

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

**ACTUARIAL VALUATION  
JUNE 30, 1994**

November 2, 1994

Board of Trustees  
Teachers' Retirement System  
of The State of Illinois  
2815 West Washington Street  
Springfield, Illinois 62794

Ladies and Gentlemen:

We have completed the valuation of the System as of June 30, 1994 and the principal results are set forth in page 1 of this report.

The recommended contributions to the System determined by the current valuation are for the 1996 fiscal year and are based on the provisions of the new pension funding law (Public Act 88-0593), which are first effective July 1, 1995. The recommended contributions to the System for the current 1995 fiscal year were based on last year's valuation and the provisions of the now superseded Senate Bill 95 (Public Act 86-0273).

The new pension funding law (Public Act 88-0593) was approved by the Governor in August of 1994. It amends Section 16-158 of the Illinois Pension Code to require that contributions to the System be sufficient to "meet the cost of maintaining and administering the system on a 90% funded basis in accordance with actuarial recommendations." The Act specifies that this objective is to be met by June 30, 2045 through annual appropriations that are a level percentage of payroll for fiscal years 2011 through 2045. Appropriations, as a percentage of payroll, for fiscal years 1996 through 2010 are to increase in level annual increments over the prior year's appropriation until the required level percentage of payroll is achieved in fiscal year 2010. Implementation of this Act required the adoption of new actuarial assumptions with regard to future new members of the System, and a projection of the liabilities, assets, expenses and payroll of the System through June 30, 2045.

Under the financing objective established by the 1994 pension legislation, we recommend that the employer's contribution rate to the Employer's Contribution Reserve of the System for the 1996 fiscal year be 7.02% of membership payroll. This rate will increase to an ultimate employer contribution rate of 20.85% in fiscal year 2010.

Applying the contribution rate of 7.02% to the estimated fiscal year 1996 membership payroll of \$4.864 billion produces an employer contribution of \$341,276,000 less an estimated Federal and Trust Funds contribution of \$17,000,000, or a State Contribution of \$324,276,000. Adding to this a state contribution to the Guaranteed Minimum Annuity Reserve and the Supplemental Annuity Reserve of \$4,252,000 and \$90,000, respectively, results in a total recommended state contribution for the 1996 fiscal year of \$328,618,000.

The June 30, 1994 valuation reflects our recommendations in regard to new actuarial assumptions with respect to severance pay, service credit for unused and uncompensated sick leave, and optional service purchases. The effect of these new assumptions would be to increase the recommended 1996 employer contribution rate by .13 percentage points. In addition, we recommend that future administrative expenses be assumed to be paid from employer normal cost contributions instead of from investment return. The effect of this change would be to increase the 1996 employer contribution rate by .02 percentage points. These recommended new assumptions have been reflected in the 1996 employer rate of 7.02%.

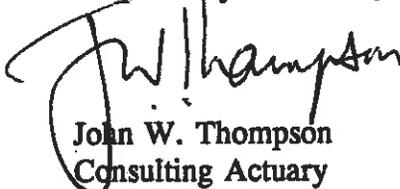
The new assumptions with respect to severance pay, service credit for unused and uncompensated sick leave, and optional service purchases are the results of an investigation which was undertaken to explore the factors producing net experience losses in the year-to-year measurement of the pension benefit obligation of the System. Adoption of these assumptions should result in smaller experience losses in future years. A detailed report of the investigation on which these assumptions are based is contained in an appendix to this report. The new assumption regarding inclusion of administrative expenses in employer normal cost would result in a consistent treatment of the funding of administrative expenses by all state systems. Adoption of these new assumptions should result in a more accurate projection of future benefits and expenses, thereby enabling a more accurate calculation of the employer contribution under Public Act 88-0593.

The unfunded pension benefit obligation of the System as of June 30, 1994 is \$9,754.7 million, which may be compared with the unfunded obligation of \$7,606.3 million as of June 30, 1993. The effect of the new assumptions with regard to severance pay, service credit for unused and uncompensated sick leave, and optional service purchases was to increase the unfunded obligation as of June 30, 1994 by \$772.1 million. Included in the unfunded pension benefit obligation of \$9,754.7 million as of June 30, 1994 is an amount of \$193.1 million due to 5,497 retirements under the Early Retirement Incentive (ERI) program during the fiscal year 1993/94.

The funded status of the System as of June 30, 1994 is 55.1% based on the cost value of assets, which may be compared with the System's funded status of 58.9% as of June 30, 1993.

The Table of Contents, which immediately follows, outlines the material contained in the report.

Respectfully submitted,



John W. Thompson  
Consulting Actuary

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

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**TEACHERS' RETIREMENT SYSTEM  
OF THE STATE OF ILLINOIS  
ACTUARIAL VALUATION  
JUNE 30, 1994**

**SECTION I — PRINCIPAL RESULTS**

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

**SUMMARY OF PRINCIPAL RESULTS**

Item	Year Ended June 30	
	1994	1993
<b>Employer's Contribution Reserve</b>		
• Active members reported to the actuary:		
— Number	123,528	125,770
— Annual salaries	\$ 4,250,933,000	\$ 4,094,414,000
— Average age	41.6 years	42.2 years
— Average service	11.8 years	11.9 years
• Additional new members assumed to replace ERI program retirees (see page 3):		
— Number	2,242	-
— Annual salaries	\$ 58,829,000	-
— Average age	31.1 years	-
— Average service	0.9 years	-
• Number of inactive members	32,083	25,586
• Retirees and beneficiaries in receipt of benefits:		
— Number	54,616	49,555
— Annual annuities	\$ 869,273,000	\$ 692,256,000
• Assets		
— Actuarial value (cost)	\$ 11,992,224,000	\$10,879,590,000
— Market value	\$ 12,038,688,000	\$11,544,604,000
• Pension benefit obligation (includes health reserve: 1994 - \$38,210,000; 1993 - \$63,099,000)	\$ 21,746,875,000	\$18,485,890,000
• Unfunded pension benefit obligation	\$ 9,754,651,000	\$ 7,606,300,000
• Funded ratio:		
— Actuarial value (cost)	55.1%	58.9%
— Market value	55.4%	62.5%

**SUMMARY OF PRINCIPAL RESULTS**  
(Continued)

Item	Year Ended June 30	
	1994	1993
<b>Employer's Contribution Reserve (continued)</b>	<b>Under Public Act 88-0593</b>	<b>Under Public Act 86-0273</b>
• Employer cost:		
— Percentage Rate	7.02%	14.65%
— Employer Contribution	\$ 341,276,000	\$ 663,792,000
— Less Federal and Trust Funds Contribution	<u>17,000,000</u>	
— State Contribution (Fiscal Year 1996)	\$ 324,276,000	
<b>Guaranteed Minimum Annuity Reserve</b>		
• Retirees and beneficiaries in receipt of benefits:		
— Number	4,404	Not Available
— Annual annuities	\$ 4,529,000	
— Pension benefit obligation	\$ 16,072,000	
• State Contribution (Fiscal Year 1996)	\$ 4,252,000	
<b>Supplemental Annuity Reserve</b>		
• Retirees and beneficiaries in receipt of benefits:		
— Number	225	Not Available
— Annual annuities	\$ 95,000	
— Pension benefit obligation	\$ 319,000	
• State Contribution (Fiscal Year 1996)	\$ 90,000	
<b>Total State Contribution:</b>		
• Employer's Contribution Reserve	\$ 324,276,000	
• Guaranteed Minimum Annuity Reserve	4,252,000	
• Supplemental Annuity Reserve	<u>90,000</u>	
• Total State Contribution	\$ 328,618,000	

Notes: Benefit projections for the Guaranteed Minimum Annuity Reserve and the Supplemental Annuity Reserve were prepared by the actuary for the first time at June 30, 1994. As the benefits from these reserves 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 these special groups, the fiscal 1996 State Contribution has been adjusted to ensure payment of all required benefits as required by Statute.

Employer's actual contribution to System in fiscal year 1995:

Common School Fund	\$ 233,785,600
State Pensions Fund	29,079,200
Federal and Trust Funds	<u>16,500,000</u>
Total	\$ 279,364,800

2. The preparation of the June 30, 1994 actuarial valuation was based on the latest membership data available, which was submitted by the System for (i) active and inactive members as of June 30, 1993, and (ii) retirees and beneficiaries in receipt of benefits as of June 30, 1994. Membership data for active and inactive members as of June 30, 1992, and for retirees and beneficiaries as of June 30, 1993 was used as the basis for the June 30, 1993 actuarial valuation. As part of the valuation procedure, the actual salaries reported for active members were increased by 4% to adjust for the one year lag in the census information for active members.
3. The State contribution amount of \$328,618,000 shown as of June 30, 1994 is the recommended State contribution for fiscal year 1995/96 under the new pension funding provisions of Public Act 88-0593. This amount represents an Employer's Contribution Reserve contribution by the State of \$324,276,000, a Guaranteed Minimum Annuity Reserve Contribution of \$4,252,000 plus a Supplemental Annuity Reserve contribution of \$90,000, or a total contribution of \$328,618,000.
4. As stated above, at June 30, 1993 we adjusted for the one year lag in reporting of the active membership by assuming that the population was stationary with regard to age and service and we increased reported payroll by a 4% inflation assumption. Because of the Early Retirement Incentive (ERI) program, further adjustments were needed at June 30, 1994. After a consultation with the administrative staff of the System, it was determined that all ERI retirees from the 1993 window program would be removed from the reported active data, and an assumed number of full-time new members would be substituted, sufficient to keep the size of the total active group equal to the 125,770 reported at June 30, 1992. This adjustment is reflected in the active membership figures reported in the Summary of Principal Results: 123,528 reported active members were valued, and an additional 2,242 new members were assumed. These additional new members were assumed to be distributed by age, service, and salary, in proportion to the actual distribution of reported full-time new members.

5. The June 30, 1994 valuation reflects the following benefit amendments and recommended assumption changes:

- (a) Implementation of the 1994 pension funding legislation under Public Act 88-0593, including recommended new assumptions for future new members of the System and a 50 year projection through June 30, 2045.
- (b) 5,497 retirements under the Early Retirement Incentive program, which had the effect of increasing the pension benefit obligation by \$193.1 million.
- (c) Recommended new actuarial assumptions for severance pay, service credit for unused and uncompensated sick leave, and optional service purchases, which would have the effect of increasing the pension benefit obligation by \$772.1 million and the 1995/96 employer contribution rate by 0.13 percentage points.
- (d) A recommended new assumption under which the provision for future administrative expenses would be by an addition to normal cost instead of from investment return. This would have the effect of increasing the 1995/96 employer contribution rate by 0.02 percentage points.

6. The statistics for full-time teachers and substitutes, part-time, and hourly paid teachers for purposes of the June 30, 1994 valuation, based on the census information for active members as of June 30, 1993, (after all 1993 ERI retirees were removed from the active data) are as follows:

<u>Item</u>	<u>Full-time and regular part-time</u>	<u>Substitutes, part-time, hourly paid on a flexible or limited work schedule</u>	<u>Total</u>
Number	102,029	21,499	123,528
Annual salaries	\$ 4,187,151,000	\$ 63,782,000	\$ 4,250,933,000
Average age	42.2 years	38.4 years	41.6 years
Average service	14.0 years	1.2 years	11.8 years

**SECTION II — FINANCING OBJECTIVE**  
**AND EMPLOYER'S CONTRIBUTION RATE**

The financing objective of the System was revised for the current valuation by the enactment of the new pension funding law. The new funding provision was approved by the Governor in July of 1994 and is effective for fiscal year 1995/96 and thereafter.

For years prior to fiscal year 1995/96, the financing of the System was governed by Senate Bill 95 or (Public Act 86-0273) under which contributions to the System were to attain 40 year funding in fiscal year 1995/96 after a 7 year phase in period. This funding schedule was never adhered to by the State.

The financing objective of the System established under the new pension funding law (Public Act 88-0593), effective with the 1995/96 fiscal year, is to:

- (a) meet the cost of maintaining and administering the System on a 90% funded basis in accordance with actuarial recommendations; and
- (b) meet this objective by June 30, 2045 based on a contribution rate payable by the employer which increases in equal annual increments for fiscal years 1996 through 2010, and remains at the fiscal year 2010 level for fiscal years 2011 through 2045.

On the basis of the current valuation, the contribution rate payable by the employer for the fiscal year 1995/96, using the new funding policy established under Public Act 88-0593, is equal to 7.02% of membership payroll.

A projection of the contribution rates which are payable by the employer during the phase-in period on the basis of the funding policy described above indicates that the total contribution rate payable by the employer will attain an ultimate level rate of 20.85% in fiscal year 2009/10. The 1995/96 rate of 7.02% and this phase in to the ultimate rate of 20.85% is summarized below:

Fiscal Year	Rate	Fiscal Year	Rate
1995/96	7.02%	2003/04	14.92%
1996/97	8.01%	2004/05	15.91%
1997/98	8.99%	2005/06	16.90%
1998/99	9.98%	2006/07	17.88%
1999/00	10.97%	2007/08	18.87%
2000/01	11.96%	2008/09	19.86%
2001/02	12.94%	2009/10	20.85%
2002/03	13.93%		

The above chart represents the total contribution rates to the Employer's Contribution Reserve. The State contribution equals the total contribution offset by contributions from federal and trust funds. In addition to the contributions by the State to the Employer's Contribution Reserve, the State must make contributions to the Guaranteed Minimum Annuity Reserve and the Supplemental Annuity Reserve in amounts sufficient to ensure that TRS can make the required benefit payments from these reserve funds.

Schedule I of the report at page 17 shows the required contribution for the 1995/96 fiscal year under the financing objectives described above. As indicated in Schedule I, there is a total State contribution amount of \$328,618,000 payable to all three reserves for the fiscal year 1995/96.

The employer 1995/96 contribution rate of 7.02% to the Employer's Contribution Reserve includes the effects of the recommended assumption changes as follows:

Item	Effect on 1995/96 Employer Rate
<ul style="list-style-type: none"> <li>Increase due to new actuarial assumptions for severance pay, unused and uncompensated sick leave service, and optional service purchases</li> </ul>	0.13%
<ul style="list-style-type: none"> <li>Increase due to inclusion of administrative expenses in normal cost</li> </ul>	0.02%

### 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. 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

<u>Valuation Date</u>	<u>Assets</u>		<u>Pension Benefit Obligation</u>	<u>Funded Status</u>	
	<u>Cost</u>	<u>Market</u>		<u>Cost</u>	<u>Market</u>
June 30, 1994	\$ 11,992 M	\$ 12,039 M	\$ 21,747 M	55.1%	55.4%
June 30, 1993	\$ 10,880 M	\$ 11,545 M	\$ 18,486 M	58.9%	62.5%

As can be seen from the table, the current funded status of the System is 55.1% as measured by the cost value of assets. The funded status has declined by 3.8 percentage points from the previous valuation. The liability components of the pension benefit obligation in regard to active and retired members are shown in greater detail in Schedule II of the report at page 18.

In assessing the financial position of the System, it is important to review annually the trend line of the funded status. Although a System may not be fully-funded — in the case of TRS, the current funded status is approximately 55% — if the funded status is showing progressive improvement from year to year, then the Board can feel satisfied that the financial security of member benefits has improved. For this purpose, it is best to examine the trend line of funded status based on the cost value of assets. The funded status as measured by the market value of assets naturally is more volatile and given to sharp upward and downward movements without necessarily establishing any trend.

As can be seen from the chart on page 9, the funded status based on book value, which is indicated by the blue line in the chart, had shown some improvement between fiscal years 1985 through 1988. However, since 1988 the funded ratio of the system has declined from 61.2% to 55.1%. While 2.0 percentage points of this decline is due to the new actuarial assumptions

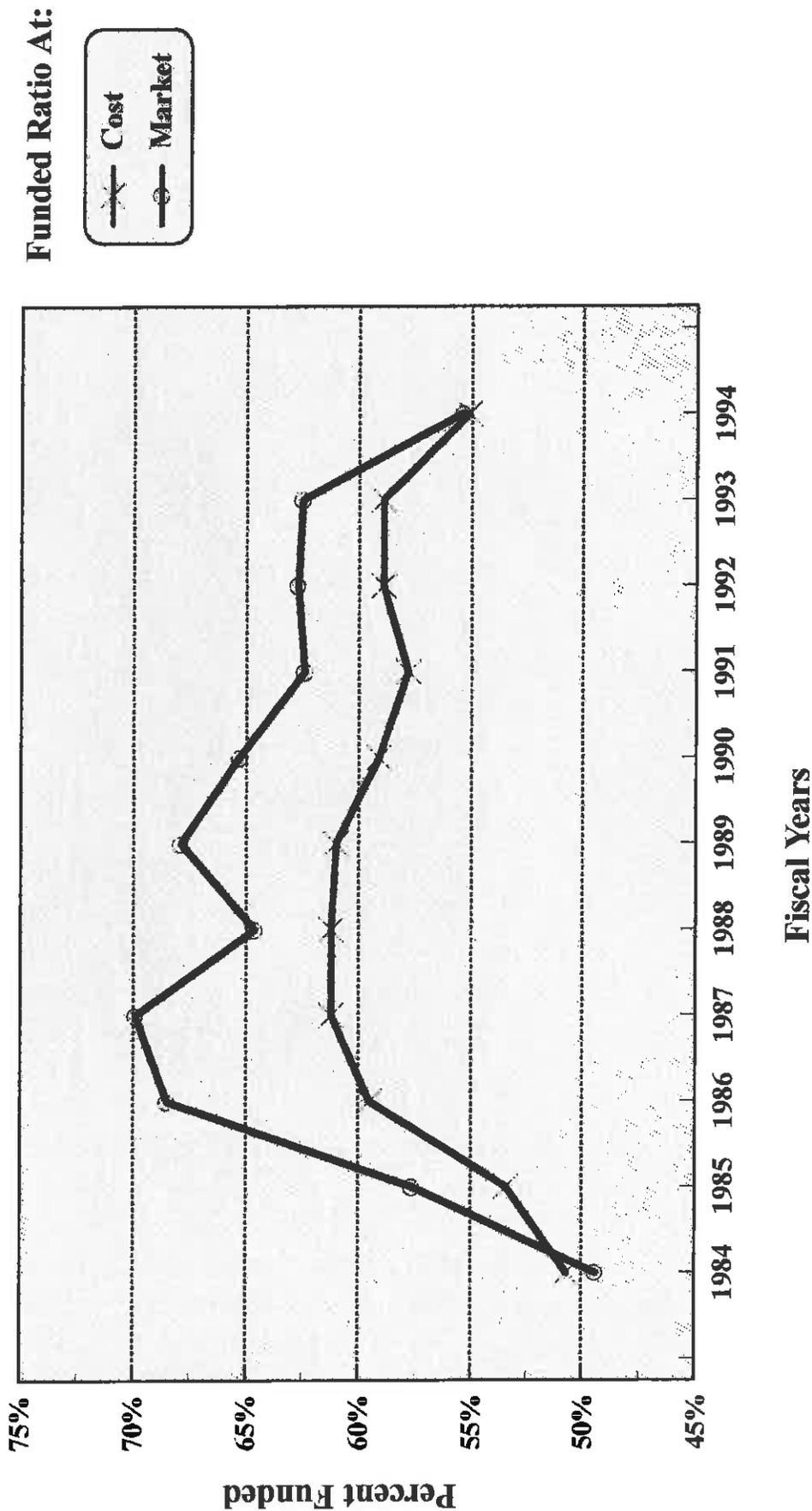
recommended for adoption this year, this decline is due mainly to the failure of the State to adhere to the funding provisions of Senate Bill 95 (Public Act 86-0273). In fact, the decline in the funded ratio of the System would have been greater had it not been for the investment return of the System, which was greater than the expected 8% during this period of underfunding by the State.

The new pension funding law adopted this year (Public Act 88-0593) effective with the contribution for the 1995/96 fiscal year will arrest what would otherwise be a continuing and accelerating decline in the funded ratio of the System. The new funding provisions are designed to attain a 90% funded ratio in fiscal year 2045. However, because of the 15 year phase in period before the full contribution rate is attained, the funded ratio of the System will continue to decline moderately to the fiscal year 2000 and will improve steadily thereafter to the 90% level.

A projection of the future funded status of the System is shown in Schedule VII at page 23 and Schedule XIII at page 29.

# TEACHERS' RETIREMENT SYSTEM OF THE STATE OF ILLINOIS

## FUNDED RATIO: FISCAL YEARS 1984 - 1994



## 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 at page 19.

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, 1994, there were net actuarial losses due to demographic and economic experience equal to \$521.8 million under the System, when compared to the actuarial assumptions used to anticipate these factors.

The significant factors contributing to these net losses included the following:

(1) Losses due to salary increases greater than expected	\$ (196.4) million
(2) Gains due to investment income above that expected	249.5
(3) Losses due to new entrants, for which no allowance is made in the assumptions	(17.5)
(4) Losses due to lower than expected mortality	(23.5)
(5) Losses due to retirements with unused sick leave	(76.6)

(6) Losses due to increased employer-provided benefits resulting from employee purchases of prior service credits	(64.2)
(7) Losses due to delayed reporting of retirements	(96.4)
(8) Losses due to all other causes (e.g., retroactive benefit payments, lower than expected terminations)	<u>(243.5)</u>
Total net losses	\$ 521.8 million

Losses arising from items 5-7 are due to the lack of an actuarial assumption in prior valuations for retirements with severance pay, unused and uncompensated sick leave, and prior service purchases in the two years preceding retirement. Due to the large number of retirements in the fiscal year ended June 30, 1994, they may be viewed as an acceleration of losses that would ordinarily have occurred over the next five years. Assumptions regarding these items were adopted effective June 30, 1994, so that future losses due to these items will be minimized. (There will be some residual loss next year due to the remaining number of early retirements still to occur under the ERI.)

The loss from item 8 is due to 3,398 retirements that occurred prior to July 1, 1993 and were not reported to the actuary until June 30, 1994. The actuarial loss is equal to the value of the unexpected benefit payments.

The "other cause" category is the balancing item needed to complete the reconciliation of the June 30, 1993 and June 30, 1994 unfunded PBOs. The combined effect of the ongoing ERI program and the lag in the active data impact this item, and it cannot be further reconciled at this time.

### SECTION V — MEMBERSHIP DATA

The preparation of the June 30, 1994 actuarial valuation was based on the latest membership data available, which was submitted by the System for (i) active and inactive members as of June 30, 1993, and (ii) annuitants and survivor annuitants in receipt of benefits as of June 30, 1994. As part of the valuation procedure, the annualized salaries reported for active 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, he did perform tests for internal consistency and reasonableness in relation to the data submitted for the previous valuation.

A comparison of the membership data for active and inactive members included in the June 30, 1994 actuarial valuation, with those who were included in the June 30, 1993 actuarial valuation is as follows:

	<u>Valuation June 30, 1994</u>	<u>Valuation June 30, 1993</u>
<b>Active membership:</b>		
<b>Full-time and regular part time:</b>		
Number	102,029	104,407
Annual compensation	\$ 4,187,151,434	\$ 4,026,052,128
Average compensation	\$ 41,039	\$ 38,561
<b>Additional new full-time members assumed to replace ERI Program retirees:</b>		
Number	2,242	—
Annual compensation	\$ 58,829,000	—
Average compensation	\$ 26,240	—
<b>Substitutes, part-time, and hourly paid on a limited schedule:</b>		
Number	21,499	21,363
Annual compensation	\$ 63,781,696	\$ 68,361,423
Average compensation	\$ 2,967	\$ 3,200
<b>Total Number</b>	<b>125,770</b>	<b>125,770</b>

	<u>Valuation</u> <u>June 30, 1994</u>	<u>Valuation</u> <u>June 30, 1993</u>
Inactive membership:		
Eligible for deferred annuities	9,212	8,733
Eligible for refunds or single sum benefits only	22,871	16,853

On this basis, there was a change in the reported active members' data equal to (i) a decrease of 2.3% in the number of members who are full-time and regular part-time teachers, and an increase of 0.6% in the number of substitutes, part-time, and hourly-paid teachers who are on a flexible or limited work schedule, and (ii) an increase of 6.4% in the average compensation of full-time and regular part-time teachers, and a decrease of 7.3% in the average compensation of substitutes, part-time, and hourly-paid teachers who are on a flexible or limited work schedule. (An additional 2,242 new full-time members were assumed to keep the size of the total active membership equal to 125,770.) In addition, rates of pay for individual full-time and regular part-time teachers increased 8.6% on average, compared to the expected average increase of 7.4%. Also, there was an increase of 5.5% in the number of inactive members eligible for deferred annuities, and an increase of 35.7% in the number of inactive members eligible for refunds or single sum benefits only. The 35.7% increase is due primarily to experience among substitutes and other members on a limited or flexible schedule.

A comparison of the membership data for annuitants and survivor annuitants who were included in the June 30, 1994 actuarial valuation, with those included in the June 30, 1993 actuarial valuation is as follows:

	<u>June 30, 1994</u>	<u>June 30, 1993</u>
Annuitants and survivor annuitants:		
Number	54,616	49,555
Annual annuities	\$ 869,273,000	\$ 692,256,000
Average annual annuities	\$ 15,916	\$ 13,969

On this basis, there was a change in the data for annuitants and survivor annuitants equal to (i) an increase of 10.2% in the number of annuitants and survivor annuitants, and (ii) an increase of 13.9% in the average annual annuities of annuitants and survivor annuitants. In addition, total annual annuities increased by 25.6%.

**SECTION VI — ASSETS**

For valuation purposes, the actuary's assets are set equal to the cost value of assets reported by the System. The actuary's assets as of June 30, 1994 amounted to \$11,992,224,000. This amount includes \$191,405,000 receivable from members and school districts for future ERI contributions.

During the fiscal year ended June 30, 1994, the investment rate of return was equal to 10.31%, based on cost value. This may be compared to the investment rate of return of 11.59% during the fiscal year ended June 30, 1993, based on cost value.

The market value of assets of the System amounted to \$12,038,688,000 as of June 30, 1994.

## **SECTION VII — ACTUARIAL ASSUMPTIONS AND METHODS**

The rates of separation, incidence of disability, salary increase and mortality used in the valuation were those previously adopted by the Board of Trustees for valuation purposes. Assumptions for severance pay at retirement, unused and uncompensated sick leave, and optional service purchases are new assumptions we are recommending for adoption by the Board of Trustees effective for valuation purposes on and after June 30, 1994. The new member profile, necessary for the 50 year projection required by Public Act 88-0593, is also recommended for formal adoption at this time. We are also recommending a new assumption in respect of administrative expenses under which an amount is included in the normal cost rate effective with the June 30, 1994 valuation. An interest rate of 8% per annum compounded annually, as previously adopted by the Board of Trustees, was used in the valuation.

The actuarial cost method utilized is the projected unit credit cost method which became effective with the June 30, 1989 valuation. The financing objective of the System has been amended by the pension funding law (Public Act 88-0593) adopted July of this year. The provisions of this new law are first effective for the 1995/96 fiscal year and have been reflected in this current June 30, 1994 valuation. The objective of the new is to meet the cost of maintaining and administering the System on a 90% funded basis by June 30, 2045.

The previous financing objective was set forth in Senate Bill 95 (Public Act 86-0273) and is effective for the current 1994/95 fiscal year. However, the strict contribution requirements of Senate Bill 95 were never adhered to by the State.

The rate of contribution determined under the cost method, according to the financing objective of Public Act 88-0593, is based on a projection of the liabilities, assets, expenses and payroll of the System for current and future members of the System for the period July 1, 1994 through June 30, 2045. See Section II for a more detailed description of the results of the application of the new financing objective to the determination of the 1995/96 fiscal year contribution requirement.

**SECTION VIII — FINANCIAL RESULTS AND MEMBERSHIP DATA -**  
**DETAILED SUMMARIES**

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

**SCHEDULE I**  
**EMPLOYER'S CONTRIBUTION RATES AND AMOUNTS**  
**FISCAL YEAR 1995/96**  
**(Based on June 30, 1994 Actuarial Valuation)**

Reserve Fund	Year Ended June 30, 1996
• Employer's Contribution Reserve:	
— Employer's Cost	\$ 341,276,000
— Less Federal and Trust Funds	<u>17,000,000</u>
— State Contribution	\$ 324,276,000
• Guaranteed Minimum Annuity Reserve	
— State Contribution	\$ 4,252,000
• Supplemental Annuity Reserve	
— State Contribution	\$ 90,000
Total State Contribution	\$ 328,618,000

**Notes:****(1) Employer's Contribution Reserve:**

- (a) Employer's cost of \$341,276,000 is equivalent to a contribution rate of 7.02% of payroll based on an estimated membership payroll for fiscal year 1995/96 of \$4.864 billion.
- (b) Employer's cost is based on projection required by new pension funding law under Public Act 88-0593 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.
- (c) Projection indicates that employer contribution rate will rise from 7.02% in fiscal year 1995/96 to 20.85% in fiscal year 2009/10.

**(2) Guaranteed Minimum Annuity Reserve and Supplemental Annuity Reserve:**

- (a) Above State contributions for fiscal year 1995/96 of \$4,252,000 and \$90,000, respectively, are based on projection of benefit outgo from reserve funds in fiscal year 1995/96.
- (b) As separate mortality studies have not been performed for the pensioners covered by these special reserves, the contributions have been adjusted to ensure payment of all benefits as required by Statute.

**(3) Base Data:**

Base data used for 50-year projection under Public Act 88-0593 is as follows:

- (a) Membership data at June 30, 1994. New entrant profile per actuarial assumptions.
- (b) Employer's total contribution to System in fiscal year 1994/95:

Common School Fund	\$ 233,785,600
State Pensions Fund	29,079,200
Federal and Trust Funds	<u>16,500,000</u>
Total	\$ 279,364,800

**SCHEDULE II****PENSION BENEFIT OBLIGATION AND FUNDED STATUS  
(\$ Thousands)**

Item	Year ended June 30	
	1994	1993
<b>Pension benefit obligation:</b>		
Retirees and beneficiaries currently receiving benefits (includes health reserve: 1994 - \$38,210; 1993 - \$63,099)	\$ 10,088,901	\$ 7,510,618
Terminated employees not yet receiving benefits	375,411	308,398
<b>Current employees:</b>		
Accumulated employee contributions	2,850,319	2,709,573
Employer-financed vested	3,045,589	2,690,062
Employer-financed nonvested	<u>5,386,655</u>	<u>5,267,239</u>
<b>Total pension benefit obligation</b>	<b>\$ 21,746,875</b>	<b>\$ 18,485,890</b>
<b>Net assets available for benefits at cost</b> (market value: 1994 - \$12,038,688; 1993 - \$11,544,604)	<b>\$ 11,992,224</b>	<b>\$ 10,879,590</b>
<b>Unfunded pension benefit obligation</b>	<b>\$ 9,754,651</b>	<b>\$ 7,606,300</b>
<b>Funding ratio</b>		
— Actuarial value (cost)	55.1%	58.9%
— Market value	55.4%	62.5%

**Notes:**

The total pension benefit obligation of \$21,746,875 thousands as of June 30, 1994 includes the impact of:

- (1) 5,497 retirements under the Early Retirement Incentive program, including the revision in the assumed per person cost of the program that was based on the average age, service, and pay of the 3,976 1993 Window retirees, which had the effect of increasing the pension benefit obligation by \$436,649 thousands.
- (2) New actuarial assumptions regarding severance pay, unused and uncompensated sick leave, and optional service purchases, which had the effect of increasing the pension benefit obligation by \$223,335 thousands, \$295,570 thousands, and \$253,220 thousands respectively.

**SCHEDULE III**  
**RECONCILIATION OF UNFUNDED PENSION BENEFIT OBLIGATION**  
(\$ Thousands)

Item	Year ended June 30	
	1994	1993
• Unfunded pension benefit obligation at beginning of year	\$ 7,606,300	\$ 6,847,391
• Additions (deductions):		
— Employer cost in excess of contributions	\$ 639,746	\$ 551,158
Amendments:		
— For fiscal 1993/94: 5,497 retirements under the TRS early retirement incentive program	\$ 193,098	
— For fiscal 1992/93: 624 retirements under the TRS early retirement incentive program		\$ 38,589
• Addition to health care reserves	\$ 21,600	\$ 21,600
<b>Change in actuarial assumptions</b>		
• For fiscal 1993/1994:		
— New assumption for severance pay	\$ 223,335	
— New assumption for unused sick leave	\$ 295,570	
— New assumption for optional service purchases <sup>(A)</sup>	\$ 253,220	
• For fiscal 1992/1993:		
— Revised assumptions for active and disabled mortality and for incidence of disability		\$ 12,544
• Actuarial losses (gains) compared to assumptions:		
— Salary increases for continuing active members	\$ 196,373	\$ 237,332
— Investment income	(249,575)	(351,089)
— New entrant loss	17,517	23,543
— Mortality loss	23,508	20,987
— Prior service credits	64,221	26,025
— Severance pay for new service retirements	53,229	**
— Retirements with unused sick leave	76,605	**
— Delayed reporting of retirements <sup>(B)</sup>	96,420	**
— Other*	243,484	178,220
• Net additions	\$ 2,148,351	\$ 758,909
• Unfunded pension benefit obligation at end of year	\$ 9,754,651	\$ 7,606,300

<sup>(A)</sup> \$63,346 thousands of the increase will be covered by future member contributions.

<sup>(B)</sup> 3,398 retirements that occurred prior to 7/1/93 were not reported to the actuary until 6/30/94.

\* Other includes items such as:

- (a) Retroactive benefits for late retirees (50-100 late retirements annually).
- (b) Fewer terminations of vested employees than expected.
- (c) Change in rate of benefit accruals from certified normal cost rate.
- (d) Retirements with reciprocal service credits.
- (e) Fewer disablements than expected.

\*\* These items included in "Other" in 1993.

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

Item	Year ended June 30	
	1994	1993
• Employer normal cost	\$ 309,351	\$ 285,271
• Interest on unfunded pension benefit obligation at beginning of year	<u>608,504</u>	<u>547,791</u>
Total employer cost	\$ 917,855	\$ 833,062
• Employer contributions		
— Common School and State Pensions Funds	\$ 261,355	\$ 264,702
— Federal and trust funds	<u>16,754</u>	<u>17,202</u>
Total employer credits	\$ 278,109	\$ 281,904
• Employer cost in excess of contributions	\$ 639,746	\$ 551,158

**SCHEDULE V****10 YEAR HISTORY OF UNFUNDED  
PENSION BENEFIT OBLIGATION**

<b>Year Ended June 30</b>	<b>Pension Benefit Obligation</b>	<b>Net Assets (Cost)</b>	<b>Unfunded Pension Benefit Obligation</b>
1994	\$21,746,875,000	\$11,992,224,000	\$ 9,754,651,000
1993	18,485,890,000	10,879,590,000	7,606,300,000
1992	16,659,353,000	9,811,962,000	6,847,391,000
1991	15,141,334,000	8,747,122,000	6,394,212,000
1990	13,662,509,000	8,079,898,000	5,582,611,000
1989	11,913,959,000	7,272,071,000	4,641,888,000
1988	10,922,587,000	6,684,489,000	4,238,098,000
1987	9,949,961,000	6,092,195,000	3,857,766,000
1986	8,687,270,000	5,168,069,000	3,519,201,000
1985	7,981,610,000	4,265,310,000	3,716,300,000

**SCHEDULE VI****10 YEAR HISTORY OF FUNDED STATUS**

Year Ended June 30	Pension Benefit Obligation	Net Assets		Funded Ratio	
		Cost	Market	Cost	Market
1994	\$21,746,875,000	\$ 11,992,224,000	\$12,038,688,000	55.1%	55.4%
1993	18,485,890,000	10,879,590,000	11,544,604,000	58.9	62.5
1992	16,659,353,000	9,811,962,000	10,439,836,000	58.9	62.7
1991	15,141,334,000	8,747,122,000	9,453,140,000	57.8	62.4
1990	13,662,509,000	8,079,898,000	8,924,022,000	59.1	65.3
1989	11,913,959,000	7,272,071,000	8,088,731,000	61.0	67.9
1988	10,922,587,000	6,684,489,000	7,054,818,000	61.2	64.6
1987	9,949,961,000	6,092,195,000	6,958,366,000	61.2	69.9
1986	8,687,270,000	5,168,069,000	5,951,564,000	59.5	68.5
1985	7,981,610,000	4,265,310,000	4,598,061,000	53.4	57.6

**SCHEDULE VII****10 YEAR PROJECTION OF FUNDED STATUS  
JUNE 30, 1995 - JUNE 30, 2004**

Year Ended June 30	Pension Benefit Obligation	Cost Value of Assets	Unfunded Pension Benefit Obligation	Funded Ratio
1995	\$ 23,694,200,000	<del>\$ 12,883,300,000</del> 2,842,200,000	\$ 10,810,900,000	54.4%
1996	25,198,900,000	13,454,700,000	11,744,200,000	53.4
1997	26,868,700,000	14,164,000,000	12,704,700,000	52.7
1998	28,678,800,000	14,987,600,000	13,691,200,000	52.3
1999	30,639,000,000	15,938,200,000	14,700,700,000	52.0
2000	32,731,400,000	17,000,200,000	15,731,200,000	51.9
2001	34,971,400,000	18,195,900,000	16,775,500,000	52.0
2002	37,331,700,000	19,502,900,000	17,828,800,000	52.2
2003	39,807,200,000	20,921,900,000	18,885,300,000	52.6
2004	42,387,000,000	22,448,000,000	19,939,000,000	53.0

NOTES: The projection of assets is based upon the assumption that the Employer implements the funding policy under Public Act 88-0593 beginning in Fiscal Year 1996.

The projection of the pension benefit obligation includes the effect of 11,063 retirements under the Early Retirement Incentive (ERI) program.

**SCHEDULE VIII****10 YEAR HISTORY OF SYSTEM REVENUE AND EXPENSES**

Year Ended June 30	Beginning of Year Market Value of Assets	Contributions		Market Value Income	Benefits and Expenses	End of Year Market Value of Assets
		Member	Employer			
1994	\$ 11,544,604,000	\$ 413,395,000	\$ 483,465,000	\$ 503,837,000	\$ 906,613,000	\$12,038,688,000
1993	10,439,836,000	363,334,000	305,974,000	1,179,776,000	744,316,000	11,544,604,000
1992	9,453,140,000	350,909,000	272,376,000	1,035,945,000	672,534,000	10,439,836,000
1991	8,924,022,000	310,969,000	293,585,000	524,514,000	599,950,000	9,453,140,000
1990	8,088,731,000	283,780,000	293,024,000	841,393,000	582,906,000	8,924,022,000
1989	7,054,818,000	268,253,000	260,927,000	1,007,931,000	503,198,000	8,088,731,000
1988	6,958,366,000	253,052,000	241,660,000	64,239,000	462,499,000	7,054,818,000
1987	5,951,564,000	237,592,000	279,791,000	917,993,000	428,574,000	6,958,366,000
1986	4,598,061,000	220,160,000	259,952,000	1,263,359,000	389,968,000	5,951,564,000
1985	3,630,206,000	206,839,000	237,590,000	875,563,000	352,137,000	4,598,061,000

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

**SCHEDULE IX****MEMBERSHIP DATA**

**ACTIVE AND INACTIVE MEMBERSHIP OF SYSTEM  
AS OF JUNE 30, 1993  
USED IN JUNE 30, 1994 VALUATION**

Group	Number	Actual Salaries
<b>Active members:</b>		
Reported full-time and regular part-time	102,029	\$ 4,187,151,434
Reported substitutes and hourly paid	21,499	63,781,696
Additional new members assumed	<u>2,242</u>	<u>58,828,919</u>
Total	125,770	\$ 4,309,762,049
<b>Inactive members:</b>	32,053	N/A

**ANNUITANTS, DISABILITY BENEFIT RECIPIENTS,  
AND SURVIVOR ANNUITANTS OF THE SYSTEM  
AS OF JUNE 30, 1994**

Class	Number	Annual Annuities
<b>Retired on account of service:</b>		
Regular	35,167	\$ 505,019,914
ERI	6,116	173,194,752
ERO	<u>6,728</u>	<u>145,461,066</u>
Total	48,011	\$ 823,675,732
<b>Disability benefit recipients:</b>		
Retirement allowance	582	\$ 5,627,784
Occupational	14	232,247
Temporary	<u>273</u>	<u>4,214,226</u>
Total	869	\$ 10,074,257
<b>Survivor benefit recipients:</b>		
Children	117	\$ 518,519
Survivor annuitants	5,470	33,958,401
Reversionary annuitants	<u>149</u>	<u>1,046,201</u>
Total	5,736	\$ 35,523,121
Grand Total	54,616	\$ 869,273,110

**SCHEDULE X****HISTORY OF ACTIVE MEMBERSHIP DATA  
FOR LAST 10 YEARS**

Census Date June 30	Number of Active Members	Percentage Change in Membership	Average Annual Salary	Percentage Change in Salary
1993	125,770**	0%	\$ 34,267	5.26%
1992	125,770	1.91	32,555	2.09
1991	123,413*	20.89	31,388	(9.80)
1990	102,083	1.08	34,797	5.57
1989	100,995	.11	32,962	5.68
1988	100,889	.96	31,190	11.06
1987	99,934	1.12	28,085	5.89
1986	98,826	1.42	26,522	4.20
1985	97,446	.23	25,454	5.44
1984	97,226	(2.61)	24,141	5.53

\*\* Includes 2,242 assumed new members to replace ERI program retirees.

\* Includes for the first time 19,149 substitutes, part-time, and hourly-paid teachers on a flexible or limited work schedule. These new categories of teacher members are also included in subsequent years.

**SCHEDULE XI****HISTORY OF ANNUITANT AND SURVIVOR  
ANNUITANT MEMBERSHIP FOR LAST 10 YEARS**

<b>Year Ended June 30</b>	<b>Number on Roll</b>	<b>Percentage Change in Membership</b>
1994	54,616	10.21%
1993	49,555	3.23
1992	48,005	2.64
1991	46,772	1.94
1990	45,880	2.21
1989	44,886	3.43
1988	43,396	1.73
1987	42,659	3.00
1986	41,417	3.25
1985	40,113	4.10

**SCHEDULE XII**

**BENEFIT STREAMS FOR GUARANTEED MINIMUM AND SUPPLEMENTAL ANNUITY RESERVES**

Fiscal Year	Benefit Payment Stream	
	Guaranteed Minimum	Supplemental
1995	\$ 3,635,564	\$ 87,097
1996	3,401,851	71,576
1997	2,892,677	58,105
1998	2,363,292	46,570
1999	1,932,430	36,833
2000	1,498,885	28,731
2001	1,285,440	22,091
2002	1,010,678	16,733
2003	814,406	12,478
2004	640,145	9,155
2005	497,746	6,605
2006	365,016	4,685
2007	300,919	3,266
2008	227,549	2,240
2009	167,543	1,512
2010	118,949	1,008
2011	86,919	666
2012	62,697	439
2013	42,438	290
2014	28,026	194
2015	19,010	132

Fiscal Year	Benefit Payment Stream	
	Guaranteed Minimum	Supplemental
2016	\$ 11,226	\$ 92
2017	4,639	65
2018	1,885	47
2019	0	34
2020	0	20
2021	0	0

**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 these special groups, the fiscal 1995/96 State Contribution shown on page 2 has been adjusted to ensure payment of all required benefit amounts, as required by Statute.

**SCHEDULE XIII**

**50 YEAR PROJECTION FOR EMPLOYER'S CONTRIBUTION RESERVE UNDER PUBLIC ACT 88-0593  
50 YEAR AMORTIZATION WITH 15 YEAR PHASE-IN BEGINNING FISCAL YEAR 1996**

Year Ended June 30	Amort. Year	Beginning of Year		Employer Rate			Amount of Employer Contribution			Assumed Payroll
		Funded Ratio	Unfunded Pension Benefit Obligation	Total	Normal Cost	Amortization	Total	Normal Cost	Amortization	
1994	-1	58.9%	\$ 7,606,300,000	6.30%	7.50%	-1.20%	\$ 278,109,000	\$ 330,996,800	\$ (52,887,800)	\$ 4,413,000,000
1995	0	55.1	9,754,651,000	6.03	8.12	-2.09	279,364,800	376,122,700	(96,757,900)	4,633,650,000
1996	1	54.3	10,810,921,640	7.02	8.23	-1.21	341,276,242	400,134,055	(58,857,812)	4,863,544,432
1997	2	53.4	11,744,103,495	8.01	8.32	-0.31	408,629,543	424,566,844	(15,937,302)	5,104,678,148
1998	3	52.7	12,704,685,930	8.99	8.41	0.59	481,850,151	450,464,486	31,385,665	5,358,072,900
1999	4	52.3	13,691,175,310	9.98	8.50	1.48	561,301,474	477,860,084	83,441,390	5,623,728,688
2000	5	52.0	14,700,742,388	10.97	8.59	2.38	644,320,887	504,417,761	139,903,126	5,874,058,181
2001	6	51.9	15,731,233,681	11.96	8.60	3.36	733,508,378	527,404,943	206,103,435	6,134,605,204
2002	7	52.0	16,775,543,403	12.94	8.61	4.34	829,431,318	551,499,569	277,931,749	6,407,413,264
2003	8	52.2	17,828,751,730	13.93	8.62	5.32	932,453,113	576,705,315	355,747,797	6,692,482,359
2004	9	52.6	18,885,347,912	14.92	8.63	6.29	1,042,937,170	603,025,861	439,911,309	6,989,812,492
2005	10	53.0	19,939,006,502	15.91	8.64	7.27	1,155,232,601	627,199,598	528,033,003	7,261,598,798
2006	11	53.4	20,985,379,029	16.90	8.56	8.34	1,274,624,819	645,521,982	629,102,837	7,543,602,635
2007	12	53.9	22,010,426,505	17.88	8.49	9.40	1,401,416,664	665,042,904	736,373,760	7,835,824,002
2008	13	54.5	23,005,998,566	18.87	8.41	10.47	1,536,296,639	684,372,722	851,923,917	8,140,306,406
2009	14	55.1	23,961,133,146	19.86	8.33	11.53	1,679,628,154	704,236,371	975,391,782	8,457,049,846
2010	15	55.7	24,864,366,923	20.85	8.26	12.59	1,832,626,701	725,820,503	1,106,806,199	8,790,141,334
2011	16	56.4	25,703,289,535	20.85	8.19	12.66	1,905,054,120	748,109,449	1,156,944,670	9,137,537,365
2012	17	56.9	26,557,220,528	20.85	8.11	12.74	1,980,250,821	770,040,412	1,210,210,409	9,498,216,185
2013	18	57.4	27,424,110,620	20.85	8.04	12.81	2,058,216,807	793,447,744	1,264,769,063	9,872,177,795
2014	19	57.7	28,303,652,903	20.85	7.97	12.88	2,139,591,141	817,634,013	1,321,957,129	10,262,487,453
2015	20	58.0	29,194,126,988	20.85	7.89	12.96	2,236,729,091	846,172,067	1,390,557,024	10,728,406,836
2016	21	58.2	30,084,547,897	20.85	7.87	12.98	2,338,340,498	882,369,298	1,455,971,199	11,215,783,032
2017	22	58.4	30,978,222,074	20.85	7.86	12.99	2,444,638,385	921,308,084	1,523,330,301	11,725,637,795
2018	23	58.5	31,873,388,552	20.85	7.84	13.01	2,555,622,752	960,683,042	1,594,939,711	12,257,971,125
2019	24	58.7	32,765,749,668	20.85	7.82	13.03	2,671,719,643	1,001,762,008	1,669,957,635	12,814,826,527
2020	25	58.8	33,651,538,759	20.85	7.80	13.05	2,804,645,258	1,048,912,023	1,755,733,234	13,452,400,419

**Notes:**

- (1) Above represents contributions to the Employer's Contribution Reserve. It does not include contributions to Guaranteed Minimum and Supplemental Annuity Reserves.
- (2) Above contributions represent the sum of State contributions and Federal and Trust Funds Contributions.
- (3) Negative amortization occurs in fiscal years 1994-1997 on account of the fact that contributions do not cover normal cost.

**Assumptions:**

Return on Investment = 8.00%. Payroll Growth based on valuation assumptions. Valuation Interest Rate = 8.00%.  
ERI Assumptions: 3,978 1993 Program Retirees and 7,085 1994 Program Retirees

SCHEDULE XIII

**50 YEAR PROJECTION FOR EMPLOYER'S CONTRIBUTION RESERVE UNDER PUBLIC ACT 88-0593  
50 YEAR AMORTIZATION WITH 15 YEAR PHASE-IN BEGINNING FISCAL YEAR 1996**  
(Continued)

Year Ended June 30	Amort. Year	Beginning of Year		Employer Rate			Amount of Employer Contribution			Assumed Payroll
		Funded Ratio	Unfunded Pension Benefit Obligation	Total	Normal Cost	Amortization	Total	Normal Cost	Amortization	
2021	26	58.9%	\$ 34,519,005,360	20.85%	7.81%	13.04%	\$ 2,943,961,527	\$ 1,102,427,114	\$ 1,841,534,413	\$ 14,120,626,902
2022	27	59.1	35,366,795,689	20.85	7.82	13.03	3,090,307,516	1,158,711,645	1,931,595,871	14,822,571,235
2023	28	59.2	36,188,766,031	20.85	7.83	13.02	3,243,896,247	1,217,855,707	2,026,040,540	15,559,255,171
2024	29	59.4	36,978,344,222	20.85	7.84	13.01	3,404,940,741	1,279,949,799	2,124,990,942	16,331,700,463
2025	30	59.7	37,728,256,393	20.85	7.85	13.00	3,573,980,352	1,345,207,655	2,228,772,697	17,142,494,103
2026	31	60.0	38,430,308,375	20.85	7.85	13.00	3,751,412,001	1,411,991,014	2,339,420,987	17,993,539,910
2027	32	60.4	39,073,535,438	20.85	7.85	13.00	3,937,652,313	1,482,089,859	2,455,562,455	18,886,836,217
2028	33	60.9	39,647,522,914	20.85	7.85	13.00	4,133,138,598	1,555,668,788	2,577,469,811	19,824,480,568
2029	34	61.5	40,140,739,547	20.85	7.85	13.00	4,338,329,876	1,632,900,572	2,705,429,305	20,808,674,639
2030	35	62.1	40,540,434,103	20.85	7.85	13.00	4,553,707,955	1,713,966,557	2,839,741,398	21,841,729,408
2031	36	62.9	40,832,523,003	20.85	7.85	13.00	4,779,778,563	1,799,057,096	2,980,721,467	22,926,070,585
2032	37	63.8	41,001,468,228	20.85	7.85	13.00	5,017,072,534	1,888,371,987	3,128,700,547	24,064,244,302
2033	38	64.7	41,030,144,701	20.85	7.85	13.00	5,266,147,057	1,982,120,951	3,284,026,106	25,258,923,097
2034	39	65.8	40,899,696,235	20.85	7.85	13.00	5,527,586,982	2,080,524,119	3,447,062,863	26,512,912,187
2035	40	67.0	40,589,379,124	20.85	7.85	13.00	5,802,006,194	2,183,812,550	3,618,193,644	27,829,156,054
2036	41	68.4	40,076,392,320	20.85	7.85	13.00	6,090,049,055	2,292,228,776	3,797,820,279	29,210,745,362
2037	42	69.8	39,335,693,098	20.85	7.85	13.00	6,392,391,915	2,406,027,368	3,986,364,548	30,660,924,210
2038	43	71.4	38,339,796,985	20.85	7.85	13.00	6,709,744,706	2,525,475,535	4,184,269,171	32,183,097,752
2039	44	73.2	37,058,560,666	20.85	7.85	13.00	7,042,852,599	2,650,853,753	4,391,998,846	33,780,840,194
2040	45	75.0	35,458,946,431	20.85	7.85	13.00	7,392,497,763	2,782,456,421	4,610,041,342	35,457,903,182
2041	46	77.1	33,504,766,648	20.85	7.85	13.00	7,759,501,198	2,920,592,556	4,838,908,642	37,218,224,616
2042	47	79.3	31,156,406,607	20.85	7.85	13.00	8,144,724,662	3,065,586,513	5,079,138,149	39,065,937,895
2043	48	81.7	28,370,523,935	20.85	7.85	13.00	8,549,072,695	3,217,778,751	5,331,293,944	41,005,381,621
2044	49	84.3	25,099,722,661	20.85	7.85	13.00	8,973,494,744	3,377,526,632	5,595,968,112	43,041,109,786
2045	50	87.0	21,292,199,822	20.85	7.85	13.00	9,418,987,390	3,545,205,259	5,873,782,131	45,177,902,471
2046	51	90.0	16,891,362,358	9.59	7.85	1.75	4,549,183,514	3,721,208,357	827,975,157	47,420,777,061

**Notes:**

- (1) Above represents contributions to the Employer's Contribution Reserve. It does not include contributions to Guaranteed Minimum and Supplemental Annuity Reserves.
- (2) Above contributions represent the sum of State contributions and Federal and Trust Funds Contributions.
- (3) Negative amortization occurs in fiscal years 1994-1997 on account of the fact that contributions do not cover normal cost.

**Assumptions:**

Return on Investment = 8.00%. Payroll Growth based on valuation assumptions. Valuation Interest Rate = 8.00%.  
 ERI Assumptions: 3,978 1993 Program Retirees and 7,085 1994 Program Retirees

**SECTION IX****STATEMENT OF ACTUARIAL ASSUMPTIONS AND METHODS**

INTEREST RATE: 8% per annum, compounded annually.

SEPARATIONS FROM ACTIVE SERVICE AND SALARY INCREASES: Representative values of the assumed rates of separation and annual rates of salary increase are as follows:

Age	Annual Rates of				
	Withdrawal and Vesting	Death	Disability	Retirement	Salary Increase
<b>Males</b>					
20	.1690	.0015	.0004	—	.0970
30	.0910	.0011	.0004	—	.0860
40	.0350	.0013	.0006	—	.0750
50	.0230	.0031	.0012	—	.0690
55	.0270	.0051	.0020	.0970	.0680
60	.0410	.0083	.0040	.2700	.0670
65	.0600	.0130	.0060	.3650	.0650
70	—	.0205	—	1.0000	—
<b>Females</b>					
20	.1867	.0015	.0007	—	.0970
30	.1350	.0011	.0008	—	.0860
40	.0550	.0013	.0012	—	.0750
50	.0365	.0031	.0024	—	.0690
55	.0380	.0051	.0040	.0970	.0680
60	.0440	.0083	.0080	.1800	.0670
65	.0600	.0130	.0120	.3300	.0650
70	—	.0205	—	1.0000	—

**DEATH AFTER RETIREMENT:** According to the UP-1984 Table with ages set back six years. For the period after disability retirement, the Pension Benefit Guaranty Corporation rates for male disabled lives not necessarily receiving Social Security benefits, set back three years, but not less than the rate at age 65 (after the setback).

**VALUATION METHOD:** Projected unit credit cost method. Gains and losses are reflected in the unfunded pension benefit obligation.

**ASSET VALUATION METHOD:** Cost value.

**GROWTH IN ACTIVE MEMBERSHIP:** For purposes of the projection required by Public Act 88-0593, 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.

**SEVERANCE PAY (Proposed Assumption):** The percent of retirees assumed to receive severance payments, and the amount of such severance payments, are assumed to be as follows:

Years of Service at Retirement	Percent of Retirees Who Receive Severance Pay	Severance Pay as a Percent of Other Pensionable Earnings in the Last Year of Employment
Less than 20	0%	0.00%
20-24	54%	13.21%
25-29	60%	13.21%
30-34	66%	13.91%
35 or more	72%	14.60%

**OPTIONAL SERVICE PURCHASES (Proposed Assumption):** The pension benefit obligation for retirement benefits for active employees is increased by 2.87% to cover the employer cost of out-of-system service purchased in the last two years prior to retirement. In addition, 75% of this liability is the responsibility of the employer, and 25% of this liability will be covered by future member payments for purchase of out-of-system service.

**UNUSED AND UNCOMPENSATED SICK LEAVE SERVICE AT RETIREMENT (Proposed Assumption):** Such sick leave credit equals 2.90% of regular service credit at retirement.

**ADMINISTRATIVE EXPENSES:** Expected administrative expenses for the fiscal year following the valuation are estimated by the administrative staff of the System. 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.

## NEW MEMBER PROFILE:

Distribution of New Entrants is as follows:

Age Group	Full Time/Part Time			Hourly/Substitute		
	Males	Females	Total	Males	Females	Total
20 - 24	4.6%	22.1%	26.7%	4.6%	15.8%	20.4%
25 - 29	6.5	18.7	25.2	4.6	10.4	15.0
30 - 34	3.2	8.1	11.3	2.6	7.8	10.4
35 - 39	2.4	9.4	11.8	2.4	11.3	13.7
40 - 44	1.9	11.9	13.8	2.6	16.3	18.9
45 - 49	1.3	6.2	7.5	1.8	9.0	10.8
50 - 54	0.6	1.8	2.4	1.1	4.1	5.2
55 - 59	0.3	0.6	0.9	0.7	2.0	2.7
60 - 64	0.2	0.2	0.4	0.5	1.2	1.7
65 - 69	0.0	0.0	0.0	0.3	0.6	0.9
70	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.1</u>	<u>0.2</u>	<u>0.3</u>
	21.0%	79.0%	100.0%	21.3%	78.7%	100.0%

Service Credit Earned in Each Future Year:

Age Group	Full Time/Part Time			Hourly/Substitute		
	Males	Females	Total	Males	Females	Total
20 - 24	1.000	1.000	1.000	0.340	0.379	0.370
25 - 29	1.000	1.000	1.000	0.325	0.337	0.333
30 - 34	1.000	0.995	0.998	0.319	0.287	0.295
35 - 39	1.000	0.966	0.975	0.271	0.316	0.307
40 - 44	1.000	0.980	0.985	0.303	0.318	0.315
45 - 49	1.000	0.981	0.987	0.281	0.287	0.286
50 - 54	0.995	1.000	0.998	0.261	0.238	0.244
55 - 59	0.954	0.972	0.964	0.290	0.230	0.251
60 - 64	1.000	0.928	0.969	0.167	0.175	0.172
65 - 69				0.179	0.196	0.190
70	<u>-</u>	<u>-</u>	<u>-</u>	<u>0.206</u>	<u>0.098</u>	<u>0.134</u>
	1.000	0.994	0.997	0.308	0.323	0.319

## NEW MEMBER PROFILE (continued):

Full Time Rate of Pay at 6/30/94\*

Age Group	Full Time/Part Time			Hourly/Substitute		
	Males	Females	Total	Males	Females	Total
20 - 24	\$ 24,598	\$ 23,364	\$ 23,586	\$ 10,208	\$ 9,696	\$ 9,811
25 - 29	26,754	25,655	25,931	10,212	9,746	9,895
30 - 34	30,433	26,836	27,902	10,268	9,450	9,663
35 - 39	32,254	26,213	27,583	9,966	9,449	9,550
40 - 44	36,090	27,029	28,329	10,087	9,614	9,693
45 - 49	43,742	28,124	31,326	9,914	9,611	9,672
50 - 54	46,758	32,024	36,411	9,887	9,649	9,714
55 - 59	43,684	31,012	36,154	10,387	9,381	9,728
60 - 64	38,329	27,541	32,288	9,843	8,962	9,285
65 - 69				9,280	9,137	9,184
70	-	-	-	9,773	9,174	9,373
	\$ 30,361	\$ 25,664	\$ 26,696	\$ 10,131	\$ 9,602	\$ 9,727

\* The rate of pay profile will increase by 5% per annum. 4% of the increase is attributable to inflation and 1% to real wage growth.

**PENSION BENEFIT OBLIGATION:** The measure of the actuarial present value (APV) as of the valuation date of credited projected benefits prorated on service, or pension benefit obligation (PBO) as referred to in Statement No. 5 of the Governmental Accounting Standards Board (GASB), includes an adjustment for the effects of projected salary increases, estimated to be payable in the future as a result of employee service to June 30, 1994. Significant actuarial assumptions used to determine the pension benefit obligation as of June 30, 1994 include the following:

- (1) An assumed rate of return on the investment of present and future assets of 8% per annum, compounded annually.
- (2) Assumed projected annual salary increases ranging from 9.7% at age 20 to 6.4% 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 benefit at retirement.

**SECTION X — SUMMARY OF**  
**BENEFIT AND CONTRIBUTION PROVISIONS**

**MEMBERSHIP**

Employers of the System include:

- (a) the public common school districts outside of Chicago,
- (b) any facility of the Department of Children and Family Services, Department of Corrections, Department of Mental Health, or Department of Rehabilitation Services which employs certificated teachers, and
- (c) the State Office of Education, Illinois School Board Association, educational cooperatives and the retirement system.

Employees covered under the System include:

- (a) Any educational, administrative, professional or other staff employed on a regular basis in the Illinois public schools outside the City of Chicago and who is certificated under Illinois teacher certification law.
- (b) Any educational, administrative, professional or other staff employed by the included Employers who is certified under the Illinois law governing the certification of teachers and is employed in a position requiring teacher certification; any regional superintendent of schools, assistant regional superintendent of schools; any employee of the State Board of Education who is employed as an executive or any executive of the boards engaged in the service of public common school education in school districts included within the provisions of this retirement system of which the State Superintendent of Education is an ex-officio member; any executive or employee who has teacher certification employed by the System; any certificated employee of a school board association, and, in certain cases, an employee of a statewide teacher organization.

- (c) Substitute teachers, part-time teachers, and hourly-paid teachers who are on a flexible or limited work schedule and receive credit for a part of year.

Employment on a full-time basis covers only teachers whose normal employment requires 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 the number of days required at the time to constitute a legal school year, provided such service of 170 or more days in any school year after June 30, 1959, constitutes a year of service. A member may earn optional credit for purchases of service, including military service.

"Final average salary" means 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.

## BENEFITS

### Normal Retirement

Eligibility	Age 60 with 10 years of service, or age 62 with 5 years of service.
Amount	The greater of: <ul style="list-style-type: none"> <li>(i) 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.</li> <li>(ii) 1-1/2% of final average salary for each year of creditable service, plus \$7.50 per month for each of the first 20 years of creditable service.</li> </ul>

- (iii) An actuarially equivalent life annuity, resulting from the member's contributions and State-matching contributions plus compound interest on both.

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

**Automatic post-retirement  
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**

Initial increase of 1-1/2% 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.

**Early Retirement**

**Eligibility**

Age 55 with 20 years of service.

**Amount**

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.

A member retiring after June 1, 1980 and before June 30, 1995 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 contribution will be a percentage 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 employee contribution shall be at the rate of 7% for the lesser of the following two periods: (a) for each year that the member is less than age 60; or (b) for each year that the member's creditable service is less than 35 years. The employer contribution shall be at the rate of 20% for each year the member is under age 60. The provisions of this paragraph will not be applicable until all of the outlined 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%, with the right to participate to be allocated among those applying on the basis of seniority in the service of the employer.

#### 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) attainment of age 65 for disability commencing prior to age 60, (3) attainment of age 70, but limited to a period not to exceed 5 years, whichever occurs first, for disability commencing on or after age 60, (4) when the period for which payments have been made equals one-fourth the period of creditable service, or (5) the member is gainfully employed.

#### Disability Retirement Annuity

##### Eligibility

Termination of temporary disability benefit, provided member remains disabled.

##### Amount

The larger of 35% of the member's most recent annual contract salary or (a) if disability commences prior to age 55, the benefit payable as for normal retirement, but reduced by 1/2% for each month by which the member is less than age 55, or (b) if disability commences after age 55, the benefit payable as for normal retirement.

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

### Occupational Disability

**Eligibility** Under age 70 and 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 Workmen's Compensation or Occupational Diseases Act. Any amounts payable under these Acts shall be applied as an offset to any accidental disability benefits payable by the Teachers' Retirement System. In general, benefits are payable throughout the period of disability but not after attainment of age 70.

### Deferred Vested Benefits

**Eligibility** 5 years of service.

**Amount** Equal to the amount computed under normal retirement deferred to age 62 if member has less than 10 years of service. With more than 10 years of service the annuity is payable at age 60.

### Reversionary Retirement Annuity

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

### Refund of Contributions

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

### Death Benefit

Lump sum death benefits of 1/6 of the current salary rate at time of death, times the number of completed years of service, up to but not to exceed the annual salary rate (the

minimum is 1/6 the lesser of current salary or \$3,000), plus accumulated contributions are payable to the beneficiary of members who die in active service.

#### Survivor Benefit

In addition to a refund of accumulated contributions, dependent beneficiaries receive survivor benefits of \$1,000 plus monthly benefits equal to a percentage of average salary for each dependent beneficiary. The widow's or widower's maximum benefit is \$400 per month; and the maximum family benefit is \$600 per month, or 80% of average salary, whichever is less.

Minimum Benefit - 50% of earned retirement allowance.

#### Member Contributions

Contributions for creditable service at the rate of 7% (exclusive of amounts paid toward Survivor Benefits) of each payment of salary paid the member by any school district included in this system, which is comprised of a rate of 6-1/2% of salary towards the cost of the retirement annuity plus 1/2% of salary toward the cost of the automatic annual increase in retirement annuity. Other rates, maximum and minimum contributions were in effect in earlier years.

From July 24, 1959 each member contributes 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.

Additional contributions as are necessary to receive credit for service during which contributions were not made, such as military service, service outside the System, or service prior to July 1, 1939.

**SECTION XI — DETAILED TABULATIONS OF DATA**

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**EXHIBIT**

**ACTIVE MEMBERSHIP  
NUMBER AND AVERAGE ANNUAL SALARY  
AS OF JUNE 30, 1993**

Age	Full-Time and Regular Part-Time Members										Substi- tutes	Grand Total		
	Service													
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40+	Total				
UNDER 25	2,969 \$ 24,265											2,969 \$ 24,265	3,073 \$ 2,728	6,042 \$ 13,311
25 - 29	6,934 \$ 27,271	2,709 \$ 31,150										9,643 \$ 28,360	2,946 \$ 2,825	12,589 \$ 22,384
30 - 34	2,689 \$ 28,651	4,838 \$ 33,124	1,637 \$ 36,797	1								9,165 \$ 32,468	1,980 \$ 2,788	11,145 \$ 27,195
35 - 39	2,687 \$ 28,064	2,713 \$ 34,584	4,514 \$ 38,532	3,093 \$ 42,647								13,007 \$ 36,525	2,915 \$ 2,656	15,922 \$ 30,324
40 - 44	3,705 \$ 28,992	3,773 \$ 35,418	3,033 \$ 40,292	7,178 \$ 45,157	5,313 \$ 48,182	1						23,003 \$ 41,014	4,385 \$ 3,217	27,388 \$ 34,962
45 - 49	2,204 \$ 30,960	2,971 \$ 37,713	2,350 \$ 42,033	2,900 \$ 47,062	7,758 \$ 50,994	4,177 \$ 53,088	1					22,361 \$ 46,194	2,982 \$ 3,281	25,343 \$ 41,145
50 - 54	720 \$ 33,723	1,163 \$ 38,883	1,354 \$ 42,425	1,733 \$ 46,574	2,550 \$ 50,821	4,330 \$ 54,505	1,682 \$ 57,407					13,532 \$ 49,499	1,619 \$ 3,237	15,151 \$ 44,556
55 - 59	201 \$ 33,634	327 \$ 38,162	447 \$ 43,099	779 \$ 45,784	1,154 \$ 49,316	1,121 \$ 52,750	1,445 \$ 57,517	405				5,879 \$ 50,593	835 \$ 3,110	6,714 \$ 44,688
60 - 64	58 \$ 28,718	76 \$ 37,857	120 \$ 42,659	256 \$ 46,467	455 \$ 50,940	431 \$ 50,885	313 \$ 53,679	293	29			2,031 \$ 50,613	455 \$ 2,641	2,486 \$ 41,833
OVER 65	16 \$ 38,454	15 \$ 40,069	21 \$ 43,134	53 \$ 45,138	72 \$ 53,444	105 \$ 53,483	76 \$ 52,189	36	45			439 \$ 51,239	309 \$ 2,826	748 \$ 31,240
TOTAL	22,183 \$ 28,065	18,585 \$ 34,723	13,476 \$ 39,914	15,993 \$ 45,222	17,302 \$ 50,002	10,165 \$ 53,566	3,517 \$ 57,003	734	74			102,029 \$ 41,039	21,499 \$ 2,967	123,528 \$ 34,413

**THE NUMBER AND ANNUAL SALARIES  
OF MEMBERS IN ACTIVE SERVICE DISTRIBUTED BY  
AGE AS OF JUNE 30, 1993  
(FULL TIME AND REGULAR PART TIME)**

AGE	MALES		FEMALES		TOTALS	
	NUMBER	SALARIES	NUMBER	SALARIES	NUMBER	SALARIES
20			1	\$ 13,872	1	\$ 13,872
21			6	108,094	6	108,094
22	36	\$ 889,477	250	5,626,410	286	6,515,887
23	143	3,485,464	910	21,551,130	1,053	25,036,594
24	304	7,938,587	1,319	32,431,729	1,623	40,370,316
25	345	9,457,772	1,524	39,406,301	1,869	48,864,073
26	422	12,052,313	1,629	43,805,136	2,051	55,857,449
27	386	11,383,952	1,538	43,453,351	1,924	54,837,303
28	411	12,675,004	1,486	43,573,307	1,897	56,248,311
29	398	13,041,435	1,504	44,636,058	1,902	57,677,493
30	449	15,089,161	1,462	44,574,226	1,911	59,663,387
31	466	16,338,343	1,400	42,767,797	1,866	59,106,140
32	428	15,584,528	1,327	41,965,087	1,755	57,549,615
33	427	15,929,540	1,323	41,434,397	1,750	57,363,937
34	493	19,152,385	1,390	44,737,469	1,883	63,889,854
35	550	21,516,473	1,567	51,680,824	2,117	73,197,297
36	580	24,039,390	1,721	57,863,066	2,301	81,902,456
37	674	28,855,861	1,872	63,690,823	2,546	92,546,684
38	699	30,884,878	2,116	74,446,301	2,815	105,331,179
39	806	36,189,105	2,422	85,914,090	3,228	122,103,195
40	943	43,852,716	2,907	105,945,273	3,850	149,797,989
41	1,063	51,503,318	3,398	126,566,868	4,461	178,070,186
42	1,290	64,035,475	3,648	138,671,148	4,938	202,706,623
43	1,377	69,736,763	3,384	129,721,789	4,761	199,458,552
44	1,465	74,689,626	3,528	138,736,268	4,993	213,425,894
45	1,683	89,664,857	3,548	144,598,609	5,231	234,263,466
46	1,938	104,226,960	3,699	154,657,852	5,637	258,884,812
47	1,489	81,104,532	2,521	105,948,104	4,010	187,052,636
48	1,402	75,762,942	2,435	104,958,574	3,837	180,721,516
49	1,375	75,641,455	2,271	96,387,753	3,646	172,029,208
50	1,408	79,245,577	2,474	109,042,139	3,882	188,287,716
51	1,098	63,479,790	1,912	85,525,302	3,010	149,005,092
52	925	53,952,956	1,595	71,669,557	2,520	125,622,513
53	800	46,432,846	1,410	63,480,773	2,210	109,913,619
54	660	40,490,045	1,250	56,505,510	1,910	96,995,555
55	558	33,446,588	1,016	45,714,650	1,574	79,161,238

**THE NUMBER AND ANNUAL SALARIES  
OF MEMBERS IN ACTIVE SERVICE DISTRIBUTED BY  
AGE AS OF JUNE 30, 1993  
(FULL TIME AND REGULAR PART TIME)**

AGE	MALES		FEMALES		TOTALS	
	NUMBER	SALARIES	NUMBER	SALARIES	NUMBER	SALARIES
56	432	\$ 26,041,260	910	\$ 41,672,510	1,342	\$ 67,713,770
57	410	24,327,470	782	36,279,842	1,192	60,607,312
58	334	20,112,541	684	31,483,811	1,018	51,596,352
59	239	14,776,212	514	23,587,023	753	38,363,235
60	209	12,693,239	434	20,327,146	643	33,020,385
61	147	8,726,445	330	15,861,178	477	24,587,623
62	98	5,925,470	287	13,246,531	385	19,172,001
63	76	4,353,680	251	11,843,212	327	16,196,892
64	36	2,332,717	163	7,487,092	199	9,819,809
65	27	1,679,530	121	6,058,897	148	7,738,427
66	18	1,138,508	67	3,275,892	85	4,414,400
67	16	828,384	41	1,970,084	57	2,798,468
68	10	648,860	35	1,670,697	45	2,319,557
69	8	481,983	32	1,608,421	40	2,090,404
70	3	167,313	14	716,707	17	884,020
71	4	199,758	16	777,798	20	977,556
72			8	333,014	8	333,014
73	2	97,570	7	378,140	9	475,710
74			5	237,790	5	237,790
75			2	77,770	2	77,770
76			1	50,378	1	50,378
77	1	42,727	1	54,083	2	96,810
<b>TOTAL</b>	<b>29,561</b>	<b>\$ 1,466,343,781</b>	<b>72,468</b>	<b>\$ 2,720,807,653</b>	<b>102,029</b>	<b>\$ 4,187,151,434</b>

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	21,499
Annual Salaries	\$ 63,781,696
Average Age	38.37 years
Average Service	1.17 years

**ADDITIONAL ASSUMED NEW MEMBERS**

Number	2,242
Annual Salaries	\$ 58,828,919
Average Age	31.12 years
Average Service	.94 years

**THE NUMBER AND ANNUAL SALARIES  
OF MEMBERS IN ACTIVE SERVICE DISTRIBUTED BY  
YEARS OF CREDITED SERVICE AS OF JUNE 30, 1993  
(FULL TIME AND REGULAR PART TIME)**

SERVICE	MALES		FEMALES		TOTALS	
	NUMBER	SALARIES	NUMBER	SALARIES	NUMBER	SALARIES
0	162	\$ 4,340,707	769	\$ 16,129,398	931	\$ 20,470,105
1	1,030	30,059,396	4,155	101,886,743	5,185	131,946,139
2	1,133	35,664,473	4,788	128,945,519	5,921	164,609,992
3	970	32,049,563	4,733	135,590,411	5,703	167,639,974
4	728	25,038,139	3,715	112,866,873	4,443	137,905,012
5	677	24,986,024	3,316	103,390,904	3,993	128,376,928
6	709	28,114,648	3,158	102,913,290	3,867	131,027,938
7	728	29,625,426	3,251	109,615,947	3,979	139,241,373
8	684	28,681,031	3,038	105,941,578	3,722	134,622,609
9	602	25,118,618	2,422	86,943,526	3,024	112,062,144
10	444	18,918,581	1,833	66,465,895	2,277	85,384,476
11	448	20,543,124	1,779	66,553,879	2,227	87,097,003
12	581	26,709,385	2,048	77,833,778	2,629	104,543,163
13	655	30,857,384	2,393	93,292,400	3,048	124,149,784
14	719	33,725,865	2,576	102,993,139	3,295	136,719,004
15	824	39,474,352	2,493	103,509,036	3,317	142,983,388
16	819	39,896,927	2,293	97,676,666	3,112	137,573,593
17	770	38,657,853	2,041	87,207,527	2,811	125,865,380
18	924	48,168,829	2,233	97,849,658	3,157	146,018,487
19	1,192	62,741,494	2,404	108,053,263	3,596	170,794,757
20	1,370	72,750,663	2,301	104,478,567	3,671	177,229,230
21	1,363	73,593,666	2,184	99,775,790	3,547	173,369,456
22	1,202	66,598,370	2,096	96,940,257	3,298	163,538,627
23	1,437	79,638,854	2,024	97,541,048	3,461	177,179,902
24	1,580	89,076,372	1,745	84,751,786	3,325	173,828,158
25	1,419	79,921,720	1,362	66,920,666	2,781	146,842,386
26	1,191	67,340,616	1,209	59,462,818	2,400	126,803,434
27	1,050	62,128,831	940	46,262,050	1,990	108,390,881
28	879	51,198,400	776	39,040,629	1,655	90,239,029
29	716	41,695,515	623	30,532,057	1,339	72,227,572
30	565	33,864,977	462	23,326,714	1,027	57,191,691
31	533	32,696,374	357	17,790,995	890	50,487,369
32	421	25,856,907	267	13,605,697	688	39,462,604
33	301	19,005,724	195	9,925,796	496	28,931,520
34	273	16,928,772	143	7,478,752	416	24,407,524
35	175	11,158,887	106	5,402,907	281	16,561,794

**THE NUMBER AND ANNUAL SALARIES  
OF MEMBERS IN ACTIVE SERVICE DISTRIBUTED BY  
YEARS OF CREDITED SERVICE AS OF JUNE 30, 1993  
(FULL TIME AND REGULAR PART TIME)**

SERVICE	MALES		FEMALES		TOTALS	
	NUMBER	SALARIES	NUMBER	SALARIES	NUMBER	SALARIES
36	148	\$ 9,546,545	86	\$ 4,212,560	234	\$ 13,759,105
37	62	4,751,120	44	2,225,343	106	6,976,463
38	34	2,390,617	41	1,992,631	75	4,383,248
39	13	822,715	25	1,206,795	38	2,029,510
40	7	419,157	14	728,282	21	1,147,439
41	8	548,492	6	284,206	14	832,698
42	6	463,056	9	494,983	15	958,039
43	4	280,593	5	251,097	9	531,690
44	3	196,330	3	208,532	6	404,862
45			2	65,969	2	65,969
46	1	55,210			1	55,210
47						
48						
49						
50			1	50,420	1	50,420
51	1	43,479	3	130,528	4	174,007
52						
53			1	60,348	1	60,348
<b>TOTAL</b>	<b>29,561</b>	<b>\$ 1,466,343,781</b>	<b>72,468</b>	<b>\$ 2,720,807,653</b>	<b>102,029</b>	<b>\$ 4,187,151,434</b>

In addition, there are the following active members:

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Average Age	38.37 years
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**ADDITIONAL ASSUMED NEW MEMBERS**

Number	2,242
Annual Salaries	\$ 58,828,919
Average Age	31.12 years
Average Service	.94 years

TABLE 3

**THE NUMBER AND ANNUAL BENEFITS PAYABLE FROM  
THE EMPLOYER'S CONTRIBUTION RESERVE  
OF RETIRED ANNUITANTS  
AS OF JUNE 30, 1994**

AGE	MALES		FEMALES		TOTALS	
	NUMBER	ANNUITIES	NUMBER	ANNUITIES	NUMBER	ANNUITIES
50	21	\$ 427,600	19	\$ 316,491	40	\$ 744,092
51	80	1,804,336	98	1,989,774	178	3,794,111
52	150	4,199,388	149	3,389,631	299	7,589,018
53	180	5,457,073	178	4,315,793	358	9,772,866
54	220	7,165,866	268	6,476,692	488	13,642,559
55	281	9,581,599	300	7,590,259	581	17,171,858
56	418	13,835,910	424	10,409,526	842	24,245,436
57	449	14,096,097	484	11,284,905	933	25,381,003
58	527	16,257,495	553	12,070,430	1,080	28,327,925
59	618	18,580,817	594	12,864,548	1,212	31,445,365
60	610	17,422,359	623	12,456,956	1,233	29,879,315
61	682	19,273,269	708	13,259,967	1,390	32,533,236
62	708	20,516,855	852	16,050,732	1,560	36,567,587
63	816	22,532,058	879	16,660,495	1,695	39,192,554
64	761	20,807,405	960	16,964,938	1,721	37,772,343
65	724	19,578,468	1,060	18,504,869	1,784	38,083,337
66	770	20,037,484	1,123	18,662,312	1,893	38,699,796
67	730	18,489,973	1,081	17,629,231	1,811	36,119,204
68	744	18,108,147	1,049	16,053,568	1,793	34,161,715
69	670	15,461,362	920	13,933,766	1,590	29,395,128
70	625	14,393,898	953	14,210,169	1,578	28,604,068
71	529	11,367,192	1,002	13,449,028	1,531	24,816,220
72	506	10,662,957	1,030	13,305,901	1,536	23,968,858
73	461	8,686,216	1,096	13,821,277	1,557	22,507,493
74	370	6,724,075	1,051	12,723,009	1,421	19,447,085
75	317	5,710,196	955	11,460,167	1,272	17,170,363
76	313	4,953,038	1,067	11,933,650	1,380	16,886,689
77	275	4,437,523	949	10,658,923	1,224	15,096,447
78	257	4,166,455	965	10,657,174	1,222	14,823,630
79	255	4,127,069	885	9,614,601	1,140	13,741,670
80	234	3,789,958	970	9,994,856	1,204	13,784,813
81	222	3,315,496	879	8,870,246	1,101	12,185,741
82	220	3,120,345	871	8,658,936	1,091	11,779,282
83	162	2,155,671	844	8,646,092	1,006	10,801,762
84	163	2,158,632	832	7,898,941	995	10,057,574
85	164	2,188,535	837	7,658,870	1,001	9,847,405

TABLE 3

**THE NUMBER AND ANNUAL BENEFITS PAYABLE FROM  
THE EMPLOYER'S CONTRIBUTION RESERVE  
OF RETIRED ANNUITANTS  
AS OF JUNE 30, 1994**

AGE	MALES		FEMALES		TOTALS	
	NUMBER	ANNUITIES	NUMBER	ANNUITIES	NUMBER	ANNUITIES
86	145	\$ 1,906,476	760	\$ 6,559,136	905	\$ 8,465,612
87	120	1,228,796	715	6,206,593	835	7,435,389
88	98	1,035,061	682	5,584,311	780	6,619,372
89	85	783,239	490	3,990,444	575	4,773,683
90	71	725,660	427	3,281,982	498	4,007,642
91	58	607,416	379	2,927,663	437	3,535,079
92	49	436,980	300	2,201,409	349	2,638,389
93	34	341,759	223	1,577,639	257	1,919,398
94	23	212,326	173	1,165,024	196	1,377,350
95	10	107,435	133	820,477	143	927,912
96	5	38,112	94	685,506	99	723,618
97	8	50,018	54	338,351	62	388,369
98	3	19,226	56	364,179	59	383,405
99	2	16,336	22	133,396	24	149,733
100	3	20,174	19	94,094	22	114,269
101	1	8,733	10	52,328	11	61,061
102	1	7,976	9	52,326	10	60,302
103			5	32,647	5	32,647
104			2	14,211	2	14,211
105			1	3,366	1	3,366
106						
107						
108			1	7,382	1	7,382
<b>TOTAL</b>	<b>15,948</b>	<b>\$ 383,136,544</b>	<b>32,063</b>	<b>\$ 440,539,188</b>	<b>48,011</b>	<b>\$ 823,675,732</b>

TABLE 4

**THE NUMBER AND ANNUAL BENEFITS PAYABLE FROM  
THE EMPLOYER'S CONTRIBUTION RESERVE  
OF SURVIVOR ANNUITANTS  
AS OF JUNE 30, 1994**

AGE	MALES		FEMALES		TOTALS	
	NUMBER	ANNUITIES	NUMBER	ANNUITIES	NUMBER	ANNUITIES
4	1	\$ 2,400			1	\$ 2,400
5	1	2,701	1	\$ 4,052	2	6,753
6						
7	3	13,588	2	7,965	5	21,552
8						
9			2	5,767	2	5,767
10	5	19,095	4	15,699	9	34,794
11	3	12,233	2	13,473	5	25,707
12	3	9,502	4	17,087	7	26,589
13	3	16,128	9	34,817	12	50,945
14	4	16,251	5	24,302	9	40,553
15	6	27,721	13	55,578	19	83,299
16	11	52,584	11	49,152	22	101,736
17	7	42,574	11	49,264	18	91,839
18	4	18,474	2	8,111	6	26,585
19			1	4,052	1	4,052
20						
21						
22						
23	1	9,109			1	9,109
24						
25						
26						
27			1	7,638	1	7,638
28	1	7,200			1	7,200
29			1	7,200	1	7,200
30						
31						
32						
33	1	7,416	1	7,200	2	14,616
34						
35			1	5,565	1	5,565
36	1	8,878	1	8,347	2	17,225
37	1	7,200			1	7,200
38						
39	4	29,886	3	26,508	7	56,394

TABLE 4

**THE NUMBER AND ANNUAL BENEFITS PAYABLE FROM  
THE EMPLOYER'S CONTRIBUTION RESERVE  
OF SURVIVOR ANNUITANTS  
AS OF JUNE 30, 1994**

AGE	MALES		FEMALES		TOTALS	
	NUMBER	ANNUITIES	NUMBER	ANNUITIES	NUMBER	ANNUITIES
40			1	\$ 2,317	1	\$ 2,317
41	2	\$ 15,763	3	44,260	5	60,023
42	5	37,437	6	43,968	11	81,405
43	2	7,682	4	30,450	6	38,132
44	1	7,868	6	49,116	7	56,984
45	4	31,065	6	48,301	10	79,367
46	2	19,266	9	84,878	11	104,144
47	1	7,416	9	87,732	10	95,148
48	4	31,734	6	53,368	10	85,102
49	6	39,268	3	33,533	9	72,801
50	1	5,947	10	89,724	11	95,671
51	5	27,833	14	111,648	19	139,480
52	11	93,616	33	300,747	44	394,363
53	9	62,846	31	305,349	40	368,195
54	8	56,557	27	269,440	35	325,997
55	5	37,545	25	292,003	30	329,548
56	9	61,864	44	459,839	53	521,703
57	4	21,690	40	382,820	44	404,510
58	9	56,486	40	444,112	49	500,598
59	10	68,031	46	436,695	56	504,726
60	13	86,952	54	486,071	67	573,023
61	16	114,162	52	516,025	68	630,188
62	16	100,371	60	533,996	76	634,367
63	25	147,037	89	834,663	114	981,700
64	28	235,349	82	764,417	110	999,766
65	25	190,306	83	730,536	108	920,843
66	34	248,556	84	778,197	118	1,026,753
67	42	298,993	118	1,075,199	160	1,374,192
68	27	210,341	109	955,830	136	1,166,171
69	48	307,470	102	840,691	150	1,148,161
70	38	241,444	96	809,724	134	1,051,168
71	51	346,327	102	719,346	153	1,065,674
72	50	311,072	106	833,746	156	1,144,817
73	52	271,848	101	756,289	153	1,028,137
74	50	283,110	120	809,186	170	1,092,296
75	56	290,565	140	846,910	196	1,137,475

TABLE 4

**THE NUMBER AND ANNUAL BENEFITS PAYABLE FROM  
THE EMPLOYER'S CONTRIBUTION RESERVE  
OF SURVIVOR ANNUITANTS  
AS OF JUNE 30, 1994**

AGE	MALES		FEMALES		TOTALS	
	NUMBER	ANNUITIES	NUMBER	ANNUITIES	NUMBER	ANNUITIES
76	62	\$ 295,744	136	\$ 813,052	198	\$ 1,108,796
77	66	331,532	136	831,388	202	1,162,920
78	70	347,867	137	777,381	207	1,125,248
79	64	302,550	135	834,563	199	1,137,113
80	65	311,126	120	722,383	185	1,033,509
81	75	353,384	133	769,729	208	1,123,114
82	70	301,289	144	805,058	214	1,106,347
83	81	330,891	136	673,137	217	1,004,028
84	74	304,395	131	625,048	205	929,443
85	78	294,246	131	605,776	209	900,022
86	64	262,855	134	649,430	198	912,285
87	62	220,937	110	442,071	172	663,008
88	51	174,724	85	353,956	136	528,680
89	42	144,726	83	333,111	125	477,836
90	33	111,374	63	256,583	96	367,957
91	26	99,772	57	221,184	83	320,956
92	28	104,833	39	149,166	67	253,999
93	18	50,984	36	126,816	54	177,800
94	12	38,922	19	60,793	31	99,715
95	10	34,371	16	47,551	26	81,922
96	2	4,622	11	40,459	13	45,081
97			11	41,183	11	41,183
98	3	5,081	5	11,185	8	16,266
99	1	1,101	2	6,513	3	7,615
100	1	1,837	2	3,998	3	5,835
101						
102						
103						
104			1	2,782	1	2,782
<b>TOTAL</b>	<b>1,787</b>	<b>\$ 9,105,922</b>	<b>3,949</b>	<b>\$ 26,417,199</b>	<b>5,736</b>	<b>\$ 35,523,121</b>

TABLE 5

**THE NUMBER AND ANNUAL BENEFITS PAYABLE FROM  
THE EMPLOYER'S CONTRIBUTION RESERVE  
OF DISABILITY BENEFIT RECIPIENTS  
AS OF JUNE 30, 1994**

AGE	MALES		FEMALES		TOTALS	
	NUMBER	ANNUITIES	NUMBER	ANNUITIES	NUMBER	ANNUITIES
66	6	\$ 42,182	16	\$ 124,689	22	\$ 166,870
67	12	119,081	12	120,750	24	239,831
68	4	42,768	13	93,570	17	136,338
69	4	44,568	9	90,102	13	134,669
70	2	27,940	12	113,817	14	141,757
71	2	20,168	10	89,342	12	109,510
72	1	9,185	19	161,452	20	170,636
73	3	26,241	6	36,169	9	62,410
74	2	14,619	11	68,393	13	83,012
75	1	7,486	6	43,130	7	50,616
76	1	12,038	8	45,841	9	57,879
77			4	23,455	4	23,455
78	1	3,267	7	39,905	8	43,172
79			3	15,336	3	15,336
80			3	23,966	3	23,966
81			3	9,583	3	9,583
82			2	7,595	2	7,595
83			2	6,402	2	6,402
84			1	4,273	1	4,273
85	1	2,581	1	1,835	2	4,416
86			1	3,264	1	3,264
87						
88	1	1,225	1	2,286	2	3,511
89			1	3,284	1	3,284
90						
91			2	6,074	2	6,074
92			1	2,779	1	2,779
93			4	10,966	4	10,966
94			2	5,129	2	5,129
95			1	2,839	1	2,839
96						
97			1	2,848	1	2,848
98						
99						
100						
<b>TOTAL</b>	<b>188</b>	<b>\$ 2,429,212</b>	<b>681</b>	<b>\$ 7,645,045</b>	<b>869</b>	<b>\$ 10,074,257</b>

TABLE 5

**THE NUMBER AND ANNUAL BENEFITS PAYABLE FROM  
THE EMPLOYER'S CONTRIBUTION RESERVE  
OF DISABILITY BENEFIT RECIPIENTS  
AS OF JUNE 30, 1994**

AGE	MALES		FEMALES		TOTALS	
	NUMBER	ANNUITIES	NUMBER	ANNUITIES	NUMBER	ANNUITIES
28	1	\$ 7,786			1	\$ 7,786
29						
30			2	\$ 19,912	2	19,912
31	1	14,126	1	10,690	2	24,816
32			1	11,041	1	11,041
33	1	7,275	3	32,121	4	39,396
34			2	28,363	2	28,363
35			4	49,726	4	49,726
36			3	34,126	3	34,126
37			5	62,840	5	62,840
38	1	8,763	3	25,046	4	33,809
39	4	44,200	8	86,039	12	130,239
40			8	80,996	8	80,996
41	2	19,425	8	110,051	10	129,476
42	3	30,706	17	199,570	20	230,276
43	3	26,798	19	202,323	22	229,121
44	4	48,172	23	261,108	27	309,280
45	4	49,953	16	208,479	20	258,432
46	5	70,001	20	244,069	25	314,071
47	4	64,392	17	242,596	21	306,989
48	4	48,003	16	258,887	20	306,890
49	5	76,587	12	142,803	17	219,390
50	10	124,224	20	250,972	30	375,196
51	7	100,272	21	305,572	28	405,844
52	4	38,408	25	337,132	29	375,540
53	5	79,405	16	179,233	21	258,638
54	5	60,977	22	277,037	27	338,014
55	5	93,043	19	237,673	24	330,716
56	3	50,368	27	377,875	30	428,243
57	6	124,805	33	384,031	39	508,836
58	12	144,520	27	340,623	39	485,143
59	7	131,069	29	371,497	36	502,567
60	12	227,607	17	239,436	29	467,042
61	4	87,047	15	207,625	19	294,672
62	7	83,276	20	249,349	27	332,625
63	8	78,511	15	143,202	23	221,713
64	5	63,287	16	188,424	21	251,711
65	5	52,857	9	85,506	14	138,363

TABLE 6

**THE NUMBER AND ANNUAL BENEFITS PAYABLE FROM  
THE GUARANTEED MINIMUM ANNUITY RESERVE  
OF RETIRED ANNUITANTS  
AS OF JUNE 30, 1994**

AGE	MALES		FEMALES		TOTALS	
	NUMBER	ANNUITIES	NUMBER	ANNUITIES	NUMBER	ANNUITIES
61			2	\$ 482	2	\$ 482
62			1	524	1	524
63			1	154	1	154
64			4	2,115	4	2,115
65	2	\$ 1,026	9	5,403	11	6,429
66	2	967	17	5,850	19	6,818
67	3	1,729	28	10,140	31	11,869
68	12	4,831	31	14,194	43	19,025
69	8	6,281	42	18,115	50	24,396
70	6	3,061	46	22,973	52	26,034
71	17	9,419	66	43,450	83	52,869
72	12	7,936	90	69,379	102	77,315
73	16	10,064	86	68,961	102	79,025
74	17	12,876	107	90,699	124	103,575
75	14	11,283	102	87,249	116	98,532
76	26	26,390	115	113,832	141	140,223
77	17	15,701	106	91,004	123	106,706
78	10	9,286	99	87,549	109	96,835
79	15	11,313	97	83,338	112	94,651
80	18	18,850	132	130,080	150	148,929
81	20	23,261	129	129,602	149	152,863
82	24	31,368	107	115,606	131	146,974
83	21	27,069	131	140,330	152	167,399
84	15	21,389	151	188,496	166	209,885
85	21	29,719	186	230,733	207	260,452
86	22	26,225	209	249,538	231	275,764
87	27	37,530	197	219,145	224	256,675
88	28	31,897	219	245,888	247	277,785
89	20	34,587	182	194,683	202	229,270

TABLE 6

**THE NUMBER AND ANNUAL BENEFITS PAYABLE FROM  
THE GUARANTEED MINIMUM ANNUITY RESERVE  
OF RETIRED ANNUITANTS  
AS OF JUNE 30, 1994**

AGE	MALES		FEMALES		TOTALS	
	NUMBER	ANNUITIES	NUMBER	ANNUITIES	NUMBER	ANNUITIES
90	16	\$ 19,218	155	\$ 191,529	171	\$ 210,747
91	13	16,410	160	180,870	173	197,281
92	14	18,334	128	155,119	142	173,453
93	8	6,411	117	154,285	125	160,696
94	10	14,229	99	116,297	109	130,526
95	3	2,948	76	102,812	79	105,760
96	4	3,685	52	70,109	56	73,794
97	5	2,967	37	53,320	42	56,287
98	2	700	37	48,741	39	49,441
99	1	2,384	18	28,474	19	30,858
100	2	2,754	16	25,180	18	27,933
101			8	13,604	8	13,604
102			9	12,005	9	12,005
103			4	5,535	4	5,535
104			1	1,926	1	1,926
105			1	2,059	1	2,059
106						
107						
108			1	869	1	869
<b>TOTAL</b>	<b>471</b>	<b>\$ 504,101</b>	<b>3,611</b>	<b>\$ 3,822,246</b>	<b>4,082</b>	<b>\$ 4,326,346</b>

TABLE 7

**THE NUMBER AND ANNUAL BENEFITS PAYABLE FROM  
THE GUARANTEED MINIMUM ANNUITY RESERVE  
OF SURVIVOR ANNUITANTS  
AS OF JUNE 30, 1994**

AGE	MALES		FEMALES		TOTALS	
	NUMBER	ANNUITIES	NUMBER	ANNUITIES	NUMBER	ANNUITIES
62			1	\$ 623	1	\$ 623
63						
64						
65			1	35	1	35
66						
67			2	1,518	2	1,518
68			1	408	1	408
69			2	612	2	612
70						
71			2	1,267	2	1,267
72			4	1,445	4	1,445
73			1	180	1	180
74	1	\$ 723	3	1,141	4	1,863
75	2	1,635	5	2,690	7	4,324
76	4	1,148	5	2,870	9	4,018
77	2	1,848	5	3,376	7	5,224
78	4	513	6	3,871	10	4,383
79	1	506	5	3,360	6	3,867
80	2	2,650	6	2,675	8	5,325
81	2	1,660	8	3,777	10	5,436
82	3	2,785	10	3,275	13	6,060
83	8	4,466	12	7,738	20	12,204
84	7	3,098	14	9,663	21	12,761
85	8	5,037	14	10,292	22	15,329
86	5	3,622	13	7,944	18	11,566
87	6	2,347	18	8,175	24	10,522
88	5	3,390	11	8,030	16	11,420
89	6	3,772	6	1,073	12	4,845

TABLE 7

**THE NUMBER AND ANNUAL BENEFITS PAYABLE FROM  
THE GUARANTEED MINIMUM ANNUITY RESERVE  
OF SURVIVOR ANNUITANTS  
AS OF JUNE 30, 1994**

AGE	MALES		FEMALES		TOTALS	
	NUMBER	ANNUITIES	NUMBER	ANNUITIES	NUMBER	ANNUITIES
90	7	\$ 5,190	9	\$ 5,400	16	\$ 10,590
91	3	2,461	11	4,038	14	6,499
92	3	1,494	7	4,919	10	6,412
93	1	759	6	4,287	7	5,046
94	4	2,551	2	586	6	3,137
95	1	1,422	1	42	2	1,463
96			3	772	3	772
97			2	1,298	2	1,298
98			2	979	2	979
99						
100	1	1,112			1	1,112
<b>TOTAL</b>	<b>86</b>	<b>\$ 54,189</b>	<b>198</b>	<b>\$ 108,357</b>	<b>284</b>	<b>\$ 162,546</b>

TABLE 8

**THE NUMBER AND ANNUAL BENEFITS PAYABLE FROM  
THE GUARANTEED MINIMUM ANNUITY RESERVE  
OF DISABILITY BENEFIT RECIPIENTS  
AS OF JUNE 30, 1994**

AGE	MALES		FEMALES		TOTALS	
	NUMBER	ANNUITIES	NUMBER	ANNUITIES	NUMBER	ANNUITIES
68			1	\$ 126	1	\$ 126
69						
70			1	696	1	696
71						
72			2	367	2	367
73			1	883	1	883
74			3	2,221	3	2,221
75						
76			3	2,629	3	2,629
77			1	313	1	313
78	1	\$ 116	1	850	2	966
79			1	901	1	901
80						
81			3	2,883	3	2,883
82			1	515	1	515
83			1	2,490	1	2,490
84			1	2,509	1	2,509
85	1	1,037	1	1,058	2	2,095
86			1	87	1	87
87						
88	1	1,633	1	1,217	2	2,851
89			1	2,258	1	2,258
90						
91			2	1,725	2	1,725
92			1	2,005	1	2,005
93			4	6,134	4	6,134
94			2	3,214	2	3,214
95			1	1,927	1	1,927
96						
97			1	514	1	514
<b>TOTAL</b>	<b>3</b>	<b>\$ 2,787</b>	<b>35</b>	<b>\$ 37,524</b>	<b>38</b>	<b>\$ 40,311</b>

TABLE 9

**THE NUMBER AND ANNUAL BENEFITS PAYABLE FROM  
THE SUPPLEMENTAL ANNUITY RESERVE  
OF RETIRED ANNUITANTS  
AS OF JUNE 30, 1994**

AGE	MALES		FEMALES		TOTALS	
	NUMBER	ANNUITIES	NUMBER	ANNUITIES	NUMBER	ANNUITIES
75			1	\$ 424	1	\$ 424
76						
77						
78						
79						
80						
81						
82						
83						
84			2	564	2	564
85	1	\$ 723	2	651	3	1,373
86						
87			1	285	1	285
88	1	561	7	1,444	8	2,005
89	3	911	14	3,370	17	4,282
90	1	320	23	5,745	24	6,066
91	2	375	16	4,943	18	5,318
92	4	1,707	16	5,611	20	7,319
93	1	859	22	9,774	23	10,632
94	1	127	20	8,039	21	8,167
95			19	9,809	19	9,809
96	1	183	13	4,038	14	4,222
97	1	102	12	6,217	13	6,319
98			12	6,014	12	6,014
99	1	600	6	1,798	7	2,398
100	1	662	8	4,220	9	4,882
101			5	3,235	5	3,235
102			3	1,151	3	1,151
103			3	1,128	3	1,128
104			1	774	1	774
105			1	486	1	486
<b>TOTAL</b>	<b>18</b>	<b>\$ 7,130</b>	<b>207</b>	<b>\$ 79,721</b>	<b>225</b>	<b>\$ 86,851</b>

TABLE 10

**THE NUMBER AND ANNUAL BENEFITS PAYABLE FROM  
THE SUPPLEMENTAL ANNUITY RESERVE  
OF DISABILITY BENEFIT RECIPIENTS  
AS OF JUNE 30, 1994**

AGE	MALES		FEMALES		TOTALS	
	NUMBER	ANNUITIES	NUMBER	ANNUITIES	NUMBER	ANNUITIES
81			1	\$ 600	1	\$ 600
82						
83			1	192	1	192
84						
85			1	400	1	400
86						
87						
88	1	\$ 800	1	600	2	1,400
89			1	545	1	545
90						
91			1	460	1	460
92			1	650	1	650
93			4	2,461	4	2,461
94			2	1,200	2	1,200
95			1	622	1	622
<b>TOTAL</b>	<b>1</b>	<b>\$ 800</b>	<b>14</b>	<b>\$ 7,731</b>	<b>15</b>	<b>\$ 8,531</b>

**APPENDIX A**

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

**INVESTIGATION OF  
SEVERANCE PAY  
OPTIONAL SERVICE CREDIT  
AND**

**UNUSED AND UNCOMPENSATED SICK LEAVE SERVICE CREDIT**

**FOR THE THREE YEAR PERIOD  
JULY 1, 1989 - JUNE 30, 1992**

**SEPTEMBER, 1994**

**BUCK  
CONSULTANTS**

55 West Monroe Street Suite 1700  
Chicago, Illinois 60603

**September 26, 1994**

**Board of Trustees  
Teachers' Retirement System  
of the State of Illinois  
2815 West Washington Street  
Springfield, Illinois 62794**

**Ladies and Gentlemen:**

We are submitting herewith our report on the results of an actuarial investigation of the experience of the Teachers' Retirement System of the State of Illinois with regard to severance pay, service credit for unused and uncompensated sick leave, and optional service purchases, for the three year period July 1, 1989 to June 30, 1992.

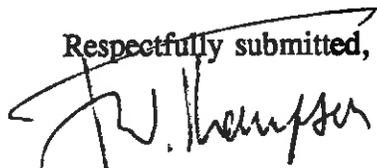
The attached report describes the actuarial process employed, and identifies the significant results of the investigation.

A summary of our recommendations may be found in Section III on pages A-9 and A-10 of the report.

As indicated in Section III, the proposed new assumptions would increase the current pension benefit obligation of the System, determined as of June 30, 1994, by approximately \$772.1 million.

The proposed assumptions would increase the total employer contribution rate by .13 percentage points for fiscal year 1996.

Respectfully submitted,



**John W. Thompson  
Consulting Actuary**

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

**ACTUARIAL INVESTIGATION OF THE SYSTEM'S  
EXPERIENCE OF  
SEVERANCE PAY  
OPTIONAL SERVICE CREDIT  
AND  
UNUSED AND UNCOMPENSATED SICK LEAVE SERVICE CREDIT  
FOR THE THREE YEAR PERIOD  
JULY 1, 1989 - JUNE 30, 1992**

**SECTION I — INTRODUCTION**

In past actuarial valuations, the year-to-year changes in the pension benefit obligation on account of experience gains/losses were reported in three categories: (i) investment gains/losses, (ii) salary increase gains/losses, and (iii) a general category representing all other sources of experience gains/losses. While this practice was adequate in the past, it was decided with the last valuation as of June 30, 1993 to undertake a more detailed analysis of the factors producing the net experience losses in the third general category.

The analysis at June 30, 1993 identified several factors which could be giving rise to experience losses. However, the measurement of these factors would require extensive additional data collection from TRS and it was agreed with the System that we would delay the additional data collection and analysis until the June 30, 1994 actuarial valuation. The three items deemed to have the greatest potential for contributing to experience losses were: (i) severance payments made in the last year of employment, (ii) service credit for unused and uncompensated sick leave, which is credited at the point of retirement, and (iii) optional service purchases made in the last two years of employment. As part of the June 30, 1994 valuation, data was collected and summarized by TRS Information Systems expressly for the purpose of undertaking this special experience study. Although data was provided for the period July 1, 1989 through June 30, 1994, it was deemed advisable to ignore data for any years that may have been impacted by the TRS Early Retirement Incentive (ERI) program. This required us to limit the experience investigation to the 3 year period July 1, 1989 through June 30, 1992.

Based on our investigation of the experience for this 3 year period (July 1, 1989 through June 30, 1992) we have prepared the following report.

The objectives of this investigation are to:

- 1) Determine appropriate assumptions to anticipate the following events among active members:
  - (a) severance payments in the last year of employment;
  - (b) service credit granted at retirement for unused and uncompensated sick leave;
  - (c) optional service purchases made in the last two years of employment.
  
- 2) Make recommendations regarding the adoption of new assumptions to the actuarial basis of the System, which are deemed appropriate by the actuary for adoption by the Board.

At our request, service credit information that will allow us to monitor future experience of optional service purchases and unused sick leave credit has been added to the pensioner data supplied by the System for the annual actuarial valuation. Severance pay information has not been added to the pensioner file, but severance pay summary information provided by Information Systems in future years will provide the data necessary to monitor this item.

#### **Experience Data Provided by Information Systems**

Information for retirements with effective dates between July 1, 1989 and June 30, 1992, inclusive, was reviewed. Tabulations showing the distributions, by years of service, of severance pay, other pensionable earnings in the last year of employment, and unused and uncompensated sick leave credit were provided. Additional tabulations providing information on different types of optional service — including the numbers of retirements with such service and the amount of such service — were also provided.

#### **Recommendations**

We are recommending the adoption of new actuarial assumptions that will anticipate, and provide for the advance funding of, benefits due to severance payments, unused and uncompensated sick leave service, and optional service purchases made in the last two years of employment. Analysis of the experience under these new assumptions will henceforth be part

of the periodic review of actuarial assumptions that is required under Article 16, Section 176 of the Pension Code governing the System.

## **SECTION II — DISCUSSION OF INVESTIGATION RESULTS**

We have prepared Tables 1 through 3, attached to Section IV, which summarize the actual experience of severance payments, optional service credit, and unused and uncompensated sick leave service credit for retirements occurring during the three year period ended June 30, 1992. The comments presented below under each category set forth the facts indicated by this experience study, along with our recommendations for future valuations.

### **Severance Pay**

During the three year period, data provided on 5,463 retirements from active service show that 3,400 or 62.2% received severance payments averaging 13.4% of other pensionable earnings received in the last year of employment. The data clearly indicates that not only the percentage of retirees with severance, but the amount of severance as a percentage of other earnings, increase with the amount of service at retirement. Using the new pensioner service fields provided by TRS Information Systems, and the summary information provided about severance payments, we were able to analyze the impact of severance payments on the pension benefit obligation of pensioners who had retired during the period under study. This analysis indicates that their pension benefit obligation was increased on average by 2.53% by severance payments.

We feel that such a significant impact warrants the adoption of a new assumption that will allow advance funding of benefits due to severance payments in the final year of employment. Our recommendation, and its fiscal impact, is explained in Section III.

### **Optional Service Credit**

During the three year period, data provided on 6,826 retirements (including retirements from active service and retirements of members who had terminated employment in prior years) give details on the following types of service credit: Regular (including repaid refunds), Out-of-System, Military, Leave/Layoff (FY92 information only), and Unused and Uncompensated Sick Leave.

Leave/Layoff service is limited to 3 years per member. Information was provided for only one fiscal year, and based on that data equals only 0.01% of Regular service. This type of service was ignored for the remainder of the study.

Military service is limited to 5 years of credit per member. Up to 2 of the 5 years can be for active military service that does not immediately follow TRS or Chicago Teachers service. (Thus, inactive members can become eligible to purchase such service after they leave TRS covered employment.) If the service immediately follows TRS or Chicago Teachers service, the member payment for such service is the contribution that would have been required if the member continued teaching, plus interest. In this case payment must be made prior to retirement. If the service does not immediately follow TRS or Chicago Teachers service, payment is based on both the member rate and the employer normal cost rate, plus interest. Payment can be made while in retirement.

The data provided by TRS Information Systems shows that military service equals 1.06% of regular service, which is fairly significant. However, the two types of military service could not easily be separated, which made an analysis of the impact of such service difficult. In addition, TRS administrative staff feels that these service purchases may be a temporary phenomenon. It was therefore decided not to recommend adoption of an assumption regarding military service at this time and such service was ignored for the remainder of the study.

Out-of-System service is limited to the lesser of 10 years, or 40% of TRS service, and must be followed by at least 5 years of service with TRS, Chicago Teachers, or SURS. The member payment equals the contribution that would have been required if the service had been rendered under TRS, plus interest (6% in recent years).

The data provided by TRS Information Systems indicate that out-of-system service averages 3.26% of regular service at retirement, which is significant. The initial feeling of the TRS administrative staff was that 90% of optional service credit is purchased in the last 2 years prior to retirement. However, the data provided by Information Systems did not provide detail as to the timing of the purchases.

We were able to test the 90% assumption by matching 5,905 newly reported retirees to the active data reported for them at June 30, 1992. For each such member the 1994 pensioner data included the following new service fields: total, ERI, unused sick leave, and optional service. The service credit from the 1992 active file reflected regular service earned, and optional service purchased, up to June 30, 1992. For each member we totaled the 1992 active service field, the regular service assumed earned between July 1, 1992 and the date of retirement, and the 1994 ERI and unused sick leave service fields. The difference between the June 30, 1994 total service field and this amount was assumed to be attributable to optional service purchases made between July 1, 1992 and June 30, 1994. These service purchases averaged 86% of the total optional service at June 30, 1994. We are therefore comfortable with the 90% assumption suggested by the TRS administrative staff.

Using the 90% assumption, we then analyzed the impact of out-of-system service purchases assumed to have been made in the 2 years prior to retirement on the pension benefit obligation of members who retired during the period under study. (Out-of-system service for pensioners with 35 or more years of service was assumed to be negligible due to their low average age at hire (approximately 25 years of age).) The analysis indicates that the pension benefit obligation of this group of retirees was increased on average by 2.87% by such optional service purchases. On the assumption that such out-of-system service occurred before the effective date of membership in TRS, our analysis further indicates that employee payments covered 25% of the cost of this benefit.

We feel that such a significant impact should be reflected by a new actuarial assumption that will allow advance funding of employer-provided benefits due to out-of-system service purchases made in the last two years of employment. Our recommendation, and its fiscal impact, is explained in Section III.

#### **Unused and Uncompensated Sick Leave**

This type of service is limited to 1 year. The member can receive such credit from TRS employers or from out-of-system employers who have verified creditable teaching service. No payment from the member is required to receive such service credit.

The data provided by TRS Information Systems shows that unused and uncompensated sick leave service averages 2.90% of regular service at retirement, which is significant. The rate of accumulation of sick leave service also appears to be fairly uniform at all levels of service at retirement. An analysis similar to that performed for the severance pay and out-of-system optional service studies indicates that the pension benefit obligation of members retiring during the three year period of the study was increased on average by 3.35% by unused and uncompensated sick leave service credit.

We recommend adoption of a new assumption that will allow advance funding of benefits due to unused and uncompensated sick leave credit. The recommendation, and its fiscal impact, is explained in Section III.

### SECTION III – SUMMARY OF FINDINGS

On the basis of our analysis of the results of the experience investigation, we recommend that certain additions to the actuarial basis of the System be evaluated. We therefore propose that consideration be given to amending the actuarial assumptions as follows:

- (1) A new parameter for severance pay in the final year of employment should be adopted as shown below.

#### **PROPOSED ASSUMPTION FOR SEVERANCE PAY**

<b>Years of Service at Retirement</b>	<b>Percent of Retirees Who Receive Severance Pay</b>	<b>Severance Pay as a Percent of Other Pensionable Earnings in the Last Year of Employment</b>
Less than 20	0%	0.00%
20-24	54	13.21
25-29	60	13.21
30-34	66	13.91
35 or more	72	14.60

- (2) A new parameter for optional service purchases in the two years preceding retirement should be adopted. The proposed assumption is that a load be added to the pension benefit obligation for retirement benefits for current active employees. (The pension benefit obligation for disability, termination of employment, and pre-retirement death benefits will not be affected.) Based on the analysis described in Section II, we would propose a load of 2.87%. In addition, it would be assumed that 75% of this liability is the responsibility of the employer, and that 25% of this liability will be covered by future member payments for purchase of out-of-system service.
- (3) A new parameter for the amount of unused and uncompensated sick leave service at retirement should be adopted. The proposed assumption is that such sick leave credit equals 2.90% of regular service credit at retirement.

## Fiscal Impact

In order to estimate the potential fiscal impact of the proposed changes, we have completed actuarial calculations based on the June 30, 1993 data for active members, which was submitted to our office by the System. The results of the calculations are summarized below.

Item	Amount
<b>Net Fiscal Impact</b>	
(1) Unfunded Pension Benefit Obligation	
Employer Responsibility	\$ 708,779,000
Member Responsibility	<u>63,346,000</u>
Total	\$ 772,125,000
(2) 1995/96 Employer Contribution Rate:	
Percentage of Payroll	.13%

The above calculations indicate that the net effect of the proposed revisions in actuarial assumptions would be to increase the pension benefit obligation of the System by approximately \$772.1 million.

In addition, the calculations indicate that the proposed revisions would increase the 1995/96 employer contribution rate by .13% of payroll.

**SECTION IV**  
**ACTUAL EXPERIENCE DURING THE THREE YEAR PERIOD**  
**JULY 1, 1989 — JUNE 30, 1992**

**TABLES 1A - 1D**  
**SUMMARY OF SEVERANCE PAY EXPERIENCE**  
**IN THE YEAR PRECEDING RETIREMENT**

**TABLE 1A**  
**Severance Payments Distributed by Service at Retirement**

Years of Service at Retirement	Percent of Severance Paid to all Retirees
Less than 20	3.7%
20-24	12.0
25-29	16.8
30-34	26.6
35 or more	<u>40.9</u>
All Retirees	100.0%

On the basis of the above data, members retiring with 20 or more years of service receive 96.3% of all severance payments. Therefore, the following analysis assumes that all severance payments were made to retirees with 20 or more years of service.

**TABLE 1B**  
**Average Earnings in Year Preceding Retirement**  
**(excluding severance payments)**

Years of Service at Retirement	Retirees with Severance Pay (a)	Retirees without Severance Pay (b)	(a) divided by (b)
20-24	\$ 42,766	\$ 38,875	1.07
25-29	44,446	41,946	1.06
30-34	47,510	44,585	1.07
35 or more	51,110	48,585	1.05

On the basis of the above data, retirees who receive severance payments earn from 5% to 7% more in other pensionable earnings than those without severance. However, the data does not

provide any means of distinguishing those who will receive severance from those who will not by their level of pay at retirement.

**TABLE 1C**

**Number of Retirements and Percent Retiring with Severance Pay**

Years of Service at Retirement	Number with Severance	Number without Severance	Total Number Retiring	Percent Retiring with Severance
20-24	474	435	909	52%
25-29	634	423	1,057	60%
30-34	915	523	1,438	64%
35 or more	1,219	476	1,695	72%

**TABLE 1D**

**Severance Pay Compared to Other Pensionable Earnings  
(retirees with severance only)**

Years of Service at Retirement	Severance Payments (millions)	Other Earnings (millions)	Severance as a Percent of Other Earnings
20-24	\$ 2.7	\$ 20.3	13.30%
25-29	3.7	28.2	13.12%
30-34	5.9	43.5	13.56%
35 or more	9.1	62.3	14.61%

The data shown in Tables 1C and 1D, above, were combined and smoothed to produce the proposed assumption shown on page 9, above.

**TABLE 2****SUMMARY OF OPTIONAL SERVICE CREDIT****Summary Information on Service at Retirement**

Type of Service	Number of Retirees	Years of Service	Average Over All Retirees	As a Percent of Regular	Limit
Regular (includes repaid refunds)	6,826	169,981	24.902	100.00%	
Out-of-System	1,467	5,548	.813	3.26	10 yrs/ 40% of regular
Military	997	1,794	.263	1.06	5 yrs
Leave/Layoff	19	17	.002	0.01	3 yrs
Sick Leave	6,704	<u>4,923</u>	<u>.721</u>	<u>2.90</u>	1 yr
Total	6,826	182,263	26.701	107.23	

Leave/Layoff information was provided only for the fiscal year ending June 30, 1992.

**APPENDIX B**

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

**COMPARISON OF  
BENEFIT PAYMENTS COVERED BY  
MEMBER CONTRIBUTIONS, EMPLOYER CONTRIBUTIONS  
AND  
INVESTMENT RETURN FOR TYPICAL ANNUITANTS**

**OCTOBER, 1994**

**BUCK  
CONSULTANTS**

55 West Monroe Street Suite 1700  
Chicago, Illinois 60603

**October 13, 1994**

**Board of Trustees  
Teachers' Retirement System  
of the State of Illinois  
2815 West Washington Street  
Springfield, Illinois 62794**

**Ladies and Gentlemen:**

At your request, we have explored the issue raised by Trustee Hugh Brown, relating to when the typical annuitant has "recovered" his or her member's accumulated contributions and the related employer contributions in annuity payments, as well as the period in which that annuitant's payments are in essence "funded by investment earnings".

We felt that results could differ based on age and service at retirement, and reviewed the characteristics of members retiring during the three period July 1, 1989 to June 30, 1992, in order to determine reasonable combinations of age and service to use for the "typical" annuitant. After grouping retirees by quinquennial years of service at retirement, we settled on the following: 22 years of service and age 60; 27 years of service and age 60; 32 years of service and age 59; and 37 years of service and age 61.

Accumulated member contributions at retirement were calculated for each annuitant, using the 7% refundable member contribution rate, the salary increase assumptions used for the actuarial valuation, and the 6% interest rate credited to the member's account. The employer's contribution balance was set equal to the present value of future retirement benefits (including the value of the 3% automatic annual increase) minus the member's accumulated contributions. Benefit payments were then projected for the period of the member's future life expectancy.

The results of the investigation are shown on the attached schedules. As you can see, the results did not vary markedly by age and service at retirement. Member contributions covered the first 3.23 to 3.84 years of benefit payments, employer contributions covered the next 7.29 to 7.71 years, and investment return covered the final years, from 11.80 to 13.09 years of benefit payments. In terms of percentages of future benefits, accumulated member contributions covered from 10.5% to 11.9%, employer contributions covered from 26.7% to 29.3%, and investment return covered from 60.2% to 62.4%.

Board of Trustees  
October 13, 1994  
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We would be pleased to discuss the results in more detail.

Sincerely yours,



S. Lynn Hill  
Senior Actuarial Manager

Enc.

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**TEACHERS' RETIREMENT SYSTEM OF THE STATE OF ILLINOIS  
COMPARISON OF BENEFIT PAYMENTS COVERED BY MEMBER CONTRIBUTIONS,  
EMPLOYER CONTRIBUTIONS, AND INVESTMENT RETURN  
FOR TYPICAL ANNUITANTS**

<b>Years of Service at Retirement</b>	<b>22</b>	<b>27</b>	<b>32</b>	<b>37</b>
<b>Age at Retirement</b>	<b>60</b>	<b>60</b>	<b>59</b>	<b>61</b>
<b>Future Expectation of Life (years)</b>	<b>23.55</b>	<b>23.55</b>	<b>24.37</b>	<b>22.74</b>
<b><u>Number of Years of Benefit Payments From</u></b>				
<b>Member Contributions ( 7.0% basis )</b>	3.84 yrs	3.63 yrs	3.65 yrs	3.23 yrs
<b>Employer Contributions</b>	<u>7.29</u>	<u>7.49</u>	<u>7.63</u>	<u>7.71</u>
<b>Member and Employer Contributions</b>	11.13	11.12	11.28	10.94
<b>Investment Return</b>	<u>12.42</u>	<u>12.43</u>	<u>13.09</u>	<u>11.80</u>
<b>Total Years of Benefit Payments</b>	23.55 yrs	23.55 yrs	24.37 yrs	22.74 yrs

Annual benefit payments, including the 3% automatic annual increase, were projected for the period of the member's life expectancy. It was then assumed that benefits would be paid first from member contributions, next from employer contributions, and finally from investment return.

**TEACHERS' RETIREMENT SYSTEM OF THE STATE OF ILLINOIS  
COMPARISON OF BENEFIT PAYMENTS COVERED BY MEMBER CONTRIBUTIONS,  
EMPLOYER CONTRIBUTIONS, AND INVESTMENT RETURN  
FOR TYPICAL ANNUITANTS**

<b>Years of Service at Retirement</b>	<b>22</b>	<b>27</b>	<b>32</b>	<b>37</b>
<b>Age at Retirement</b>	<b>60</b>	<b>60</b>	<b>59</b>	<b>61</b>
<b>Future Expectation of Life (years)</b>	<b>23.55</b>	<b>23.55</b>	<b>24.37</b>	<b>22.74</b>
<b><u>Percentage of Benefits Paid From</u></b>				
<b>Member Contributions</b>	11.9%	11.3%	10.9%	10.5%
<b>Employer Contributions</b>	26.8%	27.4%	26.7%	29.3%
<b>Investment Return</b>	61.3%	61.3%	62.4%	60.2%

Annual benefit payments, including the 3% automatic annual increase, were projected for the period of the member's life expectancy. Member and Employer contribution percentages were then determined by dividing accumulated contributions at retirement by the total benefit payments expected over the member's future lifetime. The remaining payments were assumed to be made from Investment Return.