

REVISED

TEACHERS' RETIREMENT SYSTEM OF THE STATE OF ILLINOIS

June 30, 2013 Actuarial Valuation of Pension Benefits

January 2014



January 14, 2014

Board of Trustees Teachers' Retirement System of The State of Illinois 2815 West Washington Street Springfield, Illinois 62702

Ladies and Gentlemen:

We have completed the valuation of the System as of June 30, 2013 and the principal results are set forth on Pages 1 and 2 of this report.

The contributions to the System, which are shown in the Summary of Principal Results, are based on the provisions of Public Act 94-0004, as amended by subsequent acts. The actuary and the Board are required to follow Public Act 94-0004 for purposes of developing contributions to the System. Public Act 94-0004 has resulted in contributions to the System much less than those that would be contributed under minimum generally accepted actuarial standards. Under such minimum standards, a funded ratio of 100% would be achieved within 30 years as opposed to the 90% funded ratio achieved by 2045 under Public Act 94-0004. In addition, under minimum actuarial standards, contributions would not be based on members not currently in the System as is done under Public Act 94-0004, particularly given the lower value of Tier II benefits in the System for members hired on or after January 1, 2011. The continued use of Public Act 94-0004 in its current form will continue the history of an inadequate funded ratio of less than 100%. In addition, the Net Pension Obligation clearly exhibits the shortfall of the Public Act 94-0004 contributions when compared to the GASB 25/27 ARC, which is generally recognized as a reasonable contribution under generally accepted actuarial standards. We have also shown proposed contributions to the System in the Summary of Principal Results based on minimum standards and under a slightly more stringent standard, the employer's normal cost plus interest, consistent with a TRS Board resolution requiring certification of funding requirements based on sound actuarial principles. For ease of comparison, we have used the same actuarial cost method (projected unit credit) and asset smoothing method required under Public Act 94-0004 as amended by subsequent acts. While we prefer the use of the entry age normal cost method for public plans, the method in place is acceptable under generally accepted actuarial standards.

The member contribution rate is 9.4% of covered payroll, which includes a 0.4% of pay "Career Early Retirement Option (ERO) contribution" that became effective July 1, 2005. The member rate for Modified ERO lump sum payments at retirement is currently 14.4%. An additional member contribution has been required since July 1, 1995 to finance retiree health insurance through a state agency other than TRS. School Districts are required to contribute 0.58% of payroll toward the cost of the 2.2% formula. School Districts also pay the cost of pension benefits resulting from salary increases over 6% used in the final average salary calculation, although PA 94-1057 provided permanent and temporary exemptions from some of these payments for retirements occurring on or after July 31, 2006. The School District rate for Modified ERO lump sum payments at retirement is 29.3%, and School Districts make lump sum payments at retirement for excessive annual sick leave accruals.

Board of Trustees January 14, 2014 Page 2

In total, employer contributions to the System must be sufficient to "meet the cost of maintaining and administering the system on a 90% funded basis in accordance with actuarial recommendations." The statute specifies that this objective is to be met by June 30, 2045 through annual appropriations that are a level percentage of payroll – before reduction for the maximum State contribution limitations of the statute – for fiscal years 2010 through 2045.

As required under PA 96-0043, the method for determining the actuarial value of assets used to determine the employer contribution rate is a smoothed value first used in the June 30, 2009 valuation. The smoothed value recognizes actuarial investment gains or losses for each fiscal year, beginning with FY 2009, in equal amounts over the ensuing five-year period. The System incurred a gain on a market basis of \$1,689,215,000 in FY 2013. Per statutory requirement, 20% is recognized in the actuarial value of assets as of June 30, 2013, and recognition of the remaining 80%, or \$1,351,372,000, will be deferred and recognized in equal amounts over the next four valuations. Depending on whether the total net deferral is an investment gain or loss, the smoothing method will produce a contribution rate that is more or less than the rate based on the market value. As of the June 30, 2013 valuation the total net deferral is a \$1,703,577,000 gain, resulting in a contribution that is higher than it would be if the assets were valued at market.

Subsequent to the initial June 30, 2010 valuation report, the FY 2011 funding requirements were recertified due to Public Act 96-1511. The tables accompanying our FY 2015 funding recommendation do not show the recertified values for FY 2011, but the FY 2015 recommendation recognizes the FY 2011 funding reduction.

The unfunded pension benefit obligation of the System based on the actuarial value of assets as of June 30, 2013 is \$55,731,797,000, which may be compared with the unfunded obligation of \$52,079,548,000 as of June 30, 2012.

The funded status of the System as of June 30, 2013 is 42.5% based on the market value of assets and 40.6% based on the actuarial value of assets. As of June 30, 2012 the System's funded status was 40.6% based on the market value of assets, and 42.1% based on the actuarial value of assets. The primary factors resulting in this decrease in the funded ratio (based on actuarial value of assets) between 2012 and 2013 were:

- the adverse investment results achieved during the plan year based upon the actuarial value of assets, and
- the fact that the contributions actually made to the plan during the plan year amounted to less than the normal cost and interest on the unfunded actuarial liability.

Assuming the full fiscal year 2014 State Contribution is made, we calculate that the employer's contribution rate to the Benefit Trust Reserve of the System for fiscal year 2015 is 33.58% of membership payroll. The recommended total employer contribution for fiscal year 2015 to the Benefit Trust Reserve under the provisions of Article 16 of the Illinois Pension Code is \$3,497,366,000. Subtracting estimated Federal Funds and School District contributions and adding a contribution to the Guaranteed Minimum Annuity Reserve results in a total State Contribution for fiscal year 2015 of \$3,412,878,000. This figure represents a decrease of \$25,700,000 or 0.7% from the total State Contribution in fiscal year 2014 of \$3,438,578,000. As required under Public Act 97-0694, on or before November 1, 2013, the Board shall submit to the State Actuary the amount of the required State contribution and on or before January 15, 2014, the Board shall certify the required State contribution for the next fiscal year. **These amounts are predicated on all contributions for the fiscal year 2014 being paid.**



The following changes have been reflected during the past year:

- The Federal Funds contribution rate was reduced from the total State Contribution rate to the State Employer Normal Cost contribution as directed by the Board of Trustees.
- The census data lag was eliminated as recommended by Buck. In the past, the June 30, 2013 actuarial valuation would have been based on June 30, 2013 retiree data with the active census data collected as of June 30, 2012. With this valuation, all census data is collected as of June 30, 2012 with the resulting liabilities projected to the valuation date.

Future actuarial measurements may differ significantly from the current measurement presented in this report due to such factors as: plan experience different 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. Due to the limited scope of this report, an analysis of the potential range of such future measurements has not been performed.

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

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

Sincerely,

Larry Langer, FCA, ASA, EA, MAAA

Principal, Retirement

Paul R. Wilkinson, ASA, EA, MAAA Director, Consulting Actuary

Paul R. Wilkinson



TEACHERS' RETIREMENT SYSTEM OF THE STATE OF ILLINOIS

TABLE OF CONTENTS

| <u>Section</u> | | <u>Page</u> | | | | | |
|----------------|---|-------------|--|--|--|--|--|
| I | Principal Results | 1 | | | | | |
| II | Financing Objective and Employer's Contribution Rate | 4 | | | | | |
| III | Current Financial Position | 7 | | | | | |
| IV | Gains and Losses During Year | | | | | | |
| V | Membership Data | 11 | | | | | |
| VI | Assets | 12 | | | | | |
| VII | History of Legislative Changes | 13 | | | | | |
| VIII | Financial Results and Membership Data - Detailed Summaries | 15 | | | | | |
| | Schedule IA – Employer's Contribution Rates and Amounts | 16 | | | | | |
| | Schedule IB – Determination of Employer Contribution Under Public Act 94-0004 | 17 | | | | | |
| | Schedule II - GASB 25 and 27 - Required Supplementary Information - | 19 | | | | | |
| | Schedule III - Reconciliation of Unfunded Pension Benefit Obligation | | | | | | |
| | Schedule IV - Employer Cost in Excess of Contributions | 21 | | | | | |
| | Schedule V – 10-Year History of Unfunded Pension Benefit Obligation | 22 | | | | | |
| | Schedule VI – 10-Year History of Funded Status | 23 | | | | | |
| | Schedule VII - 10-Year History of System Revenue and Expenses | 24 | | | | | |
| | Schedule VIII - Membership Data | 25 | | | | | |
| | Schedule IX - History of Active Membership Data for Last 10 Years | 27 | | | | | |
| | Schedule X – History of Annuitant and Survivor Annuitant Membership for Last 10 Years | 28 | | | | | |
| | Schedule XI – Benefit Stream for Guaranteed Minimum Annuity Reserve | 29 | | | | | |
| | Schedule XII – Itemization of Employer Contribution to Benefit Trust Reserve | 30 | | | | | |
| | Schedule XIII – Fiscal Year 2015 Employer Contribution Based on 50-Year Projection for Benefit Trust Reserve (50-Year Amortization with 15-Year Phase-In Beginning Fiscal Year 1996) | | | | | | |
| | Schedule XIV – Projection Of Assets, Employer, State And Federal Contributions Without Pension Obligation Bonds - State's Debt Service On Pension Obligation Bonds, And State and Federal Fund Maximums With Pension Obligation Bonds | 34 | | | | | |
| | Schedule XV - Projections Using Certified Contributions | | | | | | |
| | and an 8.0% Market Rate of Return | | | | | | |
| IX | Statement of Actuarial Assumptions and Methods | 38 | | | | | |
| X | Summary of Benefit and Contribution Provisions | | | | | | |
| XI | Detailed Tabulations of Data | | | | | | |
| XII | Additional Information | 71 | | | | | |

TEACHERS' RETIREMENT SYSTEM OF THE STATE OF ILLINOIS

ACTUARIAL VALUATION JUNE 30, 2013

<u>SECTION I — PRINCIPAL RESULTS</u>

1. We have summarized below the principal results of this year's valuation along with a comparison with last year's valuation results. The schedule also includes the significant membership data and asset data used in the valuations.

SUMMARY OF PRINCIPAL RESULTS

| | | Year Ende | ed June | 30 |
|--|----|----------------|---------|----------------|
| Item | | 2013 | | 2012 |
| Benefit Trust Reserve | | | | |
| Active members reported to the actuary: | | | | |
| – Number | | 162,029 | | 165,872 |
| – Annual salaries | \$ | 9,756,025,000 | \$ | 9,511,731,000 |
| Average age | | 41.8 | Ť | 41.7 |
| Average service | | 10.6 | | 10.4 |
| Number of inactives | | 125,526 | | 121,781 |
| Retirees and beneficiaries in receipt of | | | | |
| benefits: | | | | |
| – Number | | 106,102 | | 105,499 |
| Annual annuities (at June 30) | \$ | 4,811,370,000 | \$ | 4,780,743,000 |
| • Assets | | | | |
| Market value | \$ | 39,858,768,000 | \$ | 36,516,825,000 |
| Actuarial value | \$ | 38,155,191,000 | \$ | 37,945,397,000 |
| Pension benefit obligation | \$ | 93,886,988,000 | \$ | 90,024,945,000 |
| Unfunded pension benefit obligation with assets based on | | | | |
| Market value | \$ | 54,028,220,000 | \$ | 53,508,120,000 |
| Actuarial value | \$ | 55,731,797,000 | \$ | 52,079,548,000 |
| Funded ratio: | | | | |
| Market value | | 42.5% | | 40.6% |
| Actuarial value | | 40.6% | | 42.1% |
| | | | | |

SUMMARY OF PRINCIPAL RESULTS (Continued)

| | | Year Ende | ed June | : 30 |
|--|--|--|---------|----------------------------|
| Item | | 2013 | | 2012 |
| | | Fiscal Year | | Fiscal Year |
| Benefit Trust Reserve (continued) | | <u>2015</u> | | <u>2014</u> |
| Based on Statutory Funding Plan (PA 94-0004) | | | | |
| Employer cost under: | | | | |
| Percentage Rate (includes Federal and | | | | |
| School Districts) | | 33.58% | | 35.99% |
| Employer Contribution | \$ | 3,497,366,000 | \$ | 3,592,578,000 |
| Less School Districts for 2.2% formula | | (60,414,000) | | (57,896,000) |
| Less Federal Funds Contribution | | (25,074,000) | | (97,204,000) |
| State Contribution | \$ | 3,411,878,000 | \$ | 3,437,478,000 |
| Based on Generally Accepted Actuarial Standards | | | | |
| Employer cost under: | | | | |
| Normal Cost plus Amortization | \$ | 4,146,656,000 | \$ | 4,200,419,000 |
| Less School Districts for 2.2% formula | | (60,414,000) | | (57,896,000) |
| Less Federal Funds Contribution | | (25,074,000) | | (97,204,000) |
| State Contribution | \$ | 4,061,168,000 | \$ | 4,045,319,000 |
| Guaranteed Minimum Annuity Reserve | I - | 1,000,000 | | 1,100,000 |
| Total State Contribution | \$ | 4,062,168,000 | \$ | 4,046,419,000 |
| Based on Contribution to Pay the Employer Normal Cost and Keep the Projected Unfunded Pension Benefit Obligation from Growing during the Fiscal Year before Reflecting Unrealized Gains or Losses as of the Actuarial Valuation Date • Employer cost under: - Normal Cost plus interest payment - Less School Districts for 2.2% formula - Less Federal Funds Contribution - State Contribution • Guaranteed Minimum Annuity Reserve • Total State Contribution | \$ \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ | 5,176,025,000 (60,414,000) (25,074,000) 5,090,537,000 1,000,000 5,091,537,000 | | |
| Guaranteed Minimum Annuity Reserve* | | | | |
| Retirees and disabilitants in receipt of benefits: Number | | 1,209 | | 1,209 |
| - Annual annuities | \$ | 1,109,000 | \$ | 1,109,000 |
| Pension benefit obligation | \$ | 5,168,000 | | 5,168,000 |
| State Contribution | \$ | | | |
| - State Continuation | ٩ | 1,000,000 | Ф | 1,100,000 |
| Total State Contribution Under Statutory Plan: | | | | |
| Benefit Trust Reserve | \$ | 3,411,878,000 | \$ | 3,437,478,000 |
| Guaranteed Minimum Annuity Reserve Total State Contribution | \$ | 1,000,000 3,412,878,000 | \$ | 1,100,000 3,438,578,000 |

Notes:

 $Employer's\ contribution\ to\ Benefit\ Trust\ Reserve\ in\ fiscal\ year\ 2014,\ as\ shown\ in\ Schedules\ XII\ and\ XIII:$

| | Certific | ed Contributions ** |
|---------------------------|----------|---------------------|
| Common School Fund | \$ | 3,437,478,000 |
| School Districts for 2.2% | | 57,896,000 |
| Federal Funds | | 97,204,000 |
| Total | \$ | 3 592 578 000 |

^{**} State contribution amounts shown are those contained in the final fiscal year 2014 State budget. Future Federal Funds and School Districts contributions are estimated.

As shown in Exhibit XIII, the FY15 rate is comprised of 8.02% normal cost and 25.55% amortization. The normal cost portion is 9.55% for Tier 1 and (2.81%) for Tier 2.

^{*} As the benefits from the Guaranteed Minimum Annuity Reserve are paid to members who are much older, on average, than the general pensioner population, and as separate mortality studies have not been performed for this special group, the fiscal year 2014 and 2015 State Contributions were adjusted to ensure payment of all required benefits as required by Statute.

- 2. The June 30, 2013 actuarial valuation was based on the latest membership data available, which were submitted by the System for active, inactive and retired members as of June 30, 2012. Membership data for active and inactive members as of June 30, 2011, and for retirees and beneficiaries as of June 30, 2012 were used as the basis for the June 30, 2012 actuarial valuation. As part of the valuation procedure, liabilities were adjusted by projecting results based on the valuation assumptions.
- 3. The State contribution amount of \$3,412,878,000 for FY 2015 is based on Article 16 of the Illinois Pension Code. This amount represents a Benefit Trust Reserve Contribution of \$3,411,878,000 and a Guaranteed Minimum Annuity Reserve Contribution of \$1,000,000 for a total contribution of \$3,412,878,000
- 4. As stated above, at June 30, 2013, we adjusted for the one year lag in reporting of the active, inactive and retired membership by projecting results based on the valuation assumptions. No further adjustments were made to the membership data at June 30, 2012.
- 5. The statistics for full-time, substitute, part-time, and hourly paid teachers for purposes of the June 30, 2013 valuation, based on the census information for active members as of June 30, 2012, are as follows:

Active Member Statistics

| Item | Full-time and gular Part-Time | Substitutes, Part-Time, Hourly Paid on a Flexible or Limited Work Schedule | Total |
|--------------------------------|-----------------------------------|--|-----------------------------|
| Number | 132,956 | 29,073 | 162,029 |
| Annual salaries Average age | \$ 9,601,785,000 41.8 years | | 9,756,025,000 41.8 years |
| Average service | 12.4 years | • | 10.6 years |

SECTION II — FINANCING OBJECTIVE AND EMPLOYER'S CONTRIBUTION RATE

The financing objective of the System under Section 16-158 of the Pension Code is to:

- (a) meet the cost of maintaining and administering the Benefit Trust Reserve on a 90% funded basis in accordance with actuarial recommendations; and
- (b) meet this objective by June 30, 2045 through annual appropriations that are a level percentage of payroll before reduction for the maximum state contribution limitations of the statute for fiscal years 2010 through 2045. Gross appropriations, as a percentage of payroll, for fiscal years 1996 through 2013 increased in level annual increments over the prior year's gross appropriation until the required level percentage of payroll was achieved in fiscal year 2013. In fiscal years 1999 through 2004, the statute specifies minimum state contributions as a percentage of applicable member payroll. In fiscal years 2006 and 2007 the statute specifies the dollar amount of the state contribution.

In addition to the contributions to the Benefit Trust Reserve required by section 16-158, the State must make contributions to the Guaranteed Minimum Annuity Reserve in an amount sufficient to ensure that TRS can make the required benefit payments.

On the basis of the current valuation and the funding policy of Section 16-158, the total fiscal year 2015 contribution rate payable to the Benefit Trust Reserve by all employers is equal to 33.58% of membership payroll. This is the required employer rate, including state contributions, federal funds contributions, and school district contributions for the 2.2% formula change.

Schedule IA of the report shows the required contributions to the Benefit Trust Reserve and the Guaranteed Minimum Annuity Reserve for fiscal year 2015. Schedule IB shows the development of the 33.58% required employer contribution rate for the Benefit Trust Reserve for fiscal year 2015.

Schedule XIV shows a projection of the Gross Employer Rate for the Benefit Trust Reserve before application of the State Maximum, while Schedules XII and XIII provide detailed projections of required employer rates and amounts. The chart below summarizes the projected gross and required employer contribution rates to the Benefit Trust Reserve.

| Fiscal Year | Gross Employer Rate (Before State Maximum and Without POBs) from Schedule XIV | Required Employer Rate (After State Maximum and With POBs) from Schedule XIII | State Rate (After State Maximum and With POBs) from Schedule XII |
|-------------|---|--|---|
| 2015 | 36.86% | 33.58% | 33.77% |
| 2016 | 36.16% | 33.02% | 33.34% |
| 2017 | 35.63% | 32.51% | 32.95% |
| 2018 | 35.74% | 32.64% | 33.10% |
| 2019 | 35.55% | 32.48% | 32.94% |
| 2020 | 35.54% | 32.39% | 32.87% |
| 2021 | 35.52% | 32.33% | 32.81% |
| 2022 | 35.51% | 32.29% | 32.78% |
| 2023 | 35.50% | 32.26% | 32.77% |
| 2024 | 35.49% | 32.15% | 32.67% |
| 2025 | 35.47% | 32.07% | 32.60% |
| 2026 | 35.46% | 32.10% | 32.64% |
| 2027 | 35.44% | 32.14% | 32.70% |
| 2028 | 35.43% | 32.10% | 32.67% |
| 2029 | 35.41% | 32.08% | 32.66% |
| 2030 | 35.40% | 31.99% | 32.59% |
| 2031 | 35.38% | 31.91% | 32.53% |
| 2032 | 35.36% | 31.92% | 32.56% |
| 2033 | 35.34% | 32.01% | 32.67% |
| 2034 | | 33.94% | 34.70% |
| 2035 | Maximum does not | 33.90% | 34.68% |
| 2036 | | 33.86% | 34.66% |
| 2037 - 2045 | apply | 33.84% | 34.64% |

The above employer rates include the 0.58% of payroll School District contributions for the 2.2% formula change as required by section 16-158(e). In addition, the statute requires School Districts to make the following contributions:

- (a) Sec. 16-128(d-10) payments for excessive sick leave service credit
- (b) Sec. 16-133.2 ERO lump sum payments when members retire with ERO benefits
- (c) Sec. 16-158(f) lump sum payments at retirement for the cost of pension benefits arising from salary increases over 6% used in the final average salary calculation. PA 94-1057 provided permanent and temporary exemptions from some of these payments for retirements occurring on or after July 31, 2006.

Although not all of these additional contributions are shown in Schedules IA, IB, XII, XIII, XIV, or XV they are all – with the exception of Sec. 16-128(d-10) payments – taken into account in the actuarial projection of the assets and funded status of the system, and the calculation of the Gross and Required employer rates is performed only *after* the above contributions have been taken into account. (There is currently no assumption for excessive sick leave service credit.) A projection of School District contributions under sections 16-133.2 and 16-158(f) can be found in Schedule XII.

<u>SECTION III — CURRENT FINANCIAL POSITION</u>

The current financial position of the System may be measured by comparing the assets of the System to the pension benefit obligation of the System where the latter represents the value of pensions currently in payment and pensions earned through the valuation date by the active membership. As required under PA 96-0043, the method for determining the actuarial value of assets used to determine the employer contribution was changed to a 5-year smoothed value beginning with the June 30, 2009 valuation. In the ideal, fully-funded state, the assets would be equal to the pension benefit obligation. A comparison of the current financial position, or funded status, as of the current valuation date, with that as of the previous valuation date is summarized in the table below.

COMPARISON OF FUNDED STATUS

(dollars in millions)

| Valuation Date | Assets at Fair Market Value | Assets at 5-Year Smoothed Value | Pension Benefit Obligation | Funded Status at Fair Market Value Basis | Funded Status at 5- Year Smoothed Value Basis |
|----------------|--------------------------------|------------------------------------|----------------------------|--|---|
| June 30, 2013 | \$ 39,859 | \$ 38,155 | \$ 93,887 | 42.5% | 40.6% |
| June 30, 2012 | \$ 36,517 | \$ 37,945 | \$ 90,025 | 40.6% | 42.1% |

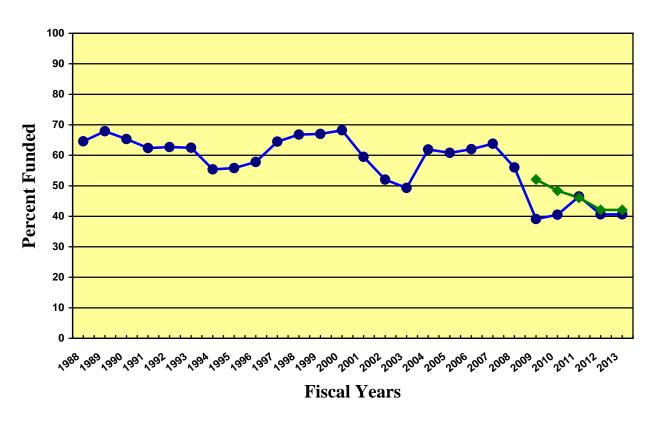
As can be seen from the table, the current funded statuses of the System are 42.5% and 40.6% as measured by the fair market value of assets and 5-year smoothed actuarial value of assets, respectively.

In assessing the financial position of the System, it is important to review annually the trend line of the funded status. As can be seen from the chart on page 8, the funded status based on either book value or market value of assets declined significantly from 1987 to 1996. The major portion of the decline was due to the failure of the State to adhere to the prior funding provisions of Senate Bill 95 (Public Act 86-0273). In fact, the decline in the funded ratio of the System would have been greater had it not been for the average investment return of the System, which was greater than the 8% return expected during this period of underfunding by the State. The decline in the funded ratio that occurred during fiscal years 2001 through 2003, and 2008 through 2009, is due to the rate of return of the market value of investments being less than the 8.5% expected. With the implementation of the actuarial value of assets with the June 30, 2009 actuarial valuation, the funded status has not fluctuated as much as when market was used.

The funding provisions of Section 16-158 are designed to attain a 90% funded ratio in fiscal year 2045. A projection of the future funded status of the System is shown in Schedule XV on pages 36 and 37.

TEACHERS' RETIREMENT SYSTEM OF THE STATE OF ILLINOIS

FUNDED RATIO FISCAL YEARS 1988 – 2013



Funded Ratio At:

Fair Market

5-Year Smoothed Actuarial Value*

* Actuarial value of assets effective after 2008.

<u>SECTION IV — GAINS AND LOSSES DURING YEAR</u>

The gain and loss analysis provides a measure of the impact of the demographic and economic factors on the results of the actuarial valuation, when compared to the actuarial assumptions used to anticipate these factors. The analysis is significant in providing a test of the adequacy of these assumptions over a period of time. A detailed reconciliation of the changes in the unfunded pension benefit obligation, including actuarial gains and losses, can be found in Schedule III.

The demographic factors affecting the gain and loss analysis include the following:

- (a) withdrawal from active membership;
- (b) mortality during active membership;
- (c) disability retirement;
- (d) service retirement; and
- (e) mortality after retirement.

The economic factors affecting the gain and loss analysis include the following:

- (a) investment rate of return; and
- (b) active members' salary increases.

During the fiscal year ended June 30, 2013, there was a net actuarial loss of \$1,527 million incurred by the System due to demographic and economic experience when compared to the actuarial assumptions used to anticipate these factors.

The significant factors contributing to this net loss included the following:

| (1) | Gain due to salary increases less than expected | \$ (413) | million |
|-----|--|-------------|---------|
| (2) | Loss due to return on actuarial value of assets less than expected | 1,557 | |
| (3) | Loss due to new entrants, for which no allowance is | | |
| | made in the assumptions | 13 | |
| (4) | Loss due to mortality experience | 7 | |
| (5) | Loss due to retirement experience | 66 | |
| (6) | Gain due to disability experience | (6) | |
| (7) | Loss due to termination experience | 23 | |
| (8) | Loss due to repayments of refunded member contributions | 26 | |
| (9) | Loss due to all other causes | 254 | |
| | Total net losses | \$ 1,527 | million |

The loss from item 2 is the difference between the expected return of 8.00% on the actuarial value of assets and the actual return (including recognition of deferred gains or losses) on the actuarial value of assets. The actuarial loss is equal to the expected earnings of \$2.987 billion minus the actual investment return of \$1.430 billion.

The non-investment loss consists of all gains and losses not associated with the loss due to investment income (item 2). It is composed of the net demographic losses plus the salary increase assumption gain and is \$30 million or 0.03% of the total Pension Benefit Obligation.

The loss from item 8 is due to restoration of the employer-paid portion of the benefit when members repaid previously refunded contributions.

The "other cause" category (item 9) is the balancing item needed to complete the reconciliation and is mainly due to actual cost of benefits earned during the year higher than projected and the transition at June 30, 2013 to eliminate the data lag between active and retired members.

<u>SECTION V — MEMBERSHIP DATA</u>

The June 30, 2013 actuarial valuation was based on the latest membership data available, which were submitted by the System for active, inactive and retired members as of June 30, 2012. As part of the valuation procedure, liabilities were adjusted by projecting results based on the valuation assumptions.

While the actuary did not verify the data at their source, the actuary did perform tests for internal consistency and reasonableness in relation to the data submitted for the previous valuation.

A comparison of the data for the current and previous valuations is as follows:

Comparison of Membership Data

| Data Item | Valuation June 30, 2013 | Valuation June 30, 2012 | Percentage Change |
|---|----------------------------|----------------------------|----------------------|
| Active membership: | | | |
| Full-time and regular part-time: | | | |
| > Number | 132,956 | 133,752 | (0.6) |
| Annual Compensation | \$ 9,601,785,000 | \$ 9,358,470,000 | 2.6 |
| Average Compensation | \$ 72,218 | \$ 69,970 | 3.2 |
| Substitute, part-time, hourly paid (limited schedule) | | | |
| > Number | 29,073 | 32,120 | (9.5) |
| Annual Compensation | \$ 154,240,000 | \$ 153,261,000 | 0.6 |
| Average Compensation | \$ 5,305 | \$ 4,772 | 11.2 |
| Total Number | 162,029 | 165,872 | (2.3) |
| Inactive Membership: | | | |
| Eligible for deferred annuities | 16,995 | 16,811 | 1.1 |
| Eligible for refunds or single sum benefits only | 108,531 | 104,970 | 3.4 |
| Annuitants (retirees, disabilitants and survivors): | | | |
| • Number | 106,102 | 105,499 | 0.6 |
| Annual annuities | \$ 4,811,370,000 | \$ 4,780,743,000 | 0.6 |
| Average annual annuities | \$ 45,347 | \$ 45,316 | 0.1 |

- 1. Rates of pay for individual teachers who were on full-time or regular part-time status at both June 30, 2011 and June 30, 2012 increased on average 5.19%, compared to the expected average increase of 7.11%.
- 2. The 3.4% increase in the number of inactive members eligible for refunds or single sum benefits only is due primarily to experience among substitutes and other members on a limited or flexible schedule.

$\underline{\textbf{SECTION VI}} - \underline{\textbf{ASSETS}}$

| 1. | 1. Market Value of Assets as of June 30, 2013 | | | | | | | | \$ | 39,858,768,499 |
|---|---|------|--------------------|------|---------------|------------|--------------------------------|---------------|----------------|------------------------------|
| 2. | 2. Determination of Deferred Gain (Loss) | | | | | | | | | |
| | | | | | Market Ret | urn o | n Assets | | | |
| | Fiscal Year Ending | | <u>Actual</u> | | Expected | | Gain/(Loss) | % Deferred | | Deferred <u>Amount</u> |
| | 2013 | \$ | 4,561,768,383 | \$ | 2,872,553,018 | \$ | 1,689,215,365 | 80% | \$ | 1,351,372,292 |
| | 2012 | | 224,106,719 | | 3,134,969,397 | | (2,910,862,678) | 60% | | (1,746,517,607) |
| | 2011 | | 7,234,539,490 | | 2,616,321,757 | | 4,618,217,733 | 40% | | 1,847,287,093 |
| | 2010 | | 3,646,060,161 | | 2,388,884,043 | \$ | 1,257,176,118 4,653,746,538 | 20% | \$ | 251,435,224 1,703,577,002 |
| 3. | 3. Actuarial Value of Assets as of June 30, 2013 (1) - (2) | | | | | | | \$ | 38,155,191,497 | |
| 4. | Actuarial Va | alue | of Assets as of Ju | ne 3 | 0, 2012 | | | | \$ | 37,945,397,211 |
| 5. | 5. Return on Actuarial Basis $(3) - [(4) + (B) + (C) + (D)]$ | | | | | | | \$ | 1,429,619,509 | |
| 6. | 6. Expected Actuarial Return on Assets for Fiscal 2013 (G) $x [(4) + .5 x ((B) + (C) + (D))]$ | | | | | C) + (D))] | \$ | 2,986,838,768 | | |
| 7. 2013 Actuarial Basis Asset Gain / (Loss) (5) - (6) | | | | | | \$ | (1,557,219,259) | | | |
| 8. | 8. Actuarial Rate of Return $(5) / [(4) + 0.5 \times ((B) + (C) + (D))]$ 3.83% | | | | | | | 3.83% | | |

| \$ 36,516,825,339 |
|----------------------|
| 3,780,914,113 |
| (4,980,481,783) |
| (20,257,553) |
| 4,561,768,383 |
| \$ 39,858,768,499 |
| 8.00% |
| \$ 2,872,553,018 |
| \$ 1,689,215,365 |
| 12.70% |
| \$ |

<u>SECTION VII — HISTORY OF LEGISLATIVE CHANGES</u>

The actuarial cost method utilized is the projected unit credit cost method, which became effective with the June 30, 1989 valuation. Administrative expenses have been a component of the normal cost rate since the June 30, 1994 valuation. The financing objective under Article 16 of the Illinois Pension Code is to meet the cost of maintaining and administering the system on a 90% funded basis by June 30, 2045. Following is a brief summary of the changes in funding requirements.

- Public Act 88-0593, enacted in 1994, established a fifty-year funding plan for fiscal years 1996 through 2045. It required a fifteen—year ramp period of gradually increasing State contributions followed by a 35-year period of State contributions at a level percent of pay.
- Public Act 90-0448, enacted in 1997, required the System's assets to be valued at fair market value instead of book value.
- Public Act 90-0582, enacted in 1998, changed the defined benefit formula and added minimum state contribution rates in fiscal year 1999 that remained in effect through fiscal year 2004.
- Public Act 93-0002, enacted in 2003, provided pension obligation bond proceeds and placed upper limits on State contributions beginning with the State contribution due for fiscal year 2005.
- Public Act 94-0004, enacted in 2005, removed the money purchase formula for new hires, added new employer contributions for excess salary increases and sick leave, specified the level of state contributions for fiscal years 2006 and 2007, and required a return to the statutory funding plan in fiscal year 2008.
- Public Act 94-1057, enacted in 2006, contained exemptions from some of the new employer contribution requirements enacted in 2005.
- Public Act 96-0043, enacted in 2009, required the use of a smoothed actuarial value of assets beginning with the June 30, 2009 valuation.

- Public Act 96-1511, enacted in 2011, required the state retirement systems to recertify their fiscal year 2011 state funding requirements and assume the Tier II benefits of Public Act 96-0889 were in effect on June 30, 2009.
- Public Act 97-0694, enacted in 2012, required the auditor general to hire an actuary to serve as the State Actuary.

<u>SECTION VIII — FINANCIAL RESULTS AND MEMBERSHIP DATA - DETAILED SUMMARIES</u>

Detailed summaries of the financial results of the valuation and membership data used in preparing the valuation are shown in the schedules that follow.

Schedules XII through XV are based on Public Act 94-0004, as amended. Public Act 96-0043 introduced a five-year smoothed asset value into the determination of the contribution requests with the June 30, 2009 valuation. Prior to this date, the projections were based on market.

SCHEDULE IA

EMPLOYER'S CONTRIBUTION RATES AND AMOUNTS FISCAL YEAR 2015

(Based on June 30, 2013 Actuarial Valuation)

| Reserve Fund | Year Ended June 30, 2015 |
|---|--------------------------|
| Benefit Trust Reserve | |
| Employer's Cost | \$ 3,497,366,000 |
| Less School Districts | (60,414,000) |
| Less Federal Funds | (25,074,000) |
| State Contribution | \$ 3,411,878,000 |
| Guaranteed Minimum Annuity Reserve State Contribution | \$ 1,000,000 |
| Total State Contribution | \$ 3,412,878,000 |

Notes:

(1) Benefit Trust Reserve

- (a) Employer's cost of \$3,497,366,000 is equivalent to a contribution rate of 33.58% of payroll based on an estimated membership payroll for fiscal year 2015 of \$10.416 billion.
- (b) Employer's cost is based on projection required by Section 16-158 summarized as follows:
 - (i) Meet the cost of maintaining and administering the System on a 90% funded basis by June 30, 2045, with level percentage of payroll contributions after a 15 year phase-in beginning in fiscal year 1996.
 - (ii) Phase-in period requires employer's contribution rate to increase in equal annual increments to attain level percentage schedule in fiscal year 2010, except in the following State fiscal years, the State contribution to the System shall not be less than the following indicated percentages of the applicable employee payroll: 10.02% in FY1999; 10.77% in FY2000; 11.47% in FY2001; 12.16% in FY2002; 12.86% in FY2003; 13.56% in FY2004.
 - (iii) Commencing in FY2005, there are upper limits on the State contribution.
 - (iv) PA 94-0004 specifies the FY 2006 and FY 2007 State contribution amounts to TRS.
- (c) The FY 2015 state contribution rate is 33.77% of the estimated \$10.104 billion state payroll.

(2) Guaranteed Minimum Annuity Reserve

Above State contribution for fiscal year 2015 of \$1,000,000 for the Guaranteed Minimum Annuity Reserve is based on projection of benefit outgo from reserve funds in fiscal year 2015. As separate mortality studies have not been performed for the pensioners covered by this special reserve, the contribution has been adjusted to ensure payment of all benefits as required by Statute.

(3) Base Data

Base data used for 50-year projection under the Act is as follows:

- (a) June 30, 2013 valuation data. New entrant profile per actuarial assumptions.
- (b) Employer's contribution to Benefit Trust Reserve in fiscal year 2014 as shown in Schedules XII and XIII:

| | Cer | tified Contribution |
|---------------------------|-----|---------------------|
| State Contribution | \$ | 3,437,478,000 |
| School Districts for 2.2% | | 57,896,000 |
| Federal Funds | | 97,204,000 |
| Total | \$ | 3 592 578 000 |

(c) Funds provided July 2, 2003 under section 7.2(d) of the General Obligation Bond Act: \$4,330,374,000, and debt service schedule provided by the Office of Management and Budget.

SCHEDULE IB

DETERMINATION OF EMPLOYER CONTRIBUTION FOR FISCAL YEAR 2015 (Based on June 30, 2013 Actuarial Valuation)

| D. C.T. ID | Year Ended June 30, 2015 | Percentage of | • |
|--|-------------------------------|------------------------|------------------|
| Benefit Trust Reserve | Julie 30, 2013 | (State, Federa | ai, 10tai) |
| (1) Assumed Payrolls | | | |
| Total Payroll | \$ 10,416,172,000 | | |
| Less Federal Funds Payroll | (312,485,000) | | |
| > State Payroll | 10,103,687,000 | | |
| (2) Employer contribution that would have been required without funds | | | |
| provided by sec. 7.2(d) of General Obligation Bond Act | | | |
| Employer's Cost | 3,839,767,000 | 36.86 % | Total |
| Less School Districts under Sec. 16-158(e) | (60,414,000) | (0.58) | Total |
| State and Federal Funds Contribution Less State Debt Service for TRS portion of all funds provided | 3,779,353,000 | 36.28 % | Total |
| under sec. 7.2 of General Obligation Bond Act | (342,401,000) | (3.28) % | Total |
| Maximum State and Federal Funds Contribution under PA 94- 0004 (3) Employer contribution recognizing all system assets, before limiting | 3,436,952,000 | 33.00 % | Total |
| State and Federal Funds contribution | | | |
| Employer's Cost Less School Districts under Sec. 16-158(e) | 3,581,559,000 (60,414,000) | 34.38 % (0.58) | Total Total |
| State and Federal Funds Contribution | 3,521,145,000 | 33.80 % | Total |
| (4) State and Federal Funds Contribution under PA 94-0004 ➤ Lesser of amounts under (2) and (3) (5) Employer contribution under PA 94-0004 | 3,436,952,000 | 33.00 % | Total |
| State Portion of (4), based on State Payroll Plus Federal Portion of (4), based on Federal Payroll | 3,411,878,000 25,074,000 | 33.77 % <u>8.02</u> | State Federal |
| State and Federal Funds Contribution Plus School Districts under Sec. 16-158(e) | 3,436,952,000 60,414,000 | 33.00 % <u>0.58</u> | Total Total |
| > Employer's Cost | 3,497,366,000 | 33.58 % | Total |

Notes:

(1) Assumed Payrolls

The administrative staff of the System estimated Federal Funds payroll for the fiscal year ending June 30, 2015 would be 3.00% of total payroll. Federal Funds payroll was then projected to increase at 3.50% for 2016 and 4.00% for for 2017 and all subsequent fiscal years.

(2) Determination of Maximum State and Federal Funds Contribution under Public Act 94-0004

Under Section 7.2(d) of the General Obligation Bond Act (GOBA), TRS received \$4.33 billion on July 2, 2003. Commencing with the fiscal year 2005, the maximum State contribution under the Act equals the State contribution that would have been required if this \$4.33 billion contribution had not been made, reduced, but not below zero, by the State's debt service on the TRS portion of the full \$10 billion of Pension Obligation Bonds issued under Section 7.2 of the GOBA. Commencing with the fiscal year 2006 the Federal Funds contribute at the same rate as the State, and so a Combined State and Federal Funds contributions must be determined.

(3) Employer Contribution Recognizing \$4.33 Billion Received July 2, 2003

A gross employer contribution is determined that recognizes all system assets, and that meets the cost of maintaining and administering the System on a 90% funded basis by June 30, 2045, with level percentage of payroll contributions after a 15 year phase-in beginning in fiscal year 1996 (as described in Schedule IA)

(4) State and Federal Funds Contribution under Public Act 94-0004

The State and Federal Funds contribution is the lesser of the maximum contribution determined under (2) or the contribution determined under (3).

(5) Employer Contribution under Public Act 94-0004

The contribution determined under (4) is allocated to the State and to the Federal Funds in proportion to their respective payrolls (shown in (1)). The required employer contribution under PA 94-0004 equals the sum of these contributions, plus the expected 0.58% of payroll School District contributions for the 2.2% formula made under the provisions of Sec. 16-158(e).

(6) State Contribution Amount for FY 2006 and FY 2007 under PA 94-0004

PA 94-0004 specified actual contribution amounts for fiscal years 2006 and 2007 made by the State to the Benefit Trust Reserve.

Additional Information:

The following contributions made to the Benefit Trust Reserve are not shown in Schedule IB:

- (a) From Members:
 - 1. Sec. 16-128 payments for the purchase of optional service credit.
 - 2. Sec. 16-133.2 ERO lump sum payments upon retirement with ERO benefits
 - 3. Sec. 16-152 career contributions of 9.0% of salary, plus commencing July 1, 2005 an additional 0.4% toward the ERO program.
- (b) From School Districts:
 - 1. Sec. 16-128(d-10) payments for excessive sick leave service credit
 - 2. Sec. 16-133.2 ERO lump sum payments when members retire with ERO benefits
 - 3. Sec. 16-158(f) lump sum payments at retirement for the cost of pension benefits arising from salary increases over 6% used in the final average salary calculation.

Although these types of contributions are not shown in Schedule IB (or in Schedules XII, XIII, or XIV), they are all – with the exception of Sec. 16-128(d-10) payments – taken into account in the actuarial projection of the assets and funded status of the system, and the Schedule IB calculation is performed only *after* the above contributions have been taken into account.

An assumption for optional service purchases has been included in the projections since the June 30, 1994 valuation, and payments under Sec. 16-158(f) have been included since the recertified June 30, 2004 valuation. The career ERO contributions and lump sum payments toward ERO benefits were first recognized in the June 30, 2005 actuarial valuation. Finally, there are no current assumptions for excessive sick leave service credit, and so the actuarial projections do not currently include projected payments under Sec. 16-128(d-10).

SCHEDULE II GASB 25 AND 27 — REQUIRED SUPPLEMENTARY INFORMATION (\$ Thousands)

| | GASB 25 Schedule of Funding Progress | | | | | | | | | |
|--------------------------------|--------------------------------------|--|----|--|----|--------------------------------------|----------------------------|----|---------------------------|--|
| Actuarial Valuation Date | | Actuarial Value of Assets (a) * |] | ctuarial Accrued Liability (AAL) - Projected Unit Credit (b) | | Unfunded AAL (UAAL) (b - a) | Funded Ratio (a)/(b) | | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b - a)/c) |
| 6/30/2004 | \$ | 31,544,729 | \$ | 50,947,451 | \$ | 19,402,722 | 61.9% | \$ | 7,280,795 | 266.5% |
| 6/30/2005 | | 34,085,218 | | 56,075,029 | | 21,989,811 | 60.8% | | 7,550,510 | 291.2% |
| 6/30/2006 | | 36,584,889 | | 58,996,913 | | 22,412,024 | 62.0% | | 7,765,752 | 288.6% |
| 6/30/2007** | | 41,909,318 | | 65,648,395 | | 23,739,077 | 63.8% | | 8,149,849 | 291.3% |
| 6/30/2008 | | 38,430,723 | | 68,632,367 | | 30,201,644 | 56.0% | | 8,521,717 | 354.4% |
| 6/30/2009 | | 38,026,044 | | 73,027,198 | | 35,001,154 | 52.1% | | 8,945,021 | 391.3% |
| 6/30/2010 | | 37,439,092 | | 77,293,198 | | 39,854,106 | 48.4% | | 9,251,139 | 430.8% |
| 6/30/2011 | | 37,769,753 | | 81,299,745 | | 43,529,992 | 46.5% | | 9,205,603 | 472.9% |
| 6/30/2012** | | 37,945,397 | | 90,024,945 | | 52,079,548 | 42.1% | | 9,321,098 | 558.7% |
| 6/30/2013 | | 38,155,191 | | 93,886,988 | | 55,731,797 | 40.6% | | 9,394,741 | 593.2% |

| GASB 25 Schedule of Employer Contributions | | | | | | |
|--|-------------------------------------|------------------------------------|---------------------------|--|--|--|
| Total Employer Contributions (State, Federal Funds, and School Districts) | | | | | | |
| Actuarial Valuation Date | Funding Year Ended June 30 | Annual Required Contribution | Percentage Contributed | | | |
| 6/30/2002 ** | 2004 | 1,716,977 | 64.3% | | | |
| 6/30/2003 | 2005 | 1,683,212 | 58.7% | | | |
| 6/30/2004 | 2006 | 1,679,524 | 35.8% | | | |
| 6/30/2005 | 2007 | 2,052,396 | 39.8% | | | |
| 6/30/2006 | 2008 | 1,949,463 | 60.0% | | | |
| 6/30/2007 ** | 2009 | 2,109,480 | 75.9% | | | |
| 6/30/2008 | 2010 | 2,481,914 | 90.6% | | | |
| 6/30/2009 | 2011 | 2,743,221 | 84.7% | | | |
| 6/30/2010 | 2012 | 3,429,945 | 74.6% | | | |
| 6/30/2011 | 2013 | 3,582,033 | 79.8% | | | |

| GASB 27 Disclosure | | | | | | |
|--|---------------|--|--|--|--|--|
| Development of Net Pension Obligations | | | | | | |
| 6/30/2013 | | | | | | |
| <u>Item</u> | | | | | | |
| 1) Net Pension Obligation at 6/30/12 | \$ 14,641,828 | | | | | |
| 2) Employer Normal Cost | 817,433 | | | | | |
| 3) Amortization of Unfunded PBO*** | 2,764,600 | | | | | |
| 4) Annual Required Contribution (ARC) for the | | | | | | |
| period $7/1/12 - 6/30/13$ (2) + (3) | 3,582,033 | | | | | |
| 5) Interest on the NPO at 6/30/12 | 1,244,555 | | | | | |
| 6) Adjustment to the ARC | 870,323 | | | | | |
| 7) Pension Cost $(4) + (5) - (6)$ | 3,956,265 | | | | | |
| 8) Total Employer Contribution | 2,858,065 | | | | | |
| 9) Percent of Pension Cost Contributed (8) / (7) | 72.2% | | | | | |
| 10) Change in NPO (7) – (8) | 1,098,200 | | | | | |
| 11) Net Pension Obligation at $6/30/13$ (1) + (10) | \$ 15,740,028 | | | | | |

The Government Accounting Standards Board (GASB) requires disclosure of the Annual Required Contribution (ARC) under a standard funding methodology. Amounts shown as the ARCs for each year are different from the contributions required by state statute. The information here was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation follows:

Valuation date: 6/30/2013

Actuarial Cost Method: Projected Unit Credit
Amortization Method (for GASB disclosure): Level Percent Open

Remaining Amortization Period (for GASB disclosure): 30 years

Payroll Growth Assumption (for GASB disclosure): Projected using the assumed decrements for the

members in the system and the valuation new entrant profile

Asset Valuation Method: 5-year smoothed value

Actuarial Assumptions:

Investment Rate of Return: 8.00%

Projected Salary Increases: 5.00% – 10.15% composite approximates 6.00%

Includes Inflation at: 3.25% Cost-of-Living Adjustments: 3.00%

For 2009 and later: Assets are 5-year smoothed value.

* Revised economic and noneconomic assumptions due to experience review.

^{*} For 2003 to 2008: Assets are at fair market value.

^{***} The amortization of the unfunded PBO is amortized as a level percentage of pay over 30 years based on the salary increase assumption and new entrant profile found in Section IX of this report.

SCHEDULE III

RECONCILIATION OF UNFUNDED PENSION BENEFIT OBLIGATION

| | | YEAR END | ED JUNE 30 | |
|--|---------|------------|------------|-------------|
| ITEM | | 2013 | | 2012 |
| Unfunded pension benefit obligation at beginning of year | \$ | 52,079,548 | \$ | 43,529,992 |
| Additions (deductions) | | | | |
| - Employer cost in excess of contributions | \$ | 2,125,732 | \$ | 2,710,713 |
| - Change in actuarial assumptions and methods | <u></u> | | | 4,624,966 |
| Net additions (deductions) | \$ | 2,125,732 | \$ | 7,335,679 |
| Actuarial losses (gains) compared to assumptions | | | | |
| - Salary increases for continuing active members | \$ | (412,776) | \$ | (1,211,157) |
| - Asset losses (gains) on actuarial value of assets ¹ | | 1,557,219 | | 1,806,148 |
| - New entrant loss | | 12,678 | | 14,505 |
| - Mortality other than expected | | 7,355 | | 52,681 |
| - Retirements other than expected | | 65,579 | | - |
| - Disabilities other than expected | | (6,121) | | - |
| - Terminations other than expected | | 22,926 | | 29,810 |
| - Repayments of refunded member contributions ² | | 25,733 | | 30,013 |
| - Delayed reporting of retirements (effect on assets) ³ | | 2,303 | | 12,666 |
| - Other ⁴ | l | 251,621 | | 479,211 |
| Net actuarial losses (gains) | \$ | 1,526,517 | \$ | 1,213,877 |
| Unfunded pension benefit obligation at end of year | \$ | 55,731,797 | \$ | 52,079,548 |

Assets are expected to earn 8.0%. This item is the difference between the expected and the actual return on an actuarial basis. For example, in fiscal year 2013, the expected actuarial returns of \$2.987 billion was greater than the \$1.430 billion actual return on assets, resulting in an actuarial loss which increased the unfunded pension benefit obligation by \$1.557 billion.

- (a) Retroactive benefit payments for individuals who delayed applying for retirement.
- (b) Differences between actual cost of benefits earned during the year and projected cost.
- (c) Retirements with reciprocal service credits.
- (d) Delayed reporting of retirements (effect on PBO).
- (e) For 6/30/2013, transition to eliminate data lag between active and retired members.

(\$ Thousands)

Buck will estimate the impact of this change with the June 30, 2014 actuarial valuation, at which point the 2013 census data will be available.

² This includes the employer-paid portion of the benefit that was restored when members repaid previously refunded contributions

³ 547 retirements that occurred prior to 7/1/2011 were not reported to the actuary until 6/30/2012. 191 retirements that occurred prior to 7/1/2012 were not reported to the actuary until 6/30/2013.

⁴ Other includes items such as:

SCHEDULE IV EMPLOYER COST IN EXCESS OF CONTRIBUTIONS (\$ Thousands)

| Year Ended Jun | | | | | |
|---|------|--|-------------|--|--|
| ITEM | | 2013 | | 2012 | |
| Employer normal cost | \$ | 817,433 | \$ | 842,532 | |
| Interest on unfunded pension benefit obligation at beginning of year | | 4,166,364 | | 4,426,762 | |
| Total employer cost | \$ | 4,983,797 | \$ | 5,269,294 | |
| Employer contributions toward normal cost and interest on unfunded pension benefit obligation -State (excluding Minimum Benefit) -School Districts for 2.2% and Salary Increase Cap and Modified ERO -Federal Funds Total employer credits | \$ | 2,702,278 86,919 68,868 2,858,065 | | 2,405,172 91,121 62,288 2,558,581 | |
| Employer cost in excess of contributions | \$ | 2,125,732 | \$ | 2,710,713 | |

SCHEDULE V

10 YEAR HISTORY OF UNFUNDED PENSION BENEFIT OBLIGATION

| | | | | Percentage | |
|------------|-------------------|-------------------|--------------------|-------------|---|
| Year Ended | Pension Benefit | Actuarial Value | Unfunded Pension | Change | |
| June 30 | Obligation | of Assets* | Benefit Obligation | in Unfunded | |
| 2004 | \$ 50,947,451,000 | \$ 31,544,729,000 | \$ 19,402,722,000 | (18.51) | % |
| 2005 | 56,075,029,000 | 34,085,218,000 | 21,989,811,000 | 13.33 | |
| 2006 | 58,996,913,000 | 36,584,889,000 | 22,412,024,000 | 1.92 | |
| 2007 | 65,648,395,000 | 41,909,318,000 | 23,739,077,000 | 5.92 | |
| 2008 | 68,632,367,000 | 38,430,723,000 | 30,201,644,000 | 27.22 | |
| 2009 | 73,027,198,000 | 38,026,044,000 | 35,001,154,000 | 15.89 | |
| 2010 | 77,293,198,000 | 37,439,092,000 | 39,854,106,000 | 13.87 | |
| 2011 | 81,299,745,000 | 37,769,753,000 | 43,529,992,000 | 9.22 | |
| 2012 | 90,024,945,000 | 37,945,397,000 | 52,079,548,000 | 19.64 | |
| 2013 | 93,886,988,000 | 38,155,191,000 | 55,731,797,000 | 7.01 | |
| _ | Average A | Annual Change | | 9.55% | |

^{*} For 2001 to 2008: Assets are at fair market value.

For 2009 and After: Assets are 5-year smoothed value.

SCHEDULE VI

10 YEAR HISTORY OF FUNDED STATUS

| Year Ended June 30 | Pension Benefit Obligation | Actuarial Value of Assets* | Funded Ratio |
|-----------------------|-------------------------------|----------------------------|--------------|
| 2004 | \$ 50,947,451,000 | \$ 31,544,729,000 | 61.9% |
| 2005 | 56,075,029,000 | 34,085,218,000 | 60.8 |
| 2006 | 58,996,913,000 | 36,584,889,000 | 62.0 |
| 2007 | 65,648,395,000 | 41,909,318,000 | 63.8 |
| 2008 | 68,632,367,000 | 38,430,723,000 | 56.0 |
| 2009 | 73,027,198,000 | 38,026,044,000 | 52.1 |
| 2010 | 77,293,198,000 | 37,439,092,000 | 48.4 |
| 2011 | 81,299,745,000 | 37,769,753,000 | 46.5 |
| 2012 | 90,024,945,000 | 37,945,397,000 | 42.1 |
| 2013 | 93,886,988,000 | 38,155,191,000 | 40.6 |

^{*} For 2001 to 2008: Assets are at fair market value.

For 2009 and After: Assets are 5-year smoothed value.

SCHEDULE VII

10-YEAR HISTORY OF SYSTEM REVENUE AND EXPENSES

| Year Ended June 30 | Beginning of Year Market Value of Assets | Contri Member | butions Employer | Market Value Income | Benefits and Expenses | End of Year Market Value of Assets |
|-----------------------|--|------------------|---------------------|------------------------|--------------------------|--|
| 2004 | \$ 23,124,823,000 | \$ 768,661,000 | 5,489,426,000* | \$ 4,485,729,000 | \$ 2,323,910,000 | \$ 31,544,729,000 |
| 2005 | 31,544,729,000 | 761,790,000 | 1,055,562,000 | 3,330,039,000 | 2,606,902,000 | 34,085,218,000 |
| 2006 | 34,085,218,000 | 799,034,000 | 657,848,000 | 3,993,290,000 | 2,950,501,000 | 36,584,889,000 |
| 2007 | 36,584,889,000 | 826,249,000 | 853,586,000 | 6,831,325,000 | 3,186,731,000 | 41,909,318,000 |
| 2008 | 41,909,318,000 | 865,400,000 | 1,171,789,000 | (2,014,414,000) | 3,501,370,000 | 38,430,723,000 |
| 2009 | 38,430,723,000 | 876,182,000 | 1,603,921,000 | (8,654,703,000) | 3,724,811,000 | 28,531,312,000 |
| 2010 | 28,531,312,000 | 899,401,000 | 2,252,150,000 | 3,644,460,000 | 4,003,539,000 | 31,323,784,000 |
| 2011 | 31,323,784,000 | 909,578,000 | 2,326,028,000 | 7,234,539,000 | 4,322,662,000 | 37,471,267,000 |
| 2012 | 37,471,267,000 | 917,661,000 | 2,561,259,000 | 224,107,000 | 4,657,469,000 | 36,516,825,000 |
| 2013 | 36,516,825,000 | 921,423,000 | 2,860,491,000 | 4,561,768,000 | 5,001,739,000 | 39,858,768,000 |

Notes:

Market Value Income represents the net appreciation/(depreciation) in the market value of assets after adjusting for contributions received and benefits and expenses paid.

^{*} The amount shown as the employer contribution for FY 2004 also includes \$4,330,374,000 which TRS received on July 2, 2003 as required under Section 7.2(d) of the General Obligation Bond Act.

SCHEDULE VIII

MEMBERSHIP DATA

ACTIVE AND INACTIVE MEMBERSHIP OF SYSTEM AS OF JUNE 30, 2012 USED IN JUNE 30, 2013 VALUATION

| Group | Number | A | Annual Salaries |
|--|---------|----|-----------------|
| Active members: | | | |
| Reported full-time and regular part-time | 132,956 | \$ | 9,601,784,939 |
| Reported substitutes and hourly paid | 29,073 | | 154,239,957 |
| Total | 162,029 | \$ | 9,756,024,896 |
| | | | |
| Inactives: | 125,526 | | N/A |

ANNUITANTS, DISABILITY BENEFIT RECIPIENTS, AND SURVIVOR ANNUITANTS OF THE SYSTEM AS OF JUNE 30, 2012

USED IN JUNE 30, 2013 VALUATION

(Excluding Guaranteed Minimum Annuities)

| | | A | Annual Annuities | | |
|--------------------------------|---------|----|------------------|--|--|
| Class | Number | | at June 30 | | |
| Retired on account of service: | | | | | |
| Regular | 59,413 | \$ | 2,575,046,000 | | |
| ERI | 10,334 | | 534,116,955 | | |
| ERO | 25,717 | | 1,491,956,757 | | |
| Total | 95,464 | \$ | 4,601,119,712 | | |
| Disability benefit recipients: | | | | | |
| Retirement allowance | 783 | \$ | 19,862,492 | | |
| Occupational | 4 | | 174,085 | | |
| Temporary | 325 | | 8,900,331 | | |
| Total | 1,112 | \$ | 28,936,908 | | |
| Survivor benefit recipients: | | | | | |
| Children | 73 | \$ | 654,925 | | |
| Survivor annuitants | 9,266 | | 174,693,882 | | |
| Reversionary annuitants | 187 | | 5,964,268 | | |
| Total | 9,526 | \$ | 181,313,075 | | |
| Grand Total | 106,102 | \$ | 4,811,369,695 | | |

SCHEDULE VIII

MEMBERSHIP DATA

(Continued)

DATA RECONCILIATION

| | Active Members | Inactive Members |
|--|-------------------|---------------------|
| Number as of June 30, 2011 used as proxy | | |
| for June 30, 2012 Valuation | 165,872 | 121,781 |
| New Participants | 10,589 | |
| Terminations | (12,669) | 12,669 |
| Retirements | (4,658) | (1,132) |
| Disabilities | (154) | (4) |
| Return to Work | 4,326 | (4,282) |
| Deceased | (132) | (203) |
| Refund | (1,028) | (2,598) |
| Lump Sum | (153) | (211) |
| Data Corrections | <u>36</u> | (494) |
| Number as of June 30, 2012 used as proxy | | |
| for June 30, 2013 Valuation | 162,029 | 125,526 |

| | Retirees & Beneficiaries |
|--|-----------------------------|
| Number as of June 30, 2012 | 105,499 |
| New Retirees & Beneficiaries | 630 |
| Disabilities | 17 |
| Return to Work | (9) |
| Deceased | (9) |
| Expiration or Transfer | (7) |
| Suspended | (7) |
| Data Corrections | <u>(12)</u> |
| Number as of June 30, 2012 used as proxy | |
| for June 30, 2013 Valuation | 106,102 |

^{*} The Member counts shown represent the data one year prior to the Valuation. For example, the Active Membership data used for the June 30, 2013 valuation is the snapshot as of June 30, 2012.

SCHEDULE IX

HISTORY OF ACTIVE MEMBERSHIP DATA FOR LAST 10 YEARS

Full-Time and Regular Part-Time

| Census Date | Number Percentage of Active Change in Members Membership | | Average Annual | Percentage Change in |
|-------------|--|--------|----------------|----------------------|
| June 30 | Members | 1 | Salary | Salary |
| 2003 | 128,140 | 1.11% | \$ 55,466 | 4.03% |
| 2004 | 127,405 | (0.57) | 56,871 | 2.53 |
| 2005 | 126,798 | (0.48) | 58,715 | 3.24 |
| 2006 | 130,867 | 3.21 | 59,948 | 2.10 |
| 2007 | 132,287 | 1.09 | 61,713 | 2.94 |
| 2008 | 136,328 | 3.05 | 63,986 | 3.68 |
| 2009 | 138,180 | 1.36 | 66,199 | 3.46 |
| 2010 | 137,711 | (0.34) | 68,352 | 3.25 |
| 2011 | 133,752 | (2.87) | 69,969 | 2.37 |
| 2012 | 132,956 | (0.60) | 72,218 | 3.21 |

Substitutes, Part-Time and Hourly-Paid

| Census | Number | Percentage | Average | Percentage |
|---------|-----------|------------|----------|------------|
| Date | of Active | Change in | Annual | Change in |
| June 30 | Members | Membership | Salary | Salary |
| 2003 | 29,645 | 6.06% | \$ 4,587 | 2.21% |
| 2004 | 30,238 | 2.00 | 4,294 | (6.39) |
| 2005 | 29,148 | (3.60) | 4,636 | 7.96 |
| 2006 | 28,355 | (2.72) | 4,784 | 3.19 |
| 2007 | 28,514 | 0.56 | 4,890 | 2.22 |
| 2008 | 29,146 | 2.22 | 5,128 | 4.87 |
| 2009 | 30,993 | 6.34 | 4,973 | (3.02) |
| 2010 | 32,479 | 4.79 | 4,971 | (0.04) |
| 2011 | 32,120 | (1.11) | 4,772 | (4.00) |
| 2012 | 29,073 | (9.49) | 5,305 | 11.17 |

SCHEDULE X

HISTORY OF ANNUITANT AND SURVIVOR ANNUITANT MEMBERSHIP FOR LAST 10 YEARS

| Census Date | | |
|-------------|----------------|---------------------------------|
| June 30 | Number on Roll | Percentage Change in Membership |
| 2004 | 77,165 | 5.22% |
| 2005 | 82,491 | 6.90 |
| 2006 | 85,153 | 3.23 |
| 2007 | 89,269 | 4.83 |
| 2008 | 91,497 | 2.50 |
| 2009 | 94,419 | 3.19 |
| 2010 | 97,796 | 3.58 |
| 2011 | 101,352 | 3.64 |
| 2012 | 105,499 | 4.09 |
| 2012 | 106,102 | 0.57 |

SCHEDULE XI

BENEFIT STREAM FOR GUARANTEED MINIMUM ANNUITY RESERVE

| Benefit Pay | ment Stream |
|---------------|-------------|
| Fiscal Year | Guaranteed |
| 1 isour 1 our | Minimum |
| 2014 | \$ 934,495 |
| 2015 | 826,960 |
| 2016 | 728,055 |
| 2017 | 637,735 |
| 2018 | 555,855 |
| 2019 | 482,130 |
| 2020 | 416,180 |
| 2021 | 357,580 |
| 2022 | 305,830 |
| 2023 | 260,430 |
| 2024 | 220,840 |
| 2025 | 186,515 |
| 2026 | 156,940 |
| 2027 | 131,595 |
| 2028 | 109,985 |
| 2029 | 91,655 |
| 2030 | 76,160 |
| 2031 | 63,115 |
| 2032 | 52,160 |
| 2033 | 42,975 |
| 2034 | 35,295 |
| 2035 | 28,875 |
| 2036 | 23,520 |
| 2037 | 19,065 |
| | |

| Benefit P | ayment Stream |
|-------------|---------------|
| | Guaranteed |
| Fiscal Year | Minimum |
| 2038 | \$ 15,370 |
| 2039 | 12,310 |
| 2040 | 9,785 |
| | , |
| 2041 | 7,715 |
| 2042 | 6,030 |
| 2043 | 4,665 |
| 2044 | 3,570 |
| 2045 | 2,705 |
| 2046 | 2,025 |
| 2047 | 1,495 |
| 2048 | 1,090 |
| 2049 | 785 |
| 2050 | 555 |
| 2051 | 385 |
| 2052 | 260 |
| 2053 | 175 |
| 2054 | 110 |
| 2055 | 70 |
| 2056 | 40 |
| 2057 | 20 |
| 2058 | 10 |
| 2059 | 5 |
| 2060 | 5 |
| 2061 | - |
| | |

- (1) Above benefit payment amounts were projected based on the mortality assumptions for the general pensioner population.
- (2) As separate mortality studies have not been performed for this special group, the fiscal 2015 State Contribution shown on the Summary of Principal Results has been adjusted to ensure payment of all required benefit amounts, as required by Statute.

SCHEDULE XII

ITEMIZATION OF EMPLOYER CONTRIBUTION TO BENEFIT TRUST RESERVE

| | | | | | | Combined State and Federal Funds | | | | | | |
|---------|------------------------|-------------------------------|--------------|---------------|-------------------------------------|----------------------------------|---------|---------------|---------------|---------------|---------------|------------|
| | | School District Contributions | | | Calculations Required by PA 94-0004 | | | (B) | (C) | | | |
| Year | | | | (A) | | | | | | Required | Required | Percent of |
| Ended | Assumed | s. 16-158(f) | s. 133.2 | s. 16-158(e) | | Formula | Formula | Maximum | Required | Federal Funds | State | State |
| June 30 | Payroll ⁽¹⁾ | (Increases) | (ERO) | (2.2 Formula) | Total | Amount | Rate | Amount | Amount | Contribution | Contribution | Payroll |
| 1995 | \$4,633,650,000 | | | | | \$279,364,800 | 6.03% | | | \$16,500,000 | \$262,864,800 | |
| 1996 | 4,863,544,432 | | | | | 341,276,242 | 7.02% | | | 17,000,000 | 324,276,242 | |
| 1997 | 4,903,151,093 | | | | | 395,268,984 | 8.06% | | | 17,300,000 | 377,968,984 | |
| 1998 | 5,264,732,966 | | | | | 478,439,267 | 9.09% | | | 18,000,000 | 460,439,267 | |
| 1999 | 5,558,349,721 | | | 16,675,000 | 16,675,000 | 543,855,776 | 9.78% | | | 18,500,000 | 567,067,600 | |
| 2000 | 5,887,080,405 | | | 34,145,066 | 34,145,066 | 617,359,480 | 10.49% | | | 18,200,000 | 634,038,560 | |
| 2001 | 6,271,637,672 | | | 36,375,498 | 36,375,498 | 731,839,141 | 11.67% | | | 20,000,000 | 719,356,841 | |
| 2002 | 6,666,272,399 | | | 38,664,380 | 38,664,380 | 821,265,118 | 12.32% | | | 23,000,000 | 810,618,724 | |
| 2003 | 7,115,762,553 | | | 12,808,373 | 12,808,373 | 951,049,918 | 13.37% | | | 25,000,000 | 926,049,918 | |
| 2004 | 7,345,674,585 | | | 42,604,912 | 42,604,912 | 1,056,658,994 | 14.38% | | | 29,400,000 | 1,027,258,994 | |
| 2005 | 7,669,150,690 | | | 44,481,074 | 44,481,074 | 1,199,246,349 | 15.64% | 940,103,532 | 940,103,532 | 37,860,000 | 902,243,532 | 12.26% |
| 2006 | 7,871,835,902 | 14,974,781 | See note (2) | 45,656,648 | 60,631,429 | 555,898,087 | 7.06% | 555,898,087 | 555,898,087 | 24,070,387 | 531,827,700 | 7.06% |
| 2007 | 7,939,262,146 | 19,353,893 | 160,339,640 | 46,047,720 | 225,741,253 | 776,842,522 | 9.78% | 776,842,522 | 776,842,522 | 41,328,022 | 735,514,500 | 9.78% |
| 2008 | 8,293,518,065 | 0 | 83,137,070 | 48,102,405 | 131,239,475 | 1,106,016,254 | 13.34% | 1,087,024,046 | 1,087,024,046 | 47,829,058 | 1,039,194,988 | 13.11% |
| 2009 | 8,817,486,572 | 3,000,000 | 94,319,430 | 51,141,422 | 148,460,852 | 1,505,595,846 | 17.08% | 1,513,542,600 | 1,505,595,846 | 55,707,046 | 1,449,888,800 | 17.08% |
| 2010 | 9,252,805,323 | 3,000,000 | 89,212,140 | 53,666,271 | 145,878,411 | 2,187,182,020 | 23.64% | 2,163,387,015 | 2,163,387,015 | 75,718,545 | 2,087,668,469 | 23.38% |
| 2011 | 9,684,686,327 | 5,000,000 | 86,576,360 | 56,171,181 | 147,747,541 | 2,465,577,919 | 25.46% | 2,432,446,436 | 2,432,446,436 | 75,405,839 | 2,357,040,597 | 25.12% |
| 2012 | 9,995,937,994 | 5,000,000 | 84,768,690 | 57,976,440 | 147,745,130 | 2,548,927,758 | 25.50% | 2,489,826,268 | 2,489,826,268 | 84,654,093 | 2,405,172,175 | 24.91% |
| 2013 | 9,932,764,038 | 5,000,000 | 70,492,910 | 57,610,031 | 133,102,941 | 2,905,908,858 | 29.26% | 2,785,853,432 | 2,785,853,432 | 83,575,603 | 2,702,277,829 | 28.05% |
| 2014 | 9,982,102,443 | 5,000,000 | 61,550,660 | 57,896,194 | 124,446,854 | 3,655,257,494 | 36.62% | 3,534,681,904 | 3,534,681,904 | 97,203,752 | 3,437,478,152 | 35.41% |
| 2015 | 10,416,171,908 | 5,782,580 | 58,366,010 | 60,413,797 | 124,562,387 | 3,521,145,335 | 33.80% | 3,436,951,953 | 3,436,951,953 | 25,074,310 | 3,411,877,643 | 33.77% |
| 2016 | 10,838,000,024 | 5,460,940 | 60,587,420 | 62,860,400 | 128,908,760 | 3,586,935,042 | 33.10% | 3,516,377,157 | 3,516,377,157 | 29,354,700 | 3,487,022,457 | 33.34% |
| 2017 | 11,281,987,796 | 5,359,270 | 68,163,120 | 65,435,529 | 138,957,919 | 3,675,004,326 | 32.57% | 3,602,499,034 | 3,602,499,034 | 33,537,964 | 3,568,961,070 | 32.95% |
| 2018 | 11,738,320,347 | 5,291,600 | 72,764,080 | 68,082,258 | 146,137,938 | 3,838,956,957 | 32.70% | 3,762,975,908 | 3,762,975,908 | 33,456,300 | 3,729,519,608 | 33.10% |
| 2019 | 12,210,758,841 | 5,428,200 | 74,951,300 | 70,822,401 | 151,201,901 | 3,968,740,751 | 32.50% | 3,895,070,410 | 3,895,070,410 | 33,427,862 | 3,861,642,548 | 32.94% |
| 2020 | 12,705,905,897 | 5,619,820 | 79,347,140 | 73,694,254 | 158,661,214 | 4,129,426,749 | 32.50% | 4,042,276,426 | 4,042,276,426 | 33,312,022 | 4,008,964,404 | 32.87% |

- (1) The administrative staff of the System estimated the Federal Funds contribution for fiscal years prior to 2006. Commencing with the contribution for fiscal 2006, total payroll for the valuation is split into State and Federal Funds payrolls. Federal Funds payrolls for 2006 2009 were estimated to be 4.33%, 5.32%, 4.40%, and 3.70%, respectively, of total payrolls for those years. For 2015, 2016 and 2017 the estimates are 3.00%, 3.50% and 4.00% of payroll. All payrolls are assumed to increase at the same rate for years subsequent to 2017.
- (2) School District contributions under 16-158(e) for years subsequent to 2005 are expected to equal .58% of total payroll. Sec. 16-158(f) contributions for 2008 2014 were estimated by the administrative staff of the System. Commencing with the contribution for fiscal 2007, Sec. 16-133.2 contributions are estimated in this schedule.
- (3) Federal Funds and State contributions for years 2005 through 2014 are equal to each group's respective payroll multiplied by the Combined State and Federal Funds Required Rate. Beginning with 2015, the Federal Funds contributions are that groups share of the employer normal cost.
- (4) Schedule excludes State ERI contributions of \$1,000,000 for 2004, and \$1,684,000 for 2005 (under Public Act 92-0056, as amended).
- (5) The sum of the amounts in columns (A), (B), and (C) equals the Total Amount of Employer Contribution shown on Schedule XIII.

SCHEDULE XII

ITEMIZATION OF EMPLOYER CONTRIBUTION TO BENEFIT TRUST RESERVE

| | | | | | | Combined State and Federal Funds | | | | | | |
|---------|------------------------|-------------------------------|-------------|---------------|-------------------------------------|----------------------------------|---------|---------------|---------------|---------------|---------------|------------|
| | | School District Contributions | | | Calculations Required by PA 94-0004 | | | (B) | (C) | | | |
| Year | | | | (A) | | | | | | Required | Required | Percent of |
| Ended | Assumed | s. 16-158(f) | s. 133.2 | s. 16-158(e) | | Formula | Formula | Maximum | Required | Federal Funds | State | State |
| June 30 | Payroll ⁽¹⁾ | (Increases) | (ERO) | (2.2 Formula) | Total | Amount | Rate | Amount | Amount | Contribution | Contribution | Payroll |
| 2021 | 13,224,823,529 | 5,940,460 | 84,640,810 | 76,703,976 | 167,285,246 | 4,298,647,739 | 32.50% | 4,199,103,658 | 4,199,103,658 | 33,105,774 | 4,165,997,884 | 32.81% |
| 2022 | 13,766,399,799 | 6,314,670 | 94,838,400 | 79,845,119 | 180,998,189 | 4,476,119,328 | 32.51% | 4,365,182,514 | 4,365,182,514 | 32,825,301 | 4,332,357,213 | 32.78% |
| 2023 | 14,331,471,517 | 6,915,780 | 111,419,930 | 83,122,535 | 201,458,245 | 4,661,803,723 | 32.53% | 4,540,626,506 | 4,540,626,506 | 32,293,792 | 4,508,332,714 | 32.77% |
| 2024 | 14,916,245,433 | 7,555,640 | 123,244,670 | 86,514,224 | 217,314,534 | 4,854,759,411 | 32.55% | 4,709,435,581 | 4,709,435,581 | 31,622,217 | 4,677,813,364 | 32.67% |
| 2025 | 15,518,073,078 | 8,364,640 | 138,958,380 | 90,004,824 | 237,327,844 | 5,055,208,343 | 32.58% | 4,886,542,391 | 4,886,542,391 | 30,735,265 | 4,855,807,126 | 32.60% |
| 2026 | 16,137,672,679 | 9,355,950 | 159,665,790 | 93,598,502 | 262,620,242 | 5,263,975,660 | 32.62% | 5,086,846,759 | 5,086,846,759 | 29,821,469 | 5,057,025,290 | 32.64% |
| 2027 | 16,769,745,642 | 10,442,500 | 177,373,500 | 97,264,525 | 285,080,525 | 5,477,534,217 | 32.66% | 5,292,533,769 | 5,292,533,769 | 28,453,739 | 5,264,080,030 | 32.70% |
| 2028 | 17,416,055,519 | 11,059,740 | 171,242,600 | 101,013,122 | 283,315,462 | 5,696,635,425 | 32.71% | 5,489,432,989 | 5,489,432,989 | 26,644,800 | 5,462,788,189 | 32.67% |
| 2029 | 18,070,475,510 | 11,760,940 | 181,883,920 | 104,808,758 | 298,453,618 | 5,921,843,996 | 32.77% | 5,691,466,778 | 5,691,466,778 | 24,893,088 | 5,666,573,690 | 32.66% |
| 2030 | 18,725,461,063 | 12,696,270 | 194,953,360 | 108,607,674 | 316,257,304 | 6,150,414,302 | 32.85% | 5,880,837,188 | 5,880,837,188 | 22,813,148 | 5,858,024,040 | 32.59% |
| 2031 | 19,367,238,934 | 13,863,090 | 215,157,580 | 112,329,986 | 341,350,656 | 6,379,528,304 | 32.94% | 6,068,102,169 | 6,068,102,169 | 20,191,846 | 6,047,910,323 | 32.53% |
| 2032 | 19,982,181,944 | 15,129,270 | 225,388,020 | 115,896,655 | 356,413,945 | 6,604,769,619 | 33.05% | 6,262,833,017 | 6,262,833,017 | 16,533,268 | 6,246,299,749 | 32.56% |
| 2033 | 20,565,442,961 | 16,049,710 | 231,450,360 | 119,279,569 | 366,779,639 | 6,827,270,305 | 33.20% | 6,464,137,172 | 6,464,137,172 | 13,381,052 | 6,450,756,120 | 32.67% |
| 2034 | 21,118,759,644 | 16,698,420 | 231,464,140 | 122,488,806 | 370,651,366 | 7,045,243,247 | 33.36% | | 7,045,243,247 | 9,762,253 | 7,035,480,994 | 34.70% |
| 2035 | 21,642,833,444 | 17,267,280 | 236,486,340 | 125,528,434 | 379,282,054 | 7,211,609,881 | 33.32% | | 7,211,609,881 | 6,401,841 | 7,205,208,040 | 34.68% |
| 2036 | 22,141,591,393 | 17,568,990 | 229,869,140 | 128,421,230 | 375,859,360 | 7,369,472,043 | 33.28% | | 7,369,472,043 | 2,829,205 | 7,366,642,838 | 34.66% |
| 2037 | 22,614,464,490 | 18,345,180 | 240,071,540 | 131,163,894 | 389,580,614 | 7,520,654,789 | 33.26% | | 7,520,654,789 | 0 | 7,520,654,789 | 34.64% |
| 2038 | 23,062,744,912 | 19,030,400 | 238,140,140 | 133,763,920 | 390,934,460 | 7,669,734,699 | 33.26% | | 7,669,734,699 | 0 | 7,669,734,699 | 34.64% |
| 2039 | 23,482,636,441 | 19,324,990 | 220,479,060 | 136,199,291 | 376,003,341 | 7,809,373,612 | 33.26% | | 7,809,373,612 | 0 | 7,809,373,612 | 34.64% |
| 2040 | 23,874,179,785 | 19,400,410 | 204,056,680 | 138,470,243 | 361,927,333 | 7,939,585,066 | 33.26% | | 7,939,585,066 | 0 | 7,939,585,066 | 34.64% |
| 2041 | 24,248,131,429 | 19,092,380 | 167,055,380 | 140,639,162 | 326,786,922 | 8,063,946,235 | 33.26% | | 8,063,946,235 | 0 | 8,063,946,235 | 34.64% |
| 2042 | 24,615,375,945 | 19,037,490 | 133,460,910 | 142,769,180 | 295,267,580 | 8,186,076,884 | 33.26% | | 8,186,076,884 | 0 | 8,186,076,884 | 34.64% |
| 2043 | 24,990,254,614 | 18,753,000 | 107,093,000 | 144,943,477 | 270,789,477 | 8,310,746,342 | 33.26% | | 8,310,746,342 | 0 | 8,310,746,342 | 34.64% |
| 2044 | 25,386,571,499 | 17,117,850 | 76,044,620 | 147,242,115 | 240,404,585 | 8,442,545,284 | 33.26% | | 8,442,545,284 | 0 | 8,442,545,284 | 34.64% |
| 2045 | 25,805,995,696 | 13,772,820 | 3,804,470 | 149,674,775 | 167,252,065 | 8,582,028,781 | 33.26% | | 8,582,028,781 | 0 | 8,582,028,781 | 34.64% |
| 2046 | 26,250,072,333 | 11,090,840 | 699,550 | 152,250,420 | 164,040,810 | 872,929,757 | 3.33% | | 872,929,757 | 0 | 872,929,757 | 3.46% |

- (1) The administrative staff of the System estimated the Federal Funds contribution for fiscal years prior to 2006. Commencing with the contribution for fiscal 2006, total payroll for the valuation is split into State and Federal Funds payrolls. Federal Funds payrolls for 2006 2009 were estimated to be 4.33%, 5.32%, 4.40%, and 3.70%, respectively, of total payrolls for those years. For 2015, 2016 and 2017 the estimates are 3.00%, 3.50% and 4.00% of payroll. All payrolls are assumed to increase at the same rate for years subsequent to 2017.
- (2) School District contributions under 16-158(e) for years subsequent to 2005 are expected to equal .58% of total payroll. Sec. 16-158(f) contributions for 2008 2014 were estimated by the administrative staff of the System. Commencing with the contribution for fiscal 2007, Sec. 16-133.2 contributions are estimated in this schedule.
- (3) Federal Funds and State contributions for years 2005 through 2014 are equal to each group's respective payroll multiplied by the Combined State and Federal Funds Required Rate. Beginning with 2015, the Federal Funds contributions are that groups share of the employer normal cost.
- (4) Schedule excludes State ERI contributions of \$1,000,000 for 2004, and \$1,684,000 for 2005 (under Public Act 92-0056, as amended).
- (5) The sum of the amounts in columns (A), (B), and (C) equals the Total Amount of Employer Contribution shown on Schedule XIII.

SCHEDULE XIII

FISCAL YEAR 2015 EMPLOYER CONTRIBUTION BASED ON 50-YEAR PROJECTION FOR BENEFIT TRUST RESERVE (50 YEAR AMORTIZATION WITH 15 YEAR PHASE-IN BEGINNING FISCAL YEAR 1996)

| Year | | | End of Year | Employe | er Rate (see 1 | notes) | Amount of Em | ployer Contribution (se | e notes) | |
|---------|--------|--------|--------------------|---------|----------------|--------|---------------|-------------------------|----------------|-----------------|
| Ended | Amort. | Funded | Unfunded Pension | | Normal | | | Normal | | Assumed |
| June 30 | Year | Ratio | Benefit Obligation | Total | Cost | Amort. | Total | Cost | Amort. | Payroll |
| 1995 | 0 | 52.7% | \$11,338,701,000 | 6.03% | 8.12% | -2.09% | \$279,364,800 | \$376,122,700 | (\$96,757,900) | \$4,633,650,000 |
| 1996 | 1 | 52.9% | 12,312,083,000 | 7.02% | 8.23% | -1.21% | 341,276,242 | 400,134,055 | (58,857,812) | 4,863,544,432 |
| 1997 | 2 | 64.5% | 9,558,477,000 | 8.06% | 8.21% | -0.15% | 395,268,984 | 402,771,457 | (7,502,473) | 4,903,151,093 |
| 1998 | 3 | 66.8% | 9,942,354,000 | 9.09% | 8.38% | 0.70% | 478,439,267 | 441,403,004 | 37,036,263 | 5,264,732,966 |
| 1999 | 4 | 67.0% | 10,967,804,000 | 10.83% | 7.84% | 2.99% | 602,242,600 | 435,910,961 | 166,331,639 | 5,558,349,721 |
| 2000 | 5 | 68.2% | 11,404,991,000 | 11.66% | 8.15% | 3.51% | 686,383,626 | 479,928,856 | 206,454,770 | 5,887,080,405 |
| 2001 | 6 | 59.5% | 15,851,051,000 | 12.37% | 8.65% | 3.71% | 775,732,339 | 542,794,806 | 232,937,533 | 6,271,637,672 |
| 2002 | 7 | 52.0% | 20,681,389,000 | 13.09% | 8.84% | 4.25% | 872,283,104 | 588,971,933 | 283,311,171 | 6,666,272,399 |
| 2003 | 8 | 49.3% | 23,808,609,000 | 13.55% | 8.83% | 4.71% | 963,858,291 | 628,536,783 | 335,321,507 | 7,115,762,553 |
| 2004 | 9 | 61.9% | 19,402,722,000 | 14.96% | 8.15% | 6.82% | 1,099,263,906 | 598,462,925 | 500,800,982 | 7,345,674,585 |
| 2005 | 10 | 60.8% | 21,989,811,000 | 12.84% | 8.32% | 4.52% | 984,584,606 | 637,971,250 | 346,613,356 | 7,669,150,690 |
| 2006 | 11 | 62.0% | 22,412,024,000 | 7.64% | 8.20% | -0.56% | 601,554,735 | 645,705,698 | (44,150,963) | 7,871,835,902 |
| 2007 | 12 | 63.8% | 23,739,077,000 | 10.36% | 8.20% | 2.17% | 822,890,242 | 650,835,074 | 172,055,168 | 7,939,262,146 |
| 2008 | 13 | 56.0% | 30,201,644,000 | 13.69% | 8.22% | 5.47% | 1,135,126,451 | 681,651,502 | 453,474,949 | 8,293,518,065 |
| 2009 | 14 | 52.1% | 35,001,154,488 | 17.66% | 9.27% | 8.39% | 1,556,737,268 | 817,320,366 | 739,416,902 | 8,817,486,572 |
| 2010 | 15 | 48.4% | 39,854,106,229 | 23.96% | 9.15% | 14.81% | 2,217,053,286 | 846,936,893 | 1,370,116,393 | 9,252,805,323 |
| 2011 | 16 | 46.5% | 43,529,992,029 | 25.70% | 8.77% | 16.92% | 2,488,617,617 | 849,716,122 | 1,638,901,495 | 9,684,686,327 |
| 2012 | 17 | 42.1% | 52,079,547,789 | 25.49% | 8.43% | 17.06% | 2,547,802,708 | 842,532,254 | 1,705,270,454 | 9,995,937,994 |
| 2013 | 18 | 40.6% | 55,731,797,288 | 28.63% | 8.23% | 20.40% | 2,843,463,463 | 817,433,027 | 2,026,030,436 | 9,932,764,038 |
| 2014 | 19 | 42.6% | 56,189,687,870 | 35.99% | 7.89% | 28.10% | 3,592,578,098 | 787,230,469 | 2,805,347,629 | 9,982,102,443 |
| 2015 | 20 | 44.0% | 57,108,990,424 | 33.58% | 8.02% | 25.55% | 3,497,365,750 | 835,810,326 | 2,661,555,424 | 10,416,171,908 |
| 2016 | 21 | 44.4% | 58,995,714,619 | 33.02% | 7.74% | 25.29% | 3,579,237,557 | 838,705,712 | 2,740,531,845 | 10,838,000,024 |
| 2017 | 22 | 45.3% | 60,331,373,095 | 32.51% | 7.43% | 25.08% | 3,667,934,563 | 838,449,092 | 2,829,485,471 | 11,281,987,796 |
| 2018 | 23 | 46.0% | 61,962,268,344 | 32.64% | 7.13% | 25.51% | 3,831,058,166 | 836,407,500 | 2,994,650,666 | 11,738,320,347 |
| 2019 | 24 | 46.6% | 63,580,251,021 | 32.48% | 6.84% | 25.63% | 3,965,892,811 | 835,696,551 | 3,130,196,260 | 12,210,758,841 |
| 2020 | 25 | 47.3% | 65,163,808,526 | 32.39% | 6.55% | 25.84% | 4,115,970,680 | 832,800,547 | 3,283,170,133 | 12,705,905,897 |

Notes:

- (1) Above contributions to the Benefit Trust Reserve represent the sum of State and Federal Funds Contributions, as well as School District Contributions for the 2.2% formula (commencing in 1999). A breakdown of the total amounts by source is shown on Schedule XII. Sec. 16-158 requires calculations of State contribution amounts as shown in Schedule IB beginning in FY 2005.
- (2) The following employer contributions to the Benefit Trust Reserve were taken into account when determining the above schedule, but are not included in this schedule: (a) State ERI contributions of \$1,000,000 for fiscal year 2004 and \$1,684,000 for fiscal year 2005, which were made under a separate funding plan. (Beginning in fiscal year 2007, the cost of ERI is part of the 50-year funding plan, and included in this schedule); (b) School District Contributions to the Benefit Trust Reserve under Sec. 16-133.2 and 16-158(f), which are shown in Schedule XII; and (c) for FY 1999, additional State funding due to PA 90-0582, and \$9,695,600 in additional State Pensions Fund appropriations. No School District contributions are anticipated under Sec. 16-128(d-10).
- (3) Amortization rate in fiscal years 1995-1997 and 2006 is negative on account of the fact that contributions do not cover normal cost. For years 2037 & beyond, employer normal cost is negative, as member contributions are projected to exceed the cost of benefits accruing.
- (4) Employer Rates, Contribution Amounts, and Assumed Payroll shown for fiscal years 1995 2013 are based on the June 30, 1993 June 30, 2011 actuarial valuations (2004 as recertified per PA 94-0004) and are certified amounts. FY2011 is based on the originally certified amounts.
- (5) Modified ERO retirements are recognized commencing with the June 30, 2005 actuarial liability, while FY 2006 and FY 2007 Pipeline ERO retirements are first recognized in the June 30, 2006 and 2007 accrued liabilities.
- (6) For calculation purposes, Employer Rates include 15 decimal places. For ease of presentation, only 2 decimal places are shown.
- (7) Assumptions and methodology:
 - Prior to 1997: Return on Investment = 8.00%. Payroll Growth based on valuation assumptions. Valuation Interest Rate = 8.00%. Assets at cost value.
 - For 1997 to 2008: Return on Investment = 8.50%. Payroll Growth based on valuation assumptions. Valuation Interest Rate = 8.50%. Assets at market value.
 - For 2009 to 2013: Return on Investment = 8.50%. Payroll Growth based on valuation assumptions. Valuation Interest Rate = 8.50%. 5-year smoothing actuarial value of assets.
 - For 2014 and after: Return on Investment = 8.00%. Payroll Growth based on valuation assumptions. Valuation Interest Rate = 8.00%. 5-year smoothing actuarial value of assets.

SCHEDULE XIII

FISCAL YEAR 2015 EMPLOYER CONTRIBUTION BASED ON 50-YEAR PROJECTION FOR BENEFIT TRUST RESERVE (50 YEAR AMORTIZATION WITH 15 YEAR PHASE-IN BEGINNING FISCAL YEAR 1996) (Continued)

| Year | | | End of Year | Employe | er Rate (see 1 | notes) | Amount of Emp | loyer Contribution (see | notes) | |
|---------|--------|--------|--------------------|---------|----------------|--------|---------------|-------------------------|---------------|----------------|
| Ended | Amort. | Funded | Unfunded Pension | | Normal | | | Normal | | Assumed |
| June 30 | Year | Ratio | Benefit Obligation | Total | Cost | Amort. | Total | Cost | Amort. | Payroll |
| 2021 | 26 | 48.0% | 66,696,618,881 | 32.33% | 6.26% | 26.07% | 4,275,807,634 | 827,644,358 | 3,448,163,276 | 13,224,823,529 |
| 2022 | 27 | 48.7% | 68,157,778,277 | 32.29% | 5.96% | 26.33% | 4,445,027,633 | 820,632,516 | 3,624,395,117 | 13,766,399,799 |
| 2023 | 28 | 49.5% | 69,518,270,999 | 32.26% | 5.63% | 26.63% | 4,623,749,041 | 807,344,809 | 3,816,404,232 | 14,331,471,517 |
| 2024 | 29 | 50.3% | 70,778,090,199 | 32.15% | 5.30% | 26.85% | 4,795,949,805 | 790,555,423 | 4,005,394,382 | 14,916,245,433 |
| 2025 | 30 | 51.2% | 71,910,629,258 | 32.07% | 4.95% | 27.12% | 4,976,547,215 | 768,381,621 | 4,208,165,594 | 15,518,073,078 |
| 2026 | 31 | 52.2% | 72,875,392,109 | 32.10% | 4.62% | 27.48% | 5,180,445,261 | 745,536,724 | 4,434,908,537 | 16,137,672,679 |
| 2027 | 32 | 53.2% | 73,644,501,826 | 32.14% | 4.24% | 27.90% | 5,389,798,294 | 711,343,476 | 4,678,454,818 | 16,769,745,642 |
| 2028 | 33 | 54.3% | 74,225,168,384 | 32.10% | 3.82% | 28.27% | 5,590,446,111 | 666,120,001 | 4,924,326,110 | 17,416,055,519 |
| 2029 | 34 | 55.5% | 74,580,884,929 | 32.08% | 3.44% | 28.63% | 5,796,275,536 | 622,327,198 | 5,173,948,338 | 18,070,475,510 |
| 2030 | 35 | 56.7% | 74,695,519,304 | 31.99% | 3.05% | 28.94% | 5,989,444,862 | 570,328,705 | 5,419,116,157 | 18,725,461,063 |
| 2031 | 36 | 58.0% | 74,530,317,908 | 31.91% | 2.61% | 29.31% | 6,180,432,155 | 504,796,151 | 5,675,636,004 | 19,367,238,934 |
| 2032 | 37 | 59.4% | 74,038,591,463 | 31.92% | 2.07% | 29.85% | 6,378,729,672 | 413,331,696 | 5,965,397,976 | 19,982,181,944 |
| 2033 | 38 | 60.9% | 73,205,432,641 | 32.01% | 1.63% | 30.39% | 6,583,416,741 | 334,526,291 | 6,248,890,450 | 20,565,442,961 |
| 2034 | 39 | 62.7% | 71,603,155,427 | 33.94% | 1.16% | 32.78% | 7,167,732,053 | 244,056,319 | 6,923,675,734 | 21,118,759,644 |
| 2035 | 40 | 64.5% | 69,603,328,120 | 33.90% | 0.74% | 33.16% | 7,337,138,315 | 160,046,030 | 7,177,092,285 | 21,642,833,444 |
| 2036 | 41 | 66.4% | 67,190,009,043 | 33.86% | 0.32% | 33.54% | 7,497,893,273 | 70,730,128 | 7,427,163,145 | 22,141,591,393 |
| 2037 | 42 | 68.5% | 64,314,106,960 | 33.84% | -0.10% | 33.94% | 7,651,818,683 | (23,517,295) | 7,675,335,978 | 22,614,464,490 |
| 2038 | 43 | 70.6% | 60,952,728,407 | 33.84% | -0.51% | 34.35% | 7,803,498,619 | (118,664,601) | 7,922,163,220 | 23,062,744,912 |
| 2039 | 44 | 72.9% | 57,082,765,225 | 33.84% | -0.96% | 34.79% | 7,945,572,903 | (224,412,907) | 8,169,985,810 | 23,482,636,441 |
| 2040 | 45 | 75.3% | 52,683,173,118 | 33.84% | -1.34% | 35.18% | 8,078,055,309 | (319,846,567) | 8,397,901,876 | 23,874,179,785 |
| 2041 | 46 | 77.9% | 47,751,628,482 | 33.84% | -1.66% | 35.50% | 8,204,585,397 | (403,688,464) | 8,608,273,861 | 24,248,131,429 |
| 2042 | 47 | 80.6% | 42,263,972,407 | 33.84% | -1.90% | 35.74% | 8,328,846,064 | (468, 450, 107) | 8,797,296,171 | 24,615,375,945 |
| 2043 | 48 | 83.5% | 36,194,022,246 | 33.84% | -2.02% | 35.86% | 8,455,689,819 | (506,029,521) | 8,961,719,340 | 24,990,254,614 |
| 2044 | 49 | 86.6% | 29,535,553,561 | 33.84% | -1.98% | 35.82% | 8,589,787,399 | (503,579,423) | 9,093,366,822 | 25,386,571,499 |
| 2045 | 50 | 90.0% | 22,208,374,456 | 33.84% | -2.20% | 36.04% | 8,731,703,556 | (568,049,336) | 9,299,752,892 | 25,805,995,696 |
| 2046 | 51 | 90.0% | 22,305,749,058 | 3.91% | -2.20% | 6.11% | 1,025,180,177 | (577,736,504) | 1,602,916,681 | 26,250,072,333 |

Notes:

- (1) Above contributions to the Benefit Trust Reserve represent the sum of State and Federal Funds Contributions, as well as School District Contributions for the 2.2% formula (commencing in 1999). A breakdown of the total amounts by source is shown on Schedule XII. Sec. 16-158 requires calculations of State contribution amounts as shown in Schedule IB beginning in FY 2005.
- (2) The following employer contributions to the Benefit Trust Reserve were taken into account when determining the above schedule, but are not included in this schedule: (a) State ERI contributions of \$1,000,000 for fiscal year 2004 and \$1,684,000 for fiscal year 2005, which were made under a separate funding plan. (Beginning in fiscal year 2007, the cost of ERI is part of the 50-year funding plan, and included in this schedule); (b) School District Contributions to the Benefit Trust Reserve under Sec. 16-133.2 and 16-158(f), which are shown in Schedule XII; and (c) for FY 1999, additional State funding due to PA 90-0582, and \$9,695,600 in additional State Pensions Fund appropriations. No School District contributions are anticipated under Sec. 16-128(d-10).
- (3) Amortization rate in fiscal years 1995-1997 and 2006 is negative on account of the fact that contributions do not cover normal cost. For years 2037 & beyond, employer normal cost is negative, as member contributions are projected to exceed the cost of benefits accruing.
- (4) Employer Rates, Contribution Amounts, and Assumed Payroll shown for fiscal years 1995 2013 are based on the June 30, 1993 June 30, 2011 actuarial valuations (2004 as recertified per PA 94-0004) and are certified amounts. FY2011 is based on the originally certified amounts.
- (5) Modified ERO retirements are recognized commencing with the June 30, 2005 actuarial liability, while FY 2006 and FY 2007 Pipeline ERO retirements are first recognized in the June 30, 2006 and 2007 accrued liabilities.
- (6) For calculation purposes, Employer Rates include 15 decimal places. For ease of presentation, only 2 decimal places are shown.
- Assumptions and methodology:
 - Prior to 1997: Return on Investment = 8.00%. Payroll Growth based on valuation assumptions. Valuation Interest Rate = 8.00%. Assets at cost value.
 - For 1997 to 2008: Return on Investment = 8.50%. Payroll Growth based on valuation assumptions. Valuation Interest Rate = 8.50%. Assets at market value.
 - For 2009 to 2013: Return on Investment = 8.50%. Payroll Growth based on valuation assumptions. Valuation Interest Rate = 8.50%. 5-year smoothing actuarial value of assets.
 - For 2014 and after: Return on Investment = 8.00%. Payroll Growth based on valuation assumptions. Valuation Interest Rate = 8.00%. 5-year smoothing actuarial value of assets.

SCHEDULE XIV

PROJECTION OF ASSETS, EMPLOYER, STATE AND FEDERAL FUNDS CONTRIBUTIONS WITHOUT PENSION OBLIGATION BONDS STATE'S DEBT SERVICE ON PENSION OBLIGATION BONDS, AND STATE AND FEDERAL FUND MAXIMUMS WITH PENSION OBLIGATION BONDS JUNE 30, 2013 VALUATION

| | | | | Witho | ut POB | | | With POB |
|---------|----------------|----------------|--------------------|--------|----------------|--------|-------------|---------------------|
| | | | Required Emplo | oyer | Required State | and | | State and Federal |
| Year | End of | Total | (including s. 16-1 | 58(e)) | Federal Fund | ds | State's | Funds Maximum |
| Ended | Year Assets | Assumed | | | | | Debt | (Required Amount |
| June 30 | Without POB | Payroll | Amount | Rate | Amount | Rate | Service | Minus Debt Service) |
| 2003 | 23,124,823,000 | 7,115,762,553 | 963,858,291 | 13.55% | 951,049,918 | 13.37% | | |
| 2004 | 26,501,701,000 | 7,345,674,585 | 1,099,263,906 | 14.96% | 1,056,658,994 | 14.38% | | |
| 2005 | 28,812,420,000 | 7,669,150,690 | 1,278,235,766 | 16.67% | 1,233,754,692 | 16.09% | 293,651,160 | 940,103,532 |
| 2006 | 30,991,751,000 | 7,871,835,902 | 895,205,895 | 11.37% | 849,549,247 | 10.79% | 293,651,160 | 555,898,087 |
| 2007 | 35,571,482,266 | 7,939,262,146 | 1,116,541,402 | 14.06% | 1,070,493,682 | 13.48% | 293,651,160 | 776,842,522 |
| 2008 | 32,718,344,000 | 8,293,518,065 | 1,458,367,611 | 17.58% | 1,410,265,206 | 17.00% | 323,241,160 | 1,087,024,046 |
| 2009 | 32,512,829,921 | 8,817,486,572 | 1,887,185,432 | 21.40% | 1,836,044,010 | 20.82% | 322,501,410 | 1,513,542,600 |
| 2010 | 32,224,190,408 | 9,252,805,323 | 2,538,726,176 | 27.44% | 2,485,059,905 | 26.86% | 321,672,890 | 2,163,387,015 |
| 2011 | 32,741,467,189 | 9,684,686,327 | 2,809,314,037 | 29.01% | 2,753,142,856 | 28.43% | 320,696,420 | 2,432,446,436 |
| 2012 | 33,123,603,717 | 9,995,937,994 | 2,897,038,683 | 28.98% | 2,839,062,243 | 28.40% | 349,235,975 | 2,489,826,268 |
| 2013 | 33,544,961,209 | 9,932,764,038 | 3,190,480,188 | 32.12% | 3,132,870,157 | 31.54% | 347,016,725 | 2,785,853,432 |
| 2014 | 36,662,312,702 | 10,015,729,165 | 3,937,316,393 | 39.31% | 3,879,420,199 | 38.73% | 344,738,295 | 3,534,681,904 |
| 2015 | 39,664,558,645 | 10,416,171,908 | 3,839,766,435 | 36.86% | 3,779,352,638 | 36.28% | 342,400,685 | 3,436,951,953 |
| 2016 | 41,904,951,716 | 10,838,000,024 | 3,919,241,452 | 36.16% | 3,856,381,052 | 35.58% | 340,003,895 | 3,516,377,157 |
| 2017 | 44,715,299,374 | 11,281,987,796 | 4,020,159,128 | 35.63% | 3,954,723,599 | 35.05% | 352,224,565 | 3,602,499,034 |
| 2018 | 47,363,668,889 | 11,738,320,347 | 4,194,859,818 | 35.74% | 4,126,777,560 | 35.16% | 363,801,653 | 3,762,975,908 |
| 2019 | 50,123,035,220 | 12,210,758,841 | 4,340,627,968 | 35.55% | 4,269,805,567 | 34.97% | 374,735,158 | 3,895,070,410 |
| 2020 | 53,027,015,123 | 12,705,905,897 | 4,515,169,370 | 35.54% | 4,441,475,116 | 34.96% | 399,198,690 | 4,042,276,426 |

Note: This schedule shows how the maximum state and federal funds contributions under PA 94-0004 are determined. It shows projections of the amounts shown in Schedule IB, item 2: contributions that would have been required if there were no POB program, minus the debt service. Schedule excludes School District payments required by Sec. 16-128(d-10), 16-133.2, and 16-158(f) (because they are not a set percentage of payroll).

SCHEDULE XIV

PROJECTION OF ASSETS, EMPLOYER, STATE AND FEDERAL FUNDS CONTRIBUTIONS WITHOUT PENSION OBLIGATION BONDS STATE'S DEBT SERVICE ON PENSION OBLIGATION BONDS, AND STATE AND FEDERAL FUND MAXIMUMS JUNE 30, 2013 VALUATION

(Continued)

| | | | | Witho | ut POB | | | With POB |
|---------|-----------------|----------------|--------------------|--------|----------------|--------|-------------|---------------------|
| | | | Required Emplo | oyer | Required State | and | | State and Federal |
| Year | End of | Total | (including s. 16-1 | 58(e)) | Federal Fund | ds | State's | Funds Maximum |
| Ended | Year Assets | Assumed | | | | | Debt | (Required Amount |
| June 30 | Without POB | Payroll | Amount | Rate | Amount | Rate | Service | Minus Debt Service) |
| 2021 | 56,091,746,224 | 13,224,823,529 | 4,698,005,151 | 35.52% | 4,621,301,175 | 34.94% | 422,197,518 | 4,199,103,658 |
| 2022 | 59,340,473,736 | 13,766,399,799 | 4,888,759,273 | 35.51% | 4,808,914,154 | 34.93% | 443,731,640 | 4,365,182,514 |
| 2023 | 62,801,767,664 | 14,331,471,517 | 5,087,550,099 | 35.50% | 5,004,427,564 | 34.92% | 463,801,058 | 4,540,626,506 |
| 2024 | 66,494,141,384 | 14,916,245,433 | 5,293,150,575 | 35.49% | 5,206,636,351 | 34.91% | 497,200,770 | 4,709,435,581 |
| 2025 | 70,432,779,625 | 15,518,073,078 | 5,504,551,175 | 35.47% | 5,414,546,351 | 34.89% | 528,003,960 | 4,886,542,391 |
| 2026 | 74,632,027,369 | 16,137,672,679 | 5,722,193,776 | 35.46% | 5,628,595,274 | 34.88% | 541,748,515 | 5,086,846,759 |
| 2027 | 79,096,237,858 | 16,769,745,642 | 5,943,782,274 | 35.44% | 5,846,517,749 | 34.86% | 553,983,980 | 5,292,533,769 |
| 2028 | 83,804,822,004 | 17,416,055,519 | 6,169,951,466 | 35.43% | 6,068,938,344 | 34.85% | 579,505,355 | 5,489,432,989 |
| 2029 | 88,769,513,478 | 18,070,475,510 | 6,399,038,631 | 35.41% | 6,294,229,873 | 34.83% | 602,763,095 | 5,691,466,778 |
| 2030 | 94,003,233,198 | 18,725,461,063 | 6,627,997,062 | 35.40% | 6,519,389,388 | 34.82% | 638,552,200 | 5,880,837,188 |
| 2031 | 99,517,760,158 | 19,367,238,934 | 6,851,755,280 | 35.38% | 6,739,425,294 | 34.80% | 671,323,125 | 6,068,102,169 |
| 2032 | 105,312,290,036 | 19,982,181,944 | 7,065,010,542 | 35.36% | 6,949,113,887 | 34.78% | 686,280,870 | 6,262,833,017 |
| 2033 | 111,349,597,914 | 20,565,442,961 | 7,267,596,721 | 35.34% | 7,148,317,152 | 34.76% | 684,179,980 | 6,464,137,172 |
| 2034 | | | | | | | | |
| 2035 | | | | | | | | |
| 2036 | | | | | | | | |
| 2037 | | | | | | | | |
| 2038 | | | | | | | | |
| 2039 | | 1.7 | | Cı | C' 1 | 1. 1 T | 20 202 | |
| 2040 | | Maximum de | bes not apply | arter | nscai year e | naea J | une 30, 203 |)3 |
| 2041 | | | | | | | | |
| 2042 | | | | | | | | |
| 2043 | | | | | | | | |
| 2044 | | | | | | | | |
| 2045 | | | | | | | | |
| 2046 | | | | | | | | |

Note: This schedule shows how the maximum state and federal funds contributions under PA 94-0004 are determined. It shows projections of the amounts shown in Schedule IB, item 2: contributions that would have been required if there were no POB program, minus the debt service. Schedule excludes School District payments required by Sec. 16-128(d-10), 16-133.2, and 16-158(f) (because they are not a set percentage of payroll).

SCHEDULE XV

PROJECTIONS USING CERTIFIED CONTRIBUTIONS AND AN 8.0% MARKET RATE OF RETURN

| Year | | Contrib | utions | | | | | | | Funded |
|---------|---------------|-------------|--------------|---------------|-----------------|-----------------|------------------|------------------|------------------|--------------|
| Ended | | School | Federal | | Benefits and | Asset Return & | Actuarial Value | Market Value | | Ratio |
| June 30 | Member | District | Funds | State | Expenses | Cash Income | of Assets * | of Assets | PBO | based on AVA |
| 1995 | \$421,726,521 | | \$16,500,000 | \$262,864,800 | \$1,108,283,000 | | \$12,641,865,000 | \$12,641,865,000 | \$23,980,566,000 | 52.7% |
| 1996 | 422,238,847 | | 17,000,000 | 324,276,242 | 1,148,919,000 | 1,573,249,911 | 13,829,711,000 | 13,829,711,000 | 26,141,794,000 | 52.9% |
| 1997 | 420,762,625 | | 17,300,000 | 377,968,984 | 1,186,203,042 | 3,933,568,433 | 17,393,108,000 | 17,393,108,000 | 26,951,585,000 | 64.5% |
| 1998 | 440,967,595 | | 18,000,000 | 460,439,267 | 1,237,762,773 | 2,891,134,911 | 19,965,887,000 | 19,965,887,000 | 29,908,241,000 | 66.8% |
| 1999 | 866,369,000 | 16,675,000 | 18,500,000 | 567,067,600 | 1,314,929,000 | 2,118,139,400 | 22,237,709,000 | 22,237,709,000 | 33,205,513,000 | 67.0% |
| 2000 | 619,622,000 | 34,145,066 | 18,200,000 | 634,038,560 | 1,437,474,000 | 2,375,172,374 | 24,481,413,000 | 24,481,413,000 | 35,886,404,000 | 68.2% |
| 2001 | 643,563,000 | 36,375,498 | 20,000,000 | 719,356,841 | 1,611,050,000 | (974,012,339) | 23,315,646,000 | 23,315,646,000 | 39,166,697,000 | 59.5% |
| 2002 | 681,151,770 | 38,664,380 | 23,000,000 | 810,618,724 | 1,809,763,000 | (693,032,874) | 22,366,285,000 | 22,366,285,000 | 43,047,674,000 | 52.0% |
| 2003 | 732,020,451 | 12,808,373 | 25,000,000 | 926,049,918 | 2,051,953,000 | 1,114,612,258 | 23,124,823,000 | 23,124,823,000 | 46,933,432,000 | 49.3% |
| 2004 | 768,661,300 | 42,604,912 | 29,400,000 | 1,027,258,994 | 2,320,690,844 | 8,872,671,638 | 31,544,729,000 | 31,544,729,000 | 50,947,451,000 | 61.9% |
| 2005 | 761,790,009 | 44,481,074 | 37,860,000 | 902,243,532 | 2,604,081,011 | 3,398,195,396 | 34,085,218,000 | 34,085,218,000 | 56,075,029,000 | 60.8% |
| 2006 | 799,034,336 | 60,631,429 | 24,070,387 | 531,827,700 | 2,948,023,574 | 4,032,130,722 | 36,584,889,000 | 36,584,889,000 | 58,996,913,000 | 62.0% |
| 2007 | 826,249,007 | 225,741,253 | 41,328,022 | 735,514,500 | 3,184,574,659 | 6,680,170,878 | 41,909,318,000 | 41,909,318,000 | 65,648,395,000 | 63.8% |
| 2008 | 865,400,168 | 131,239,475 | 47,829,058 | 1,039,194,988 | 3,498,960,895 | (2,063,297,794) | 38,430,723,000 | 38,430,723,000 | 68,632,367,000 | 56.0% |
| 2009 | 876,182,122 | 148,460,852 | 55,707,046 | 1,449,888,800 | 3,723,108,308 | (8,706,541,270) | 38,026,043,512 | 28,531,312,242 | 73,027,198,000 | 52.1% |
| 2010 | 909,642,774 | 145,878,411 | 75,718,545 | 2,087,668,469 | 4,003,538,821 | 3,577,102,594 | 37,439,091,771 | 31,323,784,214 | 77,293,198,000 | 48.4% |
| 2011 | 948,286,581 | 147,747,541 | 75,405,839 | 2,357,040,597 | 4,329,807,307 | 6,948,809,729 | 37,769,752,971 | 37,471,267,194 | 81,299,745,000 | 46.5% |
| 2012 | 976,364,866 | 147,745,130 | 84,654,093 | 2,405,172,175 | 4,641,424,675 | 73,046,556 | 37,945,397,211 | 36,516,825,339 | 90,024,945,000 | 42.1% |
| 2013 | 967,910,390 | 133,102,941 | 83,575,603 | 2,702,277,829 | 4,969,794,354 | 4,424,870,751 | 38,155,191,497 | 39,858,768,499 | 93,886,988,785 | 40.6% |
| 2014 | 1,004,368,089 | 124,446,854 | 97,203,752 | 3,437,478,152 | 5,236,335,484 | 3,165,787,934 | 41,678,890,101 | 42,451,717,796 | 97,868,577,971 | 42.6% |
| 2015 | 1,045,996,125 | 124,562,387 | 25,074,310 | 3,411,877,643 | 5,501,015,905 | 3,360,397,206 | 44,825,095,953 | 44,918,609,563 | 101,934,086,377 | 44.0% |
| 2016 | 1,085,541,121 | 128,908,760 | 29,354,700 | 3,487,022,458 | 5,771,388,399 | 3,551,866,311 | 47,092,071,440 | 47,429,914,513 | 106,087,786,059 | 44.4% |
| 2017 | 1,131,037,399 | 138,957,919 | 33,537,964 | 3,568,961,070 | 6,053,339,761 | 3,747,159,345 | 49,996,228,448 | 49,996,228,448 | 110,327,601,543 | 45.3% |
| 2018 | 1,179,189,464 | 146,137,938 | 33,456,300 | 3,729,519,608 | 6,345,234,226 | 3,949,421,039 | 52,688,718,570 | 52,688,718,570 | 114,650,986,914 | 46.0% |
| 2019 | 1,226,437,136 | 151,201,901 | 33,427,862 | 3,861,642,548 | 6,637,566,893 | 4,160,503,188 | 55,484,364,312 | 55,484,364,312 | 119,064,615,333 | 46.6% |
| 2020 | 1,276,581,886 | 158,661,214 | 33,312,022 | 4,008,964,404 | 6,940,047,942 | 4,380,248,008 | 58,402,083,905 | 58,402,083,905 | 123,565,892,431 | 47.3% |

Notes: The projection of assets is based upon the assumption that the Employer maintains the funding policy under Public Act 94-0004 that begins with fiscal year 2006. Projected amounts may not add to the dollar due to rounding.

^{*} For 2001 to 2008: Assets are at fair market value. For 2009 and After: Assets are 5-year smoothed value.

SCHEDULE XV

PROJECTIONS USING CERTIFIED CONTRIBUTIONS AND AN 8.0% MARKET RATE OF RETURN (Continued)

| Year | | Contrib | ıtions | | | | | | | Funded |
|---------|---------------|-------------|------------|---------------|----------------|----------------|-----------------|-----------------|-----------------|--------------|
| Ended | | School | Federal | | Benefits and | Asset Return & | Actuarial Value | Market Value | | Ratio |
| June 30 | Member | District | Funds | State | Expenses | Cash Income | of Assets * | of Assets | PBO | based on AVA |
| 2021 | 1,329,789,308 | 167,285,246 | 33,105,774 | 4,165,997,884 | 7,250,520,064 | 4,609,993,038 | 61,457,735,090 | 61,457,735,090 | 128,154,353,971 | 48.0% |
| 2022 | 1,385,309,535 | 180,998,189 | 32,825,301 | 4,332,357,213 | 7,566,195,133 | 4,851,230,611 | 64,674,260,806 | 64,674,260,806 | 132,832,039,083 | 48.7% |
| 2023 | 1,447,404,866 | 201,458,245 | 32,293,792 | 4,508,332,714 | 7,889,775,262 | 5,105,929,439 | 68,079,904,600 | 68,079,904,599 | 137,598,175,599 | 49.5% |
| 2024 | 1,511,289,795 | 217,314,534 | 31,622,217 | 4,677,813,364 | 8,215,786,539 | 5,375,282,503 | 71,677,440,474 | 71,677,440,474 | 142,455,530,673 | 50.3% |
| 2025 | 1,577,448,714 | 237,327,844 | 30,735,265 | 4,855,807,126 | 8,557,104,706 | 5,659,963,808 | 75,481,618,523 | 75,481,618,523 | 147,392,247,781 | 51.2% |
| 2026 | 1,640,477,157 | 262,620,242 | 29,821,469 | 5,057,025,291 | 8,911,860,582 | 5,961,652,825 | 79,521,354,924 | 79,521,354,924 | 152,396,747,033 | 52.2% |
| 2027 | 1,707,976,779 | 285,080,525 | 28,453,739 | 5,264,080,030 | 9,287,990,150 | 6,281,612,431 | 83,800,568,277 | 83,800,568,277 | 157,445,070,103 | 53.2% |
| 2028 | 1,778,778,066 | 283,315,462 | 26,644,800 | 5,462,788,189 | 9,687,873,104 | 6,618,591,599 | 88,282,813,288 | 88,282,813,288 | 162,507,981,672 | 54.3% |
| 2029 | 1,841,424,296 | 298,453,618 | 24,893,088 | 5,666,573,690 | 10,106,890,754 | 6,971,603,221 | 92,978,870,446 | 92,978,870,446 | 167,559,755,375 | 55.5% |
| 2030 | 1,907,608,149 | 316,257,304 | 22,813,148 | 5,858,024,040 | 10,539,256,147 | 7,340,927,495 | 97,885,244,436 | 97,885,244,436 | 172,580,763,740 | 56.7% |
| 2031 | 1,981,335,067 | 341,350,656 | 20,191,846 | 6,047,910,323 | 10,990,699,186 | 7,726,823,103 | 103,012,156,245 | 103,012,156,245 | 177,542,474,153 | 58.0% |
| 2032 | 2,071,849,291 | 356,413,945 | 16,533,268 | 6,246,299,749 | 11,460,926,099 | 8,130,179,306 | 108,372,505,705 | 108,372,505,704 | 182,411,097,168 | 59.4% |
| 2033 | 2,139,359,365 | 366,779,639 | 13,381,052 | 6,450,756,120 | 11,950,297,814 | 8,550,599,591 | 113,943,083,657 | 113,943,083,657 | 187,148,516,298 | 60.9% |
| 2034 | 2,207,758,990 | 370,651,366 | 9,762,253 | 7,035,480,994 | 12,457,739,223 | 9,002,083,268 | 120,111,081,304 | 120,111,081,304 | 191,714,236,731 | 62.7% |
| 2035 | 2,260,344,265 | 379,282,054 | 6,401,841 | 7,205,208,040 | 12,980,286,278 | 9,483,724,501 | 126,465,755,727 | 126,465,755,727 | 196,069,083,847 | 64.5% |
| 2036 | 2,311,462,577 | 375,859,360 | 2,829,205 | 7,366,642,838 | 13,506,175,615 | 9,979,285,193 | 132,995,659,285 | 132,995,659,285 | 200,185,668,328 | 66.4% |
| 2037 | 2,361,676,932 | 389,580,614 | 0 | 7,520,654,790 | 14,035,480,122 | 10,489,110,031 | 139,721,201,530 | 139,721,201,530 | 204,035,308,490 | 68.5% |
| 2038 | 2,405,999,971 | 390,934,460 | 0 | 7,669,734,699 | 14,575,209,304 | 11,013,354,515 | 146,626,015,871 | 146,626,015,871 | 207,578,744,278 | 70.6% |
| 2039 | 2,451,177,728 | 376,003,341 | 0 | 7,809,373,612 | 15,123,087,460 | 11,550,619,959 | 153,690,103,050 | 153,690,103,050 | 210,772,868,275 | 72.9% |
| 2040 | 2,479,027,840 | 361,927,333 | 0 | 7,939,585,066 | 15,679,192,604 | 12,099,262,149 | 160,890,712,835 | 160,890,712,835 | 213,573,885,953 | 75.3% |
| 2041 | 2,494,880,304 | 326,786,922 | 0 | 8,063,946,235 | 16,214,926,517 | 12,658,084,505 | 168,219,484,284 | 168,219,484,283 | 215,971,112,766 | 77.9% |
| 2042 | 2,497,660,426 | 295,267,580 | 0 | 8,186,076,884 | 16,715,008,089 | 13,228,118,615 | 175,711,599,699 | 175,711,599,699 | 217,975,572,106 | 80.6% |
| 2043 | 2,487,754,711 | 270,789,477 | 0 | 8,310,746,342 | 17,164,912,624 | 13,813,103,092 | 183,429,080,697 | 183,429,080,697 | 219,623,102,943 | 83.5% |
| 2044 | 2,455,063,529 | 240,404,585 | 0 | 8,442,545,284 | 17,551,425,603 | 14,417,789,968 | 191,433,458,460 | 191,433,458,460 | 220,969,012,021 | 86.6% |
| 2045 | 2,511,151,648 | 167,252,065 | 0 | 8,582,028,781 | 17,868,860,412 | 15,050,339,560 | 199,875,370,102 | 199,875,370,102 | 222,083,744,558 | 90.0% |
| 2046 | 2,539,282,627 | 164,040,810 | 0 | 872,929,757 | 18,108,616,840 | 15,408,735,062 | 200,751,741,519 | 200,751,741,519 | 223,057,490,577 | 90.0% |

Notes: The projection of assets is based upon the assumption that the Employer maintains the funding policy under Public Act 94-0004 that begins with fiscal year 2006. Projected amounts may not add to the dollar due to rounding.

^{*} For 2001 to 2008: Assets are at fair market value. For 2009 and After: Assets are 5-year smoothed value.

SECTION IX

STATEMENT OF ACTUARIAL ASSUMPTIONS AND METHODS

(Adopted effective June 30, 2012 except as otherwise noted.)

ASSUMPTIONS

INTEREST RATE: 8.0% per annum, compounded annually. The interest rate assumption includes the following components: inflation 3.25%, and real rate of return 4.75%.

SEPARATIONS FROM ACTIVE SERVICE (OTHER THAN SERVICE RETIREMENT) AND SALARY INCREASES: Representative values of the assumed rates of separation, annual rates of salary increase, are shown in the following table:

| | | | Annual Rate | es* of | | |
|--|---|---|--|--|--|---|
| | Termination | | | | Salary | Merit or Seniority |
| Age | < 5 years | >= 5 years | Death** | Disability*** | Increase | Component |
| Males | | | | | | |
| 20 25 30 40 50 55 60 65 70 | 12.0 7.0 8.6 11.1 12.0 16.0 21.0 21.0 | 8.0 6.0 3.7 1.5 1.4 4.0 4.0 | .023 .029 .035 .061 .122 .183 .303 .531 | .029 .029 .026 .051 .094 .111 .170 | 10.15% 9.25% 7.45% 6.25% 5.00% 5.00% 5.00% | 6.15% 5.25% 3.45% 2.25% 1.00% 1.00% 1.00% |
| Females 20 25 30 40 50 55 60 65 70 | 18.0 7.8 10.6 10.0 10.0 15.0 14.0 40.0 | 10.0 9.0 6.0 2.2 1.4 3.1 4.0 4.0 | .011 .013 .031 .069 .116 .219 | .045 .045 .117 .162 .172 .197 .144 | 10.15% 9.25% 7.45% 6.25% 5.00% 5.00% 5.00% | 6.15% 5.25% 3.45% 2.25% 1.00% 1.00% 1.00% |

^{*} Rates of separation are rates per 100 participants. For example, 7% of all 25 year-old actively employed non-vested male members (i.e., 7.0 per 100) are assumed to terminate employment each year for reasons other than death, disability, or service retirement.

The basic salary increase assumption averages 5.75% per annum plus an additional 0.25% per annum to cover employment type and status changes, for a composite increase that averages approximately 6.0% per annum. The 6.0% salary increase assumption includes the following components:

- Inflation of 3.25% and Real wage growth (productivity) of 0.75%
- Merit or seniority (includes employment type and status changes): ranges from 6.15 % at age 20 to 1.00% at age 50 and above and averages 2.00%.
- Increase on payroll and account balances to account for delay: 4% (based on the increase in 2013 payroll from the prior year to the current year)

^{**} Beginning July 1, 2012, projected mortality improvements are phased in with the Society of Actuaries Mortality Projection Scale AA. The table above reflects this phase in, and shows representative values as of July 1, 2012.

^{***} A 2% load was placed on disability benefits to account for Occupational Disability benefits being greater than standard disability.

SERVICE RETIREMENT FROM ACTIVE SERVICE AND UTILIZATION OF ERO FOR MEMBERS HIRED BEFORE JANUARY 1, 2011: The assumed rates of retirement and utilization of ERO are shown in the following tables:

| An | Annual Service Retirement Rates per 100 Eligible Participants | | | | | | | | |
|-------|---|-------|----------|-------|-----|--|--|--|--|
| | | | Service* | | | | | | |
| Age** | 5-18 | 19-30 | 31 | 32-33 | 34+ | | | | |
| 54 | - | 6 | 12 | 38 | 40 | | | | |
| 55 | - | 10 | 20 | 38 | 40 | | | | |
| 56 | - | 7 | 16 | 38 | 32 | | | | |
| 57 | - | 7 | 16 | 38 | 32 | | | | |
| 58 | - | 7 | 13 | 38 | 32 | | | | |
| 59 | - | 25 | 34 | 45 | 31 | | | | |
| 60 | 14 | 27 | 45 | 45 | 31 | | | | |
| 61 | 14 | 24 | 30 | 45 | 31 | | | | |
| 62 | 14 | 26 | 36 | 45 | 31 | | | | |
| 63 | 14 | 26 | 36 | 45 | 31 | | | | |
| 64 | 20 | 33 | 36 | 45 | 31 | | | | |
| 65 | 23 | 33 | 45 | 45 | 31 | | | | |
| 66 | 23 | 33 | 45 | 45 | 31 | | | | |
| 67 | 23 | 33 | 45 | 45 | 31 | | | | |
| 68 | 27 | 33 | 45 | 45 | 31 | | | | |
| 69 | 27 | 33 | 45 | 45 | 31 | | | | |
| 70 | 100 | 100 | 100 | 100 | 100 | | | | |

| | Utilization of ERO among All Active Service Retirees*** | | | | | | | | | |
|----------|---|-------|-----|-----|-----|-----|--|--|--|--|
| | | Age** | | | | | | | | |
| Service* | 54 | 55 | 56 | 57 | 58 | 59 | | | | |
| 19 – 30 | 68% | 75% | 66% | 63% | 64% | 23% | | | | |
| 31 | 90% | 79% | 75% | 71% | 69% | 27% | | | | |
| 32 | 49% | 53% | 45% | 48% | 46% | 28% | | | | |
| 33 | 22% | 25% | 17% | 15% | 14% | 13% | | | | |

Notes

***ERO Utilization Rates are applied only to members who have less than 35 years of total service at the assumed retirement date (including assumed sick leave and optional service purchased at retirement). Based on the sick leave and optional service assumptions, the majority of members with 33 years of service at the beginning of the year of retirement will not be assumed to retire on ERO because they will be assumed to have at least 35 years of service at retirement.

In addition, ERO Utilization Rates are not applied to members whose pension under the ERO program would be less than their money purchase benefit.

^{*} Active member service rounded to nearest year on June 30 prior to retirement

^{**} Age rounded to nearest year on June 30 prior to retirement

SERVICE RETIREMENT FROM ACTIVE SERVICE FOR MEMBERS HIRED ON OR AFTER JANUARY 1, 2011: The assumed rates of retirement for members hired January 1, 2011 and later are shown in the following tables:

| An | Annual Service Retirement Rates per 100 Eligible Participants | | | | | | | |
|-------------------|---|-------|----------|-------|-----|--|--|--|
| | | | Service* | | | | | |
| Age** | 9-18 | 19-30 | 31 | 32-33 | 34+ | | | |
| 61 and younger | - | - | - | - | - | | | |
| 62 | 13 | 15 | 20 | 25 | 25 | | | |
| 63 | 8 | 10 | 15 | 20 | 20 | | | |
| 64 | 8 | 10 | 15 | 20 | 20 | | | |
| 65 | 8 | 10 | 15 | 20 | 20 | | | |
| 66 | 20 | 10 | 15 | 20 | 20 | | | |
| 67 | 20 | 40 | 70 | 70 | 70 | | | |
| 68 | 20 | 40 | 40 | 40 | 40 | | | |
| 69 | 20 | 40 | 40 | 40 | 40 | | | |
| 70 | 100 | 100 | 100 | 100 | 100 | | | |

Notes:

DEATH AFTER RETIREMENT: For annuitants, the RP-2000 White Collar Table projected nine years using scale AA, with a two-year age setback from men and no age setback for women. Rates for women are further adjusted for ages 63-77 by 65% and ages 78-87 by 85%.

For beneficiaries, the RP-2000 blended table, projected nine years using scale AA, with a one-year age setback for both men and women.

For the period after disability retirement, the RP-2000 Disabled Table, projected nine years using scale AA, with a one-year age setback for both men and women.

Future generational rates are projected from 2009 based on scale AA.

MARITAL DATA: It is assumed that 85% of members are married and that the female spouse is three years younger than the male spouse. (Adopted effective June 30, 1993.)

^{*} Active member service rounded to nearest year on June 30 prior to retirement

^{**} Age rounded to nearest year on June 30 prior to retirement

GROWTH IN ACTIVE MEMBERSHIP: For purposes of the projection required by State funding law, it is assumed that the active membership of the System will remain constant in number, with no change in the size of either the full-time/part-time group or the hourly/substitute group. (Adopted effective June 30, 1994.)

SEVERANCE PAY: For members hired before January 1, 2011, the percent of retirees from active service assumed to receive severance payments, and the amount of such severance payments, are assumed to be as follows:

| Percent of Retirees Who Receive Severance Pay | Severance Pay as a Percent of Other Pensionable Earnings in the Last Year of Employment |
|---|---|
| 20% | 6% |

OPTIONAL SERVICE PURCHASES: The pension benefit obligation for retirement benefits for active members who have not previously purchased optional service is increased to cover the employer cost of out-of-system service purchased in the last two years prior to retirement. The amount purchased varies by the amount of regular service at retirement. Representative amounts purchased at retirement, and other assumptions used, are as follows:

| Regular Service at Retirement | Maximum Service Purchased |
|-------------------------------|---------------------------|
| 10 years | 0.473 years |
| 20 years | 0.835 years |
| 25 years | 1.360 years |
| 30 years | 1.040 years |
| 34 or more | None |

- (a) Actual optional service credit for each current member is provided by TRS; and
- (b) No additional service purchases will be assumed for members who currently have optional service credit; and
- (c) Members will not purchase service if it does not improve their pension benefit; and
- (d) When optional service is purchased within the last two years prior to retirement, 25% of the cost is covered by member payments and the remaining cost is the responsibility of the employer.

The PBO covered by future member payments is not included in the liability on the valuation date, but is brought into projected liabilities as those payments are brought into the assets.

UNUSED AND UNCOMPENSATED SICK LEAVE SERVICE AT RETIREMENT: Such credit varies by the amount of regular service at retirement. Representative assumed amounts of unused and uncompensated sick leave service are as follows:

| Regular Service at Retirement | Sick Leave Service Credit |
|-------------------------------|---------------------------|
| 20 years | 1.035 years |
| 25 years | 1.847 years |
| 30 years | 1.454 years |
| 34 years | 1.000 years |
| 35 or more | None |

ADMINISTRATIVE EXPENSES: The administrative staff of the System estimates the expected administrative expenses for the fiscal year following the valuation. Total payroll for the same year is projected based on valuation assumptions and the expected administrative expenses are then expressed as a percent of total payroll. Administrative expenses in future years are then assumed to remain constant as a percent of total payroll. (Adopted effective June 30, 1994.)

2.2 UPGRADE ASSUMPTION: For those active members who have already made a payment to upgrade past service prior to June 30, 1998, their benefits are based on their upgrading at the valuation date. For all other active members, they are assumed to upgrade at retirement. (Adopted effective June 30, 1999.)

LIABILITY ADJUSTMENT: The current actuarial valuation was based on the latest membership data available, which was submitted by the System for active, inactive and retired members as of the prior valuation date. In projecting results to account for the one-year difference in the census date and the valuation date, we made use of the valuation assumptions. As a result, the PBO as of June 30, 2013 is the June 30, 2012 PBO with interest at 8%, plus the normal cost as of June 30, 2012 with a half year's interest less the benefit payments projected to be paid during the year ended June 30, 2013 with a half year's interest. To the extent that changes have occurred in the census from the date the census information is determined and the valuation date, we will work with TRS staff to determine if additional adjustments need to be made. Otherwise, any change in liability due to changes in census between the collection date of the census information and the valuation date will be captured in the next actuarial valuation. For the June 30, 2013 valuation, no adjustments were necessary.

FUTURE PAYROLL ASSUMPTION: Future payroll is projected using the assumed decrements for the members in the system and the new entrant profile as described below.

NEW MEMBER PROFILE

Distribution of New Entrants is as follows (based on 6/30/2009-6/30/2011 new hire counts):

| Age | Ful | l Time/Part Ti | me | Н | ourly/Substitu | te |
|---------|-------|----------------|--------|-------|----------------|-------------|
| Group | Males | Females | Total | Males | Females | Total |
| 20 – 24 | 5.4% | 26.2% | 31.6% | 6.9% | 18.1% | 25.0% |
| 25 – 29 | 7.7% | 24.6% | 32.3% | 8.2% | 15.1% | 23.3% |
| 30 - 34 | 3.6% | 10.3% | 13.9% | 2.7% | 6.0% | 8.7% |
| 35 – 39 | 1.8% | 5.6% | 7.4% | 2.0% | 6.6% | 8.6% |
| 40 - 44 | 1.4% | 3.9% | 5.3% | 2.7% | 9.4% | 12.1% |
| 45 - 49 | 0.8% | 3.3% | 4.1% | 1.8% | 6.2% | 8.0% |
| 50 - 54 | 0.6% | 2.0% | 2.6% | 1.6% | 3.9% | 5.5% |
| 55 – 59 | 0.6% | 1.3% | 1.9% | 1.7% | 2.7% | 4.4% |
| 60 - 64 | 0.3% | 0.4% | 0.7% | 1.4% | 1.6% | 3.0% |
| 65 – 69 | 0.1% | 0.1% | 0.2% | 0.6% | 0.5% | 1.1% |
| 70 | 0.0% | 0.0% | 0.0% | 0.2% | 0.1% | <u>0.3%</u> |
| Total | 22.3% | 77.7% | 100.0% | 29.8% | 70.2% | 100.0% |

Service Credit Earned in Each Future Year (Full Time/Part Time based on 6/30/2009-6/30/2011 new hire service credits and Hourly/Substitutes based on 6/30/2011 new hire service credits):

| Age | Ful | l Time/Part Ti | me | Н | Hourly/Substitute | | | |
|---------|-------|----------------|-------|-------|-------------------|-------|--|--|
| Group | Males | Females | Total | Males | Females | Total | | |
| 20 - 24 | 0.917 | 0.923 | 0.922 | 0.311 | 0.336 | 0.335 | | |
| 25 - 29 | 0.947 | 0.934 | 0.937 | 0.309 | 0.298 | 0.298 | | |
| 30 - 34 | 0.909 | 0.915 | 0.913 | 0.340 | 0.276 | 0.297 | | |
| 35 - 39 | 0.930 | 0.916 | 0.920 | 0.288 | 0.301 | 0.300 | | |
| 40 - 44 | 0.931 | 0.901 | 0.908 | 0.252 | 0.308 | 0.298 | | |
| 45 - 49 | 0.900 | 0.905 | 0.904 | 0.304 | 0.317 | 0.312 | | |
| 50 - 54 | 0.888 | 0.928 | 0.919 | 0.321 | 0.338 | 0.334 | | |
| 55 - 59 | 0.972 | 0.903 | 0.926 | 0.353 | 0.345 | 0.346 | | |
| 60 - 64 | 0.893 | 1.113 | 1.010 | 0.328 | 0.330 | 0.327 | | |
| 65 - 69 | - | - | - | 0.315 | 0.304 | 0.308 | | |
| 70 | - | - | - | 0.285 | 0.255 | 0.268 | | |
| Average | 0.928 | 0.924 | 0.924 | 0.313 | 0.315 | 0.314 | | |

NEW MEMBER PROFILE (continued)

Projected Annual Rate of Pay at 6/30/2012*

(for one year of service credit – Full Time/Part Time based on 6/30/2009-6/30/2011 new hire pay normalized to 6/30/2012 and Hourly/Substitutes based on 6/30/2011 new hire pay)

| Age | Full Time/Part Time | | | | | Hourly/Substitute | | | | | | | | | | | |
|-------|---------------------|--------|----|---------|----|-------------------|----|--------|----|--------|----|--------|--|---------|--|-------|--|
| Group | | Males | F | Females | | Total | | Total | | Total | | Males | | Females | | Total | |
| 20-24 | \$ | 46,349 | \$ | 45,029 | \$ | 45,254 | \$ | 17,475 | \$ | 18,053 | \$ | 17,893 | | | | | |
| 25-29 | \$ | 47,771 | \$ | 48,290 | \$ | 48,167 | \$ | 17,467 | \$ | 17,374 | \$ | 17,407 | | | | | |
| 30-34 | \$ | 55,110 | \$ | 52,482 | \$ | 53,163 | \$ | 17,704 | \$ | 16,908 | \$ | 17,155 | | | | | |
| 35-39 | \$ | 57,001 | \$ | 54,980 | \$ | 55,472 | \$ | 16,839 | \$ | 16,595 | \$ | 16,652 | | | | | |
| 40-44 | \$ | 64,467 | \$ | 55,424 | \$ | 57,812 | \$ | 16,616 | \$ | 15,919 | \$ | 16,075 | | | | | |
| 45-49 | \$ | 68,190 | \$ | 55,885 | \$ | 58,286 | \$ | 16,348 | \$ | 16,192 | \$ | 16,227 | | | | | |
| 50-54 | \$ | 74,055 | \$ | 56,203 | \$ | 60,323 | \$ | 16,806 | \$ | 16,281 | \$ | 16,434 | | | | | |
| 55-59 | \$ | 68,428 | \$ | 68,443 | \$ | 68,438 | \$ | 16,095 | \$ | 16,233 | \$ | 16,180 | | | | | |
| 60-64 | \$ | 77,237 | \$ | 58,749 | \$ | 66,672 | \$ | 15,935 | \$ | 16,183 | \$ | 16,067 | | | | | |
| 65-69 | \$ | - | \$ | 52,933 | \$ | 26,466 | \$ | 15,841 | \$ | 15,565 | \$ | 15,716 | | | | | |
| 70 | | - | | 47,386 | | - | | 15,783 | | 14,993 | \$ | 15,520 | | | | | |
| Total | \$ | 52,582 | \$ | 49,509 | \$ | 50,195 | \$ | 17,074 | \$ | 16,989 | \$ | 17,014 | | | | | |

^{*} The rate of pay profile will increase 4.00% per annum. 3.25% of the increase is attributable to inflation and 0.75% to real wage growth.

METHODS

VALUATION COST METHOD: Projected unit credit cost method. Gains and losses are reflected in the unfunded pension benefit obligation. (Adopted effective June 30, 1989.)

PENSION BENEFIT OBLIGATION: The actuarial accrued liability (AAL) of the System was determined using the projected unit-credit actuarial cost method, and the AAL is equivalent to the Government Accounting Standards Board (GASB) Statement No. 5 pension benefit obligation (PBO). PBO is a measure of the actuarial present value (APV) as of the valuation date of credited projected benefits prorated on service, including an adjustment for the effects of projected salary increases estimated to be payable in the future. The Pension Benefit Obligation is determined as of June 30, 2012 and projected to June 30, 2013 based on expected normal cost and benefit payments. As a result, the PBO as of June 30, 2013 is the June 30, 2012 PBO with interest at 8%, plus the normal cost as of June 30, 2012 with a half year's interest less the benefit payments projected to be paid during the year ended June 30, 2013 with a half year's interest. Significant actuarial assumptions used to determine the PBO as of June 30, 2013 include the following:

- (1) An assumed rate of return on the investment of present and future assets of 8.0% per annum, compounded annually.
- (2) Assumed projected annual salary increases ranging from 10.15% at age 20 to 5.00% at age 69, which reflect an allowance for inflation and merit or seniority increases.
- (3) Automatic annual post-retirement benefit increases equal to 3% of the member's current benefit.

ASSET VALUATION METHOD: Beginning with the June 30, 2009 valuation, the method for determining the actuarial value of assets was changed from the market value to a smoothed value. The smoothed value recognizes the actuarial investment gains or losses for each fiscal year in equal amounts over the ensuing five-year period.

AMORTIZATION OF UNFUNDED ACCRUED LIABILITY: The amortization of the unfunded accrued liability is amortized as a level percentage of pay over 30 years based on the salary increase assumption and new entrant profile found elsewhere in the report. The determination of the Annual Required Contribution (ARC) can be found in Schedule II of this report.

SECTION X — SUMMARY OF BENEFIT AND CONTRIBUTION PROVISIONS

MEMBERSHIP

Employers of the System include:

- (a) the Illinois public common school districts outside of Chicago,
- (b) certain state agencies employing certificated teachers, and
- (c) the State Board of Education, Illinois School Board Association, statewide and national teacher organizations, educational cooperatives and the retirement system.

Employees covered under the System include:

- Any educational, administrative, professional or other staff employed in the public common schools outside the City of Chicago in a position requiring certification under the teacher certification law, including substitute teachers, part-time teachers, and hourly paid teachers who are on a flexible work schedule;
- Any position requiring teacher certification in certain state agencies;
- Any regional superintendent of schools, assistant regional superintendent of schools, State
 Superintendent of Education; any person employed by the State Board of Education as an
 executive; any executive of the boards engaged in the service of public common school
 education in school districts covered under this system of which the State Superintendent of
 Education is an ex-officio member;
- Any employee of a school board association who is certificated under the teacher certification law;
- Any person employed by the retirement system who was an employee of and a participant in the system on August 17, 2001 or becomes an employee of the system on or after August 17, 2001;
- Any educational, administrative, professional or other staff employed by and under the supervision and control of a regional superintendent of schools, provided such employment position requires the person to be certificated under the teacher certification law;

- Any educational, administrative, professional or other staff in a certificated position employed by a program serving two or more school districts in accordance with a joint agreement authorized by the School Code or by federal legislation;
- Any officer or employee of a statewide teacher organization or officer of a national teacher organization who is certified under the teacher certification law, provided the member had previously established creditable service under TRS and files an irrevocable election for TRS membership before January 5, 2012, and does not receive credit under any other article of the pension code; and
- Any educational, administrative, professional, or other staff employed in a charter school that is certificated under the teacher certification law.

Employment on a full-time basis covers only teachers whose normal employment schedule consists of working at least four clock hours daily, five days per week. Employment on a part-time basis covers teachers who are employed less than four clock hours daily or less than five days per week. A substitute teacher is employed on a temporary basis to replace another teacher.

Creditable service rendered as an employee for a regular school year in any district, in accordance with the provisions of the Pension Code, is equal to one year of service, and time less than a legal year is counted as such portion of a year as the number of days taught bears to 170 days. Additionally, members may purchase various types of optional service credit.

"Tier II" means a member, or a benefit provision that applies to a member, who first contributed to TRS on or after January 1, 2011 and has no preexisting creditable service with a reciprocal pension system prior to January 1, 2011. "Tier I" means all other members and applicable benefit provisions.

For determining both member benefits and contribution amounts, salary for Tier II is capped at a limit that is tied to the Consumer Price Index. The initial limit is \$106,800 as of January 1, 2011. Each subsequent year the limit will increase by an amount equal to the then current limit times the lesser of 3% or one-half the percentage increase in cpi-u as of the preceding September.

"Final average salary" means for Tier I the average salary for the highest 4 consecutive years within the last 10 years of creditable service as determined under the rules of the Board. For Tier II, the average is for the highest 8 consecutive years within the last 10 years.

BENEFITS

Normal Retirement

Eligibility

For Tier I, age 60 with 10 years of service, or age 62 with 5 years of service. For Tier II, age 67 with 10 years of service.

Amount

For a Tier I person who first became a teacher before July 1, 2005, the annual benefit amount is the greatest of (i), (ii) and (iii) below. For a Tier I person who first became a teacher on or after July 1, 2005, the annual benefit amount is the greater of (i) and (ii) below. For Tier II, the annual benefit is the amount under (i) below.

(i) For service earned before July 1, 1998, 1.67% of final average salary for each of the first 10 years of creditable service, plus 1.90% of final average salary for each year in excess of 10 but not exceeding 20, plus 2.10% of final average salary for each year in excess of 20 but not exceeding 30, and 2.30% of final average salary for each year in excess of 30. For all other service, 2.2% of final average salary.*

- (ii) 1½% of final average salary for each year of creditable service, plus \$7.50 per year for each of the first 20 years of creditable service.
- (iii) An actuarially equivalent life annuity, resulting from the member's contributions and State-matching contributions (1.4 times member contributions) plus compound interest on both.

Maximum amount under (i) and (ii) above - 75% of final average salary.

^{*} Service earned before July 1, 1998 can be upgraded to 2.2% through additional member contributions or 1% of the member's highest salary within the last four years for each year of prior service. Maximum payment is 20% of salary, but all years are upgraded. The number of years to be upgraded is reduced by one for each three full years worked under the 2.2% formula. The 2.2% formula upgrade cost is reduced on a sliding scale for members who have more than 34 years of service credit.

Early Retirement

Eligibility

For Tier I, age 55 with 20 years of service. For Tier II, age 62 with 10 years of service.

Amount

For Tier I, equal to the amount computed under normal retirement, reduced by 6% for each year the member is under age 60. There is no reduction for a member who retires prior to age 60 with 35 years of credited service. For Tier II, the reduction is 6% for each year the member is under age 67.

Early Retirement Option

A member retiring after June 1, 1980 and within six months of the last day of teaching for which retirement contributions were required, may elect to make a one time employee contribution to avoid the early retirement reduction described in the foregoing paragraph. Such employee and employer contributions will be a multiple of the member's last full time annual salary rate as a teacher, the full time equivalent if less than full time, or the highest year's salary used for determining final average salary.

The member lump sum ERO contribution rate for members is 14.4%, and the employer lump sum ERO contribution rate for such persons is 29.3%.

The multiple of salary to be contributed by the member equals the member rate times the lesser of the following two periods: (a) the number of years (including fractional years) that the member is less than age 60; or (b) the number of years (including fractional years) that the member's creditable service is less than 35 years.

The multiple of salary to be contributed by the member's employer equals the employer rate times the number of years (including fractional years) that the member is less than age 60.

Rule of 85 for State Employees

A Tier I employee of a state agency retiring on or after January 1, 2001 is entitled to a nondiscounted annuity if his or her attained age at retirement and total creditable service equal at least 85, provided he or she has (i) earned during the period immediately preceding the last day of service at least one year of contributing creditable service as a state employee and (ii) has earned at least 5 years of contributing creditable service as a state employee.

Single Sum Benefit

Eligibility

Age 65 with fewer than 5 years of creditable service after July 1, 1947.

Amount

Lump sum payment actuarially equivalent to a life annuity consisting of 1.67% of final average salary for each year of service.

Temporary Disability Benefit

Eligibility

3 years of credited service.

Amount

Equal to 40% of the member's most recent annual contract salary at time of disablement. The benefit is payable beginning with the 31st day after disablement and ending at the earlier of (1) cessation of disability, (2) when the member requests termination of the benefit, (3) when the period for which payments have been made equals one-fourth the period of creditable service, or (4) the member is gainfully employed or able to be gainfully employed.

Disability Retirement Annuity

Eligibility

Termination of temporary disability benefit, provided member remains disabled.

Amount

The larger of (a) 35% of the member's most recent annual contract salary or (b) the benefit payable as for normal retirement, but reduced by ½% for each month by which the member is less than age 60, or age 55 if the member has 20 years of service.

Other formulas may be applicable if disability retirement occurred prior to July 1, 1971.

Occupational Disability

Eligibility

Totally and immediately incapacitated for the performance of duty.

Amount

Equal to 60% of salary, if disability is duty-connected or occupational adjudicated by the Illinois Industrial Commission as compensable under either the Workers' Compensation or Occupational Diseases Act. Any amounts payable under these Acts shall be applied as an offset to any occupational disability benefits payable by the Teachers' Retirement System. In general, benefits are payable throughout the period of disability.

Deferred Vested Benefits

Eligibility

For Tier I, 5 years of service. For Tier II, 10 years of service.

Amount

For Tier I, equal to the amount computed under normal retirement deferred to age 62 if member has less than 10 years of service. With 10 or more years of service the annuity is payable at age 60. For Tier II, equal to the amount computed under normal retirement, payable at age 67 or in a reduced amount as early as age 62. The reduction is 6% for each year the member is under age 67.

Reversionary Retirement Annuity

Any member entitled to a retirement annuity for age may elect to receive a reduced annuity with the remainder determined on an actuarial basis to become, upon the member's death, an annuity for life to any designated person dependent upon the member at the time of the member's retirement, provided such payment shall not be less than \$10 nor more than the amount of reduced age retirement monthly annuity to which the member is entitled.

Refund of Contributions

A member who ceases to be a member for any reason other than death or retirement, shall be entitled to a refund of all retirement contributions and payments made into the fund by him which have not previously been refunded, without interest thereon.

A member who retires on ERO shall not receive a refund of the 0.4% career ERO contributions; otherwise, the 0.4% career ERO contributions are refunded, without interest, to the member, or the member's beneficiary or Estate (if applicable) if any of the following occur: (1) the ERO program is discontinued under Section 16-176; or (2) the member either retires without ERO, terminates employment and withdraws the member account balance, or dies before retirement.

Death Benefit

Refunds of the deceased member's accumulated contributions are paid to survivors or to the member's estate. Additional lump sum death benefits are also payable.

Survivor Benefit

Types of Beneficiaries

| Time of Death | <u>Dependents</u> | Non-dependents |
|---|---|----------------------------|
| While employed | Lump sum up to last salary or \$1,000 and a monthly benefit generally not less than \$400* or \$600 with minor children** | Lump sum up to last salary |
| Inactive within 12 months of last day of credit | Lump sum up to last salary or \$1,000 and a monthly benefit generally not less than \$400* or \$600 with minor children** | Lump sum up to last salary |

Inactive with 20 or more years of service

Lump sum of \$3,000 or 1/6 of last salary*** **or** \$1,000

and a monthly benefit generally ½ for Tier I and 2/3

for Tier II of member's earned benefit at time of

death

Lump sum of \$3,000 or 1/6 of last salary*** **or** \$1,000

and a monthly benefit

generally ½ for Tier I and 2/3 for Tier II of annuitant's earned benefit at time of

death

Lump sum of \$3,000 or 1/6 of last salary***

Lump sum of \$3,000 or 1/6 of last salary***

- * Certain circumstances might provide a monthly annuity less than \$400 per month for an active member.
- ** TRS will pay 50 percent of the member's earned retirement annuity at death if it is greater than the above amounts.
- *** Certain lump sums may be greater if the annuitant or inactive member has been in retirement or out of service for less than five years.

Automatic Postretirement Benefit Cost-of-Living Adjustment

Annuitant

Eligibility

Member contributed for at least an equivalent period of one full year of creditable service after July 1, 1969.

Amount

For Tier I, initial increase of 1½% of base annuity for periods prior to January 1, 1972, 2% for periods from and after January 1, 1972 and prior to January 1, 1978, and 3% for periods thereafter (such periods to exclude any period of retirement that precedes attainment of age 55). Initial increase payable effective with the later of: January 1 following first anniversary of retirement; or January 1 following attainment of age 61.

Following the initial increase, automatic annual increases payable on each January 1 thereafter. Prior to January 1, 1990, annual increases were determined as a percentage of the original retirement annuity. Effective on and after January 1, 1990, automatic annual increases granted to eligible annuitants equal 3% of the total annuity being received, including previous increases granted.

For Tier II retirement and deferred vested benefits, the annual increase is equal to the original granted annuity benefit times the lesser of 3% or one-half the increase in the cpi-u as of the preceding September. The initial

increase is effective Jan. 1 after the later of attaining age 67 or the first anniversary of the annuity starting date.

For Tier I and Tier II disability benefits, the initial increase is generally 7% effective Jan. 1 following the fourth anniversary of the initial payment and 3% annually thereafter of the then current benefit amount.

For Tier I and Tier II survivor benefits, the initial increase is effective Jan. 1 following the first anniversary of the initial survivor payment, or after the survivor benefit has been granted benefits for survivors of annuitants, and annually thereafter. The Tier I increase is 3% of the then current benefit. The increase for Tier II is the lesser of 3% or one-half the percentage increase in cpi-u as of the preceding September of the original benefit amount.

Member Contributions

Beginning July 1, 2005, each member contributes an additional 0.4% of pay "career ERO contribution," bringing the total contribution to 9.4%. This contribution requirement shall cease if the Early Retirement Option program ends.

Beginning July 1, 1998, contributions for creditable service are made at the rate of 8% (exclusive of the 1% Survivor Benefit Contribution) of salary which is comprised of a rate of 7½% of salary towards the cost of the retirement annuity plus ½% of salary toward the cost of the automatic annual increase in retirement annuity.

Beginning July 24, 1959, each member contributes an additional 1% of salary toward Survivor's Benefits. These contributions are subject to refund if there is no dependent beneficiary at retirement, provided the member elects such refund.

Beginning July 1, 1995, each member not employed by a State agency contributes to the Teachers' Health Insurance Security Fund, administered by the Department of Central Management Services. These contributions are not refundable and do not become part of the System's assets.

Additional contributions as are necessary to receive credit for service during which contributions were not made, such as military service or service outside the System. New Benefit Increases:

The term "new benefit increase" means an increase in the amount of any benefit provided by the statute, or an expansion of the eligibility requirements for any benefit provided by the statute, resulting from an amendment that takes effect on or after June 1, 2005.

Every new benefit increase must have an identified funding source whose adequacy is verified and periodically confirmed by the Commission on Government Forecasting and Accountability (CGFA).

Every new benefit increase will automatically expire at the earlier of (i) five years after its effective date; (ii) at an earlier time specified in the amendment creating the benefit; or (iii) at the end of the fiscal year in which CGFA certifies that the identified funding source is inadequate; except that any new benefit increase will continue to apply to persons who applied for and qualified for the increase while it was in effect, and except that any new benefit increase may be extended or recreated by the General Assembly (subject to the adequacy of the funding source).

Sick Leave Service Accruals:

Any unused and uncompensated accumulated sick leave is counted as creditable service provided that each former employer certifies to the System the number of unused and uncompensated accumulated sick leave days upon termination of the member. The service granted is the ratio of the number of unused and uncompensated accumulated sick leave days to 170 days, subject to a maximum of 2 years of service credit. The period of sick leave shall not be considered in determining the effective date of retirement.

SECTION XI — DETAILED TABULATIONS OF DATA

| | <u>Description</u> | Page No |
|----------------|--|---------|
| <u>EXHIBIT</u> | Active Membership: Number and Average Annual | 57 |
| <u>TABLE</u> | Salary as of June 30, 2012 | 57 |
| 1 | The Number and Annual Salaries of Members in Active Service Distributed By Age as of June 30, 2012 (Full Time and Regular Part Time) | 58 |
| 2 | The Number and Annual Salaries of Members in Active Service Distributed By Years of Credited Service as of June 30, 2012 (Full Time and Regular Part Time) | 60 |
| 3 | The Number and Annual Benefits Payable from the Benefit Trust Reserve of Retired Annuitants as of June 30, 2012 | 62 |
| 4 | The Number and Annual Benefits Payable from the Benefit Trust Reserve of Survivor Annuitants as of June 30, 2012 | 64 |
| 5 | The Number and Annual Benefits Payable from the Benefit Trust Reserve of Disability Benefit Recipients as of June 30, 2012 | 67 |
| 6 | The Number and Annual Benefits Payable from the Guaranteed Minimum Annuity Reserve of Retired Annuitants as of June 30, 2012 | 69 |

EXHIBIT

ACTIVE MEMBERSHIP

NUMBER AND AVERAGE ANNUAL SALARY AS OF JUNE 30, 2012

| | | | | Y | ears of Se | ervice | | | | | Substitutes | Grand Total |
|----------|--------------------|--------------------|--------------------|--------------------|--------------------|-------------------|-------------------|-----------------|------------------|---------------------|-------------------|------------------------|
| Age | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total | | |
| Under 25 | 3,149 \$39,290 | 2 \$39,880 | | | | | | | | 3,151 \$39,290 | 3,224 \$5,022 | 6,375 \$ 21,960 |
| 25-29 | 11,702 \$44,948 | 6,660 \$53,110 | | | | | | | | 18,362 \$47,908 | 4,750 \$5,327 | 23,112 \$ 39,157 |
| 30-34 | 4,393 \$48,303 | 13,552 \$57,625 | 4,806 \$65,966 | | | | | | | 22,751 \$57,587 | 2,664 \$4,712 | 25,415 \$ 52,045 |
| 35-39 | 2,071 \$49,230 | 5,054 \$59,849 | 10,116 \$69,267 | 2,506 \$77,651 | | | | | | 19,747 \$65,819 | 2,672 \$4,400 | 22,419 \$ 58,499 |
| 40-44 | 1,631 \$49,358 | 3,346 \$59,354 | 4,661 \$70,390 | 7,016 \$79,320 | 1,879 \$84,245 | | | | | 18,533 \$71,332 | 3,687 \$4,758 | \$ 22,220 \$ 60,285 |
| 45-49 | 1,215 \$49,315 | 2,559 \$58,863 | 2,705 \$69,266 | 2,930 \$79,416 | 4,127 \$86,426 | 1,525 \$90,496 | | | | 15,061 \$74,715 | 3,370 \$4,763 | 18,431 \$ 61,925 |
| 50-54 | 732 \$50,776 | 2,057 \$58,926 | 2,618 \$67,906 | 2,374 \$76,400 | 2,328 \$83,745 | 3,460 \$89,925 | 1,609 \$93,586 | | | 15,178 \$77,362 | 3,054 \$4,926 | 18,232 \$ 65,229 |
| 55-59 | 410 \$54,439 | 1,207 \$61,928 | 2,073 \$68,595 | 2,383 \$76,823 | 2,112 \$83,701 | 1,938 \$89,579 | 2,709 \$95,380 | 423 \$97,784 | | 13,255 \$80,910 | 2,653 \$5,067 | 15,908 \$ 68,262 |
| 60-64 | 191 \$55,338 | 525 \$67,595 | 946 \$71,657 | 1,143 \$78,093 | 1,165 \$84,874 | 908 \$90,285 | 531 \$95,532 | 386 \$98,781 | 84 \$95,632 | 5,879 \$81,791 | 1,856 \$4,813 | 7,735 \$ 63,320 |
| Over 64 | 30 \$ 55,417 | 92 \$ 68,306 | 173 \$ 70,211 | 217 \$ 78,924 | 187 \$ 86,660 | 155 \$ 93,734 | 69 \$ 90,126 | 37 \$ 97,197 | 79 \$ 102,694 | 1,039 \$ 82,658 | 1,143 \$ 4,413 | 2,182 \$ 41,671 |
| Total | 25,524 \$46,073 | 35,054 \$57,744 | 28,098 \$68,799 | 18,569 \$78,336 | 11,798 \$84,913 | 7,986 \$90,065 | 4,918 \$94,735 | 846 \$98,213 | 163 \$99,055 | 132,956 \$66,746 | 29,073 \$4,880 | 162,029 \$55,645 |

TABLE 1

THE NUMBER AND ANNUAL SALARIES OF MEMBERS IN ACTIVE SERVICE DISTRIBUTED BY AGE AS OF JUNE 30, 2012 (FULL TIME AND REGULAR PART TIME)

| | | Men | | Women | | Totals |
|-----|--------|--------------|--------|--------------|--------|--------------|
| Age | Number | Compensation | Number | Compensation | Number | Compensation |
| 21 | 2 | \$ 59,171 | 5 | \$ 202,235 | 7 | \$ 261,406 |
| 22 | 16 | 609,817 | 160 | 5,751,137 | 176 | 6,360,954 |
| 23 | 171 | 6,780,560 | 877 | 33,205,633 | 1,048 | 39,986,193 |
| 24 | 386 | 15,688,811 | 1,534 | 61,702,169 | 1,920 | 77,390,980 |
| 25 | 533 | 22,996,098 | 2,062 | 86,653,683 | 2,595 | 109,649,781 |
| 26 | 646 | 29,855,788 | 2,642 | 117,961,412 | 3,288 | 147,817,200 |
| 27 | 809 | 39,493,990 | 3,033 | 143,661,356 | 3,842 | 183,155,346 |
| 28 | 901 | 46,444,668 | 3,207 | 157,794,629 | 4,108 | 204,239,297 |
| 29 | 1,020 | 56,026,944 | 3,509 | 178,805,820 | 4,529 | 234,832,764 |
| 30 | 1,072 | 60,932,444 | 3,681 | 194,813,180 | 4,753 | 255,745,624 |
| 31 | 1,033 | 62,441,196 | 3,486 | 191,088,307 | 4,519 | 253,529,504 |
| 32 | 1,158 | 72,414,386 | 3,584 | 200,534,561 | 4,742 | 272,948,947 |
| 33 | 1,055 | 69,005,696 | 3,367 | 192,999,986 | 4,422 | 262,005,682 |
| 34 | 1,103 | 75,072,718 | 3,212 | 190,856,416 | 4,315 | 265,929,134 |
| 35 | 1,175 | 82,872,049 | 3,161 | 190,937,677 | 4,336 | 273,809,726 |
| 36 | 1,085 | 78,881,370 | 2,845 | 175,135,830 | 3,930 | 254,017,199 |
| 37 | 1,075 | 79,970,772 | 2,986 | 186,680,479 | 4,061 | 266,651,252 |
| 38 | 1,051 | 81,092,415 | 2,703 | 173,237,339 | 3,754 | 254,329,754 |
| 39 | 1,033 | 81,771,420 | 2,633 | 169,154,268 | 3,666 | 250,925,688 |
| 40 | 1,019 | 82,011,346 | 2,730 | 178,734,366 | 3,749 | 260,745,711 |
| 41 | 1,075 | 87,405,861 | 2,916 | 193,771,597 | 3,991 | 281,177,458 |
| 42 | 1,033 | 85,461,164 | 2,843 | 190,487,740 | 3,876 | 275,948,905 |
| 43 | 967 | 85,427,904 | 2,656 | 178,589,200 | 3,623 | 264,017,104 |
| 44 | 863 | 73,965,388 | 2,431 | 166,141,911 | 3,294 | 240,107,300 |
| 45 | 815 | 70,392,461 | 2,390 | 165,633,187 | 3,205 | 236,025,648 |
| 46 | 801 | 69,888,631 | 2,232 | 155,891,057 | 3,033 | 225,779,688 |
| 47 | 739 | 64,670,136 | 2,148 | 152,610,709 | 2,887 | 217,280,844 |
| 48 | 695 | 60,499,739 | 2,306 | 162,862,509 | 3,001 | 223,362,248 |
| 49 | 694 | 61,657,615 | 2,241 | 161,184,009 | 2,935 | 222,841,624 |
| 50 | 689 | 62,545,033 | 2,383 | 170,645,234 | 3,072 | 233,190,268 |
| 51 | 666 | 60,243,639 | 2,336 | 170,238,909 | 3,002 | 230,482,548 |
| 52 | 590 | 54,007,592 | 2,332 | 169,535,093 | 2,922 | 223,542,685 |
| 53 | 620 | 58,083,901 | 2,358 | 175,145,893 | 2,978 | 233,229,794 |
| 54 | 638 | 59,705,053 | 2,566 | 194,056,057 | 3,204 | 253,761,110 |
| 55 | 572 | 52,825,847 | 2,449 | 188,538,722 | 3,021 | 241,364,569 |
| 56 | 536 | 50,684,780 | 2,248 | 174,725,516 | 2,784 | 225,410,296 |
| 57 | 493 | 45,615,021 | 2,165 | 170,324,068 | 2,658 | 215,939,089 |
| 58 | 443 | 40,073,252 | 2,039 | 161,211,136 | 2,482 | 201,284,389 |
| 59 | 402 | 36,230,115 | 1,908 | 152,234,760 | 2,310 | 188,464,876 |
| 60 | 300 | 26,579,279 | 1,463 | 116,886,252 | 1,763 | 143,465,531 |

Amounts may not add to the dollar due to rounding.

TABLE 1 (Continued)

THE NUMBER AND ANNUAL SALARIES OF MEMBERS IN ACTIVE SERVICE DISTRIBUTED BY AGE AS OF JUNE 30, 2012

(FULL TIME AND REGULAR PART TIME)

| | | Men | | Women | | Totals |
|-------|--------|------------------|---------|------------------|---------|------------------|
| Age | Number | Compensation | Number | Compensation | Number | Compensation |
| 61 | 247 | \$ 21,544,511 | 1,298 | \$ 104,143,530 | 1,545 | \$ 125,688,042 |
| 62 | 202 | 18,156,876 | 900 | 72,260,708 | 1,102 | 90,417,584 |
| 63 | 161 | 14,326,841 | 698 | 56,763,721 | 859 | 71,090,562 |
| 64 | 116 | 10,214,738 | 494 | 39,974,681 | 610 | 50,189,419 |
| 65 | 91 | 7,687,412 | 329 | 26,568,720 | 420 | 34,256,132 |
| 66 | 56 | 5,097,190 | 170 | 13,758,789 | 226 | 18,855,979 |
| 67 | 27 | 2,752,623 | 93 | 7,400,203 | 120 | 10,152,826 |
| 68 | 18 | 1,433,856 | 67 | 5,320,619 | 85 | 6,754,475 |
| 69 | 27 | 2,526,753 | 49 | 4,100,404 | 76 | 6,627,157 |
| 70 | 7 | 637,439 | 35 | 2,678,139 | 42 | 3,315,578 |
| 71 | 3 | 160,310 | 17 | 1,477,155 | 20 | 1,637,465 |
| 72 | 2 | 201,311 | 13 | 967,347 | 15 | 1,168,658 |
| 73 | 2 | 112,934 | 10 | 985,525 | 12 | 1,098,459 |
| 74 | 3 | 428,160 | 4 | 371,174 | 7 | 799,334 |
| 75 | 3 | 211,338 | 6 | 475,465 | 9 | 686,803 |
| 76 | | | 1 | 95,800 | 1 | 95,800 |
| 77 | | | 4 | 299,465 | 4 | 299,465 |
| 78 | | | | | | |
| 79 | | | 1 | 76,836 | 1 | 76,836 |
| 80 | | | | | | |
| 81 | | | 1 | 56,727 | 1 | 56,727 |
| Total | 30,939 | \$ 2,335,876,363 | 102,017 | \$ 6,538,399,055 | 132,956 | \$ 8,874,275,418 |

Amounts may not add to the dollar due to rounding.

In addition, there are the following active members:

SUBSTITUTES, PART-TIME, AND HOURLY-PAID TEACHERS WHO ARE ON A FLEXIBLE OR LIMITED WORK SCHEDULE

| Number | 29,073 |
|-----------------|-------------|
| Annual Salaries | 141,905,027 |
| Average Age | 41.85 |
| Average Service | 2.05 |

THE NUMBER AND ANNUAL SALARIES
OF MEMBERS IN ACTIVE SERVICE DISTRIBUTED BY
YEARS OF CREDITED SERVICE AS OF JUNE 30, 2012

TABLE 2

(FULL TIME AND REGULAR PART TIME)

| Years of | | Men | | Women | | Totals |
|----------|--------|--------------|--------|---------------|--------|---------------|
| Service | Number | Compensation | Number | Compensation | Number | Compensation |
| 0 | 267 | \$ 9,863,105 | 848 | \$ 29,369,928 | 1,115 | \$ 39,233,033 |
| 1 | 1,504 | 67,093,277 | 4,849 | 200,502,112 | 6,353 | 267,595,390 |
| 2 | 1,175 | 57,170,849 | 3,963 | 177,099,008 | 5,138 | 234,269,858 |
| 3 | 1,320 | 67,492,669 | 4,616 | 216,693,195 | 5,936 | 284,185,864 |
| 4 | 1,440 | 77,478,074 | 5,542 | 273,426,255 | 6,982 | 350,904,329 |
| 5 | 1,790 | 102,889,378 | 5,899 | 304,870,438 | 7,689 | 407,759,815 |
| 6 | 1,591 | 97,892,633 | 5,759 | 311,475,689 | 7,350 | 409,368,322 |
| 7 | 1,693 | 109,555,271 | 5,863 | 330,145,556 | 7,556 | 439,700,827 |
| 8 | 1,433 | 96,624,247 | 5,092 | 295,702,670 | 6,525 | 392,326,917 |
| 9 | 1,336 | 96,810,411 | 4,598 | 278,195,176 | 5,934 | 375,005,587 |
| 10 | 1,421 | 103,722,959 | 4,668 | 292,505,773 | 6,089 | 396,228,732 |
| 11 | 1,361 | 103,712,425 | 4,654 | 299,429,197 | 6,015 | 403,141,621 |
| 12 | 1,376 | 108,060,889 | 4,476 | 297,326,832 | 5,852 | 405,387,721 |
| 13 | 1,327 | 106,371,604 | 4,075 | 277,359,169 | 5,402 | 383,730,773 |
| 14 | 1,135 | 94,953,873 | 3,605 | 249,662,201 | 4,740 | 344,616,075 |
| 15 | 1,010 | 85,298,052 | 3,049 | 216,741,554 | 4,059 | 302,039,606 |
| 16 | 929 | 80,677,261 | 2,632 | 191,957,522 | 3,561 | 272,634,784 |
| 17 | 872 | 78,071,343 | 2,644 | 200,171,925 | 3,516 | 278,243,268 |
| 18 | 1,147 | 106,437,281 | 3,075 | 234,310,353 | 4,222 | 340,747,634 |
| 19 | 809 | 76,104,516 | 2,402 | 184,850,768 | 3,211 | 260,955,284 |
| 20 | 604 | 58,655,792 | 2,083 | 164,882,774 | 2,687 | 223,538,566 |
| 21 | 643 | 62,866,175 | 2,067 | 165,166,665 | 2,710 | 228,032,841 |
| 22 | 540 | 52,515,952 | 1,932 | 157,197,106 | 2,472 | 209,713,058 |
| 23 | 472 | 46,316,088 | 1,546 | 127,301,727 | 2,018 | 173,617,815 |
| 24 | 398 | 39,192,661 | 1,513 | 127,704,404 | 1,911 | 166,897,064 |
| 25 | 410 | 41,791,211 | 1,430 | 120,457,561 | 1,840 | 162,248,773 |
| 26 | 407 | 42,206,537 | 1,329 | 113,939,608 | 1,736 | 156,146,145 |
| 27 | 381 | 38,593,453 | 1,326 | 114,909,948 | 1,707 | 153,503,402 |
| 28 | 384 | 39,190,223 | 1,101 | 96,279,331 | 1,485 | 135,469,554 |
| 29 | 299 | 30,625,605 | 919 | 81,263,743 | 1,218 | 111,889,348 |
| 30 | 239 | 25,537,457 | 845 | 75,147,208 | 1,084 | 100,684,664 |
| 31 | 303 | 32,602,448 | 869 | 78,131,431 | 1,172 | 110,733,879 |
| 32 | 318 | 34,875,283 | 949 | 87,595,489 | 1,267 | 122,470,772 |
| 33 | 218 | 22,615,972 | 706 | 64,858,894 | 924 | 87,474,866 |
| 34 | 96 | 9,785,151 | 375 | 34,759,685 | 471 | 44,544,836 |
| 35 | 84 | 8,782,593 | 210 | 19,310,674 | 294 | 28,093,267 |
| 36 | 62 | 7,019,228 | 159 | 14,825,858 | 221 | 21,845,086 |
| 37 | 48 | 5,476,279 | 100 | 9,514,732 | 148 | 14,991,011 |
| 38 | 26 | 2,994,859 | 88 | 8,231,535 | 114 | 11,226,393 |
| 39 | 19 | 2,185,190 | 50 | 4,747,553 | 69 | 6,932,743 |

Amounts may not add to the dollar due to rounding.

TABLE 2 (Continued)

THE NUMBER AND ANNUAL SALARIES OF MEMBERS IN ACTIVE SERVICE DISTRIBUTED BY YEARS OF CREDITED SERVICE AS OF JUNE 30, 2012 (FULL TIME AND REGULAR PART TIME)

| Years of | | Men | | Women | | Totals | |
|----------|--------|------------------|---------|------------------|---------|---------------------|--|
| Service | Number | Compensation | Number | Compensation | Number | Number Compensation | |
| 40 | 16 | \$ 1,637,918 | 28 | \$ 2,507,454 | 44 | \$ 4,145,371 | |
| 41 | 11 | 1,068,512 | 25 | 2,277,985 | 36 | 3,346,497 | |
| 42 | 5 | 729,103 | 24 | 2,371,120 | 29 | 3,100,223 | |
| 43 | 8 | 856,901 | 14 | 1,300,299 | 22 | 2,157,200 | |
| 44 | 4 | 462,187 | 4 | 378,318 | 8 | 840,506 | |
| 45 | 4 | 403,586 | 2 | 206,501 | 6 | 610,087 | |
| 46 | 1 | 145,055 | 5 | 418,563 | 6 | 563,618 | |
| 47 | 2 | 199,857 | 2 | 205,991 | 4 | 405,848 | |
| 48 | | | 1 | 97,298 | 1 | 97,298 | |
| 49 | | | 4 | 441,642 | 4 | 441,642 | |
| 50 | | | | | | | |
| 51 | | | | | | | |
| 52 | | | | | | | |
| 53 | 1 | 264,970 | | | 1 | 264,970 | |
| 54 | | | 1 | 95,800 | 1 | 95,800 | |
| 55 | | | | | | | |
| 56 | | | | | | | |
| 57 | | | | | | | |
| Total | 30,939 | \$ 2,335,876,363 | 102,017 | \$ 6,538,399,055 | 132,956 | \$ 8,874,275,418 | |

Amounts may not add due to rounding.

In addition, there are the following active members:

SUBSTITUTES, PART-TIME, AND HOURLY-PAID TEACHERS WHO ARE ON A FLEXIBLE OR LIMITED WORK SCHEDULE

 Number
 29,073

 Annual Salaries
 141,905,027

 Average Age
 41.85

TABLE 3

THE NUMBER AND ANNUAL BENEFITS PAYABLE FROM
THE BENEFIT TRUST RESERVE
OF RETIRED ANNUITANTS
AS OF JUNE 30, 2012

| | | Males | | Females | | Totals |
|-----|--------|-------------|--------|-------------|--------|-------------|
| Age | Number | Annuities | Number | Annuities | Number | Annuities |
| 51 | 1 | \$ 66,782 | | | 1 | \$ 66,782 |
| 52 | | | | | | |
| 53 | | | 1 | \$ 66,843 | 1 | 66,843 |
| 54 | 11 | 1,004,298 | 29 | 2,003,144 | 40 | 3,007,442 |
| 55 | 136 | 9,177,513 | 350 | 18,287,079 | 486 | 27,464,592 |
| 56 | 262 | 17,935,827 | 609 | 34,526,830 | 871 | 52,462,658 |
| 57 | 365 | 25,625,053 | 933 | 52,656,417 | 1,298 | 78,281,470 |
| 58 | 478 | 32,372,309 | 1,249 | 69,663,925 | 1,727 | 102,036,234 |
| 59 | 665 | 44,098,648 | 1,821 | 100,217,828 | 2,486 | 144,316,476 |
| 60 | 943 | 59,927,276 | 3,066 | 149,878,064 | 4,009 | 209,805,341 |
| 61 | 1,202 | 78,316,615 | 3,495 | 172,302,175 | 4,697 | 250,618,790 |
| 62 | 1,410 | 93,902,006 | 3,697 | 177,903,405 | 5,107 | 271,805,411 |
| 63 | 1,537 | 100,969,278 | 3,828 | 182,894,563 | 5,365 | 283,863,842 |
| 64 | 1,728 | 114,486,957 | 4,021 | 192,728,062 | 5,749 | 307,215,019 |
| 65 | 2,159 | 144,523,097 | 4,393 | 208,295,394 | 6,552 | 352,818,491 |
| 66 | 1,620 | 105,282,587 | 3,000 | 138,369,523 | 4,620 | 243,652,110 |
| 67 | 1,529 | 97,029,800 | 2,863 | 132,136,076 | 4,392 | 229,165,876 |
| 68 | 1,481 | 90,553,197 | 2,737 | 116,673,187 | 4,218 | 207,226,384 |
| 69 | 1,591 | 95,398,664 | 2,981 | 126,748,348 | 4,572 | 222,147,012 |
| 70 | 1,275 | 75,520,940 | 2,368 | 101,384,966 | 3,643 | 176,905,906 |
| 71 | 1,153 | 66,974,464 | 2,039 | 84,201,837 | 3,192 | 151,176,301 |
| 72 | 1,004 | 58,299,777 | 1,775 | 72,264,307 | 2,779 | 130,564,084 |
| 73 | 933 | 54,023,518 | 1,723 | 69,177,837 | 2,656 | 123,201,355 |
| 74 | 957 | 54,335,739 | 1,552 | 61,422,349 | 2,509 | 115,758,088 |
| 75 | 823 | 46,441,698 | 1,429 | 54,298,916 | 2,252 | 100,740,613 |
| 76 | 858 | 44,829,531 | 1,288 | 49,937,688 | 2,146 | 94,767,219 |
| 77 | 817 | 45,208,500 | 1,210 | 45,206,318 | 2,027 | 90,414,818 |
| 78 | 685 | 36,819,605 | 1,024 | 36,833,289 | 1,709 | 73,652,893 |
| 79 | 704 | 36,094,604 | 1,096 | 38,971,015 | 1,800 | 75,065,619 |
| 80 | 629 | 31,680,436 | 956 | 32,280,406 | 1,585 | 63,960,843 |
| 81 | 626 | 29,506,645 | 928 | 30,625,630 | 1,554 | 60,132,275 |
| 82 | 553 | 27,054,432 | 948 | 30,607,406 | 1,501 | 57,661,838 |
| 83 | 466 | 21,962,912 | 885 | 26,794,112 | 1,351 | 48,757,023 |
| 84 | 451 | 20,002,299 | 855 | 24,946,602 | 1,306 | 44,948,900 |
| 85 | 380 | 17,146,702 | 751 | 21,069,227 | 1,131 | 38,215,929 |
| 86 | 349 | 16,009,629 | 617 | 16,484,660 | 966 | 32,494,289 |
| 87 | 281 | 11,841,966 | 574 | 15,402,453 | 855 | 27,244,420 |
| 88 | 238 | 9,832,122 | 488 | 12,985,316 | 726 | 22,817,439 |
| 89 | 159 | 6,309,453 | 515 | 12,034,067 | 674 | 18,343,519 |
| 90 | 120 | 4,075,147 | 491 | 11,670,283 | 611 | 15,745,430 |

TABLE 3
(Continued)
THE NUMBER AND ANNUAL BENEFITS PAYABLE FROM
THE BENEFIT TRUST RESERVE
OF RETIRED ANNUITANTS
AS OF JUNE 30, 2012

| | | Males | | Females | | Totals |
|-------|--------|------------------|--------|------------------|--------|------------------|
| Age | Number | Annuities | Number | Annuities | Number | Annuities |
| 91 | 102 | \$ 3,418,794 | 422 | \$ 9,502,593 | 524 | \$ 12,921,387 |
| 92 | 69 | 2,032,023 | 359 | 7,756,371 | 428 | 9,788,394 |
| 93 | 62 | 1,998,628 | 269 | 5,691,249 | 331 | 7,689,877 |
| 94 | 29 | 735,546 | 231 | 5,030,646 | 260 | 5,766,192 |
| 95 | 27 | 879,858 | 162 | 3,248,949 | 189 | 4,128,806 |
| 96 | 16 | 476,858 | 123 | 2,622,429 | 139 | 3,099,286 |
| 97 | 14 | 578,668 | 108 | 1,955,924 | 122 | 2,534,592 |
| 98 | 19 | 888,545 | 100 | 1,906,559 | 119 | 2,795,104 |
| 99 | 6 | 176,691 | 64 | 1,216,668 | 70 | 1,393,359 |
| 100 | 4 | 94,975 | 38 | 724,251 | 42 | 819,226 |
| 101 | | | 30 | 632,996 | 30 | 632,996 |
| 102 | 2 | 84,248 | 16 | 338,794 | 18 | 423,042 |
| 103 | | | 9 | 143,339 | 9 | 143,339 |
| 104 | | | 10 | 174,496 | 10 | 174,496 |
| 105 | | | 5 | 117,761 | 5 | 117,761 |
| 106 | | | 2 | 47,354 | 2 | 47,354 |
| 107 | | | 1 | 24,232 | 1 | 24,232 |
| 108 | | | 1 | 30,696 | 1 | 30,696 |
| Total | 30,929 | \$ 1,836,004,858 | 64,535 | \$ 2,765,114,854 | 95,464 | \$ 4,601,119,712 |

TABLE 4

THE NUMBER AND ANNUAL BENEFITS PAYABLE FROM
THE BENEFIT TRUST RESERVE
OF SURVIVOR ANNUITANTS
AS OF JUNE 30, 2012

| | | Males | | Females | | Totals |
|-----|--------|-----------|--------|-----------|--------|-----------|
| Age | Number | Annuities | Number | Annuities | Number | Annuities |
| 3 | 1 | \$ 2,400 | | | 1 | \$ 2,400 |
| 4 | | | | | | · |
| 5 | | | | | | |
| 6 | 4 | 12,945 | | | 4 | 12,945 |
| 7 | 1 | 33,395 | | | 1 | 33,395 |
| 8 | | | | | | |
| 9 | 1 | 9,985 | 1 | \$ 5,601 | 2 | 15,586 |
| 10 | 3 | 18,775 | 1 | 38,962 | 4 | 57,737 |
| 11 | 3 | 13,265 | 1 | 38,962 | 4 | 52,227 |
| 12 | | | 1 | 3,708 | 1 | 3,708 |
| 13 | 3 | 11,192 | 3 | 11,912 | 6 | 23,103 |
| 14 | 5 | 29,536 | 2 | 43,568 | 7 | 73,104 |
| 15 | 3 | 29,893 | 1 | 4,396 | 4 | 34,289 |
| 16 | 6 | 29,633 | 4 | 39,998 | 10 | 69,631 |
| 17 | 1 | 4,263 | 2 | 20,645 | 3 | 24,909 |
| 18 | 4 | 18,311 | 3 | 47,949 | 7 | 66,260 |
| 19 | 4 | 27,992 | 1 | 34,218 | 5 | 62,209 |
| 20 | 6 | 40,158 | 3 | 47,163 | 9 | 87,321 |
| 21 | 3 | 26,138 | 1 | 7,563 | 4 | 33,701 |
| 22 | 1 | 2,400 | | | 1 | 2,400 |
| 23 | | | 1 | 8,669 | 1 | 8,669 |
| 24 | | | 3 | 61,095 | 3 | 61,095 |
| 25 | | | | | | |
| 26 | 1 | 70,892 | | | 1 | 70,892 |
| 27 | 1 | 4,862 | | | 1 | 4,862 |
| 28 | | | | | | |
| 29 | | | | | | |
| 30 | | | | | | |
| 31 | | | 1 | 7,416 | 1 | 7,416 |
| 32 | 2 | 13,493 | | | 2 | 13,493 |
| 33 | | | 1 | 10,809 | 1 | 10,809 |
| 34 | | | | | | |
| 35 | _ | | | | _ | |
| 36 | 2 | 11,521 | 3 | 23,916 | 5 | 35,437 |
| 37 | 1 | 9,121 | 4 | 30,851 | 5 | 39,971 |
| 38 | 4 | 32,643 | 1 | 7,873 | 5 | 40,516 |
| 39 | 2 | 17,881 | 3 | 27,868 | 5 | 45,749 |
| 40 | 6 | 66,860 | 1 | 8,597 | 7 | 75,457 |
| 41 | 2 | 24,104 | | 402.000 | 2 | 24,104 |
| 42 | 4 | 44,542 | 4 | 103,080 | 8 | 147,621 |

.

TABLE 4
(Continued)
THE NUMBER AND ANNUAL BENEFITS PAYABLE FROM
THE BENEFIT TRUST RESERVE
OF SURVIVOR ANNUITANTS
AS OF JUNE 30, 2012

| | | Males | | Females | | Totals |
|-----|--------|-----------|--------|-----------|--------|------------|
| Age | Number | Annuities | Number | Annuities | Number | Annuities |
| 43 | 3 | \$ 78,159 | 2 | \$ 34,515 | 5 | \$ 112,674 |
| 44 | 4 | 59,399 | 3 | 66,670 | 7 | 126,069 |
| 45 | 1 | 9,394 | | | 1 | 9,394 |
| 46 | 3 | 27,344 | 5 | 52,247 | 8 | 79,590 |
| 47 | 5 | 44,733 | 4 | 43,576 | 9 | 88,309 |
| 48 | 3 | 33,768 | 4 | 28,602 | 7 | 62,370 |
| 49 | 3 | 34,256 | 7 | 130,935 | 10 | 165,192 |
| 50 | 8 | 123,980 | 10 | 228,500 | 18 | 352,479 |
| 51 | 9 | 113,603 | 12 | 265,834 | 21 | 379,437 |
| 52 | 9 | 108,155 | 14 | 242,750 | 23 | 350,905 |
| 53 | 12 | 169,430 | 14 | 248,526 | 26 | 417,956 |
| 54 | 22 | 341,748 | 23 | 400,269 | 45 | 742,017 |
| 55 | 26 | 383,162 | 12 | 247,845 | 38 | 631,006 |
| 56 | 20 | 255,794 | 29 | 608,841 | 49 | 864,636 |
| 57 | 16 | 268,565 | 27 | 602,359 | 43 | 870,924 |
| 58 | 24 | 438,284 | 31 | 697,810 | 55 | 1,136,094 |
| 59 | 41 | 767,361 | 59 | 1,624,283 | 100 | 2,391,644 |
| 60 | 45 | 1,006,999 | 61 | 1,615,298 | 106 | 2,622,297 |
| 61 | 48 | 782,374 | 74 | 1,837,502 | 122 | 2,619,876 |
| 62 | 45 | 838,550 | 72 | 1,999,639 | 117 | 2,838,189 |
| 63 | 67 | 1,286,412 | 97 | 2,696,451 | 164 | 3,982,863 |
| 64 | 90 | 1,810,493 | 129 | 3,355,285 | 219 | 5,165,778 |
| 65 | 69 | 1,451,481 | 125 | 3,203,516 | 194 | 4,654,997 |
| 66 | 72 | 1,333,363 | 117 | 3,027,010 | 189 | 4,360,373 |
| 67 | 61 | 1,111,641 | 118 | 2,762,797 | 179 | 3,874,438 |
| 68 | 88 | 1,875,065 | 151 | 4,007,126 | 239 | 5,882,190 |
| 69 | 99 | 1,888,284 | 170 | 4,232,194 | 269 | 6,120,478 |
| 70 | 84 | 1,684,363 | 168 | 3,997,877 | 252 | 5,682,240 |
| 71 | 83 | 1,443,968 | 163 | 4,157,635 | 246 | 5,601,603 |
| 72 | 86 | 1,556,806 | 163 | 3,982,214 | 249 | 5,539,020 |
| 73 | 87 | 1,674,260 | 178 | 4,207,083 | 265 | 5,881,343 |
| 74 | 80 | 1,414,393 | 203 | 4,971,225 | 283 | 6,385,618 |
| 75 | 75 | 1,197,712 | 221 | 5,261,300 | 296 | 6,459,012 |
| 76 | 89 | 1,533,249 | 198 | 4,603,010 | 287 | 6,136,259 |
| 77 | 86 | 1,406,678 | 217 | 4,684,879 | 303 | 6,091,557 |
| 78 | 93 | 1,678,559 | 184 | 3,830,169 | 277 | 5,508,728 |
| 79 | 102 | 1,621,687 | 221 | 4,698,682 | 323 | 6,320,369 |
| 80 | 109 | 1,688,889 | 229 | 4,740,945 | 338 | 6,429,834 |
| 81 | 114 | 1,782,326 | 290 | 5,792,661 | 404 | 7,574,986 |
| 82 | 108 | 1,507,970 | 235 | 4,553,107 | 343 | 6,061,077 |

TEACHERS' RETIREMENT SYSTEM OF THE STATE OF ILLINOIS

TABLE 4
(Continued)
THE NUMBER AND ANNUAL BENEFITS PAYABLE FROM
THE BENEFIT TRUST RESERVE
OF SURVIVOR ANNUITANTS
AS OF JUNE 30, 2012

| | | Males | | Females | | Totals |
|-------|--------|---------------|--------|----------------|--------|----------------|
| Age | Number | Annuities | Number | Annuities | Number | Annuities |
| 83 | 88 | \$ 1,171,819 | 255 | \$ 4,921,230 | 343 | \$ 6,093,048 |
| 84 | 103 | 1,545,032 | 250 | 4,760,065 | 353 | 6,305,097 |
| 85 | 89 | 1,142,831 | 230 | 4,226,586 | 319 | 5,369,417 |
| 86 | 96 | 1,337,728 | 216 | 3,906,410 | 312 | 5,244,139 |
| 87 | 87 | 1,063,087 | 208 | 3,717,008 | 295 | 4,780,095 |
| 88 | 112 | 1,419,656 | 164 | 2,681,739 | 276 | 4,101,396 |
| 89 | 83 | 933,215 | 160 | 2,617,143 | 243 | 3,550,358 |
| 90 | 68 | 730,247 | 141 | 2,186,404 | 209 | 2,916,651 |
| 91 | 64 | 627,276 | 138 | 2,117,793 | 202 | 2,745,069 |
| 92 | 58 | 490,414 | 114 | 1,664,925 | 172 | 2,155,339 |
| 93 | 36 | 339,287 | 89 | 1,055,291 | 125 | 1,394,579 |
| 94 | 44 | 432,789 | 76 | 954,555 | 120 | 1,387,345 |
| 95 | 26 | 242,629 | 64 | 710,148 | 90 | 952,777 |
| 96 | 25 | 173,296 | 42 | 566,915 | 67 | 740,211 |
| 97 | 18 | 161,104 | 47 | 577,738 | 65 | 738,842 |
| 98 | 12 | 129,674 | 18 | 218,380 | 30 | 348,054 |
| 99 | 4 | 64,188 | 14 | 193,635 | 18 | 257,823 |
| 100 | 5 | 39,162 | 9 | 108,395 | 14 | 147,557 |
| 101 | 3 | 17,401 | 8 | 81,376 | 11 | 98,777 |
| 102 | 1 | 7,888 | 4 | 57,716 | 5 | 65,604 |
| 103 | 1 | 7,363 | 3 | 42,032 | 4 | 49,394 |
| 104 | | | 1 | 21,059 | 1 | 21,059 |
| 105 | | | 3 | 35,604 | 3 | 35,604 |
| Total | 3,186 | \$ 49,514,946 | 6,340 | \$ 131,798,129 | 9,526 | \$ 181,313,074 |

TABLE 5

THE NUMBER AND ANNUAL BENEFITS PAYABLE FROM
THE BENEFIT TRUST RESERVE
OF DISABILITY BENEFIT RECIPIENTS
AS OF JUNE 30, 2012

| | | Males | | Females | | Totals |
|-----|--------|-----------|--------|-----------|--------|-----------|
| Age | Number | Annuities | Number | Annuities | Number | Annuities |
| 28 | | | 1 | \$ 19,604 | 1 | \$ 19,604 |
| 29 | | | 1 | 17,680 | 1 | 17,680 |
| 30 | | | 4 | 75,704 | 4 | 75,704 |
| 31 | | | 5 | 92,846 | 5 | 92,846 |
| 32 | | | 5 | 104,591 | 5 | 104,591 |
| 33 | | | 4 | 77,075 | 4 | 77,075 |
| 34 | | | 4 | 70,228 | 4 | 70,228 |
| 35 | | | 5 | 92,607 | 5 | 92,607 |
| 36 | | | 3 | 46,731 | 3 | 46,731 |
| 37 | | | 8 | 155,989 | 8 | 155,989 |
| 38 | 1 | \$ 27,108 | 3 | 59,241 | 4 | 86,350 |
| 39 | 1 | 16,143 | 14 | 269,526 | 15 | 285,669 |
| 40 | 1 | 48,601 | 4 | 95,940 | 5 | 144,541 |
| 41 | 1 | 14,803 | 7 | 162,086 | 8 | 176,889 |
| 42 | | | 18 | 395,932 | 18 | 395,932 |
| 43 | 3 | 87,264 | 16 | 344,620 | 19 | 431,884 |
| 44 | 2 | 59,030 | 21 | 498,547 | 23 | 557,577 |
| 45 | | | 12 | 226,984 | 12 | 226,984 |
| 46 | 5 | 123,737 | 16 | 355,155 | 21 | 478,892 |
| 47 | 3 | 67,790 | 10 | 232,221 | 13 | 300,011 |
| 48 | 4 | 86,123 | 18 | 440,449 | 22 | 526,572 |
| 49 | 3 | 97,044 | 11 | 319,093 | 14 | 416,136 |
| 50 | 6 | 135,811 | 13 | 328,810 | 19 | 464,621 |
| 51 | 4 | 112,610 | 15 | 382,772 | 19 | 495,382 |
| 52 | 8 | 233,458 | 17 | 360,397 | 25 | 593,856 |
| 53 | 2 | 48,903 | 33 | 798,859 | 35 | 847,762 |
| 54 | 10 | 265,947 | 34 | 950,350 | 44 | 1,216,298 |
| 55 | 9 | 211,008 | 34 | 986,776 | 43 | 1,197,784 |
| 56 | 12 | 420,627 | 38 | 1,291,103 | 50 | 1,711,730 |
| 57 | 4 | 112,597 | 36 | 1,028,450 | 40 | 1,141,047 |
| 58 | 10 | 236,766 | 45 | 1,362,583 | 55 | 1,599,349 |
| 59 | 10 | 285,713 | 56 | 1,596,816 | 66 | 1,882,529 |
| 60 | 9 | 304,482 | 45 | 1,387,493 | 54 | 1,691,975 |
| 61 | 10 | 338,354 | 40 | 1,041,329 | 50 | 1,379,683 |
| 62 | 9 | 198,804 | 39 | 1,147,087 | 48 | 1,345,891 |
| 63 | 5 | 176,092 | 30 | 952,006 | 35 | 1,128,099 |
| 64 | 6 | 138,691 | 37 | 1,061,314 | 43 | 1,200,005 |
| 65 | 8 | 279,870 | 30 | 881,909 | 38 | 1,161,778 |
| 66 | 3 | 142,965 | 16 | 485,969 | 19 | 628,934 |
| 67 | 3 | 67,568 | 16 | 312,150 | 19 | 379,719 |

TABLE 5
(Continued)
THE NUMBER AND ANNUAL BENEFITS PAYABLE FROM
THE BENEFIT TRUST RESERVE
OF DISABILITY BENEFIT RECIPIENTS
AS OF JUNE 30, 2012

| | | Males | | Females | | Totals |
|-------|--------|--------------|--------|---------------|--------|---------------|
| Age | Number | Annuities | Number | Annuities | Number | Annuities |
| 68 | 7 | \$ 198,744 | 9 | \$ 182,035 | 16 | \$ 380,778 |
| 69 | 7 | 165,150 | 16 | 388,167 | 23 | 553,317 |
| 70 | 3 | 133,775 | 15 | 318,114 | 18 | 451,890 |
| 71 | 1 | 20,383 | 7 | 173,097 | 8 | 193,479 |
| 72 | 2 | 24,352 | 9 | 191,766 | 11 | 216,118 |
| 73 | 1 | 7,148 | 5 | 144,193 | 6 | 151,341 |
| 74 | | | 13 | 227,416 | 13 | 227,416 |
| 75 | 1 | 37,692 | 4 | 34,705 | 5 | 72,397 |
| 76 | 3 | 63,945 | 10 | 224,344 | 13 | 288,289 |
| 77 | 4 | 195,924 | 12 | 279,265 | 16 | 475,189 |
| 78 | 2 | 53,174 | 9 | 172,968 | 11 | 226,142 |
| 79 | 1 | 9,671 | 4 | 86,985 | 5 | 96,656 |
| 80 | 1 | 18,488 | 7 | 128,566 | 8 | 147,053 |
| 81 | 2 | 32,929 | 5 | 62,820 | 7 | 95,749 |
| 82 | | | 2 | 25,866 | 2 | 25,866 |
| 83 | 1 | 12,310 | 7 | 98,505 | 8 | 110,815 |
| 84 | 2 | 25,644 | 1 | 27,604 | 3 | 53,249 |
| 85 | 2 | 49,961 | 1 | 14,229 | 3 | 64,190 |
| 86 | 1 | 17,059 | 3 | 31,952 | 4 | 49,011 |
| 87 | | | 6 | 98,889 | 6 | 98,889 |
| 88 | | | 2 | 23,801 | 2 | 23,801 |
| 89 | | | | | | |
| 90 | | | 5 | 56,705 | 5 | 56,705 |
| 91 | | | | | | |
| 92 | | | 1 | 8,896 | 1 | 8,896 |
| 93 | | | | | | |
| 94 | | | | | | |
| 95 | | | | | | |
| 96 | | | 2 | 22,738 | 2 | 22,738 |
| Total | 193 | \$ 5,404,257 | 919 | \$ 23,532,650 | 1,112 | \$ 28,936,907 |

TABLE 6

THE NUMBER AND ANNUAL BENEFITS PAYABLE FROM THE GUARANTEED MINIMUM ANNUITY RESERVE OF RETIRED ANNUITANTS
AS OF JUNE 30, 2012

| | | Males | | Females | | Totals |
|-----|--------|-----------|--------|-----------|--------|-----------|
| Age | Number | Annuities | Number | Annuities | Number | Annuities |
| 61 | | | 1 | \$ 143 | 1 | \$ 143 |
| 62 | | | 1 | 1,095 | 1 | 1,095 |
| 63 | | | 1 | 194 | 1 | 194 |
| 64 | 1 | \$ 167 | 7 | 4,032 | 8 | 4,199 |
| 65 | | | 5 | 2,052 | 5 | 2,052 |
| 66 | | | 3 | 1,724 | 3 | 1,724 |
| 67 | 1 | 247 | 4 | 2,043 | 5 | 2,290 |
| 68 | 1 | 6 | 7 | 2,425 | 8 | 2,431 |
| 69 | 3 | 159 | 8 | 4,502 | 11 | 4,662 |
| 70 | 1 | 367 | 12 | 4,878 | 13 | 5,245 |
| 71 | 1 | 208 | 7 | 8,108 | 8 | 8,316 |
| 72 | | | 11 | 4,951 | 11 | 4,951 |
| 73 | 2 | 1,231 | 19 | 9,506 | 21 | 10,736 |
| 74 | | , | 29 | 14,319 | 29 | 14,319 |
| 75 | 3 | 1,483 | 28 | 17,075 | 31 | 18,558 |
| 76 | 3 | 3,368 | 24 | 11,527 | 27 | 14,894 |
| 77 | | , | 29 | 14,398 | 29 | 14,398 |
| 78 | 2 | 968 | 18 | 12,093 | 20 | 13,060 |
| 79 | 3 | 810 | 15 | 8,820 | 18 | 9,630 |
| 80 | 3 | 1,947 | 24 | 19,240 | 27 | 21,187 |
| 81 | 3 | 1,202 | 43 | 28,344 | 46 | 29,546 |
| 82 | 6 | 4,122 | 41 | 29,361 | 47 | 33,483 |
| 83 | 6 | 4,200 | 59 | 37,621 | 65 | 41,820 |
| 84 | 9 | 6,554 | 44 | 31,127 | 53 | 37,681 |
| 85 | 9 | 5,883 | 61 | 54,345 | 70 | 60,229 |
| 86 | 7 | 6,318 | 47 | 35,094 | 54 | 41,413 |
| 87 | 7 | 6,509 | 56 | 57,699 | 63 | 64,208 |
| 88 | 9 | 10,932 | 37 | 40,096 | 46 | 51,028 |
| 89 | 5 | 3,698 | 76 | 70,261 | 81 | 73,959 |
| 90 | 9 | 5,831 | 55 | 60,905 | 64 | 66,735 |
| 91 | 6 | 8,640 | 57 | 68,779 | 63 | 77,419 |
| 92 | 3 | 3,471 | 60 | 65,416 | 63 | 68,887 |
| 93 | 4 | 2,629 | 36 | 37,225 | 40 | 39,854 |
| 94 | 2 | 4,256 | 33 | 52,667 | 35 | 56,923 |
| 95 | 3 | 2,983 | 29 | 42,535 | 32 | 45,518 |
| 96 | 2 | 3,375 | 18 | 23,319 | 20 | 26,694 |
| 97 | 1 | 1,546 | 30 | 42,371 | 31 | 43,918 |
| 98 | 1 | 4,120 | 17 | 20,888 | 18 | 25,008 |
| 99 | 1 | 497 | 11 | 18,617 | 12 | 19,114 |
| 100 | 1 | 994 | 11 | 17,164 | 12 | 18,158 |

TABLE 6 (Continued) THE NUMBER AND ANNUAL BENEFITS PAYABLE FROM THE GUARANTEED MINIMUM ANNUITY RESERVE OF RETIRED ANNUITANTS AS OF JUNE 30, 2012

| | | | Females | | | Totals | | |
|-------|--------|-----------|--------------------|----|-----------|--------|-----------|-----------|
| Age | Number | Annuities | Number Annuities 1 | | Number | | Annuities | |
| 101 | | | 4 | \$ | 7,717 | 4 | \$ | 7,717 |
| 102 | | | 5 | | 8,643 | 5 | | 8,643 |
| 103 | | | 2 | | 4,332 | 2 | | 4,332 |
| 104 | | | 4 | | 7,220 | 4 | | 7,220 |
| 105 | | | 2 | | 5,346 | 2 | | 5,346 |
| Total | 118 | \$ 98,721 | 1,091 | \$ | 1,010,214 | 1,209 | \$ | 1,108,935 |

SECTION XII — ADDITIONAL INFORMATION

TABLE 1
Breakdown of PBO Benefit Payments and Normal Cost

| | | Tier 1 A | ctive | | | Tier 2 A | ctive | | Inacti | ve | Total |
|---------|-------------------|---------------|-----------------|-----------------|-------------------|---------------|-----------------|----------------|-------------------|-------------------|-------------------|
| June 30 | Projected Benefit | | Benefit | | Projected Benefit | | Benefit | | Projected Benefit | Benefit | Projected Benefit |
| PYE | Obligation | Normal Cost | <u>Payments</u> | Payroll Payroll | <u>Obligation</u> | Normal Cost | <u>Payments</u> | <u>Payroll</u> | Obligation | Payments Payments | Obligation |
| 2013 | 33,177,204,732 | 1,748,442,875 | 313,564,913 | 9,002,742,119 | 80,198,722 | 72,614,097 | 8,404,393 | 1,012,987,046 | 60,629,585,331 | 4,892,712,586 | 93,886,988,785 |
| 2014 | 37,323,654,191 | 1,758,750,699 | 490,758,941 | 8,945,545,802 | 153,392,712 | 100,536,419 | 15,271,134 | 1,470,626,106 | 60,391,531,068 | 4,972,466,496 | 97,868,577,971 |
| 2015 | 41,628,257,955 | 1,771,793,045 | 675,488,000 | 8,905,053,533 | 254,340,025 | 129,022,480 | 25,336,413 | 1,932,946,491 | 60,051,488,397 | 5,047,132,678 | 101,934,086,377 |
| 2016 | 46,098,675,838 | 1,787,231,772 | 875,592,181 | 8,880,146,145 | 382,520,737 | 157,863,527 | 34,078,666 | 2,401,841,651 | 59,606,589,484 | 5,119,277,722 | 106,087,786,059 |
| 2017 | 50,734,675,080 | 1,802,928,600 | 1,088,602,812 | 8,858,717,010 | 541,858,651 | 187,290,599 | 45,923,440 | 2,879,603,337 | 59,051,067,812 | 5,185,330,210 | 110,327,601,543 |
| 2018 | 55,536,347,906 | 1,817,958,516 | 1,312,286,950 | 8,832,533,972 | 732,229,188 | 217,776,015 | 54,295,927 | 3,378,224,869 | 58,382,409,820 | 5,244,584,859 | 114,650,986,914 |
| 2019 | 60,505,154,167 | 1,832,477,198 | 1,551,377,819 | 8,802,317,172 | 960,826,815 | 249,435,591 | 64,015,093 | 3,903,588,725 | 57,598,634,351 | 5,297,185,386 | 119,064,615,333 |
| 2020 | 65,637,909,855 | 1,846,577,400 | 1,803,963,707 | 8,768,220,763 | 1,230,530,278 | 282,264,743 | 74,997,036 | 4,456,602,766 | 56,697,452,298 | 5,342,967,798 | 123,565,892,431 |
| 2021 | 70,933,260,884 | 1,859,759,638 | 2,069,916,165 | 8,727,872,076 | 1,544,531,116 | 316,420,025 | 85,379,953 | 5,038,527,723 | 55,676,561,971 | 5,381,136,627 | 128,154,353,971 |
| 2022 | 76,389,358,967 | 1,871,528,041 | 2,350,500,388 | 8,678,831,355 | 1,908,375,280 | 352,237,585 | 98,514,725 | 5,652,640,162 | 54,534,304,836 | 5,409,776,100 | 132,832,039,083 |
| 2023 | 82,002,376,443 | 1,879,636,054 | 2,651,375,153 | 8,612,371,981 | 2,324,917,077 | 389,960,857 | 104,298,576 | 6,303,873,452 | 53,270,882,079 | 5,427,864,503 | 137,598,175,599 |
| 2024 | 87,759,957,895 | 1,882,244,361 | 2,976,541,685 | 8,521,937,276 | 2,807,999,215 | 430,036,541 | 111,306,917 | 6,996,135,802 | 51,887,573,563 | 5,435,706,671 | 142,455,530,673 |
| 2025 | 93,642,685,310 | 1,878,362,838 | 3,326,764,087 | 8,404,399,894 | 3,364,117,961 | 472,762,060 | 119,622,481 | 7,733,272,785 | 50,385,444,510 | 5,430,585,032 | 147,392,247,781 |
| 2026 | 99,627,762,836 | 1,865,692,754 | 3,708,942,175 | 8,252,199,924 | 4,000,512,560 | 517,372,003 | 130,458,881 | 8,517,545,718 | 48,768,471,637 | 5,412,333,597 | 152,396,747,033 |
| 2027 | 105,681,004,465 | 1,841,949,269 | 4,127,876,619 | 8,057,389,197 | 4,722,943,212 | 565,296,004 | 142,458,654 | 9,358,666,322 | 47,041,122,426 | 5,379,885,038 | 157,445,070,103 |
| 2028 | 111,758,120,378 | 1,808,697,931 | 4,579,547,353 | 7,826,290,491 | 5,540,529,513 | 615,985,940 | 156,840,366 | 10,244,185,019 | 45,209,331,781 | 5,331,435,413 | 162,507,981,672 |
| 2029 | 117,817,086,609 | 1,768,164,759 | 5,058,394,613 | 7,568,153,668 | 6,461,283,271 | 669,288,421 | 173,451,992 | 11,157,307,395 | 43,281,385,495 | 5,266,925,868 | 167,559,755,375 |
| 2030 | 123,820,614,490 | 1,718,610,943 | 5,571,946,638 | 7,277,671,562 | 7,493,855,819 | 725,649,104 | 192,558,649 | 12,089,567,372 | 41,266,293,431 | 5,184,322,728 | 172,580,763,740 |
| 2031 | 129,718,794,526 | 1,657,635,875 | 6,118,729,733 | 6,946,484,005 | 8,647,778,358 | 784,344,459 | 215,760,131 | 13,035,697,939 | 39,175,901,269 | 5,083,235,583 | 177,542,474,153 |
| 2032 | 135,456,760,476 | 1,583,098,846 | 6,704,054,241 | 6,567,410,523 | 9,930,928,328 | 846,325,172 | 241,651,833 | 13,998,032,438 | 37,023,408,364 | 4,960,130,101 | 182,411,097,168 |
| 2033 | 140,967,507,703 | 1,495,521,174 | 7,321,941,293 | 6,143,434,634 | 11,354,262,867 | 910,636,248 | 273,870,393 | 14,975,325,010 | 34,826,745,728 | 4,816,269,650 | 187,148,516,298 |
| 2034 | 146,185,431,395 | 1,396,749,174 | 7,970,719,890 | 5,683,143,486 | 12,924,840,386 | 976,850,209 | 311,179,469 | 15,959,689,958 | 32,603,964,950 | 4,651,596,007 | 191,714,236,731 |
| 2035 | 151,043,336,362 | 1,288,776,457 | 8,639,942,621 | 5,195,539,362 | 14,651,125,186 | 1,045,547,042 | 353,337,389 | 16,946,052,031 | 30,374,622,299 | 4,465,026,398 | 196,069,083,847 |
| 2036 | 155,481,590,460 | 1,173,032,913 | 9,328,034,682 | 4,687,036,768 | 16,543,113,240 | 1,116,235,185 | 401,582,887 | 17,927,427,722 | 28,160,964,628 | 4,256,971,014 | 200,185,668,328 |
| 2037 | 159,438,915,857 | 1,047,359,338 | 10,042,513,565 | 4,152,101,658 | 18,609,800,689 | 1,190,115,330 | 453,648,020 | 18,910,643,254 | 25,986,591,944 | 4,029,187,017 | 204,035,308,490 |
| 2038 | 162,839,068,729 | 909,886,666 | 10,771,147,958 | 3,585,573,622 | 20,864,510,747 | 1,266,109,664 | 515,791,812 | 19,897,062,819 | 23,875,164,802 | 3,785,379,199 | 207,578,744,278 |
| 2039 | 165,610,482,484 | 764,453,024 | 11,515,857,837 | 3,001,563,808 | 23,314,002,173 | 1,343,113,258 | 586,303,424 | 20,872,615,977 | 21,848,383,618 | 3,525,416,352 | 210,772,868,275 |
| 2040 | 167,677,860,077 | 617,143,626 | 12,242,021,927 | 2,421,595,300 | 25,966,204,574 | 1,421,624,755 | 664,786,694 | 21,826,536,129 | 19,929,821,302 | 3,255,694,437 | 213,573,885,953 |
| 2041 | 169,002,215,450 | 475,594,449 | 12,929,464,963 | 1,872,572,839 | 28,830,612,523 | 1,500,398,443 | 753,918,109 | 22,742,803,106 | 18,138,284,793 | 2,978,407,591 | 215,971,112,766 |
| 2042 | 169,570,367,351 | 347,649,249 | 13,561,276,086 | 1,381,640,212 | 31,913,401,072 | 1,580,048,042 | 850,352,675 | 23,608,614,402 | 16,491,803,683 | 2,699,255,964 | 217,975,572,106 |
| 2043 | 169,393,824,829 | 239,846,671 | 14,103,857,623 | 969,984,134 | 35,225,356,339 | 1,656,752,715 | 969,359,163 | 24,416,587,365 | 15,003,921,775 | 2,423,324,097 | 219,623,102,943 |
| 2044 | 168,526,759,425 | 160,979,834 | 14,546,704,408 | 666,998,768 | 38,758,274,140 | 1,726,330,980 | 1,112,689,619 | 25,138,996,928 | 13,683,978,456 | 2,153,674,888 | 220,969,012,021 |
| 2045 | 167,047,746,622 | 110,825,706 | 14,887,617,729 | 470,456,590 | 42,497,123,087 | 1,793,968,844 | 1,267,943,732 | 25,779,615,743 | 12,538,874,849 | 1,896,303,805 | 222,083,744,558 |
| 2046 | 165,043,702,648 | | | | 46,443,959,050 | | | | 11,569,828,879 | | 223,057,490,577 |

TABLE 2
Department of Insurance Information

Inactive and Pensioner Liabilities Split for the Department of Insurance

| | 6/30/2008 | 6/30/2009 | 6/30/2010 | 6/30/2011 | 6/30/2012 | 6/30/2013 |
|-----------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Service Retirement | 40,461,359,000 | 43,023,480,000 | 45,913,605,000 | 48,896,754,000 | 56,761,585,000 | 59,202,201,000 |
| Disability Retirement | 267,011,000 | 278,271,000 | 284,963,000 | 295,790,000 | 368,681,000 | 383,302,000 |
| Survivor | 1,121,594,000 | 1,194,166,000 | 1,277,338,000 | 1,375,336,000 | 1,604,370,000 | 1,668,831,000 |
| | 41,849,964,000 | 44,495,917,000 | 47,475,906,000 | 50,567,880,000 | 58,734,636,000 | 61,254,334,000 |
| Inactive | 1,723,182,000 | 1,816,407,000 | 1,914,815,000 | 1,906,806,000 | 1,806,335,000 | 1,883,826,000 |
| Active | 25,059,221,000 | 26,714,874,000 | 27,902,477,000 | 28,825,059,000 | 29,483,974,000 | 30,748,828,000 |
| Grand Total | 68,632,367,000 | 73,027,198,000 | 77,293,198,000 | 81,299,745,000 | 90,024,945,000 | 93,886,988,000 |

Headcounts and Salaries for Active Members

| | 6/30/2008 | 6/30/2009 | 6/30/2010 | 6/30/2011 | 6/30/2012 | 6/30/2013 |
|----------|---------------|---------------|---------------|---------------|---------------|---------------|
| BA - I - | | | | | | |
| Male | | | | | | |
| Count | 37,462 | 38,534 | 39,534 | 40,064 | 38,816 | 37,695 |
| Salaries | 2,194,200,461 | 2,345,026,726 | 2,449,168,147 | 2,511,502,994 | 2,499,553,000 | 2,564,452,000 |
| Female | | | | | | |
| Count | 123,339 | 126,940 | 129,639 | 130,126 | 127,056 | 124,334 |
| Salaries | 6,109,079,348 | 6,527,524,483 | 6,852,385,935 | 7,062,830,981 | 7,012,178,000 | 7,191,573,000 |
| Total | | | | | | |
| Count | 160,801 | 165,474 | 169,173 | 170,190 | 165,872 | 162,029 |
| Salaries | 8,303,279,809 | 8,872,551,209 | 9,301,554,082 | 9,574,333,975 | 9,511,731,000 | 9,756,025,000 |
| | | • | · | | | |