

Public School Employees' Retirement System

**Actuarial  
Section**



January 28, 2005

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, 2005.

The valuation takes into account all of the promised benefits to which members are entitled as of June 30, 2005, including pension and survivor benefits; and as required by the Retirement Code is the basis for the contribution rate for fiscal year 2006/2007. The fiscal year 2006/2007 employer contribution rate certified by the Board is 6.46%.

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. As a result of the July 1, 2000 – June 30, 2005 experience review the actuarial assumptions and methods used to determine the contribution were changed from last year. Changes adopted by the Board at its December 2005 meeting include a minor change to the actuarial cost method, and changes in the assumptions for post-retirement mortality, death in service, disability retirement, and non-vested withdrawal. The assumed rate of inflation was changed from 3.5% to 3.25%, and the assumed real rate of return on assets was increased from 5% to 5.25%. The interest rate assumption is unchanged at 8.5%, and the salary increase assumption has declined by 25 basis points to a career average of 6%.

### **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

At its December 2005 meeting the Board adopted a package of assumption changes whose fiscal impact had not previously been determined by the actuary. At the meeting the actuary estimated that the required fiscal year 2006/2007 employer contribution rate would be 6.46%, and the Board certified this rate. The actuary subsequently confirmed that the 6.46% rate is adequate for funding future benefits. (The calculated rate, based on the actual package of changes adopted by the Board, would have been 6.41%.) The total funded ratio of the plan (for Pensions and Health Insurance combined) is 83.7% based on the accrued liability and the actuarial value of assets as of June 30, 2005.

### 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 the PSERS Comprehensive Annual Financial Report (CAFR), and also prepared the trend data schedules included in the Financial Section of the CAFR.

Qualified actuaries completed the valuation 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, 2005 for the Public School Employees' Retirement System of Pennsylvania.

The principal valuation results include:

- The employer contribution rate for fiscal year 2006/2007 which is 6.46%.
- The total funded ratio of the plan determined as of June 30, 2005, which is 83.7% based on the accrued liability and the actuarial value of assets for Pensions and Health Insurance as of that date.
- The determination of the actuarial gain or loss as of June 30, 2004 which is a loss of \$2.9 billion.
- Annual disclosure as of June 30, 2004 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 the PSERS Comprehensive Annual Financial Report (CAFR), and also prepared the trend data schedules included in the Financial Section of the CAFR.

## Changes Since Last Year

### Legislative and Administrative Changes

There were no legislative or administrative changes since the prior valuation.

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

### Actuarial Assumptions and Methods

As a result of the July 1, 2000 – June 30, 2005 experience review the actuarial assumptions and methods used to determine the contribution were changed from last year. The changes are effective for the June 30, 2005 actuarial valuation, and were adopted by the Board at its December, 2005 meeting.

The change in method was a minor change in the Entry Age Normal actuarial cost method. Previously the average normal cost rate was the total of the rates for all active members divided by the number of active members. That is, each active member's normal cost rate had an equal weight in the calculation of the average rate. Individual member normal cost rates are still being determined, but the average rate is now a pay-weighted average. The assumptions for post-retirement mortality, death in service, disability retirement, and non-vested withdrawal were changed to better reflect recent experience, and also to reflect expected future improvements in mortality. The assumed rate of inflation was changed from 3.5% to 3.25%, and the assumed real rate of return on assets was increased from 5% to 5.25%. The interest rate assumption is unchanged at 8.5%, and the salary increase assumption has declined by 25 basis points to a career average of 6%.

The actuarial assumptions and methods are outlined in Table 12.

## Contribution Rates

The results of the valuation as of June 30, 2005 determine the employer contribution rate for fiscal year 2006/2007. At its December 2005 meeting the Board adopted a package of assumption changes whose fiscal impact had not previously been determined by the actuary. At the meeting the actuary estimated that the required fiscal year 2006/2007 employer contribution rate would be 6.46% of payroll, and the Board certified this rate. The actuary subsequently confirmed that the 6.46% rate is adequate for funding future benefits. The calculated rate, based on the actual package of changes adopted by the Board, is 6.41% of payroll, including 5.67% of payroll for pension benefits plus 0.74% of payroll for the health insurance premium assistance program.

The average contribution rate payable by the members is 7.21%. Effective January 1, 2002, the employee contribution rate for members who elected to have prior school service and intervening military service converted to Class T-D service increased by 1.25%. However, anyone who enrolls (or re-enrolls) in PSERS on or after July 1, 2001 is *automatically* a member of Class T-D with regard to all subsequent school service and subsequent intervening military service, with a member rate equal to 7.5%. The average member contribution rate of 7.21% is a pay-weighted average of member rates that vary based on date of hire and based on Class T-D membership.

### Reasons for Change in the Rate

The employer contribution rate calculated by the actuary increased from 4.69% for fiscal year 2005/2006 to 6.41% for fiscal year 2006/2007. The increase of 1.72% is due to the following reasons:

· Decrease due to change in normal rate*	(0.38)
· Increase due to payroll growth*	0.11
· Increase due to actuarial loss on assets*	2.31
· Increase due to actuarial loss on liabilities*	0.66
· Increase due to change in health insurance contribution rate*	0.04
· Impact of the 4% floor on employer contribution rate under Act 40*	(0.67)
· Decrease due to FY 2005 over-contribution*	(0.34)
· Decrease due to assumption and method changes	<u>(0.01)</u>
· Total	1.72%

\* Before assumption and method changes.

## 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, 2005. Comparable results from the June 30, 2004 valuation are also shown.

Item	June 30, 2005	June 30, 2004
<b>Demographics</b>		
Active Members		
· Number	255,465	246,700
· Average Annual Pay	\$ 41,210	\$ 40,463
Annuitants		
· Number	156,519	151,552
· Average Annual Benefit Payment	\$ 19,343	\$ 18,464
<b>Contribution Rates (as a Percentage of Payroll)</b>		
	(Fiscal Year 2006/2007)	(Fiscal Year 2005/2006)
Employer Contribution Rate:		
· Total Pension Contribution Rate	5.67%	4.00%
· Health Insurance Contribution Rate	<u>0.74</u>	<u>0.69</u>
· Total Contribution Rate Calculated by Actuary	6.41%	4.69%
· Total Contribution Rate Certified by Board	6.46%	4.69%
Member Average Contribution Rate	<u>7.21</u>	<u>7.16</u>
· Total Rate	13.67%	11.85%
<b>Actuarial Funded Status*</b>		
· Accrued Liability	\$ 61,226.6 Mil	\$ 57,123.0 Mil
· Actuarial Value of Assets	<u>51,219.3</u>	<u>52,094.5</u>
· Unfunded Accrued Liability	\$ 10,007.3	\$ 5,028.5
· Funded Ratio	83.7 %	91.2 %

\* Pensions and Health Insurance combined

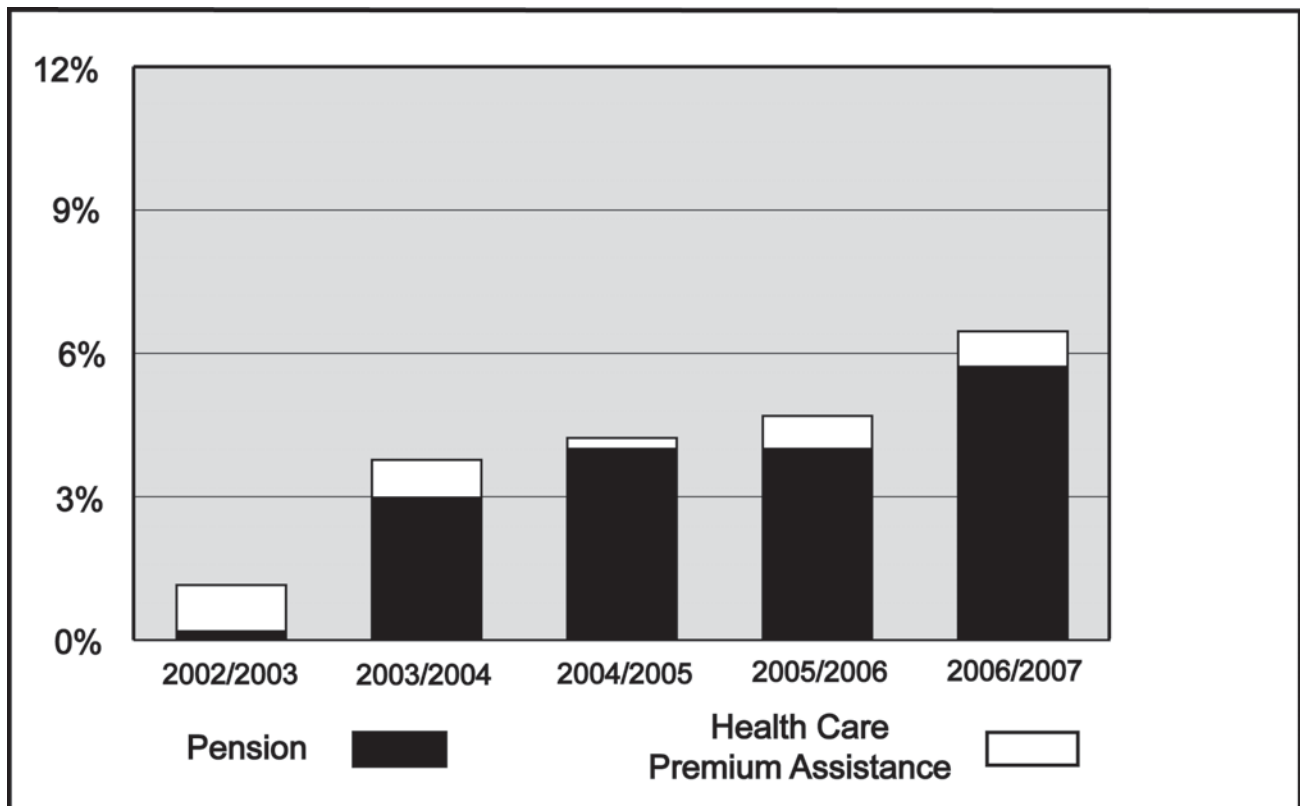
### Five-Year History of Principal Financial Results

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

Fiscal Year	Member Contributions	Employer Contributions			
		Normal Cost	Unfunded Accrued Liability	Health Care	Total *
2006/2007	7.21%	6.62%	(0.95)%	0.74%	6.46%
2005/2006	7.16	7.61	(4.28)	.69	4.69
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

\* Certified by the Board.

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 6.46% 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 total funded ratio 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 for Pensions is the present value of benefits accumulated to date under the System's funding method and reflects future pay increases for active employees. The accrued liability for Health Insurance equals the assets in the Health Insurance account.

On this basis, the System's total funded ratio (for Pensions and Health Insurance combined) is 83.7% as of June 30, 2005. This funded ratio is based on an actuarial value of assets of \$51.2 billion and an accrued liability of \$61.2 billion. The funded ratio for Pensions alone is 83.6% as of June 30, 2005, based on an actuarial value of assets of \$51.1 billion, and an accrued liability of \$61.1 billion.

### Reasons for Change in the Funded Ratio

The total funded ratio decreased from 91.2% as of June 30, 2004 to 83.7% as of June 30, 2005. The change in assumptions and methods caused the funded ratio to decrease by 0.9%. The remaining decrease is due to the asset and liability losses.



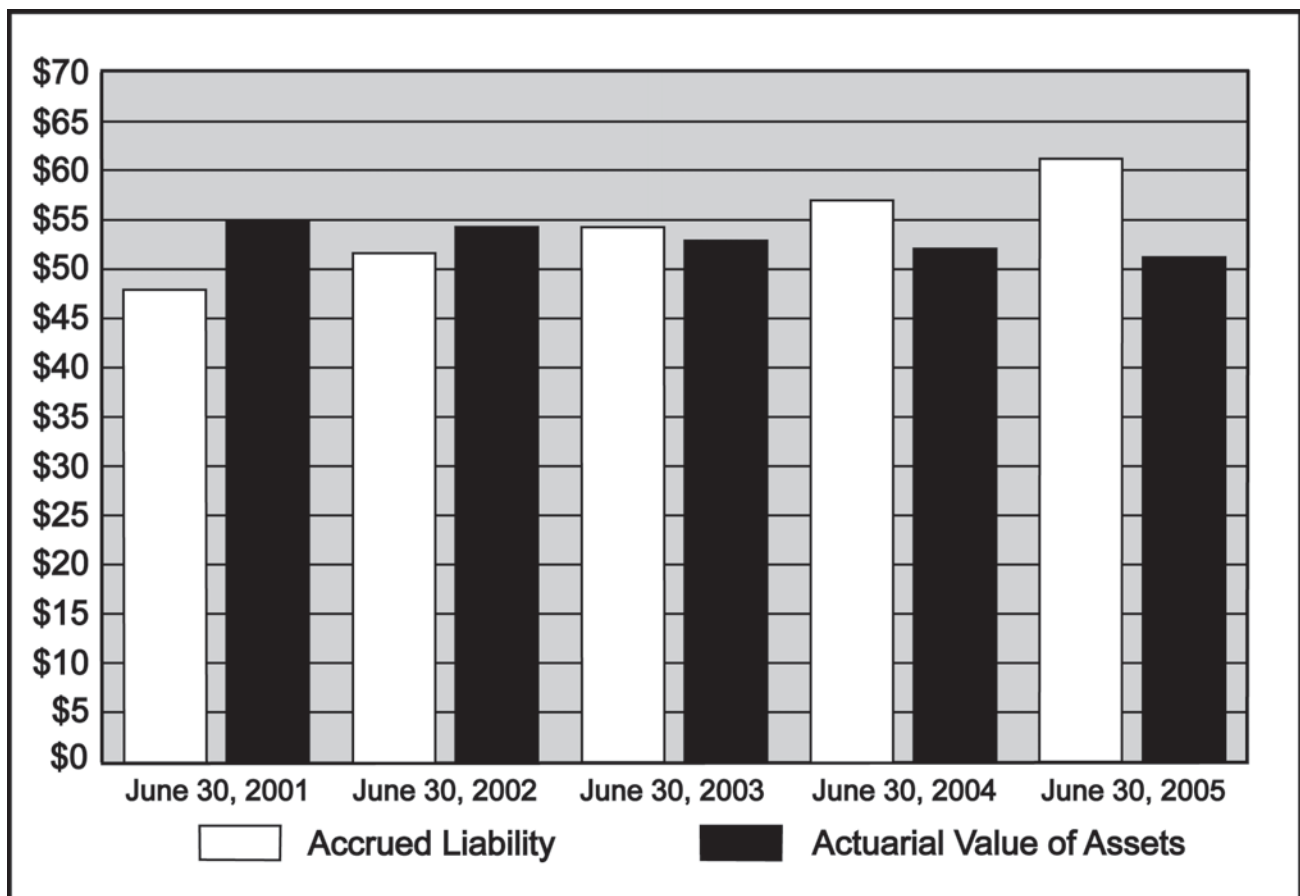
**Five-Year History of  
Total Funded Ratio\***  
(Dollar Amounts in Millions)

Valuation as of June 30	Accrued Liability	Actuarial Value of Assets	Unfunded Accrued Liability	Funded Ratio
2005	\$ 61,226.6	\$ 51,219.3	\$ 10,007.3	83.7%
2004	57,123.0	52,094.5	5,028.5	91.2
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

\* For Pensions and Health Insurance

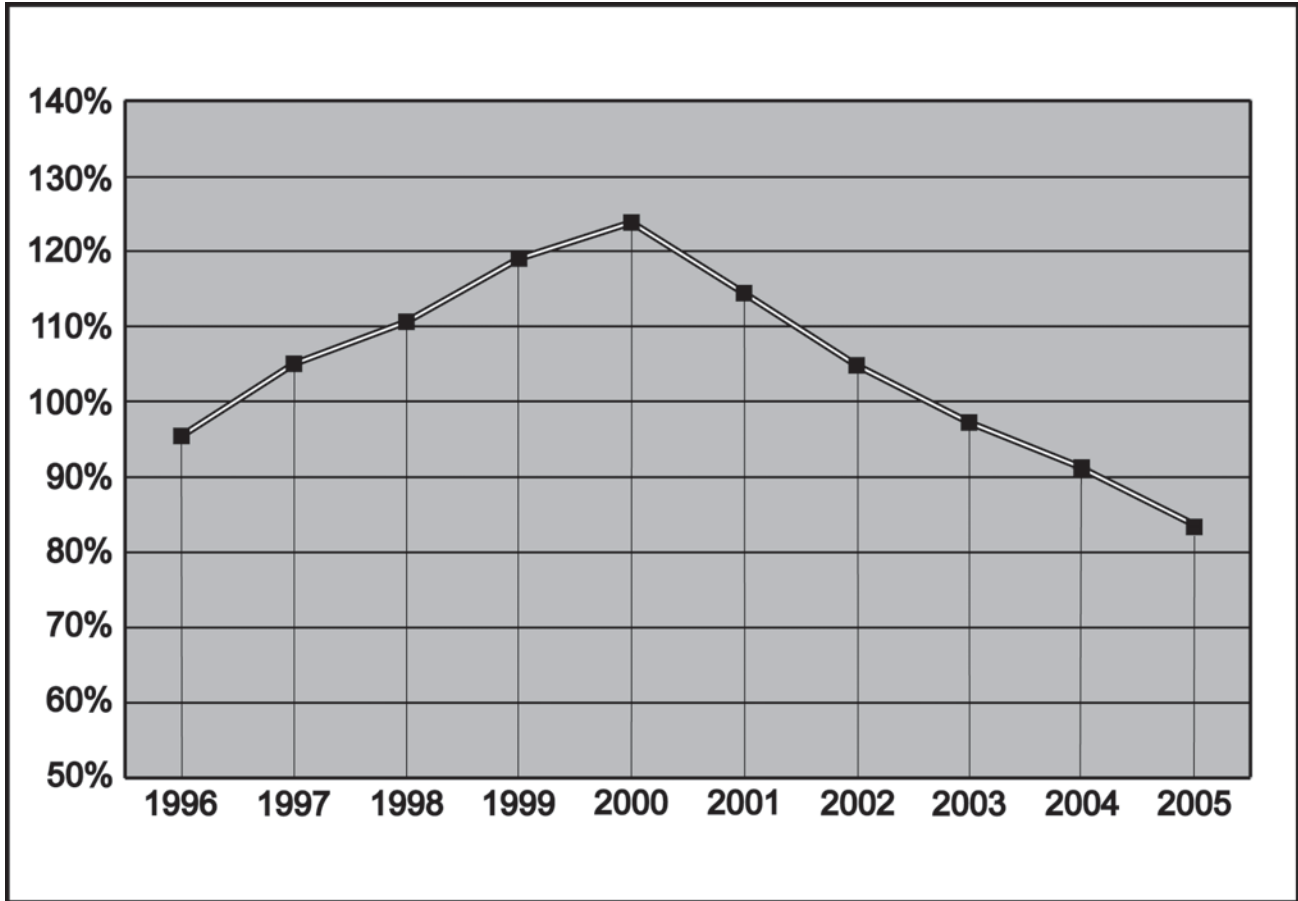
The following chart shows a five-year history of the accrued liability and the actuarial value of assets:

**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 total funded ratio for Pensions and Health Insurance:

**Ten-Year History of Funded Ratio  
(1996 - 2005)**



## 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 pension assets, the actuarial accrued liability for pensions and the unfunded actuarial accrued liability for pensions. The actuarial funded ratio for pensions is measured by comparing the actuarial value of pension assets (based on a 5-year moving average market value) with the accrued liability for pensions. The accrued liability is the present value of pension 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 for pensions is 83.6% as of June 30, 2005. This funded ratio is based on an actuarial value of pension assets of \$51.1 billion and an accrued liability for pensions of \$61.1 billion.

The “schedule of employer contributions” shows historical trend information about the annual required contributions (ARC) for pensions of the employer and the percentage of the ARC contributed to the System. The ARC is equal to the normal cost for pensions plus amortization of the unfunded actuarial accrued liability for pensions. 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 actual employer pension contributions for the five fiscal years ending June 30, 2004 are equal to 100% of the ARC while the actual employer pension contributions for the fiscal year ending June 30, 2005 are 46% of the ARC. Refer to Table 8 for additional detail.

## 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 2000/2001 through 2004/2005 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 2001/2002 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
2004/2005*	12.9%	3.2%
2003/2004*	19.7	2.6
2002/2003*	2.7	1.4
2001/2002*	(5.3)	2.7
2000/2001	(7.4)	14.3

\* Market value rate of return provided by Wilshire Associates Incorporated, the PSERS investment consultant.

**Table 1**  
**Summary of Results of Actuarial Valuation**  
**As of June 30, 2005**  
(Dollar Amounts in Thousands)

Item	Amount
<b>Member Data</b>	
1. Number of Members	
a) Active Members	255,465
b) Inactive Members and Vestees	58,720
c) Annuitants, Beneficiaries and Survivor Annuitants	156,519
d) Total	<u>470,704</u>
2. Annualized Salaries	\$ 10,527,668
3. Annual Annuities	\$ 3,027,550
<b>Valuation Results</b>	
4. Present Value of Future Pension Benefits	
a) Active Members	\$ 47,470,869
b) Inactive Members and Vestees	660,394
c) Annuitants, Beneficiaries and Survivor Annuitants	26,954,108
d) Total	<u>\$ 75,085,371</u>
5. Present Value of Future Pension Normal Cost	
a) Active Members	\$ 7,275,650
b) Employer	6,680,277
c) Total	<u>\$ 13,955,927</u>
6. Pension Accrued Liability	
a) Active Members (4a) - (5c)	\$ 33,514,942
b) Inactive Members and Vestees	660,394
c) Annuitants, Beneficiaries and Survivor Annuitants	26,954,108
d) Total	<u>\$ 61,129,444</u>
7. Health Care Premium Assistance Payments	\$ 97,137
8. Total Accrued Liability (6) + (7)	\$ 61,226,581
9. Actuarial Value of Assets	\$ 51,219,293
10. Funded Status (9) / (8)	83.7 %
11. Unfunded Accrued Liability (8) - (9)	\$ 10,007,288
12. Total Normal Cost Rate	13.83 %
13. Member Contribution Rate	7.21 %
14. Employer Normal Cost Rate (12 - (13)	6.62 %
<b>Employer Annual Funding Requirement for Fiscal 2006/2007</b>	
15. Employer Contribution Rate Calculated by Actuary	
a) Normal	6.62 %
b) Unfunded Accrued Liability	<u>(0.95)</u>
c) Preliminary Pension Rate	5.67 %
d) Preliminary Pension Rate with 4% Floor	5.67
e) Health Insurance Premium Assistance	<u>0.74</u>
f) Total Rate	6.41 %
16. Employer Contribution Rate Certified by Board	6.46 %

**Table 2**  
**Summary of Sources of Employer Contribution Rate**  
**As of June 30, 2005**  
(Dollar Amounts in Thousands)

	Funding Period	Funding Period Beginning July 1	Initial Amount of Liability	Outstanding Balance as of July 1, 2004	Annual Payment	
					Amount	Percent *
1. Amortization of:						
a) July 1, 2001 Fresh Start Unfunded Base	10 Years	2002	\$ (9,137,130)	\$ (7,733,753)	\$ (1,510,937)	(12.78)%
b) Asset Method Change at July 1, 2001 due to Act 38	10 Years	2002	(4,638,306)	(3,925,906)	(767,001)	(6.49)%
c) 2001 Changes	30 Years	2002	7,570,507	6,991,515	668,111	5.65%
d) 2002 Changes	30 Years	2003	3,014,171	3,023,070	286,101	2.41 %
e) 2002 COLA	10 Years	2003	463,795	432,493	76,694	0.65 %
f) 2003 COLA	10 Years	2004	754,524	828,370	135,375	1.15 %
g) 2003 Changes	30 Years	2004	3,229,593	3,475,898	326,059	2.76 %
h) 2004 Changes	30 Years	2005	2,903,093	3,149,856	293,096	2.48 %
i) 2005 Changes	30 Years	2006	3,765,745	3,765,745	380,189	3.22 %
Total Amortization Payments				10,007,288	(112,313)	(0.95)%
2. Employer Normal Cost Rate						6.62 %
3. Preliminary Pension Rate (1) + (2)						5.67 %
4. Preliminary Pension Rate with 4% Floor -- Maximum of (3) and 4%						5.67 %
5. Health Insurance Premium Assistance Rate						0.74 %
6. Final Total Employer Contribution Rate Calculated by Actuary (4) + (5)						6.41 %
7. Final Total Employer Contribution Rate Adopted by Board						6.46 %

\* Based on Estimated Employer Payroll for Fiscal Year Ending 2007 of \$11,821,951.

**Table 3**  
**Determination of Health Insurance Contribution Rate**  
**For Fiscal Year 2006/2007**  
(Dollar Amounts in Thousands)

Item	Amount
1. Estimated Number of Eligible Annuitants in Fiscal Year 2007/2008	112,300
2. Estimated Number of Eligible Annuitants Who Elect Coverage	72,995
3. Estimated Annual Health Insurance Premium Assistance Payments During Fiscal Year 2007/2008 (2) x \$100 x 12	\$ 87,594
4. Estimated Health Insurance Premium Assistance Administrative Expenses During Fiscal Year 2007/2008	2,113
5. Total Estimated Health Insurance Premium Assistance Account Disbursements During Fiscal Year 2007/2008 (3) + (4)	\$ 89,707
6. Estimated Balance in Health Insurance Premium Assistance Account for Prior Fiscal Year	\$ 3,262
7. Estimated Shortfall in Health Insurance Premium Assistance Account (5) - (6)	\$ 86,445
8. Required Health Insurance Premium Assistance Contribution Rate	
(a) Estimated 2006/2007 Payroll	\$ 11,821,951
(b) Required Health Insurance Premium Assistance Contribution Rate (7) / (8a) (rounded up)	0.74%

**Table 4**  
**Summary of Market Value of Plan Assets**  
**As of June 30, 2005**  
(Dollar Amounts in Thousands)

<b>Market Value</b>	
1. Market Value of Assets as of June 30, 2004	\$ 48,484,506
2. Contributions During Fiscal Year 2004/2005	1,246,118
3. Disbursements During Fiscal Year 2004//2005	3,741,395
4. Investment Return During Fiscal Year 2004/2005	
a) Net Investment Return	\$ 6,078,851
b) Administrative Expenses	34,546
c) Investment Return After Expenses (a) - (b)	\$ 6,044,305
5. Market Value of Assets as of June 30, 2005 (1) + (2) - (3) + (4c)	\$ 52,033,534
6. Rate of Return (per Wilshire)	12.87 %
<b>Asset Allocation by Account</b>	
1. Members' Savings Account	\$ 9,116,347
2. Annuity Reserve Account	26,954,108
3. State Accumulation Account	15,865,942
4. Health Care Account	97,137
5. Total (1) + (2) + (3) + (4)	\$ 52,033,534

**Table 5**  
**Derivation of Actuarial Value of Assets**  
**As of June 30, 2005**  
(Dollar Amounts in Thousands)

1. Market Value of Assets as of June 30, 2005					\$ 52,033,534
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>
2004/2005	\$ 6,044,305	\$ 4,321,981	\$ 1,722,324	80%	\$ 1,377,859
2003/2004	8,201,871	4,404,561	\$ 3,797,310	60%	2,278,386
2002/2003	985,646	4,525,288	(3,539,642)	40%	(1,415,857)
2001/2002	(2,555,630)	4,575,102	(7,130,732)	20%	(1,426,147)
					\$ 814,241
3. Actuarial Value of Assets (1) - (2)					\$ 51,219,293
4. Actuarial Rate of Return *					3.19%

\* The actuarial rate of return is the investment return based on the change in the actuarial value of the assets from the June 30, 2004 valuation to the June 30, 2005 valuation.



**Table 6**  
**Analysis of Change in Unfunded Accrued Liability**  
**As of June 30, 2005**  
(Dollar Amounts in Thousands)

Item	Amount
1. Unfunded Accrued Liability at June 30, 2004	\$ 5,028,521
2. Interest Credit at 8.50% to June 30, 2005	427,424
3. Contributions toward Unfunded Accrued Liability	(785,598)
4. Change due to FY 2005 Over-Contribution	(400,366)
5. Expected Unfunded Accrued Liability at June 30, 2005 (1) + (2) - (3) + (4)	\$ 5,841,177
6. Actual Unfunded Accrued Liability at June 30, 2005	\$ 10,007,288
7. Increase (Decrease) from Expected (6) - (5)	\$ 4,166,111
9. Reasons for Increase (Decrease)	
(a) Experience (Gains) Losses	
(i) Loss from Investment Return on Actuarial Value of Assets	\$ 2,701,891
(ii) Gain from Salary Increases Less than Expected	(118,605)
(iii) Gain from Retirement and Other Separation Experience	766,982
(iv) Loss from Annuitants' Mortality Experience	122,856
Subtotal	\$ 3,473,124
(b) Change in Assumptions and Funding Method	692,987
(c) Grand Total	\$ 4,166,111

**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
2005	\$ 51,122,156	\$ 61,129,444	\$ (10,007,288)	83.6	\$ 10,527,668	(95.1) %
2004	51,949,622	56,978,143	(5,028,521)	91.2	10,030,705	(50.1)
2003	52,770,018	54,313,328	(1,543,310)	97.2	9,652,881	(16.0)
2002	54,193,064	51,693,207	2,499,857	104.8	9,378,944	26.7
2001	54,783,928	47,870,922	6,913,006	114.4	9,414,884	73.4
2000	49,241,819	39,771,604	9,470,215	123.8	8,939,598	105.9

\* The amounts reported do not include assets or liabilities for Health Insurance. In previous valuations, the amounts reported did include assets and liabilities for Health Insurance.

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

<b>Fiscal Year Ended June 30</b>	<b>Annual Required Contribution</b>	<b>Actual Employer Contribution</b>	<b>Percentage Contributed</b>
2005	\$ 945,107	\$ 431,556	46 %
2004	321,901	321,091	100 %
2003	20,831	20,831	100 %
2002	539	539	100 %
2001	158,193	158,193	100 %
2000	390,504	390,504	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, 2002 was contributed in the fiscal year ending June 30, 2004).

Additional information as of the latest actuarial valuation follows:

Valuation Date:	6/30/2005
Actuarial Cost Method:	Entry Age
Amortization Method:	Level percent closed
Remaining Amortization Period:	40 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%
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**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)
2005	\$ 9,116,347	\$ 27,051,245	\$ 25,058,989	\$ 51,219,293	100%	100%	60%
2004	8,755,109	24,482,234	23,885,657	52,094,479	100%	100%	79%
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%

\*The amounts reported include assets and liabilities for Pensions and Health Insurance.

**Table 10**  
**History and Projection of**  
**Contribution Rates and Funded Ratios \***

Fiscal Year	Employer Payroll	Contribution Rates						Funded Ratio
		Member	Employer Normal Cost Rate	Unfunded Liability Rate	Preliminary Employer Pension Rate	Health Insurance Rate	Total Employer Rate	
1997/1998	\$ 8,091,481	5.65 %	6.44 %	2.17 %	8.61 %	0.15 %	8.76 %	110.6 %
1998/1999	8,247,602	5.69	6.33	(0.44)	5.89	0.15	6.04	119.0
1999/2000	8,939,598	5.72	6.40	(2.04)	4.36	0.25	4.61	123.8
2000/2001	9,414,884	5.77	6.29	(4.65)	1.64	0.30	1.94	114.4
2001/2002	9,378,944	6.43	5.63	(6.05)	(0.42)	1.09	1.09	104.8
2002/2003	9,652,881	7.10	7.20	(10.03)	1.00	0.97	1.15	97.2
2003/2004	10,030,705	7.08	7.25	(4.27)	2.98	0.79	3.77	91.2
2004/2005	11,062,589	7.12	7.48	(7.10)	4.00	0.23	4.23	83.7
2005/2006	11,505,093	7.16	7.61	(4.28)	4.00	0.69	4.69	80.9
2006/2007	<b>11,821,951</b>	<b>7.21</b>	<b>6.62</b>	<b>(0.95)</b>	<b>5.67</b>	<b>0.74</b>	<b>6.46 **</b>	<b>80.7</b>
2007/2008	12,015,696	7.23	6.60	(0.21)	6.39	0.76	7.15	81.6
2008/2009	12,272,752	7.25	6.58	(0.57)	6.01	0.77	6.78	81.3
2009/2010	12,526,362	7.27	6.57	(1.51)	5.06	0.77	5.83	80.3
2010/2011	12,778,938	7.30	6.54	(1.82)	4.72	0.78	5.50	79.1
2011/2012	13,039,623	7.32	6.53	(1.85)	4.68	0.78	5.46	77.9
2012/2013	13,315,696	7.35	6.51	15.24	21.75	0.77	22.52	79.2
2013/2014	13,611,415	7.37	6.49	14.31	20.80	0.77	21.57	80.4
2014/2015	13,928,825	7.39	6.48	13.00	19.48	0.76	20.24	81.5
2015/2016	14,283,124	7.41	6.46	12.67	19.13	0.76	19.89	82.5
2016/2017	14,675,532	7.43	6.45	12.33	18.78	0.74	19.52	83.5

\* The projection of contribution rates is based on the assumption that there are no changes in demographics or economic assumptions, no changes in benefit provisions, and no actuarial gains or losses other than gains or losses on the actuarial value of assets that result from recognizing currently deferred gains or losses on the market value of assets.

\*\* 6.46% total employer contribution rate for fiscal year 2006/2007 adopted by Board on December 9, 2005.

**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
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			138,383	7,310	145,693	246,700
2004			143,997	7,555	151,552	247,901
2005			<b>148,727</b>	<b>7,792</b>	<b>156,519</b>	<b>255,465</b>
2006	12,442	4,080	157,089	8,209	165,298	255,465
2007	11,351	4,228	164,212	8,600	172,812	255,465
2008	11,712	4,405	171,519	8,959	180,478	255,465
2009	12,056	4,585	178,990	9,298	188,288	255,465
2010	12,096	4,759	186,327	9,620	195,947	255,465
2011	11,651	4,931	193,047	9,925	202,972	255,465
2012	11,732	5,114	199,665	10,225	209,890	255,465
2013	11,693	5,289	206,069	10,523	216,592	255,465
2014	11,527	5,465	212,131	10,816	222,947	255,465
2015	11,379	5,646	217,864	11,110	228,974	255,465

**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 3.25% for inflation and 5.25% for the real rate of return (both adopted as of June 30, 2005). Actuarial equivalent benefits are determined based on 4% (since 1960).

**Separation From Service:** Illustrative rates of assumed separation from service are shown in the following table. (Rates of non-vested withdrawal, of death, and of disability were adopted as of June 30, 2005; other rates were adopted as of June 30, 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	12.40 %	5.50 %	1.40 %	.042 %	.024 %		
30	10.00	3.00	1.40	.057	.024		
35	11.00	3.00	1.10	.062	.100		
40	11.00	3.00	.80	.072	.180		
45	11.00	3.00	.50	.100	.180		
50	11.00	3.00	1.78	.152	.280		24.00 %
55	10.50	3.00	3.50	.252	.430	10.00 %	24.00
60	9.00	2.40	4.50	.467	.580	10.00	28.00
65				.870	.100		20.00
69				1.335	.100		20.00
<b>Females</b>							
25	14.10 %	9.50 %	4.00 %	.019 %	.040 %		
30	14.10	7.50	4.00	.023	.040		
35	14.10	5.50	2.00	.031	.080		
40	10.90	3.50	1.00	.043	.130		
45	10.90	3.00	.55	.061	.180		
50	10.90	3.00	1.50	.085	.250		10.00 %
55	10.90	3.00	3.00	.146	.480	10.00	10.00
60	10.90	3.50	5.90	.284	.480	15.00	25.00
65				.561	.160		28.00
69				.866	.160		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 Uninsured Pensioners 1994 Mortality Table (UP94) with mortality improvements projected 10 years, and with age set back one year for males and females, adopted in 2005, 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% per annum, compounded annually (adopted as of June 30, 2005). The components are 3.25% for inflation, 1% for real wage growth and 1.75% for merit or seniority increases (adopted as of June 30, 2000). Representative values are as follows:

Age	Annual Rate of Salary Increase
20	12.00 %
30	9.00
40	7.00
50	4.75
55	4.50
60	4.25
65	4.25
69	4.25

**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 (modified slightly as of June 30, 2005 to use a pay-weighted average normal contribution rate). The results of each June 30 valuation normally determine the employer contribution rate for the second succeeding fiscal year. 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



## Description of Actuarial Assumptions and Methods (Continued)

accrued liability due to the July 1, 2002 and July 1, 2003 cost-of-living adjustments provided by Act 38 were both recognized at June 30, 2002 and 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, 2002 – including the Act 9 benefit changes – are amortized over a 30-year period, with level dollar funding starting on July 1, 2003. Post June 30, 2002 benefit improvements for active members and retirees are amortized over a 10-year period with level dollar funding. Post June 30, 2002 gains and losses, and changes in the unfunded accrued liability resulting from changes in actuarial assumptions and methods, are amortized over a 30-year period with level dollar funding. Act 40 also provided a 4.00% floor on the employer pension rate.

**Asset Valuation Method:** A five-year moving market average value of assets that recognizes the 8.5% 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:** This is the rate necessary to establish reserves sufficient to provide premium assistance payments to all participating eligible annuitants during the fiscal year that immediately follows the year the employer contribution is made.

**DATA**

**Census and Assets:** The valuation was based on members of the System as of June 30, 2005 and does not take into account future members. All census data was supplied by the System and was subject to reasonable consistency checks. The actuary adjusts the data to account for service and pay earned by members on or before the valuation that is not reported by the System until after the actuarial valuation is performed. 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 (see below) 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: <ul style="list-style-type: none"> <li>(a) have 24½ or more years of service, or</li> <li>(b) are disability annuitants, or</li> <li>(c) have 15 or more years of service and who both terminated school service and retired after attaining superannuation age and</li> <li>(d) participate in the PSERS Health Options Program or in an employer-sponsored health insurance program.</li> </ul>
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 elected coverage under Class T-D and who were most recently enrolled prior to July 22, 1983 contribute at a rate of 6½% of compensation, while members who elected coverage under Class T-D and who were most recently enrolled on or after July 22, 1983 contribute at a rate of 7½% of compensation. Members who did not elect coverage under Class T-D and who were most recently enrolled prior to July 22, 1983 contribute at a rate of 5¼% of compensation, while members who did not elect coverage under Class T-D and who were most recently enrolled on or after July 22, 1983 and prior to July 1, 2001 contribute at a rate of 6¼% of compensation. Anyone who enrolls or re-enrolls on or after July 1, 2001 automatically has coverage under class T-D for subsequent school service and subsequent intervening military service, and must contribute at a rate of 7½% of compensation. Reduction in rate for a joint coverage member: 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, 2005**  
(Dollar Amounts in Thousands)

**Active Members \***

<b>Item</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
Number of Members	70,774	184,691	255,465
Annual Salaries **	\$ 3,355,836	\$ 7,171,833	\$ 10,527,668
Average Age	44.9	45.0	45.0
Average Service	12.6	11.0	11.5

\* Excludes 58,720 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, 2005.

**Annuitants and Beneficiaries**

<b>Item</b>	<b>Number</b>	<b>Annual Annuities</b>	<b>Average Annuities</b>	<b>Average Age</b>
Annuitants (Normal, Early and Withdrawal)	141,763	\$ 2,855,901	\$ 20,146	69.8
Survivors and Beneficiaries	7,792	65,406	8,394	75.8
Disabled Annuitants	6,964	106,243	15,256	62.3
<b>Total</b>	<b>156,519</b>	<b>\$ 3,027,550</b>	<b>19,343</b>	<b>69.8</b>

**Exhibit I**  
**Active Membership Data as of June 30, 2005**  
**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>	6,922	84								7,006
	\$26,535	\$25,554								\$26,523
<b>25 - 29</b>	17,823	5,173	26							23,022
	\$33,149	\$43,263	\$35,472							\$35,424
<b>30 - 34</b>	9,595	13,158	2,667	67						25,487
	\$29,826	\$44,945	\$52,923	\$37,430						\$40,068
<b>35 - 39</b>	9,077	7,884	7,333	2,185	70					26,549
	\$23,724	\$41,541	\$54,783	\$57,562	\$39,061					\$40,419
<b>40 - 44</b>	11,418	7,640	4,542	5,341	1,858	158				30,957
	\$19,724	\$32,371	\$47,758	\$59,433	\$58,412	\$37,619				\$36,222
<b>45 - 49</b>	10,783	9,493	5,601	4,683	4,745	3,473	202			38,980
	\$19,622	\$29,636	\$40,648	\$53,739	\$62,974	\$64,502	\$40,662			\$38,566
<b>50 - 54</b>	7,438	7,674	6,552	6,151	4,187	9,303	7,968	109		49,382
	\$21,561	\$30,920	\$40,332	\$50,151	\$59,641	\$68,924	\$71,410	\$45,251		\$49,314
<b>55 - 59</b>	4,757	4,040	4,118	4,842	3,697	3,794	7,860	2,062	21	35,191
	\$21,529	\$29,487	\$36,826	\$45,191	\$53,694	\$61,997	\$72,180	\$76,011	\$54,685	\$49,756
<b>60 - 64</b>	2,489	1,799	1,659	2,031	1,634	1,529	909	637	176	12,863
	\$18,574	\$25,505	\$30,938	\$37,980	\$42,747	\$49,223	\$58,522	\$75,205	\$74,249	\$37,305
<b>Over 64</b>	1,802	1,039	791	753	512	479	361	161	130	6,028
	\$12,718	\$18,046	\$21,862	\$27,205	\$29,823	\$34,348	\$37,221	\$48,282	\$68,972	\$23,448
<b>Total</b>	82,104	57,984	33,289	26,053	16,703	18,736	17,300	2,969	327	255,465
	\$24,904	\$36,122	\$44,246	\$50,754	\$56,482	\$63,946	\$70,010	\$73,205	\$70,895	\$41,210

**Exhibit II**  
**The Number and Average Annual Annuity**  
**As of June 30, 2005**

**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>	11	1,182	1,351	436	137	27	4			3,148
	\$2,857	\$754	\$1,485	\$3,748	\$8,844	\$13,497	\$21,417			\$1,978
<b>50-54</b>	5	232	1,366	537	329	360	287	15		3,131
	\$4,275	\$1,465	\$1,414	\$4,085	\$9,152	\$20,268	\$31,892	\$31,674		\$7,800
<b>55-59</b>	10	250	2,552	1,301	754	1,461	8,233	3,555	6	18,122
	\$29,665	\$1,972	\$1,714	\$4,953	\$10,196	\$25,029	\$39,992	\$51,661	\$56,756	\$31,404
<b>60-64</b>	125	422	2,431	2,001	1,642	2,507	9,509	5,857	235	24,729
	\$1,946	\$2,871	\$2,980	\$7,079	\$13,644	\$24,656	\$35,753	\$48,951	\$53,474	\$30,180
<b>65-69</b>	441	729	2,576	2,652	2,870	3,333	5,579	4,640	766	23,586
	\$869	\$2,516	\$3,686	\$7,481	\$12,358	\$20,443	\$30,124	\$38,520	\$49,699	\$22,048
<b>70-74</b>	543	960	2,728	2,691	2,960	3,205	3,982	2,643	1,810	21,522
	\$590	\$2,003	\$3,435	\$6,293	\$10,816	\$17,148	\$25,767	\$34,519	\$41,730	\$17,884
<b>75-79</b>	611	1,159	2,748	2,809	3,050	3,059	2,868	2,101	1,186	19,591
	\$512	\$1,736	\$3,321	\$6,068	\$10,619	\$16,241	\$22,651	\$29,972	\$39,768	\$14,581
<b>80-84</b>	473	1,029	2,307	2,418	2,198	2,029	1,549	1,480	592	14,075
	\$523	\$1,571	\$3,283	\$5,972	\$10,032	\$14,612	\$19,711	\$24,484	\$35,004	\$11,585
<b>85-89</b>	288	695	1,623	1,419	1,230	1,057	827	938	389	8,466
	\$602	\$1,703	\$3,478	\$6,051	\$9,417	\$13,298	\$18,229	\$22,385	\$27,652	\$10,401
<b>Over 89</b>	147	459	741	758	657	694	564	742	631	5,393
	\$690	\$2,248	\$4,203	\$7,228	\$10,666	\$13,791	\$18,059	\$21,439	\$24,905	\$12,630
<b>Total</b>	2,654	7,117	20,423	17,022	15,827	17,732	33,402	21,971	5,615	141,763
	\$803	\$1,761	\$2,932	\$6,272	\$11,046	\$18,728	\$32,031	\$39,913	\$39,335	\$20,146

**Exhibit III**  
**The Number and Average Annual Annuity**  
**As of June 30, 2005**

**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	18	53	43	49	33	28	18	16	259
	\$240	\$1,707	\$1,753	\$2,875	\$5,462	\$7,612	\$14,746	\$14,304	\$10,652	\$6,205
<b>50 - 54</b>	1	10	14	19	29	32	41	20	10	176
	\$217	\$1,056	\$2,681	\$4,067	\$6,276	\$11,270	\$12,451	\$12,552	\$9,197	\$8,646
<b>55 - 59</b>	2	8	33	28	42	53	113	90	21	390
	\$291	\$2,473	\$2,340	\$3,031	\$6,705	\$12,085	\$15,280	\$15,919	\$13,240	\$11,646
<b>60 - 64</b>	2	15	42	53	44	59	146	130	31	522
	\$381	\$1,402	\$2,464	\$4,778	\$6,275	\$10,845	\$17,185	\$19,940	\$14,123	\$13,091
<b>65 - 69</b>	10	21	94	84	81	74	141	157	54	716
	\$591	\$1,738	\$3,185	\$4,381	\$6,647	\$10,611	\$13,149	\$18,404	\$18,518	\$10,862
<b>70 - 74</b>	8	39	119	119	108	101	194	162	101	951
	\$577	\$1,675	\$2,730	\$4,432	\$6,683	\$9,001	\$12,665	\$15,045	\$18,876	\$9,836
<b>75 - 79</b>	23	53	168	167	160	186	205	239	121	1,322
	\$634	\$1,416	\$2,614	\$3,790	\$6,471	\$8,334	\$11,640	\$12,362	\$15,934	\$8,333
<b>80 - 84</b>	21	96	202	184	174	206	216	307	108	1,514
	\$584	\$1,233	\$2,443	\$3,537	\$5,863	\$7,471	\$9,350	\$10,769	\$14,126	\$7,058
<b>85 - 89</b>	10	98	172	126	127	108	152	225	156	1,174
	\$507	\$1,125	\$2,039	\$3,529	\$4,902	\$7,084	\$7,931	\$9,810	\$10,502	\$6,260
<b>Over 89</b>	1	42	79	58	62	61	86	182	196	767
	\$514	\$1,008	\$2,103	\$3,013	\$4,246	\$5,412	\$6,716	\$7,725	\$8,976	\$6,154
<b>Total</b>	79	400	976	881	876	913	1,322	1,530	814	7,791
	\$567	\$1,325	\$2,443	\$3,788	\$5,946	\$8,511	\$11,845	\$12,898	\$13,189	\$8,395



**Exhibit IV**  
**The Number and Average Annual Annuity**  
**As of June 30, 2005**

**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>	2	226	185	105	57	15				590
	\$10,868	\$9,872	\$11,938	\$16,424	\$20,111	\$25,249				\$13,069
<b>50 - 54</b>	1	166	198	146	165	200	42			918
	\$20,265	\$8,401	\$11,147	\$15,720	\$22,505	\$36,091	\$46,178			\$20,466
<b>55 - 59</b>	4	218	296	250	260	377	203	3		1,611
	\$14,367	\$8,009	\$10,404	\$13,541	\$21,167	\$31,798	\$44,653	\$49,560		\$21,709
<b>60 - 64</b>		219	285	249	280	232	45	2		1,312
		\$5,925	\$8,151	\$11,512	\$18,341	\$27,200	\$38,253	\$46,868		\$15,052
<b>65 - 69</b>		161	238	199	170	115	16	2		901
		\$5,157	\$7,377	\$9,730	\$14,592	\$23,933	\$27,256	\$42,997		\$11,407
<b>70 - 74</b>		133	173	147	127	67	13	1		661
		\$4,050	\$6,505	\$8,640	\$12,810	\$19,445	\$26,193	\$43,179		\$9,451
<b>75 - 79</b>		96	146	88	90	56	6	1	1	484
		\$3,407	\$5,719	\$8,613	\$13,016	\$17,880	\$23,576	\$24,751	\$54,601	\$8,912
<b>80 - 84</b>	1	72	63	47	54	34	14	1		286
	\$25,382	\$3,615	\$5,858	\$7,157	\$10,542	\$15,570	\$21,209	\$29,135		\$8,447
<b>85 - 89</b>		26	39	27	21	11	16			140
		\$3,107	\$5,827	\$8,135	\$10,849	\$15,996	\$21,045			\$9,059
<b>Over 89</b>		4	18	23	8	6	2			61
		\$3,045	\$5,999	\$8,176	\$9,306	\$14,460	\$16,133			\$8,224
<b>Total</b>	8	1,321	1,641	1,281	1,232	1,113	357	10	1	6,964
	\$15,606	\$6,600	\$8,677	\$11,694	\$17,572	\$28,521	\$40,082	\$42,547	\$54,601	\$15,256

**Exhibit V**  
**The Number and Average Annual Annuity**  
**As of June 30, 2005**

**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, 2005**

**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	24,401	\$ 599,759	\$ 24,579
60 - 64	24,729	746,327	30,180
65 - 69	23,586	520,023	22,048
70 - 74	21,522	384,894	17,884
75 - 79	19,591	285,663	14,581
Over 79	27,934	319,235	11,428
Total	141,763	\$ 2,855,901	\$ 20,146
<b>Survivors and Beneficiaries</b>			
Under 60	825	7,671	9,298
60 - 64	522	6,833	13,090
65 - 69	716	7,777	10,862
70 - 74	951	9,354	9,836
75 - 79	1,322	11,016	8,333
Over 79	3,456	22,755	6,584
Total	7,792	\$ 65,406	\$ 8,394
<b>Disabled Annuitants</b>			
Under 60	3,119	\$ 61,471	\$ 19,709
60 - 64	1,312	19,748	15,052
65 - 69	901	10,277	11,406
70 - 74	661	6,247	9,451
75 - 79	484	4,314	8,913
Over 79	487	4,186	8,595
Total	6,964	\$ 106,243	\$ 15,256
<b>Grand Total</b> <b>Average Annual Benefit</b>		156,519	\$ 3,027,550
		\$ 19,343	

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

<b>Valuation as of June 30</b>	<b>Number of Active Members</b>	<b>Percentage Change in Membership</b>	<b>Total Annual Payroll (Dollars in Thousands)</b>	<b>Percentage Change in Payroll</b>
2005	255,465	3.05%	\$ 10,527,668	4.95%
2004	247,901	0.49%	10,030,705	3.91%
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%

**Annuitant and Survivor Annuitant Members**

<b>Year Ended June 30</b>	<b>Number on roll</b>	<b>Additions</b>	<b>Deletions</b>	<b>Percentage Change in Membership</b>	<b>Annual Annuities (Dollars in Millions)</b>	<b>Percentage Change in Annuities</b>
2005	156,519	10,050	5,083	3.28%	\$ 3,027.6	8.20%
2004	151,552	10,526	4,667	4.02%	2,798.2	9.94%
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%