

**TEACHERS' RETIREMENT SYSTEM
OF THE STATE OF ILLINOIS**

**June 30, 2013
Actuarial Valuation of
Pension Benefits**

October 2013

October 31, 2013

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.

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

**TEACHERS' RETIREMENT SYSTEM
OF THE STATE OF ILLINOIS**

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**TEACHERS' RETIREMENT SYSTEM
OF THE STATE OF ILLINOIS**

**ACTUARIAL VALUATION
JUNE 30, 2013**

SECTION I — PRINCIPAL RESULTS

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

Item	Year Ended June 30	
	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	41.7
– Average service	10.6	10.4
• Number of inactive	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)

Item	Year Ended June 30	
	2013	2012
	Fiscal Year <u>2015</u>	Fiscal Year <u>2014</u>
Benefit Trust Reserve (continued)		
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	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	\$ 5,176,025,000	
– Less School Districts for 2.2% formula	(60,414,000)	
– Less Federal Funds Contribution	(25,074,000)	
– State Contribution	\$ 5,090,537,000	
• Guaranteed Minimum Annuity Reserve	1,000,000	
• Total State Contribution	\$ 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	\$ 1,000,000	\$ 1,100,000
Total State Contribution Under Statutory Plan:		
• Benefit Trust Reserve	\$ 3,411,878,000	\$ 3,437,478,000
• Guaranteed Minimum Annuity Reserve	1,000,000	1,100,000
• Total State Contribution	\$ 3,412,878,000	\$ 3,438,578,000

Notes:

* 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.

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

	<u>Certified Contributions **</u>
Common School Fund	\$ 3,437,478,000
School Districts for 2.2%	57,896,000
Federal Funds	<u>97,204,000</u>
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.

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 Regular Part-Time	Substitutes, Part-Time, Hourly Paid on a Flexible or Limited Work Schedule	Total
Number	132,956	29,073	162,029
Annual salaries	\$ 9,601,785,000	\$ 154,240,000	\$ 9,756,025,000
Average age	41.8 years	41.9 years	41.8 years
Average service	12.4 years	2.0 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		33.90%	34.68%
2036		33.86%	34.66%
2037 - 2045	Maximum does not 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.

SECTION III — CURRENT FINANCIAL POSITION

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%

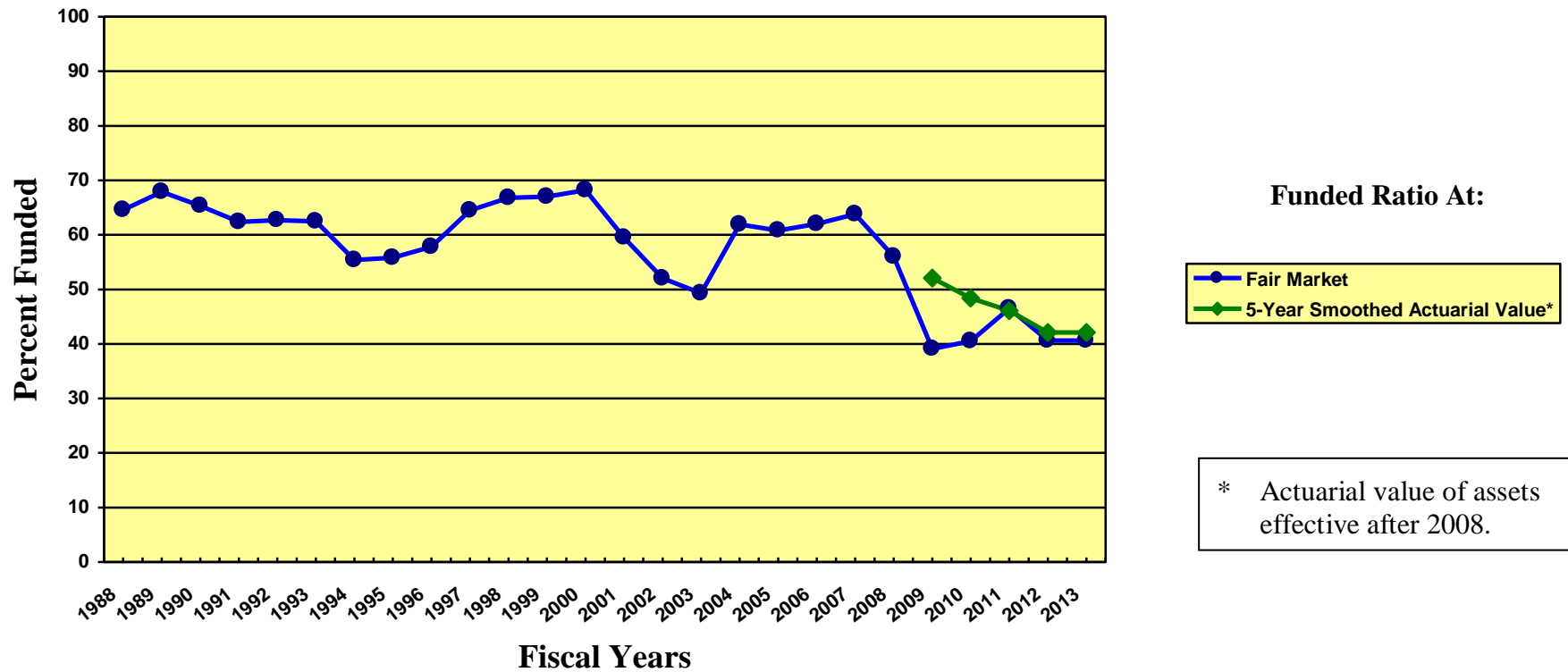
As can be seen from the table, the current funded statuses of the System are 42.5% and 40.6% as measured by the fair market value of assets and 5-year smoothed actuarial value of assets, respectively.

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



SECTION IV — GAINS AND LOSSES DURING YEAR

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	<u>254</u>
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.

SECTION V — MEMBERSHIP DATA

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

Notes:

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.

SECTION VI — ASSETS

1. Market Value of Assets as of June 30, 2013						\$ 39,858,768,499
2. Determination of Deferred Gain (Loss)						
		<u>Market Return on Assets</u>				
Fiscal Year	<u>Ending</u>	<u>Actual</u>	<u>Expected</u>	<u>Gain/(Loss)</u>	<u>% Deferred</u>	<u>Deferred 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	<u>1,257,176,118</u>	20%	<u>251,435,224</u>
				\$ 4,653,746,538		\$ 1,703,577,002
3. Actuarial Value of Assets as of June 30, 2013 (1) - (2)						\$ 38,155,191,497
4. Actuarial Value of Assets as of June 30, 2012						\$ 37,945,397,211
5. Return on Actuarial Basis (3) - [(4) + (B) + (C) + (D)]						\$ 1,429,619,509
6. Expected Actuarial Return on Assets for Fiscal 2013 (G) x [(4) + .5 x ((B) + (C) + (D))]						\$ 2,986,838,768
7. 2013 Actuarial Basis Asset Gain / (Loss) (5) - (6)						\$ (1,557,219,259)
8. Actuarial Rate of Return (5) / [(4) + 0.5 x ((B) + (C) + (D))]						3.83%

(A) Certified Market Value of Assets as of June 30, 2012		\$ 36,516,825,339
(B) Contributions in Fiscal Year 2013		3,780,914,113
(C) Benefit Payments in Fiscal Year 2013		(4,980,481,783)
(D) Administrative Expense in Fiscal Year 2013		(20,257,553)
(E) Actual Return in Fiscal Year 2013		<u>4,561,768,383</u>
(F) Market Value of Assets as of June 30, 2013		\$ 39,858,768,499
(G) Valuation Interest Rate as of June 30, 2012		8.00%
(H) Expected Market Return on Assets for Fiscal 2013 (G) x [(A) + .5 x ((B)+(C)+(D))]		\$ 2,872,553,018
(I) 2013 Market Basis Asset Gain / (Loss) (E) - (H)		\$ 1,689,215,365
(J) Market Rate of Return (E) / [(A) + 0.5 x ((B) + (C) + (D))]		12.70%

SECTION VII — HISTORY OF LEGISLATIVE CHANGES

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.

SECTION VIII — FINANCIAL RESULTS AND MEMBERSHIP DATA -
DETAILED SUMMARIES

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	<u>(25,074,000)</u>
--- 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:

	<u>Certified Contribution</u>
State Contribution	\$ 3,437,478,000
School Districts for 2.2%	57,896,000
Federal Funds	<u>97,204,000</u>
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)

Benefit Trust Reserve	Year Ended June 30, 2015	Percentage of Payroll (State, Federal, Total)	
(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)	<u>(0.58)</u>	Total
➤ State and Federal Funds Contribution	3,779,353,000	36.28 %	Total
➤ Less State Debt Service for TRS portion of all funds provided 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	3,436,952,000	33.00 %	Total
(3) Employer contribution recognizing all system assets, before limiting State and Federal Funds contribution			
➤ Employer's Cost	3,581,559,000	34.38 %	Total
➤ Less School Districts under Sec. 16-158(e)	(60,414,000)	<u>(0.58)</u>	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)	3,436,952,000	33.00 %	Total
(5) Employer contribution under PA 94-0004			
➤ State Portion of (4), based on State Payroll	3,411,878,000	33.77 %	State
➤ Plus Federal Portion of (4), based on Federal Payroll	25,074,000	<u>8.02</u>	Federal
➤ State and Federal Funds Contribution	3,436,952,000	33.00 %	Total
➤ Plus School Districts under Sec. 16-158(e)	60,414,000	<u>0.58</u>	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 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) *	Actuarial 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	
Item	
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 2003 to 2008: Assets are at fair market value.

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

** Revised economic and noneconomic assumptions due to experience review.

*** 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
(\$ Thousands)

ITEM	YEAR ENDED JUNE 30	
	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	-	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	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

¹ 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.

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:
(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.

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

ITEM	Year Ended June 30	
	2013	2012
Employer normal cost	\$ 817,433	\$ 842,532
Interest on unfunded pension benefit obligation at beginning of year	<u>4,166,364</u>	<u>4,426,762</u>
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)	\$ 2,702,278	2,405,172
-School Districts for 2.2% and Salary Increase Cap and Modified ERO	86,919	91,121
-Federal Funds	<u>68,868</u>	<u>62,288</u>
Total employer credits	\$ 2,858,065	\$ 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**

Year Ended June 30	Pension Benefit Obligation	Actuarial Value of Assets*	Unfunded Pension Benefit Obligation	Percentage Change 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 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	Contributions		Market Value Income	Benefits and Expenses	End of Year Market Value of Assets
		Member	Employer			
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	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)**

Class	Number	Annual Annuities 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>	<u>(494)</u>
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 June 30	Number of Active Members	Percentage Change in Membership	Average Annual Salary	Percentage Change in 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 Date June 30	Number of Active Members	Percentage Change in Membership	Average Annual Salary	Percentage Change in 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 Payment Stream	
Fiscal Year	Guaranteed 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 Payment Stream	
Fiscal Year	Guaranteed 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	-

Notes:

(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

Year Ended June 30	Assumed Payroll ⁽¹⁾	School District Contributions				Combined State and Federal Funds				(B) Required Federal Funds Contribution	(C) Required State Contribution	Percent of State Payroll
		s. 16-158(f) (Increases)	s. 133.2 (ERO)	(A)		Calculations Required by PA 94-0004						
				s. 16-158(e) (2.2 Formula)	Total	Formula Amount	Formula Rate	Maximum Amount	Required Amount			
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%

CERTIFIED

PROJECTED

Notes:

- (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

PROJECTED

Year Ended June 30	Assumed Payroll ⁽¹⁾	School District Contributions				Combined State and Federal Funds				(B) Required Federal Funds Contribution	(C) Required State Contribution	Percent of State Payroll
		s. 16-158(f) (Increases)	s. 133.2 (ERO)	(A) s. 16-158(e) (2.2 Formula)	Total	Calculations Required by PA 94-0004						
						Formula Amount	Formula Rate	Maximum Amount	Required Amount			
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	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	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	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	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	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	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	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	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	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	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	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	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	872,929,757	0	872,929,757	3.46%

Notes:

- (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)**

CERTIFIED

PROJECTED

Year Ended June 30	Amort. Year	End of Year		Employer Rate (see notes)			Amount of Employer Contribution (see notes)			Assumed Payroll
		Funded Ratio	Unfunded Pension Benefit Obligation	Total	Normal Cost	Amort.	Total	Normal Cost	Amort.	
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:

- 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.
- 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).
- 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.
- 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.
- 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.
- 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 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)**

PROJECTED

Year Ended June 30	Amort. Year	End of Year		Employer Rate (see notes)			Amount of Employer Contribution (see notes)			Assumed Payroll
		Funded Ratio	Unfunded Pension Benefit Obligation	Total	Normal		Total	Normal		
					Cost	Amort.		Cost	Amort.	
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	6,248,940,450	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.
- (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 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**

Year Ended June 30	End of Year Assets Without POB	Total Assumed Payroll	Without POB				State's Debt Service	With POB
			Required Employer (including s. 16-158(e))		Required State and Federal Funds			State and Federal Funds Maximum (Required Amount Minus Debt Service)
			Amount	Rate	Amount	Rate		
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	
2006	30,991,751,000	7,871,835,902	895,205,895	11.37%	849,549,247	10.79%	293,651,160	
2007	35,571,482,266	7,939,262,146	1,116,541,402	14.06%	1,070,493,682	13.48%	293,651,160	
2008	32,718,344,000	8,293,518,065	1,458,367,611	17.58%	1,410,265,206	17.00%	323,241,160	
2009	32,512,829,921	8,817,486,572	1,887,185,432	21.40%	1,836,044,010	20.82%	322,501,410	
2010	32,224,190,408	9,252,805,323	2,538,726,176	27.44%	2,485,059,905	26.86%	321,672,890	
2011	32,741,467,189	9,684,686,327	2,809,314,037	29.01%	2,753,142,856	28.43%	320,696,420	
2012	33,123,603,717	9,995,937,994	2,897,038,683	28.98%	2,839,062,243	28.40%	349,235,975	
2013	33,544,961,209	9,932,764,038	3,190,480,188	32.12%	3,132,870,157	31.54%	347,016,725	
2014	36,662,312,702	10,015,729,165	3,937,316,393	39.31%	3,879,420,199	38.73%	344,738,295	
2015	39,664,558,645	10,416,171,908	3,839,766,435	36.86%	3,779,352,638	36.28%	342,400,685	
2016	41,904,951,716	10,838,000,024	3,919,241,452	36.16%	3,856,381,052	35.58%	340,003,895	
2017	44,715,299,374	11,281,987,796	4,020,159,128	35.63%	3,954,723,599	35.05%	352,224,565	
2018	47,363,668,889	11,738,320,347	4,194,859,818	35.74%	4,126,777,560	35.16%	363,801,653	
2019	50,123,035,220	12,210,758,841	4,340,627,968	35.55%	4,269,805,567	34.97%	374,735,158	
2020	53,027,015,123	12,705,905,897	4,515,169,370	35.54%	4,441,475,116	34.96%	399,198,690	

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)**

Year Ended June 30	End of Year Assets Without POB	Total Assumed Payroll	Without POB				State's Debt Service	With POB	
			Required Employer (including s. 16-158(e))		Required State and Federal Funds			State and Federal Funds Maximum (Required Amount Minus Debt Service)	
			Amount	Rate	Amount	Rate			
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			Maximum does not apply after fiscal year ended June 30, 2033						
2035									
2036									
2037									
2038									
2039									
2040									
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 Ended June 30	Contributions				Benefits and Expenses	Asset Return & Cash Income	Actuarial Value of Assets *	Market Value of Assets	PBO	Funded Ratio based on AVA
	Member	School District	Federal Funds	State						
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 Ended June 30	Contributions				Benefits and Expenses	Asset Return & Cash Income	Actuarial Value of Assets *	Market Value of Assets	PBO	Funded Ratio based on AVA
	Member	School District	Federal Funds	State						
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:

Age	Annual Rates* of					
	Termination		Death**	Disability***	Salary Increase	Merit or Seniority Component
	< 5 years	>= 5 years				
<u>Males</u>						
20	12.0	8.0	.023	.029	10.15%	6.15%
25	7.0	6.0	.029	.029	9.25%	5.25%
30	8.6	3.7	.035	.026	7.45%	3.45%
40	11.1	1.5	.061	.051	6.25%	2.25%
50	12.0	1.4	.122	.094	5.00%	1.00%
55	16.0	4.0	.183	.111	5.00%	1.00%
60	21.0	4.0	.303	.170	5.00%	1.00%
65	21.0	4.0	.531	.510	5.00%	1.00%
70	—	—	—	—	—	—
<u>Females</u>						
20	18.0	10.0	.011	.045	10.15%	6.15%
25	7.8	9.0	.011	.045	9.25%	5.25%
30	10.6	6.0	.013	.117	7.45%	3.45%
40	10.0	2.2	.031	.162	6.25%	2.25%
50	10.0	1.4	.069	.172	5.00%	1.00%
55	15.0	3.1	.116	.197	5.00%	1.00%
60	14.0	4.0	.219	.144	5.00%	1.00%
65	40.0	4.0	.395	.287	5.00%	1.00%
70	—	—	—	—	—	—

* 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.

** 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.

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)

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:

Annual Service Retirement Rates per 100 Eligible Participants					
Age**	Service*				
	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***						
Service*	Age**					
	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:

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

** Age rounded to nearest year on June 30 prior to retirement

***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.

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:

Annual Service Retirement Rates per 100 Eligible Participants					
Age**	Service*				
	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:

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

** Age rounded to nearest year on June 30 prior to retirement

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.)

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. 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.

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 Group	Full Time/Part Time			Hourly/Substitute		
	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	<u>0.0%</u>	<u>0.0%</u>	<u>0.0%</u>	<u>0.2%</u>	<u>0.1%</u>	<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 Group	Full Time/Part Time			Hourly/Substitute		
	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 Group	Full Time/Part Time			Hourly/Substitute		
	Males	Females	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. 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.*

* 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.

- (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.

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

<u>Time of Death</u>	<u>Dependents</u>	<u>Non-dependents</u>
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 1/2 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***
Annuitant	Lump sum of \$3,000 or 1/6 of last salary*** or \$1,000 and a monthly benefit generally 1/2 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***

* 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

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

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EXHIBIT

ACTIVE MEMBERSHIP

NUMBER AND AVERAGE ANNUAL SALARY AS OF JUNE 30, 2012

Age	Years of Service									Total	Substitutes	Grand Total
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+			
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)

Age	Men		Women		Totals	
	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)

Age	Men		Women		Totals	
	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

TABLE 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)**

Years of Service	Men		Women		Totals	
	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 Service	Men		Women		Totals	
	Number	Compensation	Number	Compensation	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

Age	Males		Females		Totals	
	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

Amounts may not add due to rounding.

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

Age	Males		Females		Totals	
	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

Amounts may not add due to rounding.

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

Age	Males		Females		Totals	
	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			2	24,104
42	4	44,542	4	103,080	8	147,621

Amounts may not add due to rounding.

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

Age	Males		Females		Totals	
	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

Amounts may not add due to rounding.

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

Age	Males		Females		Totals	
	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

Amounts may not add due to rounding.

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

Age	Males		Females		Totals	
	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

Amounts may not add due to rounding.

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

Age	Males		Females		Totals	
	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

Amounts may not add due to rounding.

TABLE 6

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

Age	Males		Females		Totals	
	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

Amounts may not add due to rounding.

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

Age	Males		Females		Totals	
	Number	Annuities	Number	Annuities	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

Amounts may not add due to rounding.