

**THE PUBLIC SCHOOL EMPLOYEES'
RETIREMENT SYSTEM OF PENNSYLVANIA**

**ACTUARIAL VALUATION
JUNE 30, 2000**

Revised to Reflect Act 9 of 2001

BUCK CONSULTANTS

One North Franklin, Suite 3500
Chicago, Illinois 60606

May 21, 2001

The Retirement Board
Public School Employees'
Retirement System of Pennsylvania
P.O. Box 125
Harrisburg, Pennsylvania 17108

Ladies and Gentlemen:

This report presents the results of the revised annual actuarial valuation of the Public School Employees' Retirement System of Pennsylvania as of June 30, 2000. The valuation was revised to reflect Act 9 of 2001 which amended the Code to increase the level of Premium Assistance from \$55 per month to \$100 per month effective January 1, 2002. The valuation takes into account all of the promised benefits to which members are entitled, including pension and survivor benefits and establishes the contribution rate for the 2001/2002 fiscal year in conformance with the Retirement Code.

The valuation was based on the actuarial assumptions and methods as adopted by the Board of Trustees, including a valuation interest rate of 8½% per annum compounded annually. Based on our recommendations and effective with this valuation, the Board adopted revised actuarial assumptions. Specifically, the disability, retirement and termination rates were modified to reflect experience and an updated mortality table was adopted. Also, the inflation assumption was reduced from 4% to 3½% and the salary increase assumption was lowered to an average of 6¼%.

The actuarial assumptions and methods comply with the parameters set forth in Governmental Accounting Standards Board Statement No. 25.

Assets and Membership Data

The individual data for members of the System as of the valuation date were reported to the actuary by the Retirement System. While we did not verify the data at their source, we did perform tests for internal consistency and reasonableness. The amount of assets in the trust fund taken into account in the valuation was based on statements prepared for us by the Retirement System.

The Retirement Board
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Funding Adequacy

The valuation results determine that the employer contribution rate for fiscal year 2001/2002 is 1.09%. The funded status of the plan determined as of June 30, 2000 based on the accrued liability and the actuarial value of assets of the date is 123.8%.

Financial Results and Membership Data

Detailed summaries of the financial results of the valuation and membership data used in preparing the valuation are shown in the valuation report. Supporting schedules included in the Actuarial and Statistical Section of PSERS Comprehensive Annual Financial Report were prepared by the actuary.

The valuations were completed by qualified actuaries in accordance with accepted actuarial procedures as prescribed by the Actuarial Standards Board. The qualified actuaries are members of the American Academy of Actuaries and are experienced in performing actuarial valuations of public employee retirement systems. To the best of our knowledge, this report is complete and accurate and the actuarial methods and assumptions produced results which are reasonable.

Respectfully submitted,



Kim M. Nicholl, F.S.A.
Principal and Consulting Actuary



S. Lynn Hill
Senior Actuarial Manager

KMN/SLH:pl

THE PUBLIC SCHOOL EMPLOYEES' RETIREMENT SYSTEM OF PENNSYLVANIA

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Executive Summary

This report presents the actuarial valuation as of June 30, 2000 for the Public School Employees' Retirement System of Pennsylvania.

The principal valuation results include:

- The employer contribution rate for fiscal year 2001/2002 which is 1.09%.
- The funded status of the plan determined as of June 30, 2000 based on the accrued liability and the actuarial value of assets as of that date which is 123.8%.
- The determination of the actuarial gain or loss as of June 30, 2000 which is a gain of \$1.9 billion.
- Annual disclosure as of June 30, 2000 as required by Statement No. 25 of the Governmental Accounting Standards Board.

The valuation was completed based upon membership and financial data submitted by the Retirement System. Detailed summaries of the financial results of the valuation and membership data used in preparing the valuation are included in the valuation report. Supporting schedules included in the Actuarial and Statistical Section of PSERS Comprehensive Annual Financial Report were prepared by the actuary.

Changes Since Last Year

Actuarial Assumptions and Methods

The actuarial assumptions are adopted by the Board based on the recommendation of the actuary. The actuarial assumptions have been changed effective June 30, 2000. Specifically, the disability, retirement and termination rates were modified to reflect experience and an updated mortality table was adopted. Also, the inflation assumption was reduced from 4% to 3½% and the salary increase assumption was lowered to an average of 6¼%. The actuarial cost method is specified in the Retirement Code. The actuarial assumptions and methods are outlined in Table 12.

Legislative and Administrative Changes

Act 9 of 2001 amended Section 8509(B) of the PSERS Code to increase the level of Premium Assistance from \$55 per month to \$100 per month effective January 1, 2002. There were no other legislative or administrative changes that affect the funding of the System.

Contribution Rates

The results of the valuation as of June 30, 2000 determine the employer contribution rate for fiscal year 2001/2002. The total contribution rate payable by the employer is 1.09% of payroll. This includes 0.00% of payroll for pension benefits plus 1.09% of payroll for the health insurance premium assistance program.

The average contribution rate payable by the members is 5.80%. This rate represents an average of the members who were most recently hired prior to July 22, 1983 contributing 5.25%, and the remaining members who are contributing 6.25%.

Reasons for Change in the Rate

The employer contribution rate decreased from 1.94% for fiscal year 2000/2001 to 1.09% for fiscal year 2001/2002. The decrease of 0.85% is due to the following reasons:

- | | |
|--|------------|
| • Decrease due to assumption changes | (.69)% |
| • Decrease due to actuarial gain on assets | (1.77) |
| • Increase due to actuarial loss on liabilities | .40 |
| • Increase due to change in health insurance contribution rate | .79 |
| • Increase due to zero minimum pension rate contribution | <u>.42</u> |
| • Total | (0.85)% |

Summary of Principal Results

Summarized below are the principal financial results for the Public School Employees' Retirement System based upon the actuarial valuation as of June 30, 2000. Comparable results from the June 30, 1999 valuation are also shown.

Item	June 30, 2000	June 30, 1999
Demographics		
Active Members		
• Number	234,210	223,495
• Average Annual Pay	\$ 38,169	\$ 36,903
Annuitants		
• Number	134,058	132,869
• Average Annual Benefit Payment	\$ 14,029	\$ 13,777
Contribution Rates (as a Percentage of Payroll)		
	(Fiscal Year 2001/2002)	(Fiscal Year 2000/2001)
Employer Contribution Rate:		
• Total Pension Contribution Rate	0.00%	1.64%
• Health Insurance Contribution Rate	<u>1.09</u>	<u>0.30</u>
• Total	1.09%	1.94%
Member Average Contribution Rate		
• Total Rate	<u>5.80</u> 6.89%	<u>5.77</u> 7.71%
Actuarial Funded Status		
• Accrued Liability	\$ 39,822.8 Mil	\$ 37,499.1 Mil
• Actuarial Value of Assets	<u>49,293.0</u>	<u>44,606.5</u>
• Unfunded Accrued Liability	\$ (9,470.2)	\$ (7,107.4)
• Funded Ratio	123.8%	119.0%

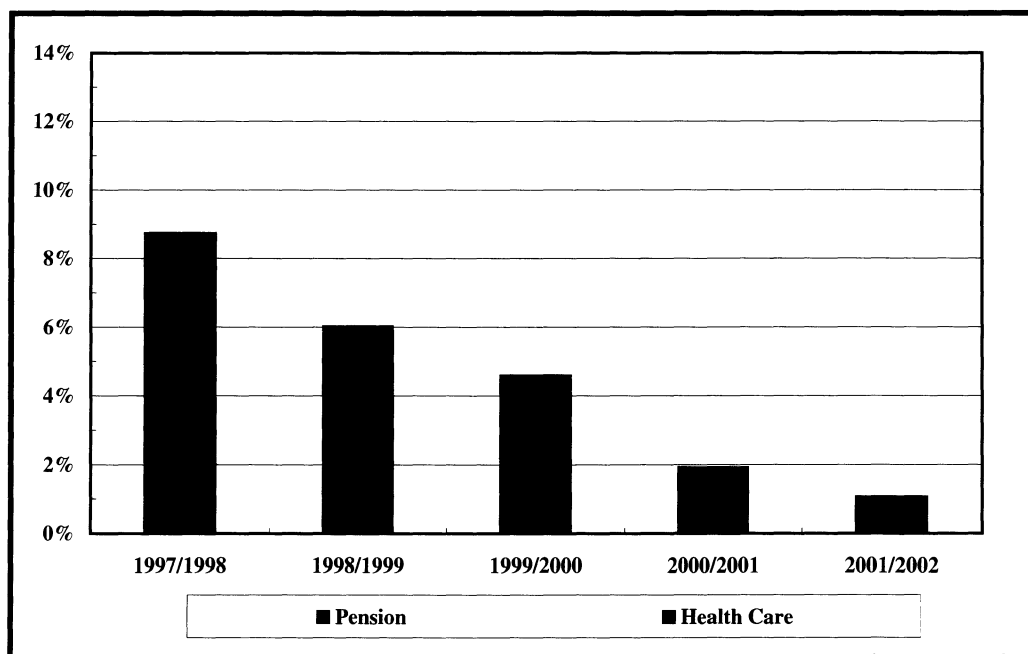
Five-Year History of Principal Financial Results

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

Fiscal Year	Member Contributions	Employer Contributions			
		Normal Cost	Unfunded Accrued Liability	Health Care	Total
2001/2002	5.80%	5.63%	(6.05)%	1.09%	1.09%
2000/2001	5.77	6.29	(4.65)	.30	1.94
1999/2000	5.72	6.40	(2.04)	.25	4.61
1998/1999	5.69	6.33	(.44)	.15	6.04
1997/1998	5.65	6.44	2.17	.15	8.76

The following chart shows a five-year history of employer contribution rates:

Five-Year History of Employer Contribution Rates



Funded Ratio

The financing objective of the System is to:

- Fully fund all current costs based on the normal contribution rate determined under the funding method; and
- Liquidate the unfunded accrued liability based on the amortization schedules as required by the retirement code, i.e., a schedule of 20 years for each change in the unfunded accrued liability.

The total contribution rate of 1.09% of payroll payable by employers, when taken together with the contributions payable by the members and asset returns, is sufficient to achieve the financing objective.

The System's funded status on the funding basis is measured by comparing the actuarial value of assets (based on a 3-year moving average market value) with the accrued liability. The accrued liability is the present value of benefits accumulated to date under the System's funding method and reflects future pay increases for active employees.

On this basis, the System's funded ratio is 123.8% as of June 30, 2000. The funded ratio is based on an actuarial value of assets of \$49.3 billion and an accrued liability of \$39.8 billion.

Reasons for Change in the Funded Ratio

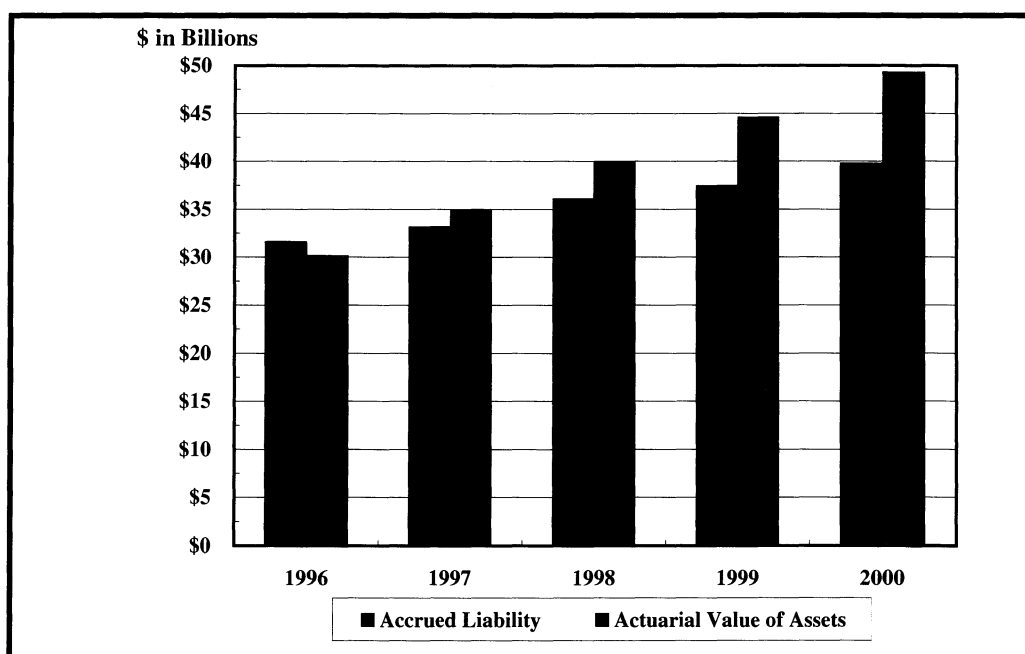
The funded ratio increased from 119.0% as of June 30, 1999 to 123.8% as of June 30, 2000. The increase is due to the net effect of asset and experience gains.

**Five-Year History of
Funded Ratio**
(\$ results reported in millions)

Valuation as of June 30	Accrued Liability	Actuarial Value of Assets	Unfunded Accrued Liability	Funded Ratio
2000	\$ 39,822.8	\$ 49,293.0	\$ (9,470.2)	123.8%
1999	37,499.1	44,606.5	(7,107.4)	119.0
1998	36,136.2	39,969.0	(3,832.8)	110.6
1997	33,209.5	34,872.6	(1,663.1)	105.0
1996	31,629.8	30,170.9	1,458.9	95.4

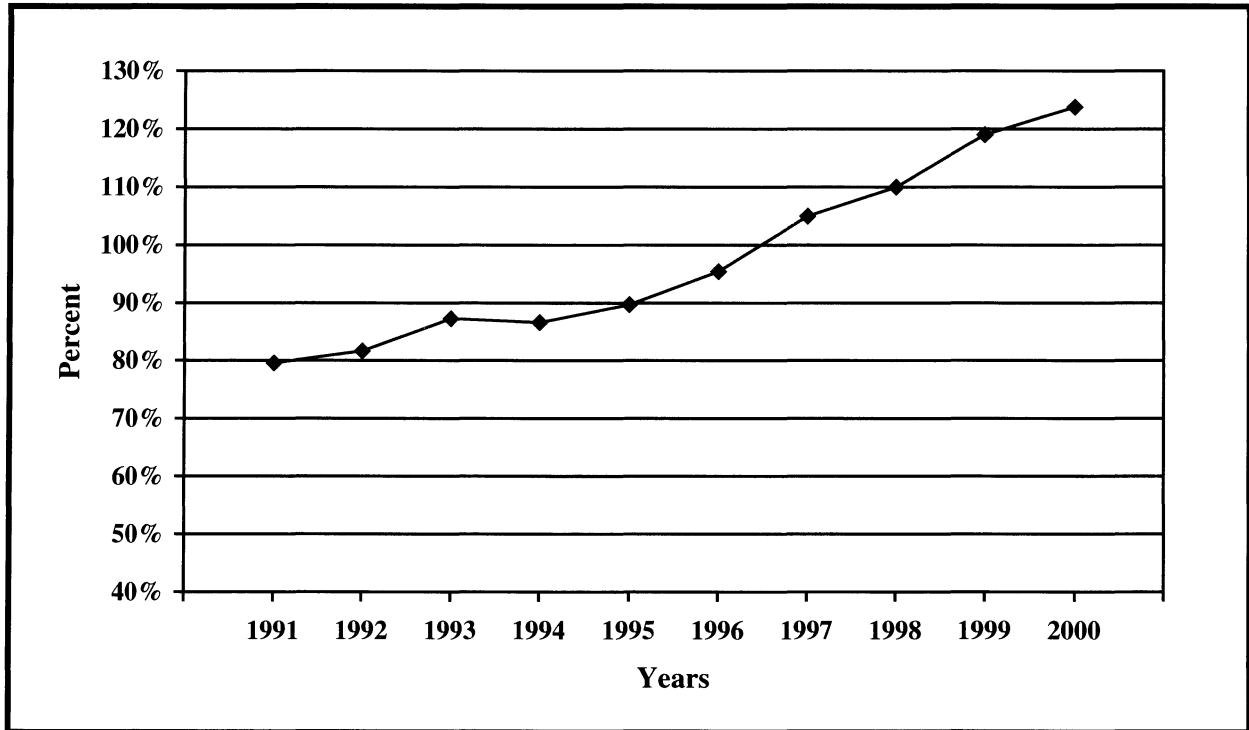
The following chart shows a five-year history of the accrued liability and the actuarial value of assets:

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



The following chart shows a ten-year history of the funded ratio:

**Ten-Year History of Funded Ratio
(1991 - 2000)**



GASB No. 25 Disclosure

Statement No. 25 of the Governmental Accounting Standards Board established reporting standards for the annual financial reports of defined benefit pension plans. The System complied with Statement No. 25 beginning with the June 30, 1996 valuation. The statement requires disclosure of the "schedule of funding progress" and the "schedule of employer contributions" in the System's financial statements.

The "schedule of funding progress" shows historical trend information about the System's actuarial value of assets, the actuarial accrued liability and the unfunded actuarial accrued liability. The actuarial funded status is measured by comparing the actuarial value of assets (based on a 3-year moving average market value) with the accrued liability. The accrued liability is the present value of benefits accumulated to date under the System's funding method and reflects future pay increases for active employees. On this basis, the System's funded ratio is 123.8% as of June 30, 2000. The funded ratio is based on an actuarial value of assets of \$49.3 billion and an accrued liability of \$39.8 billion.

The "schedule of employer contributions" shows historical trend information about the annual required contributions (ARC) of the employer and the percentage of the ARC contributed to the System. The ARC is equal to the normal cost plus amortization of the unfunded actuarial accrued liability. The maximum period of amortizing the unfunded actuarial accrued liability permitted by GASB No. 25 is 40 years. The maximum amortization period decreases to 30 years in 2006. The employer contributions to the System are equal to the normal cost plus a 20-year amortization of each change in the unfunded accrued liability. The employer contributions to the System are equal to 100% of the ARC.

Rate of Return

The investment return of the trust fund (i.e. total return including both realized and unrealized gains and losses) for fiscal years 1995/1996 through 1999/2000 is shown in the table below. The return based on the actuarial value of assets used for determining annual contribution rates is also shown.

The rate of return on market value reflects the investment earnings on the market value of assets from the beginning of the fiscal year to the end of the fiscal year. The actuarial assets are the assets recognized for valuation purposes. Actuarial assets are based on a smoothed market value that recognizes investment gains and losses over a period of three years. The rate of return on the actuarial value of assets is a measure of the increase in the actuarial value of assets from the beginning of the fiscal year to the end of the fiscal year.

Fiscal Year	Rate of Return Based on	
	Market Value	Actuarial Value
1999/2000	11.9%	13.6%
1998/1999	12.2	15.1
1997/1998	15.8	16.8
1996/1997	18.3	17.3
1995/1996	17.8	12.6

TABLE 1

**SUMMARY OF RESULTS OF ACTUARIAL VALUATION
AS OF JUNE 30, 2000
(\$ Amounts in Thousands)**

Item	Amount
Member Data	
1. Number of Members	
a) Active Members	234,210
b) Inactive Members and Vesteas	50,682
c) Annuitants, Beneficiaries and Survivor Annuitants	<u>134,058</u>
d) Total	418,950
2. Annualized Salaries	\$ 8,939,598
3. Annual Annuities	\$ 1,880,644
Valuation Results	
4. Present Value of Future Pension Benefits	
a) Active Members	\$ 33,352,814
b) Inactive Members and Vesteas	480,534
c) Annuitants, Beneficiaries and Survivor Annuitants	<u>15,985,652</u>
d) Total	\$ 49,819,000
5. Present Value of Future Pension Normal Cost	
a) Active Members	\$ 5,098,416
b) Employer	<u>4,948,980</u>
c) Total	\$ 10,047,396
6. Pension Accrued Liability	
a) Active Members (4a) - (5c)	\$ 23,305,418
b) Inactive Members and Vesteas	480,534
c) Annuitants, Beneficiaries and Survivor Annuitants	<u>15,985,652</u>
d) Total	\$ 39,771,604
7. Health Care Payments	\$ 51,228
8. Total Accrued Liability (6) + (7)	\$ 39,822,832
9. Actuarial Value of Assets	\$ 49,293,047
10. Unfunded Accrued Liability (8) - (9)	\$ (9,470,215)
11. Total Normal Cost Rate	11.43 %
12. Member Contribution Rate	5.80 %
13. Employer Normal Cost Rate (11) - (12)	5.63 %
Employer Annual Funding Requirement for Fiscal 2001/2002	
14. Employer Contribution Rate	
a) Normal	5.63 %
b) Unfunded Accrued Liability	<u>(6.05)</u>
c) Preliminary Pension Rate	(0.42) %
d) Final Pension Rate	0.00
e) Health Insurance	<u>1.09</u>
f) Total	1.09 %

TABLE 2

**SUMMARY OF SOURCES OF EMPLOYER CONTRIBUTION RATE
AS OF JUNE 30, 2000
(\$ Amounts in Thousands)**

	Funding Period 20 Years from July 1	Initial Amount of Liability	Outstanding Balance as of July 1, 2000	Annual Payment Amount	Percent
1. Amortization of:					
a) Initial Unfunded Base	1991	\$ 4,354,817	\$ 4,614,716	\$ 560,069	5.60 %
b) Changes in 1991	1992	(140,035)	(151,823)	(17,152)	(0.17)%
c) Changes in 1992	1993	(135,127)	(148,861)	(15,763)	(0.16)%
d) Changes in 1993	1994	(1,224,680)	(1,362,886)	(136,059)	(1.36)%
e) Changes in 1994	1995	70,588	78,956	7,469	0.08 %
f) 1994 COLA	1995	499,010	558,165	52,799	0.53 %
g) Changes in 1995	1996	(740,020)	(828,354)	(74,571)	(0.74)%
h) Changes in 1996	1997	(1,569,397)	(1,751,312)	(150,615)	(1.51)%
i) Changes in 1997	1998	(2,950,869)	(3,271,689)	(269,710)	(2.70)%
j) Changes in 1998	1999	(2,799,000)	(3,074,059)	(243,646)	(2.44)%
k) 1998 COLA	1999	956,799	1,050,824	83,287	0.83 %
l) Changes in 1999	2000	(2,986,434)	(3,240,281)	(247,583)	(2.48)%
m) Changes in 2000	2001	(1,943,611)	<u>(1,943,611)</u>	<u>(153,457)</u>	<u>(1.53)%</u>
Total Amortization Payments			\$ (9,470,215)	\$ (604,932)	(6.05)%
2. Employer Normal Cost Rate					<u>5.63 %</u>
3. Preliminary Pension Rate (1) - (2)					(0.42)%
4. Final Pension Rate					0.00 %
5. Health Insurance Rate					<u>1.09 %</u>
6. Total Employer Contribution Rate (4) + (5)					1.09 %

TABLE 3

**DETERMINATION OF HEALTH INSURANCE CONTRIBUTION RATE
FOR FISCAL YEAR 2001/2002**
(\$ Amounts in Thousands)

Item	Amount
1. Estimated Number of Eligible Annuitants in Fiscal 2002/2003	90,000
2. Estimated Number of Eligible Annuitants Who Elect Coverage	72,900
3. Annual Health Insurance Payments During Fiscal 2002/2003 (2) x \$100 x 12	\$ 87,480
4. Estimated Health Insurance Administrative Expenses During Fiscal 2002/2003	<u>962</u>
5. Total Estimated Health Insurance Account Disbursements During Fiscal 2002/2003 (3) + (4)	\$ 88,442
6. Additional Disbursement in Fiscal 2001/2002 due to Increase in Premium Assistance	\$ 19,834
7. Estimated Shortfall in Health Insurance Account (5) + (6)	<u>\$ 108,276</u>
8. Required Health Insurance Contribution Rate	
(a) Estimated 2001/2002 Payroll	\$ 9,998,568
(b) Required Health Insurance Contribution Rate (7) / (8a) (rounded up)	1.09%

TABLE 4

**SUMMARY OF MARKET VALUE OF PLAN ASSETS
AS OF JUNE 30, 2000**
(\$ Amounts in Thousands)

Market Value	
1. Market Value of Assets as of June 30, 1999	\$ 48,971,751
2. Contributions During Fiscal 1999/2000	965,285
3. Disbursements During Fiscal 1999/2000	2,260,852
4. Investment Return During Fiscal 1999/2000	
a) Net Investment Return	\$ 5,763,627
b) Administrative Expenses	<u>26,861</u>
c) Investment Return After Expenses (a) - (b)	\$ 5,736,766
5. Market Value of Assets as of June 30, 2000 (1) + (2) - (3) + (4c)	\$ 53,412,950
6. Rate of Return	11.87%
Asset Allocation by Account	
1. Members' Savings Account	\$ 6,775,934
2. Annuity Reserve Account	16,567,998
3. State Accumulation Account	30,017,790
4. Health Care Account	<u>51,228</u>
5. Total (1) + (2) + (3) + (4)	\$ 53,412,950

TABLE 5

**DERIVATION OF ACTUARIAL VALUE OF ASSETS
AS OF JUNE 30, 2000
(\$ Amounts in Thousands)**

1. Market Value of Assets as of June 30, 2000				\$ 53,412,950
2. Determination of Deferred Gain (Loss)				
	<u>Year</u>	<u>Gain (Loss)</u>	<u>% Deferred</u>	<u>Deferred Amount</u>
	1999/2000	\$ 4,129,236	66-2/3%	\$ 2,752,824
	1998/1999	4,101,236	33-1/3%	1,367,079
	1997/1998	<u>4,893,203</u>	- 0 -	<u>0</u>
	Total	\$ 13,123,675		\$ 4,119,903
3. Actuarial Value of Assets (1) - (2)				\$ 49,293,047
4. Actuarial Rate of Return *				13.61%

* The actuarial rate of return is the investment return on the increase in the actuarial value of assets from the June 30, 1999 to the June 30, 2000 valuation.

TABLE 6

**ANALYSIS OF CHANGE IN UNFUNDED ACCRUED LIABILITY
AS OF JUNE 30, 2000**
(\$ Amounts in Thousands)

Item	Amount
1. Unfunded Accrued Liability at June 30, 1999	\$ (7,107,410)
2. Interest Credit at 8.50% to June 30, 2000	(604,130)
3. Contributions Toward Unfunded Accrued Liability	(184,936)
4. Expected Unfunded Accrued Liability at June 30, 2000 (1) + (2) - (3)	\$ (7,526,604)
5. Actual Unfunded Accrued Liability at June 30, 2000	<u>\$ (9,470,215)</u>
6. Increase (Decrease) from Expected (5) - (4)	\$ (1,943,611)
7. Reasons for Increase (Decrease)	
(a) Experience (Gains) Losses	
(i) Gain from Investment Return on Actuarial Value of Assets	\$ (2,245,595)
(ii) Loss from Salary Increases Greater than Expected	36,064
(iii) Loss from Retirement and Other Separation Experience	199,935
(iv) Loss from Annuitants' Mortality Experience	<u>122,551</u>
Subtotal	\$ (1,887,045)
(b) Changes in Benefit Provisions	\$ -
(c) Change in Assumptions	\$ (56,566)
(d) Grand Total	\$ (1,943,611)

TABLE 7

**SCHEDULE OF FUNDING PROGRESS
GASB STATEMENT No. 25 DISCLOSURE
(\$ Amounts in Thousands)**

Valuation as of June 30	Actuarial Value of Assets	Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability	Funded Ratio	Covered Payroll	Unfunded Accrued Liability as a Percentage of Covered Payroll
2000	\$ 49,293,047	\$ 39,822,832	\$ (9,470,215)	123.8 %	\$ 8,939,598	105.9 %
1999	44,606,526	37,499,115	(7,107,411)	119.0	8,247,602	86.2
1998	39,968,957	36,136,163	(3,832,794)	110.6	8,091,481	47.4
1997	34,872,643	33,209,493	(1,663,150)	105.0	7,745,001	21.5
1996	30,170,885	31,629,822	1,458,937	95.4	7,616,585	(19.2)
1995	26,971,214	30,072,732	3,101,518	89.7	7,378,342	(42.0)

TABLE 8

SCHEDULE OF EMPLOYER CONTRIBUTIONS
GASB STATEMENT No. 25 DISCLOSURE
(\$ Amounts in Thousands)

Fiscal Year Ended June 30	Annual Required Contribution	Percentage Contributed
2000	\$ 390,504	100 %
1999	513,940	100
1998	718,431	100
1997	796,205	100
1996	860,898	100
1995	791,802	100

The information presented above was determined as part of the actuarial valuation as of two years prior to the dates indicated (i.e. the contribution determined by the valuation completed as of June 30, 1998 was contributed in the fiscal year ending June 30, 2000).

Additional information as of the latest actuarial valuation follows:

Valuation Date:	6/30/2000
Actuarial Cost Method:	Entry Age
Amortization Method:	Level percent closed
Remaining Amortization Period:	10 to 20 years
Asset Valuation Method:	3-year smoothed market

Actuarial Assumptions:	
- Investment Rate of Return *	8.50%
-Projected Salaried Increases *	6.25%

* Includes Inflation at:	3.50%
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TABLE 9

**SOLVENCY TEST
COMPARATIVE SUMMARY OF ACCRUED LIABILITY AND ACTUARIAL VALUE OF ASSETS**

(\$ Amounts in Thousands)

Valuation as of June 30	(1) Active Member Contributions	(2) Retirees and Beneficiaries	(3) Active Member Employer Financed	Actuarial Value of Assets	Portion of Accrued Liability Covered by Valuation Assets		
					(1)	(2)	(3)
2000	\$ 6,775,934	\$ 16,036,880	\$ 17,010,018	\$ 49,293,047	100 %	100 %	100 %
1999	6,298,483	15,275,756	15,924,876	44,606,526	100	100	100
1998	6,113,312	13,734,388	16,288,463	39,968,957	100	100	100
1997	5,755,010	12,078,982	15,375,501	34,872,643	100	100	100
1996	5,498,624	10,599,998	15,531,200	30,170,885	100	100	91
1995	5,089,724	9,931,378	15,051,630	26,971,214	100	100	79

TABLE 10**HISTORY AND PROJECTION OF CONTRIBUTION RATES**

Fiscal Year Ending June	Contribution Rates					
	Member	Employer Normal Cost	Unfunded Liability Rate	Preliminary Employer Pension Rate	Health Care Contribution	Total Employer Rate
1992/1993	5.48 %	7.90 %	5.84 %	13.74 %	0.50 %	14.24 %
1993/1994	5.51	7.34	5.58	12.92	0.25	13.17
1994/1995	5.55	6.43	4.18	10.61	0.45	11.06
1995/1996	5.59	6.43	4.67	11.10	0.62	11.72
1996/1997	5.62	6.44	3.56	10.00	0.60	10.60
1997/1998	5.65	6.44	2.17	8.61	0.15	8.76
1998/1999	5.69	6.33	(0.44)	5.89	0.15	6.04
1999/2000	5.72	6.40	(2.04)	4.36	0.25	4.61
2000/2001	5.77	6.29	(4.65)	1.64	0.30	1.94
2001/2002	5.80	5.63	(6.05)	(0.42)	1.09	1.09
2002/2003	5.83	5.61	(7.31)	(1.70)	0.89	0.89
2003/2004	5.85	5.59	(8.02)	(2.43)	0.88	0.88
2004/2005	5.87	5.57	(8.34)	(2.77)	0.88	0.88
2005/2006	5.89	5.56	(8.75)	(3.19)	0.89	0.89
2006/2007	5.92	5.53	(9.22)	(3.69)	0.88	0.88
2007/2008	5.95	5.51	(9.74)	(4.23)	0.90	0.90
2008/2009	5.98	5.48	(10.34)	(4.86)	0.89	0.89
2009/2010	6.01	5.46	(11.01)	(5.55)	0.90	0.90
2010/2011	6.04	5.43	(11.75)	(6.32)	0.90	0.90
2011/2012	6.07	5.41	(19.49)	(14.08)	0.90	0.90

The projection of contribution rates is based on the assumption that there are no actuarial gains or losses, no changes in demographics or economic assumptions and no changes in benefit provisions.

TABLE 11

**HISTORY AND PROJECTION OF
ANNUITANTS, BENEFICIARIES, SURVIVOR ANNUITANTS AND ACTIVE MEMBERS**

Valuation as of June 30	New Annuitants During the Year	Annuitant Deaths During the Year	Annuitants at End of Year	Beneficiaries and Survivor Annuitants at End of Year	Total Annuitants, Beneficiaries and Survivor Annuitants	Active Members
1991			98,310	4,614	102,924	202,631
1992			100,265	4,761	105,026	202,991
1993			108,444	4,768	113,212	197,997
1994			109,813	5,218	115,031	206,540
1995			110,509	5,451	115,960	210,783
1996			113,007	5,719	118,726	213,906
1997			118,137	5,987	124,124	215,077
1998			120,665	6,149	126,814	220,703
1999			126,448	6,421	132,869	223,495
2000			127,404	6,654	134,058	234,210
2001	7,011	3,812	130,603	7,070	137,673	234,210
2002	6,878	3,946	133,535	7,451	140,986	234,210
2003	7,356	4,095	136,796	7,795	144,591	234,210
2004	7,909	4,230	140,475	8,101	148,576	234,210
2005	8,368	4,378	144,465	8,375	152,840	234,210
2006	8,782	4,515	148,732	8,616	157,348	234,210
2007	9,291	4,653	153,370	8,830	162,200	234,210
2008	9,675	4,795	158,250	9,020	167,270	234,210
2009	9,897	4,928	163,219	9,181	172,400	234,210
2010	9,949	5,061	168,107	9,324	177,431	234,210

Note: The projection of active members assumes that the workforce will remain constant.
This may or may not occur.

TABLE 12**DESCRIPTION OF ACTUARIAL ASSUMPTIONS AND METHODS****ASSUMPTIONS**

Interest Rate: 8½% per annum, compounded annually (adopted as of June 30, 1990). The components are 3½% for inflation and 5% for the real rate of return. Actuarial equivalent benefits are determined based on 4% (since 1960).

Separation From Service: Illustrative rates of assumed separation from service are as follows (adopted in 2000):

Age	Annual Rate of:						
	Non-Vested Withdrawal		Death	Disability	Vested Withdrawal*	Early Retirement**	Superannuation Retirement
	Less than 5 Years of Service	5 or More Years of Service					
MALES							
25	13.00%	5.50%	.05%	.02%	1.40%		
30	11.00	3.00	.05	.02	1.40		
35	11.00	3.00	.05	.10	1.10		
40	11.00	3.00	.07	.18	.80	.13%	
45	11.00	3.00	.10	.18	.50	.15	
50	9.00	3.00	.16	.28	1.78	1.56	24.00%
55	9.00	3.00	.25	.43	3.50	10.00	24.00
60	9.00	2.40	.46	.58	4.50	10.00	28.00
65			.90				20.00
69			1.44				20.00
FEMALES							
25	13.00%	9.50%	.01%	.04%	4.00%		
30	13.00	7.50	.02	.04	4.00		
35	13.00	5.50	.03	.08	2.00		
40	10.00	3.50	.04	.13	1.00	.60%	
45	10.00	3.00	.07	.18	.55	.60	
50	10.00	3.00	.10	.25	1.50	1.74	10.00%
55	10.00	3.00	.15	.35	3.00	10.00	10.00
60	10.00	3.50	.23	.45	5.90	15.00	25.00
65			.48				28.00
69			.88				20.00

* Vested Withdrawal – At least 10 years service but not eligible for Early or Superannuation retirement.

** Early Retirement – Age 55 with 25 years service, but not eligible for Superannuation retirement.

Death After Retirement: The 1995 George B. Buck Mortality Tables, rated forward one year for males and unadjusted for females, adopted in 2000, are used to project mortality for healthy annuitants and for dependent beneficiaries. Special mortality tables based on PSERS' experience are used for disability retirements. (The 1995 George B. Buck Mortality Tables, rated forward one year for males and unadjusted for females, adopted in 2000, are used to determine actuarial equivalent benefits.)

TABLE 12

DESCRIPTION OF ACTUARIAL ASSUMPTIONS AND METHODS
(Continued)

Salary Increase: Effective average of 6¼% per annum, compounded annually. The components are 3½% for inflation, 1% for real wage growth and 1¼% for merit or seniority increases (adopted as of June 30, 1995). Representative values are as follows:

Age	Annual Rate of Salary Increase
20	10.00%
30	9.50
40	7.25
50	5.00
55	4.75
60	4.50
65	4.50
70	4.50

MISCELLANEOUS

Option 4 Elections: 100% of members are assumed to elect a refund of contributions and a reduced annuity.

Withdrawal Annuity: 90% of members are assumed to commence payment immediately and 10% are assumed to defer payment to superannuation age.

METHODS

Calculations: The actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the retirement system, and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the System.

Actuarial Cost Method: Entry Age Normal Cost Method. The outstanding balance of the June 30, 1990 unfunded accrued liability is to be amortized over a 20 year period commencing July 1, 1991, with payments increasing 5% annually. Changes in the unfunded accrued liability, including actuarial gains and losses, subsequent to June 30, 1990 are to be amortized over a period of 20 years from the first day of July next following the change, with payments increasing 5% annually.

TABLE 12

DESCRIPTION OF ACTUARIAL ASSUMPTIONS AND METHODS
(Continued)

Asset Valuation Method: A three-year moving market average value of assets that will spread realized and unrealized gains and losses over a period of 3 years (adopted as of June 30, 1993).

Determination of Health Care Contribution Rate: Rate necessary to establish reserves sufficient to provide premium assistance payments for all participating eligible annuitants for the subsequent fiscal year.

DATA

Census and Assets: The valuation was based on members of the System as of June 30, 2000 and does not take into account future members. All census data was supplied by the System and was subject to reasonable consistency checks. Asset data was supplied by the System.

TABLE 13**SUMMARY OF BENEFIT AND CONTRIBUTION PROVISIONS****MEMBERSHIP**

For valuation purposes, all employees are considered to be full coverage (Class T-C). All employees who become members on and after January 1, 1966 are members of the dual coverage group. Dual coverage members contribute to both PSERS and to Social Security.

BENEFITS**Superannuation Annuity**

Eligibility	Age 62, or age 60 with 30 years of service, or 35 years of service regardless of age.
Amount	2% of final average salary times years of service. Minimum of \$100 per year of service. "Final average salary" means the highest average annual salary for any 3 years of service.

Early Retirement Annuity

Eligibility	Age 55 with 25 years of service.
Amount	Accrued benefit as of date of retirement, reduced 1/4% for each month by which commencement of payments precedes Superannuation Age.

TABLE 13**SUMMARY OF BENEFIT AND CONTRIBUTION PROVISIONS**
(Continued)**Withdrawal Annuity**

Eligibility	10 years of service.
Amount	Accrued benefit deferred to superannuation retirement age or an actuarially reduced benefit payable immediately. Actuarially equivalent benefits are based on 4% interest and the 1995 George B. Buck mortality tables, rated forward one year for males and unadjusted for females.

Disability Annuity

Eligibility	5 years of service.
Amount	2% of final average salary per year of service, but not less than 33 ¹ / ₃ % of such salary, except that the benefit cannot be greater than the benefit member would have had at superannuation retirement age (or at current age, if later). Minimum of \$100 per year of service.

Return of Contributions

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

Death Benefit

Eligibility	Death of an active member or vestee who was eligible to receive an annuity.
Amount	The present value of the annuity which would have been effective if the member retired on the day before death. Option 1 (see next page) assumed payable if no other option elected.

TABLE 13**SUMMARY OF BENEFIT AND CONTRIBUTION PROVISIONS**
(Continued)**Normal and
Optional Forms
of Benefits**

Normal Form:	Life annuity with a guaranteed payment equal to member contributions with interest.
Option 1:	Reduced benefit with refund of balance of present value of annuity at retirement over payments received. If balance is less than \$5,000, benefit is paid in lump sum; otherwise, beneficiary may elect annuity and/or lump sum.
Option 2:	Joint and 100% survivorship annuity.
Option 3:	Joint and 50% survivorship annuity.
Option 4:	Benefit of equivalent actuarial value, including lump sum payment of member contributions.

Health Care Premium Assistance

Eligibility	Retired members who: <ul style="list-style-type: none"> (a) have 24½ or more years of service, or (b) are disability annuitants, or (c) have 15 or more years of service and who both terminated school service and retired after attaining superannuation age and (d) participate in the PSERS health options program or in an employer-sponsored health insurance program.
Amount	Participating eligible annuitants receive health insurance premium assistance payments from the Health Insurance Account equal to the lesser of \$55 per month (\$100 per month effective January 1, 2002) or the actual monthly premium. All administrative expenses necessary to operate the health insurance premium assistance program are to be funded by the Health Insurance Account. The Health Insurance Account is credited with contributions of the Commonwealth and the employers.

TABLE 13

**SUMMARY OF BENEFIT AND CONTRIBUTION PROVISIONS
(Continued)**

CONTRIBUTIONS

By Members

Members who were hired prior to July 22, 1983 contribute at a rate of 5¼% of compensation, while members who were most recently hired on or after July 22, 1983 contribute at a rate of 6¼% of compensation. Reduction for a joint coverage member of 40% of Social Security tax, exclusive of disability and medical coverage portion.

By Commonwealth and
School Districts

Balance of required contribution determined as normal contribution, accrued liability contribution, supplemental annuity contribution, experience adjustment factor and premium assistance contribution, is funded by the Commonwealth and the School Districts.

TABLE 14

**SUMMARY OF MEMBERSHIP DATA
AS OF JUNE 30, 2000
(\$ Amounts in Thousands)**

ACTIVE MEMBERS *

Item	Male	Female	Total
Number of Members	68,408	165,802	234,210
Annual Salaries **	\$ 3,081,711	\$ 5,857,887	\$ 8,939,598
Average Age	45.2	44.6	44.8
Average Service	14.4	11.3	12.2

* Excludes 50,682 inactive members and vestees.

** These salaries shown in the table above represent a rate of pay as of the valuation date and are the approximate average of the salaries of \$8,560,756 reported for the fiscal year ended June 30, 2000 and the expected salaries for the fiscal year ended June 30, 2001.

ANNUITANTS AND BENEFICIARIES

Item	Number	Annual Annuities	Average Annuities
Annuitants (Normal, Early and Withdrawal)	121,812	\$ 1,775,523	\$ 14,576
Survivors and Beneficiaries	6,654	43,204	6,493
Disabled Annuitants	<u>5,592</u>	<u>61,917</u>	<u>11,072</u>
Total	134,058	\$ 1,880,644	\$ 14,029

EXHIBIT I

**ACTIVE MEMBERSHIP DATA AS OF JUNE 30, 2000
NUMBER AND AVERAGE ANNUAL SALARY**

Age	Service									Total
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
Under 25	5,964 \$24,779	29 \$25,682								5,993 \$24,784
25-29	16,119 \$30,169	3,411 \$38,308	67 \$31,140							19,597 \$31,589
30-34	9,987 \$26,802	8,218 \$40,623	2,408 \$43,397	51 \$30,972						20,664 \$34,243
35-39	10,497 \$19,610	5,064 \$35,033	5,620 \$45,630	1,871 \$45,873	131 \$31,736					23,183 \$31,475
40-44	12,690 \$18,658	6,434 \$29,402	5,135 \$41,656	4,793 \$50,665	3,527 \$52,479	140 \$34,514				32,719 \$32,782
45-49	9,948 \$20,473	7,677 \$29,775	6,792 \$39,567	4,334 \$48,039	9,904 \$58,010	8,382 \$60,059	73 \$35,148			47,110 \$42,235
50-54	5,578 \$21,209	5,018 \$28,726	5,948 \$36,956	4,350 \$44,016	4,710 \$52,564	12,713 \$62,121	7,905 \$64,101	34 \$38,093		46,256 \$47,974
55-59	2,994 \$18,525	2,555 \$24,827	3,306 \$31,778	2,895 \$36,346	3,303 \$42,717	3,095 \$52,935	4,380 \$64,166	1,519 \$66,446	12 \$32,681	24,059 \$42,249
60-64	1,486 \$16,032	1,231 \$21,445	1,571 \$27,282	1,381 \$29,782	1,649 \$34,748	1,306 \$43,437	672 \$52,650	611 \$66,032	173 \$63,737	10,080 \$33,234
Over 64	1,071 \$ 11,790	805 \$ 15,544	774 \$ 19,780	530 \$ 21,773	487 \$ 27,105	425 \$ 33,455	237 \$ 39,313	82 \$ 53,669	138 \$ 63,511	4,549 \$ 22,398
Total	76,334 \$23,034	40,442 \$32,316	31,621 \$38,858	20,205 \$43,940	23,711 \$51,578	26,061 \$58,815	13,267 \$62,940	2,246 \$65,438	323 \$62,487	234,210 \$38,169

EXHIBIT II**ANNUITANT AND BENEFICIARY MEMBERSHIP DATA
AS OF JUNE 30, 2000****NUMBER AND AVERAGE ANNUAL BENEFIT
EXCLUDES PARTIAL LUMP SUM PAYMENTS**

Age Last Birthday	Number	Annual Benefit (Thousands)	Average Annual Benefit
Annuitants (Normal, Early and Withdrawal)			
Under 60	21,417	\$ 372,848	\$ 17,409
60 - 64	16,438	356,687	21,699
65 - 69	20,901	348,607	16,679
70 - 74	21,258	284,818	13,398
75 - 79	17,087	175,034	10,244
Over 79	24,711	237,529	9,612
Total	121,812	\$ 1,775,523	\$ 14,576
Survivors and Beneficiaries			
Under 60	604	\$ 4,305	\$ 7,128
60 - 64	391	3,640	9,310
65 - 69	600	5,303	8,838
70 - 74	966	7,120	7,371
75 - 79	1,300	8,069	6,207
Over 79	2,793	14,767	5,289
Total	6,654	\$ 43,204	\$ 6,493
Disabled Annuitants			
Under 60	2,413	\$ 34,126	\$ 14,143
60 - 64	949	10,205	10,754
65 - 69	814	7,044	8,653
70 - 74	603	4,695	7,787
75 - 79	404	2,905	7,190
Over 79	409	2,942	7,194
Total	5,592	\$ 61,917	\$ 11,072
Grand Total Average Annual Benefit	134,058	\$ 1,880,644	\$ 14,029

EXHIBIT III**10-YEAR HISTORY OF MEMBERSHIP DATA****ACTIVE MEMBERS**

Valuation as of June 30	Number of Active Members	Percentage Change in Membership	Total Annual Payroll (Thousands)	Percentage Change in Payroll
2000	234,210	4.79%	\$ 8,939,598	8.39%
1999	223,495	1.27%	8,247,602	1.93%
1998	220,703	2.62%	8,091,481	4.47%
1997	215,077	0.55%	7,745,001	1.69%
1996	213,906	1.48%	7,616,585	3.23%
1995	210,783	2.05%	7,378,342	7.16%
1994	206,540	4.31%	6,885,337	8.46%
1993	197,997	(2.46%)	6,348,565	4.11%
1992	202,991	0.18%	6,098,222	6.15%
1991	202,631	0.98%	5,744,798	7.11%

ANNUITANT AND SURVIVOR ANNUITANT MEMBERS

Year Ended June 30	Number on roll	Additions	Deletions	Percentage Change in Membership	Annual Annuities (Millions)	Percentage Change in Annuities
2000	134,058	5,923	4,734	0.89%	\$ 1,880.6	2.73%
1999	132,869	10,609	4,554	4.77%	1,830.6	10.77%
1998	126,814	7,132	4,442	2.17%	1,652.6	14.21%
1997	124,124	9,787	4,389	4.55%	1,447.0	11.74%
1996	118,726	7,047	4,281	2.39%	1,295.0	6.05%
1995	115,960	4,923	3,994	0.81%	1,221.1	2.99%
1994	115,031	4,866	3,047	1.61%	1,185.6	12.06%
1993	113,212	12,258	4,072	7.79%	1,058.0	22.65%
1992	105,026	5,811	3,709	2.04%	862.6	5.66%
1991	102,924	6,076	3,274	2.80%	816.4	5.79%

EXHIBIT IV

DETAILED TABULATIONS OF THE DATA

TABLE 1
THE NUMBER AND ANNUAL SALARIES
OF MEMBERS IN ACTIVE SERVICE DISTRIBUTED BY
AGE AS OF JUNE 30, 2000

Age	Males		Females	
	Number	Salaries	Number	Salaries
17	8	\$ 77,352		
18	11	81,874	11	\$ 112,601
19	37	456,905	41	354,110
20	78	1,095,709	93	929,139
21	99	1,597,988	122	1,596,614
22	172	3,650,282	499	11,036,815
23	539	13,702,141	1,475	37,022,972
24	813	22,543,782	1,995	54,270,838
25	926	27,368,277	2,376	68,255,482
26	1,036	32,532,012	2,489	74,928,412
27	1,182	37,916,263	2,650	83,633,150
28	1,357	45,330,896	2,924	93,424,549
29	1,392	48,450,841	3,265	107,208,242
30	1,413	50,143,040	3,171	106,404,607
31	1,354	49,808,020	2,874	95,712,867
32	1,288	48,726,231	2,655	86,960,298
33	1,265	49,632,701	2,690	88,597,734
34	1,285	49,535,331	2,669	82,067,121
35	1,224	47,466,902	2,916	88,191,272
36	1,294	51,102,939	3,089	87,779,826
37	1,280	49,818,220	3,168	90,760,353
38	1,276	50,455,001	3,620	100,691,738
39	1,380	54,573,446	3,936	108,843,174
40	1,385	55,316,647	4,039	108,935,617
41	1,500	58,906,108	4,428	124,313,496
42	1,554	65,346,946	5,077	151,575,651
43	1,773	76,658,252	5,534	169,345,722
44	1,769	78,129,275	5,660	184,079,761
45	2,027	90,506,747	6,120	210,034,156
46	2,075	98,040,364	6,675	246,137,030
47	2,427	120,511,410	7,047	281,262,133
48	2,676	138,986,065	7,693	322,359,794
49	2,864	154,430,478	7,506	327,442,379
50	2,958	163,802,620	7,067	312,981,973
51	3,183	180,091,440	6,897	309,542,113
52	3,284	187,161,586	6,556	288,799,651
53	3,366	191,702,545	6,702	290,540,694
54	2,185	122,535,581	4,058	171,917,754
55	1,875	100,523,612	3,836	158,557,071
56	1,719	90,210,939	3,482	134,519,982

TABLE 1
THE NUMBER AND ANNUAL SALARIES
OF MEMBERS IN ACTIVE SERVICE DISTRIBUTED BY
AGE AS OF JUNE 30, 2000

Age	Males		Females	
	Number	Salaries	Number	Salaries
57	1,804	\$ 93,972,466	3,563	\$ 135,466,306
58	1,381	67,068,589	2,861	102,077,788
59	1,082	50,690,440	2,456	83,384,213
60	936	38,904,062	2,080	68,295,136
61	792	30,929,052	1,817	57,187,075
62	587	22,080,467	1,269	39,272,594
63	431	15,618,768	951	27,402,468
64	407	13,312,807	810	21,991,826
65	282	8,166,977	559	13,387,677
66	234	6,314,243	421	10,239,015
67	203	5,521,958	335	8,220,583
68	178	4,375,210	305	6,485,687
69	139	3,077,320	262	5,553,065
70	124	2,677,270	200	3,857,099
71	107	2,164,546	184	3,547,409
72	90	1,974,757	138	2,413,752
73	84	1,662,964	124	2,037,117
74	58	1,236,302	93	1,350,983
75	34	622,561	80	1,343,862
76	29	520,564	49	832,627
77	34	529,576	36	628,430
78	24	497,596	33	676,047
79	15	267,419	20	347,143
80	6	148,894	20	291,798
81	8	144,339	14	168,721
82	4	117,902	8	87,451
83	1	32,457	2	22,775
84	5	154,747	7	191,511
Total	68,408	\$ 3,081,711,021	165,802	\$ 5,857,887,049

TABLE 2

**THE NUMBER AND ANNUAL SALARIES
OF MEMBERS IN ACTIVE SERVICE DISTRIBUTED BY
YEARS OF CREDITED SERVICE AS OF JUNE 30, 2000**

Service	Males		Females	
	Number	Salaries	Number	Salaries
0	3,767	\$ 79,593,261	13,343	\$ 217,064,391
1	4,707	122,187,322	14,332	285,867,229
2	3,995	117,385,408	11,300	254,164,160
3	3,810	123,438,317	10,268	254,776,257
4	2,825	95,035,134	7,987	208,727,499
5	2,503	86,601,357	7,045	193,534,938
6	2,237	81,017,358	6,126	179,990,917
7	2,608	100,907,707	6,465	205,075,377
8	1,775	67,624,313	5,219	168,008,664
9	1,637	64,296,830	4,827	159,859,469
10	1,874	73,536,598	5,053	175,335,701
11	1,783	73,583,236	5,142	189,036,063
12	1,632	69,371,874	4,675	175,956,889
13	1,616	70,598,834	4,333	171,027,113
14	1,409	64,742,672	4,104	165,526,057
15	1,292	58,590,834	3,590	148,963,496
16	1,103	50,540,205	2,993	126,120,350
17	979	45,252,174	2,591	112,754,034
18	973	45,337,893	2,782	121,304,635
19	965	47,441,947	2,937	131,496,613
20	1,220	63,457,657	3,373	157,752,086
21	1,267	67,364,940	3,553	172,398,409
22	1,268	71,876,050	3,325	167,818,341
23	1,333	75,476,663	3,321	172,376,732
24	1,540	87,436,764	3,511	186,999,296
25	1,657	98,121,869	3,407	184,536,555
26	1,984	121,734,159	3,574	198,726,884
27	2,001	125,931,569	3,383	193,118,377
28	2,165	138,035,048	3,083	178,738,659
29	2,024	130,635,534	2,783	163,201,515
30	2,025	132,002,571	2,489	149,056,576
31	1,670	110,938,565	1,431	84,466,912
32	1,347	89,259,102	1,061	63,838,765
33	1,043	69,336,549	771	45,544,572
34	838	56,049,765	592	34,537,752
35	536	37,247,747	319	19,180,082
36	360	25,553,689	232	13,575,509
37	238	16,318,647	158	9,346,384
38	156	10,728,897	96	5,740,527
39	85	5,688,525	66	3,593,442

TABLE 2
THE NUMBER AND ANNUAL SALARIES
OF MEMBERS IN ACTIVE SERVICE DISTRIBUTED BY
YEARS OF CREDITED SERVICE AS OF JUNE 30, 2000

Service	Males		Females	
	Number	Salaries	Number	Salaries
40	55	\$ 3,935,476	38	\$ 2,144,777
41	42	2,891,119	34	1,981,342
42	21	1,491,040	26	1,206,389
43	14	1,007,453	13	668,058
44	13	939,498	15	826,248
45	8	548,408	9	581,261
46	4	254,102	7	358,666
47	1	145,040	6	261,242
48			4	244,221
49			1	55,838
50			2	100,289
51	2	171,366	1	43,736
52			3	143,401
53	1	49,935		
54			1	48,381
55			1	50,473
56				
57			1	35,500
Total	68,408	\$ 3,081,711,021	165,802	\$ 5,857,887,049

TABLE 3

**THE NUMBER AND ANNUAL ANNUITIES
OF ANNUITANTS ON THE RETIRED LIST
AS OF JUNE 30, 2000**

**RETIRED ON ACCOUNT OF SUPERANNUATION, EARLY RETIREMENT AND
THOSE IN RECEIPT OF WITHDRAWAL ANNUITIES**

Age	Male		Female	
	Number	Annuities	Number	Annuities
30			2	\$ 638
31			2	1,787
32	3	\$ 1,767	3	1,620
33	5	6,676	9	9,467
34	9	9,123	17	16,246
35	13	9,246	22	21,398
36	18	26,118	28	29,678
37	25	26,018	30	29,528
38	20	22,916	29	31,743
39	20	23,302	39	54,208
40	41	73,785	51	64,583
41	39	62,182	70	116,892
42	57	80,709	74	136,748
43	61	105,039	108	183,786
44	61	103,752	110	207,678
45	66	102,010	138	306,437
46	86	169,584	177	367,345
47	95	237,420	214	535,722
48	131	375,156	263	655,992
49	174	502,474	404	1,194,544
50	201	794,670	459	1,449,569
51	218	944,720	489	2,117,676
52	356	2,650,299	570	4,223,376
53	851	14,255,778	997	14,116,118
54	968	21,063,941	1,045	18,216,596
55	971	21,949,915	1,031	19,123,599
56	1,085	27,036,293	1,120	22,164,175
57	1,352	35,646,469	1,370	27,674,608
58	1,432	38,724,697	1,483	30,110,509
59	1,266	34,652,800	1,439	30,029,210
60	1,243	35,942,440	1,429	29,355,411
61	1,174	33,257,655	1,591	29,681,279
62	1,382	38,496,017	1,894	34,667,382
63	1,551	40,670,115	2,277	36,329,731
64	1,572	41,017,137	2,325	37,269,785
65	1,532	35,131,911	2,444	34,557,406
66	1,594	35,439,486	2,401	33,745,471
67	1,648	34,796,866	2,440	32,047,653
68	1,701	35,341,292	2,701	35,477,868
69	1,637	34,881,774	2,803	37,187,532

TABLE 3

**THE NUMBER AND ANNUAL ANNUITIES
OF ANNUITANTS ON THE RETIRED LIST
AS OF JUNE 30, 2000**

**RETIRED ON ACCOUNT OF SUPERANNUATION, EARLY RETIREMENT AND
THOSE IN RECEIPT OF WITHDRAWAL ANNUITIES**

Age	Male		Female	
	Number	Annuities	Number	Annuities
70	1,676	\$ 31,872,887	2,757	\$ 34,834,639
71	1,491	26,569,589	2,685	30,547,616
72	1,509	25,981,653	2,883	32,200,416
73	1,512	23,959,550	2,725	29,713,145
74	1,366	21,513,304	2,654	27,625,464
75	1,372	20,285,605	2,442	23,282,990
76	1,255	17,253,088	2,440	22,352,727
77	1,144	14,767,905	2,209	18,802,612
78	985	11,714,194	2,192	18,209,295
79	875	10,113,906	2,173	18,251,450
80	850	9,006,893	2,104	17,433,890
81	626	6,659,732	1,729	14,120,701
82	682	6,482,509	1,852	15,291,144
83	592	5,418,479	1,721	14,374,839
84	544	5,313,016	1,567	12,981,008
85	445	3,995,128	1,406	12,107,422
86	387	4,075,576	1,354	12,489,501
87	345	3,530,616	1,166	11,131,700
88	265	2,537,288	1,095	11,286,964
89	212	2,283,514	993	10,584,707
90	166	2,147,534	873	9,680,904
91	149	1,556,779	800	9,211,087
92	101	1,332,883	706	8,400,778
93	87	1,001,741	542	6,669,013
94	64	845,724	390	4,832,463
95	39	492,463	291	3,355,907
96	35	434,661	168	2,022,521
97	15	193,950	122	1,409,501
98	9	138,536	96	1,197,949
99	3	37,028	37	465,987
100	5	49,922	31	354,024
101			20	248,458
102			11	149,742
103	1	19,527	5	54,969
104			5	61,560
105			3	35,924
106			1	14,844
108			1	7,535
Total	43,465	\$ 826,216,732	78,347	\$ 949,306,390

TABLE 3

**THE NUMBER AND ANNUAL ANNUITIES
OF ANNUITANTS ON THE RETIRED LIST
AS OF JUNE 30, 2000**

**RETIRED ON ACCOUNT OF SUPERANNUATION, EARLY RETIREMENT AND
THOSE IN RECEIPT OF WITHDRAWAL ANNUITIES**

<u>OPTION</u>					
Maximum	24,946	\$	526,467,395	60,874	\$ 761,476,317
1A	16		219,474	101	1,231,638
1B	13		156,136	56	565,518
1C	4,470		51,574,484	8,869	72,252,841
2	6,537		86,812,009	3,893	42,586,613
3	6,983		146,243,812	4,369	66,843,955
4	<u>500</u>		<u>14,743,422</u>	<u>185</u>	<u>4,349,508</u>
	43,465	\$	826,216,732	78,347	\$ 949,306,390

DEFINITIONS OF OPTIONS

- Option 1A A life annuity to the member with a guaranteed payment to the beneficiary equal to the member's contributions and interest at retirement less any amounts paid to the member from the employee annuity portion of the retirement benefit prior to death. This option was discontinued in 1975.
- Option 1B A life annuity to the member with a guaranteed payment to the beneficiary equal to the present value of the employer portion of the annuity less any amounts paid to the member from the reduced state portion of the retirement benefit prior to death. This option was discontinued in 1975.
- Option 1C A life annuity to the member with a guaranteed payment to the beneficiary equal to the present value of the total maximum single life annuity less any amounts paid to the member prior to death.
- Option 2 A joint and one hundred percent (100%) survivor annuity payable during the lifetime of the member with the full amount of such annuity payable thereafter to the designated survivor annuitant, if living at the member's death.
- Option 3 A joint and fifty percent (50%) survivor annuity payable during the lifetime of the member with one-half of such annuity payable thereafter to the designated survivor annuitant, if living at the member's death.
- Option 4 A life annuity to the member with a special death benefit for a designated beneficiary.

TABLE 4
THE NUMBER AND ANNUAL ANNUITIES
OF BENEFICIARIES AND SURVIVOR ANNUITANTS
AS OF JUNE 30, 2000

Age	Male		Female	
	Number	Annuities	Number	Annuities
12			1	\$ 3,484
13	1	\$ 1,533		
14	1	2,483		
16	1	669		
18	1	2,514	2	17,961
19	1	7,883	2	3,084
20			1	1,312
21	2	1,996		
22			1	1,070
23			2	2,368
24	1	1,108		
25	1	8,215		
26	2	4,533	2	7,069
27			1	4,257
28	1	23,464		
29			1	3,399
31	2	14,075	1	8,188
32	1	1,284	2	5,810
33	4	10,983	4	23,579
34	2	1,010	1	3,459
35			3	4,316
36	4	19,022	4	4,426
37	1	4,098	2	9,946
38	3	28,573	2	4,419
40	3	15,630	3	14,151
41	2	5,820	12	52,345
42	2	10,918	9	29,352
43	3	22,477	9	28,898
44	5	6,835	3	6,441
45	3	23,243	10	36,926
46	7	32,296	11	51,394
47	5	23,081	13	78,057
48	7	28,313	7	17,815
49	3	12,891	7	63,270
50	8	38,828	20	105,207
51	6	32,222	26	252,223
52	9	40,336	22	171,649
53	10	72,929	33	202,298
54	10	52,915	27	213,861
55	5	42,817	28	215,154

TABLE 4
THE NUMBER AND ANNUAL ANNUITIES
OF BENEFICIARIES AND SURVIVOR ANNUITANTS
AS OF JUNE 30, 2000

Age	Male		Female	
	Number	Annuities	Number	Annuities
56	12	\$ 154,067	26	\$ 264,382
57	17	90,261	38	266,856
58	14	107,579	51	644,896
59	8	73,471	49	461,799
60	12	96,490	54	462,764
61	13	78,196	58	690,243
62	12	88,903	55	521,329
63	12	52,068	92	933,863
64	10	97,340	73	618,901
65	15	97,622	83	843,980
66	15	90,542	96	898,594
67	17	91,765	106	1,053,875
68	12	91,471	110	897,868
69	15	111,461	131	1,125,349
70	25	204,242	147	1,149,428
71	16	135,974	145	1,139,593
72	26	142,073	162	1,119,951
73	23	174,507	196	1,476,416
74	25	193,357	201	1,384,670
75	29	203,145	197	1,287,029
76	37	305,685	229	1,306,296
77	41	359,297	206	1,165,054
78	39	272,182	235	1,449,455
79	49	364,445	238	1,355,992
80	40	243,741	267	1,505,913
81	24	161,059	204	1,088,904
82	34	229,885	245	1,256,286
83	33	189,149	220	1,169,113
84	35	165,938	202	1,018,207
85	35	180,770	186	1,012,444
86	19	95,597	165	877,930
87	31	166,722	156	794,889
88	19	74,023	158	865,392
89	18	103,564	123	637,214
90	16	101,186	111	624,749
91	13	79,248	92	523,914
92	14	73,878	76	406,366
93	14	66,240	60	317,280
94	6	32,268	43	204,295
95	7	40,518	40	178,324

TABLE 4
THE NUMBER AND ANNUAL ANNUITIES
OF BENEFICIARIES AND SURVIVOR ANNUITANTS
AS OF JUNE 30, 2000

Age	Male		Female	
	Number	Annuities	Number	Annuities
96	1	\$ 5,696	28	\$ 78,075
97			19	65,853
98	1	2,364	11	55,848
99			8	25,247
100	1	1,420	5	10,632
101	1	1,137	4	11,367
102			3	13,274
103			1	4,320
104			2	5,052
106			1	1,419
Total	973	\$ 6,285,542	5,680	\$ 36,918,078

TABLE 5

THE NUMBER AND ANNUAL ANNUITIES
OF ANNUITANTS ON THE RETIRED LIST
AS OF JUNE 30, 2000

RETIRED ON ACCOUNT OF DISABILITY

Age	Male		Female	
	Number	Annuities	Number	Annuities
27	1	\$ 11,205		
30	1	12,084		
31	1	7,357		
32			2	\$ 14,234
33			1	11,719
34	1	3,667	3	21,521
35	2	18,712	4	22,488
36	1	8,859	6	45,441
37	6	55,134	7	68,939
38	4	37,733	7	73,716
39	4	39,251	7	71,617
40	7	85,579	9	97,056
41	7	64,967	21	192,200
42	13	114,584	21	173,158
43	12	125,233	14	115,839
44	18	174,569	25	215,298
45	18	189,176	29	314,030
46	19	235,062	29	300,681
47	31	329,998	59	731,495
48	39	430,072	68	975,752
49	34	533,575	78	1,057,729
50	46	787,166	81	1,217,307
51	60	922,037	101	1,617,545
52	60	1,159,815	122	2,063,490
53	68	1,255,613	134	2,065,821
54	66	1,137,915	129	2,071,133
55	67	1,273,475	97	1,314,200
56	63	1,088,267	101	1,360,292
57	73	1,102,491	117	1,445,789
58	79	1,217,563	147	1,870,004
59	57	725,233	136	1,451,226
60	68	905,329	151	1,618,207
61	71	931,199	114	1,254,252
62	73	799,458	125	1,171,759
63	49	596,466	129	1,307,570
64	55	562,909	114	1,058,069
65	56	609,091	135	1,119,565
66	56	534,026	109	948,093
67	57	641,160	101	701,098
68	40	362,989	118	1,024,698

TABLE 5

THE NUMBER AND ANNUAL ANNUITIES
OF ANNUITANTS ON THE RETIRED LIST
AS OF JUNE 30, 2000

RETIRED ON ACCOUNT OF DISABILITY

Age	Male		Female	
	Number	Annuities	Number	Annuities
69	45	\$ 383,936	97	\$ 719,038
70	39	362,395	97	677,722
71	38	412,459	91	694,203
72	26	215,675	97	650,586
73	44	474,654	56	376,569
74	39	301,352	76	529,709
75	39	329,145	61	442,157
76	17	110,799	53	328,552
77	18	183,799	56	412,889
78	28	206,625	61	376,742
79	16	144,957	55	369,031
80	23	146,431	52	383,275
81	14	159,528	40	239,277
82	9	79,602	36	271,514
83	7	57,982	38	251,855
84	6	42,583	28	178,089
85	5	40,486	31	214,968
86	6	39,717	18	109,603
87	4	22,914	23	176,001
88	1	12,402	13	108,248
89	2	15,960	6	45,369
90			9	77,386
91			4	23,379
92			10	73,065
93	1	9,576	9	71,142
94	1	4,250	6	43,426
95			1	11,186
96			1	4,429
97			3	16,715
98			2	11,905
Total	1,811	\$ 22,846,248	3,781	\$ 39,071,061

TABLE 6

THE NUMBER AND ANNUAL ANNUITIES
OF ANNUITANTS ON THE RETIRED LIST
AS OF JUNE 30, 2000

RECEIVING A REFUND ANNUITY

Age	Male		Female	
	Number	Annuities	Number	Annuities
90			1	\$ 53
Total	0	\$ 0	1	\$ 53

EXHIBIT V**GLOSSARY**

Accrued Liability	The difference between (a) the present value of future plan benefits, and (b) the present value of future normal cost. It is the portion of the present value of future plan benefits attributable to service accrued as of the valuation date. Sometimes referred to as “actuarial accrued liability.”
Accrued Service	The service credited under the plan which was rendered before the date of the actuarial valuation.
Actuarial Assumptions	Estimates of future plan experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.
Actuarial Cost Method	A mathematical budgeting procedure for allocating the dollar amount of the “present value of future plan benefits” between the present value of future normal cost and the accrued liability. Sometimes referred to as the “actuarial funding method.”
Actuarial Equivalent	A series of payments is called an actuarial equivalent of another series of payments if the two series have the same actuarial present value.
Actuarial Value of Assets	The value of current plan assets recognized for valuation purposes. Based on a smoothed market value that recognizes investment gains and losses over a period of three years.
Amortization	Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.
Experience Gain (Loss)	A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions during the period between two actuarial valuation dates, in accordance with the actuarial cost method being used.
Normal Cost	The annual cost assumed, under the actuarial funding method, for current and subsequent plan years. Sometimes referred to as “current service cost.”

EXHIBIT V

GLOSSARY
(Continued)

Present Value	The amount of funds presently required to provide a payment or series of payments in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.
Unfunded Accrued Liability	The difference between the actuarial accrued liability and valuation assets.