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TEACHERS' RETIREMENT SYSTEM OF THE STATE OF ILLINOIS

June 30, 2012 Actuarial Valuation of Pension Benefits

October 2012

A Xerox Company

buckconsultants

October 31, 2012

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, 2012 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 generally accepted actuarial standards. Under such 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 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 a proposed contribution to the System in the Summary of Principal Results based on such standards. This contribution is based on achieving a funded ratio of 100% within 30 years. The funding method underlying this proposed is the projected unit credit cost method. 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.

On September 21, 2012, the Board approved recommendations resulting from a comprehensive review of the System's experience during the five-year period of July 1, 2006 through June 30, 2011; as a result, the actuarial assumptions used to determine the contribution were changed from last year. The investment return, inflation, salary increases, mortality and other actuarial assumptions have been revised to more closely reflect recent actual emerging experience and future expectations. As shown in the exhibit on page 20, the increase in the accrued liability associated with these revisions in the assumptions was approximately \$4.6 billion.

The member contribution rate is 9.4% of covered payroll, which includes a 0.4% of pay "Career ERO contribution" that became effective July 1, 2005. The member rate for Modified ERO lump sum payments at retirement is currently 11.5%. 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 provides permanent and temporary exemptions from some of these

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payments for retirements occurring on or after July 31, 2006. The School District rate for Modified ERO lump sum payments at retirement is 23.5%, 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 loss on a market basis of \$2,910,863,000 in FY 2012. Per statutory requirement, 20% is recognized in the actuarial value of assets as of June 30, 2012, and recognition of the remaining 80%, or \$2,328,690,000, 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, 2012 valuation the total net deferral is a \$1,428,572,000 loss, resulting in a contribution that is lower 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 2014 funding recommendation do not show the recertified values for FY 2011, but the FY 2014 recommendation recognizes the FY 2011 funding reduction.

The unfunded pension benefit obligation of the System as of June 30, 2012 is \$52,079,548,000, which may be compared with the unfunded obligation of \$43,529,992,000 as of June 30, 2011.

The funded status of the System as of June 30, 2012 is 40.6% based on the market value of assets and 42.1% based on the actuarial value of assets. As of June 30, 2011 the System's funded status was 46.1% based on the market value of assets, and 46.5% based on the actuarial value of assets. The primary factors resulting in this decrease in the funded ratio between 2011 and 2012 were:

- the adverse investment results achieved during the plan year based upon the actuarial value of assets,
- 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, and
- the changes in the assumptions that increased the actuarial liability by approximately \$4.6 billion.

Assuming the full fiscal year 2013 State Contribution is made, we calculate that the employer's contribution rate to the Benefit Trust Reserve of the System for fiscal year 2014 is 35.99% of membership payroll. The recommended total employer contribution for fiscal year 2014 to the Benefit Trust Reserve under the provisions of Article 16 of the Illinois Pension Code is \$3,592,578,000. 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 2014 of \$3,438,578,000. This figure represents an increase of \$735,100,000 or 27.2% from the total State Contribution in fiscal year 2013 of \$2,703,478,000. As required under Public Act 97-0694, on or before November 1, 2012, the Board shall submit to the State Actuary the amount of the required State contribution and on or before January 15,



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2013, the Board shall certify the required State contribution for the next fiscal year. These amounts are predicated on all contributions for the fiscal year 2013 being paid.

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. Ulikinom

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

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TEACHERS' RETIREMENT SYSTEM OF THE STATE OF ILLINOIS

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TEACHERS' RETIREMENT SYSTEM OF THE STATE OF ILLINOIS

ACTUARIAL VALUATION JUNE 30, 2012

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.

	Year Ended June 30					
Item		2012		2011		
 Benefit Trust Reserve Active members reported to the actuary: Number 		165,872		170,190		
 Annual salaries (adjusted for data lag) Average age Average service 	\$	9,511,731,000 41.7 10.4	\$	9,574,334,000 41.7 10.1		
 Number of inactives Retirees and beneficiaries in receipt of benefits: Number Number 	¢	121,781	•	115,295		
 Annual annuities (at June 30) Assets Market value Actuarial value 	\$ \$ \$	4,780,743,000 36,516,825,000 37,945,397,000	\$ \$ \$	4,418,017,000 37,471,267,000 37,769,753,000		
Pension benefit obligation	\$	90,024,945,000	\$	81,299,745,000		
• Unfunded pension benefit obligation (based on actuarial value of assets)	\$	52,079,548,000	\$	43,529,992,000		
 Funded ratio: Market value Actuarial value 		40.6% 42.1%		46.1% 46.5%		

SUMMARY OF PRINCIPAL RESULTS

SUMMARY OF PRINCIPAL RESULTS (Continued)

	Year End	ed June 30		
Item	2012	2011		
Benefit Trust Reserve (continued)	Fiscal Year <u>2014</u>	Fiscal Year 2013		
Based on Statutory Funding Plan (PA 94-0004)				
 Employer cost under: Percentage Rate (includes Federal and School Districts) *** Employer Contribution Less School Districts for 2.2% formula Less Federal Funds Contribution State Contribution 	35.99% \$ 3,592,578,000 (57,896,000) (97,204,000) \$ 3,437,478,000	\$ 2,843,463,000 (57,610,000)		
Based on Generally Accepted Actuarial Standards ****				
 Employer cost under: Normal Cost plus Amortization Less School Districts for 2.2% formula Less Federal Funds Contribution State Contribution Guaranteed Minimum Annuity Reserve Total State Contribution 	$\begin{array}{cccc} \$ & 4,534,537,000 \\ & (57,896,000) \\ \hline & (97,204,000) \\ \$ & 4,379,437,000 \\ \hline & 1,100,000 \\ \$ & 4,380,537,000 \\ \end{array}$			
 Guaranteed Minimum Annuity Reserve* Retirees and disabilitants in receipt of benefits: Number Annual annuities Pension benefit obligation State Contribution 	1,209 \$ 1,109,000 \$ 5,168,000 \$ 1,100,000	1,339 \$ 1,267,000 \$ 5,986,000 \$ 1,200,000		
Total State Contribution:				
Benefit Trust ReserveGuaranteed Minimum Annuity ReserveTotal State Contribution	\$ 3,437,478,000 <u>1,100,000</u> \$ 3,438,578,000	\$ 2,702,278,000 <u>1,200,000</u> \$ 2,703,478,000		

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 2013 and 2014 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 2013, as shown in Schedules XII and XIII:

	Certifie	ed Contributions **
Common School Fund	\$	2,702,278,000
School Districts for 2.2%		57,610,000
Federal Funds		83,575,000
Total	\$	2,843,463,000

** State contribution amounts shown are those contained in the final fiscal year 2013 State budget. Future Federal Funds and School Districts contributions are estimated.

*** As shown in Exhibit XIII, the FY14 rate is comprised of 7.89% normal cost and 28.10% amortization. The normal cost portion is 9.35% for Tier 1 and (3.51%) for Tier 2. The State share of FY14 employer normal cost is \$632,131,000.

**** To be consistent with the board's resolution from March/April 2012.

- 2. The June 30, 2012 actuarial valuation was based on the latest membership data available, which were submitted by the System for (i) active and inactive members as of June 30, 2011, and (ii) retirees and beneficiaries in receipt of benefits as of June 30, 2012. Membership data for active and inactive members as of June 30, 2010, and for retirees and beneficiaries as of June 30, 2011 were used as the basis for the June 30, 2011 actuarial valuation. As part of the valuation procedure, actual salaries and member account balances reported for active and inactive members were increased by 4% to adjust for the one-year lag in the census information. The 4% assumption is intended to reflect the salary increases that have occurred during the lag period for the entire population.
- 3. The State contribution amount of \$3,438,578,000 for FY 2014 is based on Article 16 of the Illinois Pension Code. This amount represents a Benefit Trust Reserve Contribution of \$3,437,478,000 and a Guaranteed Minimum Annuity Reserve Contribution of \$1,100,000 for a total contribution of \$3,438,578,000
- 4. As stated above, at June 30, 2012 and June 30, 2011, we adjusted for the one year lag in reporting of the active and terminated membership by assuming that the population was stationary with regard to age and service and we increased by 4% reported payroll and member account balances. No further adjustments were made to the active 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, 2012 valuation, based on the census information for active members as of June 30, 2011, (after salaries were increased to adjust for the one year lag in the census information for the June 30, 2012 data, as mentioned in paragraph 4 above) are as follows:

Item	Full-tim Regular Pa		Hourly Paid	s, Part-Time, l on a Flexible Work Schedule	Total
Number		133,752		32,120	165,872
Annual salaries Average age		470,000 1.9 years		153,261,000 41.0 years	\$ 9,511,731,000 41.7 years
Average service	1	2.4 years		1.9 years	10.4 years

Active Member Statistics

<u>SECTION II — FINANCING OBJECTIVE</u> <u>AND EMPLOYER'S CONTRIBUTION RATE</u>

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 2012 increased in level annual increments over the prior year's gross appropriation until the required level percentage of payroll was achieved in fiscal year 2012. 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 2014 contribution rate payable to the Benefit Trust Reserve by all employers is equal to 35.99% 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.

On the basis of the funding policy described above, a projection of the contribution rates which are payable by the employer to the Benefit Trust Reserve indicates that the required rate is calculated to be at a level percentage in fiscal year 2013 and going forward subject to adjustments for the state maximum.

Schedule IA of the report shows the required contributions to the Benefit Trust Reserve and the Guaranteed Minimum Annuity Reserve for fiscal year 2014. Schedule IB shows the development of the 35.99% required employer contribution rate for the Benefit Trust Reserve for fiscal year 2014.

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	State Rate (After State Maximum and With POBs) from Schedule XII
2014	39.44%	35.99%	35.41%
2015	39.14%	35.83%	35.25%
2016	38.99%	35.82%	35.24%
2017	39.29%	36.13%	35.55%
2018	39.29%	36.15%	35.57%
2019	39.29%	36.17%	35.59%
2020 2021	39.29% 39.29%	36.10% 36.04%	35.52% 35.46%
2022	39.29%	36.01%	35.43%
2023	39.29%	36.00%	35.42%
2024	39.29%	35.90%	35.32%
2025	39.29%	35.82%	35.24%
2026	39.29%	35.87%	35.29%
2027	39.29%	35.92%	35.34%
2028	39.29%	35.90%	35.32%
2029	39.29%	35.89%	35.31%
2030	39.29%	35.81%	35.23%
2031	39.29%	35.75%	35.17%
2032	39.29%	35.78%	35.20%
2033	39.29%	35.88%	35.30%
2034	Maximum does not	40.74%	40.16%
2035	apply	40.74%	40.16%
2036 - 2045	appiy	40.74%	40.16%

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 provides 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)

								Funded Status at	Funded Status at 5-
		Assets at 1	Fair Market	As	ssets at 5-Year	P	ension Benefit	Fair Market Value	Year Smoothed
Valuation	n Date	Va	alue	Sn	noothed Value		Obligation	Basis	Value Basis
June 30, 2	2012	\$	36,517	\$	37,945	\$	90,025	40.6%	42.1%
June 30, 2	2011	\$	37,471	\$	37,770	\$	81,300	46.1%	46.5%

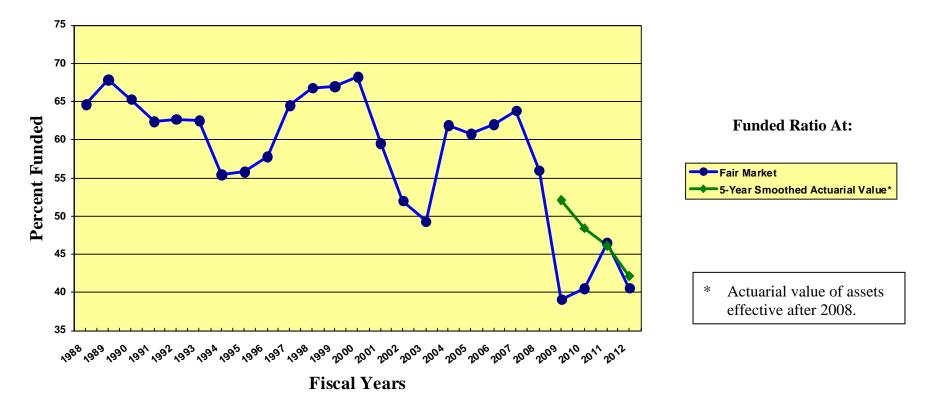
As can be seen from the table, the current funded statuses of the System are 40.6% and 42.1% as measured by the fair market value of assets and 5-year smoothed actuarial value of assets, respectively.

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 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 - 2012



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, 2012, there was a net actuarial loss of \$1,214 million (based on the actuarial assumptions as of June 30, 2011) 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) Gains due to salary increases less than expected	\$ (1,211) mi	llion
(2) Losses due to investment income less than expected	1,806	
(3) Losses due to new entrants, for which no allowance is		
made in the assumptions	14	
(4) Losses due to lower than expected mortality	53	
(5) Losses due to fewer terminations than expected	30	
(6) Losses due to repayments of refunded member contributions	s 30	
(7) Losses due to delayed reporting of retirements (effect on ass	sets) 13	
(8) Losses due to all other causes (rounded)	479	
Total net losses	\$ 1,214 mi	llion

The loss from item 2 is the difference between the expected return of 8.50% 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 \$3.160 billion minus the actual investment return of \$1.354 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 demographic losses plus the salary increase assumption gain and is \$0.715 billion and is 0.79% of the total Pension Benefit Obligation.

The loss from item 6 is due to restoration of the employer-paid portion of the benefit when members repaid previously refunded contributions.

The loss from item 7 is due to 547 retirements that occurred prior to July 1, 2011 and were not reported to the actuary until June 30, 2012 due to backdated retirement claims and TRS processing constraints. The actuarial loss is equal to the value of benefits paid prior to July 1, 2012 to these late reported retirees.

The "other cause" category (item 8) is the balancing item needed to complete the reconciliation and is mainly due to the lag in data reporting, higher than expected retirement rates and actual cost of benefits earned during the year higher than projected.

SECTION V — MEMBERSHIP DATA

The June 30, 2012 actuarial valuation was based on the latest membership data available, which were submitted by the System for (i) active and inactive members as of June 30, 2011, and (ii) annuitants and survivor annuitants in receipt of benefits as of June 30, 2012. As part of the valuation procedure, annualized salaries and member account balances reported for active and terminated members were increased by 4% to adjust for the one year lag in the census information reported for active members.

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:

Data Item	Valuation June 30, 2012	Valuation June 30, 2011	Percentage Change
Active membership:			
• Full-time and regular part-time:			
> Number	133,752	137,711	(2.9)
Annual Compensation	\$ 9,358,470,000	\$ 9,412,873,000	(0.6)
 Average Compensation 	\$ 69,970	\$ 68,352	2.4
• Substitute, part-time, hourly paid (limited schedule)			
> Number	32,120	32,479	(1.1)
 Annual Compensation 	\$ 153,261,000	\$ 161,461,000	(5.1)
 Average Compensation 	\$ 4,772	\$ 4,971	(4.0)
• Total Number	165,872	170,190	(2.5)
Inactive Membership:			
• Eligible for deferred annuities	16,811	16,266	3.4
• Eligible for refunds or single sum benefits only Annuitants (retirees, disabilitants and survivors):	104,970	99,029	6.0
• Number	105,499	101,352	4.1
Annual annuities	\$ 4,780,743,000	\$ 4,418,017,000	8.2
Average annual annuities	\$ 45,316	\$ 43,591	4.0

Comparison of Membership Data

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 4.00%, compared to the expected average increase of 7.11%.

2. The 6.0% 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 o	of Assets a	as of June	30, 2012
----	--------	---------	-------------	------------	----------

\$	36,516,825,339
Ψ	00,010,020,000

2. Determination of Deferred Gain (Loss)

	Market Return on Assets										
	Fiscal Year Ending <u>Actual</u>			Expected		Gain/(Loss)	% Deferred		Deferred <u>Amount</u>		
	2012	\$	224,106,719	\$	3,134,969,397	:	\$ (2,910,862,678)	80%	\$	(2,328,690,142)	
	2011		7,234,539,490		2,616,321,757		4,618,217,733	60%		2,770,930,640	
	2010		3,646,060,161		2,388,884,043		1,257,176,118	40%		502,870,447	
	2009		(8,654,702,712)		3,213,711,375	:	(11,868,414,087) (8,903,882,914)	20%	\$	(2,373,682,817) (1,428,571,872)	
3.	Actuarial Va	lue	of Assets as of Ju	ne 3	0, 2012 (1) - (2)			\$	37,945,397,211	
4.	Actuarial Value of Assets as of June 30, 2011 \$ 37,769,752,972								37,769,752,972		
5.	5. Return on Actuarial Basis $(3) - [(4) + (B) + (C) + (D)]$ \$ 1,354,192,813									1,354,192,813	
6.	5. Expected Actuarial Return on Assets for Fiscal 2012 (G) $x [(4) + .5 x ((B) + (C) + (D))]$ \$ 3,160,340,688								3,160,340,688		
7.	. 2012 Actuarial Basis Asset Gain / (Loss) (5) - (6) \$ (1,806,147,875)										
8.	Actuarial Rate of Return (5) / $[(4) + 0.5 x ((B) + (C) + (D))]$ 3.64%										

(A) Certified Market Value of Assets as of June 30, 2011	\$ 37,471,267,194
(B) Contributions in Fiscal Year 2012	3,477,520,430
(C) Benefit Payments in Fiscal Year 2012	(4,637,057,105)
(D) Administrative Expense in Fiscal Year 2012	(19,011,899)
(E) Actual Return in Fiscal Year 2012	 224,106,719
(F) Market Value of Assets as of June 30, 2012	\$ 36,516,825,339
(G) Valuation Interest Rate as of June 30, 2011	8.50%
(H) Expected Market Return on Assets for Fiscal 2012 (G) x [(A)+.5 x ((B)+(C)+(D))]	\$ 3,134,969,397
(I) 2012 Market Basis Asset Gain / (Loss) (E) - (H)	\$ (2,910,862,678)
(J) Market Rate of Return (E) / $[(A) + 0.5 x ((B) + (C) + (D))]$	0.61%

SECTION VII — HISTORY OF LEGISLATIVE CHANGES

Effective with the June 30, 2012 actuarial valuation, new assumptions regarding rates of interest, separation, retirement, utilization of ERO, salary increase, mortality, optional service purchases, sick leave service credit and severance pay at retirement were adopted. The new member profiles necessary for the 50-year projection required by State funding law were also updated.

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

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

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

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

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

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

SCHEDULE IA

EMPLOYER'S CONTRIBUTION RATES AND AMOUNTS FISCAL YEAR 2014 (Based on June 30, 2012 Actuarial Valuation)

Reserve Fund	Year I	Ended June 30, 2014
Benefit Trust Reserve		
Employer's Cost	\$	3,592,578,000
Less School Districts		(57,896,000)
Less Federal Funds		<u>(97,204,000)</u>
State Contribution	\$	3,437,478,000
Guaranteed Minimum Annuity Reserve		
State Contribution	\$	1,100,000.00
Total State Contribution	\$	3,438,578,000

Notes:

(1) Benefit Trust Reserve

- (a) Employer's cost of \$3,592,578,000 is equivalent to a contribution rate of 35.99% of payroll based on an estimated membership payroll for fiscal year 2014 of \$9.982 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 2014 state contribution rate is 35.41% of the estimated \$9.708 billion state payroll.

(2) Guaranteed Minimum Annuity Reserve

Above State contribution for fiscal year 2014 of \$1,100,000 for the Guaranteed Minimum Annuity Reserve is based on projection of benefit outgo from reserve funds in fiscal year 2014. 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, 2012 valuation data. New entrant profile per actuarial assumptions.
- (b) Employer's contribution to Benefit Trust Reserve in fiscal year 2013 as shown in Schedules XII and XIII:

	Cer	rtified Contribution
State Contribution	\$	2,702,278,000
School Districts for 2.2%		57,610,000
Federal Funds		83,576,000
Total	\$	2,843,464,000

(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 2014 (Based on June 30, 2012 Actuarial Valuation)

	Year Ended	Percentage o	f Payroll
Benefit Trust Reserve	June 30, 2014	June 30, 2014 (State, Feder	
(1) Assumed Payrolls			
> Total Payroll	\$ 9,982,102,000		
 Less Federal Funds Payroll 	(274,508,000)		
> State Payroll	9,707,594,000		
(2) Employer contribution that would have been required without funds			
provided by sec. 7.2(d) of General Obligation Bond Act			
Employer's Cost	3,937,316,000	39.44 %	Total
 Less School Districts under Sec. 16-158(e) 	(57,896,000)	<u>(0.58)</u>	Total
 State and Federal Funds Contribution Less State Debt Service for TRS portion of all funds provided 	3,879,420,000	38.86 %	Total
under sec. 7.2 of General Obligation Bond Act	(344,738,000)	(3.45) %	Total
 Maximum State and Federal Funds Contribution under PA 94-0004 (3) Employer contribution recognizing all system assets, before limiting 	3,534,682,000	35.41 %	Total
State and Federal Funds contribution			
 Employer's Cost Less School Districts under Sec. 16-158(e) 	3,713,154,000 (57,896,000)	37.20 % (0.58)	Total Total
 State and Federal Funds Contribution 	3,655,258,000	36.62 %	Total
 (4) State and Federal Funds Contribution under PA 94-0004 > Lesser of amounts under (2) and (3) (5) Employee contribution up deg PA 04 0004 	3,534,682,000	35.41 %	Total
 (5) Employer contribution under PA 94-0004 State Portion of (4), based on State Payroll Plus Federal Portion of (4), based on Federal Payroll 	3,437,478,000 97,204,000	35.41 % <u>35.41</u>	State Federal
 State and Federal Funds Contribution Plus School Districts under Sec. 16-158(e) 	3,534,682,000 57,896,000	35.41 % <u>0.58</u>	Total Total
 Employer's Cost 	3,592,578,000	35.99 %	Total

Notes:

(1) Assumed Payrolls

The administrative staff of the System estimated Federal Funds payroll for the fiscal year ending June 30, 2014 would be 2.75% of total payroll. Federal Funds payroll was then projected to increase at the same rate as the Total payroll for 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).

<u>SCHEDULE II</u> 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)
6/30/2003	23,124,823	46,933,432	23,808,609	49.3%	7,059,032	337.3%
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%

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			
6/30/2001	2003	1,427,519	68.0%			
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%			

GASB 27 Disclosure Development of Net Pension Obligations 6/30/2012					
Item					
1) Net Pension Obligation at 6/30/11	\$ 13,418,725				
2) Employer Normal Cost	842,532				
3) Amortization of Unfunded PBO***	2,587,413				
4) Annual Required Contribution (ARC) for the period $7/1/11 - 6/30/12$ (2) + (3)	3,429,945				
5) Interest on the NPO at 6/30/11	1,140,592				
6) Adjustment to the ARC	788,853				
7) Pension Cost $(4) + (5) - (6)$	3,781,684				
8) Total Employer Contribution	2,558,581				
9) Percent of Pension Cost Contributed (8) / (7)	67.7%				
10) Change in NPO (7) – (8)	1,223,103				
11) Net Pension Obligation at $6/30/12$ (1) + (10)	\$ 14,641,828				

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: Actuarial Cost Method: Amortization Method (for GASB disclosure): Remaining Amortization Period (for GASB disclosure): Payroll Growth Assumption (for GASB disclosure):	6/30/2012 Projected Unit Credit Level Percent Open 30 years 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: Projected Salary Increases: Includes Inflation at: Cost-of-Living Adjustments:	8.00% 5.00% – 10.15% composite approximates 6.00% 3.25% 3.00%

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

For 2009: Assets are 5-year smoothed value.

*** The amortization of the unfunded PBO is amortized as a level percentage of pay over 30 years based on the salary increase assumption and new entrant profile used in the June 30, 2010 valuation.

^{**} Revised economic and noneconomic assumptions due to experience review.

SCHEDULE III

RECONCILIATION OF UNFUNDED PENSION BENEFIT OBLIGATION

(\$ Thousands)

		YEAR ENDED JUNE 30			
ITEM		2012	2011		
Unfunded pension benefit obligation at beginning of year	\$	43,529,992	\$	39,854,106	
Additions (deductions)					
Employer cost in excess of contributions	\$	2,710,713	\$	1,913,647	
Change in actuarial assumptions and methods		4,624,966		-	
Net additions (deductions)	\$	7,335,679	\$	1,913,647	
Actuarial losses (gains) compared to assumptions					
Salary increases for continuing active members	\$	(1,211,157)	\$	(545,612)	
Asset losses (gains) on actuarial value of assets ¹		1,806,148		1,718,405	
New entrant loss		14,505		21,230	
Mortality other than expected		52,681		52,319	
Terminations other than expected		29,810		50,761	
Repayments of refunded member contributions ²		30,013		30,392	
Delayed reporting of retirements (effect on assets) ³		12,666		11,222	
Other ⁴		479,211		423,522	
Net actuarial losses (gains)	<u>\$</u>	1,213,877	<u>\$</u>	1,762,239	
Unfunded pension benefit obligation at end of year	<u>\$</u>	52,079,548	<u>\$</u>	43,529,992	

¹ Assets are expected to earn 8.5%. This item is the difference between the expected and the actual return on an actuarial basis. For example, in fiscal year 2012, the expected actuarial returns of \$3.160 billion was greater than the \$1.354 billion actual return on assets, resulting in an actuarial loss which increased the unfunded pension benefit obligation by \$1.806 billion.

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

³ 509 retirements that occurred prior to 7/1/2010 were not reported to the actuary until 6/30/2011.
 547 retirements that occurred prior to 7/1/2011 were not reported to the actuary until 6/30/2012.

⁴ Other includes items such as:

- (a) Retroactive benefit payments for individuals who delayed applying for retirement.
- (b) Fewer terminations of vested employees than expected.
- (b) Differences between actual cost of benefits earned during the year and projected cost.
- (c) Retirements with reciprocal service credits.
- (d) Disablements and service retirements other than expected.
- (e) Delayed reporting of retirements (effect on PBO).

SCHEDULE IV

EMPLOYER COST IN EXCESS OF CONTRIBUTIONS (\$ Thousands)

	Year Ended June 30			
ITEM	2012		2011	
Employer normal cost	\$ 842,532	\$	849,716	
Interest on unfunded pension benefit obligation at beginning of year	 4,426,762		3,387,599	
Total employer cost	\$ 5,269,294	\$	4,237,315	
Employer contributions toward normal cost and interest on unfunded pension benefit obligation -State (excluding Minimum Benefit) -School Districts for 2.2% and Salary Increase Cap and Modified ERO -Federal Funds	 2,405,172 91,121 62,288		2,169,518 88,085 66,065	
Total employer credits	\$ 2,558,581	\$	2,323,668	
Employer cost in excess of contributions	\$ 2,710,713	\$	1,913,647	

SCHEDULE V

10 YEAR HISTORY OF UNFUNDED PENSION BENEFIT OBLIGATION

				Percentage	
Year Ended	Pension Benefit	Actuarial Value	Unfunded Pension	Change	
June 30	Obligation	of Assets*	Benefit Obligation	in Unfunded	
2003	\$ 46,933,432,000	\$ 23,124,823,000	\$ 23,808,609,000	15.12	%
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	
	Average	Annual Change		10.36%	

* 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
2003	\$ 46,933,432,000	\$ 23,124,823,000	49.3%
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

* 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	Contr Member	butions Employer	Market Value Income	Benefits and Expenses	End of Year Market Value of Assets
2003	\$ 22,366,285,000	\$ 732,020,000	\$ 1,021,263,000	\$ 1,060,852,000	\$ 2,055,597,000	\$ 23,124,823,000
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	- (915,472,000)	-3,517,890,000	36,516,825,000
				224,107,000	4,657,469,000	

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.

Notes:

SCHEDULE VIII

MEMBERSHIP DATA

ACTIVE AND INACTIVE MEMBERSHIP OF SYSTEM AS OF JUNE 30, 2011 USED IN JUNE 30, 2012 VALUATION

Group	Number	Annual Salaries (Adjusted to Valuation Date)
Active members:		
Reported full-time and regular part-time*	133,752	\$ 9,358,470,156
Reported substitutes and hourly paid	32,120	153,261,300
Total	165,872	\$ 9,511,731,456
Inactives:	121,781	N/A

*Age and service also adjusted for 2012 valuation as explained on page 3.

ANNUITANTS, DISABILITY BENEFIT RECIPIENTS, AND SURVIVOR ANNUITANTS OF THE SYSTEM AS OF JUNE 30, 2012 (Excluding Guaranteed Minimum Annuities)

Annual Annuities at June 30 Class Number Retired on account of service: Regular 58,884 \$ 2,553,869,282 ERI 10,335 532,248,184 ERO 25,649 1,485,541,875 Total 94,868 \$ 4,571,659,341 Disability benefit recipients: Retirement allowance 784 19,785,773 \$ Occupational 4 174,085 Temporary 325 8,876,634 Total 1,113 \$ 28,836,492 Survivor benefit recipients: Children 69 \$ 612,612 Survivor annuitants 9,262 173,698,671 Reversionary annuitants 187 5,936,094 Total 9,518 \$ 180,247,377 105,499 Grand Total \$ 4,780,743,210

SCHEDULE VIII

MEMBERSHIP DATA

(Continued)

DATA RECONCILIATION

	Active Members	Inactive Members
Number as of June 30, 2010 used as proxy		
for June 30, 2011 Valuation	170,190	115,295
New Participants	11,755	
Terminations	(13,874)	13,874
Retirements	(4,193)	(944)
Disabilities	(150)	(1)
Return to Work	3,432	(3,396)
Deceased	(123)	(206)
Refund	(1,070)	(2,448)
Lump Sum	(106)	(141)
Data Corrections	<u>11</u>	(252)
Number as of June 30, 2011 used as proxy		
for June 30, 2012 Valuation *	165,872	121,781

	Retirees & Beneficiaries
Number as of June 30, 2011	101,352
New Retirees & Beneficiaries	6,486
Disabilities	166
Return to Work	(42)
Deceased	(2,410)
Expiration or Transfer	(24)
Suspended	(20)
Data Corrections	<u>(9)</u>
Number as of June 30, 2012	105,499

* The Active and Inactive Member counts shown represent the data one year prior to the Valuation. For example, the Active Membership data used for the June 30, 2012 is the snapshot as of June 30, 2011. Annualized salaries and member account balances reported for active members were increased by 4% to adjust for the one year lag in the census information reported for active members.

SCHEDULE IX

HISTORY OF ACTIVE MEMBERSHIP DATA FOR LAST 10 YEARS

Full-Time and Regular Part-Time									
Census	Number	Percentage	Average	Percentage					
Date	of Active	Change in	Annual	Change in					
June 30	Members	Membership	Membership Salary						
2002	126,738	1.35%	\$ 53,319	3.09%					
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					

Full-Time and Regular Part-Time

Substitutes, Part-Time and Hourly-Paid

Census	Number	Percentage	Average	Percentage
Date	of Active	Change in	Annual	Change in
June 30	Members	Membership	Salary	Salary
2002	27,952	12.81%	\$ 4,488	-0.97%
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)

SCHEDULE X

HISTORY OF ANNUITANT AND SURVIVOR ANNUITANT MEMBERSHIP FOR LAST 10 YEARS

Year Ended		
June 30	Number on Roll	Percentage Change in Membership
2003	73,336	5.56%
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

SCHEDULE XI

BENEFIT STREAM FOR GUARANTEED MINIMUM ANNUITY RESERVE

Benefit Pay	ment Stream		Benefit Pa	ayment Stream
Fiscal Year	Guaranteed Minimum	F	Fiscal Year	Guaranteed Minimum
2013	\$ 894,260		2037	\$ 12,030
2014	774,310		2038	9,360
2015	667,870		2039	7,170
2016	574,190		2040	5,390
2017	491,770		2041	4,080
2018	422,680		2042	3,040
2019	357,810		2043	2,290
2020	301,420		2044	1,650
2021	252,460		2045	1,240
2022	208,870		2046	940
2023	173,810		2047	630
2024	144,640		2048	420
2025	119,340		2049	230
2026	100,960		2050	80
2027	84,830		2051	60
2028	70,460		2052	10
2029	58,090		2053	-
2030	48,150		2054	-
2031 2032 2033	39,590 32,440 26,700		2055 2056 2057	- -
2034 2035 2036	22,120 18,240 14,950		2058 2059 2060	

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 2014 State Contribution shown on the Summary of Principal Results has been adjusted to ensure payment of all required benefit amounts, as required by Statute.

SCHEDULE XII

ITEMIZATION OF EMPLOYER CONTRIBUTION TO BENEFIT TRUST RESERVE

						Combined State and Federal Funds						
			School Dist	rict Contributions		Calculations Required by PA 94-004					(B)	(C)
Year				(A)							Required	Required
Ended	Assumed	Sec. 16-158(f)	Sec. 133.2	Sec. 16-158(e)		Formula	Formula	Maximum	Required	Required	Federal Funds	State
June 30	Payroll(1)	(Pay Increases)	(ERO)	(2.2 Formula)	Total	Amount	Rate	Amount	Amount	Rate	Contribution	Contribution
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	12.26%	37,860,000	902,243,532
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	7.06%	24,070,387	531,827,700
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	9.78%	41,328,022	735,514,500
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	13.11%	47,829,058	1,039,194,988
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	17.08%	55,707,046	1,449,888,800
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	23.38%	75,718,545	2,087,668,469
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	25.12%	75,405,839	2,357,040,597
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	24.91%	84,654,093	2,405,172,175
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	28.05%	83,575,603	2,702,277,829
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	35.41%	97,203,752	3,437,478,152
2015	10,346,104,073	6,003,310	59,156,060	60,007,404	125,166,774	3,759,646,679	36.34%	3,647,463,675	3,647,463,675	35.25%	100,305,251	3,547,158,424
2016	10,734,062,380	5,621,480	61,938,610	62,257,562	129,817,652	3,888,428,244	36.23%	3,783,133,601	3,783,133,601	35.24%	104,036,174	3,679,097,427
2017	11,145,653,003	5,464,850	69,400,460	64,644,787	139,510,097	4,082,200,997	36.63%	3,962,148,090	3,962,148,090	35.55%	108,959,073	3,853,189,017
2018	11,578,296,491	5,620,180	74,459,800	67,154,120	147,234,100	4,248,377,630	36.69%	4,118,043,040	4,118,043,040	35.57%	113,246,184	4,004,796,856
2019	12,033,816,175	5,737,770	76,704,320	69,796,134	152,238,224	4,424,092,215	36.76%	4,283,436,725	4,283,436,725	35.59%	117,794,510	4,165,642,215
2020	12,510,863,775	5,940,660	81,368,060	72,563,010	159,871,730	4,608,956,466	36.84%	4,443,633,626	4,443,633,626	35.52%	122,199,925	4,321,433,701

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 FY 2014 the estimate is 2.75% of total payroll. All payrolls are assumed to increase at the same rate for years subsequent to 2014.

(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 subsequent to 2005 are equal to each group's respective payroll multiplied by the Combined State and Federal Funds Required Rate.

(4) Schedule excludes State ERI contributions of \$1,000,000 for 2004, and \$1,684,000 for 2005 (under Public Act 92-0056, as amended).

(5) The sum of the amounts in columns (A), (B), and (C) equals the Total Amount of Employer Contribution shown on Schedule XIII.

SCHEDULE XII

ITEMIZATION OF EMPLOYER CONTRIBUTION TO BENEFIT TRUST RESERVE

						Combined State and Federal Funds						
			School Dist	rict Contributions		Calculations Required by PA 94-004					(B)	(C)
Year				(A)							Required	Required
Ended	Assumed	Sec. 16-158(f)	Sec. 133.2	Sec. 16-158(e)		Formula	Formula	Maximum	Required	Required	Federal Funds	State
June 30	Payroll(1)	(Pay Increases)	(ERO)	(2.2 Formula)	Total	Amount	Rate	Amount	Amount	Rate	Contribution	Contribution
2021	13,010,512,581	6,224,900	86,805,690	75,460,973	168,491,563	4,804,472,810	36.93%	4,614,043,938	4,614,043,938	35.46%	126,886,208	4,487,157,730
2022	13,534,415,064	6,620,200	97,287,430	78,499,607	182,407,237	5,011,508,511	37.03%	4,795,307,314	4,795,307,314	35.43%	131,870,951	4,663,436,363
2023	14,082,485,325	7,236,430	114,003,090	81,678,415	202,917,935	5,230,340,129	37.14%	4,987,390,503	4,987,390,503	35.42%	137,153,239	4,850,237,264
2024	14,653,025,011	7,862,980	125,853,980	84,987,545	218,704,505	5,460,705,539	37.27%	5,174,841,092	5,174,841,092	35.32%	142,308,130	5,032,532,962
2025	15,240,389,267	8,667,210	141,412,760	88,394,258	238,474,228	5,702,101,712	37.41%	5,371,400,828	5,371,400,828	35.24%	147,713,523	5,223,687,305
2026	15,843,782,202	9,664,650	162,091,750	91,893,937	263,650,337	5,954,888,266	37.59%	5,591,223,743	5,591,223,743	35.29%	153,758,653	5,437,465,090
2027	16,466,415,767	10,752,030	180,132,780	95,505,211	286,390,021	6,219,852,123	37.77%	5,820,003,608	5,820,003,608	35.34%	160,050,099	5,659,953,509
2028	17,099,586,238	11,326,220	173,499,660	99,177,600	284,003,480	6,494,534,839	37.98%	6,039,576,295	6,039,576,295	35.32%	166,088,348	5,873,487,947
2029	17,727,499,461	11,979,270	183,350,640	102,819,497	298,149,407	6,775,287,716	38.22%	6,259,377,587	6,259,377,587	35.31%	172,132,884	6,087,244,703
2030	18,350,924,687	12,911,420	195,413,080	106,435,363	314,759,863	7,063,819,222	38.49%	6,464,910,256	6,464,910,256	35.23%	177,785,032	6,287,125,224
2031	18,954,154,149	14,001,200	213,936,340	109,934,094	337,871,634	7,357,357,864	38.82%	6,665,643,522	6,665,643,522	35.17%	183,305,197	6,482,338,325
2032	19,537,537,868	15,227,420	223,832,620	113,317,720	352,377,760	7,658,504,701	39.20%	6,876,507,877	6,876,507,877	35.20%	189,103,966	6,687,403,911
2033	20,090,450,531	16,126,200	228,830,600	116,524,613	361,481,413	7,964,577,336	39.64%	7,092,635,821	7,092,635,821	35.30%	195,047,485	6,897,588,336
2034	20,606,670,624	16,741,830	228,195,920	119,518,690	364,456,440	8,275,019,942	40.16%		8,275,019,942	40.16%	227,563,048	8,047,456,894
2035	21,094,300,908	17,265,300	232,477,220	122,346,945	372,089,465	8,470,837,618	40.16%		8,470,837,618	40.16%	232,948,034	8,237,889,584
2036	21,553,365,080	17,543,570	224,700,360	125,009,517	367,253,447	8,655,184,000	40.16%		8,655,184,000	40.16%	238,017,560	8,417,166,440
2037	21,990,903,576	18,267,570	233,825,500	127,547,241	379,640,311	8,830,886,317	40.16%		8,830,886,317	40.16%	242,849,374	8,588,036,943
2038	22,409,051,314	18,939,650	229,588,120	129,972,498	378,500,268	8,998,801,888	40.16%		8,998,801,888	40.16%	247,467,052	8,751,334,836
2039	22,796,386,777	19,110,450	209,651,780	132,219,043	360,981,273	9,154,344,176	40.16%		9,154,344,176	40.16%	251,744,465	8,902,599,711
2040	23,156,849,908	19,047,740	190,673,160	134,309,729	344,030,629	9,299,095,342	40.16%		9,299,095,342	40.16%	255,725,122	9,043,370,220
2041	23,498,136,549	18,594,840	151,022,400	136,289,192	305,906,432	9,436,145,805	40.16%		9,436,145,805	40.16%	259,494,010	9,176,651,795
2042	23,837,451,688	18,122,150	110,752,940	138,257,220	267,132,310	9,572,404,572	40.16%		9,572,404,572	40.16%	263,241,126	9,309,163,446
2043	24,184,480,615	16,764,230	59,055,800	140,269,988	216,090,018	9,711,760,965	40.16%		9,711,760,965	40.16%	267,073,427	9,444,687,538
2044	24,555,024,506	13,921,840	3,865,300	142,419,142	160,206,282	9,860,560,262	40.16%		9,860,560,262	40.16%	271,165,407	9,589,394,855
2045	24,970,779,146	11,562,070	740,860	144,830,519	157,133,449	10,027,514,837	40.16%		10,027,514,837	40.16%	275,756,658	9,751,758,179
2046	25,410,070,486	9,722,490	174,240	147,378,409	157,275,139	1,162,809,778	4.58%		1,162,809,778	4.58%	31,977,269	1,130,832,509

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 FY 2014 the estimate is 2.75% of total payroll. All payrolls are assumed to increase at the same rate for years subsequent to 2014.

(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 subsequent to 2005 are equal to each group's respective payroll multiplied by the Combined State and Federal Funds Required Rate.

(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.

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SCHEDULE XIII

FISCAL YEAR 2014 EMPLOYER CONTRIBUTION BASED ON 50-YEAR PROJECTION FOR BENEFIT TRUST RESERVE (50 YEAR AMORTIZATION WITH 15 YEAR PHASE-IN BEGINNING FISCAL YEAR 1996)

Year			End of Year	Employ	er Rate (see r	notes)	Amount of Emp	oloyer Contribution (se	ee notes)	
Ended	Amort.	Funded	Unfunded Pension		Normal			Normal		Assumed
June 30	Year	Ratio	Benefit Obligation	Total	Cost	Amort.	Total	Cost	Amort.	Payroll
1995	0	52.7%	\$11,338,701,000	6.03%	8.12%	-2.09%	\$279,364,800	\$376,122,700	(\$96,757,900)	\$4,633,650,000
1996	1	52.9%	12,312,083,000	7.02%	8.23%	-1.21%	341,276,242	400,134,055	(58,857,812)	4,863,544,432
1997	2	64.5%	9,558,477,000	8.06%	8.21%	-0.15%	395,268,984	402,771,457	(7,502,473)	4,903,151,093
1998	3	66.8%	9,942,354,000	9.09%	8.38%	0.70%	478,439,267	441,403,004	37,036,263	5,264,732,966
1999	4	67.0%	10,967,804,000	10.83%	7.84%	2.99%	602,242,600	435,910,961	166,331,639	5,558,349,721
2000	5	68.2%	11,404,991,000	11.66%	8.15%	3.51%	686,383,626	479,928,856	206,454,770	5,887,080,405
2001	6	59.5%	15,851,051,000	12.37%	8.65%	3.71%	775,732,339	542,794,806	232,937,533	6,271,637,672
2002	7	52.0%	20,681,389,000	13.09%	8.84%	4.25%	872,283,104	588,971,933	283,311,171	6,666,272,399
2003	8	49.3%	23,808,609,000	13.55%	8.83%	4.71%	963,858,291	628,536,783	335,321,507	7,115,762,553
2004	9	61.9%	19,402,722,000	14.96%	8.15%	6.82%	1,099,263,906	598,462,925	500,800,982	7,345,674,585
2005	10	60.8%	21,989,811,000	12.84%	8.32%	4.52%	984,584,606	637,971,250	346,613,356	7,669,150,690
2006	11	62.0%	22,412,024,000	7.64%	8.20%	-0.56%	601,554,735	645,705,698	(44,150,963)	7,871,835,902
2007	12	63.8%	23,739,077,000	10.36%	8.20%	2.17%	822,890,242	650,835,074	172,055,168	7,939,262,146
2008	13	56.0%	30,201,644,000	13.69%	8.22%	5.47%	1,135,126,451	681,651,502	453,474,949	8,293,518,065
2009	14	52.1%	35,001,154,488	17.66%	9.27%	8.39%	1,556,737,268	817,320,366	739,416,902	8,817,486,572
2010	15	48.4%	39,854,106,229	23.96%	9.15%	14.81%	2,217,053,286	846,936,893	1,370,116,393	9,252,805,323
2011	16	46.5%	43,529,992,029	25.70%	8.77%	16.92%	2,488,617,617	849,716,122	1,638,901,495	9,684,686,327
2012	17	41.5%	53,524,765,789	25.49%	8.43%	17.06%	2,547,802,708	842,532,254	1,705,270,454	9,995,937,994
2013	18	40.2%	56,083,876,373	28.63%	8.23%	20.40%	2,843,463,463	817,433,027	2,026,030,436	9,932,764,038
2014	19	41.4%	57,292,096,672	35.99%	7.89%	28.10%	3,592,578,098	787,230,469	2,805,347,629	9,982,102,443
2015	20	42.3%	58,786,113,274	35.83%	7.59%	28.24%	3,707,471,079	785,523,602	2,921,947,477	10,346,104,073
2016	21	42.2%	61,220,257,880	35.82%	7.31%	28.51%	3,845,391,163	784,694,890	3,060,696,273	10,734,062,380
2017	22	42.8%	63,026,079,988	36.13%	7.03%	29.10%	4,026,792,877	783,900,314	3,242,892,563	11,145,653,003
2018	23	43.3%	64,800,404,019	36.15%	6.76%	29.39%	4,185,197,160	782,405,238	3,402,791,922	11,578,296,491
2019	24	43.9%	66,540,439,035	36.17%	6.48%	29.70%	4,353,232,859	779,449,586	3,573,783,273	12,033,816,175
2020	25	44.5%	68,249,641,117	36.10%	6.20%	29.90%	4,516,196,636	775,213,406	3,740,983,230	12,510,863,775

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 2038 & 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.

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SCHEDULE XIII

FISCAL YEAR 2014 EMPLOYER CONTRIBUTION BASED ON 50-YEAR PROJECTION FOR BENEFIT TRUST RESERVE (50 YEAR AMORTIZATION WITH 15 YEAR PHASE-IN BEGINNING FISCAL YEAR 1996)

(Continued)

V	1		End of Verse	E	,	unueu)	A		(
Year		F 1. 1	End of Year	Employe	er Rate (see 1	notes)	Amount of I	Employer Contribution ((see notes)	A
Ended	Amort.	Funded	Unfunded Pension	T (1	Normal		T 1	Normal		Assumed
June 30	Year	Ratio	Benefit Obligation	Total	Cost	Amort.	Total	Cost	Amort.	Payroll
2021	26	45.2%	69,904,628,686	36.04%	5.92%	30.13%	4,689,504,911	769,654,593	3,919,850,318	13,010,512,581
2022	27	45.8%	71,493,034,925	36.01%	5.63%	30.38%		762,537,559	4,111,269,362	13,534,415,064
2023	28	46.6%	72,981,616,117	36.00%	5.35%	30.65%	- ,	753,329,187	4,315,739,731	14,082,485,325
2024	29	47.4%	74,367,253,460	35.90%	5.05%	30.84%	5,259,828,637	740,496,762	4,519,331,875	14,653,025,011
2025	30	48.2%	75,638,649,130	35.82%	4.74%	31.08%	5,459,795,086	723,135,303	4,736,659,783	15,240,389,267
2026	31	49.2%	76,755,195,133	35.87%	4.42%	31.45%	5,683,117,680	699,583,688	4,983,533,992	15,843,782,202
2027	32	50.2%	77,690,294,556	35.92%	4.06%	31.86%	5,915,508,819	668,736,553	5,246,772,266	16,466,415,767
2028	33	51.2%	78,437,918,892	35.90%	3.68%	32.22%	6,138,753,895	629,279,484	5,509,474,411	17,099,586,238
2029	34	52.4%	79,001,431,476	35.89%	3.30%	32.59%	6,362,197,084	584,865,636	5,777,331,448	17,727,499,461
2030	35	53.5%	79,344,249,555	35.81%	2.92%	32.88%	6,571,345,619	536,763,006	6,034,582,613	18,350,924,687
2031	36	54.8%	79,459,936,173	35.75%	2.55%	33.19%	6,775,577,616	483,892,270	6,291,685,346	18,954,154,149
2032	37	56.1%	79,295,145,580	35.78%	2.18%	33.60%	6,989,825,597	425,776,942	6,564,048,655	19,537,537,868
2033	38	57.5%	78,822,693,727	35.88%	1.79%	34.09%	7,209,160,434	360,245,977	6,848,914,457	20,090,450,531
2034	39	59.5%	77,021,872,914	40.74%	1.40%	39.34%	8,394,538,632	287,992,082	8,106,546,550	20,606,670,624
2035	40	61.6%	74,802,947,580	40.74%	1.00%	39.74%	8,593,184,563	210,638,148	8,382,546,415	21,094,300,908
2036	41	63.7%	72,134,610,811	40.74%	0.60%	40.14%	8,780,193,517	129,537,029	8,650,656,488	21,553,365,080
2037	42	66.0%	68,991,292,307	40.74%	0.21%	40.53%	8,958,433,558	46,448,752	8,911,984,806	21,990,903,576
2038	43	68.4%	65,335,007,612	40.74%	-0.19%	40.93%	9,128,774,386	(42,165,476)	9,170,939,862	22,409,051,314
2039	44	71.0%	61,141,113,082	40.74%	-0.60%	41.34%	9,286,563,219	(136,475,475)	9,423,038,694	22,796,386,777
2040	45	73.6%	56,392,625,689	40.74%	-1.00%	41.74%	9,433,405,071	(231,706,047)	9,665,111,118	23,156,849,908
2041	46	76.4%	51,026,799,229	40.74%	-1.37%	42.11%	9,572,434,997	(322,653,389)	9,895,088,386	23,498,136,549
2042	47	79.5%	44,998,939,672	40.74%	-1.69%	42.43%	9,710,661,792	(402,937,295)	10,113,599,087	23,837,451,688
2043	48	82.7%	38,281,755,912	40.74%	-1.93%	42.67%	9,852,030,953	(466,875,516)	10,318,906,469	24,184,480,615
2044	49	86.2%	30,823,993,141	40.74%	-2.06%	42.80%	10,002,979,404	(505,763,542)	10,508,742,946	24,555,024,506
2045	50	90.0%	22,496,021,740	40.74%	-2.09%	42.83%	10,172,345,356	(521,856,904)	10,694,202,260	24,970,779,146
2046	51	90.0%	22,654,493,993	5.16%	-2.06%	7.22%	1,310,188,187	(524,631,196)	1,834,819,383	25,410,070,486

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 2038 & 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.

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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, 2012 VALUATION

				Witho	ut POB			With POB
			Required Emplo	oyer	Required State	and		State and Federal
Year	End of	Total	(including s. 16-158(e))		Federal Fund	ds	State's	Funds Maximum
Ended	Year Assets	Assumed					Debt	(Required Amount
June 30	Without POB	Payroll	Amount	Rate	Amount	Rate	Service	Minus Debt Service)
2003	23,124,823,000	7,115,762,553	963,858,291	13.55%	951,049,918	13.37%		
2004	26,501,701,000	7,345,674,585	1,099,263,906	14.96%	1,056,658,994	14.38%		
2005	28,812,420,000	7,669,150,690	1,278,235,766	16.67%	1,233,754,692	16.09%	293,651,160	940,103,532
2006	30,991,751,000	7,871,835,902	895,205,895	11.37%	849,549,247	10.79%	293,651,160	555,898,087
2007	35,571,482,266	7,939,262,146	1,116,541,402	14.06%	1,070,493,682	13.48%	293,651,160	776,842,522
2008	32,718,344,000	8,293,518,065	1,458,367,611	17.58%	1,410,265,206	17.00%	323,241,160	1,087,024,046
2009	32,512,829,921	8,817,486,572	1,887,185,432	21.40%	1,836,044,010	20.82%	322,501,410	1,513,542,600
2010	32,224,190,408	9,252,805,323	2,538,726,176	27.44%	2,485,059,905	26.86%	321,672,890	2,163,387,015
2011	32,741,467,189	9,684,686,327	2,538,726,176	26.21%	2,753,142,856	28.43%	320,696,420	2,432,446,436
2012	33,123,603,717	9,995,937,994	2,897,038,683	28.98%	2,839,062,243	28.40%	349,235,975	2,489,826,268
2013	33,820,100,026	9,932,764,038	3,190,480,188	32.12%	3,132,870,157	31.54%	347,016,725	2,785,853,432
2014	36,547,336,230	9,982,102,443	3,937,316,393	39.44%	3,879,420,199	38.86%	344,738,295	3,534,681,904
2015	39,087,705,658	10,346,104,073	4,049,871,764	39.14%	3,989,864,360	38.56%	342,400,685	3,647,463,675
2016	40,877,802,953	10,734,062,380	4,185,395,058	38.99%	4,123,137,496	38.41%	340,003,895	3,783,133,601
2017	43,298,342,796	11,145,653,003	4,379,017,442	39.29%	4,314,372,655	38.71%	352,224,565	3,962,148,090
2018	45,836,509,228	11,578,296,491	4,548,998,813	39.29%	4,481,844,693	38.71%	363,801,653	4,118,043,040
2019	48,500,568,396	12,033,816,175	4,727,968,016	39.29%	4,658,171,882	38.71%	374,735,158	4,283,436,725
2020	51,300,751,453	12,510,863,775	4,915,395,326	39.29%	4,842,832,316	38.71%	399,198,690	4,443,633,626

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, 2012 VALUATION

(Continued)

				Witho	ut POB			With POB
			Required Emple	oyer	Required State	and		State and Federal
Year	End of	Total	(including s. 16-1	58(e))	Federal Fund	ls	State's	Funds Maximum
Ended	Year Assets	Assumed					Debt	(Required Amount
June 30	Without POB	Payroll	Amount	Rate	Amount	Rate	Service	Minus Debt Service)
2021	54,262,164,301	13,010,512,581	5,111,702,428	39.29%	5,036,241,455	38.71%	422,197,518	4,614,043,938
2022	57,403,787,001	13,534,415,064	5,317,538,561	39.29%	5,239,038,954	38.71%	443,731,640	4,795,307,314
2023	60,759,842,343	14,082,485,325	5,532,869,976	39.29%	5,451,191,561	38.71%	463,801,058	4,987,390,503
2024	64,359,064,606	14,653,025,011	5,757,029,407	39.29%	5,672,041,862	38.71%	497,200,770	5,174,841,092
2025	68,210,719,545	15,240,389,267	5,987,799,046	39.29%	5,899,404,788	38.71%	528,003,960	5,371,400,828
2026	72,333,562,785	15,843,782,202	6,224,866,195	39.29%	6,132,972,258	38.71%	541,748,515	5,591,223,743
2027	76,741,972,154	16,466,415,767	6,469,492,799	39.29%	6,373,987,588	38.71%	553,983,980	5,820,003,608
2028	81,441,291,411	17,099,586,238	6,718,259,250	39.29%	6,619,081,650	38.71%	579,505,355	6,039,576,295
2029	86,403,679,173	17,727,499,461	6,964,960,179	39.29%	6,862,140,682	38.71%	602,763,095	6,259,377,587
2030	91,657,507,227	18,350,924,687	7,209,897,819	39.29%	7,103,462,456	38.71%	638,552,200	6,464,910,256
2031	97,198,411,984	18,954,154,149	7,446,900,741	39.29%	7,336,966,647	38.71%	671,323,125	6,665,643,522
2032	103,037,288,086	19,537,537,868	7,676,106,467	39.29%	7,562,788,747	38.71%	686,280,870	6,876,507,877
2033	109,163,636,058	20,090,450,531	7,893,340,414	39.29%	7,776,815,801	38.71%	684,179,980	7,092,635,821
2034								-
2035								
2036								
2037								
2038								
2039		Manimum		. often	figeal waar a		20 202	22
2040		Maximum de	oes not apply	<i>i</i> alter	inscal year e	naea J	une $50, 203$	00
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).

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SCHEDULE XV

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

Year		Contrib	utions							Funded
Ended		School	Federal		Benefits and	Asset Return &	Actuarial Value	Market Value		Ratio
June 30	Member	District	Funds	State	Expenses	Cash Income	of Assets *	of Assets	PBO	based on AVA
1995	\$421,726,521		\$16,500,000	\$262,864,800	\$1,108,283,000		\$12,641,865,000	\$12,641,865,000	\$23,980,566,000	52.7%
1996	422,238,847		17,000,000	324,276,242	1,148,919,000	1,573,249,911	13,829,711,000	13,829,711,000	26,141,794,000	52.9%
1997	420,762,625		17,300,000	377,968,984	1,186,203,042	3,933,568,433	17,393,108,000	17,393,108,000	26,951,585,000	64.5%
1998	440,967,595		18,000,000	460,439,267	1,237,762,773	2,891,134,911	19,965,887,000	19,965,887,000	29,908,241,000	66.8%
1999	866,369,000	16,675,000	18,500,000	567,067,600	1,314,929,000	2,118,139,400	22,237,709,000	22,237,709,000	33,205,513,000	67.0%
2000	619,622,000	34,145,066	18,200,000	634,038,560	1,437,474,000	2,375,172,374	24,481,413,000	24,481,413,000	35,886,404,000	68.2%
2001	643,563,000	36,375,498	20,000,000	719,356,841	1,611,050,000	(974,012,339)	23,315,646,000	23,315,646,000	39,166,697,000	59.5%
2002	681,151,770	38,664,380	23,000,000	810,618,724	1,809,763,000	(693,032,874)	22,366,285,000	22,366,285,000	43,047,674,000	52.0%
2003	732,020,451	12,808,373	25,000,000	926,049,918	2,051,953,000	1,114,612,258	23,124,823,000	23,124,823,000	46,933,432,000	49.3%
2004	768,661,300	42,604,912	29,400,000	1,027,258,994	2,320,690,844	8,872,671,638	31,544,729,000	31,544,729,000	50,947,451,000	61.9%
2005	761,790,009	44,481,074	37,860,000	902,243,532	2,604,081,011	3,398,195,396	34,085,218,000	34,085,218,000	56,075,029,000	60.8%
2006	799,034,336	60,631,429	24,070,387	531,827,700	2,948,023,574	4,032,130,722	36,584,889,000	36,584,889,000	58,996,913,000	62.0%
2007	826,249,007	225,741,253	41,328,022	735,514,500	3,184,574,659	6,680,170,878	41,909,318,000	41,909,318,000	65,648,395,000	63.8%
2008	865,400,168	131,239,475	47,829,058	1,039,194,988	3,498,960,895	(2,063,297,794)	38,430,723,000	38,430,723,000	68,632,367,000	56.0%
2009	876,182,122	148,460,852	55,707,046	1,449,888,800	3,723,108,308	(8,706,541,270)	38,026,043,512	28,531,312,242	73,027,198,000	52.1%
2010	899,401,028	145,878,411	75,718,545	2,028,952,648	4,003,538,821	3,646,060,161	37,439,091,771	31,323,784,214	77,293,198,000	48.4%
2011	909,577,109	147,747,541	75,405,839	2,101,475,242	4,321,262,241	7,234,539,490	37,769,752,971	37,471,267,194	81,299,745,000	46.5%
2012	917,661,328	147,745,130	84,654,093	2,405,172,175	4,656,369,004	224,106,719	37,945,397,211	36,594,237,635	91,470,163,000	41.5%
								36,516,825,339	90,024,945,000	42.1%
2013	996,066,462	133,102,941	83,575,603	2,702,277,829	5,223,089,034	2,869,023,379	37,725,577,809	38,155,194,815	93,809,454,182	40.2%
2014	1,004,368,089	124,446,854	97,203,752	3,437,478,152	5,499,006,495	3,012,802,216	40,495,776,610	40,332,487,382	97,787,873,282	41.4%
2015	1,032,822,287	125,166,774	100,305,251	3,547,158,424	5,781,261,721	3,181,373,647	43,042,812,284	42,538,052,044	101,828,925,558	42.3%
2016	1,063,631,405	129,817,652	104,036,174	3,679,097,427	6,075,555,157	3,352,892,280	44,714,559,529	44,791,971,825	105,934,817,409	42.2%
2017	1,098,530,955	139,510,097	108,959,073	3,853,189,017	6,369,417,930	3,530,395,611	47,075,726,351	47,153,138,648	110,101,806,339	42.8%
2018	1,146,393,293	147,234,100	113,246,184	4,004,796,857	6,665,569,195	3,715,902,158	49,537,729,749	49,615,142,045	114,338,133,768	43.3%
2019	1,195,422,339	152,238,224	117,794,510	4,165,642,215	6,970,122,416	3,909,457,375	52,108,161,995	52,185,574,291	118,648,601,030	43.9%
2020	1,239,402,624	159,871,730	122,199,925	4,321,433,701	7,280,435,915	4,111,151,842	54,781,785,902	54,859,198,198	123,031,427,019	44.5%

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		Contribu	utions							Funded
Ended		School	Federal		Benefits and	Asset Return &	Actuarial Value	Market Value		Ratio
June 30	Member	District	Funds	State	Expenses	Cash Income	of Assets *	of Assets	PBO	based on AVA
2021	1,288,923,585	168,491,563	126,886,208	4,487,157,730	7,592,355,900	4,321,707,000	57,582,596,088	57,660,008,384	127,487,224,774	45.2%
2022	1,337,121,129	182,407,237	131,870,951	4,663,436,363	7,911,788,900	4,542,729,558	60,528,372,425	60,605,784,721	132,021,407,350	45.8%
2023	1,386,844,834	202,917,935	137,153,239	4,850,237,264	8,229,653,962	4,776,169,766	63,652,041,502	63,729,453,798	136,633,657,619	46.6%
2024	1,453,247,451	218,704,505	142,308,130	5,032,532,962	8,557,037,206	5,023,753,554	66,965,550,896	67,042,963,193	141,332,804,356	47.4%
2025	1,510,662,243	238,474,228	147,713,523	5,223,687,305	8,895,724,172	5,286,236,597	70,476,600,620	70,554,012,917	146,115,249,750	48.2%
2026	1,569,982,967	263,650,337	153,758,653	5,437,465,090	9,249,311,643	5,565,149,866	74,217,295,890	74,294,708,187	150,972,491,023	49.2%
2027	1,634,188,866	286,390,021	160,050,099	5,659,953,509	9,619,831,527	5,862,213,710	78,200,260,568	78,277,672,865	155,890,555,124	50.2%
2028	1,724,530,848	284,003,480	166,088,348	5,873,487,947	10,012,268,396	6,177,454,535	82,413,557,330	82,490,969,626	160,851,476,222	51.2%
2029	1,769,042,850	298,149,407	172,132,884	6,087,244,703	10,422,520,969	6,509,246,541	86,826,852,746	86,904,265,043	165,828,284,222	52.4%
2030	1,829,462,212	314,759,863	177,785,032	6,287,125,224	10,842,363,646	6,856,818,967	91,450,440,399	91,527,852,695	170,794,689,954	53.5%
2031	1,885,268,282	337,871,634	183,305,197	6,482,338,325	11,282,891,008	7,220,270,929	96,276,603,759	96,354,016,055	175,736,539,932	54.8%
2032	1,959,400,415	352,377,760	189,103,966	6,687,403,911	11,737,063,899	7,600,177,187	101,328,003,098	101,405,415,394	180,623,148,678	56.1%
2033	2,040,754,858	361,481,413	195,047,485	6,897,588,336	12,214,278,106	7,997,464,007	106,606,061,091	106,683,473,388	185,428,754,818	57.5%
2034	2,099,843,101	364,456,440	227,563,048	8,047,456,895	12,704,351,021	8,449,883,626	113,090,913,180	113,168,325,476	190,112,786,094	59.5%
2035	2,150,922,372	372,089,465	232,948,034	8,237,889,584	13,207,249,057	8,958,737,070	119,836,250,647	119,913,662,944	194,639,198,227	61.6%
2036	2,207,212,055	367,253,447	238,017,560	8,417,166,440	13,715,326,700	9,487,472,964	126,838,046,414	126,915,458,710	198,972,657,225	63.7%
2037	2,232,736,529	379,640,311	242,849,374	8,588,036,943	14,224,616,174	10,035,789,592	134,092,482,989	134,169,895,285	203,083,775,296	66.0%
2038	2,290,828,910	378,500,268	247,467,052	8,751,334,836	14,750,952,818	10,604,085,769	141,613,747,006	141,691,159,302	206,948,754,618	68.4%
2039	2,341,994,253	360,981,273	251,744,465	8,902,599,711	15,279,156,926	11,192,226,271	149,384,136,053	149,461,548,349	210,525,249,135	71.0%
2040	2,372,465,225	344,030,629	255,725,122	9,043,370,220	15,813,777,045	11,798,803,450	157,384,753,654	157,462,165,951	213,777,379,343	73.6%
2041	2,407,957,832	305,906,432	259,494,010	9,176,651,795	16,320,257,798	12,423,970,383	165,638,476,308	165,715,888,605	216,665,275,537	76.4%
2042	2,422,963,065	267,132,310	263,241,126	9,309,163,446	16,781,748,993	13,070,308,143	174,189,535,405	174,266,947,702	219,188,475,077	79.5%
2043	2,422,034,196	216,090,018	267,073,427	9,444,687,538	17,189,006,645	13,741,597,974	183,092,011,914	183,169,424,210	221,373,767,826	82.7%
2044	2,395,964,379	160,206,282	271,165,407	9,589,394,855	17,509,478,623	14,443,651,045	192,442,915,259	192,520,327,555	223,266,908,400	86.2%
2045	2,409,415,569	157,133,449	275,756,658	9,751,758,179	17,761,518,492	15,188,735,035	202,464,195,656	202,541,607,953	224,960,217,396	90.0%
2046	2,452,020,375	157,275,139	31,977,269	1,130,832,509	17,974,879,689	15,629,024,677	203,890,445,935	203,967,858,232	226,544,939,928	90.0%

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

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

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

SECTION IX

STATEMENT OF ACTUARIAL ASSUMPTIONS AND METHODS

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

ASSUMPTIONS

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

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

			Annual Rate	es* of	
	Termina	ation			Salary
Age	Non-vested	Vested	Death**	Disability***	Increase
<u>Males</u>					
20 25 30 40 50 55 60 65 70	$12.0 \\ 7.0 \\ 8.6 \\ 11.1 \\ 12.0 \\ 16.0 \\ 21.0 \\ 21.0 \\ 21.0 \\ $	$\begin{array}{c} 8.0 \\ 6.0 \\ 3.7 \\ 1.5 \\ 1.4 \\ 4.0 \\ 4.0 \\ 4.0 \end{array}$.023 .029 .035 .061 .122 .183 .303 .531	.029 .029 .026 .051 .094 .111 .170 .510	$\begin{array}{c} 10.15\% \\ 9.25\% \\ 7.45\% \\ 6.25\% \\ 5.00\% \\ 5.00\% \\ 5.00\% \\ 5.00\% \end{array}$
Females 20 25 30 40 50 55 60 65 70	$18.0 \\ 7.8 \\ 10.6 \\ 10.0 \\ 10.0 \\ 15.0 \\ 14.0 \\ 40.0 \\$	$10.0 \\ 9.0 \\ 6.0 \\ 2.2 \\ 1.4 \\ 3.1 \\ 4.0 \\$.011 .011 .013 .031 .069 .116 .219 .395	.045 .045 .117 .162 .172 .197 .144 .287 	10.15% 9.25% 7.45% 6.25% 5.00% 5.00% 5.00% 5.00%

- * Rates of separation are rates per 100 participants. For example, 7% of all 25 year-old actively employed nonvested 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 2012 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:

An	nual Service R	Retirement Rat	es per 100 Eli	gible Participa	ints
			Service*	_	
Age**	5-18	19-30	31	32-33	34+
54	-	6	12	38	40
55	-	10	20	38	40
56	-	7	16	38	32
57	-	7	16	38	32
58	-	7	13	38	32
59	-	25	34	45	31
60	14	27	45	45	31
61	14	24	30	45	31
62	14	26	36	45	31
63	14	26	36	45	31
64	20	33	36	45	31
65	23	33	45	45	31
66	23	33	45	45	31
67	23	33	45	45	31
68	27	33	45	45	31
69	27	33	45	45	31
70	100	100	100	100	100

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

Notes:

* 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:

An	nual Service R	Retirement Rat	es per 100 Eli	gible Participa	ants				
		Service*							
Age**	9-18	19-30	31	32-33	34+				
61 and									
younger	-	-	-	-	-				
62	13	15	20	25	25				
63	8	10	15	20	20				
64	8	10	15	20	20				
65	8	10	15	20	20				
66	20	10	15	20	20				
67	20	40	70	70	70				
68	20	40	40	40	40				
69	20	40	40	40	40				
70	100	100	100	100	100				

Notes:

- * 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 oneyear 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.)

DATA LAG ADJUSTMENT: The current actuarial valuation was based on the latest membership data available, which were submitted by the System for (i) active and inactive members as of prior valuation date, and (ii) retirees and beneficiaries in receipt of benefits as of the current valuation date. As part of the valuation procedure, actual salaries and member account balances reported for active and inactive members were increased by 4% to adjust for the one-year lag in the census information. The 4% assumption is intended to reflect the salary increases that have occurred during the lag period for the entire population.

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

Age	Ful	l Time/Part Ti	me	Hourly/Substitute				
Group	Males	Females	Total	Males	Females	Total		
20 - 24	5.4%	26.2%	31.6%	8.8%	16.8%	25.6%		
25 - 29	7.7%	24.6%	32.3%	8.4%	14.7%	23.1%		
30 - 34	3.6%	10.3%	13.9%	2.9%	5.7%	8.6%		
35 – 39	1.8%	5.6%	7.4%	2.7%	5.9%	8.6%		
40 - 44	1.4%	3.9%	5.3%	3.7%	8.4%	12.1%		
45 - 49	0.8%	3.3%	4.1%	2.6%	5.5%	8.1%		
50 - 54	0.6%	2.0%	2.6%	1.8%	3.6%	5.4%		
55 – 59	0.6%	1.3%	1.9%	1.6%	2.6%	4.2%		
60 - 64	0.3%	0.4%	0.7%	1.3%	1.6%	2.9%		
65 – 69	0.1%	0.1%	0.2%	0.5%	0.5%	1.0%		
70	<u>0.0%</u>	<u>0.0%</u>	<u>0.0%</u>	<u>0.2%</u>	0.2%	<u>0.4%</u>		
Total	22.3%	77.7%	100.0%	34.5%	65.5%	100.0%		

Distribution of New Entrants is as follows:

Service Credit Earned in Each Future Year:

Age	Ful	l Time/Part Ti	me	Hourly/Substitute			
Group	Males	Females	Total	Males Females		Total	
20 - 24	0.991	0.987	0.988	0.291	0.331	0.330	
25 - 29	0.991	0.990	0.990	0.303	0.277	0.287	
30 - 34	0.987	0.987	0.987	0.344	0.288	0.304	
35 - 39	0.993	0.978	0.982	0.286	0.308	0.303	
40 - 44	0.989	0.979	0.982	0.304	0.314	0.314	
45 - 49	0.996	0.978	0.982	0.318	0.348	0.345	
50 - 54	0.993	0.978	0.982	0.339	0.355	0.353	
55 - 59	0.986	0.967	0.974	0.362	0.358	0.359	
60 - 64	0.967	0.961	0.963	0.345	0.347	0.346	
65 - 69	-	-	-	0.339	0.325	0.330	
70	-	-	-	0.303	0.295	0.297	
Average	0.990	0.986	0.987	0.326	0.328	0.329	

NEW MEMBER PROFILE (continued)

Age	Full Time/Part Time						Hourly/Substitute					
Group		Males	F	emales		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

Projected Annual Rate of Pay at 6/30/2012* (for one year of service credit)

* 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. Significant actuarial assumptions used to determine the PBO as of June 30, 2012 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.

<u>SECTION X — SUMMARY OF</u> <u>BENEFIT AND CONTRIBUTION PROVISIONS</u>

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 who 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, 2012. 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

* 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.

average salary.*

- (ii) 1¹/₂% 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 Incentive	
for State Employees	Some TRS-covered members employed by state agencies were eligible for an early retirement incentive (ERI) during fiscal year 2003. PA 92-566, enacted in June 2002, allowed certain state employees to purchase up to five years of service credit and an equal amount of age enhancement. Retirement must have occurred between August 1, 2002 and December 31, 2002, with deferrals until April 30, 2003, for key employees. Some employees who were not yet eligible to retire could also purchase the age and service enhancements if they terminated state employment.
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 persons who retired under ERO prior to July 1, 2005, or who retired during the "Pipeline ERO" period July 1, 2005 through July 1, 2007 after having properly notified their employer by June 1, 2005 of their intent to retire under ERO during the Pipeline ERO period is 7%, and the employer lump sum ERO contribution rate for such persons is 20%.
	The member lump sum ERO contribution rate for other persons is 11.5%, and the employer lump sum ERO contribution rate for such persons is 23.5%. Such other persons are referred to as "Modified ERO" retirees.

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.

Both the member and employer contributions are waived for Pipeline ERO retirees who are at least age 55 with at least 34 years of service. There is no waiver for Modified ERO retirees.

The ERO provisions will not be applicable until the member contributions have been received; however, the date such contributions are received will not be considered in determining the effective date of retirement. The number of employees of a single employer who may retire under this paragraph in any year may be limited at the option of the employer to a specified percentage of those eligible, not lower than 30% for Pipeline ERO retirees, and not lower than 10% for Modified ERO retirees, with the right to participate to be allocated among those applying on the basis of seniority in the service of the employer.

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.

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

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

Rule of 85 for State Employees

Single Sum Benefit Eligibility

Amount

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 $\frac{1}{2}$ % 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.
TEACHERS' RETIREMENT SYSTEM	

		elect t determ member person member less the retirem	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		other t of all 1 fund b	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 E	Benefit	Types	of Beneficiaries						
	Time of Death		Dependents	Non-dependents					
	While employed		Lump sum up to last salary or \$1,000 and a monthly benefit generally not less than \$400* or \$600 with minor children**	Lump sum up to last salary					
	Inactive within 12 months of last day of credit		Lump sum up to last salary or \$1,000 and a monthly benefit generally not less than \$400* or \$600 with minor children**	Lump sum up to last salary					

Inactive with 20 or more years of service	Lump sum of \$3,000 or 1/6 of last salary*** or \$1,000 and a monthly benefit generally 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 ½ for Tier I and 2/3 for Tier II of annuitant's earned benefit at time of death	Lump sum of \$3,000 or 1/6 of last salary***

- * 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.

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SECTION XI — DETAILED TABULATIONS OF DATA

Description Page No. EXHIBIT Active Membership: Number as of June 30, 2011 and Average Annual Salary Projected to June 30, 2012-----57 TABLE 1 The Number and Annual Salaries of Members in Active Service Distributed By Age as of June 30, 2011 With Salaries Projected to June 30, 2012 (Full Time and Regular Part Time) ------58 2 The Number and Annual Salaries of Members in Active Service Distributed By Years of Credited Service as of June 30, 2011 With Salaries Projected to June 30, 2012 (Full Time and Regular Part Time) ------60 3 The Number and Annual Benefits Payable from the Benefit Trust Reserve of Retired Annuitants as of June 30, 2012 ------62 4 The Number and Annual Benefits Payable from the the Benefit Trust Reserve of Survivor Annuitants as of June 30, 2012 ------64 5 The Number and Annual Benefits Payable from the Benefit Trust Reserve of Disability Benefit Recipients as of June 30, 2012 -----67 6 The Number and Annual Benefits Payable from the Guaranteed Minimum Annuity Reserve of Retired Annuitants as of June 30, 2012 ------69

<u>EXHIBIT</u>

ACTIVE MEMBERSHIP

NUMBER AS OF JUNE 30, 2011 AND AVERAGE ANNUAL SALARY PROJECTED TO JUNE 30, 2012

	Years of Service										Substitutes	Gr	and Total
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total			
Under 25	3,102 \$41,478	1 \$43,721								3,103 \$41,479	4,157 \$4,629	\$	7,260 20,379
25-29	12,847 \$47,858	6,614 \$56,233								19,461 \$50,705	5,620 \$4,893	\$	25,081 40,439
30-34	4,734 \$51,340	13,095 \$60,824	4,598 \$69,347							22,427 \$60,570	2,797 \$4,542	\$	25,224 54,357
35-39	2,299 \$52,486	5,005 \$63,062	9,281 \$72,523	2,460 \$81,217						19,045 \$68,741	3,073 \$4,247		22,118 59,780
40-44	1,854 \$52,613	3,261 \$62,191	4,408 \$73,283	6,489 \$82,797	1,837 \$88,114					17,849 \$74,095	3,835 \$4,864	\$	21,684 61,851
45-49	1,406 \$52,276	2,620 \$62,240	2,673 \$71,399	2,784 \$83,580	3,897 \$90,344	1,505 \$92,996				14,885 \$77,402	3,696 \$4,836	\$	18,581 62,968
50-54	833 \$54,739	2,124 \$62,058	2,626 \$70,970	2,335 \$79,847	2,326 \$87,286	3,312 \$93,708	2,025 \$97,066			15,581 \$80,879	3,130 \$4,934		18,711 68,174
55-59	471 \$58,315	1,250 \$64,713	2,157 \$71,695	2,490 \$80,807	2,336 \$87,281	2,042 \$94,019	3,212 \$100,817	554 \$105,376		14,512 \$85,604	2,799 \$5,273	\$	17,311 72,616
60-64	209 \$62,418	539 \$72,149	920 \$73,514	1,172 \$82,179	1,129 \$89,597	896 \$95,737	598 \$100,802	414 \$105,956	111 \$105,804	5,988 \$86,624	1,912 \$4,854	\$	7,900 66,834
Over 64	31 \$63,820	85 \$79,282	138 \$79,596	183 \$82,748	163 \$88,422	103 \$96,140	78 \$ 97,878	35 \$100,864	86 \$ 109,088	902 \$88,366	1,101 \$ 4,324	\$	2,003 42,170
Total	27,786 \$49,174	34,594 \$60,944	26,801 \$71,843	17,913 \$82,000	11,688 \$88,674	7,858 \$93,916	5,913 \$99,492	1,003 \$105,458	197 \$107,237	133,752 \$69,969	32,120 \$4,772		165,872 \$57,344

THE NUMBER AND ANNUAL SALARIES OF MEMBERS IN ACTIVE SERVICE DISTRIBUTED BY AGE AS OF JUNE 30, 2011 WITH SALARIES PROJECTED TO JUNE 30, 2012 (FULL TIME AND REGULAR PART TIME)

		Men		Women		Totals
Age	Number	Compensation	Number	Compensation	Number	Compensation
21	1	\$ 15,655	7	\$ 213,152	8	\$ 228,807
22	20	781,596	143	5,386,720	163	6,168,316
23	159	6,573,218	837	33,565,064	996	40,138,282
24	370	15,885,974	1,566	66,287,387	1,936	82,173,361
25	530	24,512,540	2,303	103,400,192	2,833	127,912,732
26	742	36,178,593	2,868	136,647,374	3,610	172,825,967
27	830	43,083,903	3,076	153,745,176	3,906	196,829,078
28	966	53,599,139	3,449	178,752,786	4,415	232,351,925
29	1,031	59,468,572	3,665	197,281,678	4,696	256,750,250
30	1,023	62,335,340	3,523	196,927,413	4,546	259,262,753
31	1,121	71,087,278	3,628	207,735,715	4,749	278,822,994
32	1,042	68,991,278	3,405	198,980,388	4,447	267,971,666
33	1,091	75,337,711	3,255	196,819,567	4,346	272,157,278
34	1,158	83,393,632	3,181	196,784,939	4,339	280,178,572
35	1,085	79,913,980	2,873	180,651,776	3,958	260,565,756
36	1,064	81,143,294	2,950	189,993,635	4,014	271,136,929
37	1,049	82,067,817	2,662	174,247,242	3,711	256,315,059
38	1,027	83,160,045	2,637	173,666,715	3,664	256,826,759
39	1,016	83,372,049	2,682	180,955,876	3,698	264,327,925
40	1,079	89,727,154	2,869	195,513,415	3,948	285,240,569
41	1,030	87,470,328	2,823	193,840,385	3,853	281,310,712
42	965	87,460,064	2,622	181,012,787	3,587	268,472,851
43	867	76,130,411	2,414	169,589,050	3,281	245,719,461
44	816	72,719,568	2,364	169,058,632	3,180	241,778,201
45	798	71,677,154	2,218	159,211,110	3,016	230,888,265
46	737	66,715,130	2,148	156,421,316	2,885	223,136,446
47	702	62,774,084	2,269	165,631,755	2,971	228,405,839
48	696	64,102,161	2,235	165,415,960	2,931	229,518,121
49	697	65,136,196	2,385	175,047,884	3,082	240,184,080
50	671	62,970,014	2,336	175,499,339	3,007	238,469,353
51	597	56,134,435	2,329	174,003,719	2,926	230,138,154
52	624	60,145,684	2,362	180,220,977	2,986	240,366,661
53	661	63,504,443	2,612	203,695,867	3,273	267,200,311
54	664	65,867,295	2,725	218,126,713	3,389	283,994,008
55	656	65,974,480	2,578	210,398,735	3,234	276,373,215
56	599	59,608,239	2,488	204,306,057	3,087	263,914,297
57	535	51,777,388	2,330	191,614,447	2,865	243,391,834
58	495	47,965,879	2,219	184,056,886	2,714	232,022,765
59	465	46,332,472	2,147	180,257,159	2,612	226,589,631
60	327	31,713,028	1,639	139,320,367	1,966	171,033,395

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, 2011 WITH SALARIES PROJECTED TO JUNE 30, 2012 (FULL TIME AND REGULAR PART TIME)

		Men		Women		Totals
Age	Number	Compensation	Number	Compensation	Number	Compensation
61	264	\$ 25,385,503	1,159	\$ 96,927,478	1,423	\$ 122,312,981
62	216	21,154,846	912	76,150,542	1,128	97,305,388
63	162	15,568,185	677	57,083,100	839	72,651,285
64	134	12,310,952	498	43,091,014	632	55,401,967
65	75	7,228,464	247	20,982,203	322	28,210,667
66	43	4,560,776	150	12,356,441	193	16,917,217
67	27	2,734,555	88	7,358,263	115	10,092,818
68	34	3,616,468	64	5,605,159	98	9,221,628
69	16	1,367,827	56	4,378,783	72	5,746,610
70	7	732,714	24	2,148,161	31	2,880,875
71	6	706,319	18	1,395,993	24	2,102,312
72	1	71,506	11	1,094,143	12	1,165,649
73	6	895,834	5	513,931	11	1,409,765
74	4	277,314	7	574,636	11	851,950
75	1	163,752	3	242,670	4	406,422
76			4	304,715	4	304,715
77			1	93,838	1	93,838
78			2	135,281	2	135,281
79						
80			1	58,883	1	58,883
81	1	107,329			1	107,329
Total	31,003	\$ 2,463,689,565	102,749	\$ 6,894,780,593	133,752	\$ 9,358,470,157

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

32,120
153,261,300
40.99
1.90

THE NUMBER AND ANNUAL SALARIES OF MEMBERS IN ACTIVE SERVICE DISTRIBUTED BY YEARS OF CREDITED SERVICE AS OF JUNE 30, 2011 WITH SALARIES PROJECTED TO JUNE 30, 2012 (FULL TIME AND REGULAR PART TIME)

Years of		Men		Women		Totals
Service	Number	Compensation	Number	Compensation	Number	Compensation
0	239	\$ 9,432,647	834	\$ 29,644,073	1,073	\$ 39,076,720
1	1,159	54,996,377	3,895	170,519,400	5,054	225,515,778
2	1,395	70,784,050	4,832	227,731,119	6,227	298,515,168
3	1,507	80,813,909	5,844	290,265,412	7,351	371,079,322
4	1,888	108,576,496	6,192	323,487,785	8,080	432,064,281
5	1,645	101,386,582	6,037	329,856,156	7,682	431,242,738
6	1,738	113,215,170	6,037	344,915,939	7,775	458,131,109
7	1,483	101,107,138	5,310	313,802,129	6,793	414,909,267
8	1,369	100,698,675	4,709	288,934,175	6,078	389,632,850
9	1,469	108,823,992	4,797	305,550,432	6,266	414,374,424
10	1,384	107,133,985	4,815	316,216,028	6,199	423,350,012
11	1,405	112,023,747	4,614	311,388,189	6,019	423,411,935
12	1,366	111,508,181	4,210	291,220,987	5,576	402,729,168
13	1,156	98,673,681	3,684	260,136,192	4,840	358,809,873
14	1,030	89,171,973	3,137	227,986,134	4,167	317,158,106
15	945	83,806,789	2,707	202,187,378	3,652	285,994,167
16	893	81,822,227	2,761	213,642,508	3,654	295,464,735
17	1,180	112,468,680	3,220	251,425,187	4,400	363,893,866
18	843	81,151,848	2,532	200,225,210	3,375	281,377,058
19	640	64,040,602	2,192	178,089,558	2,832	242,130,160
20	664	66,606,276	2,196	180,659,157	2,860	247,265,433
21	572	57,710,762	2,066	172,840,574	2,638	230,551,336
22	482	48,901,964	1,674	142,799,090	2,156	191,701,055
23	420	43,009,469	1,624	141,491,086	2,044	184,500,555
24	444	47,260,233	1,546	135,140,268	1,990	182,400,501
25	434	46,234,023	1,471	129,858,429	1,905	176,092,452
26	392	40,806,996	1,476	131,876,198	1,868	172,683,194
27	403	43,352,472	1,179	106,958,897	1,582	150,311,369
28	316	33,910,332	992	90,562,493	1,308	124,472,825
29	265	28,985,804	930	85,446,193	1,195	114,431,998
30	336	37,359,825	957	88,028,206	1,293	125,388,031
31	359	40,444,013	1,088	102,309,117	1,447	142,753,130
32	414	47,015,064	1,090	104,275,465	1,504	151,290,529
33	251	28,954,558	862	83,771,959	1,113	112,726,517
34	139	15,236,249	417	40,903,887	556	56,140,136
35	99	11,800,690	249	24,548,400	348	36,349,090
36	80	9,876,810	171	17,072,378	251	26,949,188
37	53	6,558,617	140	13,354,439	193	19,913,056
38	45	5,543,988	79	7,994,692	124	13,538,680
39	29	3,402,053	58	5,622,513	87	9,024,566

Amounts may not add to the dollar due to rounding.

(Continued) THE NUMBER AND ANNUAL SALARIES OF MEMBERS IN ACTIVE SERVICE DISTRIBUTED BY YEARS OF CREDITED SERVICE AS OF JUNE 30, 2011 WITH SALARIES PROJECTED TO JUNE 30, 2012 (FULL TIME AND REGULAR PART TIME)

Years of		Men		Women		Totals
Service	Number	Compensation	Number	Compensation	Number	Compensation
40	20	\$ 2,454,450	40	\$ 3,831,836	60	\$ 6,286,286
41	14	1,814,249	40	3,930,652	54	5,744,900
42	15	1,717,965	17	1,671,795	32	3,389,761
43	6	790,099	8	699,198	14	1,489,297
44	6	722,052	4	400,129	10	1,122,182
45	2	275,800	5	431,622	7	707,421
46	3	347,355	3	266,120	6	613,475
47	1	111,261	2	167,169	3	278,430
48			4	464,745	4	464,745
49	1	163,752			1	163,752
50						
51	2	310,215			2	310,215
52	1	268,093			1	268,093
53			1	99,273	1	99,273
54						
55						
56						
57	1	107,329	1	80,621	2	187,950
Total	31,003	\$ 2,463,689,565	102,749	\$ 6,894,780,593	133,752	\$ 9,358,470,157

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	32,120
Annual Salaries	153,261,300
Average Age	40.99
Average Service	1.90

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

		Males		Females		Totals
Age	Number	Annuities	Number	Annuities	Number	Annuities
51	1	\$ 66,782			1	\$ 66,782
52		,				. ,
53			1	\$ 66,843	1	66,843
54	11	1,004,185	29	2,002,649	40	3,006,834
55	128	8,834,160	322	17,188,671	450	26,022,830
56	257	17,767,166	579	33,096,635	836	50,863,800
57	358	25,371,951	911	51,741,102	1,269	77,113,052
58	472	31,989,607	1,224	68,725,851	1,696	100,715,458
59	655	43,688,975	1,795	99,230,330	2,450	142,919,304
60	930	59,407,402	3,013	148,570,932	3,943	207,978,335
61	1,192	77,937,322	3,449	171,175,557	4,641	249,112,878
62	1,401	93,660,415	3,648	177,013,316	5,049	270,673,732
63	1,529	100,863,179	3,784	182,258,056	5,313	283,121,235
64	1,719	114,198,701	3,970	191,968,120	5,689	306,166,821
65	2,147	144,263,722	4,361	207,773,765	6,508	352,037,488
66	1,614	105,178,013	2,978	137,972,578	4,592	243,150,590
67	1,529	96,949,392	2,849	131,803,894	4,378	228,753,285
68	1,481	90,432,898	2,727	116,520,313	4,208	206,953,211
69	1,588	95,169,355	2,971	126,339,645	4,559	221,508,999
70	1,271	75,405,796	2,361	101,171,498	3,632	176,577,294
71	1,151	66,809,554	2,030	84,080,073	3,181	150,889,627
72	1,002	57,963,762	1,774	72,158,462	2,776	130,122,224
73	932	53,794,924	1,723	69,039,824	2,655	122,834,748
74	955	53,969,222	1,552	61,277,268	2,507	115,246,490
75	822	46,273,054	1,428	54,177,702	2,250	100,450,755
76	857	44,596,391	1,287	49,802,969	2,144	94,399,359
77	816	45,057,135	1,209	45,083,882	2,025	90,141,017
78	685	36,480,895	1,024	36,623,472	1,709	73,104,368
79	704	35,878,545	1,095	38,638,631	1,799	74,517,176
80	630	31,507,619	956	32,065,783	1,586	63,573,403
81	626	29,265,902	927	30,416,231	1,553	59,682,133
82	554	26,878,317	948	30,304,217	1,502	57,182,535
83	466	21,496,546	886	26,462,640	1,352	47,959,187
84	451	19,665,988	855	24,701,597	1,306	44,367,585
85	381	16,761,393	751	20,846,152	1,132	37,607,545
86	349	15,705,417	617	16,130,974	966	31,836,392
87	281	11,568,534	574	15,127,916	855	26,696,450
88	238	9,457,743	488	12,662,378	726	22,120,121
89	159	6,121,633	515	11,588,175	674	17,709,809
90	120	4,005,345	492	11,347,236	612	15,352,581

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

		Males		Females		Totals
Age	Number	Annuities	Number	Annuities	Number	Annuities
91	102	\$ 3,248,625	422	\$ 9,047,209	524	\$ 12,295,833
92	69	1,988,013	359	7,485,928	428	9,473,941
93	62	1,779,987	269	5,357,994	331	7,137,981
94	29	711,454	232	4,753,583	261	5,465,037
95	28	838,977	163	3,047,346	191	3,886,323
96	16	429,649	123	2,383,655	139	2,813,304
97	14	476,398	108	1,777,985	122	2,254,383
98	19	770,447	100	1,698,130	119	2,468,578
99	6	150,874	64	1,046,537	70	1,197,411
100	4	92,655	38	634,535	42	727,190
101			30	515,325	30	515,325
102	2	82,268	16	273,602	18	355,870
103			9	136,402	9	136,402
104			10	157,625	10	157,625
105			5	87,177	5	87,177
106			2	33,251	2	33,251
107			1	22,526	1	22,526
108			1	28,907	1	28,907
Total	30,813	\$ 1,826,016,287	64,055	\$ 2,745,643,055	94,868	\$ 4,571,659,342

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

		Males		Females		Totals
Age	Number	Annuities	Number	Annuities	Number	Annuities
3	1	\$ 2,400			1	\$ 2,400
4						. ,
5						
6	4	12,945			4	12,945
7	1	33,395			1	33,395
8						
9	1	9,985	1	\$ 5,601	2	15,586
10	2	7,423	1	38,962	3	46,385
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	22,610	1	4,396	4	27,006
16	5	26,033	4	39,998	9	66,031
17	1	4,263	2	20,645	3	24,909
18	4	17,111	3	38,148	7	55,259
19	3	24,392	1	34,218	4	58,609
20	6	40,158	3	47,163	9	87,321
21	3	24,794	1	5,830	4	30,624
22						
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				7 41 6		7 41 6
31		10,400	1	7,416	1	7,416
32	2	13,433	0	01 (10	2	13,433
33			2	21,618	2	21,618
34						
35		11 501	2	22.016	_	25 127
36	2	11,521	3	23,916	5	35,437
37	1	9,121 22,643	4	30,851	5	39,971 40,516
38 39	4	32,643	1	7,873	5	40,516 45,749
	2	17,881 66,860	3 2	27,868	5	
40 41	6		2	18,689	8	85,549 34,013
41 42	3 4	34,913 44,542	4	103,080	3 8	34,913 147,621
42	4	44,542	4	105,080	ð	147,021

Amounts may not add due to rounding.

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

		Males		Females		Totals
Age	Number	Annuities	Number	Annuities	Number	Annuities
43	4	\$ 110,897	2	\$ 34,515	6	\$ 145,413
44	4	59,399	3	66,670	7	126,069
45	1	9,394		,	1	9,394
46	3	27,344	5	49,480	8	76,824
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	10	120,756	12	265,834	22	386,591
52	9	108,486	13	236,986	22	345,472
53	12	169,430	14	248,526	26	417,956
54	22	344,148	23	419,739	45	763,888
55	26	386,762	12	247,845	38	634,606
56	20	255,794	28	603,788	48	859,583
57	16	268,565	27	602,359	43	870,924
58	24	440,684	31	697,810	55	1,138,494
59	41	767,939	58	1,598,404	99	2,366,343
60	45	1,006,999	61	1,615,292	106	2,622,291
61	49	823,409	73	1,796,407	122	2,619,816
62	45	838,550	72	1,999,639	117	2,838,189
63	67	1,286,412	97	2,696,271	164	3,982,683
64	90	1,810,493	129	3,355,285	219	5,165,778
65	69	1,451,481	125	3,202,193	194	4,653,675
66	72	1,333,363	116	3,024,025	188	4,357,388
67	61	1,107,816	118	2,762,557	179	3,870,372
68	87	1,863,270	151	4,005,969	238	5,869,239
69	99	1,882,948	169	4,227,380	268	6,110,328
70	84	1,684,363	168	3,995,629	252	5,679,992
71	83	1,441,348	163	4,157,486	246	5,598,834
72	86	1,556,746	164	3,986,636	250	5,543,383
73	88	1,683,709	178	4,206,063	266	5,889,772
74	80	1,413,973	203	4,967,754	283	6,381,727
75	75	1,190,763	221	5,225,134	296	6,415,897
76	89	1,527,133	196	4,587,253	285	6,114,386
77	86	1,406,498	217	4,684,159	303	6,090,657
78	93	1,671,962	184	3,808,104	277	5,480,066
79	102	1,613,928	221	4,696,462	323	6,310,390
80	109	1,668,872	229	4,737,907	338	6,406,780
81	114	1,777,182	290	5,769,399	404	7,546,581
82	108	1,482,435	234	4,536,885	342	6,019,320

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

		Males		Females		Totals
Age	Number	Annuities	Number	Annuities	Number	Annuities
83	88	\$ 1,166,647	255	\$ 4,909,259	343	\$ 6,075,905
84	103	1,541,350	250	4,737,290	353	6,278,640
85	88	1,124,162	229	4,190,236	317	5,314,398
86	96	1,319,367	216	3,847,726	312	5,167,093
87	86	1,039,070	208	3,644,302	294	4,683,372
88	112	1,392,210	164	2,646,423	276	4,038,634
89	83	919,968	161	2,565,225	244	3,485,193
90	68	718,328	140	2,144,797	208	2,863,125
91	64	610,916	138	2,078,211	202	2,689,127
92	58	482,956	114	1,590,544	172	2,073,500
93	36	335,674	89	1,043,125	125	1,378,799
94	44	419,382	76	938,522	120	1,357,904
95	26	227,858	64	675,642	90	903,500
96	25	159,250	42	525,916	67	685,166
97	18	153,714	48	554,133	66	707,847
98	12	124,390	18	208,689	30	333,079
99	4	58,560	14	174,666	18	233,226
100	5	37,495	9	92,273	14	129,768
101	3	17,401	8	74,808	11	92,209
102	1	7,888	4	39,948	5	47,836
103	1	7,363	3	38,199	4	45,561
104			1	21,059	1	21,059
105			3	34,631	3	34,631
Total	3,184	\$ 49,280,107	6,334	\$ 130,967,269	9,518	\$ 180,247,376

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TABLE 5

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

		Males		Females		Totals
Age	Number	Annuities	Number	Annuities	Number	Annuities
28			1	\$ 19,604	1	\$ 19,604
29				+ -,	_	+ _,,,,,,,,
30			5	89,911	5	89,911
31			5	92,077	5	92,077
32			5	104,591	5	104,591
33			5	98,147	5	98,147
34			4	70,179	4	70,179
35			5	91,900	5	91,900
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	268,818	15	284,961
40	1	48,601	4	95,940	5	144,541
41	1	14,803	7	161,429	8	176,232
42			18	392,596	18	392,596
43	3	87,264	16	344,620	19	431,884
44	2	59,030	21	498,537	23	557,567
45			12	226,984	12	226,984
46	5	120,197	16	355,155	21	475,352
47	3	67,790	10	232,221	13	300,011
48	4	86,123	18	438,789	22	524,912
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	383,246	19	495,856
52	8	233,458	17	360,397	25	593,856
53	2	48,903	33	798,515	35	847,418
54	10	270,139	34	947,694	44	1,217,833
55	9	211,008	35	1,004,502	44	1,215,510
56	12	415,666	38	1,291,103	50	1,706,769
57	4	112,597	35	1,010,837	39	1,123,434
58	10	236,766	45	1,362,583	55	1,599,349
59	10	280,619	55	1,576,541	65	1,857,160
60	9	304,482	45	1,354,373	54	1,658,855
61	10	325,111	40	1,035,831	50	1,360,942
62	9	198,804	39	1,137,568	48	1,336,372
63	5	176,092	30	937,450	35	1,113,542
64	6	138,691	37	1,061,314	43	1,200,005
65	8	279,870	30	876,742	38	1,156,612
66	3	142,965	16	478,906	19	621,871
67	3	67,568	16	312,150	19	379,719

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

	Males			Females	Totals		
Age	Number	Annuities	Number	Annuities	Number	Annuities	
68	7	\$ 198,744	9	\$ 181,829	16	\$ 380,573	
69	7	165,150	16	388,167	23	553,317	
70	3	133,775	15	317,972	18	451,747	
71	1	20,383	7	173,097	8	193,479	
72	2	24,108	9	191,766	11	215,874	
73	1	7,148	5	144,193	6	151,341	
74			13	226,654	13	226,654	
75	1	37,692	4	34,050	5	71,742	
76	3	63,615	10	224,344	13	287,959	
77	4	195,924	12	278,891	16	474,815	
78	2	53,174	9	172,599	11	225,773	
79	1	9,301	5	113,544	6	122,845	
80	1	18,488	7	128,347	8	146,835	
81	2	28,665	5	62,238	7	90,903	
82			2	25,866	2	25,866	
83	1	12,310	7	94,874	8	107,183	
84	2	25,644	1	27,604	3	53,249	
85	2	49,961	1	14,229	3	64,190	
86	1	16,706	3	31,710	4	48,416	
87			6	98,177	6	98,177	
88			2	23,117	2	23,117	
89							
90			5	55,527	5	55,527	
91							
92			1	8,517	1	8,517	
93							
94							
95							
96			2	22,015	2	22,015	
Total	193	\$ 5,376,051	920	\$ 23,460,441	1,113	\$ 28,836,492	

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

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

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

		Females			Totals			
Age	Number	Annuities	Number		Annuities	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