

# *Public School Employees' Retirement System*



*Old Brown's Mill School, Franklin County*

## *Actuarial Section*



January 30, 2004

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 annual actuarial valuation of the Public School Employees' Retirement System of Pennsylvania as of June 30, 2003.

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 2004/2005 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. The actuarial assumptions are unchanged from the prior valuation. The method for determining the liability for vestees has been changed due to improved data reporting.

The actuarial cost method has changed in accordance with Act 40. The outstanding balance of the unfunded accrued liability as of June 30, 2001 and the decrease in the unfunded accrued liability due to the actuarial asset method change provided by Act 38 continue to be amortized over a 10-year period, with level dollar funding, beginning July 1 2002. The increases in the unfunded accrued liability due to the July 1, 2002 and July 1, 2003 cost-of-living adjustments provided by Act 38 continue to be amortized over a 10-year period, with level dollar funding, starting on July 1, 2003 and July 1, 2004, respectively. All other changes in the unfunded accrued liability at June 30, 2001, June 30, 2002, and June 30, 2003 – including the Act 9 benefit changes – are amortized over a 30-year period, with level dollar funding, starting on July 1, 2002, July 1, 2003, and July 1, 2004, respectively. Future benefit improvements for active members and retirees will be amortized over a 10-year period with level dollar funding. Future gains and losses will be amortized over a 30-year period with level dollar funding. Act 40 also provides a 4.00% floor on the employer pension rate.

Suite 1400 • One North Dearborn Street • Chicago, IL 60602-4336  
(312) 846-3000 Office • (312) 846-3999 Fax  
[www.mellon.com](http://www.mellon.com)

*A Mellon Financial Company<sup>SM</sup>*

### Assets and Membership Data

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

### Funding Adequacy

The valuation results determine that the employer contribution rate for fiscal year 2004/2005 is 4.23%. The funded status of the plan determined as of June 30, 2003 based on the accrued liability and the actuarial value of assets is 97.2%.

### Financial Results and Membership Data

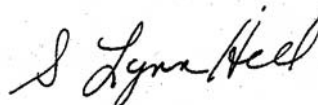
Detailed summaries of the financial results of the valuation and membership data used in preparing the valuation are shown in the valuation report. The actuary prepared supporting schedules included in the Actuarial and Statistical Section of PSERS Comprehensive Annual Financial Report. The actuary prepared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

Qualified actuaries completed the valuations 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 has been prepared in accordance with generally accepted actuarial principles and practice.

Respectfully submitted,



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



S. Lynn Hill  
Director, Retirement Consulting

## **Executive Summary**

This report presents the actuarial valuation as of June 30, 2003 for the Public School Employees' Retirement System of Pennsylvania.

The principal valuation results include:

- The employer contribution rate for fiscal year 2004/2005 which is 4.23%.
- The funded status of the plan determined as of June 30, 2003 based on the accrued liability and the actuarial value of assets as of that date which is 97.2%.
- The determination of the actuarial gain or loss as of June 30, 2003 which is a loss of \$3.8 billion.
- Annual disclosure as of June 30, 2003 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. The actuary prepared supporting schedules included in the Actuarial and Statistical Section of PSERS Comprehensive Annual Financial Report. The actuary prepared the trend data schedules included in the Financial Section of PSERS Comprehensive Annual Financial Report.

## **Changes Since Last Year**

### **Legislative and Administrative Changes**

Act 38 provided for a split COLA to be paid commencing July 1, 2002 for members retired before July 2, 1990 and commencing July 1, 2003 for members retired from July 2, 1990 through July 1, 2003. The liability for both COLAs was recognized in the prior valuation. Funding for the COLAs will commence July 1 following each effective date.

The benefit provisions and contribution provisions are summarized in Table 13.

### **Actuarial Assumptions and Methods**

The actuarial assumptions are unchanged from the prior valuation with the exception of the method of determining the liabilities for inactive members entitled to deferred benefits and the actuarial cost method which has been revised in accordance with Act 40 of 2003.

The method for determining the liability of the vestees has been changed for this valuation. Under the prior method the liabilities were estimated based on the member contribution account balances. Under the new method, the liabilities are based on the deferred benefits payable, which were calculated using additional information provided for the first time for this valuation.

Act 40 of 2003 amended the actuarial cost method. Under Act 40, the outstanding balance of the unfunded accrued liability as of June 30, 2001 and the decrease in the unfunded accrued liability due to the actuarial asset method change provided by Act 38 continue to be amortized over a 10-year period, with level dollar funding, beginning July 1 2002. The increases in the unfunded accrued liability due to

the July 1, 2002 and July 1, 2003 cost-of-living adjustments provided by Act 38 continue to be amortized over a 10-year period, with level dollar funding, starting on July 1, 2003 and July 1, 2004, respectively. All other changes in the unfunded accrued liability at June 30, 2001, June 30, 2002, and June 30, 2003 – including the Act 9 benefit changes – are amortized over a 30-year period, with level dollar funding, starting on July 1, 2002, July 1, 2003, and July 1, 2004, respectively. Future benefit improvements for active members and retirees will be amortized over a 10-year period with level dollar funding. Future gains and losses will be amortized over a 30-year period with level dollar funding. Act 40 also provides a 4.00% floor on the employer pension rate.

The actuarial assumptions and methods are outlined in Table 12.

### **Contribution Rates**

The results of the valuation as of June 30, 2003 determine the employer contribution rate for fiscal year 2004/2005. The total contribution rate payable by the employer is 4.23% of payroll. This includes 4.00% of payroll for pension benefits plus 0.23% of payroll for the health insurance premium assistance program.

The average contribution rate payable by the members is 7.12%. Effective January 1, 2002 the employee contribution rate for members who elect to have prior school service and intervening military service converted to Class T-D service increased by 1.25%. The average member contribution rate of 7.12% represents an average of the member rates that vary based on date of hire and Class T-D election.

### **Reasons for Change in the Rate**

The employer contribution rate increased from 3.77% for fiscal year 2003/2004 to 4.23% for fiscal year 2004/2005. The increase of 0.46% is due to the following reasons:

· Increase due to change in normal rate	.23
· Decrease due to method change for valuing the liability for vestees	(.36)
· Increase due to payroll growth	.19
· Increase due to July 1, 2003 COLA under Act 38	1.22
· Decrease due to 1.15% floor on 2002/2003 employer contribution rate under Act 38	(.46)
· Increase due to actuarial loss on assets	5.69
· Decrease due to actuarial gain on liabilities	(.03)
· Decrease due to change in health insurance contribution rate	(.56)
· Decrease due to Act 40	<u>(5.46)</u>
· Total	.46%

## 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, 2003. Comparable results from the June 30, 2002 valuation are also shown.

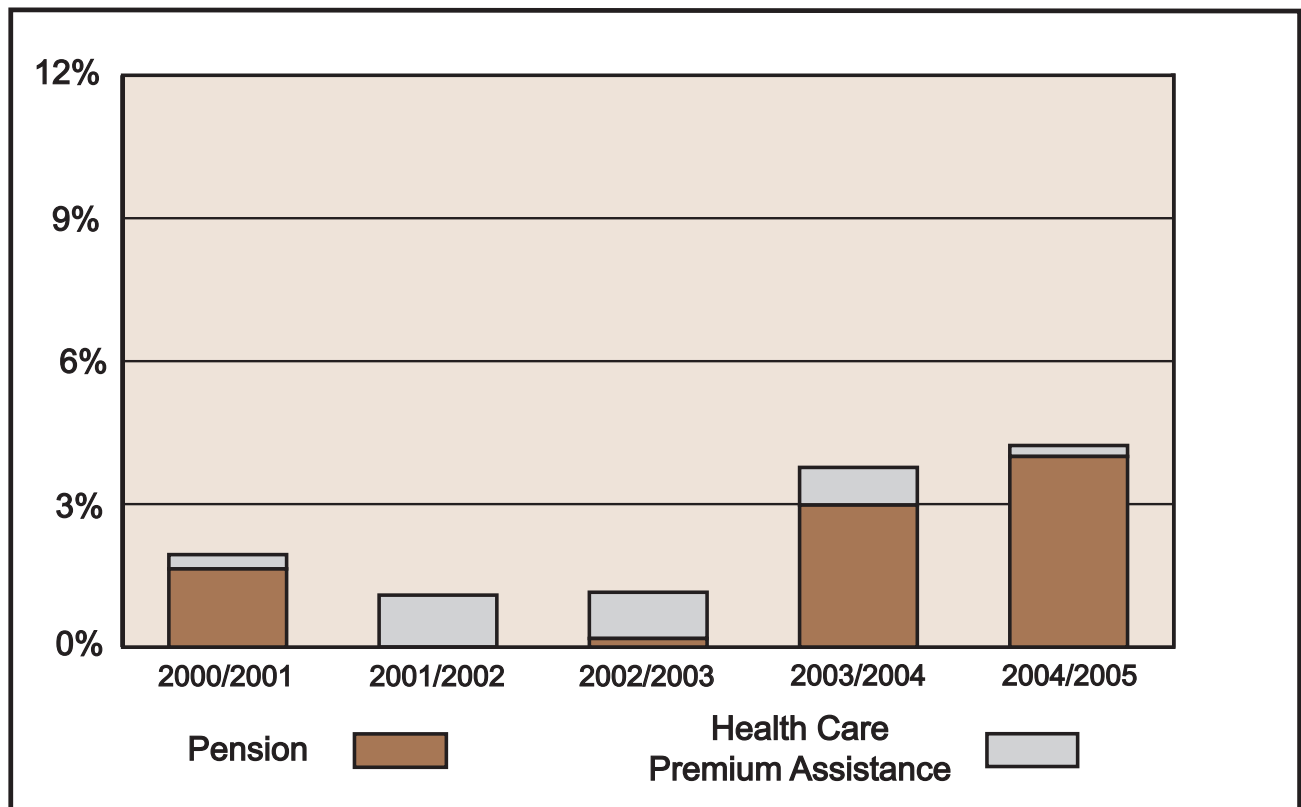
Item	June 30, 2003	June 30, 2002
<b>Demographics</b>		
Active Members		
• Number	246,700	242,616
• Average Annual Pay	\$ 39,128	\$ 38,658
Annuitants		
• Number	145,693	141,414
• Average Annual Benefit Payment	\$ 17,469	\$ 15,899
<b>Contribution Rates (as a Percentage of Payroll)</b>		
	(Fiscal Year 2004/2005)	(Fiscal Year 2003/2004)
Employer Contribution Rate:		
• Total Pension Contribution Rate	4.00%	2.98%
• Health Insurance Contribution Rate	<u>0.23</u>	<u>0.79</u>
• Total	4.23%	3.77%
Member Average Contribution Rate	<u>7.12</u>	<u>7.08</u>
• Total Rate	11.35%	10.85%
<b>Actuarial Funded Status</b>		
• Accrued Liability	\$ 54,443.8 Mil	\$ 51,796.5 Mil
• Actuarial Value of Assets	<u>52,900.5</u>	<u>54,296.4</u>
• Unfunded Accrued Liability	\$ 1,543.3	\$ (2,499.9)
• Funded Ratio	97.2%	104.8%

### 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
2004/2005	7.12%	7.48%	(7.10)%	.23%	4.23%
2003/2004	7.08	7.25	(4.27)	.79	3.77
2002/2003	7.10	7.20	(10.03)	.97	1.15
2001/2002	6.43	5.63	(6.05)	1.09	1.09
2000/2001	5.77	6.29	(4.65)	.30	1.94

The following chart shows a 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 10 or 30 years for each change in the unfunded accrued liability according to Act 40.

The total contribution rate of 4.23% 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 5-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 97.2% as of June 30, 2003. The funded ratio is based on an actuarial value of assets of \$52.9 billion and an accrued liability of \$54.4 billion.

### **Reasons for Change in the Funded Ratio**

The funded ratio decreased from 104.8% as of June 30, 2002 to 97.2% as of June 30, 2003. The decrease is due to the net effect of the asset loss and liability gain.

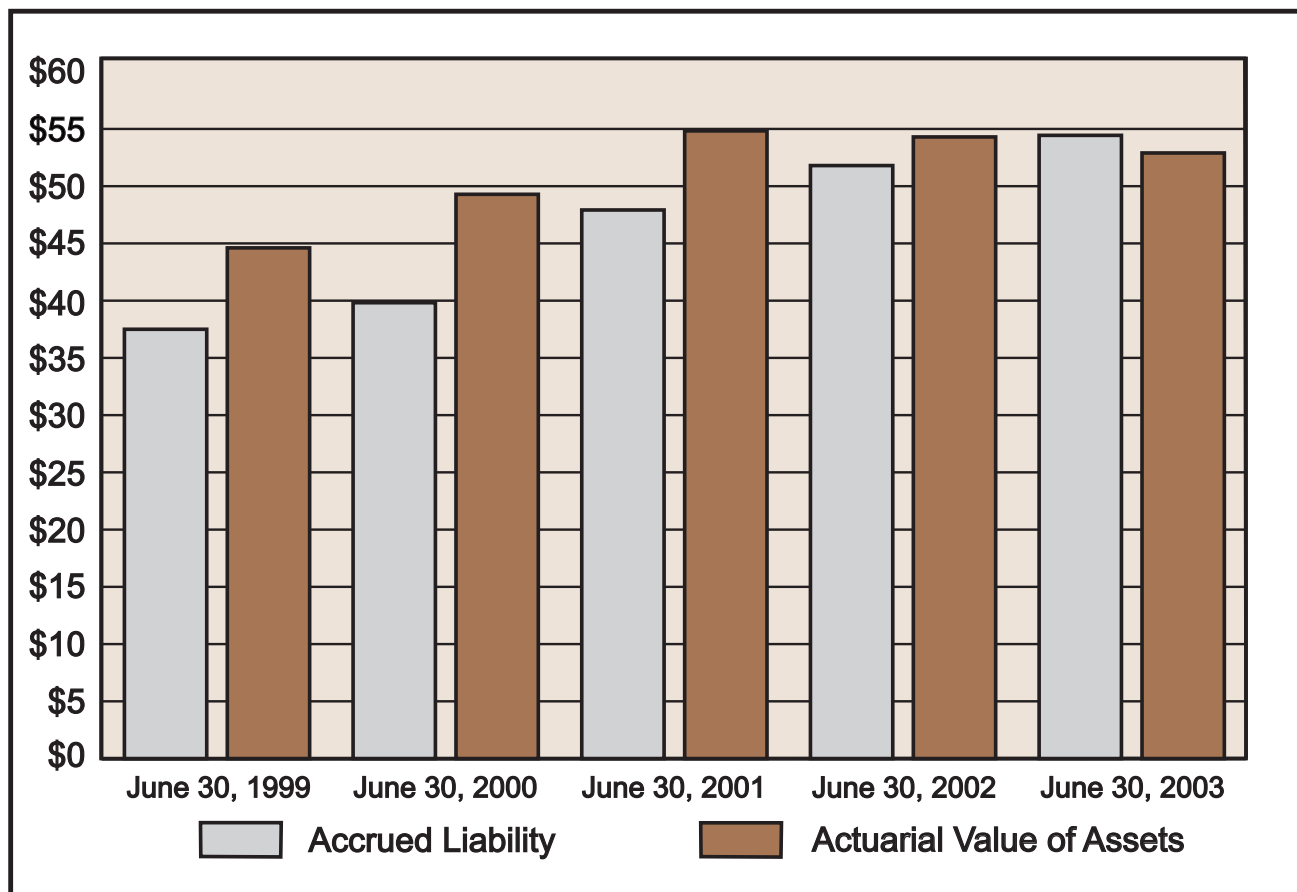


**Five-Year History of Funded Ratio**  
(Dollar Amounts in Millions)

Valuation as of June 30	Accrued Liability	Actuarial Value of Assets	Unfunded Accrued Liability	Funded Ratio
2003	\$ 54,443.8	\$ 52,900.5	\$ 1,543.3	97.2%
2002	51,796.5	54,296.4	(2,499.9)	104.8
2001	47,917.3	54,830.3	(6,913.0)	114.4
2000	39,822.8	49,293.0	(9,470.2)	123.8
1999	37,499.1	44,606.5	(7,107.4)	119.0

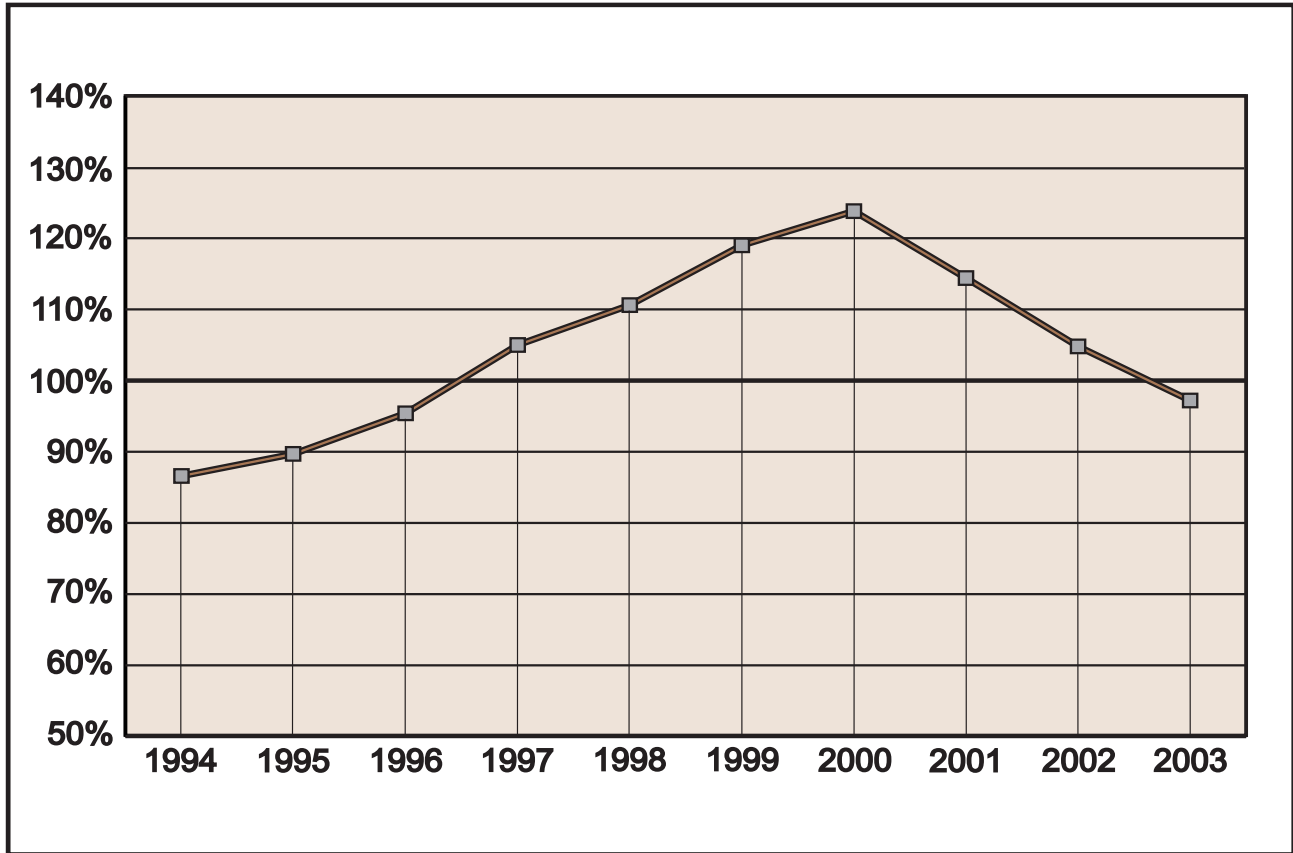
The following chart shows a five-year history of the accrued liability and the actuarial value of assets:

**Five-Year History of Accrued Liability and Actuarial Value of Assets**  
(Dollar Amounts in Billions)



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

**Ten-Year History of Funded Ratio  
(1994 - 2003)**



## 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 5-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 97.2% as of June 30, 2003. The funded ratio is based on an actuarial value of assets of \$52.9 billion and an accrued liability of \$54.4 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 payment towards each change in the unfunded accrued liability, which are amortized over 10 or 30-year periods. The employer contributions to the System for the six fiscal years ending June 30, 2003 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 1998/1999 through 2002/2003 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 spreads the difference between the actual and expected return (beginning with the 2000/2001 fiscal year) over a period of five 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
2002/2003*	2.7%	1.4%
2001/2002*	(5.3)	2.7
2000/2001	(7.4)	14.3
1999/2000	11.9	13.6
1998/1999	12.2	15.1

\* Market rate of return provided by Wilshire

**Table 1**  
**Summary of Results of Actuarial Valuation**  
**As of June 30, 2003**  
(Dollar Amounts in Thousands)

Item	Amount
<b>Member Data</b>	
1. Number of Members	
a) Active Members	246,700
b) Inactive Members and Vestees	65,453
c) Annuitants, Beneficiaries and Survivor Annuitants	145,693
d) Total	<u>457,846</u>
2. Annualized Salaries	\$ 9,652,881
3. Annual Annuities	\$ 2,545,135
<b>Valuation Results</b>	
4. Present Value of Future Pension Benefits	
a) Active Members	\$ 45,155,912
b) Inactive Members and Vestees	710,846
c) Annuitants, Beneficiaries and Survivor Annuitants	21,963,662
d) Total	<u>\$ 67,830,420</u>
5. Present Value of Future Pension Normal Cost	
a) Active Members	\$ 6,591,897
b) Employer	6,925,195
c) Total	<u>\$ 13,517,092</u>
6. Pension Accrued Liability	
a) Active Members (4a) - (5c)	\$ 31,638,820
b) Inactive Members and Vestees	710,846
c) Annuitants, Beneficiaries and Survivor Annuitants	21,963,662
d) Total	<u>\$ 54,313,328</u>
7. Health Care Premium Assistance Payments	\$ 130,447
8. Total Accrued Liability (6) + (7)	\$ 54,443,775
9. Actuarial Value of Assets	\$ 52,900,465
10. Unfunded Accrued Liability (8) - (9)	\$ 1,543,310
11. Total Normal Cost Rate	14.60 %
12. Member Contribution Rate	7.12 %
13. Employer Normal Cost Rate (11) - (12)	7.48 %
<b>Employer Annual Funding Requirement for Fiscal 2004/2005</b>	
14. Employer Contribution Rate	
a) Normal	7.48 %
b) Unfunded Accrued Liability	<u>(7.10)</u>
c) Preliminary Pension Rate	0.38 %
d) Preliminary Pension Rate with 4% Floor	4.00
e) Health Insurance Premium Assistance	<u>0.23</u>
f) Total Rate	4.23 %

**Table 2**  
**Summary of Sources of Employer Contribution Rate**  
**As of June 30, 2003**  
(Dollar Amounts in Thousands)

	Funding Period	Funding Period Beginning July 1	Initial Amount of Liability	Outstanding Balance as of July 1, 2003	Annual Payment	
					Amount	Percent
1. Amortization of:						
a) July 1, 2001 Fresh Start Unfunded Base	10 Years	2002	\$ (9,137,130)	\$ (9,245,520)	\$ (1,510,937)	(13.66)%
b) Asset Method Change at July 1, 2001 due to Act 38	10 Years	2002	(4,638,306)	(4,693,328)	(767,001)	(6.94)%
c) 2001 Changes	30 Years	2002	7,570,507	7,660,313	668,111	6.04 %
d) 2002 Changes	30 Years	2003	3,014,171	3,270,376	286,101	2.59 %
e) 2002 COLA	10 Years	2003	463,795	503,218	76,694	0.70 %
f) 2003 COLA	10 Years	2004	754,524	818,658	135,375	1.22 %
g) 2003 Changes	30 Years	2004	3,229,593	3,229,593	326,059	2.95 %
Total Amortization Payments				1,543,310	(785,598)	(7.10)%
2. Employer Normal Cost Rate						7.48 %
3. Preliminary Pension Rate (1) + (2)						0.38 %
4. Preliminary Pension Rate with 4% Floor -- Maximum of (3) and 4%						4.00 %
5. Health Insurance Premium Assistance Rate						0.23 %
6. Final Total Employer Contribution Rate (4) and (5)						4.23 %

**Table 3**  
**Determination of Health Insurance Contribution Rate**  
**For Fiscal Year 2004/2005**  
(Dollar Amounts in Thousands)

Item	Amount
1. Estimated Number of Eligible Annuitants in Fiscal Year 2005/2006	102,300
2. Estimated Number of Eligible Annuitants Who Elect Coverage	66,495
3. Estimated Annual Health Insurance Premium Assistance Payments During Fiscal Year 2005/2006 (2) x \$100 x 12	\$ 79,794
4. Estimated Health Insurance Premium Assistance Administrative Expenses During Fiscal Year 2005/2006	2,063
5. Total Estimated Health Insurance Premium Assistance Account Disbursements During Fiscal Year 2005/2006 (3) + (4)	\$ 81,857
6. Estimated Balance in Health Insurance Premium Assistance Account for Prior Fiscal Year 2004/2005	\$ 56,549
7. Estimated Shortfall in Health Insurance Premium Assistance Account (5) - (6)	\$ 25,308
8. Required Health Insurance Premium Assistance Contribution Rate	
(a) Estimated 2004/2005 Payroll	\$ 11,059,845
(b) Required Health Insurance Premium Assistance Contribution Rate (7) / (8a) (rounded up)	0.23%

**Table 4**  
**Summary of Market Value of Plan Assets**  
**As of June 30, 2003**  
(Dollar Amounts in Thousands)

<b>Market Value</b>	
1. Market Value of Assets as of June 30, 2002	\$ 43,576,553
2. Contributions During Fiscal Year 2002/2003	868,566
3. Disbursements During Fiscal Year 2002/2003	2,983,939
4. Investment Return During Fiscal Year 2002/2003	
a) Net Investment Return	\$ 1,021,871
b) Administrative Expenses	36,225
c) Investment Return After Expenses (a) - (b)	\$ 985,646
5. Market Value of Assets as of June 30, 2003 (1) + (2) - (3) + (4c)	\$ 42,446,826
6. Rate of Return (per Wilshire)	2.74 %
<b>Asset Allocation by Account</b>	
1. Members' Savings Account	\$ 8,282,753
2. Annuity Reserve Account	21,963,662
3. State Accumulation Account	12,069,964
4. Health Care Account	130,447
5. Total (1) + (2) + (3) + (4)	\$ 42,446,826

**Table 5**  
**Derivation of Actuarial Value of Assets**  
**As of June 30, 2003**  
(Dollar Amounts in Thousands)

1. Market Value of Assets as of June 30, 2003					\$ 42,446,826
2. Determination of Deferred Gain (Loss)					
	Return on Assets				
<u>Year</u>	<u>Actual</u>	<u>Expected</u>	<u>Difference</u>	<u>% Deferred</u>	<u>Deferred Amount</u>
2002/2003	\$ 985,646	\$ 4,525,288	\$ (3,539,642)	80%	\$ (2,831,714)
2001/2002	(2,555,630)	4,575,102	(7,130,732)	60%	(4,278,439)
2000/2001	(3,877,769)	4,480,947	(8,358,716)	40%	(3,343,486)
					\$ (10,453,639)
3. Actuarial Value of Assets (1) - (2)					\$ 52,900,465
4. Actuarial Rate of Return *					1.35%

\* The actuarial rate of return is the investment return on the increase in the actuarial value of the assets from the June 30, 2002 valuation to the June 30, 2003 valuation.



**Table 6**  
**Analysis of Change in Unfunded Accrued Liability**  
**As of June 30, 2003**  
(Dollar Amounts in Thousands)

Item	Amount
1. Unfunded Accrued Liability at June 30, 2002	\$ (2,499,857)
2. Interest Credit at 8.50% to June 30, 2003	(212,488)
3. Contributions Toward Unfunded Accrued Liability	(1,026,062)
4. Change due to 1.15% Floor on Total Employer Rate for Contribution due on 7/1/2003 Under Act 38	(307,836)
5. Change in Methodology Used to Value Vestees	(243,377)
6. Expected Unfunded Accrued Liability at June 30, 2003 (1) + (2) - (3) + (4) + (5)	\$ (2,237,496)
7. Actual Unfunded Accrued Liability at June 30, 2003	\$ 1,543,310
8. Increase (Decrease) from Expected (6) - (7)	\$ 3,780,806
9. Reasons for Increase (Decrease)	
(a) Experience (Gains) Losses	
(i) Loss from Investment Return on Actuarial Value of Assets	\$ 3,805,818
(ii) Gain from Salary Increases Less than Expected	(126,576)
(iii) Loss from Retirement and Other Separation Experience	(139,098)
(iv) Loss from Annuitants' Mortality Experience	240,662
Subtotal	\$ 3,780,806
(b) Change in Assumptions	\$ -
(c) Grand Total	\$ 3,780,806

**Table 7**  
**Schedule of Funding Progress**  
**GASB Statement No. 25 Disclosure**  
(Dollar Amounts in Thousands)

Valuation as of June 30	Actuarial Value of Assets	Actuarial Accrued Liability	Funded (Unfunded) Actuarial Accrued Liability	Funded Ratio	Covered Payroll	Unfunded Accrued Liability as a Percentage of Covered Payroll
2003	\$ 52,900,465	\$ 54,443,775	\$ (1,543,310)	97.2 %	\$ 9,652,881	(16.0) %
2002	54,296,368	51,796,511	2,499,857	104.8	9,378,944	26.7
2001	54,830,300	47,917,294	6,913,006	114.4	9,414,884	73.4
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

**Table 8**  
**Schedule of Employer Contributions**  
**GASB Statement No. 25 Disclosure**  
(Dollar Amounts in Thousands)

Fiscal Year Ended June 30	Annual Required Contribution	Percentage Contributed
2003	\$ 20,831	100 %
2002	539	100 %
2001	158,193	100 %
2000	390,504	100 %
1999	513,940	100 %
1998	718,431	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, 2001 was contributed in the fiscal year ending June 30, 2003).

Additional information as of the latest actuarial valuation follows:

Valuation Date:	6/30/2003
Actuarial Cost Method:	Entry Age
Amortization Method:	Level percent closed
Remaining Amortization Period:	10 - 30 years
Asset Valuation Method:	5-year smoothed market

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

* Includes Inflation at:	3.50%
--------------------------	-------

**Table 9**  
**Solvency Test**  
**Comparative Summary of Accrued Liability**  
**and Actuarial Value of Assets**  
(Dollar 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)
2003	\$ 8,282,753	\$ 22,094,109	\$ 24,066,913	\$ 52,900,465	100%	100%	94%
2002	7,780,370	19,978,567	24,037,574	54,296,368	100%	100%	100%
2001	7,464,404	15,802,140	24,650,750	54,830,300	100%	100%	100%
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%

**Table 10**  
**History of Contribution Rates**

Fiscal Year	Contribution Rates					
	Member	Employer Normal Cost Rate	Unfunded Liability Rate	Preliminary Employer Pension Rate	Health Insurance Rate	Total Employer Rate
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	6.43	5.63	(6.05)	(0.42)	1.09	1.09
2002/2003	7.10	7.20	(10.03)	1.00	0.97	1.15
2003/2004	7.08	7.25	(4.27)	2.98	0.79	3.77
2004/2005	7.12	7.48	(7.10)	4.00	0.23	4.23

**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
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			125,880	6,836	132,716	243,311
2002			134,300	7,114	141,414	242,616
2003			<b>138,383</b>	<b>7,310</b>	<b>145,693</b>	<b>246,700</b>
2004	11,125	4,158	145,350	7,785	153,135	246,700
2005	10,740	4,307	151,783	8,230	160,013	246,700
2006	11,247	4,463	158,567	8,633	167,200	246,700
2007	11,615	4,614	165,568	9,000	174,568	246,700
2008	11,864	4,778	172,654	9,342	181,996	246,700
2009	11,937	4,925	179,666	9,657	189,323	246,700
2010	11,881	5,083	186,464	9,951	196,415	246,700
2011	11,751	5,246	192,969	10,230	203,199	246,700
2012	11,660	5,389	199,240	10,491	209,731	246,700
2013	11,490	5,553	205,177	10,749	215,926	246,700

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

\* Vested Withdrawal - At least 5 years service but not eligible for Early or Superannuation retirement.

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

Description of Actuarial Assumptions and Methods (Continued)

**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.)

**Salary Increase:** Effective average of 6 1/4% per annum, compounded annually. The components are 3 1/2% for inflation, 1% for real wage growth and 1 3/4% for merit or seniority increases (adopted as of June 30, 2000). 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 unfunded accrued liability as of June 30, 2001 and the decrease in the unfunded accrued liability due to the actuarial asset method change provided by Act 38 continue to be amortized over a 10-year period, with level dollar funding, beginning July 1 2002. The increases in the unfunded accrued liability due to the July 1, 2002 and July 1, 2003 cost-of-living adjustments provided by Act 38 continue to be amortized over a 10-year period, with level dollar funding, starting on July 1, 2003 and July 1, 2004, respectively.



---

## Description of Actuarial Assumptions and Methods (Continued)

All other changes in the unfunded accrued liability at June 30, 2001, June 30, 2002, and June 30, 2003 – including the Act 9 benefit changes – are amortized over a 30-year period, with level dollar funding, starting on July 1, 2002, July 1, 2003, and July 1, 2004, respectively. Future benefit improvements for active members and retirees will be amortized over a 10-year period with level dollar funding. Future gains and losses will be amortized over a 30-year period with level dollar funding. Act 40 also provides a 4.00% floor on the employer pension rate.

**Asset Valuation Method:** A five-year moving market average value of assets that recognizes the 8½% actuarial expected investment return immediately and spreads the difference between the actual and expected return (beginning with the 2000/2001 fiscal year) over a period of five years (adopted as of June 30, 2001).

**Determination of Health Care Contribution Rate:** Rate necessary to establish reserves sufficient to provide postemployment healthcare insurance 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, 2003 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. 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	2.5% of final average salary times years of school service and intervening military service. 2% of final average salary for non-school service and for members who do not elect Class T-D coverage. Minimum of \$100 per year of service. "Final average salary" means the highest average annual salary for any 3 years of service.  Annual salary is subject to a limit of \$200,000, as adjusted under Section 401(a)(17).  For members who elect coverage under Class T-D, the maximum benefit is equal to the limit established by Section 415 of the Internal Revenue Code.

##### 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.  For members who elect coverage under Class T-D, the maximum benefit is equal to the limit established by Section 415 of the Internal Revenue Code.

##### Withdrawal Annuity

Eligibility	5 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.

---

 Summary of Benefit and Contribution Provisions (Continued)
**Disability Annuity**

Eligibility	5 years of service.
Amount	The standard single life annuity if the total number of credited service is greater than 16.667, otherwise the standard single life annuity multiplied by the lesser of the following ratios: $(Y^*/Y)$ or $(16.667/Y)$ where Y is the number of years of credited service and Y* is the total years of credited service if the member were to continue as a school employee until 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 assumed payable if no other option elected.

**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.

Summary of Benefit and Contribution Provisions (Continued)

**Postemployment Health Care Insurance Premium Assistance**

Eligibility	Retired members who: (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 \$100 per month 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.

**CONTRIBUTIONS**

By Members	Members who elect coverage under Class T-D and who were hired prior to July 22, 1983 contribute at a rate of 6½% of compensation, while members who elect coverage under Class T-D who were most recently hired on or after July 22, 1983 contribute at a rate of 7½% of compensation. Members who do not elect coverage under Class T-D and who were hired prior to July 22, 1983 contribute at a rate of 5¼% of compensation, while members who do not elect coverage under Class T-D who were most recently hired on or after July 22, 1983 contributed 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 employers	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 employers.

**Table 14**  
**Summary of Membership Data**  
**As of June 30, 2003**  
(Dollar Amounts in Thousands)

**Active Members \***

Item	Male	Female	Total
Number of Members	69,282	177,418	246,700
Annual Salaries **	\$ 3,183,286	\$ 6,469,595	\$ 9,652,881
Average Age	45.1	45.0	45.0
Average Service	13.5	11.2	11.9

\* Excludes 65,453 inactive members and vestees.

\*\* These salaries shown in the table above represent a rate of pay for members who were in active service on June 30, 2003.

**Annuitants and Beneficiaries**

Item	Number	Annual Annuities	Average Annuities	Average Age
Annuitants (Normal, Early and Withdrawal)	132,005	\$ 2,400,584	\$ 18,186	70.1
Survivors and Beneficiaries	7,310	54,580	7,466	76.0
Disabled Annuitants	6,378	89,971	14,106	62.3
Total	145,693	\$ 2,545,135	17,469	70.0

**Exhibit I**  
**Active Membership Data as of June 30, 2003**  
**Number and Average Annual Salary**

Age	Years of Service									Total
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 +	
<b>Under 25</b>	6,683	46								6,729
	\$25,260	\$27,237								\$25,274
<b>25 - 29</b>	16,373	4,009	24							20,406
	\$31,569	\$39,665	\$31,162							\$33,159
<b>30 - 34</b>	10,786	11,048	2,668	44						24,546
	\$28,557	\$42,002	\$47,511	\$36,348						\$36,682
<b>35 - 39</b>	10,007	5,894	6,158	2,054	60					24,173
	\$21,627	\$37,748	\$49,042	\$50,924	\$38,724					\$35,074
<b>40 - 44</b>	12,790	6,577	4,440	5,020	1,908	114				30,849
	\$18,700	\$30,478	\$43,845	\$53,986	\$52,213	\$36,170				\$32,709
<b>45 - 49</b>	11,246	8,288	6,018	4,710	6,329	4,586	85			41,262
	\$19,667	\$28,718	\$39,532	\$50,239	\$59,565	\$60,924	\$39,050			\$38,617
<b>50 - 54</b>	7,001	6,146	6,406	5,644	4,383	11,638	9,431	47		50,696
	\$21,147	\$29,830	\$38,458	\$47,423	\$56,709	\$65,186	\$66,670	\$39,982		\$48,983
<b>55 - 59</b>	4,121	3,167	3,725	4,033	3,452	3,419	7,345	1,596	11	30,869
	\$19,875	\$26,888	\$34,550	\$41,292	\$48,445	\$57,467	\$68,180	\$71,163	\$35,207	\$46,673
<b>60 - 64</b>	2,147	1,437	1,623	1,763	1,665	1,516	825	682	151	11,809
	\$16,427	\$22,017	\$28,103	\$35,221	\$37,944	\$44,852	\$55,223	\$70,805	\$68,902	\$34,722
<b>Over 64</b>	1,488	875	793	692	497	478	314	104	120	5,361
	\$12,189	\$16,454	\$21,313	\$25,007	\$27,596	\$33,138	\$38,874	\$47,547	\$66,612	\$22,652
<b>Total</b>	82,642	47,487	31,855	23,960	18,294	21,751	18,000	2,429	282	246,700
	\$23,642	\$33,689	\$40,799	\$47,054	\$53,111	\$60,801	\$66,146	\$69,448	\$66,613	\$39,128

**Exhibit II**  
**The Number and Average Annual Annuity**  
**As of June 30, 2003**

**Retired on Account of Superannuation, Early Retirement and**  
**Those in Receipt of Withdrawal Annuities**

Age	Years of Service									Total
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 +	
<b>Under 50</b>	13	584	1,490	463	164	32				2,746
	\$1,742	\$745	\$1,301	\$3,400	\$8,232	\$13,835				\$2,099
<b>50 - 54</b>	5	100	1,721	668	405	450	382	9		3,740
	\$2,309	\$1,528	\$1,290	\$3,532	\$8,404	\$18,734	\$30,485	\$27,977		\$7,613
<b>55 - 59</b>	11	88	2,424	1,207	710	1,204	7,737	2,146	6	15,533
	\$7,961	\$2,023	\$1,498	\$4,150	\$8,766	\$23,061	\$36,324	\$50,159	\$37,442	\$27,799
<b>60 - 64</b>	111	264	2,060	1,894	1,618	2,315	7,899	4,725	226	21,112
	\$1,964	\$2,771	\$2,911	\$6,558	\$12,128	\$22,306	\$34,163	\$44,409	\$50,676	\$27,556
<b>65 - 69</b>	408	705	2,630	2,481	2,895	3,180	4,419	4,202	1,093	22,013
	\$986	\$2,212	\$3,440	\$6,653	\$11,307	\$18,597	\$27,925	\$36,512	\$43,407	\$20,154
<b>70 - 74</b>	561	1,060	2,746	2,772	3,036	3,293	3,839	2,326	1,777	21,410
	\$1,187	\$1,870	\$3,380	\$6,011	\$10,747	\$16,521	\$24,623	\$32,790	\$41,098	\$16,789
<b>75 - 79</b>	660	1,199	2,809	2,972	3,077	2,842	2,419	2,023	981	18,982
	\$1,165	\$1,669	\$3,347	\$6,089	\$10,402	\$15,854	\$21,449	\$27,449	\$38,322	\$13,294
<b>80 - 84</b>	481	1,034	2,324	2,301	1,928	1,782	1,340	1,398	476	13,064
	\$1,193	\$1,608	\$3,320	\$6,011	\$9,599	\$13,849	\$18,674	\$23,028	\$31,351	\$10,649
<b>85 - 89</b>	366	704	1,555	1,287	1,102	991	775	963	483	8,226
	\$1,821	\$1,823	\$3,610	\$6,225	\$9,585	\$13,386	\$18,073	\$22,290	\$26,487	\$10,657
<b>Over 89</b>	146	427	630	643	574	672	555	761	771	5,179
	\$6,241	\$2,466	\$4,610	\$7,583	\$11,282	\$13,966	\$17,824	\$21,048	\$24,700	\$13,624
<b>Total</b>	2,762	6,165	20,389	16,688	15,509	16,761	29,365	18,553	5,813	132,005
	\$1,567	\$1,790	\$2,832	\$5,953	\$10,543	\$17,553	\$30,011	\$36,254	\$37,245	\$18,186

**Exhibit III**  
**The Number and Average Annual Annuity**  
**As of June 30, 2003**

**Beneficiaries and Survivor Annuitants**

Age	Years of Service									Total
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 +	
<b>Under 50</b>	1	19	47	40	43	33	18	14	10	225
	\$240	\$1,536	\$1,567	\$2,382	\$4,805	\$7,638	\$11,283	\$11,604	\$15,172	\$5,219
<b>50 - 54</b>	2	4	14	23	26	25	27	17	12	150
	\$299	\$581	\$2,593	\$3,208	\$5,350	\$10,098	\$12,622	\$13,798	\$10,185	\$8,014
<b>55 - 59</b>	3	6	27	23	34	44	91	56	18	302
	\$3,413	\$2,443	\$2,004	\$3,157	\$5,263	\$10,261	\$13,195	\$15,175	\$9,384	\$9,939
<b>60 - 64</b>	3	13	52	51	38	50	124	104	34	469
	\$5,055	\$1,461	\$2,944	\$3,958	\$5,142	\$9,989	\$16,029	\$16,263	\$13,837	\$11,158
<b>65 - 69</b>	13	23	91	75	73	72	137	122	60	666
	\$2,270	\$1,615	\$2,668	\$3,912	\$6,631	\$9,522	\$12,219	\$16,579	\$17,256	\$9,767
<b>70 - 74</b>	14	37	107	121	124	115	173	164	102	957
	\$2,314	\$1,449	\$2,718	\$3,909	\$5,838	\$7,484	\$11,930	\$13,261	\$17,543	\$8,843
<b>75 - 79</b>	24	77	186	182	151	186	195	244	101	1,346
	\$877	\$1,305	\$2,338	\$3,546	\$6,049	\$8,382	\$9,659	\$11,118	\$14,655	\$7,244
<b>80 - 84</b>	22	102	187	165	158	155	191	290	128	1,398
	\$1,870	\$1,146	\$2,185	\$3,298	\$5,250	\$6,926	\$8,811	\$9,909	\$11,185	\$6,439
<b>85 - 89</b>	14	84	140	119	121	97	130	217	177	1,099
	\$1,494	\$1,093	\$1,941	\$3,234	\$4,569	\$5,892	\$6,950	\$8,474	\$9,662	\$5,774
<b>Over 89</b>	15	31	65	58	47	50	80	151	200	697
	\$4,570	\$975	\$1,852	\$2,849	\$4,265	\$5,713	\$6,187	\$6,643	\$7,677	\$5,601
<b>Total</b>	111	396	916	857	815	827	1,166	1,379	842	7,309
	\$2,161	\$1,251	\$2,278	\$3,442	\$5,428	\$7,849	\$10,665	\$11,286	\$11,752	\$7,468



**Exhibit IV**  
**The Number and Average Annual Annuity**  
**As of June 30, 2003**

**Retired on Account of Disability**

Age	Years of Service									Total
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 +	
<b>Under 50</b>	1	181	184	94	64	21	1			546
	\$4,219	\$8,605	\$10,813	\$15,283	\$18,294	\$26,891	\$40,404			\$12,388
<b>50 - 54</b>	1	169	175	137	177	240	44	1		944
	\$15,795	\$7,771	\$10,364	\$13,824	\$21,823	\$34,004	\$47,187	\$29,253		\$20,303
<b>55 - 59</b>		187	236	202	271	300	124	1		1,321
		\$7,608	\$9,142	\$12,809	\$19,844	\$30,113	\$42,337	\$42,631		\$19,585
<b>60 - 64</b>	1	189	282	242	248	187	20			1,169
	\$13,254	\$5,613	\$7,986	\$10,678	\$16,657	\$25,677	\$31,635			\$13,238
<b>65 - 69</b>	2	154	232	182	149	98	16	3		836
	\$9,470	\$4,865	\$7,013	\$8,709	\$13,846	\$21,166	\$27,266	\$43,058		\$10,386
<b>70 - 74</b>	5	131	168	139	136	58	11		1	649
	\$9,776	\$3,468	\$5,969	\$8,664	\$12,987	\$19,671	\$27,641		\$54,601	\$9,208
<b>75 - 79</b>	2	92	120	78	81	53	11	1		438
	\$4,728	\$3,620	\$5,925	\$8,057	\$11,960	\$16,882	\$22,557	\$24,751		\$8,718
<b>80 - 84</b>	4	64	73	48	49	33	22	1		294
	\$6,930	\$3,596	\$6,128	\$7,552	\$10,428	\$15,523	\$20,936	\$29,135		\$8,778
<b>85 - 89</b>	1	14	39	29	17	15	15			130
	\$2,664	\$2,471	\$5,225	\$8,339	\$9,608	\$15,797	\$19,190			\$9,008
<b>Over 89</b>	3	1	15	16	6	6	4			51
	\$12,951	\$5,018	\$6,621	\$7,490	\$11,177	\$13,501	\$13,311			\$9,105
<b>Total</b>	20	1,182	1,524	1,167	1,198	1,011	268	7	1	6,378
	\$8,989	\$6,058	\$8,073	\$10,835	\$16,763	\$27,202	\$36,527	\$36,421	\$54,601	\$14,106

**Exhibit V**  
**The Number and Average Annual Annuity**  
**As of June 30, 2003**

**Those in Receipt of a Refund Annuity**

Age	Years of Service									Total
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 +	
Under 50										
50 - 54										
55 - 59										
60 - 64										
65 - 69										
70 - 74										
75 - 79										
80 - 84										
85 - 89										
Over 89	1 \$ 66									1 \$ 66
<b>Total</b>	1 \$ 66									1 \$ 66

**Exhibit VI**  
**Annuitant and Beneficiary Membership Data**  
**As of June 30, 2003**

**Number and Average Annual Benefit**  
**Excludes Partial Lump Sum Payments**

Age Last Birthday	Number	Annual Benefit (Dollars in Thousands)	Average Annual Benefit (Dollars)
<b>Annuitants</b>			
<b>(Normal, Early and Withdrawal)</b>			
Under 60	22,019	\$ 466,034	\$ 21,165
60 - 64	21,112	581,764	27,556
65 - 69	22,013	443,656	20,154
70 - 74	21,410	359,454	16,789
75 - 79	18,982	252,338	13,294
Over 79	26,469	297,338	11,233
Total	132,005	\$ 2,400,584	\$ 18,186
<b>Survivors and Beneficiaries</b>			
Under 60	677	\$ 5,378	\$ 7,944
60 - 64	469	5,233	11,158
65 - 69	666	6,505	9,767
70 - 74	957	8,462	8,842
75 - 79	1,346	9,750	7,244
Over 79	3,195	19,252	6,026
Total	7,310	\$ 54,580	\$ 7,466
<b>Disabled Annuitants</b>			
Under 60	2,811	\$ 51,802	\$ 18,428
60 - 64	1,169	15,476	13,239
65 - 69	836	8,683	10,386
70 - 74	649	5,776	9,208
75 - 79	438	3,818	8,717
Over 79	475	4,216	8,876
Total	6,378	\$ 89,971	\$ 14,106
<b>Grand Total</b>			
<b>Average Annual Benefit</b>		145,693	\$ 2,545,135
			\$ 17,469

**Exhibit VII****10 Year History of Membership Data****Active Members**

Valuation as of June 30	Number of Active Members	Percentage Change in Membership	Total Annual Payroll (Dollars in Thousands)	Percentage Change in Payroll
2003	246,700	1.68%	\$ 9,652,881	2.92%
2002	242,616	(0.29)%	9,378,944	(0.38)%
2001	243,311	3.89%	9,414,884	5.32%
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%

**Annuitant and Survivor Annuitant Members**

Year Ended June 30	Number on roll	Additions	Deletions	Percentage Change in Membership	Annual Annuities (Dollars in Millions)	Percentage Change in Annuities
2003	145,693	9,079	4,800	3.03%	\$ 2,545.1	13.20%
2002	141,414	13,003	4,305	6.55%	2,248.3	20.10%
2001	132,716	3,140	4,482	(1.00)%	1,872.0	0.00%
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%