

The Public School Employees' Retirement System of Pennsylvania

Actuarial Valuation
June 30, 2014



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January 14, 2015

The Retirement Board
Public School Employees'
Retirement System of Pennsylvania
5 North 5th. Street
Harrisburg, PA 17101

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, 2014.

The valuation takes into account all of the promised benefits to which members are entitled as of June 30, 2014, 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 2015/2016.

As required under Section 8502(j) of the Retirement Code, experience studies are performed once in every five-year period. This valuation was prepared on the basis of the demographic and economic assumptions that were selected on the basis of the July 1, 2005 to June 30, 2010 Experience Review and adopted by the Board of Trustees at their March 11, 2011 meeting, which include a 7.50% per annum rate of investment return. As mandated by the Retirement Code, these assumptions will remain in effect for valuation purposes until such time the Board of Trustees adopts revised assumptions.

The actuarial assumptions and methods for financial reporting meet the parameters set forth in Governmental Accounting Standards Board (GASB) Statements No. 25, 27, 43, and 50. The actuarial assumptions and methods used for GASB 25 and 27 disclosures are the same as those used for pension funding, except that the GASB 25 and 27 amortization payment is determined based on 30-year level-dollar amortization of the unfunded liability. The Health Insurance funding provisions of the Retirement Code differ from the GASB 43 disclosure requirements. 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 amortization of the unfunded liability. (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.)

Reporting requirements of Statements No. 67 and No. 68 are effective as of the June 30, 2014 and June 30, 2015 reporting dates, respectively. These requirements are provided under separate report.

Assets and Membership Data

The Retirement System reported the individual data for members of the Retirement System as of the valuation date to the actuaries. 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. The accuracy of the results presented in this report is dependent on the accuracy of the data.

Funding Adequacy

The valuation results indicate that the employer contribution rate for fiscal year 2015/2016 is 25.84%. As of June 30, 2014, the total funded ratio of the plan (for Pensions and Health Insurance combined) is 62.0%, 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

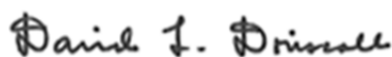
Detailed summaries of the financial results of the valuation and membership data used in preparing the valuation are shown in the valuation report. The actuaries prepared supporting schedules included in the Actuarial and Statistical Section of the PSERS Comprehensive Annual Financial Report (CAFR),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

Future actuarial measurements may differ significantly from current measurements due to plan experience differing from that anticipated by the economic and demographic assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements, and changes in plan provisions or applicable law. An analysis of the potential range of future results is beyond the scope of this valuation.

Use of this report for any other purpose or by anyone other than the Board or staff of PSERS may not be appropriate and may result in mistaken conclusions because of failure to understand applicable assumptions, methods, or inapplicability of the report for that purpose. No one may make any representations or warranties based on any statements or conclusions contained in this report without Buck Consultants' prior written consent.

David L. Driscoll is a Fellow of the Society of Actuaries and a Member of the American Academy of Actuaries. Edward Quinn and Salvador Nakar are Members of the American Academy of Actuaries. We meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. This report has been prepared in accordance with all applicable Actuarial Standards of Practice, and we are available to answer questions concerning it.


Respectfully submitted,



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The Public School Employees' Retirement System of Pennsylvania

Table of Contents

Table/Exhibit

| | |
|---|----|
| Executive Summary | 1 |
| Table 1 - Summary of Results of Actuarial Valuation as of June 30, 2014..... | 13 |
| Table 2 - Summary of Sources of Employer Contribution Rate as of June 30, 2014 | 14 |
| Table 3 - Determination of Health Insurance Contribution Rate for Fiscal Year 2015/2016..... | 15 |
| Table 4 - Summary of Market Value of Plan Assets as of June 30, 2014 | 16 |
| Table 5 - Derivation of Actuarial Value of Assets as of June 30, 2014..... | 17 |
| Table 6 - Analysis of Change in Unfunded Accrued Liability as of June 30, 2014 | 18 |
| Table 7 - Schedule of Funding Progress — GASB Statements No. 25 and 43 Disclosure..... | 19 |
| Table 8a - Schedule of Employer Contributions for Pensions - GASB Statement No. 27 Disclosure | 20 |
| Table 8b - Schedule of Employer Contributions for Postemployment Benefits Other than Pensions - GASB Statement No. 43 Disclosure | 21 |
| Table 9 - Solvency Test — Comparative Summary of Accrued Liability and Actuarial Value of Assets | 22 |
| Table 10 - History and Projection of Contribution Rates and Funded Ratios | 23 |
| Table 11 - History and Projection of Annuitants, Beneficiaries, Survivor Annuitants and Active Members | 24 |
| Table 12 - Description of Actuarial Assumptions and Methods | 25 |
| Table 13 - Summary of Benefit and Contribution Provisions | 28 |
| Table 14 - Summary of Membership Data as of June 30, 2014 | 32 |
| Exhibit I - Active Membership Data as of June 30, 2014 - Number and Average Annual Salary | 35 |
| Exhibit II - The Number and Average Annual Annuity as of June 30, 2014 – Retired on Account of Superannuation, Early Retirement and Those in Receipt of Withdrawal Annuities | 36 |
| Exhibit III - The Number and Average Annual Annuity as of June 30, 2014 – Beneficiaries and Survivor Annuitants | 37 |
| Exhibit IV - The Number and Average Annual Annuity as of June 30, 2014 - Retired on Account of Disability | 38 |
| Exhibit V - Annuitant and Beneficiary Membership Data as of June 30, 2014 | 39 |
| Exhibit VI - 10-Year History of Membership Data | 40 |
| Exhibit VII - Detailed Tabulations of the Data | 42 |
| Exhibit VIII - Glossary..... | 56 |

Executive Summary

This report presents the actuarial valuation as of June 30, 2014 for the Public School Employees' Retirement System of Pennsylvania.

The principal valuation results include:

- The employer contribution rate for fiscal year 2015/2016, which is 25.84%.
- The total funded ratio of the plan determined as of June 30, 2014 under the funding requirements of Section 8328 of the Retirement Code, which is 62.0% based on the accrued liability and the actuarial value of assets for Pensions and Health Insurance as of that date.
- The determination and analysis of actuarial experience in the year ending June 30, 2014, which consisted of a net experience loss of \$894 million.
- In accordance with the Act 120-2010 Class T-E and Class T-F "shared-risk" contribution provision, the contribution rates for Class T-E and Class T-F members shall remain at 7.50% and 10.30%, respectively, since:
 - The time-weighted rate of return, net of fees, for the three-year period ending June 30, 2014 is 8.66%, as calculated by Hewitt EnnisKnupp. The time-weighted rate of return, net of fees, is greater than 6.50% (the annual interest rate adopted by the Board over the 3 year period less 1.00%), and
 - The contribution rates for Class T-E and Class T-F members are currently at the minimum 7.50% and 10.30%, respectively.

The Act 120-2010 member shared-risk contribution rates are discussed on page 8

- Annual disclosures as of June 30, 2014 in accordance with Statement Nos. 25, 27 and 43 of the Governmental Accounting Standards Board (GASB). Although Statement No. 25 of the GASB has been superseded by Statement No. 67, information that would have been required to be disclosed under Statement No. 25 has been included in this report at the request of PSERS staff. Disclosures in accordance with Statement No. 67 have been provided under a separate report.

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 actuaries 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 benefit provisions and contribution provisions are summarized in Table 13. There were no legislative or administrative changes since the prior valuation.

Actuarial Assumptions and Methods

The actuarial assumptions and methods are outlined in Table 12. There have been no changes in the demographic or economic assumptions from those used in the prior valuation, with the exception of a decrease in the proportion of eligible participants who are assumed to elect Premium Assistance coverage from 66% to 65%. We have reviewed the assumptions and methods used in completing the June 30, 2014 actuarial valuation and believe that they are reasonable and in compliance with the applicable standards.

As required under Section 8502(j) of the Retirement Code, experience studies are performed once in every five-year period. This valuation was prepared on the basis of the demographic and economic assumptions that were selected on the basis of the July 1, 2005 to June 30, 2010 Experience Review and adopted by the Board at their March 11, 2011 meeting. Subsequent to the adoption of the current assumptions, new studies indicated that longevity had been increasing at a faster pace than had been previously expected. In view of this new evidence, we believe that it would be inappropriate to claim that the annuitant mortality assumption now in use incorporates a provision for improvements in longevity beyond the measurement date. It is beyond the scope of the current valuation to assess the possible implications. In any case, the System's practice of reviewing all demographic assumptions in experience studies conducted at five-year intervals provides ample opportunity to make any needed adjustments to this assumption, or any other, in a timely manner. The next such experience study will be performed as of June 30, 2015.

Contribution Rates

The results of the valuation as of June 30, 2014 determine the employer contribution rate for fiscal year 2015/2016. The calculated employer contribution rate for the 2015/2016 fiscal year is 25.84%, and the Board of Trustees certified this rate at their December 9, 2014 meeting.

The average contribution rate payable by the members is 7.49%. The average member contribution rate of 7.49% is a pay-weighted average of member rates that vary based on

date of hire and Class membership. 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 enrolled after July 1, 2001 and before July 1, 2011 is a member of Class T-D. Any employee who becomes a member after June 30, 2011 is a Class T-E member or, alternatively, may 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, as discussed on page 8.

Reasons for Change in the Rate Calculated by the Actuary

The employer contribution rate calculated by the actuary increased from 21.40% for fiscal year 2014/2015 to 25.84% for fiscal year 2015/2016. The reconciliation of the employer contribution rates by source is as follows:

| | |
|---|---------------|
| • FY 2014/2015 Act 120 final rate | 21.40% |
| • Deferral of FY 2014 pension contribution due to Act 120 4.5% collar | <u>5.47</u> |
| • FY 2014/2015 actual rate | 26.87% |
| • Decrease due to change in normal rate | (0.08) |
| • Net increase due to payroll growth and liability experience ¹ | 0.58 |
| • Increase due to actuarial loss on assets | 0.66 |
| • Increase due to deferral of FY 2013 pension contribution due to Act 120 4.5% collar | 0.69 |
| • Decrease due to change in health insurance contribution rate | (0.06) |
| • Deferral of FY 2016 pension contribution due to Act 120 4.5% collar | <u>(2.82)</u> |
| • FY 2015/2016 employer contribution rate | 25.84% |

1. Reflects increase from appropriation payroll less than expected partially offset by liability gains.

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, 2014. Comparable results from the June 30, 2013 valuation are also shown.

| Item | June 30, 2014 | June 30, 2013 |
|---|-------------------------|-------------------------|
| Demographics | | |
| Active Members | | |
| • Number | 263,312 | 267,428 |
| • Average Annual Pay | \$ 47,931 | \$ 47,030 |
| Annuitants | | |
| • Number ¹ | 213,900 | 207,553 |
| • Average Annual Benefit Payment | \$ 24,962 | \$ 24,799 |
| Contribution Rates (as a Percentage of Payroll) | | |
| | (Fiscal Year 2015/2016) | (Fiscal Year 2014/2015) |
| Employer Contribution Rate: | | |
| • Total Pension Rate Calculated by Actuaries | 27.82% | 25.97% |
| • Act 120 Employer Pension Rate After Application of Collar | 25.00 | 20.50 |
| • Health Insurance Contribution Rate | <u>0.84</u> | <u>0.90</u> |
| • Total Contribution Rate | 25.84% | 21.40% |
| • Total Contribution Rate Certified by Board | 25.84% | 21.40% |
| Member Average Contribution Rate | <u>7.49</u> | <u>7.46</u> |
| • Total Rate | 33.33% | 28.86% |
| Actuarial Funded Status² | | |
| • Accrued Liability | \$ 92,465.0 Mil | \$ 90,052.2 Mil |
| • Actuarial Value of Assets | <u>57,343.9</u> | <u>57,453.6</u> |
| • Unfunded Accrued Liability | \$ 35,121.1 | \$ 32,598.6 |
| • Funded Ratio | 62.0% | 63.8% |

1. In addition, there are 1,459 and 1,651 beneficiaries as of June 30, 2014 and June 30, 2013, respectively, who are only entitled to a pending lump sum distribution.
2. Pensions and Health Insurance combined.

Five-Year History of Principal Financial Results

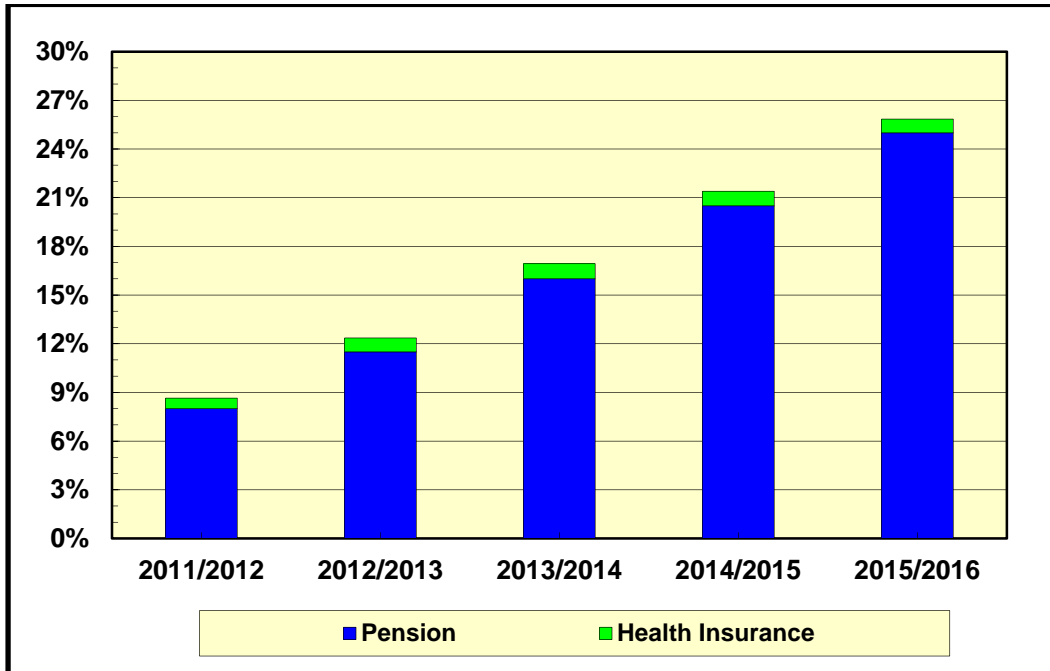
Five-Year History of Contribution Rates (As a % of Payroll)

| Fiscal Year | Member Contributions | Employer Contributions | | | | |
|-------------|----------------------|------------------------|----------------------------|------------------|-----------------------------------|--|
| | | Normal Cost | Unfunded Accrued Liability | Health Insurance | Preliminary Employer Contribution | Final Employer Contribution ¹ |
| 2015/2016 | 7.49% | 8.38% | 19.44% | 0.84% | 28.66% | 25.84% ² |
| 2014/2015 | 7.46 | 8.46 | 17.51 | 0.90 | 26.87 | 21.40 ² |
| 2013/2014 | 7.43 | 8.57 | 15.25 | 0.93 | 24.75 | 16.93 ² |
| 2012/2013 | 7.40 | 8.66 | 12.99 | 0.86 | 22.51 | 12.36 ² |
| 2011/2012 | 7.37 | 8.12 | 10.15 | 0.65 | 18.92 | 8.65 ² |

1. Certified by the Board.
2. Reflects Act 120 Pension Collar.

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-percent-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 based on level-percent-of-pay amortization.
- 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 budgetarily sound manner and within a financially responsible period of time.

The total contribution rate of 28.66% 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. However, Act 2010-120 limits the contribution for FY 2015/2016 to 25.84% of payroll. This has the effect of deferring part of the FY 2015/2016 contribution to future years.

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) to 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 62.0% as of June 30, 2014. This funded ratio is based on an actuarial value of assets of \$57.3 billion and an accrued liability of \$92.5 billion. The funded ratio for Pensions alone is 62.0% as of June 30, 2014, based on an actuarial value of assets of \$57.2 billion, and an accrued liability of \$92.4 billion.

Reasons for Change in the Total Funded Ratio

The total funded ratio decreased from 63.8% as of June 30, 2013 to 62.0% as of June 30, 2014. This decrease is primarily due to returns below expected levels on assets

measured at actuarial value and a fiscal-year 2014 employer contribution below its recommended level due to the limits imposed by Act 120. These effects were offset in part by experience gains from other sources. There was a net actuarial gain due to demographic experience. Table 6 provides an analysis of the change in the unfunded accrued liability as of June 30, 2014.

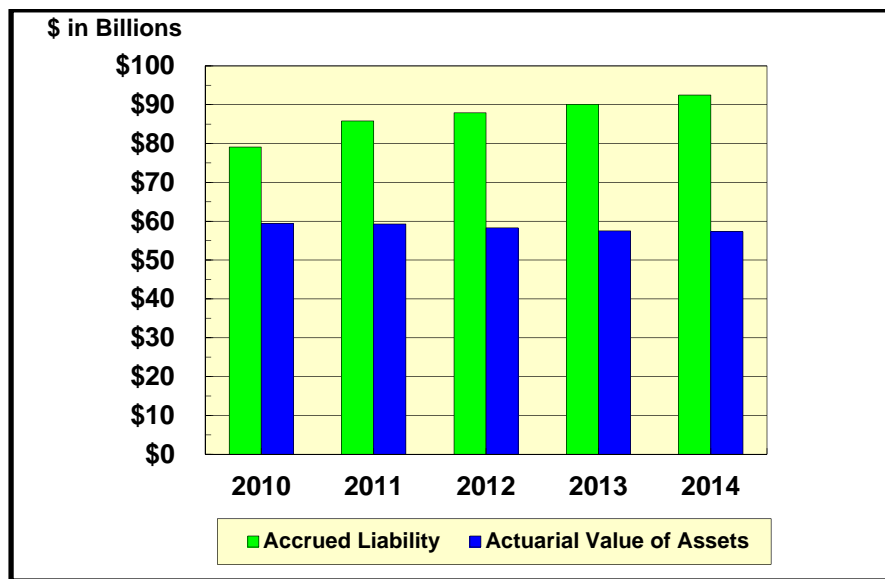
Five-Year History of Total Funded Ratio¹
(\$ Amounts in Millions)

| Valuation as of June 30 | Accrued Liability | Actuarial Value of Assets | Unfunded Accrued Liability | Funded Ratio |
|-------------------------|-------------------|---------------------------|----------------------------|--------------|
| 2014 | \$ 92,465.0 | \$ 57,343.9 | \$ 35,121.1 | 62.0% |
| 2013 | 90,052.2 | 57,453.6 | 32,598.6 | 63.8 |
| 2012 | 87,854.4 | 58,321.4 | 29,533.0 | 66.4 |
| 2011 | 85,751.6 | 59,252.4 | 26,499.2 | 69.1 |
| 2010 | 79,122.3 | 59,423.7 | 19,698.6 | 75.1 |

1. For Pensions and Health Insurance (under the funding provisions of the Retirement Code).

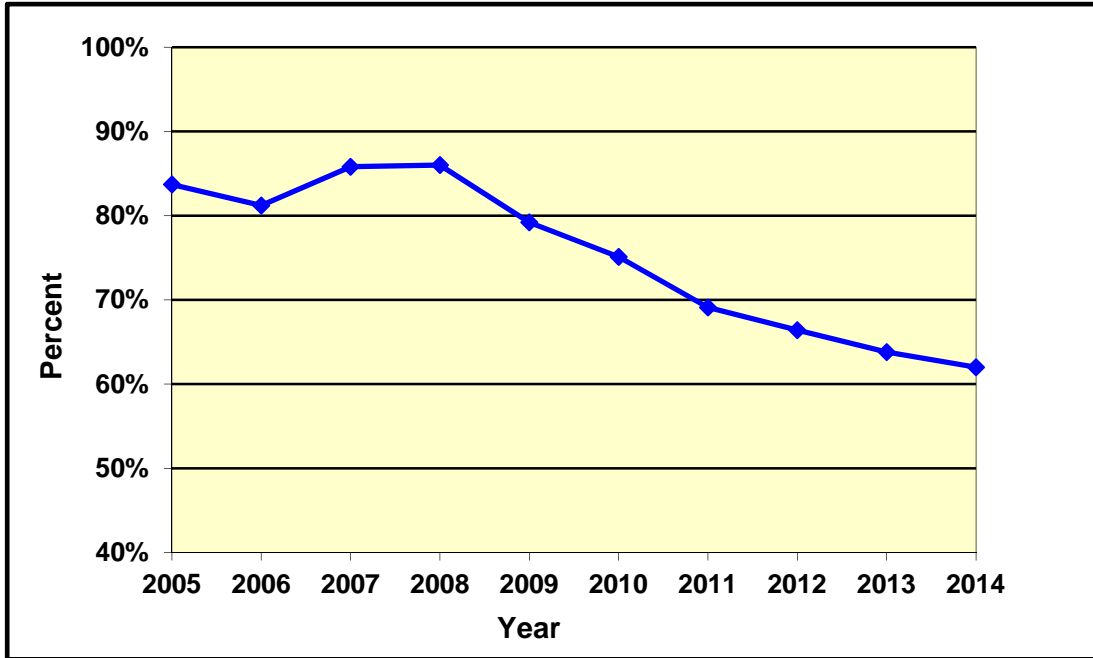
The following chart shows a five-year history of the accrued liability and the actuarial value of assets:

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



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

Ten-Year History of Total Funded Ratio (2005 – 2014)



Act 120-2010 Class T-E and Class T-F shared risk contributions

Commencing with the annual actuarial valuation for the period ending June 30, 2014, and every three years thereafter, the Board shall compare the actual investment rate of return, net of fees, to the annual interest rate adopted by the Board for the calculation of the normal contribution rate, based on the market value of assets, for the prior ten-year period. Until the Retirement System has a ten-year period of investment rate of return experience following June 30, 2011, the look-back period shall begin not earlier than June 30, 2011.

If the actual time-weighted investment rate of return, net of fees, is less than the annual interest rate adopted by the Board by an amount of 1% or more, the shared risk contribution rate of Class T-E and T-F members will increase by 0.5%. If the actual time-weighted investment rate of return, net of fees, is equal to or exceeds the annual interest rate adopted by the Board, the shared risk contributions rate of Class T-E and T-F members will decrease by 0.5%. The total member contribution rate for Class T-E members shall not be less than 7.5%, nor more than 9.5%. The total member contribution rate for Class T-F members shall not be less than 10.3%, nor more than 12.3%. If the

Retirement System's total funded ratio based on the actuarial value of assets is at least 100% as of the measurement date, the shared risk contribution rate shall be zero. In the event that the annual interest rate adopted by the Board for the calculation of the normal contribution rate is changed during the period used to determine the shared risk contribution rate, the Board, with the advice of the actuary, shall determine the applicable rate during the entire period, expressed as an annual rate. For any fiscal year in which the employer contribution rate is lower than the final contribution rate under section 8328(h), the total member contribution rate for Class T-E and T-F members shall be prospectively reset to the basic contribution rate. There shall be no increase in the member contribution rate if there has not been an equivalent increase to the employer contribution rate over the previous three-year period.

The time-weighted market rates of return net of fees, for the three-year period ending June 30, 2014 are as follows:

| Valuation as of June 30 | Time-Weighted Rate of Return (Market Value) ¹ |
|-------------------------|--|
| 2014 | 14.91% |
| 2013 | 7.96 |
| 2012 | 3.43 |
| Three-Year Average | 8.66% |

1. As provided by the Retirement System's investment consultant.

The time-weighted rate of return, net of fees, for the three-year period is 8.66% as calculated by Hewitt EnnisKnupp. Since the time-weighted rate of return exceeds 6.50% (the annual interest rate adopted by the Board over the 3-year period less 1.00%), the contribution rates for Class T-E and Class T-F members remain at 7.50% and 10.30%, respectively.

GASB No. 25 and 27 Disclosures

Statement Nos. 25 and 27 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 Nos. 25 and 27 beginning with the June 30, 1996 valuation.

Effective June 30, 2014, the requirements for GASB Statement No. 25 have been superseded by the disclosure requirements of GASB Statement No. 67. The disclosures

that would have been required under Statement No. 25 as of June 30, 2014, have been provided for information purposes only at PSERS' request. The required disclosures under Statement No. 67 have been provided in a separate report.

Statement No. 25 requires disclosure of the "schedule of funding progress" while Statement No. 27 requires disclosure of 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) to 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 62.0% as of June 30, 2014. This funded ratio is based on an actuarial value of pension assets of \$57.2 billion and an accrued liability for pensions of \$92.4 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 Statement No.25 disclosure requirements. As a result, there may be different determinations of contributions for GASB Statement No.25 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 27 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, different determinations of actuarial liability and contribution requirements are made 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, 2014, the health insurance assets were \$112,060,000, measured on a market value basis, while the GASB 43 health insurance liabilities were \$1,374,112,000, resulting in a funded ratio of 8.2%.

The GASB 43 schedule of employer contributions 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 2013/2014 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 amount recognized for valuation purposes. The actuarial value of

assets is based on a smoothed market value that spreads the recognition of differences between the actual and expected return over a period of ten 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 ¹ | Actuarial Value ² |
| 2013/2014 | 14.9% | 5.3% |
| 2012/2013 | 8.0 | 4.8 |
| 2011/2012 | 3.4 | 4.9 |
| 2010/2011 | 20.4 | 6.0 |
| 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 |

1. Market Value Rate of return provided by PSERS' investment consultants (Hewitt EnnisKnupp for 2013/2014 and Wilshire Associates for prior years).
2. Prior to fiscal year 2010/2011, the actuarial value of assets were based on a smoothed market value under which differences between the actual and expected return were recognized over a period of five years.

Table 1

**Summary of Results of Actuarial Valuation
as of June 30, 2014**
(\$ Amounts in Thousands)

| Item | June 30, 2014 | June 30, 2013 |
|---|-------------------------|-------------------------|
| Member Data | | |
| 1. Number of Members | | |
| a) Active Members | 263,312 | 267,428 |
| b) Vestees ¹ | 20,467 | 18,911 |
| c) Annuitants, Beneficiaries and Survivor Annuitants ² | 213,900 | 207,553 |
| d) Total | 497,679 | 493,892 |
| 2. Annualized Salaries (\$ Amounts in Thousands) ³ | \$ 12,620,862 | \$ 12,577,105 |
| 3. Annual Annuities (\$ Amounts in Thousands) | \$ 5,339,477 | \$ 5,147,060 |
| Valuation Results | | |
| 4. Present Value of Future Pension Benefits | | |
| a) Active Members | \$ 60,153,320 | \$ 59,347,835 |
| b) Inactive Members and Vestees | 1,521,474 | 1,379,601 |
| c) Annuitants, Beneficiaries and Survivor Annuitants | 51,425,295 | 49,979,444 |
| d) Total | \$ 113,100,089 | \$ 110,706,880 |
| 5. Present Value of Future Pension Normal Cost | | |
| a) Active Members | \$ 9,786,167 | \$ 9,826,502 |
| b) Employer | 10,960,939 | 10,928,562 |
| c) Total | \$ 20,747,106 | \$ 20,755,064 |
| 6. Pension Accrued Liability | | |
| a) Active Members (4a) - (5c) | \$ 39,406,214 | \$ 38,592,771 |
| b) Inactive Members and Vestees | 1,521,474 | 1,379,601 |
| c) Annuitants, Beneficiaries and Survivor Annuitants | 51,425,295 | 49,979,444 |
| d) Total | \$ 92,352,983 | \$ 89,951,816 |
| 7. Health Insurance Assets for Premium Assistance | \$ 112,060 | \$ 100,349 |
| 8. Total Accrued Liability for Funding (6) + (7) | \$ 92,465,043 | \$ 90,052,165 |
| 9. Actuarial Value of Assets | \$ 57,343,859 | \$ 57,453,611 |
| 10. Funded Status (9) / (8) | 62.0 % | 63.8 % |
| 11. Unfunded Accrued Liability (8) - (9) | \$ 35,121,184 | \$ 32,598,554 |
| 12. Total Normal Cost Rate | 15.87 % | 15.92 % |
| 13. Member Contribution Rate | 7.49 % | 7.46 % |
| 14. Employer Normal Cost Rate (12) - (13) | 8.38 % | 8.46 % |
| Employer Annual Funding Requirement | | |
| 15. Employer Contribution Rate Calculated by Actuaries | Fiscal 2015/2016 | Fiscal 2014/2015 |
| a) Normal | 8.38 % | 8.46 % |
| b) Unfunded Accrued Liability | 19.44 | 17.51 |
| c) Preliminary Pension Rate | 27.82 % | 25.97 % |
| d) Act 120 Employer Pension Rate Collar | 25.00 % | 20.50 % |
| e) Health Insurance | 0.84 | 0.90 |
| f) Total Rate | 25.84 % | 21.40 % |

1. In addition, there are 112,097 and 109,739 inactive members and non-members as of June 30, 2014 and June 30, 2013, respectively, who are no longer participating and are valued for their accumulated deductions only.

2. In addition, there are 1,459 and 1,651 beneficiaries as of June 30, 2014 and June 30, 2013, respectively, who are only entitled to a pending lump sum distribution.

3. The salaries shown represent an annual rate of pay for members who were in active service on the valuation date.

Table 2

Summary of Sources of Employer Contribution Rate
As of June 30, 2014
(\$ Amounts in Thousands)

| | Funding Period (Years) | Beginning July 1 | Initial Liability | 7/1/2014 Outstanding Balance | Annual Payment Amount | Annual Payment Percent ¹ |
|---|------------------------------|---------------------|----------------------|------------------------------------|--------------------------|--|
| 1. Amortization of: | | | | | | |
| a) Act 120 Fresh Start Unfunded Accrued Liability And Asset Method Change | 24 | 2011 | \$ 16,729,283 | \$ 18,065,725 | \$ 1,362,316 | 10.18% |
| b) 2010 Experience | 24 | 2011 | 3,419,297 | 3,779,956 | 285,042 | 2.13% |
| c) 2011 Experience | 24 | 2012 | 564,642 | 615,712 | 45,053 | 0.34% |
| d) 2011 Assumption Changes | 24 | 2012 | 4,592,397 | 5,007,768 | 366,430 | 2.74% |
| e) 2012 Experience | 24 | 2013 | 2,372,550 | 2,571,035 | 182,905 | 1.37% |
| e) 2013 Experience | 24 | 2014 | 2,707,494 | 2,910,556 | 201,668 | 1.51% |
| f) 2014 Experience | 24 | 2015 | 2,170,432 | <u>2,170,432</u> | <u>156,198</u> | <u>1.17%</u> |
| Total Amortization Payments | | | | \$ 35,121,184 | \$ 2,599,612 | 19.44% |
| 2. Employer Normal Cost Rate | | | | | | <u>8.38%</u> |
| 3. Preliminary Pension Rate (1) + (2) | | | | | | 27.82% |
| 4. Act 120 Fiscal Year 2016 Employer Pension Rate Collar | | | | | | 25.00% |
| 5. Health Insurance Rate | | | | | | <u>0.84%</u> |
| 6. Final Total Employer Contribution Rate Calculated by Actuary: Minimum of [(3) and (4)] + (5) | | | | | | 25.84% |

1. Based on estimated employer payroll for fiscal year ending 2016 of \$13,375,000.

Table 3
Determination of Health Insurance Contribution Rate
for Fiscal Year 2015/2016
(\$ Amounts in Thousands)

| Item | | | |
|--|----------------|----------------|-------------------|
| 1. June 30, 2014 Balance in Health Insurance Account | | \$ | 112,060 |
| 2. Estimated Fiscal 2014/2015 Contribution | | | |
| (a) Contribution Rate Certified in 2013 Valuation | | | 0.90% |
| (b) Estimated Fiscal 2014/2015 payroll | | \$ | <u>13,097,000</u> |
| (c) Estimated Contribution = (a) x (b) | | \$ | <u>117,873</u> |
| 3. Estimated Number of Annuitants who: | Are Eligible | | Elect Coverage |
| (a) Fiscal 2014/2015 | 141,600 | | 92,040 |
| (b) Fiscal 2015/2016 | 143,000 | | 92,950 |
| (c) Fiscal 2016/2017 | 144,400 | | 93,860 |
| 4. Estimated Disbursements: | Administration | Assistance | Total |
| (a) Fiscal 2014/2015 | \$ 2,412 | \$ 110,448 | \$ 112,860 |
| (b) Fiscal 2015/2016 | 2,236 | 111,540 | 113,776 |
| (c) Fiscal 2016/2017 | <u>2,314</u> | <u>112,632</u> | <u>114,946</u> |
| (d) Total | \$ 6,962 | \$ 334,620 | \$ 341,582 |
| 5. Required Fiscal 2015/2016 Contribution (4d) – (1) – (2c) | | | \$ 111,649 |
| 6. Required Health Insurance Contribution Rate | | | |
| (a) Estimated 2015/2016 Payroll | | \$ | 13,375,000 |
| (b) Required Health Insurance Contribution Rate (5) / (6a) (rounded up) | | | 0.84% |

Notes:

1. Current estimates of fiscal 2014/2015 membership payroll and administrative expenses, and of fiscal 2015/2016 administrative expenses, were provided by PSERS staff.
2. 65% of eligible annuitants are assumed to elect coverage. This decreased from the 66% used in the prior valuation.
3. Premium Assistance payments equal \$100 per month per eligible annuitant.
4. The estimated fiscal 2015 payroll in 2.(b) has been revised from \$13.482 billion to \$13.097 billion.

Table 4

Summary of Market Value of Plan Assets
as of June 30, 2014
(\$ Amounts in Thousands)

| | |
|---|----------------|
| Market Value | |
| 1. Market Value of Assets as of June 30, 2013 | \$ 49,115,910 |
| 2. Contributions During Fiscal 2013/2014 | 3,076,878 |
| 3. Disbursements During Fiscal 2013/2014 | 6,157,702 |
| 4. Investment Return During Fiscal 2013/2014 | |
| a) Investment Return (Net of Investment Expenses) | \$ 7,097,831 |
| b) Administrative Expenses | <u>40,742</u> |
| c) Investment Return After Expenses (a) - (b) | \$ 7,057,089 |
| 5. Market Value of Assets as of June 30, 2014 (1) + (2) - (3) + (4c) | \$ 53,092,175 |
| 6. Rate of Return (per Hewitt EnnisKnupp) | 14.91 % |
| Asset Allocation by Account | |
| 1. Members' Savings Account | \$ 13,554,229 |
| 2. Annuity Reserve Account | 51,425,295 |
| 3. State Accumulation Account | (11,999,409) |
| 4. Health Insurance Account | <u>112,060</u> |
| 5. Total (1) + (2) + (3) + (4) | \$ 53,092,175 |

Table 5

Derivation of Actuarial Value of Assets
as of June 30, 2014¹
(\$ Amounts in Thousands)

| | | | | | | | |
|---|---------------|------------------|-------------------|--------------------------------|--|---------------|-------------|
| 1. Market Value of Assets as of June 30, 2014 | | | | | | \$ | 53,092,175 |
| 2. Determination of Deferred Gain (Loss) | | | | | | | |
| | | Return on Assets | | | | | |
| Fiscal | | | | | | Deferred | |
| <u>Year</u> | <u>Actual</u> | <u>Expected</u> | <u>Difference</u> | <u>% Deferred</u> ³ | | <u>Amount</u> | |
| 2013/2014 | \$ 7,057,089 | \$ 4,193,490 | \$ 2,863,599 | 90.00% | | \$ 2,577,239 | |
| 2012/2013 | 4,086,520 | 4,239,172 | (152,652) | 80.00% | | (122,122) | |
| 2011/2012 | 1,057,435 | 4,303,637 | (3,246,202) | 70.00% | | (2,272,341) | |
| 2010/2011 | 9,207,766 | 4,609,422 | 4,598,344 | 60.00% | | 2,759,007 | |
| 2009/2010 | 6,100,499 | 4,651,504 | 1,448,995 | 50.00% | | 724,498 | |
| 2008/2009 | (16,237,298) | 4,900,688 | (21,137,986) | 35.56% | | (7,515,729) | |
| 2007/2008 | (1,816,980) | 4,728,472 | (6,545,452) | 22.50% | | (1,472,727) | |
| 2006/2007 | 12,658,871 | 4,359,054 | 8,299,817 | 11.43% | | 948,551 | |
| 2005/2006 | 7,901,068 | 4,242,878 | 3,658,190 | 3.33% | | 121,940 | |
| | | | | | | \$ | (4,251,684) |
| 3. Actuarial Value of Assets (1) - (2) | | | | | | \$ | 57,343,859 |
| 4. Actuarial Rate of Return ² | | | | | | | 5.31% |

1. The amounts reported include assets for both Pension and Health Insurance.
2. The actuarial rate of return is the investment return based on the change in the actuarial value of assets from the June 30, 2013 valuation to the June 30, 2014 valuation.
3. The percentage amounts shown are rounded. The corresponding Deferred Amounts reflect the use of unrounded percentages.

Table 6
Analysis of Change in Unfunded
Accrued as of June 30, 2014¹
(\$ Amounts in Thousands)

| Item | Amount |
|--|-------------------|
| 1. Unfunded Accrued Liability at June 30, 2013 | \$ 32,598,554 |
| 2. Interest Credit to June 30, 2014 | 2,444,892 |
| 3. Expected Contributions Toward Unfunded Accrued Liability | <u>2,092,693</u> |
| 4. Expected Unfunded Accrued Liability at June 30, 2014 (1) + (2) - (3) | \$ 32,950,753 |
| 5. Actual Unfunded Accrued Liability at June 30, 2014 | <u>35,121,184</u> |
| 6. Increase (Decrease) from Expected (5) - (4) | \$ 2,170,431 |
| 7. Reasons for Increase (Decrease) | |
| (a) Experience Losses (Gains) | |
| (i) Loss from Investment Return on Actuarial Value of Assets | \$ 1,222,417 |
| (ii) Loss from New Entrants and Pickups | 294,257 |
| (iii) Gain from Salary Increases Less than Expected | (249,716) |
| (iv) Loss from Mortality Experience | 88,273 |
| (v) Gain from Vested Termination Experience (Retirement/Disability/Termination) | (581,596) |
| (vi) Gain from Non-vested Termination Experience | (50,076) |
| (vii) Loss from Data/Miscellaneous | <u>170,852</u> |
| Subtotal | \$ 894,411 |
| (b) Change due to Act 120 4.5% Collar on FY 2014 Pension Contribution | <u>1,276,020</u> |
| (c) Grand Total | \$ 2,170,431 |

1. The amounts reported include assets and liabilities for Pensions only.

Table 7

Schedule of Funding Progress for Pensions¹
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 ³ | Unfunded Accrued Liability as a Percentage of Covered Payroll |
|-------------------------|---------------------------|-----------------------------|--------------------------------------|--------------|------------------------------|---|
| 2014 | \$ 57,231,799 | \$ 92,352,983 | \$ 35,121,184 | 62.0 % | \$ 12,620,862 | 278.3 % |
| 2013 | 57,353,262 | 89,951,816 | 32,598,554 | 63.8 | 12,577,105 | 259.2 |
| 2012 | 58,227,622 | 87,760,660 | 29,533,038 | 66.3 | 12,714,371 | 232.3 |
| 2011 | 59,141,131 | 85,640,383 | 26,499,252 | 69.1 | 12,910,043 | 205.3 |
| 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 |

1. The amounts reported above include assets and liabilities for Pensions.

Schedule of Funding Progress for Postemployment Benefits Other Than Pensions²
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 ³ | Unfunded Accrued Liability as a Percentage of Covered Payroll |
|-------------------------|---------------------------|-----------------------------|--------------------------------------|--------------|------------------------------|---|
| 2014 | \$ 112,060 | \$ 1,374,112 | \$ 1,262,052 | 8.2 % | \$ 12,620,862 | 10.0 % |
| 2013 | 100,349 | 1,385,033 | 1,284,684 | 7.2 | 12,577,105 | 10.2 |
| 2012 | 93,753 | 1,364,667 | 1,270,914 | 6.9 | 12,714,371 | 10.0 |
| 2011 | 111,258 | 1,339,444 | 1,228,186 | 8.3 | 12,910,043 | 9.5 |
| 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 |

2. 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.

3. The salaries shown represent an annual rate of pay for the year ended June 30th for members who were in active service on June 30th.

Table 8a

**Schedule of Employer Contributions for Pensions
GASB Statement No. 27 Disclosure
(\$ Amounts in Thousands)**

| Fiscal Year Ended June 30 | Annual Required Contribution | Actual Employer Contribution | Percentage Contributed |
|---------------------------|------------------------------|------------------------------|------------------------|
| 2014 | \$ 3,410,373 | \$ 1,986,384 | 58 % |
| 2013 | 3,110,429 | 1,434,815 | 46 |
| 2012 | 2,629,244 | 1,001,140 | 38 |
| 2011 | 2,436,602 | 647,000 | 27 |
| 2010 | 1,928,278 | 527,212 | 27 |
| 2009 | 1,761,295 | 503,227 | 29 |

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, 2014 was determined by the valuation completed as of June 30, 2012 which was based on an 7.50% interest rate).

Additional information as of the latest actuarial valuation as follows:

| | |
|--------------------------------|-------------------------|
| Valuation Date: | 6/30/2014 |
| 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 ¹ | 7.50% |
| - Projected Salaried Increases ¹ | 5.50% |
| 1. Includes Inflation at: | 3.00% |

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 |
|------------------------------------|------------------------------------|------------------------------------|---------------------------|
| 2014 | \$ 121,260 | \$ 117,471 | 97 % |
| 2013 | 113,016 | 107,993 | 96 |
| 2012 | 102,104 | 80,936 | 79 |
| 2011 | 119,320 | 88,796 | 74 |
| 2010 | 117,187 | 102,703 | 88 |
| 2009 | 109,531 | 92,493 | 84 |

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, 2014 was determined by the valuation completed as of June 30, 2012, which was based on an 7.50% interest rate).

Additional information as of the latest actuarial valuation as follows:

| | |
|--------------------------------|--------------------|
| Valuation Date: | 6/30/2014 |
| 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 ¹ | 7.50% |
| - Projected Salaried Increases ¹ | 5.50% |

| | |
|---------------------------|-------|
| 1. Includes Inflation at: | 3.00% |
|---------------------------|-------|

Table 9

Solvency Test
Comparative Summary of Accrued Liability and
Actuarial Value of Assets
 (\$ Amounts in Thousands)

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) |
| 2014 | \$ 13,554,229 | \$ 51,425,295 | \$ 27,373,459 | \$ 57,231,799 | 100 % | 85 % | 0 % |
| 2013 | 13,089,342 | 49,979,444 | 26,883,030 | 57,353,262 | 100 | 89 | 0 |
| 2012 | 12,535,442 | 47,511,912 | 27,713,306 | 58,227,622 | 100 | 96 | 0 |
| 2011 | 12,242,308 | 45,648,780 | 27,749,295 | 59,141,131 | 100 | 100 | 5 |
| 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 |

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) |
| 2014 | \$ 0 | \$ 959,079 | \$ 415,033 | \$ 112,060 | N/A | 12 % | 0 % |
| 2013 | 0 | 961,701 | 423,332 | 100,349 | N/A | 10 | 0 |
| 2012 | 0 | 934,506 | 430,161 | 93,753 | N/A | 10 | 0 |
| 2011 | 0 | 909,076 | 430,368 | 111,258 | N/A | 12 | 0 |
| 2010 | 0 | 767,587 | 394,632 | 116,831 | N/A | 15 | 0 |
| 2009 | 0 | 759,891 | 399,164 | 105,114 | N/A | 14 | 0 |

Table 10

History and Projection of Contribution Rates and Funded Ratios¹

| Fiscal Year Ending June | Budgeted Appropriation Payroll (thousands) | Contribution Rates ² | | | | | | | Funded Ratio |
|-------------------------|--|---------------------------------|----------------------|-----------------------------|------------------------------|-------------------------------------|---------------------------|----------------|--------------|
| | | Employee | Employer Normal Cost | Employer Unfunded Liability | Preliminary Employer Pension | Final Employer Pension ⁷ | Employer Health Insurance | Total Employer | |
| 2005 ³ | \$ 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 ⁴ | 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 ⁵ | 12,899,000 | 7.32 | 7.35 | (3.72) | 3.63 | 4.00 | 0.78 | 4.78 | 75.1 |
| 2011 ^{5,6} | 13,510,000 | 7.34 | 8.08 | (0.50) | 7.58 | 5.00 | 0.64 | 5.64 | 69.1 |
| 2012 | 14,112,000 | 7.37 | 8.12 | 10.15 | 18.27 | 8.00 | 0.65 | 8.65 | 66.4 |
| 2013 ⁸ | 14,297,000 | 7.40 | 8.66 | 12.99 | 21.65 | 11.50 | 0.86 | 12.36 | 63.8 |
| 2014 | 13,720,000 | 7.43 | 8.57 | 15.25 | 23.82 | 16.00 | 0.93 | 16.93 | 62.0 |
| 2015 | 13,482,000 | 7.46 | 8.46 | 17.51 | 25.97 | 20.50 | 0.90 | 21.40 | 60.6 |
| 2016 | 13,375,000 | 7.49 | 8.38 | 19.44 | 27.82 | 25.00 | 0.84 | 25.84 | 59.6 |
| 2017 | 13,739,290 | 7.50 | 8.21 | 20.64 | 28.85 | 28.85 | 0.84 | 29.69 | 58.7 |
| 2018 | 14,097,299 | 7.50 | 8.05 | 21.74 | 29.79 | 29.79 | 0.83 | 30.62 | 58.4 |
| 2019 | 14,477,945 | 7.51 | 7.89 | 22.85 | 30.74 | 30.74 | 0.82 | 31.56 | 60.0 |
| 2020 | 14,875,749 | 7.51 | 7.74 | 23.69 | 31.43 | 31.43 | 0.80 | 32.23 | 61.7 |
| 2021 | 15,280,718 | 7.51 | 7.60 | 23.64 | 31.24 | 31.24 | 0.78 | 32.02 | 63.0 |
| 2022 | 15,689,939 | 7.51 | 7.45 | 23.68 | 31.13 | 31.13 | 0.77 | 31.90 | 64.7 |
| 2023 | 16,112,661 | 7.52 | 7.29 | 23.92 | 31.21 | 31.21 | 0.75 | 31.96 | 66.5 |
| 2024 | 16,541,176 | 7.52 | 7.14 | 24.02 | 31.16 | 31.16 | 0.74 | 31.90 | 68.1 |
| 2025 | 16,980,255 | 7.52 | 6.99 | 24.12 | 31.11 | 31.11 | 0.72 | 31.83 | 69.9 |
| 2026 | 17,416,242 | 7.52 | 6.83 | 24.37 | 31.20 | 31.20 | 0.70 | 31.90 | 71.8 |

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 or Collar 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. Act 2003-40 amended the Retirement Code to increase the Employer Pension Rate Floor from 1% to 4%.
4. 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.
5. At its January 2009 meeting, the Board voted to reduce the interest rate from 8.50% to 8.25% for the June 30, 2008 valuation and to 8.00% for subsequent valuations.
6. Act 2010-46 recertified the fiscal year ending June 30, 2011 pension rate from 7.58% to 5.00%.
7. The Final Employer Pension rate is limited by the Act 2010-120 pension rate collars for fiscal years 2012 through 2016.
8. Revised actuarial assumptions based on a five-year experience review ending June 30, 2010 were used to determine the contributions for the fiscal year ending June 30, 2013 and thereafter, which include an interest rate of 7.50%.

Table 11

History and Projection of Annuitants, Beneficiaries, Survivor Annuitants and Active Members

| Valuation as of June 30 | New Annuitants During the Year ¹ | 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 |
|-------------------------|---|----------------------------------|---------------------------|--|---|----------------|
| 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 |
| 2010 | | | 176,210 | 8,724 | 184,934 | 282,041 |
| 2011 | | | 183,665 | 10,957 | 194,622 | 279,152 |
| 2012 | | | 190,560 | 11,455 | 202,015 | 273,504 |
| 2013 | | | 197,735 | 9,818 | 207,553 | 267,428 |
| 2014 | | | 203,756 | 10,144 | 213,900 | 263,312 |
| 2015 | 14,859 | 4,979 | 213,636 | 10,780 | 224,416 | 263,312 |
| 2016 | 11,967 | 5,196 | 220,407 | 11,366 | 231,773 | 263,312 |
| 2017 | 11,647 | 5,407 | 226,647 | 11,897 | 238,544 | 263,312 |
| 2018 | 11,062 | 5,657 | 232,052 | 12,388 | 244,440 | 263,312 |
| 2019 | 10,672 | 5,909 | 236,815 | 12,854 | 249,669 | 263,312 |
| 2020 | 10,305 | 6,117 | 241,003 | 13,288 | 254,291 | 263,312 |
| 2021 | 10,019 | 6,349 | 244,673 | 13,706 | 258,379 | 263,312 |
| 2022 | 9,836 | 6,567 | 247,942 | 14,114 | 262,056 | 263,312 |
| 2023 | 9,903 | 6,793 | 251,052 | 14,514 | 265,566 | 263,312 |
| 2024 | 9,798 | 7,031 | 253,819 | 14,907 | 268,726 | 263,312 |

1. The number for the fiscal 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: 7.50% per annum, compounded annually (adopted as of June 30, 2011). The components are 3.00% for inflation and 4.50% 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 (adopted as of June 30, 2011).

| Age | Annual Rate of: | | | | | | |
|----------------|-----------------------|--------------------------------|-----------------------------|-------|------------|-------------------------------|---------------------------|
| | Non-Vested Withdrawal | Vested Withdrawal ¹ | | Death | Disability | Early Retirement ² | Superannuation Retirement |
| | | Less Than 10 Years of Service | 10 or More Years of Service | | | | |
| Males | | | | | | | |
| 25 | 12.50% | 5.50% | 2.00% | .037% | .024% | | |
| 30 | 10.50 | 3.20 | 2.00 | .038 | .024 | | |
| 35 | 11.00 | 3.00 | 1.50 | .056 | .100 | | |
| 40 | 13.00 | 3.50 | 1.25 | .090 | .180 | | |
| 45 | 13.00 | 3.50 | 1.25 | .121 | .180 | | 25.00% |
| 50 | 13.00 | 3.50 | 1.70 | .173 | .280 | | 25.00 |
| 55 | 11.00 | 3.50 | 3.00 | .245 | .430 | 15.00% | 30.00 |
| 60 | 10.50 | 3.50 | 4.50 | .363 | .580 | 12.00 | 28.00 |
| 65 | | | | .592 | .100 | | 20.00 |
| 69 | | | | .810 | .100 | | 18.00 |
| Females | | | | | | | |
| 25 | 13.00% | 8.50% | 5.00% | .018% | .030% | | |
| 30 | 13.00 | 6.50 | 4.00 | .019 | .040 | | |
| 35 | 13.00 | 5.50 | 3.00 | .022 | .060 | | |
| 40 | 10.90 | 4.50 | 1.50 | .035 | .100 | | |
| 45 | 10.90 | 4.00 | 1.50 | .055 | .150 | | 30.00% |
| 50 | 10.90 | 3.75 | 1.75 | .085 | .200 | | 30.00 |
| 55 | 10.90 | 3.75 | 3.00 | .133 | .380 | 15.00% | 30.00 |
| 60 | 10.90 | 4.50 | 5.50 | .197 | .380 | 15.00 | 30.00 |
| 65 | | | | .301 | .130 | | 25.00 |
| 69 | | | | .428 | .130 | | 20.00 |

1. Vested Withdrawal – At least 5 years of service for Class T-C and Class T-D members and 10 years of service for Class T-E and Class T-F members but not eligible for Early or Superannuation retirement.
2. Early Retirement – Age 55 with 25 years of service, but not eligible for Superannuation retirement.

Death after Retirement: The RP-2000 Combined Healthy Annuitant Tables (Male and Female) with age set back 3 years for both genders for healthy annuitants and for dependent beneficiaries. The RP-2000 Combined Disabled Tables (Male and Female) with age set back 7 years for males and set back 3 years for females for disabled annuitants. (A unisex table based on the RP-2000 Combined Healthy Annuitant Tables (Male and Female) with age set back 3 years for both genders assuming the population consists of 25% males and 75% females is used to determine actuarial equivalent

benefits.) No specific additional provision has been made to reflect possible future improvements in mortality.

Salary Increase: Effective average of 5.50% per annum, compounded annually (adopted as of June 30, 2011). The components are 3.00% for inflation, 1% for real wage growth and 1.5% for merit or seniority increases. Representative values are as follows:

| Age | Annual Rate of Salary Increase |
|-----|--------------------------------|
| 20 | 10.75% |
| 30 | 8.25 |
| 40 | 6.25 |
| 50 | 4.25 |
| 55 | 3.75 |
| 60 | 3.75 |
| 65 | 3.75 |
| 70 | 3.75 |

Payroll Growth: 3.50% per annum.

Miscellaneous

Option 4 Elections: 100% of Class T-C and Class T-D 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: 65% of eligible retirees are assumed to elect premium assistance. This decreased from the 66% used in the prior valuation.

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 reasonable 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 7.50% (8.00% prior to June 30, 2011, 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.

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 and 27 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 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, 2014 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 actuaries adjust 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 did 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) of the Internal Revenue Code. As of June 30, 2014, the adjusted limit is \$260,000.

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.

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.

Withdrawal Annuity

| | |
|-------------|---|
| Eligibility | 5 years of service. For Class T-E and Class T-F members, ten years of service. |
| Amount | Accrued benefit deferred to superannuation retirement age or an actuarially reduced benefit payable immediately. Actuarially equivalent benefits are based on 4% interest and a unisex table based on the RP-2000 Combined Healthy Annuitant Tables (Male and Female) with age set back 3 years for both genders assuming the population consists of 25% males and 75% females. |

Disability Annuity

| | |
|-------------|--|
| Eligibility | 5 years of service. |
| Amount | The standard single life annuity if the total number of years of credited service is greater than 16.667, otherwise the standard single life annuity multiplied by the lesser of the following ratios: (Y^*/Y) or $(16.667/Y)$ where Y is the number of years of credited service and Y* is the total years of credited service if the member were to continue as a school employee until superannuation retirement age (or at current age, if later). Minimum of \$100 per year of service. |

Return of Contributions

| | |
|-------------|---|
| Eligibility | Death or separation from service and member does not qualify for other benefits. |
| Amount | Refund of accumulated deductions includes interest (less annuity payments received prior to death in the case of a retired member). |

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 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 cannot 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 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.

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 members, 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 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 District.

Table 14

**Summary of Membership Data
as of June 30, 2014**
(\$ Amounts in Thousands)

Total Active Members¹

| Item | Male | Female | Total |
|------------------------------------|--------------|--------------|---------------|
| Number of Members | 72,312 | 191,000 | 263,312 |
| Total Annual Salaries ⁴ | \$ 3,850,491 | \$ 8,770,371 | \$ 12,620,862 |
| Average Age ^b | 44.5 | 45.0 | 44.8 |
| Average Service ^b | 11.2 | 10.9 | 11.0 |

1. Excludes 132,564 inactive members and vestees.

Class T-C Members²

| Item | Male | Female | Total |
|------------------------------------|-----------|------------|------------|
| Number of Members | 1,025 | 3,246 | 4,271 |
| Total Annual Salaries ⁴ | \$ 58,638 | \$ 136,209 | \$ 194,847 |
| Average Age ^b | 49.0 | 51.2 | 50.7 |
| Average Service ⁵ | 18.4 | 16.4 | 16.9 |

2. Excludes 31,976 inactive members and vestees.

Class T-D Members³

| Item | Male | Female | Total |
|------------------------------------|--------------|--------------|---------------|
| Number of Members | 59,706 | 161,306 | 221,012 |
| Total Annual Salaries ⁴ | \$ 3,495,081 | \$ 7,969,004 | \$ 11,464,085 |
| Average Age ⁵ | 45.8 | 46.3 | 46.2 |
| Average Service ^b | 13.1 | 12.4 | 12.6 |

3. Excludes 78,330 inactive members and vestees.

4. The salaries shown in the table above represent an annual rate of pay for the year ended June 30, 2014 for members who were in active service on June 30, 2014.

5. Average completed years of age and service.

Table 14
(Continued)

**Summary of Membership Data
as of June 30, 2014**
(\$ Amounts in Thousands)

Class T-E Members¹

| Item | Male | Female | Total |
|------------------------------------|------------|------------|------------|
| Number of Members | 9,945 | 22,693 | 32,638 |
| Total Annual Salaries ³ | \$ 238,751 | \$ 545,087 | \$ 783,838 |
| Average Age ⁴ | 37.4 | 36.2 | 36.6 |
| Average Service ⁴ | 0.9 | 1.0 | 1.0 |

1. Excludes 21,856 inactive members.

Class T-F Members²

| Item | Male | Female | Total |
|------------------------------------|-----------|------------|------------|
| Number of Members | 1,636 | 3,755 | 5,391 |
| Total Annual Salaries ³ | \$ 58,021 | \$ 120,071 | \$ 178,092 |
| Average Age ⁴ | 36.9 | 35.1 | 35.6 |
| Average Service ⁴ | 1.3 | 1.3 | 1.3 |

2. Excludes 402 inactive members.

3. The salaries shown in the table above represent an annual rate of pay for the year ended June 30, 2014 for members who were in active service on June 30, 2014.

4. Average completed years of age and service.

Table 14
(Continued)

**Summary of Membership Data
as of June 30, 2014**
(\$ Amounts in Thousands)

Total Annuitants and Beneficiaries

| Item | Number | Annual Annuities ¹ | Average Annuities | Average Age |
|--|--------------|-------------------------------|-------------------|-------------|
| Annuitants (Normal, Early and Withdrawal) | 194,886 | \$ 5,045,333 | \$ 25,889 | 70.2 |
| Survivors and Beneficiaries | 10,144 | 128,071 | 12,625 | 75.6 |
| Disabled Annuitants | <u>8,870</u> | <u>166,073</u> | 18,723 | 63.8 |
| Total | 213,900 | \$ 5,339,477 | \$ 24,962 | 70.2 |

**New Annuitants and Beneficiaries
Who Retired Between July 1, 2013 and June 30, 2014**

| Item | Number ² | Annual Annuities ¹ | Average Annuities | Average Age |
|--|---------------------|-------------------------------|-------------------|-------------|
| Annuitants (Normal, Early and Withdrawal) | 10,565 | \$ 271,062 | \$ 25,657 | 60.4 |
| Survivors and Beneficiaries | 2,212 | 13,173 | 5,955 | 65.9 |
| Disabled Annuitants | <u>578</u> | <u>12,826</u> | 22,189 | 54.1 |
| Total | 13,355 | \$ 297,061 | \$ 22,243 | 61.1 |

1. The annuities shown in the tables above represent the annual amount payable as of July 1, 2014 for participants who were in payment on June 30, 2014.
2. Excludes 1,625 newly reported annuitants who retired prior to June 30, 2013 and 147 members who retired after June 30, 2013 but died prior to June 30, 2014.

Exhibit I

**Active Membership Data as of June 30, 2014
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+ | |
| Under 25 | 7,062 \$24,347 | 62 \$26,674 | | | | | | | | 7,124 \$24,368 |
| 25-29 | 16,511 \$34,370 | 7,466 \$50,290 | 28 \$41,063 | | | | | | | 24,005 \$39,329 |
| 30-34 | 7,931 \$32,446 | 17,176 \$54,075 | 5,663 \$62,600 | 36 \$46,592 | | | | | | 30,806 \$50,065 |
| 35-39 | 6,088 \$26,406 | 7,764 \$51,184 | 12,836 \$65,336 | 3,660 \$73,815 | 34 \$54,051 | | | | | 30,382 \$54,927 |
| 40-44 | 7,568 \$22,197 | 6,831 \$42,410 | 7,300 \$61,752 | 10,852 \$76,429 | 2,518 \$80,772 | 62 \$51,553 | | | | 35,131 \$55,349 |
| 45-49 | 7,585 \$19,926 | 7,496 \$35,302 | 6,032 \$49,888 | 5,728 \$68,980 | 6,240 \$80,047 | 2,072 \$77,357 | 71 \$53,124 | | | 35,224 \$50,402 |
| 50-54 | 6,223 \$19,571 | 7,378 \$31,784 | 7,423 \$41,549 | 5,438 \$54,256 | 3,792 \$69,153 | 4,813 \$78,429 | 1,690 \$74,123 | 85 \$48,797 | | 36,842 \$46,927 |
| 55-59 | 4,649 \$19,298 | 5,417 \$31,228 | 6,583 \$39,671 | 6,502 \$49,826 | 4,432 \$59,712 | 3,495 \$69,780 | 3,121 \$79,155 | 933 \$76,782 | 41 \$46,501 | 35,173 \$47,568 |
| 60-64 | 2,878 \$18,069 | 3,018 \$29,432 | 3,429 \$39,249 | 3,565 \$48,334 | 3,202 \$57,187 | 2,268 \$61,904 | 899 \$69,440 | 765 \$83,313 | 249 \$81,654 | 20,273 \$45,269 |
| Over 64 | 2,232 \$13,732 | 1,739 \$21,760 | 1,326 \$30,576 | 1,024 \$38,439 | 783 \$43,468 | 559 \$49,116 | 300 \$52,162 | 186 \$56,907 | 203 \$80,807 | 8,352 \$30,235 |
| Total | 68,727 \$25,766 | 64,347 \$43,327 | 50,620 \$53,155 | 36,805 \$63,227 | 21,001 \$68,984 | 13,269 \$71,799 | 6,081 \$74,685 | 1,969 \$76,234 | 493 \$78,382 | 263,312 \$47,931 |

Exhibit II

**The Number of Average Annual Annuity
As of June 30, 2014**

**Retired on Account of Superannuation, Early Retirement and Those
in Receipt of Withdrawal Annuities**

| Age | Years of Service | | | | | | | | | Total |
|-----------------|------------------|---------|---------|----------|----------|----------|----------|----------|----------|----------|
| | 0-4 ¹ | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | |
| Under 50 | | 4,076 | 1,368 | 372 | 113 | 24 | | | | 5,953 |
| | | \$865 | \$2,511 | \$6,609 | \$12,581 | \$16,799 | | | | \$1,889 |
| 50-54 | | 1,385 | 1,034 | 461 | 244 | 160 | 66 | 24 | | 3,374 |
| | | \$1,242 | \$2,443 | \$6,071 | \$11,907 | \$21,933 | \$31,837 | \$37,503 | | \$4,879 |
| 55-59 | | 1,354 | 1,559 | 924 | 640 | 1,012 | 2,594 | 1,378 | 12 | 9,473 |
| | | \$1,677 | \$3,097 | \$7,057 | \$14,405 | \$32,100 | \$49,085 | \$56,956 | \$46,201 | \$27,620 |
| 60-64 | 153 | 1,741 | 3,471 | 2,706 | 2,771 | 4,033 | 9,617 | 9,304 | 429 | 34,225 |
| | \$2,865 | \$3,316 | \$4,796 | \$11,922 | \$21,148 | \$33,742 | \$46,873 | \$59,153 | \$65,483 | \$37,370 |
| 65-69 | 845 | 2,562 | 5,252 | 4,312 | 4,372 | 5,543 | 13,557 | 11,193 | 1,270 | 48,906 |
| | \$1,577 | \$3,780 | \$5,160 | \$11,466 | \$19,985 | \$29,795 | \$41,123 | \$54,813 | \$67,855 | \$32,660 |
| 70-74 | 1,074 | 1,849 | 3,592 | 3,527 | 3,353 | 4,011 | 9,349 | 6,121 | 966 | 33,842 |
| | \$1,082 | \$3,151 | \$4,740 | \$9,449 | \$16,062 | \$24,711 | \$34,721 | \$46,493 | \$60,687 | \$25,946 |
| 75-79 | 845 | 1,196 | 2,739 | 2,635 | 2,955 | 3,307 | 4,767 | 3,616 | 941 | 23,001 |
| | \$808 | \$2,499 | \$4,029 | \$7,510 | \$12,465 | \$19,970 | \$29,547 | \$37,576 | \$47,660 | \$19,953 |
| 80-84 | 591 | 942 | 2,224 | 2,135 | 2,498 | 2,716 | 3,088 | 2,212 | 981 | 17,387 |
| | \$715 | \$2,011 | \$3,467 | \$6,327 | \$11,026 | \$17,509 | \$25,810 | \$35,768 | \$42,140 | \$17,185 |
| 85-89 | 414 | 685 | 1,664 | 1,820 | 1,984 | 1,855 | 1,541 | 1,227 | 571 | 11,761 |
| | \$749 | \$1,674 | \$3,283 | \$6,351 | \$11,016 | \$16,603 | \$22,658 | \$29,531 | \$39,733 | \$14,027 |
| Over 89 | 310 | 448 | 1,104 | 1,217 | 1,138 | 1,033 | 693 | 723 | 298 | 6,964 |
| | \$1,319 | \$1,688 | \$3,494 | \$6,319 | \$10,035 | \$14,549 | \$18,901 | \$23,691 | \$32,024 | \$11,334 |
| Total | 4,232 | 16,238 | 24,007 | 20,109 | 20,068 | 23,694 | 45,272 | 35,798 | 5,468 | 194,886 |
| | \$1,124 | \$2,192 | \$4,150 | \$8,919 | \$15,498 | \$25,161 | \$38,232 | \$50,176 | \$53,377 | \$25,889 |

1. Includes 50 annuitant records with no service information provided.

Exhibit III

The Number and Average Annual Annuity
as of June 30, 2014

Beneficiaries and Survivor Annuitants¹

| Age | Years of Service | | | | | | | | Total |
|-----------------|------------------|---------|---------|---------|----------|----------|----------|----------|----------|
| | 0-9 ² | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | |
| Under 50 | 161 | 26 | 26 | 23 | 25 | 15 | 11 | 6 | 293 |
| | \$10,518 | \$3,269 | \$3,724 | \$5,537 | \$7,852 | \$13,420 | \$15,880 | \$13,422 | \$7,221 |
| 50-54 | 118 | 11 | 12 | 15 | 7 | 10 | 3 | 6 | 182 |
| | \$12,227 | \$2,501 | \$4,489 | \$6,123 | \$11,505 | \$11,432 | \$28,193 | \$13,601 | \$8,945 |
| 55-59 | 301 | 34 | 39 | 37 | 29 | 21 | 17 | 12 | 490 |
| | \$29,194 | \$3,512 | \$5,220 | \$9,352 | \$11,410 | \$18,948 | \$14,458 | \$14,054 | \$12,401 |
| 60-64 | 516 | 35 | 38 | 53 | 51 | 77 | 52 | 9 | 831 |
| | \$35,650 | \$4,677 | \$5,707 | \$6,934 | \$15,383 | \$14,641 | \$20,536 | \$9,507 | \$17,243 |
| 65-69 | 759 | 46 | 40 | 48 | 60 | 158 | 129 | 21 | 1,261 |
| | \$23,428 | \$3,215 | \$5,485 | \$8,994 | \$12,771 | \$18,803 | \$21,720 | \$13,428 | \$17,943 |
| 70-74 | 666 | 61 | 81 | 72 | 73 | 183 | 164 | 36 | 1,336 |
| | \$21,384 | \$3,441 | \$5,892 | \$8,925 | \$12,489 | \$18,285 | \$21,620 | \$18,965 | \$15,565 |
| 75-79 | 654 | 108 | 92 | 91 | 91 | 173 | 155 | 77 | 1,441 |
| | \$15,230 | \$3,172 | \$5,014 | \$8,202 | \$12,108 | \$14,919 | \$19,503 | \$20,131 | \$12,847 |
| 80-84 | 634 | 105 | 133 | 111 | 112 | 206 | 170 | 106 | 1,577 |
| | \$13,266 | \$3,255 | \$4,530 | \$7,026 | \$9,677 | \$12,816 | \$15,603 | \$20,733 | \$11,269 |
| 85-89 | 565 | 123 | 110 | 138 | 138 | 156 | 200 | 92 | 1,522 |
| | \$12,297 | \$2,817 | \$4,333 | \$6,783 | \$9,061 | \$11,527 | \$12,689 | \$18,145 | \$9,642 |
| Over 89 | 359 | 123 | 103 | 90 | 111 | 125 | 199 | 101 | 1,211 |
| | \$9,383 | \$2,282 | \$3,915 | \$5,123 | \$7,335 | \$9,500 | \$11,231 | \$13,231 | \$7,879 |
| Total | 4,733 | 672 | 674 | 678 | 697 | 1,124 | 1,100 | 466 | 10,144 |
| | \$14,299 | \$3,073 | \$4,765 | \$7,272 | \$10,503 | \$14,559 | \$16,699 | \$17,456 | \$12,625 |

1. In addition, there are 1,459 beneficiaries who are only entitled to a pending lump sum distribution.
2. Includes 4,611 beneficiary or survivor annuitant records with no service information provided.

Exhibit IV

**The Number and Average Annual Annuity
as of June 30, 2014**

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+ | | |
| Under 50 | | 228 | 175 | 103 | 43 | 12 | | | | | 561 |
| | \$14,307 | \$18,691 | \$22,733 | \$34,681 | \$35,162 | | | | | | \$19,229 |
| 50-54 | | 223 | 201 | 152 | 113 | 87 | 20 | 2 | | | 798 |
| | \$11,434 | \$13,291 | \$19,843 | \$31,015 | \$40,624 | \$46,184 | \$35,304 | | | | \$20,338 |
| 55-59 | | 319 | 345 | 292 | 254 | 204 | 80 | 2 | | | 1,496 |
| | \$10,521 | \$13,926 | \$18,039 | \$26,486 | \$38,438 | \$49,420 | \$40,333 | | | | \$21,411 |
| 60-64 | | 363 | 437 | 348 | 358 | 373 | 187 | 4 | 1 | | 2,071 |
| | \$8,777 | \$12,389 | \$17,131 | \$25,271 | \$36,419 | \$46,718 | \$48,099 | \$35,628 | | | \$22,283 |
| 65-69 | | 283 | 313 | 277 | 310 | 352 | 188 | 5 | 4 | | 1,732 |
| | \$7,074 | \$9,940 | \$13,447 | \$21,619 | \$31,122 | \$42,817 | \$30,263 | \$26,068 | | | \$20,092 |
| 70-74 | | 170 | 240 | 200 | 203 | 144 | 43 | 3 | | | 1,003 |
| | \$5,785 | \$8,292 | \$10,720 | \$17,834 | \$26,132 | \$33,470 | \$40,959 | | | | \$14,021 |
| 75-79 | | 109 | 140 | 123 | 107 | 70 | 21 | 2 | 1 | | 573 |
| | \$5,270 | \$7,009 | \$8,964 | \$14,144 | \$19,956 | \$28,780 | \$42,997 | \$10,189 | | | \$10,940 |
| 80-84 | | 60 | 102 | 85 | 59 | 36 | 6 | 1 | 1 | | 350 |
| | \$3,586 | \$5,625 | \$8,853 | \$12,619 | \$19,694 | \$18,792 | \$43,179 | \$10,304 | | | \$9,032 |
| 85-89 | | 39 | 67 | 36 | 32 | 28 | 4 | 1 | 1 | | 208 |
| | \$3,863 | \$5,945 | \$8,465 | \$11,374 | \$17,440 | \$20,978 | \$24,751 | \$54,601 | | | \$8,987 |
| Over 89 | | 18 | 18 | 8 | 16 | 10 | 8 | | | | 78 |
| | \$3,612 | \$6,091 | \$7,205 | \$10,009 | \$17,320 | \$18,447 | | | | | \$9,144 |
| Total | | 1,812 | 2,038 | 1,624 | 1,495 | 1,316 | 557 | 20 | 8 | | 8,870 |
| | \$9,020 | \$11,445 | \$15,193 | \$22,659 | \$32,543 | \$43,180 | \$38,589 | \$26,874 | | | \$18,723 |

Exhibit V

**Annuitant and Beneficiary Membership Data
as of June 30, 2014**

**Number and Average Annual Benefit
Excludes Partial Lump Sum Payments**

| Age Last Birthday | Number | Annual Benefit (Thousands) | Average Annual Benefit |
|--|---------|-------------------------------|---------------------------|
| Annuitants (Normal, Early and Withdrawal) | | | |
| Under 60 | 18,800 | \$ 289,348 | \$ 15,391 |
| 60 - 64 | 34,225 | 1,279,003 | 37,370 |
| 65 - 69 | 48,906 | 1,597,286 | 32,660 |
| 70 - 74 | 33,842 | 878,065 | 25,946 |
| 75 - 79 | 23,001 | 458,942 | 19,953 |
| Over 79 | 36,112 | 542,689 | 15,028 |
| Total | 194,886 | \$ 5,045,333 | \$ 25,889 |
| Survivors and Beneficiaries | | | |
| Under 60 | 965 | \$ 9,820 | \$ 10,176 |
| 60 - 64 | 831 | 14,329 | 17,243 |
| 65 - 69 | 1,261 | 22,626 | 17,943 |
| 70 - 74 | 1,336 | 20,795 | 15,564 |
| 75 - 79 | 1,441 | 18,513 | 12,847 |
| Over 79 | 4,310 | 41,988 | 9,742 |
| Total | 10,144 | \$ 128,071 | \$ 12,625 |
| Disabled Annuitants | | | |
| Under 60 | 2,855 | \$ 59,049 | \$ 20,683 |
| 60 - 64 | 2,071 | 46,149 | 22,283 |
| 65 - 69 | 1,732 | 34,800 | 20,092 |
| 70 - 74 | 1,003 | 14,063 | 14,021 |
| 75 - 79 | 573 | 6,269 | 10,940 |
| Over 79 | 636 | 5,743 | 9,030 |
| Total | 8,870 | \$ 166,073 | \$ 18,723 |
| Grand Total Average Annual Benefit | | | |
| | 213,900 | \$ 5,339,477 | \$ 24,962 |

Exhibit VI

10-Year History of Membership Data

Active Members

| Valuation as of June 30 | Number of Active Members | Percentage Change in Membership | Total Annualized Payroll (Thousands) ¹ | Percentage Change in Payroll |
|-------------------------------|--------------------------------|---------------------------------------|---|------------------------------------|
| 2014 | 263,312 | (1.54%) | \$ 12,620,862 | 0.35% |
| 2013 | 267,428 | (2.22%) | 12,577,105 | (1.08%) |
| 2012 | 273,504 | (2.02%) | 12,714,371 | (1.52%) |
| 2011 | 279,152 | (1.02%) | 12,910,043 | 0.95% |
| 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% |

1. The salaries shown represent an annual rate of pay for the year ending June 30th for members who were in active service on June 30th.

**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 ² (Millions) | Average Annual Annuities | Additions | Annual Annuities (Millions) | Deletions | Annual Annuities (Millions) | Percentage Change in Membership | Percentage Change in Annuities |
|--------------------|---------|--|--------------------------|-----------|-----------------------------|-----------|-----------------------------|---------------------------------|--------------------------------|
| 2014 | 213,900 | \$ 5,339.5 | \$ 24,962 | 15,225 | \$ 300.5 | 8,878 | \$ 84.9 | 3.06% | 3.74% |
| 2013 | 207,553 | 5,147.1 | 24,800 | 16,404 | 377.6 | 10,866 | 83.7 | 2.74% | 5.63% |
| 2012 | 202,015 | 4,872.9 | 24,121 | 14,579 | 332.7 | 7,186 | 66.6 | 3.80% | 4.78% |
| 2011 | 194,622 | 4,650.8 | 23,897 | 16,228 | 453.7 | 6,540 | 76.4 | 5.24% | 7.17% |
| 2010 | 184,934 | 4,339.6 | 23,466 | 12,649 | 372.8 | 5,678 | 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 | 21,964 | 10,911 | 345.3 | 5,397 | 73.9 | 3.28% | 8.18% |
| 2007 | 168,026 | 3,523.4 | 20,969 | 10,612 | | 4,399 | | 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% |

2. 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 Salaries
Of Members in Active Service Distributed by Age as of June 30, 2014

| Age | Male | | Female | | Total | |
|-----|--------|-------------|--------|-------------|--------|-------------|
| | Number | Salaries | Number | Salaries | Number | Salaries |
| 17 | 10 | \$ 48,204 | 11 | \$ 41,699 | 21 | \$ 89,903 |
| 18 | 43 | 179,635 | 28 | 216,809 | 71 | 396,444 |
| 19 | 82 | 798,786 | 78 | 916,601 | 160 | 1,715,387 |
| 20 | 145 | 1,731,384 | 116 | 1,267,370 | 261 | 2,998,754 |
| 21 | 241 | 3,200,321 | 169 | 2,028,055 | 410 | 5,228,376 |
| 22 | 309 | 5,189,978 | 509 | 10,154,163 | 818 | 15,344,141 |
| 23 | 623 | 14,592,007 | 1,569 | 40,892,714 | 2,192 | 55,484,721 |
| 24 | 961 | 25,433,737 | 2,230 | 66,904,113 | 3,191 | 92,337,850 |
| 25 | 1,039 | 29,497,016 | 2,706 | 89,649,380 | 3,745 | 119,146,396 |
| 26 | 1,167 | 38,199,004 | 3,132 | 115,253,466 | 4,299 | 153,452,470 |
| 27 | 1,327 | 49,183,479 | 3,476 | 140,256,457 | 4,803 | 189,439,936 |
| 28 | 1,483 | 58,788,027 | 3,891 | 166,758,069 | 5,374 | 225,546,096 |
| 29 | 1,648 | 70,527,350 | 4,136 | 185,986,087 | 5,784 | 256,513,437 |
| 30 | 1,586 | 73,723,004 | 4,201 | 197,568,041 | 5,787 | 271,291,045 |
| 31 | 1,641 | 77,681,191 | 4,344 | 210,577,784 | 5,985 | 288,258,975 |
| 32 | 1,859 | 93,586,042 | 4,443 | 223,007,774 | 6,302 | 316,593,816 |
| 33 | 1,862 | 98,046,189 | 4,477 | 229,358,528 | 6,339 | 327,404,717 |
| 34 | 1,920 | 105,838,082 | 4,473 | 232,912,182 | 6,393 | 338,750,264 |
| 35 | 1,866 | 104,741,322 | 4,395 | 229,890,548 | 6,261 | 334,631,870 |
| 36 | 1,812 | 105,507,585 | 4,216 | 221,592,482 | 6,028 | 327,100,067 |
| 37 | 1,887 | 111,526,798 | 4,245 | 226,469,250 | 6,132 | 337,996,048 |
| 38 | 1,823 | 112,757,020 | 4,097 | 218,324,742 | 5,920 | 331,081,762 |
| 39 | 1,814 | 112,239,087 | 4,227 | 225,756,089 | 6,041 | 337,995,176 |
| 40 | 1,813 | 116,872,455 | 4,273 | 224,685,678 | 6,086 | 341,558,133 |
| 41 | 1,929 | 124,364,147 | 4,570 | 236,245,303 | 6,499 | 360,609,450 |
| 42 | 2,025 | 132,279,738 | 5,085 | 259,866,165 | 7,110 | 392,145,903 |
| 43 | 2,194 | 140,643,858 | 5,637 | 290,390,908 | 7,831 | 431,034,766 |
| 44 | 1,991 | 130,580,984 | 5,614 | 288,527,870 | 7,605 | 419,108,854 |
| 45 | 1,951 | 125,625,425 | 5,392 | 263,494,181 | 7,343 | 389,119,606 |
| 46 | 1,803 | 116,748,417 | 5,138 | 245,378,937 | 6,941 | 362,127,354 |
| 47 | 1,776 | 110,051,798 | 5,192 | 239,515,860 | 6,968 | 349,567,658 |
| 48 | 1,797 | 111,836,761 | 5,041 | 226,071,887 | 6,838 | 337,908,648 |
| 49 | 1,746 | 102,239,629 | 5,388 | 234,393,199 | 7,134 | 336,632,828 |
| 50 | 1,814 | 108,471,408 | 5,507 | 235,586,587 | 7,321 | 344,057,995 |
| 51 | 1,759 | 101,448,860 | 5,388 | 234,363,482 | 7,147 | 335,812,342 |
| 52 | 1,770 | 100,733,850 | 5,562 | 244,066,478 | 7,332 | 344,800,328 |
| 53 | 1,859 | 105,920,533 | 5,823 | 253,604,393 | 7,682 | 359,524,926 |
| 54 | 1,810 | 103,290,568 | 5,550 | 241,392,133 | 7,360 | 344,682,701 |
| 55 | 1,817 | 99,692,166 | 5,562 | 249,487,489 | 7,379 | 349,179,655 |
| 56 | 1,798 | 99,880,485 | 5,612 | 252,835,349 | 7,410 | 352,715,834 |

**Table 1
(Continued)**

**The Number and Annual Salaries
Of Members in Active Service Distributed by Age as of June 30, 2014**

| Age | Male | | Female | | Total | |
|--------------|--------|-----------------|---------|-----------------|---------|-------------------|
| | Number | Salaries | Number | Salaries | Number | Salaries |
| 57 | 1,759 | \$ 97,890,752 | 5,517 | \$ 247,896,351 | 7,276 | \$ 345,787,103 |
| 58 | 1,606 | 86,934,450 | 5,056 | 232,252,986 | 6,662 | 319,187,436 |
| 59 | 1,582 | 82,137,868 | 4,864 | 224,108,868 | 6,446 | 306,246,736 |
| 60 | 1,408 | 70,658,407 | 4,404 | 202,736,268 | 5,812 | 273,394,675 |
| 61 | 1,330 | 68,295,346 | 3,792 | 173,793,937 | 5,122 | 242,089,283 |
| 62 | 1,097 | 50,358,029 | 2,827 | 123,895,384 | 3,924 | 174,253,413 |
| 63 | 807 | 37,107,272 | 2,183 | 92,067,977 | 2,990 | 129,175,249 |
| 64 | 704 | 31,082,473 | 1,721 | 67,736,210 | 2,425 | 98,818,683 |
| 65 | 556 | 23,131,413 | 1,141 | 43,393,444 | 1,697 | 66,524,857 |
| 66 | 461 | 16,893,887 | 850 | 28,024,152 | 1,311 | 44,918,039 |
| 67 | 445 | 15,540,883 | 755 | 23,713,395 | 1,200 | 39,254,278 |
| 68 | 251 | 7,400,174 | 414 | 11,998,159 | 665 | 19,398,333 |
| 69 | 274 | 7,997,961 | 364 | 9,401,107 | 638 | 17,399,068 |
| 70 | 228 | 6,081,852 | 314 | 8,080,991 | 542 | 14,162,843 |
| 71 | 222 | 6,466,050 | 249 | 5,962,239 | 471 | 12,428,289 |
| 72 | 160 | 4,123,910 | 246 | 4,593,768 | 406 | 8,717,678 |
| 73 | 120 | 2,796,658 | 164 | 3,364,898 | 284 | 6,161,556 |
| 74 | 117 | 2,687,767 | 135 | 2,617,549 | 252 | 5,305,316 |
| 75 | 85 | 2,036,715 | 117 | 2,183,020 | 202 | 4,219,735 |
| 76 | 74 | 2,127,178 | 95 | 1,872,591 | 169 | 3,999,769 |
| 77 | 57 | 1,198,355 | 68 | 1,022,856 | 125 | 2,221,211 |
| 78 | 43 | 949,400 | 59 | 1,053,925 | 102 | 2,003,325 |
| 79 | 38 | 707,758 | 45 | 890,607 | 83 | 1,598,365 |
| 80 | 26 | 636,478 | 37 | 630,883 | 63 | 1,267,361 |
| 81 | 17 | 400,552 | 21 | 359,019 | 38 | 759,571 |
| 82 | 9 | 227,379 | 20 | 251,679 | 29 | 479,058 |
| 83 | 11 | 360,362 | 13 | 318,331 | 24 | 678,693 |
| 84 | 8 | 202,399 | 8 | 88,529 | 16 | 290,928 |
| 85 | 12 | 247,229 | 9 | 254,371 | 21 | 501,600 |
| 86 | 3 | 97,848 | 8 | 108,925 | 11 | 206,773 |
| 87 | 2 | 17,937 | 1 | 10,610 | 3 | 28,547 |
| Total | 72,312 | \$3,850,491,072 | 191,000 | \$8,770,371,331 | 263,312 | \$ 12,620,862,403 |

Table 2

The Number and Annual Salaries
of Members in Active Service Distributed by
Years of Credited Service as of June 30, 2014

| Service | Male | | Female | | Total | |
|---------|--------|---------------|--------|----------------|--------|----------------|
| | Number | Salaries | Number | Salaries | Number | Salaries |
| 0 | 5,342 | \$ 69,887,468 | 9,695 | \$ 141,587,366 | 15,037 | \$ 211,474,834 |
| 1 | 5,624 | 139,308,082 | 13,244 | 315,594,039 | 18,868 | 454,902,121 |
| 2 | 3,445 | 106,576,938 | 9,253 | 258,745,479 | 12,698 | 365,322,417 |
| 3 | 2,679 | 92,022,385 | 7,514 | 221,235,897 | 10,193 | 313,258,282 |
| 4 | 3,139 | 126,188,504 | 8,792 | 299,652,248 | 11,931 | 425,840,752 |
| 5 | 2,991 | 130,877,321 | 9,343 | 345,229,293 | 12,334 | 476,106,614 |
| 6 | 3,227 | 148,477,582 | 9,925 | 387,058,717 | 13,152 | 535,536,299 |
| 7 | 3,153 | 155,942,963 | 10,139 | 419,771,366 | 13,292 | 575,714,329 |
| 8 | 3,245 | 166,867,939 | 10,047 | 441,781,699 | 13,292 | 608,649,638 |
| 9 | 3,071 | 168,903,462 | 9,206 | 423,041,950 | 12,277 | 591,945,412 |
| 10 | 2,865 | 166,715,879 | 8,480 | 407,377,017 | 11,345 | 574,092,896 |
| 11 | 2,579 | 155,013,850 | 7,583 | 373,902,573 | 10,162 | 528,916,423 |
| 12 | 2,567 | 157,917,194 | 7,442 | 376,174,278 | 10,009 | 534,091,472 |
| 13 | 2,436 | 154,252,079 | 7,348 | 377,241,497 | 9,784 | 531,493,576 |
| 14 | 2,255 | 147,522,870 | 7,065 | 374,604,604 | 9,320 | 522,127,474 |
| 15 | 2,716 | 188,363,621 | 6,978 | 392,813,851 | 9,694 | 581,177,472 |
| 16 | 2,307 | 163,476,561 | 5,651 | 328,942,197 | 7,958 | 492,418,758 |
| 17 | 2,230 | 164,609,180 | 5,231 | 313,709,380 | 7,461 | 478,318,560 |
| 18 | 1,819 | 134,634,748 | 4,391 | 271,807,592 | 6,210 | 406,442,340 |
| 19 | 1,522 | 115,932,526 | 3,960 | 252,764,092 | 5,482 | 368,696,618 |
| 20 | 1,365 | 101,626,649 | 3,528 | 229,392,765 | 4,893 | 331,019,414 |
| 21 | 1,656 | 128,497,277 | 3,509 | 230,436,259 | 5,165 | 358,933,536 |
| 22 | 1,128 | 85,151,882 | 2,822 | 189,500,622 | 3,950 | 274,652,504 |
| 23 | 924 | 69,019,769 | 2,555 | 168,028,309 | 3,479 | 237,048,078 |
| 24 | 969 | 72,895,981 | 2,545 | 174,185,440 | 3,514 | 247,081,421 |
| 25 | 992 | 73,754,676 | 2,361 | 159,045,111 | 3,353 | 232,799,787 |
| 26 | 915 | 68,619,800 | 2,064 | 143,144,499 | 2,979 | 211,764,299 |
| 27 | 806 | 61,840,899 | 1,828 | 129,445,600 | 2,634 | 191,286,499 |
| 28 | 696 | 53,041,747 | 1,634 | 118,137,337 | 2,330 | 171,179,084 |
| 29 | 618 | 47,278,701 | 1,355 | 98,388,281 | 1,973 | 145,666,982 |
| 30 | 542 | 41,147,665 | 1,014 | 72,524,841 | 1,556 | 113,672,506 |
| 31 | 492 | 36,747,395 | 840 | 62,036,266 | 1,332 | 98,783,661 |
| 32 | 391 | 29,002,670 | 737 | 54,487,831 | 1,128 | 83,490,501 |
| 33 | 394 | 29,594,398 | 682 | 53,203,842 | 1,076 | 82,798,240 |
| 34 | 335 | 26,687,271 | 654 | 48,725,918 | 989 | 75,413,189 |
| 35 | 235 | 18,178,222 | 423 | 31,058,441 | 658 | 49,236,663 |
| 36 | 165 | 13,490,378 | 317 | 24,327,618 | 482 | 37,817,996 |
| 37 | 124 | 10,405,189 | 214 | 15,397,853 | 338 | 25,803,042 |
| 38 | 99 | 7,873,129 | 180 | 14,074,161 | 279 | 21,947,290 |
| 39 | 63 | 5,169,037 | 149 | 10,130,213 | 212 | 15,299,250 |

**Table 2
(Continued)**

**The Number and Annual Salaries
of Members in Active Service Distributed by
Years of Credited Service as of June 30, 2014**

| Service | Male | | Female | | Total | |
|--------------|--------|-----------------|---------|-----------------|---------|------------------|
| | Number | Salaries | Number | Salaries | Number | Salaries |
| 40 | 64 | \$ 5,186,738 | 95 | \$ 7,066,660 | 159 | \$ 12,253,398 |
| 41 | 40 | 3,947,330 | 63 | 4,837,406 | 103 | 8,784,736 |
| 42 | 28 | 2,273,736 | 36 | 2,705,035 | 64 | 4,978,771 |
| 43 | 19 | 1,857,204 | 22 | 1,380,068 | 41 | 3,237,272 |
| 44 | 9 | 861,034 | 25 | 1,369,560 | 34 | 2,230,594 |
| 45 | 8 | 628,586 | 17 | 1,091,346 | 25 | 1,719,932 |
| 46 | 4 | 314,275 | 11 | 799,235 | 15 | 1,113,510 |
| 47 | 2 | 171,921 | 7 | 604,464 | 9 | 776,385 |
| 48 | 5 | 432,426 | 6 | 351,885 | 11 | 784,311 |
| 49 | 3 | 276,439 | 6 | 371,004 | 9 | 647,443 |
| 50 | 2 | 284,362 | 2 | 120,617 | 4 | 404,979 |
| 51 | 3 | 297,954 | 2 | 177,475 | 5 | 475,429 |
| 52 | | | 2 | 120,154 | 2 | 120,154 |
| 53 | 1 | 112,024 | 3 | 291,231 | 4 | 403,255 |
| 54 | 1 | 93,801 | | | 1 | 93,801 |
| 55 | 2 | 239,355 | 1 | 93,801 | 3 | 333,156 |
| 56 | | | 2 | 111,223 | 2 | 111,223 |
| 58 | | | 1 | 92,516 | 1 | 92,516 |
| 62 | | | 1 | 81,309 | 1 | 81,309 |
| Total | 72,312 | \$3,850,491,072 | 191,000 | \$8,770,371,331 | 263,312 | \$12,620,862,403 |

Table 3

The Number and Annual Annuities
of Annuitants on the Retired List
as of June 30, 2014

Retired on Account of Superannuation, Early Retirement and
Those in Receipt of Withdrawal Annuities

| Age | Male | | Female | | Total | |
|-----|--------|------------|--------|-------------|--------|-------------|
| | Number | Annuities | Number | Annuities | Number | Annuities |
| 25 | 7 | \$ 3,873 | 1 | \$ 152 | 8 | \$ 4,025 |
| 26 | 1 | 300 | 2 | 672 | 3 | 972 |
| 27 | 3 | 1,700 | 4 | 1,077 | 7 | 2,777 |
| 28 | 10 | 5,548 | 11 | 5,665 | 21 | 11,213 |
| 29 | 16 | 11,167 | 23 | 9,808 | 39 | 20,975 |
| 30 | 19 | 13,203 | 23 | 15,515 | 42 | 28,718 |
| 31 | 30 | 17,820 | 53 | 33,575 | 83 | 51,395 |
| 32 | 54 | 38,288 | 62 | 41,705 | 116 | 79,993 |
| 33 | 44 | 42,082 | 74 | 47,992 | 118 | 90,074 |
| 34 | 61 | 65,261 | 93 | 82,660 | 154 | 147,921 |
| 35 | 59 | 60,242 | 129 | 108,827 | 188 | 169,069 |
| 36 | 84 | 103,639 | 123 | 126,911 | 207 | 230,550 |
| 37 | 89 | 144,125 | 150 | 167,979 | 239 | 312,104 |
| 38 | 95 | 144,147 | 183 | 209,434 | 278 | 353,581 |
| 39 | 85 | 124,252 | 188 | 188,270 | 273 | 312,522 |
| 40 | 92 | 135,238 | 198 | 240,907 | 290 | 376,145 |
| 41 | 98 | 187,683 | 211 | 276,249 | 309 | 463,932 |
| 42 | 111 | 215,301 | 224 | 355,707 | 335 | 571,008 |
| 43 | 129 | 306,639 | 292 | 519,486 | 421 | 826,125 |
| 44 | 142 | 403,522 | 318 | 561,187 | 460 | 964,709 |
| 45 | 139 | 388,549 | 296 | 588,318 | 435 | 976,867 |
| 46 | 119 | 423,775 | 296 | 649,791 | 415 | 1,073,566 |
| 47 | 142 | 399,193 | 331 | 812,492 | 473 | 1,211,685 |
| 48 | 160 | 592,274 | 353 | 810,391 | 513 | 1,402,665 |
| 49 | 154 | 567,469 | 372 | 994,431 | 526 | 1,561,900 |
| 50 | 165 | 751,439 | 418 | 1,172,363 | 583 | 1,923,802 |
| 51 | 189 | 1,045,929 | 449 | 1,481,589 | 638 | 2,527,518 |
| 52 | 185 | 989,513 | 475 | 1,807,859 | 660 | 2,797,372 |
| 53 | 215 | 1,695,381 | 498 | 2,269,827 | 713 | 3,965,208 |
| 54 | 242 | 2,365,702 | 538 | 2,881,298 | 780 | 5,247,000 |
| 55 | 252 | 3,715,844 | 647 | 5,307,213 | 899 | 9,023,057 |
| 56 | 424 | 9,851,760 | 893 | 15,709,514 | 1,317 | 25,561,274 |
| 57 | 565 | 16,706,087 | 1,334 | 32,806,437 | 1,899 | 49,512,524 |
| 58 | 693 | 24,879,980 | 1,694 | 50,203,739 | 2,387 | 75,083,719 |
| 59 | 862 | 33,425,364 | 2,109 | 69,036,303 | 2,971 | 102,461,667 |
| 60 | 1,117 | 44,794,070 | 2,771 | 97,357,225 | 3,888 | 142,151,295 |
| 61 | 1,441 | 62,995,719 | 3,679 | 136,894,770 | 5,120 | 199,890,489 |
| 62 | 1,924 | 80,840,847 | 5,164 | 191,815,225 | 7,088 | 272,656,072 |

**Table 3
(Continued)**

**The Number and Annual Annuities
of Annuitants on the Retired List
as of June 30, 2014**

**Retired on Account of Superannuation, Early Retirement and
Those in Receipt of Withdrawal Annuities**

| Age | Male | | Female | | Total | |
|-----|--------|----------------|--------|----------------|--------|----------------|
| | Number | Annuities | Number | Annuities | Number | Annuities |
| 63 | 2,530 | \$ 104,135,879 | 6,446 | \$ 225,328,869 | 8,976 | \$ 329,464,748 |
| 64 | 2,702 | 111,062,603 | 6,451 | 223,778,193 | 9,153 | 334,840,796 |
| 65 | 3,109 | 125,132,561 | 6,590 | 218,754,872 | 9,699 | 343,887,433 |
| 66 | 3,445 | 132,155,003 | 6,830 | 217,064,468 | 10,275 | 349,219,471 |
| 67 | 4,109 | 151,010,662 | 7,499 | 225,538,525 | 11,608 | 376,549,187 |
| 68 | 3,584 | 126,640,111 | 6,041 | 171,076,802 | 9,625 | 297,716,913 |
| 69 | 2,932 | 99,165,467 | 4,767 | 130,749,009 | 7,699 | 229,914,476 |
| 70 | 2,772 | 90,029,805 | 4,558 | 116,866,717 | 7,330 | 206,896,522 |
| 71 | 2,918 | 92,358,765 | 4,723 | 112,885,895 | 7,641 | 205,244,660 |
| 72 | 2,856 | 88,920,554 | 4,375 | 99,878,992 | 7,231 | 188,799,546 |
| 73 | 2,268 | 64,763,592 | 3,931 | 85,923,910 | 6,199 | 150,687,502 |
| 74 | 1,972 | 55,640,234 | 3,469 | 70,796,199 | 5,441 | 126,436,433 |
| 75 | 1,814 | 46,296,344 | 3,273 | 62,289,022 | 5,087 | 108,585,366 |
| 76 | 1,725 | 43,646,952 | 3,158 | 58,046,513 | 4,883 | 101,693,465 |
| 77 | 1,658 | 41,116,337 | 2,918 | 49,579,736 | 4,576 | 90,696,073 |
| 78 | 1,579 | 38,904,688 | 2,801 | 46,221,347 | 4,380 | 85,126,035 |
| 79 | 1,448 | 33,550,466 | 2,627 | 39,291,019 | 4,075 | 72,841,485 |
| 80 | 1,325 | 30,072,749 | 2,402 | 35,512,762 | 3,727 | 65,585,511 |
| 81 | 1,272 | 28,625,076 | 2,257 | 32,244,869 | 3,529 | 60,869,945 |
| 82 | 1,273 | 28,520,075 | 2,308 | 32,637,324 | 3,581 | 61,157,399 |
| 83 | 1,132 | 26,804,373 | 2,305 | 33,780,732 | 3,437 | 60,585,105 |
| 84 | 1,036 | 21,895,166 | 2,077 | 28,695,071 | 3,113 | 50,590,237 |
| 85 | 875 | 17,336,499 | 1,928 | 24,340,343 | 2,803 | 41,676,842 |
| 86 | 730 | 14,587,638 | 1,911 | 23,697,979 | 2,641 | 38,285,617 |
| 87 | 719 | 13,255,081 | 1,716 | 20,927,268 | 2,435 | 34,182,349 |
| 88 | 581 | 10,550,263 | 1,529 | 17,861,045 | 2,110 | 28,411,308 |
| 89 | 507 | 9,218,714 | 1,265 | 13,191,722 | 1,772 | 22,410,436 |
| 90 | 405 | 7,095,698 | 1,131 | 12,360,729 | 1,536 | 19,456,427 |
| 91 | 283 | 4,301,511 | 883 | 8,637,348 | 1,166 | 12,938,859 |
| 92 | 226 | 3,448,827 | 796 | 7,787,667 | 1,022 | 11,236,494 |
| 93 | 166 | 2,669,558 | 657 | 6,485,826 | 823 | 9,155,384 |
| 94 | 110 | 1,649,512 | 568 | 5,392,337 | 678 | 7,041,849 |
| 95 | 58 | 830,722 | 385 | 3,749,513 | 443 | 4,580,235 |
| 96 | 57 | 628,423 | 346 | 3,628,751 | 403 | 4,257,174 |
| 97 | 38 | 561,312 | 264 | 2,667,281 | 302 | 3,228,593 |
| 98 | 35 | 366,423 | 186 | 1,930,472 | 221 | 2,296,895 |

**Table 3
(Continued)**

**The Number and Annual Annuities
of Annuitants on the Retired List
as of June 30, 2014**

**Retired on Account of Superannuation, Early Retirement and
Those in Receipt of Withdrawal Annuities**

| Age | Male | | Female | | Total | |
|--------------|--------|------------------|---------|------------------|---------|------------------|
| | Number | Annuities | Number | Annuities | Number | Annuities |
| 99 | 13 | \$ 211,959 | 104 | \$ 1,170,655 | 117 | \$ 1,382,614 |
| 100 | 11 | 235,172 | 84 | 997,395 | 95 | 1,232,567 |
| 101 | 6 | 79,431 | 56 | 683,513 | 62 | 762,944 |
| 102 | 6 | 45,891 | 33 | 493,727 | 39 | 539,618 |
| 103 | 4 | 41,471 | 17 | 232,190 | 21 | 273,661 |
| 104 | 3 | 71,640 | 12 | 164,125 | 15 | 235,765 |
| 105 | 1 | 13,960 | 11 | 175,948 | 12 | 189,908 |
| 106 | | | 3 | 27,802 | 3 | 27,802 |
| 107 | | | 3 | 53,389 | 3 | 53,389 |
| 108 | | | 2 | 25,997 | 2 | 25,997 |
| 111 | | | 1 | 16,204 | 1 | 16,204 |
| Total | 64,510 | \$ 1,956,100,092 | 130,376 | \$ 3,089,232,635 | 194,886 | \$ 5,045,332,727 |

**Table 3
(Continued)**

**The number and Annual Annuities
of Annuitants on the Retired List
as of June 30, 2014**

**Retired on Account of Superannuation, Early Retirement and
Those in Receipt of Withdrawal Annuities**

| <u>OPTION</u> | <u>MALE</u> | | <u>FEMALE</u> | |
|---------------|--------------|-------------------|---------------|-------------------|
| Maximum | 30,283 | \$ 930,134,070 | 76,702 | \$ 1,785,988,916 |
| 1 | 9,625 | 226,819,580 | 27,457 | 527,301,536 |
| 2 | 14,901 | 428,461,216 | 15,329 | 410,515,734 |
| 3 | 8,310 | 306,159,916 | 10,106 | 332,895,079 |
| 4 | <u>1,391</u> | <u>64,525,310</u> | <u>782</u> | <u>32,531,370</u> |
| | 64,510 | \$ 1,956,100,092 | 130,376 | \$ 3,089,232,635 |

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, 2014

| Age | Male | | Female | | Total | |
|-----|--------|-----------|--------|-----------|--------|-----------|
| | Number | Annuities | Number | Annuities | Number | Annuities |
| 4 | 1 | \$ 1,534 | | | 1 | \$ 1,534 |
| 8 | | | 1 | \$ 1,534 | 1 | 1,534 |
| 13 | 1 | 2,416 | | | 1 | 2,416 |
| 14 | 1 | 1,898 | | | 1 | 1,898 |
| 15 | | | 2 | 4,388 | 2 | 4,388 |
| 16 | 1 | 10,483 | 1 | 9,605 | 2 | 20,088 |
| 19 | | | 2 | 4,814 | 2 | 4,814 |
| 20 | 1 | 2,775 | | | 1 | 2,775 |
| 21 | | | 2 | 9,620 | 2 | 9,620 |
| 22 | | | 2 | 2,855 | 2 | 2,855 |
| 23 | 3 | 19,923 | 3 | 19,187 | 6 | 39,110 |
| 24 | | | 3 | 6,719 | 3 | 6,719 |
| 25 | 2 | 6,891 | 1 | 1,227 | 3 | 8,118 |
| 26 | 1 | 4,049 | 1 | 3,484 | 2 | 7,533 |
| 27 | 5 | 53,774 | 4 | 26,084 | 9 | 79,858 |
| 28 | 1 | 2,483 | 1 | 483 | 2 | 2,966 |
| 29 | 1 | 21,281 | 7 | 87,104 | 8 | 108,385 |
| 30 | 3 | 20,927 | 2 | 17,887 | 5 | 38,814 |
| 31 | | | 1 | 13,232 | 1 | 13,232 |
| 32 | 6 | 79,892 | 3 | 23,371 | 9 | 103,263 |
| 33 | 3 | 15,461 | 3 | 10,745 | 6 | 26,206 |
| 34 | 7 | 35,952 | 1 | 8,367 | 8 | 44,319 |
| 35 | 3 | 3,031 | 5 | 46,657 | 8 | 49,688 |
| 36 | 10 | 99,090 | 4 | 21,169 | 14 | 120,259 |
| 37 | 6 | 19,805 | 4 | 11,908 | 10 | 31,713 |
| 38 | 2 | 8,515 | 3 | 20,572 | 5 | 29,087 |
| 39 | 7 | 102,070 | 4 | 33,231 | 11 | 135,301 |
| 40 | 6 | 27,069 | 4 | 9,204 | 10 | 36,273 |
| 41 | 4 | 12,591 | 9 | 34,644 | 13 | 47,235 |
| 42 | 4 | 32,131 | 2 | 11,641 | 6 | 43,772 |
| 43 | 1 | 2,554 | 12 | 79,140 | 13 | 81,694 |
| 44 | 6 | 36,704 | 5 | 31,425 | 11 | 68,129 |
| 45 | 6 | 26,966 | 12 | 122,479 | 18 | 149,445 |
| 46 | 10 | 45,080 | 13 | 74,315 | 23 | 119,395 |
| 47 | 10 | 48,585 | 16 | 134,425 | 26 | 183,010 |

**Table 4
(Continued)**

**The Number and Annual Annuities
of Beneficiaries and Survivor Annuitants
as of June 30, 2014**

| Age | Male | | Female | | Total | |
|-----|--------|-----------|--------|------------|--------|------------|
| | Number | Annuities | Number | Annuities | Number | Annuities |
| 48 | 8 | \$ 60,423 | 16 | \$ 134,611 | 24 | \$ 195,034 |
| 49 | 7 | 82,757 | 17 | 212,376 | 24 | 295,133 |
| 50 | 8 | 25,395 | 28 | 233,834 | 36 | 259,229 |
| 51 | 9 | 99,436 | 19 | 141,195 | 28 | 240,631 |
| 52 | 8 | 95,387 | 18 | 147,349 | 26 | 242,736 |
| 53 | 10 | 59,564 | 35 | 341,141 | 45 | 400,705 |
| 54 | 12 | 112,111 | 35 | 372,501 | 47 | 484,612 |
| 55 | 14 | 117,617 | 67 | 717,747 | 81 | 835,364 |
| 56 | 18 | 183,366 | 69 | 902,347 | 87 | 1,085,713 |
| 57 | 20 | 128,114 | 75 | 831,706 | 95 | 959,820 |
| 58 | 28 | 276,412 | 82 | 1,148,773 | 110 | 1,425,185 |
| 59 | 19 | 338,583 | 98 | 1,432,045 | 117 | 1,770,628 |
| 60 | 24 | 361,449 | 104 | 1,706,354 | 128 | 2,067,803 |
| 61 | 40 | 581,820 | 127 | 1,976,164 | 167 | 2,557,984 |
| 62 | 44 | 859,607 | 115 | 1,866,644 | 159 | 2,726,251 |
| 63 | 51 | 906,180 | 136 | 2,521,689 | 187 | 3,427,869 |
| 64 | 52 | 896,266 | 138 | 2,652,889 | 190 | 3,549,155 |
| 65 | 61 | 1,239,936 | 162 | 2,934,057 | 223 | 4,173,993 |
| 66 | 63 | 1,353,849 | 195 | 3,601,779 | 258 | 4,955,628 |
| 67 | 72 | 1,381,115 | 226 | 3,995,807 | 298 | 5,376,922 |
| 68 | 64 | 1,042,788 | 181 | 3,011,864 | 245 | 4,054,652 |
| 69 | 57 | 1,068,909 | 180 | 2,995,866 | 237 | 4,064,775 |
| 70 | 58 | 1,098,743 | 159 | 2,731,425 | 217 | 3,830,168 |
| 71 | 74 | 1,147,745 | 204 | 3,150,068 | 278 | 4,297,813 |
| 72 | 67 | 1,148,609 | 219 | 3,456,757 | 286 | 4,605,366 |
| 73 | 63 | 1,027,047 | 209 | 3,275,847 | 272 | 4,302,894 |
| 74 | 43 | 629,950 | 240 | 3,128,893 | 283 | 3,758,843 |
| 75 | 47 | 707,496 | 210 | 3,108,456 | 257 | 3,815,952 |
| 76 | 38 | 664,012 | 253 | 3,193,786 | 291 | 3,857,798 |
| 77 | 56 | 574,887 | 226 | 2,789,251 | 282 | 3,364,138 |
| 78 | 50 | 701,171 | 259 | 3,126,527 | 309 | 3,827,698 |
| 79 | 53 | 527,572 | 249 | 3,119,590 | 302 | 3,647,162 |
| 80 | 50 | 688,500 | 249 | 2,926,801 | 299 | 3,615,301 |
| 81 | 42 | 479,844 | 245 | 2,883,840 | 287 | 3,363,684 |
| 82 | 46 | 499,275 | 242 | 2,756,841 | 288 | 3,256,116 |

**Table 4
(Continued)**

**The Number and Annual Annuities
of Beneficiaries and Survivor Annuitants
as of June 30, 2014**

| Age | Male | | Female | | Total | |
|--------------|--------|---------------|--------|----------------|--------|----------------|
| | Number | Annuities | Number | Annuities | Number | Annuities |
| 83 | 57 | \$ 623,580 | 300 | \$ 3,210,009 | 357 | \$ 3,833,589 |
| 84 | 53 | 586,898 | 293 | 3,116,200 | 346 | 3,703,098 |
| 85 | 40 | 398,997 | 272 | 3,079,598 | 312 | 3,478,595 |
| 86 | 44 | 447,453 | 288 | 2,714,817 | 332 | 3,162,270 |
| 87 | 47 | 470,509 | 266 | 2,512,619 | 313 | 2,983,128 |
| 88 | 48 | 421,971 | 242 | 2,096,339 | 290 | 2,518,310 |
| 89 | 46 | 466,546 | 229 | 2,066,086 | 275 | 2,532,632 |
| 90 | 40 | 383,009 | 217 | 1,714,913 | 257 | 2,097,922 |
| 91 | 33 | 263,363 | 187 | 1,450,667 | 220 | 1,714,030 |
| 92 | 26 | 195,122 | 140 | 1,241,169 | 166 | 1,436,291 |
| 93 | 30 | 238,879 | 119 | 1,006,479 | 149 | 1,245,358 |
| 94 | 21 | 247,065 | 103 | 772,928 | 124 | 1,019,993 |
| 95 | 13 | 82,814 | 62 | 392,297 | 75 | 475,111 |
| 96 | 9 | 82,518 | 62 | 482,152 | 71 | 564,670 |
| 97 | 6 | 44,535 | 50 | 309,115 | 56 | 353,650 |
| 98 | 5 | 26,302 | 22 | 146,558 | 27 | 172,860 |
| 99 | 5 | 51,846 | 17 | 133,103 | 22 | 184,949 |
| 100 | 1 | 11,358 | 13 | 61,966 | 14 | 73,324 |
| 101 | 1 | 1,680 | 11 | 85,848 | 12 | 87,528 |
| 102 | | | 3 | 40,908 | 3 | 40,908 |
| 103 | 1 | 12,901 | 6 | 48,244 | 7 | 61,145 |
| 104 | | | 3 | 3,697 | 3 | 3,697 |
| 105 | | | 2 | 5,573 | 2 | 5,573 |
| 108 | | | 1 | 2,126 | 1 | 2,126 |
| 112 | 1 | 1,200 | | | 1 | 1,200 |
| 113 | | | 1 | 591 | 1 | 591 |
| Total | 2,015 | \$ 26,968,411 | 8,129 | \$ 101,102,338 | 10,144 | \$ 128,070,749 |

Table 5

The Number and Annual Annuities
of Annuitants on the Retired List
as of June 30, 2014

Retired on Account of Disability

| Age | Male | | Female | | Total | |
|-----|--------|-----------|--------|-----------|--------|------------|
| | Number | Annuities | Number | Annuities | Number | Annuities |
| 29 | 1 | \$ 13,798 | | | 1 | \$ 13,798 |
| 30 | | | 1 | \$ 28,860 | 1 | 28,860 |
| 31 | | | 2 | 25,803 | 2 | 25,803 |
| 32 | 5 | 70,181 | 1 | 22,510 | 6 | 92,691 |
| 33 | | | 2 | 41,325 | 2 | 41,325 |
| 34 | 2 | 31,049 | 1 | 22,789 | 3 | 53,838 |
| 35 | 1 | 6,837 | 4 | 76,244 | 5 | 83,081 |
| 36 | 2 | 46,832 | 6 | 121,603 | 8 | 168,435 |
| 37 | | | 10 | 214,306 | 10 | 214,306 |
| 38 | 4 | 69,905 | 16 | 286,839 | 20 | 356,744 |
| 39 | 3 | 47,808 | 9 | 204,515 | 12 | 252,323 |
| 40 | 3 | 40,241 | 20 | 347,814 | 23 | 388,055 |
| 41 | 10 | 190,034 | 27 | 478,006 | 37 | 668,040 |
| 42 | 5 | 85,185 | 17 | 272,548 | 22 | 357,733 |
| 43 | 6 | 103,118 | 30 | 584,343 | 36 | 687,461 |
| 44 | 14 | 322,917 | 27 | 554,233 | 41 | 877,150 |
| 45 | 12 | 234,549 | 44 | 734,454 | 56 | 969,003 |
| 46 | 21 | 414,037 | 30 | 593,222 | 51 | 1,007,259 |
| 47 | 20 | 493,811 | 42 | 756,721 | 62 | 1,250,532 |
| 48 | 27 | 446,407 | 43 | 972,832 | 70 | 1,419,239 |
| 49 | 24 | 503,272 | 69 | 1,328,750 | 93 | 1,832,022 |
| 50 | 41 | 915,647 | 93 | 1,793,427 | 134 | 2,709,074 |
| 51 | 43 | 827,077 | 99 | 1,841,229 | 142 | 2,668,306 |
| 52 | 48 | 979,473 | 108 | 2,133,453 | 156 | 3,112,926 |
| 53 | 45 | 1,115,226 | 131 | 2,493,104 | 176 | 3,608,330 |
| 54 | 40 | 1,098,408 | 150 | 3,032,974 | 190 | 4,131,382 |
| 55 | 96 | 2,192,409 | 150 | 3,014,285 | 246 | 5,206,694 |
| 56 | 81 | 1,699,404 | 188 | 4,142,476 | 269 | 5,841,880 |
| 57 | 92 | 2,112,346 | 191 | 3,918,160 | 283 | 6,030,506 |
| 58 | 105 | 2,186,686 | 230 | 4,799,671 | 335 | 6,986,357 |
| 59 | 113 | 2,528,702 | 250 | 5,436,793 | 363 | 7,965,495 |
| 60 | 113 | 2,631,736 | 276 | 5,867,359 | 389 | 8,499,095 |
| 61 | 145 | 3,120,967 | 295 | 6,092,460 | 440 | 9,213,427 |
| 62 | 136 | 3,348,463 | 302 | 6,880,372 | 438 | 10,228,835 |
| 63 | 124 | 2,988,101 | 296 | 6,715,280 | 420 | 9,703,381 |
| 64 | 106 | 2,274,052 | 278 | 6,230,245 | 384 | 8,504,297 |
| 65 | 149 | 3,503,164 | 284 | 5,990,616 | 433 | 9,493,780 |
| 66 | 108 | 2,435,106 | 256 | 5,270,599 | 364 | 7,705,705 |
| 67 | 120 | 2,778,740 | 269 | 5,061,968 | 389 | 7,840,708 |

**Table 5
(Continued)**

**The Number and Annual Annuities
of Annuitants on the Retired List
as of June 30, 2014**

Retired on Account of Disability

| Age | Male | | Female | | Total | |
|--------------|--------|---------------|--------|----------------|--------|----------------|
| | Number | Annuities | Number | Annuities | Number | Annuities |
| 68 | 100 | \$ 1,937,351 | 217 | \$ 3,810,179 | 317 | \$ 5,747,530 |
| 69 | 70 | 1,466,550 | 159 | 2,545,673 | 229 | 4,012,223 |
| 70 | 67 | 1,244,993 | 139 | 2,282,522 | 206 | 3,527,515 |
| 71 | 81 | 1,232,907 | 161 | 2,197,739 | 242 | 3,430,646 |
| 72 | 56 | 803,533 | 170 | 2,350,786 | 226 | 3,154,319 |
| 73 | 38 | 488,187 | 131 | 1,553,299 | 169 | 2,041,486 |
| 74 | 42 | 624,845 | 118 | 1,284,068 | 160 | 1,908,913 |
| 75 | 38 | 541,073 | 81 | 948,521 | 119 | 1,489,594 |
| 76 | 45 | 516,653 | 89 | 890,307 | 134 | 1,406,960 |
| 77 | 34 | 388,062 | 80 | 963,518 | 114 | 1,351,580 |
| 78 | 30 | 333,209 | 65 | 676,395 | 95 | 1,009,604 |
| 79 | 27 | 340,918 | 84 | 670,342 | 111 | 1,011,260 |
| 80 | 18 | 187,116 | 70 | 692,115 | 88 | 879,231 |
| 81 | 29 | 338,855 | 48 | 381,997 | 77 | 720,852 |
| 82 | 13 | 108,907 | 60 | 575,942 | 73 | 684,849 |
| 83 | 16 | 156,735 | 44 | 321,506 | 60 | 478,241 |
| 84 | 9 | 89,578 | 43 | 308,350 | 52 | 397,928 |
| 85 | 13 | 184,999 | 38 | 297,834 | 51 | 482,833 |
| 86 | 10 | 110,259 | 49 | 368,860 | 59 | 479,119 |
| 87 | 10 | 166,448 | 21 | 120,746 | 31 | 287,194 |
| 88 | 11 | 100,704 | 33 | 296,552 | 44 | 397,256 |
| 89 | 6 | 81,044 | 17 | 141,798 | 23 | 222,842 |
| 90 | 2 | 11,890 | 15 | 109,182 | 17 | 121,072 |
| 91 | 2 | 20,885 | 15 | 144,978 | 17 | 165,863 |
| 92 | 2 | 36,051 | 11 | 113,866 | 13 | 149,917 |
| 93 | | | 3 | 20,888 | 3 | 20,888 |
| 94 | 1 | 4,614 | 7 | 69,652 | 8 | 74,266 |
| 95 | | | 4 | 17,224 | 4 | 17,224 |
| 96 | | | 6 | 85,716 | 6 | 85,716 |
| 97 | | | 4 | 33,490 | 4 | 33,490 |
| 98 | 1 | 7,175 | 2 | 17,743 | 3 | 24,918 |
| 99 | | | 1 | 7,505 | 1 | 7,505 |
| 101 | | | 2 | 12,351 | 2 | 12,351 |
| Total | 2,636 | \$ 53,379,229 | 6,234 | \$ 112,693,832 | 8,870 | \$ 166,073,061 |

Exhibit VIII

Glossary

| | |
|-----------------------------------|---|
| Accrued Liability | 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.” |
| Accrued Service | The service credited under the plan that was rendered before the date of the actuarial valuation. |
| Actuarial Assumptions | 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. |
| Actuarial Cost Method | 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.” |
| Actuarial Equivalent | A series of payments is called an actuarial equivalent of another series of payments if the two series have the same actuarial present value. |
| Actuarial Value of Assets | 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. |
| Amortization | 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. |
| Experience Gain (Loss) | A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions during the period between two actuarial valuation dates, in accordance with the actuarial cost method being used. |
| Normal Cost | The annual cost assumed, under the actuarial funding method, for current and subsequent plan years. Sometimes referred to as “current service cost.” |
| Present Value | 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. |
| Unfunded Accrued Liability | The difference between the actuarial accrued liability and valuation assets. |