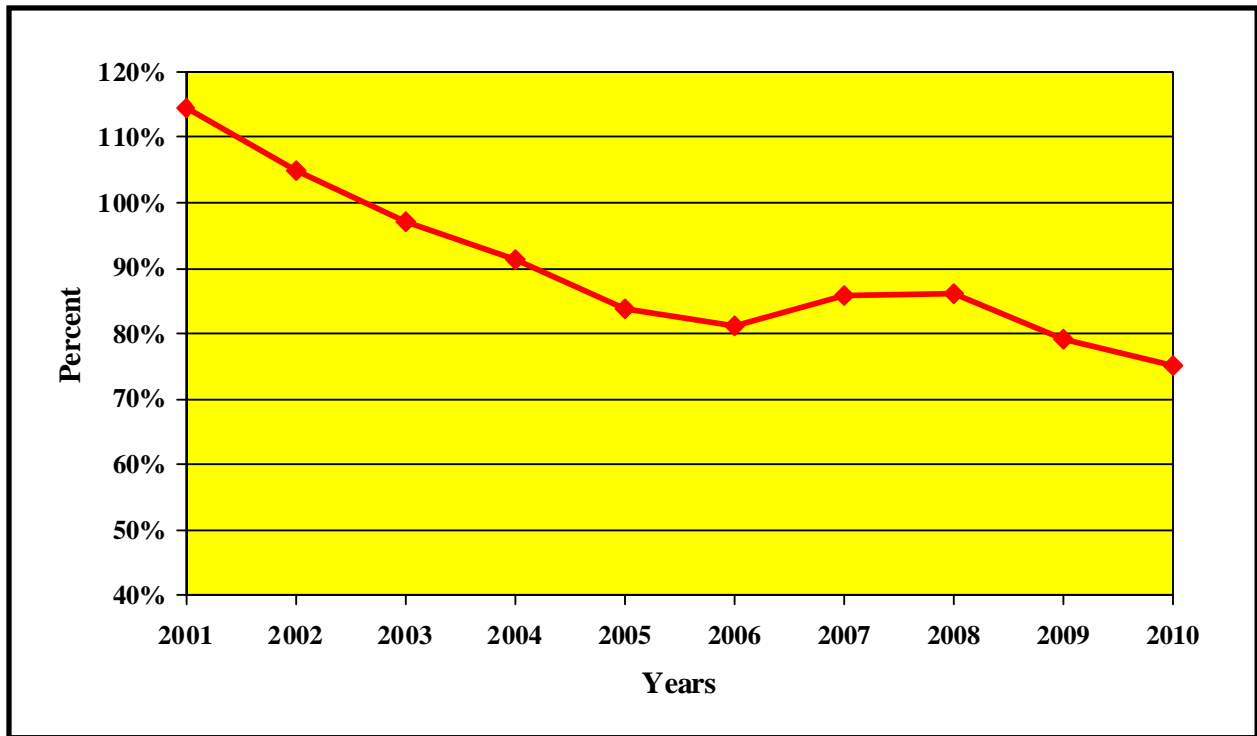
The following chart shows a five-year history of the accrued liability and the actuarial value of assets:

**Five-Year History of Accrued Liability and Actuarial Value of Assets**



The following chart shows a ten-year history of the total funded ratio for Pensions and Health Insurance:

**Ten-Year History of Total Funded Ratio  
(2001 - 2010)**



## **GASB No. 25 Disclosure**

Statement No. 25 of the Governmental Accounting Standards Board (GASB) established reporting standards for the annual financial reports of defined benefit pension plans. The Retirement System complied with Statement No. 25 beginning with the June 30, 1996 valuation. The statement requires disclosure of the "schedule of funding progress" and the "schedule of employer contributions" in the Retirement System's financial statements.

The "schedule of funding progress" shows historical trend information about the Retirement System's actuarial value of pension assets, the actuarial accrued liability for pensions and the unfunded actuarial accrued liability for pensions. The actuarial funded ratio for pensions is measured by comparing the actuarial value of pension assets based on a 10-year moving average market value (a 5-year moving average market value prior to June 30, 2010) with the accrued liability for pensions. The accrued liability is the present value of pension benefits accumulated to date under the Retirement System's funding method and reflects future pay increases for active employees. On this basis, the Retirement System's funded ratio for pensions is 75.1% as of June 30, 2010. This funded ratio is based on an actuarial value of pension assets of \$59.3 billion and an accrued liability for pensions of \$79.0 billion. See Table 7 for more detail.

The schedule of employer contributions shows historical trend information about the GASB Annual Required Contribution (ARC) for pensions, and the percentage of the ARC contributed to the Retirement System. The pension contribution requirements of the Retirement Code differ from the GASB disclosure requirements. As a result, there may be different determinations of contribution requirements for GASB accounting purposes and for State funding purposes. For GASB accounting purposes, the ARC equals the employer normal cost for pensions plus an amount that will amortize the unfunded actuarial accrued liability for pensions over 30 years. Although the employer normal cost for GASB accounting equals the PSERS normal cost for funding, Section 8328 of the Retirement Code specifies different amortization periods for different portions of the unfunded accrued liability, as well as a collar on the employer pension rate. Therefore, the resulting single amortization period may be any number of years. Table 8a presents the GASB 25 schedule of employer contributions.

## **GASB No. 43 Disclosure**

GASB Statement No. 43 established reporting standards for the annual financial reports of postemployment benefit plans other than pension plans, and these reporting requirements apply to the PSERS health insurance premium assistance plan. The Retirement System complied with Statement No. 43 beginning with the June 30, 2006 valuation. The statement requires disclosure of the "schedule of funding progress" and the "schedule of employer contributions" in the Retirement System's financial statements.

The health insurance liability and funding provisions of the Retirement Code differ from the GASB disclosure requirements. As a result, there are different determinations of actuarial liability and contribution requirements for GASB accounting purposes and for State funding purposes. For purposes of funding, the actuarial liability equals the assets in the health insurance account, and the contribution required is the amount necessary to establish reserves sufficient to provide premium assistance payments to all participating eligible annuitants during the fiscal year that immediately follows the year the employer contribution is made. For GASB accounting purposes, the actuarial liability has been determined under the entry age actuarial cost method, and the Annual Required Contribution (ARC) is equal to the entry age normal cost for health insurance plus an amount that will amortize the entry age unfunded actuarial liability for health insurance over a period of 30 years. (The entry age actuarial cost method was selected for this calculation because it meets the GASB parameters for determining actuarial liability and normal cost, and is the cost method specified by the Retirement Code for the PSERS pension plan.)

The GASB 43 schedule of funding progress, presented in Table 7, shows that as of June 30, 2010, the health insurance assets were \$116,831,000, measured on a market value basis, while the GASB 43 health insurance liabilities were \$1,162,219,000, resulting in a funded ratio of 10.1%.

The GASB 43 schedule of employer contributions first applies to fiscal year 2006/2007, and is presented in Table 8b.

## Rate of Return

The investment return of the trust fund (i.e. total return including both realized and unrealized gains and losses) for fiscal years 2005/2006 through 2009/2010 is shown in the table below. The return based on the actuarial value of assets used for determining annual contribution rates is also shown.

The rate of return on market value reflects the investment earnings on the market value of assets from the beginning of the fiscal year to the end of the fiscal year. The actuarial value of assets is the asset recognized for valuation purposes. The actuarial value of assets, prior to recognition of Act 120, are based on a smoothed market value that spreads the difference between the actual and expected return over a period of five years. The rate of return on the actuarial value of assets is a measure of the increase in the actuarial value of assets from the beginning of the fiscal year to the end of the fiscal year.

Fiscal Year	Rate of Return Based on	
	Market Value*	Actuarial Value
2009/2010	14.6%	3.1%
2008/2009	-26.5	3.5
2007/2008	-2.8	12.4
2006/2007	22.9	13.9
2005/2006	15.3	7.9

\* Market Value Rate of return provided by Wilshire Associates Incorporated, PSERS investment consultant.



**TABLE 1**

**SUMMARY OF RESULTS OF ACTUARIAL VALUATION  
AS OF JUNE 30, 2010  
(\$ Amounts in Thousands)**

Item	June 30, 2010	June 30, 2009
<b>Member Data</b>		
1. Number of Members		
a) Active Members	282,041	279,701
b) Inactive Members and Vestees	111,931	103,805
c) Annuitants, Beneficiaries and Survivor Annuitants	184,934	177,963
d) Total	<u>578,906</u>	<u>561,469</u>
2. Annualized Salaries (\$ Amounts in Thousands)	\$ 12,788,847	\$ 12,524,593
3. Annual Annuities (\$ Amounts in Thousands)	\$ 4,339,639	\$ 3,996,288
<b>Valuation Results</b>		
4. Present Value of Future Pension Benefits		
a) Active Members	\$ 57,927,025	\$ 57,954,419
b) Inactive Members and Vestees	1,261,485	930,887
c) Annuitants, Beneficiaries and Survivor Annuitants	40,284,383	37,112,318
d) Total	<u>\$ 99,472,893</u>	<u>\$ 95,997,624</u>
5. Present Value of Future Pension Normal Cost		
a) Active Members	\$ 9,960,432	\$ 9,879,309
b) Employer	10,507,033	10,597,579
c) Total	<u>\$ 20,467,465</u>	<u>\$ 20,476,888</u>
6. Pension Accrued Liability		
a) Active Members (4a) - (5c)	\$ 37,459,560	\$ 37,477,531
b) Inactive Members and Vestees	1,261,485	930,887
c) Annuitants, Beneficiaries and Survivor Annuitants	40,284,383	37,112,318
d) Total	<u>\$ 79,005,428</u>	<u>\$ 75,520,736</u>
7. Health Insurance Assets for Premium Assistance	\$ 116,831	\$ 105,114
8. Total Accrued Liability for Funding (6) + (7)	\$ 79,122,259	\$ 75,625,850
9. Actuarial Value of Assets	\$ 59,423,679	\$ 59,886,689
10. Funded Status (9) / (8)	75.1 %	79.2 %
11. Unfunded Accrued Liability (8) - (9)	\$ 19,698,580	\$ 15,739,161
12. Total Normal Cost Rate	15.49 %	15.42 %
13. Member Contribution Rate	7.37 %	7.34 %
14. Employer Normal Cost Rate (12) - (13)	8.12 %	8.08 %
<b>Employer Annual Funding Requirement</b>		
15. Employer Contribution Rate Calculated by Actuary	<b>Fiscal 2011/2012</b>	<b>Fiscal 2010/2011</b>
a) Normal	8.12 %	8.08 %
b) Unfunded Accrued Liability	<u>10.15</u>	<u>(0.50)</u>
c) Preliminary Pension Rate	18.27 %	7.58 %
d) Act 46 Recertification of Fiscal Year 2011		
Employer Pension Rate	N/A	5.00
e) Act 120 Fiscal Year 2012		
Employer Pension Rate Collar	8.00	N/A
f) Health Insurance	<u>0.65</u>	<u>0.64</u>
g) Total Rate	8.65 %	5.64 %

**TABLE 2**

**SUMMARY OF SOURCES OF EMPLOYER CONTRIBUTION RATE  
AS OF JUNE 30, 2010  
(\$ Amounts in Thousands)**

	Funding Period (Years)	Beginning July 1	Initial Liability	7/1/2010 Outstanding Balance	Annual Payment Amount	Percent *
1. Amortization of:						
a) Act 120 Fresh Start Unfunded Accrued Liability and Asset Method Change	24	2011	\$ 16,279,283	\$ 16,279,283	\$ 1,184,981	8.40 %
b) 2010 Experience	24	2011	3,419,297	<u>3,419,297</u>	<u>247,938</u>	<u>1.75 %</u>
Total Amortization Payments				\$ 19,698,580	\$ 1,432,919	10.15 %
2. Employer Normal Cost Rate						<u>8.12 %</u>
3. Preliminary Pension Rate (1) + (2)						18.27 %
4. Act 120 Fiscal Year 2012 Employer Pension Rate Collar						8.00 %
5. Health Insurance Rate						<u>0.65 %</u>
6. Final Total Employer Contribution Rate Calculated by Actuary (4) + (5)						8.65 %

\* Based on Estimated Employer Payroll for Fiscal Year Ending 2012 of \$ 14,112,000.

**TABLE 3**

**DETERMINATION OF HEALTH INSURANCE CONTRIBUTION RATE  
FOR FISCAL YEAR 2011/2012**

(\$ Amounts in Thousands)

Item			
1. June 30, 2010 Balance in Health Insurance Account			\$ 116,831
2. Estimated Fiscal 2010/2011 Contribution			
(a) Contribution Rate Certified in 2009 Valuation			0.64%
(b) Estimated Fiscal 2010/2011 payroll			\$ 13,510,000
(c) Estimated Contribution = (a) x (b)			\$ 86,464
3. Estimated Number of Annuitants who:	Are Eligible	Elect Coverage	
(a) Fiscal 2010/2011	118,200	78,012	
(b) Fiscal 2011/2012	120,800	79,728	
(c) Fiscal 2012/2013	123,400	81,444	
4. Estimated Disbursements:	Administration	Assistance	Total
(a) Fiscal 2010/2011	\$ 2,206	\$ 93,614	\$ 95,820
(b) Fiscal 2011/2012	2,220	95,674	97,894
(c) Fiscal 2012/2013	2,309	97,733	100,042
(d) Total	\$ 6,735	\$ 287,021	\$ 293,756
5. Required Fiscal 2011/2012 Contribution			\$ 90,461
(4d) - (1) -(2c)			
6. Required Health Insurance Contribution Rate			
(a) Estimated 2011/2012 Payroll			\$ 14,112,000
(b) Required Health Insurance Contribution Rate (5) / (6a)			0.65%
(rounded up)			

Notes:

1. Current estimates of fiscal 2010/2011 membership payroll and administrative expenses, and of fiscal 2011/2012 administrative expenses, were provided by PSERS staff.
2. 66% of eligible annuitants are assumed to elect coverage.
3. Premium Assistance payments equal \$100 per month per eligible annuitant.

**TABLE 4**

**SUMMARY OF MARKET VALUE OF PLAN ASSETS**

**AS OF JUNE 30, 2010**

(\$ Amounts in Thousands)

<b>Market Value</b>	
1. Market Value of Assets as of June 30, 2009	\$ 43,100,594
2. Contributions During Fiscal 2009/2010	1,590,081
3. Disbursements During Fiscal 2009/2010	5,075,868
4. Investment Return During Fiscal 2009/2010	
a) Investment Return (Net of Investment Expenses)	\$ 6,114,548
b) Administrative Expenses	<u>14,049</u>
c) Investment Return After Expenses (a) - (b)	\$ 6,100,499
5. Market Value of Assets as of June 30, 2010 (1) + (2) - (3) + (4c)	\$ 45,715,306
6. Rate of Return (per Wilshire)	14.59 %
<b>Asset Allocation by Account</b>	
1. Members' Savings Account	\$ 11,850,031
2. Annuity Reserve Account	40,284,383
3. State Accumulation Account	(6,535,939)
4. Health Insurance Account	<u>116,831</u>
5. Total (1) + (2) + (3) + (4)	\$ 45,715,306

**TABLE 5**

**DERIVATION OF ACTUARIAL VALUE OF ASSETS  
AS OF JUNE 30, 2010\*(\$ Amounts in Thousands)**

1. Market Value of Assets as of June 30, 2010						\$ 45,715,306
2. Determination of Deferred Gain (Loss)						
	<u>Return on Assets</u>					<u>Deferred</u>
<u>Fiscal</u>						<u>Amount</u>
<u>Year</u>	<u>Actual</u>	<u>Expected</u>	<u>Difference</u>	<u>% Deferred</u> #		
2009/2010	\$ 6,100,499	\$ 4,651,504	\$ 1,448,995	90.00%	\$ 1,304,096	
2008/2009	(16,237,298)	4,900,688	(21,137,986)	71.11%	(15,031,457)	
2007/2008	(1,816,980)	4,728,472	(6,545,452)	52.50%	(3,436,362)	
2006/2007	12,658,871	4,359,054	8,299,817	34.29%	2,845,652	
2005/2006	7,901,068	4,242,878	3,658,190	16.67%	<u>609,698</u>	
					\$ (13,708,373)	
3. Actuarial Value of Assets (1) - (2)						\$ 59,423,679
4. Actuarial Rate of Return **						3.09%

\* The amounts reported include assets for both Pension and Health Insurance

\*\* The actuarial rate of return is the investment return based on the change in the actuarial value of assets from the June 30, 2009 valuation to the June 30, 2010 valuation (prior to Act 120 method change).

# The percentage amounts shown are rounded. The corresponding Deferred Amounts reflect the use of unrounded percentage amounts.

**TABLE 6**

**ANALYSIS OF CHANGE IN UNFUNDED ACCRUED LIABILITY  
AS OF JUNE 30, 2010  
(\$ Amounts in Thousands)\***

Item	Amount
1. Unfunded Accrued Liability at June 30, 2009	\$ 15,739,161
2. Interest Credit to June 30, 2010	\$ 1,287,104
3. Contributions Toward Unfunded Accrued Liability	(479,578)
4. Change due to Effect of 4% Floor on FY 2010 Pension Contribution	<u>(47,726)</u>
5. Expected Unfunded Accrued Liability at June 30, 2010 (1) + (2) - (3) + (4)	\$ 17,458,117
6. Actual Unfunded Accrued Liability at June 30, 2010	<u>\$ 19,698,580</u>
7. Increase (Decrease) from Expected (6) - (5)	\$ 2,240,463
8. Reasons for Increase (Decrease)	
(a) Experience Losses (Gains)	
(i) Loss from Investment Return on Actuarial Value of Assets	\$ 2,855,287
(ii) Loss from New Entrants and Pickups	247,891
(iii) Loss from Salary Increases Greater than Expected	42,030
(iv) Loss from Mortality Experience	386,286
(v) Loss from Vested Termination Experience (Retirement/Disability/Termination)	111,228
(vi) Gain from Non-vested Termination Experience	(239,456)
(vii) Loss from Data/Miscellaneous	<u>63,758</u>
Subtotal	\$ 3,467,024
(b) Act 120 Change in Asset Averaging Period	\$ (1,226,561)
(c) Grand Total	\$ 2,240,463

\* The amounts reported include assets and liabilities for Pensions only.

**TABLE 7**

**SCHEDULE OF FUNDING PROGRESS FOR PENSIONS\***  
**GASB STATEMENT NO. 25 DISCLOSURE**  
(\$ Amounts in Thousands)

Valuation as of June 30	Actuarial Value of Assets	Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability	Funded Ratio	Covered Payroll	Unfunded Accrued Liability as a Percentage of Covered Payroll
2010	\$ 59,306,848	\$ 79,005,428	\$ 19,698,580	75.1 %	\$ 12,788,847	154.0 %
2009	59,781,575	75,520,736	15,739,161	79.2	12,524,593	125.7
2008	60,922,157	70,845,637	9,923,480	86.0	11,921,469	83.2
2007	57,057,838	66,495,870	9,438,032	85.8	11,410,257	82.7
2006	52,464,726	64,627,361	12,162,635	81.2	11,419,049	106.5
2005	51,122,156	61,129,444	10,007,288	83.6	10,527,668	95.1

\* The amounts reported above include assets and liabilities for Pensions.

**SCHEDULE OF FUNDING PROGRESS FOR  
POSTEMPLOYMENT BENEFITS OTHER THAN PENSIONS\***  
**GASB STATEMENT NO. 43 DISCLOSURE**  
(\$ Amounts in Thousands)

Valuation as of June 30	Actuarial Value of Assets	Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability	Funded Ratio	Covered Payroll	Unfunded Accrued Liability as a Percentage of Covered Payroll
2010	\$ 116,831	\$ 1,162,219	\$ 1,045,388	10.1 %	\$ 12,788,847	8.2 %
2009	105,114	1,159,055	1,053,941	9.1	12,524,593	8.4
2008	95,785	1,133,011	1,037,226	8.5	11,921,469	8.7
2007	97,292	1,058,092	960,800	9.2	11,410,257	8.4
2006	92,777	1,056,154	963,377	8.8	11,419,049	8.4

\* The amounts reported above include assets and liabilities for Health Insurance Premium Assistance. The health insurance liabilities for GASB 43 disclosure have been calculated under the entry age normal cost method, which provides liabilities that differ from those determined under the funding requirements of the Retirement Code.

**TABLE 8a**

**SCHEDULE OF EMPLOYER CONTRIBUTIONS FOR PENSIONS  
GASB STATEMENT NO. 25 DISCLOSURE**

(\$ Amounts in Thousands)

Fiscal Year Ended June 30	Annual Required Contribution	Actual Employer Contribution	Percentage Contributed
2010	\$ 1,928,278	\$ 527,212	27 %
2009	1,761,295	503,227	29
2008	1,852,238	753,532	41
2007	1,708,821	659,545	39
2006	1,328,373	456,878	34
2005	945,107	431,556	46

The Annual Required Contribution (ARC) presented above was determined as part of the actuarial valuation as of two years prior to the dates indicated (i.e., the ARC for the fiscal year ended June 30, 2010 was determined by the valuation completed as of June 30, 2008 which was based on an 8.25% interest rate).

Additional information as of the latest actuarial valuation follows:

Valuation Date:	6/30/2010
Actuarial Cost Method:	Entry Age
Amortization Method:	Level dollar open
Remaining Amortization Period:	30 Years
Asset Valuation Method:	10-year smoothed market

Actuarial Assumptions:

- Investment Rate of Return *	8.00%
-Projected Salaried Increases *	6.00%

\* Includes Inflation at: 3.25%



**TABLE 8b**

**SCHEDULE OF EMPLOYER CONTRIBUTIONS FOR  
POSTEMPLOYMENT BENEFITS OTHER THAN PENSIONS  
GASB STATEMENT NO. 43 DISCLOSURE  
(\$ Amounts in Thousands)**

Fiscal Year Ended June 30	Annual Required Contribution	Actual Employer Contribution	Percentage Contributed
2010	\$ 117,187	\$ 102,703	88 %
2009	109,531	92,493	84
2008	101,352	81,317	80
2007	94,970	86,763	91

The Annual Required Contribution (ARC) beginning with the fiscal year ended June 30, 2009 was determined as part of the actuarial valuation as of two years prior to the date indicated (i.e., the ARC for the fiscal year ended June 30, 2010 was determined by the valuation completed as of June 30, 2008, which was based on an 8.25% interest rate). Prior to that, the ARC was determined as part of the actuarial valuation as of one year prior to the dates indicated.

Additional information as of the latest actuarial valuation follows:

Valuation Date:	6/30/2010
Actuarial Cost Method:	Entry Age
Amortization Method:	Level dollar open
Remaining Amortization Period:	30 Years
Asset Valuation Method:	Market

Actuarial Assumptions:	
- Investment Rate of Return *	8.00%
-Projected Salaried Increases *	6.00%

* Includes Inflation at:	3.25%
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**TABLE 9**

**SOLVENCY TEST  
COMPARATIVE SUMMARY OF ACCRUED LIABILITY AND  
ACTUARIAL VALUE OF ASSETS**  
(\$ Amounts in Thousands)

Valuation as of June 30	(1) Active Member Contributions	(2) Retirees and Beneficiaries	(3) Active Member Employer Financed	Actuarial Value of Assets	Portion of Accrued Liability Covered by Valuation Assets		
					(1)	(2)	(3)
2010	\$ 11,850,031	\$ 40,284,383	\$ 26,871,014	\$ 59,306,848	100 %	100 %	27 %
2009	11,087,345	37,112,318	27,321,073	59,781,575	100	100	42
2008	10,532,683	34,617,953	25,695,001	60,922,157	100	100	61
2007	10,183,433	31,603,788	24,708,649	57,057,838	100	100	62
2006	9,571,668	29,117,164	25,938,529	52,464,726	100	100	53
2005	9,116,347	27,051,245	25,058,989	51,219,293	100	100	60

**POSTEMPLOYMENT BENEFITS OTHER THAN PENSIONS**

Valuation as of June 30	(1) Active Member Contributions	(2) Retirees and Beneficiaries	(3) Active Member Employer Financed	Actuarial Value of Assets	Portion of Accrued Liability Covered by Valuation Assets		
					(1)	(2)	(3)
2010	\$ 0	\$ 767,587	\$ 394,632	\$ 116,831	N/A	15 %	0 %
2009	0	759,891	399,164	105,114	N/A	14	0
2008	0	749,070	383,941	95,785	N/A	13	0
2007	0	684,677	373,415	97,292	N/A	14	0
2006	0	684,435	371,719	92,777	N/A	14	0

**TABLE 10****HISTORY AND PROJECTION OF CONTRIBUTION RATES AND FUNDED RATIOS<sup>1</sup>**

Fiscal Year Ending June	Appropriation Payroll (thousands)	Contribution Rates <sup>2</sup>							Funded Ratio
		Employee	Employer Normal Cost	Employer Unfunded Liability	Preliminary Employer Pension	Final Employer Pension	Employer Health Insurance	Total Employer	
2000	\$ 8,939,598	5.72 %	6.40 %	(2.04) %	4.36 %	4.36 %	0.25 %	4.61 %	123.8 %
2001	9,414,884	5.77	6.29	(4.65)	1.64	1.64	0.30	1.94	114.4
2002 <sup>3</sup>	9,378,944	6.43	5.63	(6.05)	(0.42)	0.00	1.09	1.09	104.8
2003 <sup>4</sup>	9,652,881	7.10	7.20	(10.03)	1.00	0.18	0.97	1.15	97.2
2004	10,030,705	7.08	7.25	(4.27)	2.98	2.98	0.79	3.77	91.2
2005 <sup>5</sup>	11,062,589	7.12	7.48	(7.10)	0.38	4.00	0.23	4.23	83.7
2006	11,505,093	7.16	7.61	(4.28)	3.33	4.00	0.69	4.69	81.2
2007 <sup>6</sup>	11,821,951	7.21	6.62	(0.95)	5.67	5.72	0.74	6.46	85.8
2008	12,881,244	7.25	6.68	(0.24)	6.44	6.44	0.69	7.13	86.0
2009	12,500,000	7.29	6.68	(3.37)	3.31	4.00	0.76	4.76	79.2
2010 <sup>7</sup>	12,899,000	7.32	7.35	(3.72)	3.63	4.00	0.78	4.78	<b>75.1</b>
2011 <sup>7,8</sup>	13,510,000	7.34	8.08	(0.50)	7.58	5.00	0.64	5.64	71.4
<b>2012<sup>9</sup></b>	<b>14,112,000</b>	<b>7.37</b>	<b>8.12</b>	<b>10.15</b>	<b>18.27</b>	<b>8.00</b>	<b>0.65</b>	<b>8.65</b>	68.0
2013 <sup>9</sup>	14,565,146	7.39	8.05	11.28	19.33	11.50	0.69	12.19	64.9
2014 <sup>9</sup>	15,031,927	7.40	7.72	12.98	20.70	16.00	0.69	16.69	62.5
2015 <sup>9</sup>	15,528,583	7.42	7.42	14.53	21.95	20.50	0.68	21.18	60.8
2016	16,058,316	7.43	7.14	15.86	23.00	23.00	0.66	23.66	59.3
2017	16,624,603	7.44	6.89	16.96	23.85	23.85	0.65	24.50	57.5
2018	17,226,433	7.45	6.65	17.99	24.64	24.64	0.63	25.27	56.3
2019	17,869,493	7.46	6.43	19.19	25.62	25.62	0.62	26.24	57.1
2020	18,555,740	7.47	6.21	20.15	26.36	26.36	0.60	26.96	58.0
2021	19,283,872	7.47	6.02	20.37	26.39	26.39	0.57	26.96	59.0
2022	20,054,674	7.47	5.84	20.62	26.46	26.46	0.57	27.03	60.3

1. The projection of contribution rates is based on the assumption that there are no changes in demographic assumptions, no changes in benefit provisions, and no actuarial gains or losses other than gains or losses on the actuarial value of assets that result from recognizing currently deferred gains or losses on the market value of assets.
2. In general, the Preliminary Employer Pension Rate equals the sum of the rates for the Employer Normal Cost and the Unfunded Liability; and the Final Employer Pension Rate is the greater of the Preliminary Pension Rate and any Pension Rate Floor stated in the Retirement Code. The Total Employer Rate is the sum of the Final Employer Pension Rate and the Employer Health Insurance Rate.
3. For fiscal years ending on or before June 30, 2002, there was no floor specified in the Retirement Code, but the Final Employer Pension Rate could not be less than 0%, since money can only be removed from the trust for purposes allowed by the Retirement Code.
4. Act 2002-38 amended the Retirement Code to place a permanent 1% floor on the Employer Pension Rate, but also provided that the Total Employer Rate for the year ending June 30, 2003 could not exceed 1.15%, resulting in a 0.18% Final Employer Pension Rate (the Total Employer Rate of 1.15% minus the 0.97% Employer Health Insurance Rate).
5. Act 2003-40 amended the Retirement Code to increase the Employer Pension Rate Floor from 1% to 4%.
6. Revised actuarial assumptions based on a five-year experience review ending June 30, 2005 were used to determine the contributions for the fiscal year ending June 30, 2007. Since the benefit changes under Act 2001-9 had not been in effect throughout the entire period covered by the study the Board decided, at its December 2005 meeting, to delay making any changes to the retirement rate assumptions until further data became available. The 5.72% Final Employer Pension Rate equals the 6.46% Total Employer Rate certified by the Board at that meeting, minus the 0.74% Employer Health Insurance Rate. The 5.67% Preliminary Employer Pension Rate equals the sum of the Employer Normal Cost and Unfunded Liability rates. The Normal Cost and Unfunded Liability rates were calculated by the actuary in January 2006, based on the package of assumptions adopted at the December 2005 meeting.
7. The Board at its January 2009 meeting adopted to reduce the interest rate from 8.50% to 8.25% for the June 30, 2008 valuation and to 8.00% thereafter.
8. Act 2010-46 recertified the fiscal year ending June 30, 2011 pension rate from 7.58% to 5.00%.
9. The Final Employer Pension rate is limited by the Act 2010-120 pension rate collar.

**TABLE 11**

**HISTORY AND PROJECTION OF  
ANNUITANTS, BENEFICIARIES, SURVIVOR ANNUITANTS AND  
ACTIVE MEMBERS**

Valuation as of June 30	New Annuitants During the Year	Annuitant Deaths During the Year	Annuitants at End of Year	Beneficiaries and Survivor Annuitants at End of Year	Total Annuitants, Beneficiaries and Survivor Annuitants	Active Members
2001			125,880	6,836	132,716	243,311
2002			134,300	7,114	141,414	242,616
2003			138,383	7,310	145,693	246,700
2004			143,997	7,555	151,552	247,901
2005			148,727	7,792	156,519	255,465
2006			153,757	8,056	161,813	263,350
2007			159,760	8,266	168,026	264,023
2008			165,091	8,449	173,540	272,690
2009			169,919	8,044	177,963	279,701
<b>2010</b>			<b>176,210</b>	<b>8,724</b>	<b>184,934</b>	<b>282,041</b>
2011	15,756	4,837	187,129	9,226	196,355	282,041
2012	12,919	4,936	195,112	9,701	204,813	282,041
2013	12,936	5,154	202,894	10,138	213,032	282,041
2014	12,852	5,372	210,374	10,548	220,922	282,041
2015	12,589	5,572	217,391	10,941	228,332	282,041
2016	11,966	5,771	223,586	11,324	234,910	282,041
2017	11,645	5,982	229,249	11,699	240,948	282,041
2018	11,428	6,185	234,492	12,071	246,563	282,041
2019	11,425	6,376	239,541	12,445	251,986	282,041
2020	11,380	6,580	244,341	12,822	257,163	282,041

\* The number for the first year of the projection reflects the assumption that all Active members age 74 and above, and that all vested inactive members who have reached superannuation age retire immediately.

**TABLE 12**

**DESCRIPTION OF ACTUARIAL ASSUMPTIONS AND METHODS**

**ASSUMPTIONS**

**Interest Rate:** 8.00% per annum, compounded annually (adopted as of June 30, 2009). The components are 3.25% for inflation and 4.75% for the real rate of return. Actuarial equivalent benefits are determined based on 4% (since 1960).

**Separation from Service:** Illustrative rates of assumed separation from service are shown in the following table. (Rates of non-vested withdrawal, of death, and of disability were adopted as of June 30, 2005; other rates were adopted as of June 30, 2000):

Age	Annual Rate of:						
	Non-Vested Withdrawal	Vested Withdrawal*		Death	Disability	Early Retirement**	Superannuation Retirement
		Less Than 10 Years of Service	10 or More Years of Service				
<b>MALES</b>							
25	12.40%	5.50%	1.40%	.042%	.024%		
30	10.00	3.00	1.40	.057	.024		
35	11.00	3.00	1.10	.062	.100		
40	11.00	3.00	.80	.072	.180		
45	11.00	3.00	.50	.100	.180		
50	11.00	3.00	1.78	.152	.280		24.00%
55	10.50	3.00	3.50	.252	.430	10.00	24.00
60	10.00	2.40	4.50	.467	.580	10.00	28.00
65				.870	.100		20.00
69				1.335	.100		20.00
<b>FEMALES</b>							
25	14.10%	9.50%	4.00%	.019%	.040%		
30	14.10	7.50	4.00	.023	.040		
35	14.10	5.50	2.00	.031	.080		
40	10.90	3.50	1.00	.043	.130		
45	10.90	3.00	.55	.061	.180		
50	10.90	3.00	1.50	.085	.250		10.00%
55	10.90	3.00	3.00	.146	.480	10.00	10.00
60	10.90	3.50	5.90	.284	.480	15.00	25.00
65				.561	.160		28.00
69				.866	.160		20.00

\* Vested Withdrawal – At least 5 years service but not eligible for Early or Superannuation retirement.

\*\* Early Retirement – Age 55 with 25 years service, but not eligible for Superannuation retirement.

**Death after Retirement:** The Uninsured Pensioners 1994 Mortality Table (UP94) with mortality improvements projected 10 years, and with age set back one year for males and females, adopted in 2005, are used to project mortality for healthy annuitants and for dependent beneficiaries. Special mortality tables based on PSERS’ experience are used for disability retirements. (The 1995 George B. Buck Mortality Tables, rated forward one year for males and unadjusted for females, adopted in 2000, are used to determine actuarial equivalent benefits.)

**TABLE 12**

**DESCRIPTION OF ACTUARIAL ASSUMPTIONS AND METHODS**  
(Continued)

**Salary Increase:** Effective average of 6% per annum, compounded annually (adopted as of June 30, 2005). The components are 3.25% for inflation, 1% for real wage growth and 1.75% for merit or seniority increases. Representative values are as follows:

Age	Annual Rate of Salary Increase
20	12.00%
30	9.00
40	7.00
50	4.75
55	4.50
60	4.25
65	4.25
70	4.25

**MISCELLANEOUS**

**Option 4 Elections:** 100% of members are assumed to elect a refund of contributions and a reduced annuity.

**Withdrawal Annuity:** 90% of members are assumed to commence payment immediately and 10% are assumed to defer payment to superannuation age.

**Health Insurance**

**Elections:** 66% of eligible retirees are assumed to elect premium assistance.

**Administrative Expenses:** Assumed equal to 2% of contributions made during the year.

**METHODS**

**Calculations:** The actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the retirement system, and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the System.

**Asset Valuation Method:** A ten-year moving market average (five-year moving market average prior to June 30, 2010) value of assets that recognizes the 8.00% (8.25% prior to June 30, 2009 and 8.50% prior to June 30, 2008) actuarial expected investment return immediately and spreads the difference between the actual return on the market value of assets and the expected return on the actuarial value of assets over a period of ten years. The averaging period is being phased-in from fiscal year 2006.

## TABLE 12

### DESCRIPTION OF ACTUARIAL ASSUMPTIONS AND METHODS

(Continued)

**Actuarial Cost Method for Pension Funding:** Entry Age Normal Cost Method (modified slightly as of June 30, 2005 to use a pay-weighted average normal contribution rate). The results of each June 30 valuation normally determine the employer contribution rate for the second succeeding fiscal year. Act 120 revised the funding method effective with the June 30, 2010 valuation. Act 120 mandated that the outstanding balance of the unfunded accrued liability as of June 30, 2010, including changes in the unfunded accrued liability due to the funding reforms of Act 120, be amortized over a 24-year period, as a level percent of pay, beginning July 1, 2011. Future valuation gains and losses, and changes in the unfunded accrued liability resulting from changes in actuarial assumptions and methods, are amortized over a 24-year period, as a level percent of pay. Future increases in the unfunded accrued liability due to legislation will be amortized over a 10-year period, as a level percent of pay. Act 120 also modified the employer pension contribution requirements by imposing collars on the rate at which employer contributions may rise from year to year. For the fiscal years ending June 30, 2012, June 30, 2013, and on or after June 30, 2014 the pension contribution rate can be no more than 3%, 3.5% and 4.5%, respectively, of total compensation of all active members, greater than the prior year's final contribution rate. Beginning with the fiscal year in which the actuarially required contribution rate is less than the collared rate, the final contribution rate is the actuarially determined contribution rate, provided that the final contribution rate is not less than the employer normal contribution rate.

**Actuarial Cost Method for GASB 25 Accounting for Pensions:** Same as for pension funding, except that the GASB 25 amortization payment will be set equal to the level dollar amount that will amortize the unfunded accrued liability over a period of 30 years.

**Actuarial Cost Method for Health Insurance Funding:** The actuarial liability equals the assets in the health insurance account, and the results of the June 30 valuation determine the contribution rate for the second succeeding fiscal year. The rate so determined is the rate necessary to establish reserves sufficient to cover administrative expenses and provide premium assistance payments for all participating eligible annuitants during the third fiscal year that follows the valuation date.

**Actuarial Cost Method for GASB 43 Accounting for Health Insurance:** The actuarial liability is determined under the entry age actuarial cost method, and the Annual Required Contribution (ARC) for the second fiscal year that follows the valuation date is equal to the entry age normal cost for health insurance plus an amount that will amortize the entry age unfunded actuarial liability for health insurance over a period of 30 years.

#### **DATA**

**Census and Assets:** The valuation was based on members of the Retirement System as of June 30, 2010 and does not take into account future members. All census data was supplied by the Retirement System and was subject to reasonable consistency checks. The actuary adjusts the data to account for service and pay earned by members on or before the valuation that is not reported by the Retirement System until after the actuarial valuation is performed. Asset data was supplied by the Retirement System.

## TABLE 13

### SUMMARY OF BENEFIT AND CONTRIBUTION PROVISIONS

#### MEMBERSHIP

For valuation purposes, all employees are considered to be full coverage. All employees who become members on and after January 1, 1966 are members of the dual coverage group. Dual coverage members contribute to both PSERS and to Social Security.

#### BENEFITS

##### Superannuation Annuity

**Eligibility** Age 62, or age 60 with 30 years of service, or 35 years of service regardless of age. For Class T-E and Class T-F members, age 65 with a minimum of three years of service credit, or any combination of age and service that totals 92 with at least 35 years of credited service

**Amount** 2.5% of final average salary times years of school service and intervening military service. 2% of final average salary for non-school service, for members who do not elect Class T-D coverage, and for Class T-E members. Minimum of \$100 per year of service. "Final average salary" means the highest average annual salary for any 3 years of service.

Annual salary is subject to a limit of \$200,000, as adjusted under Section 401(a)(17). As of June 30, 2010, the adjusted limit is \$245,000.

For members who elect coverage under Class T-D, the maximum benefit is equal to the limit established by Section 415 of the Internal Revenue Code.

For Class T-E and Class T-F members, the maximum benefit is equal to the lesser of the limit established by Section 415 of the Internal Revenue Code or 100% of final average salary.

##### Early Retirement Annuity

**Eligibility** Age 55 with 25 years of service.

**Amount** Accrued benefit as of date of retirement, reduced 1/4% for each month by which commencement of payments precedes Superannuation Age.





**TABLE 13**

**SUMMARY OF BENEFIT AND CONTRIBUTION PROVISIONS**

(Continued)

**Death Benefit**

Eligibility	Death of an active member or vestee who was eligible to receive an annuity.
Amount	The present value of the annuity that would have been effective if the member retired on the day before death. Option 1 (see next page) assumed payable if no other option elected.

**Normal and  
Optional Forms  
of Benefits**

Normal Form:	Life annuity with a guaranteed payment equal to member contributions with interest.
Option 1:	Reduced benefit with refund of balance of present value of annuity at retirement over payments received. If balance is less than \$5,000, benefit is paid in lump sum; otherwise, beneficiary may elect annuity and/or lump sum.
Option 2:	Joint and 100% survivorship annuity.
Option 3:	Joint and 50% survivorship annuity.
Option 4:	Benefit of equivalent actuarial value, including lump sum payment of member contributions. Class T-E and Class T-F members can not elect to receive a lump sum payment of member contributions.

**Health Care Premium Assistance**

Eligibility	Retired members who: (a) have 24½ or more years of service, or (b) are disability annuitants, or (c) have 15 or more years of service and who both terminated school service and retired after attaining superannuation age and (d) participate in the PSERS health options program or in an employer-sponsored health insurance program.
Amount	Participating eligible annuitants receive health insurance premium assistance payments from the Health Insurance

### **TABLE 13**

## **SUMMARY OF BENEFIT AND CONTRIBUTION PROVISIONS**

(Continued)

Account equal to the lesser of \$100 per month or the actual monthly premium. All administrative expenses necessary to operate the health insurance premium assistance program are to be funded by the Health Insurance Account. The Health Insurance Account is credited with contributions of the Commonwealth and the employers.

### **CONTRIBUTIONS**

#### **By Members**

Members who elected coverage under Class T-D and who were most recently enrolled prior to July 22, 1983 contribute at a rate of 6½% of compensation, while members who elected coverage under Class T-D and who were most recently enrolled on or after July 22, 1983 contribute at a rate of 7½% of compensation. Members who did not elect coverage under Class T-D and who were most recently enrolled prior to July 22, 1983 contribute at a rate of 5¼% of compensation, while members who did not elect coverage under Class T-D and who were most recently enrolled on or after July 22, 1983 and prior to July 1, 2001 contribute at a rate of 6¼% of compensation. Anyone who enrolls or re-enrolls on or after July 1, 2001 automatically has coverage under class T-D for subsequent school service and subsequent intervening military service, and must contribute at a rate of 7½% of compensation. Reduction in rate for a joint coverage member: 40% of Social Security tax, exclusive of disability and medical coverage portion.

The base contribution rate for Class T-E members is 7½% of compensation. The base contribution rate for Class T-F members is 10.3% of compensation. Class T-E and Class T-F members are subject to a “shared-risk” employee contribution rate. Members benefit when investments of the fund are doing well and share some of the risk when investments underperform. The member contribution rate will stay within the specified range allotted for Class T-E or Class T-F, but could increase or decrease every three years starting July 1, 2015 depending on investment performance. The member contribution rate can never go below the base rate of 7.5% for Class T-E members and 10.3% for Class T-F members, nor above 9.5% for Class T-E members and 12.3% for class T-F members. If the investment rate of return (less investment fees) is equal to or exceeds the assumed rate of return based on the prior ten-year period, the member contribution rate will

**TABLE 13**

**SUMMARY OF BENEFIT AND CONTRIBUTION PROVISIONS**

(Continued)

decrease by .5%. Likewise, the member contribution rate will increase by .5% if the investment rate of return (less investment fees) during the ten-year period is 1.0% or more below the assumed rate of return. If the Retirement System is fully funded at the time of the comparison, the member contribution rate reverts back to the base rate for the Class. There shall not be an increase in the member contribution rate if there has not been an equivalent increase in the employer contribution rate over the previous three-year period. Until a full ten-year look back period is available, the investment return measurement period will begin on July 1, 2011.

By Commonwealth and  
School Districts

Balance of required contribution determined as normal contribution, accrued liability contribution, supplemental annuity contribution, experience adjustment factor and premium assistance contribution, is funded by the Commonwealth and the School Districts.

**TABLE 14**

**SUMMARY OF MEMBERSHIP DATA  
AS OF JUNE 30, 2010**

(\$ Amounts in Thousands)

Item	Male	Female	Total
Number of Members	76,992	205,049	282,041
Annual Salaries **	\$ 3,908,918	\$ 8,879,929	\$ 12,788,847
Average Age ***	44.2	44.6	44.5
Average Service ***	10.9	10.3	10.5

\* Excludes 111,931 inactive members and vestees.

\*\* The salaries shown in the table above represent an annual rate of pay for the year ended June 30, 2010 for members who were in active service on June 30, 2010.

\*\*\* Average completed years of age and service.

**ANNUITANTS AND BENEFICIARIES**

Item	Number	Annual Annuities #	Average Annuities	Average Age
Annuitants (Normal, Early and Withdrawal)	168,238	\$ 4,112,076	\$ 24,442	69.7
Survivors and Beneficiaries	8,724	91,316	10,467	76.6
Disabled Annuitants	<u>7,972</u>	<u>136,247</u>	17,091	63.1
Total	184,934	\$ 4,339,639	\$ 23,466	69.7

# The annuities shown in the table above represent the annual amount payable as of July 1, 2010 for participants who were in payment on June 30, 2010.

**EXHIBIT I**

**ACTIVE MEMBERSHIP DATA AS OF JUNE 30, 2010  
NUMBER AND AVERAGE ANNUAL SALARY**

Age	Service									Total	
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+		
<b>Under 25</b>	9,777 \$29,192	63 \$30,273									9,840 \$29,199
<b>25-29</b>	22,076 \$37,847	7,500 \$49,583	58 \$37,228								29,634 \$40,816
<b>30-34</b>	10,626 \$35,204	15,230 \$52,702	4,188 \$60,500	23 \$42,862							30,067 \$47,597
<b>35-39</b>	9,246 \$28,450	7,991 \$49,271	11,765 \$63,069	2,549 \$69,761	60 \$47,557						31,611 \$49,965
<b>40-44</b>	10,881 \$23,721	7,233 \$41,101	6,969 \$58,083	7,055 \$71,987	2,147 \$71,329	65 \$49,193					34,350 \$47,289
<b>45-49</b>	10,973 \$21,911	8,826 \$34,138	6,419 \$45,500	4,204 \$61,920	5,176 \$72,012	1,843 \$69,273	128 \$45,097				37,569 \$42,596
<b>50-54</b>	8,258 \$21,648	8,270 \$33,038	7,991 \$41,275	5,069 \$52,754	4,291 \$65,094	4,623 \$73,410	3,268 \$73,985	104 \$49,736			41,874 \$45,730
<b>55-59</b>	5,505 \$22,161	5,505 \$33,757	6,253 \$41,887	5,599 \$51,482	5,361 \$59,870	3,496 \$68,671	5,998 \$78,918	1,972 \$79,560	29 \$49,475		39,718 \$51,632
<b>60-64</b>	3,201 \$19,676	2,910 \$31,199	2,744 \$38,971	2,810 \$46,494	2,971 \$53,431	1,847 \$59,368	1,204 \$67,940	1,139 \$81,494	322 \$81,814		19,148 \$44,951
<b>Over 64</b>	2,420 \$13,648	1,623 \$21,779	1,145 \$28,075	871 \$34,321	758 \$39,689	548 \$42,097	410 \$44,708	239 \$49,539	216 \$77,448		8,230 \$28,003
<b>Total</b>	92,963 \$28,542	65,151 \$42,270	47,532 \$51,023	28,180 \$59,020	20,764 \$63,468	12,422 \$67,867	11,008 \$74,585	3,454 \$77,223	567 \$78,497		282,041 \$45,344

**EXHIBIT II**

**THE NUMBER AND AVERAGE ANNUAL ANNUITY  
AS OF JUNE 30, 2010**

**RETIRED ON ACCOUNT OF SUPERANNUATION, EARLY RETIREMENT AND  
THOSE IN RECEIPT OF WITHDRAWAL ANNUITIES**

Age	Years of Service									Total
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
<b>Under 50</b>		2,958	1,243	355	116	24	2			4,698
		\$832	\$1,984	\$4,883	\$9,585	\$12,489	\$28,599			\$1,716
<b>50-54</b>		908	965	483	260	143	75	18		2,852
		\$1,520	\$1,955	\$4,380	\$10,034	\$21,686	\$36,043	\$36,276		\$5,013
<b>55-59</b>		1,094	1,750	987	693	1,088	4,693	2,779	8	13,092
		\$25,236	\$2,342	\$6,392	\$12,893	\$29,320	\$46,266	\$57,798	\$41,412	\$34,848
<b>60-64</b>	926	1,002	3,373	2,334	2,150	3,359	12,263	10,843	390	36,640
	\$42,260	\$3,457	\$3,438	\$8,841	\$18,053	\$29,717	\$42,570	\$55,702	\$64,488	\$37,235
<b>65-69</b>	998	1,380	3,359	3,173	3,108	3,880	10,325	6,601	786	33,610
	\$13,096	\$3,335	\$4,435	\$9,250	\$16,514	\$26,086	\$35,712	\$49,296	\$61,045	\$28,459
<b>70-74</b>	850	1,075	2,726	2,791	3,077	3,492	5,520	4,334	898	24,763
	\$2,902	\$2,756	\$4,105	\$7,979	\$12,829	\$20,837	\$30,437	\$38,554	\$50,527	\$21,466
<b>75-79</b>	672	1,035	2,557	2,543	2,823	3,129	3,771	2,672	1,096	20,298
	\$1,745	\$2,038	\$3,562	\$6,476	\$11,071	\$17,736	\$26,512	\$36,162	\$42,305	\$17,665
<b>80-84</b>	563	952	2,317	2,397	2,639	2,604	2,343	1,816	837	16,468
	\$1,029	\$1,758	\$3,332	\$6,281	\$10,972	\$16,661	\$23,261	\$30,818	\$40,542	\$14,681
<b>85-89</b>	453	647	1,516	1,733	1,602	1,476	1,048	1,015	380	9,870
	\$1,633	\$1,606	\$3,345	\$6,109	\$10,264	\$15,052	\$19,636	\$25,041	\$35,322	\$11,704
<b>Over 89</b>	233	478	1,006	981	888	778	585	638	360	5,947
	\$2,142	\$1,942	\$3,635	\$6,420	\$9,864	\$13,540	\$18,432	\$22,071	\$27,063	\$10,977
<b>Total</b>	4,695	11,529	20,812	17,777	17,356	19,973	40,625	30,716	4,755	168,238
	\$12,281	\$4,183	\$3,444	\$7,356	\$13,117	\$22,066	\$36,047	\$47,192	\$46,751	\$24,442

**EXHIBIT III**

**THE NUMBER AND AVERAGE ANNUAL ANNUITY  
AS OF JUNE 30, 2010**

**BENEFICIARIES AND SURVIVOR ANNUITANTS**

Age	Years of Service								Total
	0-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
<b>Under 50</b>	107	31	25	31	26	19	9	8	256
	\$12,111	\$1,739	\$3,469	\$5,166	\$6,639	\$13,174	\$16,412	\$10,208	\$8,690
<b>50-54</b>	93	19	24	23	13	15	11	12	210
	\$13,947	\$2,053	\$2,984	\$5,607	\$9,085	\$16,698	\$11,967	\$13,609	\$10,477
<b>55-59</b>	220	20	22	32	36	56	34	11	431
	\$17,126	\$3,875	\$3,901	\$6,038	\$11,481	\$15,528	\$14,456	\$8,749	\$13,830
<b>60-64</b>	285	35	32	36	52	122	105	21	688
	\$19,532	\$2,329	\$3,743	\$6,802	\$12,860	\$14,776	\$17,558	\$12,443	\$15,391
<b>65-69</b>	256	45	56	50	66	159	138	33	803
	\$15,040	\$2,728	\$5,141	\$6,984	\$11,513	\$17,663	\$22,072	\$14,884	\$14,590
<b>70-74</b>	276	92	86	89	76	155	148	58	980
	\$11,020	\$3,337	\$4,726	\$7,046	\$11,443	\$14,123	\$19,141	\$19,121	\$11,615
<b>75-79</b>	280	105	115	109	100	194	162	105	1,170
	\$9,482	\$2,829	\$4,423	\$7,153	\$9,081	\$12,965	\$15,291	\$20,792	\$10,533
<b>80-84</b>	381	144	139	159	164	187	220	105	1,499
	\$7,894	\$2,636	\$3,948	\$6,537	\$8,688	\$11,806	\$12,639	\$16,415	\$8,747
<b>85-89</b>	365	149	142	132	153	161	245	86	1,433
	\$14,654	\$2,475	\$3,712	\$5,787	\$7,656	\$9,608	\$11,336	\$14,141	\$9,574
<b>Over 89</b>	341	132	94	94	87	124	208	174	1,254
	\$5,095	\$2,139	\$3,422	\$4,951	\$7,267	\$7,561	\$9,179	\$10,348	\$6,449
<b>Total</b>	2,604	772	735	755	773	1,192	1,280	613	8,724
	\$12,100	\$2,603	\$4,033	\$6,294	\$9,235	\$12,901	\$14,404	\$14,888	\$10,467



**EXHIBIT IV**

**THE NUMBER AND AVERAGE ANNUAL ANNUITY  
AS OF JUNE 30, 2010**

**RETIRED ON ACCOUNT OF DISABILITY**

Age	Years of Service									Total
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
<b>Under 50</b>	260	166	89	44	13			1		573
	\$11,965	\$14,210	\$19,074	\$25,591	\$29,832			\$17,996		\$15,182
<b>50-54</b>	232	175	155	115	92	18	1	1		789
	\$10,761	\$12,565	\$16,014	\$23,339	\$35,661	\$41,153	\$29,567	\$19,808		\$17,658
<b>55-59</b>	285	317	266	267	288	154	2			1,579
	\$9,885	\$11,924	\$16,568	\$23,807	\$36,290	\$47,971	\$24,728			\$22,283
<b>60-64</b>	317	357	330	330	412	223	6	5		1,980
	\$8,000	\$10,386	\$14,177	\$22,437	\$32,195	\$43,746	\$19,415	\$27,980		\$21,011
<b>65-69</b>	203	262	224	257	200	66	3			1,215
	\$5,770	\$8,171	\$10,954	\$18,441	\$26,526	\$35,494	\$48,105			\$15,059
<b>70-74</b>	130	183	165	141	94	25	2	2		742
	\$5,351	\$7,336	\$9,258	\$14,661	\$21,862	\$29,101	\$42,997	\$13,521		\$11,494
<b>75-79</b>	92	132	126	96	57	12	1	1		517
	\$4,022	\$6,100	\$8,779	\$12,607	\$19,057	\$23,251	\$43,179	\$10,304		\$9,498
<b>80-84</b>	64	117	60	60	40	3	1	1		346
	\$3,403	\$5,624	\$8,295	\$12,964	\$17,413	\$24,627	\$24,751	\$54,601		\$8,674
<b>85-89</b>	38	33	20	33	23	7	1	1		156
	\$3,663	\$6,524	\$7,658	\$11,070	\$15,410	\$17,587	\$41,784	\$6,789		\$8,968
<b>Over 89</b>	12	19	18	9	8	9				75
	\$3,295	\$5,280	\$8,478	\$10,585	\$15,721	\$19,865				\$9,230
<b>Total</b>	1,633	1,761	1,453	1,352	1,227	517	18	11		7,972
	\$8,324	\$9,828	\$13,173	\$19,842	\$30,161	\$41,703	\$30,752	\$23,495		\$17,091

**EXHIBIT V**

**ANNUITANT AND BENEFICIARY MEMBERSHIP DATA  
AS OF JUNE 30, 2010**

**NUMBER AND AVERAGE ANNUAL BENEFIT  
EXCLUDES PARTIAL LUMP SUM PAYMENTS**

Age Last Birthday	Number	Annual Benefit (Thousands)	Average Annual Benefit
<b>Annuitants (Normal, Early and Withdrawal)</b>			
Under 60	20,642	\$ 478,587	\$ 23,185
60 - 64	36,640	1,364,281	37,235
65 - 69	33,610	956,493	28,459
70 - 74	24,763	531,575	21,466
75 - 79	20,298	358,574	17,665
Over 79	32,285	422,566	13,089
Total	168,238	\$ 4,112,076	\$ 24,442
<b>Survivors and Beneficiaries</b>			
Under 60	897	\$ 10,386	\$ 11,579
60 - 64	688	10,589	15,391
65 - 69	803	11,716	14,590
70 - 74	980	11,383	11,615
75 - 79	1,170	12,324	10,533
Over 79	4,186	34,918	8,342
Total	8,724	\$ 91,316	\$ 10,467
<b>Disabled Annuitants</b>			
Under 60	2,941	\$ 57,816	\$ 19,659
60 - 64	1,980	41,602	21,011
65 - 69	1,215	18,297	15,059
70 - 74	742	8,528	11,494
75 - 79	517	4,910	9,498
Over 79	577	5,094	8,828
Total	7,972	\$ 136,247	\$ 17,091
<b>Grand Total Average Annual Benefit</b>	184,934	\$ 4,339,639	\$ 23,466

**EXHIBIT VI**

**10 YEAR HISTORY OF MEMBERSHIP DATA**

Valuation as of June 30	Number of Active Members	Percentage Change in Membership	Total Annual Payroll (Thousands)	Percentage Change in Payroll
2010	282,041	0.84%	\$ 12,788,847	2.11%
2009	279,701	2.57%	12,524,593	5.06%
2008	272,690	3.28%	11,921,469	4.48%
2007	264,023	0.26%	11,410,257	(0.08%)
2006	263,350	3.09%	11,419,049	8.47%
2005	255,465	3.05%	10,527,668	4.95%
2004	247,901	0.49%	10,030,705	3.91%
2003	246,700	1.68%	9,652,881	2.92%
2002	242,616	(0.29%)	9,378,944	(0.38%)
2001	243,311	3.89%	9,414,884	5.32%

**EXHIBIT VI**  
(Continued)

**10 YEAR HISTORY OF MEMBERSHIP DATA**

**THE NUMBER AND ANNUAL ANNUITIES OF  
ANNUITANT AND SURVIVOR ANNUITANT MEMBERS**

Year Ended June 30	Number	Annual Annuities (Millions)	Average Annual Annuities	Additions*	Annual Annuities* (Millions)	Deletions*	Annual Annuities* (Millions)	Percentage Change in Membership	Percentage Change in Annuities
2010	184,934	\$ 4,339.6	\$ 23,466	10,911	\$ 575.2	3,940	\$ 77.6	3.92%	8.59%
2009	177,963	3,996.3	22,456	9,651	314.9	5,228	74.4	2.55%	4.85%
2008	173,540	3,811.5	21,963	10,911	345.3	5,397	73.9	3.28%	8.18%
2007	168,026	3,523.4	20,970	10,612	307.5	4,399	56.0	3.84%	7.60%
2006	161,813	3,274.5	20,236	10,637		5,343		3.38%	8.16%
2005	156,519	3,027.6	19,343	10,050		5,083		3.28%	8.20%
2004	151,552	2,798.2	18,464	10,526		4,667		4.02%	9.94%
2003	145,693	2,545.1	17,469	9,079		4,800		3.03%	13.20%
2002	141,414	2,248.3	15,899	13,003		4,305		6.55%	20.10%
2001	132,716	1,872.0	14,105	3,140		4,482		-1.00%	0.00%

\* The annual annuities added and deleted are for the annuitants and survivor annuitants who were added and deleted. Changes in annuities for continuing payees may also occur due to finalization of benefit calculations and due to the commencement of supplemental annuity payments.

**EXHIBIT VII**

**DETAILED TABULATIONS OF THE DATA**

**TABLE 1**

**THE NUMBER AND ANNUAL SALARIED  
OF MEMBERS IN ACTIVE SERVICE DISTRIBUTED BY  
AGE AS OF JUNE 30, 2010**

Age	Male		Female		Total	
	Number	Salaries	Number	Salaries	Number	Salaries
17	6	\$ 59,073	3	\$ 22,125	9	\$ 81,198
18	25	325,137	11	117,221	36	442,358
19	82	1,126,097	69	664,514	151	1,790,612
20	168	2,401,793	131	1,400,153	299	3,801,945
21	237	3,294,855	210	2,726,385	447	6,021,241
22	357	7,598,556	714	17,178,558	1,071	24,777,114
23	841	23,189,087	2,364	72,419,953	3,205	95,609,040
24	1,273	40,158,753	3,349	114,638,537	4,622	154,797,290
25	1,496	51,436,449	3,888	142,107,258	5,384	193,543,708
26	1,507	55,949,496	4,153	162,642,294	5,660	218,591,790
27	1,581	63,104,118	4,443	182,794,755	6,024	245,898,873
28	1,780	74,863,522	4,495	195,091,237	6,275	269,954,759
29	1,780	79,877,503	4,511	201,667,461	6,291	281,544,964
30	1,921	88,689,026	4,534	204,574,787	6,455	293,263,812
31	1,840	88,384,281	4,334	199,989,555	6,174	288,373,836
32	1,824	90,821,495	4,028	189,700,083	5,852	280,521,578
33	1,831	93,576,861	4,057	192,642,754	5,888	286,219,615
34	1,833	97,580,514	3,865	185,129,807	5,698	282,710,321
35	1,792	96,578,931	3,935	189,214,063	5,727	285,792,995
36	1,789	100,012,246	3,895	186,857,482	5,684	286,869,728
37	1,948	109,829,694	4,182	195,758,797	6,130	305,588,491
38	2,001	115,761,126	4,666	217,937,037	6,667	333,698,163
39	2,147	123,260,458	5,256	244,242,102	7,403	367,502,560
40	1,933	114,324,285	5,245	243,710,858	7,178	358,035,143
41	1,911	111,949,123	5,055	224,226,913	6,966	336,176,036
42	1,750	104,331,999	4,969	213,119,087	6,719	317,451,086
43	1,725	98,814,980	5,019	210,314,334	6,744	309,129,313
44	1,768	101,902,198	4,975	201,691,152	6,743	303,593,350
45	1,734	95,190,481	5,415	212,903,300	7,149	308,093,781
46	1,810	99,898,365	5,672	216,094,412	7,482	315,992,777
47	1,771	95,149,539	5,570	216,908,701	7,341	312,058,240
48	1,767	94,811,425	5,780	226,413,764	7,547	321,225,189
49	1,907	101,974,458	6,143	240,936,850	8,050	342,911,307
50	1,891	100,737,640	5,843	229,299,083	7,734	330,036,723
51	1,998	105,766,239	6,142	251,479,478	8,140	357,245,718
52	2,049	110,811,602	6,420	275,835,216	8,469	386,646,818
53	2,157	121,535,395	6,658	295,133,297	8,815	416,668,692
54	2,139	121,085,358	6,577	303,205,210	8,716	424,290,568
55	2,216	126,688,285	6,545	313,512,726	8,761	440,201,011
56	2,023	115,248,349	6,420	319,767,338	8,443	435,015,687

**TABLE 1  
(Continued)**

**THE NUMBER AND ANNUAL SALARIED  
OF MEMBERS IN ACTIVE SERVICE DISTRIBUTED BY  
AGE AS OF JUNE 30, 2010**

Age	Male		Female		Total	
	Number	Salaries	Number	Salaries	Number	Salaries
57	2,056	\$ 118,085,763	6,138	\$ 313,762,932	8,194	\$ 431,848,696
58	1,984	111,257,049	5,702	290,265,497	7,686	401,522,546
59	1,674	94,321,515	4,960	247,804,953	6,634	342,126,468
60	1,473	77,636,557	4,004	191,817,830	5,477	269,454,386
61	1,356	70,252,471	3,420	153,919,202	4,776	224,171,673
62	1,011	46,528,321	2,570	107,478,567	3,581	154,006,888
63	1,014	43,767,965	2,428	98,464,136	3,442	142,232,101
64	612	25,405,677	1,260	45,445,167	1,872	70,850,844
65	504	18,310,737	1,031	35,255,235	1,535	53,565,972
66	440	14,076,801	773	25,163,539	1,213	39,240,340
67	432	14,121,695	642	19,227,921	1,074	33,349,616
68	355	10,477,056	522	13,562,199	877	24,039,255
69	249	6,597,358	383	8,843,955	632	15,441,313
70	259	6,810,746	318	7,736,885	577	14,547,631
71	185	5,107,604	260	5,581,767	445	10,689,370
72	167	4,396,927	228	5,072,983	395	9,469,910
73	142	3,448,158	175	3,976,779	317	7,424,936
74	110	2,605,274	157	2,720,537	267	5,325,811
75	77	1,540,640	118	2,308,814	195	3,849,454
76	69	1,475,862	99	1,871,614	168	3,347,476
77	46	1,199,382	83	1,573,818	129	2,773,200
78	39	789,790	62	1,056,489	101	1,846,279
79	45	920,912	52	898,633	97	1,819,545
80	27	587,476	28	522,022	55	1,109,498
81	17	272,594	20	261,120	37	533,714
82	12	329,465	22	363,118	34	692,584
83	7	88,031	16	290,371	23	378,402
84	5	77,183	14	169,445	19	246,629
85	10	148,431	17	317,694	27	466,125
86	4	115,936	5	75,984	9	191,921
87	3	65,627	1	51,763	4	117,389
<b>Total</b>	76,992	3,908,917,795	205,049	8,879,929,602	282,041	12,788,847,397

**TABLE 2**

**THE NUMBER AND ANNUAL SALARIES  
OF MEMBERS IN ACTIVE SERVICE DISTRIBUTED BY  
YEARS OF CREDITED SERVICE AS OF JUNE 30, 2010**

Service	Male		Female		Total	
	Number	Salaries	Number	Salaries	Number	Salaries
0	5,526	\$ 78,773,017	10,419	\$ 158,472,077	15,945	\$ 237,245,095
1	5,873	162,240,739	15,995	400,109,362	21,868	562,350,101
2	5,001	171,458,601	14,653	431,275,073	19,654	602,733,674
3	4,430	171,335,644	13,808	443,497,996	18,238	614,833,639
4	4,266	178,458,235	12,992	457,748,305	17,258	636,206,540
5	3,969	177,957,802	11,633	433,250,818	15,602	611,208,621
6	3,491	166,733,204	10,356	408,984,724	13,847	575,717,928
7	3,155	157,367,503	9,132	369,738,219	12,287	527,105,722
8	3,094	157,238,879	8,771	363,863,741	11,865	521,102,620
9	2,899	152,559,663	8,651	366,225,841	11,550	518,785,504
10	2,651	144,545,388	8,328	366,087,901	10,979	510,633,288
11	3,124	183,815,209	8,226	386,977,385	11,350	570,792,594
12	2,593	153,634,772	6,702	323,287,616	9,295	476,922,388
13	2,615	163,373,909	6,109	306,966,211	8,724	470,340,120
14	2,045	129,120,558	5,139	267,410,358	7,184	396,530,916
15	1,816	118,474,682	4,673	250,076,632	6,489	368,551,315
16	1,612	104,115,564	4,245	234,782,748	5,857	338,898,312
17	1,955	133,217,695	4,417	250,475,170	6,372	383,692,865
18	1,354	90,414,203	3,620	211,915,264	4,974	302,329,467
19	1,140	74,583,726	3,348	195,130,621	4,488	269,714,347
20	1,172	78,722,867	3,357	202,878,816	4,529	281,601,683
21	1,247	83,402,881	3,270	197,446,293	4,517	280,849,175
22	1,158	78,508,100	3,139	193,621,890	4,297	272,129,990
23	1,098	75,533,360	2,778	175,662,284	3,876	251,195,645
24	956	66,507,479	2,589	165,557,245	3,545	232,064,723
25	853	58,925,877	2,251	147,747,263	3,104	206,673,139
26	785	54,692,112	1,798	118,315,363	2,583	173,007,475
27	770	51,460,792	1,612	109,160,516	2,382	160,621,307
28	622	43,181,095	1,483	102,150,476	2,105	145,331,571
29	668	47,219,706	1,580	110,187,014	2,248	157,406,720
30	727	54,565,427	1,757	125,332,242	2,484	179,897,669
31	794	59,908,832	1,715	123,418,542	2,509	183,327,374
32	695	54,840,926	1,521	113,196,378	2,216	168,037,304
33	677	53,587,630	1,333	99,065,532	2,010	152,653,162
34	624	49,146,628	1,165	87,974,216	1,789	137,120,844
35	410	32,731,927	731	53,847,095	1,141	86,579,022
36	360	29,446,385	601	45,093,312	961	74,539,697
37	219	19,428,218	397	29,470,620	616	48,898,837
38	182	14,852,525	276	20,036,676	458	34,889,202
39	123	10,885,204	155	10,934,919	278	21,820,123



**TABLE 2**  
(Continued)

**THE NUMBER AND ANNUAL SALARIES  
OF MEMBERS IN ACTIVE SERVICE DISTRIBUTED BY  
YEARS OF CREDITED SERVICE AS OF JUNE 30, 2010**

Service	Male		Female		Total	
	Number	Salaries	Number	Salaries	Number	Salaries
40	87	\$ 7,959,674	108	\$ 7,637,299	195	\$ 15,596,973
41	48	4,103,730	68	4,794,173	116	8,897,903
42	37	3,267,899	44	2,902,420	81	6,170,319
43	19	1,484,390	25	1,660,114	44	3,144,505
44	19	1,986,367	26	1,712,378	45	3,698,745
45	8	713,207	11	742,066	19	1,455,273
46	8	935,057	6	484,623	14	1,419,680
47	7	631,543	6	457,013	13	1,088,556
48	1	40,925	9	698,924	10	739,849
49	3	302,575	5	421,170	8	723,745
50	2	169,854	3	152,846	5	322,700
51	3	319,092	2	182,321	5	501,413
52			3	179,672	3	179,672
54			1	90,143	1	90,143
55			2	148,475	2	148,475
56	1	36,520	2	110,917	3	147,437
57			1	41,593	1	41,593
58			1	70,877	1	70,877
64			1	69,823	1	69,823
<b>Total</b>	76,992	3,908,917,795	205,049	8,879,929,602	282,041	\$ 12,788,847,397

**TABLE 3**

**THE NUMBER AND ANNUAL ANNUITIES  
OF ANNUITANTS ON THE RETIRED LIST  
AS OF JUNE 30, 2010**

**RETIRED ON ACCOUNT OF SUPERANNUATION, EARLY RETIREMENT AND  
THOSE IN RECEIPT OF WITHDRAWAL ANNUITIES**

Age	Male		Female		Totals	
	Number	Annuities	Number	Annuities	Number	Annuities
24	1	\$ 67			1	\$ 67
25	1	596	1	\$ 221	2	817
26			2	739	2	739
27			6	1,590	6	1,590
28	7	3,750	7	2,177	14	5,927
29	5	3,195	19	9,276	24	12,471
30	22	16,350	28	14,386	50	30,736
31	16	9,690	41	21,214	57	30,904
32	37	27,960	53	33,938	90	61,898
33	35	25,388	70	43,439	105	68,827
34	50	41,609	89	67,940	139	109,549
35	36	30,698	103	72,291	139	102,989
36	61	60,047	117	93,070	178	153,117
37	53	51,227	129	118,555	182	169,782
38	61	80,298	133	129,699	194	209,997
39	85	123,884	167	203,303	252	327,187
40	81	132,500	186	237,033	267	369,533
41	88	163,298	168	219,890	256	383,188
42	68	138,691	176	281,902	244	420,593
43	108	245,792	215	328,725	323	574,517
44	97	241,501	206	331,414	303	572,915
45	98	245,997	212	359,992	310	605,989
46	103	358,988	255	419,870	358	778,858
47	127	362,518	268	492,321	395	854,839
48	113	357,106	263	576,625	376	933,731
49	134	566,829	297	713,581	431	1,280,410
50	141	677,006	322	699,988	463	1,376,994
51	148	736,718	342	981,452	490	1,718,170
52	177	834,138	387	1,315,654	564	2,149,792
53	176	1,275,871	496	2,531,984	672	3,807,855
54	202	2,133,137	461	3,111,681	663	5,244,818
55	239	3,787,920	616	7,841,075	855	11,628,995
56	443	12,036,848	1,061	25,458,093	1,504	37,494,941
57	713	28,003,581	1,621	52,236,610	2,334	80,240,191
58	1,071	44,992,676	2,439	89,641,457	3,510	134,634,133
59	1,554	68,722,009	3,335	123,508,115	4,889	192,230,124
60	1,851	83,450,354	3,796	143,802,212	5,647	227,252,566
61	2,231	99,496,472	4,052	152,849,920	6,283	252,346,392
62	2,779	117,817,935	4,689	170,304,848	7,468	288,122,783

**TABLE 3**  
(Continued)

**THE NUMBER AND ANNUAL ANNUITIES  
OF ANNUITANTS ON THE RETIRED LIST  
AS OF JUNE 30, 2010**

**RETIRED ON ACCOUNT OF SUPERANNUATION, EARLY RETIREMENT AND  
THOSE IN RECEIPT OF WITHDRAWAL ANNUITIES**

Age	Male		Female		Totals	
	Number	Annuities	Number	Annuities	Number	Annuities
63	3,583	\$ 141,403,311	5,741	\$ 188,770,457	9,324	\$ 330,173,768
64	3,121	118,638,922	4,797	147,746,381	7,918	266,385,303
65	2,671	96,174,425	4,026	118,129,485	6,697	214,303,910
66	2,622	90,172,791	4,075	108,921,125	6,697	199,093,916
67	2,803	93,086,889	4,402	110,307,880	7,205	203,394,769
68	2,786	89,760,384	4,202	98,483,592	6,988	188,243,976
69	2,231	66,680,289	3,792	84,776,462	6,023	151,456,751
70	1,987	58,043,208	3,377	70,166,372	5,364	128,209,580
71	1,813	47,880,900	3,237	62,803,020	5,050	110,683,920
72	1,818	46,647,447	3,193	59,574,932	5,011	106,222,379
73	1,755	43,984,053	2,988	51,359,063	4,743	95,343,116
74	1,702	42,599,647	2,893	48,516,163	4,595	91,115,810
75	1,567	36,566,341	2,771	41,939,726	4,338	78,506,067
76	1,498	34,447,755	2,549	38,434,743	4,047	72,882,498
77	1,450	32,465,627	2,436	35,202,998	3,886	67,668,625
78	1,493	33,384,583	2,561	36,351,424	4,054	69,736,007
79	1,366	31,731,291	2,607	38,049,749	3,973	69,781,040
80	1,299	27,086,801	2,417	33,445,122	3,716	60,531,923
81	1,124	21,973,702	2,275	28,807,712	3,399	50,781,414
82	1,026	19,505,690	2,340	28,709,880	3,366	48,215,570
83	1,006	17,785,923	2,138	25,743,116	3,144	43,529,039
84	882	16,206,852	1,961	22,504,314	2,843	38,711,166
85	792	14,065,536	1,707	17,761,605	2,499	31,827,141
86	632	10,588,675	1,651	17,105,601	2,283	27,694,276
87	521	7,958,001	1,395	13,667,629	1,916	21,625,630
88	417	5,975,931	1,276	12,193,853	1,693	18,169,784
89	328	4,900,377	1,151	11,297,202	1,479	16,197,579
90	278	3,863,668	1,051	9,944,772	1,329	13,808,440
91	169	2,369,433	775	7,400,494	944	9,769,927
92	166	2,045,874	748	7,432,415	914	9,478,289
93	126	1,435,553	595	5,928,339	721	7,363,892
94	101	1,228,566	448	4,550,924	549	5,779,490
95	58	751,424	353	3,929,384	411	4,680,808
96	43	667,873	278	3,184,002	321	3,851,875
97	26	405,525	207	2,602,476	233	3,008,001
98	21	294,449	175	2,453,704	196	2,748,153
99	9	104,391	104	1,364,578	113	1,468,969
100	6	134,861	71	972,765	77	1,107,626
101	9	186,013	51	790,430	60	976,443
102	2	29,324	26	388,401	28	417,725

**TABLE 3**  
(Continued)

**THE NUMBER AND ANNUAL ANNUITIES  
OF ANNUITANTS ON THE RETIRED LIST  
AS OF JUNE 30, 2010**

**RETIRED ON ACCOUNT OF SUPERANNUATION, EARLY RETIREMENT AND  
THOSE IN RECEIPT OF WITHDRAWAL ANNUITIES**

Age	Male		Female		Totals	
	Number	Annuities	Number	Annuities	Number	Annuities
103	2	\$ 50,989	23	\$ 350,997	25	\$ 401,986
104			16	237,145	16	237,145
105			3	54,168	3	54,168
106			1	18,920	1	18,920
107			1	16,204	1	16,204
108			4	80,331	4	80,331
109			1	13,580	1	13,580
<b>Total</b>	58,521	\$ 1,730,535,938	109,717	2,381,539,917	168,238	\$ 4,112,075,855

**TABLE 3**  
(Continued)

**THE NUMBER AND ANNUAL ANNUITIES  
OF ANNUITANTS ON THE RETIRED LIST  
AS OF JUNE 30, 2010**

**RETIRED ON ACCOUNT OF SUPERANNUATION, EARLY RETIREMENT AND  
THOSE IN RECEIPT OF WITHDRAWAL ANNUITIES**

OPTION	MALE		FEMALE	
Maximum	29,189	\$ 889,639,389	70,073	\$ 1,489,362,735
1	8,112	190,328,989	21,034	383,955,356
2	11,933	320,466,302	10,399	257,002,098
3	8,138	278,626,117	7,701	231,141,400
4	<u>1,149</u>	<u>51,475,141</u>	<u>510</u>	<u>20,078,328</u>
	58,521	\$ 1,730,535,938	109,717	\$ 2,381,539,917

**DEFINITIONS OF OPTIONS**

- Option 1    A life annuity to the member with a guaranteed payment to the beneficiary equal to the present value of the total maximum single life annuity less any amounts paid to the member prior to death.
  
- Option 2    A joint and one hundred percent (100%) survivor annuity payable during the lifetime of the member with the full amount of such annuity payable thereafter to the designated survivor annuitant, if living at the member's death.
  
- Option 3    A joint and fifty percent (50%) survivor annuity payable during the lifetime of the member with one-half of such annuity payable thereafter to the designated survivor annuitant, if living at the member's death.
  
- Option 4    A life annuity to the member with a special death benefit other than the normal option 1, 2, or 3 death benefit.

**TABLE 4**

**THE NUMBER AND ANNUAL ANNUITIES  
OF BENEFICIARIES AND SURVIVOR ANNUITANTS  
AS OF JUNE 30, 2010**

Age	Male		Female		Totals	
	Number	Annuities	Number	Annuities	Number	Annuities
9	1	\$ 2,416			1	\$ 2,416
10	1	16,914			1	16,914
11			1	\$ 2,727	1	2,727
12						
13						
14						
15			1	2,751	1	2,751
16	1	2,775			1	2,775
17			2	9,620	2	9,620
18			1	1,614	1	1,614
19	2	10,125	2	2,266	4	12,391
20			1	483	1	483
21	1	1,497			1	1,497
22			1	3,484	1	3,484
23	2	9,737	2	24,567	4	34,304
24	1	2,483	2	6,576	3	9,060
25			4	37,035	4	37,035
26	3	19,285	1	16,131	4	35,416
27	1	5,289			1	5,289
28	3	28,235	3	23,371	6	51,606
29	2	14,518	4	81,714	6	96,232
30	3	3,683	2	9,679	5	13,363
31	2	1,996	2	29,687	4	31,683
32	5	42,452	2	4,878	7	47,330
33	4	8,353	3	11,418	7	19,771
34	2	8,515	1	13,554	3	22,068
35	6	78,326	3	26,535	9	104,862
36	4	20,978	4	10,061	8	31,040
37	2	5,101	5	14,541	7	19,642
38	4	42,931	2	11,641	6	54,572
39	3	20,648	8	34,062	11	54,709
40	5	33,362	3	22,405	8	55,766
41	4	21,471	9	94,554	13	116,025
42	3	8,706	6	29,547	9	38,253
43	10	58,492	9	90,292	19	148,784
44	7	42,198	7	41,856	14	84,054
45	5	58,504	7	48,203	12	106,707
46	6	25,315	12	69,330	18	94,645
47	5	40,838	14	198,410	19	239,249
48	4	38,168	11	84,483	15	122,650
49	8	53,300	11	440,609	19	493,910

**TABLE 4**  
(Continued)

**THE NUMBER AND ANNUAL ANNUITIES  
OF BENEFICIARIES AND SURVIVOR ANNUITANTS  
AS OF JUNE 30, 2010**

Age	Male		Female		Totals	
	Number	Annuities	Number	Annuities	Number	Annuities
50	7	\$ 43,166	16	\$ 151,115	23	\$ 194,281
51	8	29,550	37	339,356	45	368,906
52	6	33,449	36	426,436	42	459,885
53	5	25,033	41	370,785	46	395,818
54	15	202,043	39	579,272	54	781,315
55	11	201,804	70	820,646	81	1,022,449
56	13	257,063	49	945,296	62	1,202,358
57	25	289,101	82	932,371	107	1,221,472
58	22	210,231	60	757,363	82	967,594
59	27	459,586	72	1,087,221	99	1,546,807
60	25	308,548	87	1,306,646	112	1,615,194
61	25	400,610	92	1,216,730	117	1,617,340
62	33	537,774	115	1,923,278	148	2,461,052
63	32	395,430	129	2,245,481	161	2,640,910
64	35	667,631	115	1,586,984	150	2,254,615
65	26	463,560	115	1,729,215	141	2,192,774
66	39	585,966	104	1,617,901	143	2,203,867
67	45	449,773	130	1,735,570	175	2,185,343
68	35	531,938	139	2,100,382	174	2,632,320
69	34	508,665	136	1,992,540	170	2,501,206
70	24	259,622	150	1,707,315	174	1,966,937
71	35	443,139	140	1,910,520	175	2,353,659
72	30	459,250	173	2,022,053	203	2,481,302
73	35	213,222	178	2,055,698	213	2,268,919
74	27	294,917	188	2,016,830	215	2,311,747
75	35	305,607	171	1,980,734	206	2,286,341
76	33	371,627	187	2,167,460	220	2,539,087
77	33	332,256	190	2,233,170	223	2,565,426
78	28	297,340	207	2,010,534	235	2,307,874
79	42	350,407	244	2,274,822	286	2,625,229
80	50	515,335	247	2,346,524	297	2,861,859
81	32	226,474	228	2,254,178	260	2,480,652
82	40	336,756	266	2,265,719	306	2,602,474
83	48	465,001	277	2,253,604	325	2,718,605
84	46	356,461	265	2,092,152	311	2,448,613
85	50	418,056	259	2,037,671	309	2,455,727
86	47	408,089	270	1,998,993	317	2,407,082
87	42	335,404	238	1,695,686	280	2,031,090
88	42	300,335	233	1,752,412	275	2,052,747
89	35	245,605	217	4,527,843	252	4,773,448

**TABLE 4**  
(Continued)

**THE NUMBER AND ANNUAL ANNUITIES  
OF BENEFICIARIES AND SURVIVOR ANNUITANTS  
AS OF JUNE 30, 2010**

Age	Male		Female		Totals	
	Number	Annuities	Number	Annuities	Number	Annuities
90	27	\$ 244,116	204	\$ 1,345,504	231	\$ 1,589,620
91	27	198,593	153	996,043	180	1,194,636
92	28	214,656	172	1,071,257	200	1,285,913
93	18	124,371	130	748,618	148	872,989
94	18	106,803	99	597,513	117	704,316
95	13	82,050	72	510,057	85	592,107
96	8	106,019	75	463,435	83	569,454
97	5	21,557	55	337,736	60	359,293
98	6	64,234	29	161,026	35	225,260
99	9	55,812	29	181,868	38	237,681
100	2	24,224	24	154,748	26	178,972
101	2	9,204	18	117,074	20	126,278
102			10	50,763	10	50,763
103	1	6,320	5	35,423	6	41,743
104			4	18,351	4	18,351
105			5	20,727	5	20,727
106			2	4,569	2	4,569
107			1	2,803	1	2,803
108	1	1,200	1	9,271	2	10,471
109			1	591	1	591
<b>Total</b>	1,497	\$ 15,521,595	7,227	\$ 75,793,962	8,724	\$ 91,315,557



**TABLE 5**

**THE NUMBER AND ANNUAL ANNUITIES  
OF ANNUITANTS ON THE RETIRED LIST  
AS OF JUNE 30, 2010**

**RETIRED ON ACCOUNT OF DISABILITY**

Age	Male		Female		Totals	
	Number	Annuities	Number	Annuities	Number	Annuities
28	1	\$ 16,731			1	\$ 16,731
31			1	\$ 21,627	1	21,627
32			4	70,199	4	70,199
33			3	57,350	3	57,350
34	1	25,037	7	84,425	8	109,461
35	2	29,414	4	53,321	6	82,735
36	1	9,262	7	125,662	8	134,924
37	4	70,584	9	148,535	13	219,119
38	2	31,437	10	124,336	12	155,772
39	3	51,248	10	135,958	13	187,206
40	6	85,643	13	191,605	19	277,249
41	5	68,417	14	196,537	19	264,954
42	12	192,025	14	249,441	26	441,466
43	11	181,355	15	273,019	26	454,374
44	13	213,024	28	476,039	41	689,063
45	13	225,999	39	536,849	52	762,848
46	19	328,858	50	684,054	69	1,012,913
47	25	381,380	50	752,648	75	1,134,028
48	27	438,499	56	740,519	83	1,179,019
49	26	448,143	68	980,023	94	1,428,166
50	22	420,992	74	1,192,882	96	1,613,874
51	58	1,025,160	85	1,270,785	143	2,295,944
52	50	843,554	113	1,999,942	163	2,843,496
53	66	1,282,613	101	1,497,843	167	2,780,456
54	77	1,561,816	143	2,836,948	220	4,398,764
55	76	1,743,247	162	3,260,575	238	5,003,822
56	91	2,030,788	186	3,749,597	277	5,780,385
57	103	2,259,966	224	4,752,453	327	7,012,419
58	110	2,705,467	253	5,812,030	363	8,517,498
59	112	2,784,151	262	6,086,276	374	8,870,426
60	105	2,320,658	274	6,207,635	379	8,528,293
61	154	3,736,502	285	6,240,610	439	9,977,112
62	120	2,792,388	271	5,471,601	391	8,263,990
63	136	3,094,423	286	5,460,900	422	8,555,323
64	114	2,174,226	235	4,103,341	349	6,277,567
65	83	1,722,154	171	2,754,619	254	4,476,773
66	79	1,384,293	150	2,465,895	229	3,850,187
67	86	1,304,374	183	2,508,181	269	3,812,555
68	81	1,222,426	185	2,531,903	266	3,754,329

**TABLE 5**  
(Continued)

**THE NUMBER AND ANNUAL ANNUITIES  
OF ANNUITANTS ON THE RETIRED LIST  
AS OF JUNE 30, 2010**

**RETIRED ON ACCOUNT OF DISABILITY**

Age	Male		Female		Totals	
	Number	Annuities	Number	Annuities	Number	Annuities
69	50	\$ 614,026	147	\$ 1,789,369	197	\$ 2,403,395
70	53	756,344	139	1,536,687	192	2,293,031
71	46	636,922	95	1,111,142	141	1,748,064
72	53	623,189	94	951,209	147	1,574,397
73	42	497,803	98	1,161,775	140	1,659,578
74	40	444,978	82	808,317	122	1,253,295
75	31	404,544	101	874,952	132	1,279,496
76	27	323,246	78	746,890	105	1,070,136
77	37	459,527	60	440,745	97	900,272
78	16	126,902	86	842,812	102	969,714
79	21	208,190	60	482,598	81	690,788
80	14	153,143	66	488,047	80	641,190
81	23	293,743	55	433,332	78	727,075
82	12	126,936	66	513,074	78	640,009
83	18	258,562	32	221,256	50	479,817
84	16	143,239	44	369,751	60	512,990
85	13	132,602	36	331,002	49	463,604
86	2	11,890	24	194,470	26	206,360
87	5	48,926	26	225,391	31	274,317
88	6	53,304	22	189,314	28	242,618
89	3	34,623	19	177,533	22	212,155
90	1	4,614	17	161,467	18	166,081
91	5	51,573	10	70,203	15	121,776
92			11	141,631	11	141,631
93	1	15,658	8	72,435	9	88,093
94	1	7,175	8	59,940	9	67,115
95			4	30,464	4	30,464
96			1	10,511	1	10,511
97			6	47,992	6	47,992
98			1	11,458	1	11,458
99	1	7,150			1	7,150
<b>Total</b>	<b>2,431</b>	<b>\$ 45,645,064</b>	<b>5,541</b>	<b>\$ 90,601,928</b>	<b>7,972</b>	<b>\$ 136,246,992</b>

## EXHIBIT VIII

### GLOSSARY

<b>Accrued Liability</b>	The difference between (a) the present value of future plan benefits, and (b) the present value of future normal cost. It is the portion of the present value of future plan benefits attributable to service accrued as of the valuation date. Sometimes referred to as “actuarial accrued liability.”
<b>Accrued Service</b>	The service credited under the plan that was rendered before the date of the actuarial valuation.
<b>Actuarial Assumptions</b>	Estimates of future plan experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.
<b>Actuarial Cost Method</b>	A mathematical budgeting procedure for allocating the dollar amount of the “present value of future plan benefits” between the present value of future normal cost and the accrued liability. Sometimes referred to as the “actuarial funding method.”
<b>Actuarial Equivalent</b>	A series of payments is called an actuarial equivalent of another series of payments if the two series have the same actuarial present value.
<b>Actuarial Value of Assets</b>	The value of current plan assets recognized for valuation purposes. Based on a smoothed market value that recognizes investment gains and losses over a period of ten years.
<b>Amortization</b>	Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.
<b>Experience Gain (Loss)</b>	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, in accordance with the actuarial cost method being used.
<b>Normal Cost</b>	The annual cost assumed, under the actuarial funding method, for current and subsequent plan years. Sometimes referred to as “current service cost.”

## **EXHIBIT VIII**

### **GLOSSARY** (Continued)

<b>Present Value</b>	The amount of funds presently required to provide a payment or series of payments in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.
<b>Unfunded Accrued Liability</b>	The difference between the actuarial accrued liability and valuation assets.