
**THE REPORT OF THE
JUNE 30, 2006, ACTUARIAL VALUATION
OF THE
PUBLIC EDUCATION EMPLOYEE
RETIREMENT SYSTEM
OF MISSOURI**

GRS

Gabriel Roeder Smith & Company

October 20, 2006

Board of Trustees
Public Education Employee Retirement System of Missouri
3210 W. Truman Blvd.
Jefferson City, MO 65109

Dear Members of the Board:

We are pleased to present the report of the actuarial valuation of the Public Education Employee Retirement System of Missouri ("PEERS") as of June 30, 2006.

This valuation provides data on the funding status of PEERS. The results of the valuation show that the current contribution level will no longer fund the current benefits of PEERS within the framework of your funding policy.

This valuation is based on the provisions of PEERS in effect as of June 30, 2006, data on the PEERS membership and information on the asset value of the trust fund. All member data and asset information were provided by PEERS staff. While certain checks for reasonableness were performed, the data was used unaudited.

The actuarial assumptions and actuarial cost method used in this valuation are those recommended in the actuarial experience review presented to the Board and adopted by the Board at its meeting on August 14, 2006.

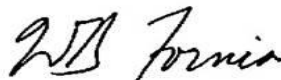
To the best of our knowledge, this actuarial statement is complete and accurate, and has been prepared in accordance with generally accepted actuarial principles and practice.

Respectfully submitted,

Gabriel, Roeder, Smith & Company



Norman S. Losk, F.S.A.
Senior Consultant



William B. Fornia, F.S.A.
Senior Consultant



Alex Rivera, F.S.A.
Senior Consultant

TABLE OF CONTENTS

PAGE

Summary of the Valuation

| | |
|---|-------------------------------------|
| 1 | Purposes of the Actuarial Valuation |
| 1 | Report Highlights |
| 3 | Membership Characteristics |
| 4 | Actuarial Assumptions |
| 4 | Experience During FY 2006 |
| 5 | PEERS Benefits |
| 5 | Asset Information |
| 5 | Funding Status |
| 6 | GASB Disclosure |
| 6 | Funding Process |

Appendix A Membership Data

| | |
|----|---|
| 7 | Table 1 – Number, Average Age-Service-Salary, and Total Payroll of Active Members |
| 8 | Table 2 – Employee Distribution by Age and Years of Service |
| 9 | Table 3 – Salary Distribution – Active Service |
| 10 | Table 4 – Salary Increase Rates by Age Group |
| 11 | Table 5 – Pensions in Force on June 30, 2006 by Type and Monthly Amount |
| 12 | Table 6 – Pensions in Force on June 30, 2006 by Type and Age |
| 13 | Table 7 – Cost of Living Increases to Retired Members |
| 14 | Table 8 – Analysis of Retired Membership by Type of Benefit |

Appendix B Asset Information

| | |
|----|---|
| 15 | Table 9 – Market Value of Assets, Balance Sheet |
| 16 | Table 10 – Statement of Revenue and Expenses, Market Value Reconciliation |
| 17 | Table 11 – Growth of Cash Flow |
| 18 | Table 12 – Development of the Actuarial Value of Assets |

Appendix C Actuarial Determinations

| | |
|----|--|
| 19 | Table 13 – Ten Year Historical Summary |
| 20 | Table 14 – Determination of Normal Cost |
| 21 | Table 15 – Determination of the Unfunded Actuarial Accrued Liability |
| 22 | Table 16 – GASB 25 Exhibits |
| 23 | Table 17 – Annual Pension Cost and Contributions |
| 24 | Table 18 – GASB Pension Cost Summary |
| 25 | Table 19 – Calculation of Unfunded Actuarial Accrued Liability |
| 26 | Table 20 – Analysis of Actuarial Gain/Loss |

Appendix D Additional Data

| | |
|----|---|
| 27 | Table 21 – Schedule of Active Member Valuation Data |
| 28 | Table 22 – Solvency Test |
| 29 | Table 23 – Schedule of Retirees and Beneficiaries Added to & Removed From Rolls |
| 30 | Table 24 – Schedule of Retirees by Type |

Appendix E Actuarial Methods and Assumptions

Appendix F Summary of Benefit Provisions of PEERS

SUMMARY OF THE VALUATION



PURPOSES OF THE ACTUARIAL VALUATION

At your request we have performed the actuarial valuation of the Public Education Employee Retirement System of Missouri (“PEERS”) as of June 30, 2006.

The purposes of an actuarial valuation are as follows:

- To determine the funding status of PEERS as of the valuation date,
- To determine the contribution rate which would provide for the normal cost of the system plus an amount which will amortize the unfunded actuarial accrued liability over 30 years, and if different, the contribution for the fiscal year ending June 30, 2008, under the statute, and
- To provide accounting and other data required by PEERS.

REPORT HIGHLIGHTS

The key results of the valuation are summarized in the following table:

| | June 30, 2005 | June 30, 2006 |
|--|------------------|---------------|
| | (\$ in Millions) | |
| A. Summary of Results | | |
| (1) Present Value of Future Benefits for: | | |
| (a) Active Members | \$2,342.1 | \$2,648.8 |
| (b) Retired members | \$904.3 | \$1,020.5 |
| (c) Inactive Members and Other Liabilities | <u>\$70.5</u> | <u>\$80.1</u> |
| (d) Total | \$3,316.9 | \$3,749.4 |
| (2) Present Value of Future Normal Costs | \$902.3 | \$992.6 |
| (3) Actuarial Accrued Liability: (1) – (2) | \$2,414.6 | \$2,756.8 |
| (4) Actuarial Value of Assets | \$2,011.6 | \$2,218.6 |
| (5) Unfunded Actuarial Accrued Liability: (3) – (4) | \$403.0 | \$538.2 |
| (6) Total Contribution Rate, Member + Employer | 11.00% | 11.50% |
| (7) Normal Cost Rate | 10.72% | 10.99% |
| (8) Approximate Rate Available for Unfunded Actuarial Accrued Liability: (6) – (7) | 0.28% | 0.51% |
| (9) 30-Year Contribution Rate | 12.60% | 13.22% |
| (10) Recommended Contribution Fiscal Year End 2008 | 11.50% | 12.00% |
| Based on Statutes | | |

B. Highlights of Report

| | | |
|---|---------------|---------------|
| (1) Actuarial Accrued Liability Funding Ratio: | | |
| (a) Actuarial Value of Assets | \$2,011.6 | \$2,218.6 |
| (b) Actuarial Accrued Liability | 2,414.6 | 2,756.8 |
| (c) Funding Ratio: (a) / (b) | 83.3% | 80.5% |
| (2) Active Members: | | |
| (a) Number: | | |
| Male | 11,492 | 11,818 |
| Female | <u>35,106</u> | <u>36,370</u> |
| Total | 46,598 | 48,188 |
| (b) Total Compensation for Fiscal Year (for Active Members at end of year): | | |
| Male | 318.4 | 362.2 |
| Female | <u>736.8</u> | <u>828.7</u> |
| Total | 1,055.2 | 1,190.9 |
| (c) Average Age: | | |
| Male | 47.5 | 47.3 |
| Female | <u>46.3</u> | <u>46.1</u> |
| Total | 46.6 | 46.4 |
| (d) Average Service: | | |
| Male | 6.9 | 7.0 |
| Female | <u>7.2</u> | <u>7.2</u> |
| Total | 7.1 | 7.1 |
| (e) Average Compensation for Fiscal Year (not in millions): | | |
| Male | \$27,708 | \$30,652 |
| Female | <u>20,987</u> | <u>22,787</u> |
| Total | \$22,645 | \$24,716 |
| (f) Average Amount of Assets per Active Member (based on actuarial value, not in millions) | \$22,250 | \$23,201 |
| (3) Retired Members and Beneficiaries | | |
| (a) Number Service Retired: | | |
| Life Annuities | 11,068 | 11,310 |
| Options | <u>3,702</u> | <u>4,012</u> |
| Total | 14,770 | 15,322 |
| (b) Number Disability Retired | 448 | 478 |
| (c) Number Survivors, Beneficiaries | <u>924</u> | <u>960</u> |
| (d) Total Persons Receiving Benefits | 16,142 | 16,760 |
| (e) Average Monthly Pension Being Paid at Valuation Date for New Service Retired, Including Options (not in millions) | 653 | 676 |
| (f) Average Amount of Assets per Retired Member (based on actuarial value, not in millions) | \$56,021 | \$60,888 |
| (g) Average Amount of Assets per New Service Retired (based on actuarial value, not in millions) | \$99,042 | \$106,977 |

MEMBERSHIP CHARACTERISTICS

Active and Inactive Membership

A total of 66,112 active and inactive members of PEERS are included in this 2006 actuarial valuation.

| | |
|-----------------------------------|---------------|
| Active members | 48,188 |
| Inactive members | <u>17,924</u> |
| Total active and inactive members | 66,112 |

Between the 2005 and 2006 actuarial valuations, the number of active employees increased by 1,590 or 3.41%. The average annual salaries of employees increased by 9.1% to \$24,716.

Summary of Changes in Membership

| | Male | Female | Total |
|--|--------------|--------------|--------------|
| Active and Inactive Members 7/1/2005 | 16,025 | 48,944 | 64,969 |
| New Membership 7/1/2005 to 6/30/2006 | <u>2,270</u> | <u>6,181</u> | <u>8,451</u> |
| Total Membership Before Decreases | 18,295 | 55,125 | 73,420 |
| Decreases: | | | |
| Service Retirements | 277 | 786 | 1,063 |
| Disability Retirements | 16 | 35 | 51 |
| Withdrawals | 1,164 | 2,841 | 4,005 |
| Deaths | 48 | 58 | 106 |
| Other Terminations | 583 | 1,416 | 1,999 |
| Previous Memberships Voided | 21 | 62 | 83 |
| Reciprocity | <u>0</u> | <u>1</u> | <u>1</u> |
| Subtotal | 2,109 | 5,199 | 7,308 |
| Net membership 6/30/2006 (includes Inactive Members) | 16,186 | 49,926 | 66,112 |

Benefit Recipients

On June 30, 2006, PEERS was paying benefits to a total of 16,760 retired members, beneficiaries and survivors. The total number of benefit recipients increased 3.8% from 16,142 on June 30, 2005. The benefit recipients were comprised of 15,322 service retirees, 478 disability retirees, and 960 beneficiaries and survivors.

There are two classes of retired members – members retired because of service and members retired because of disability.

The changes among the retired group of members during the 2005-2006 year were as follows:

| | <u>Service Retirements</u> | <u>Disability Retirements</u> | <u>Beneficiaries</u> | <u>Total</u> |
|--------------------------------|--------------------------------|-----------------------------------|----------------------|--------------|
| Retired Members, July 1, 2005 | 14,770 | 448 | 924 | 16,142 |
| Added During Year | 1,069 | 51 | 86 | 1,206 |
| Died During Year | (477) | (22) | (42) | (541) |
| Resumed Retirement During Year | 11 | 2 | 0 | 13 |
| Resumed Employment During Year | <u>(51)</u> | <u>(1)</u> | <u>(8)</u> | <u>(60)</u> |
| Retired Members, June 30, 2006 | 15,322 | 478 | 960 | 16,760 |

As of June 30, 2006, the average monthly benefit payable to new service retirees was \$676 compared to \$653 as of June 30, 2005. These average benefit amounts and the amounts shown in the tables that follow include all post-retirement benefit increases.

ACTUARIAL ASSUMPTIONS AND METHODS

The actuarial cost method and assumptions used in this valuation are those recommended in the Experience Review for the Years June 30, 2000, through June 30, 2005, and adopted by the Board at its meeting on August 14, 2006. This set of assumptions and methods is described in Appendix E. The change in assumptions and methods increased the actuarial liabilities by \$113.7 million.

EXPERIENCE DURING FY 2006

Overall the system experienced a net actuarial loss of about \$126.5 million.

The net loss is determined as follows:

| | <u>(\$ in millions)</u> |
|--|-------------------------|
| 1. Actuarial (Gain) or Loss on Assets (at actuarial value) | (24.6) |
| 2. Actuarial (Gain) or Loss on Liabilities Due to 2.5% actual COLA vs. 3.5% expected | (\$5.7) |
| 3. Actuarial (Gain) or Loss on Liabilities Due to Reinstated Service | \$8.1 |
| 4. Actuarial (Gain) or Loss on Liabilities Due to Assumption Changes | \$113.7 |
| 5. Actuarial (Gain) or Loss on Liabilities Due to Demographic Experience | \$35.0 |
| 6. Total Actuarial (Gain) or Loss (Sum 1-5) | <u>\$126.5</u> |

The PEERS investment return (measured on market value, all income sources combined) in FY 2006 was about \$198 million, compared with an expected return on actuarial value of \$162 million resulting in a total gain of approximately \$36 million. The use of the five year smoothing method to determine the actuarial value of assets would only have recognized 20% of this gain. Thus, the actuarial gain on investments was \$24.6 million as shown above.

The system's liabilities increased by \$113.7 million due to the adoption of the new assumptions. COLA increases were less than expected producing a gain of \$5.7 million. The purchase of service and reinstatement of forfeited service generated a liability loss of approximately \$8.1 million that was offset by member contributions of \$6.4 million resulting in a net increase in the unfunded actuarial liability of \$1.7 million.

PEERS BENEFITS

A summary of the current benefit provisions appears in Appendix F. There were no changes to the benefit provisions of PEERS during the 2006 session of the Legislature which impact the results of this valuation.

ASSET INFORMATION

The market value of the assets of the fund, which are available for benefits, has been increased from \$2.069 billion as of June 30, 2005 to \$2.287 billion as of June 30, 2006. The actuarial value of assets increased from \$2.012 billion as of June 30, 2005, to \$2.219 billion as of June 30, 2006.

Based on the actuarial value, the assets of the fund returned about 9.2%.

The detailed determinations of asset values utilized in this valuation and asset growth in the last year are set forth in Appendix B.

FUNDING STATUS

The funding status of PEERS is measured by the Funding Ratio. The Funding Ratio is the ratio of the assets available for benefits to a benefit liability measure for the System. While there are several such measures that could be appropriately used, the measure that ties most closely to your funding plan is the Actuarial Accrued Liability ("AAL").

The PEERS actuarial accrued liability funding ratio dropped from 83.3% at June 30, 2005 to 80.5% as of June 30, 2006. A significant portion of the reduction is due to a change in actuarial assumptions.

GASB DISCLOSURE

PEERS produces its accounting statements under the terms of GASB Statement Number 25. In Table 16, you will find Required Supplemental Information mandated by that statement.

FUNDING PROCESS

In the 2003 session of the Legislature the funding provisions of PEERS were amended. The following changes were adopted:

1. The limitation on the total contribution rate (10% of pay) was eliminated.
2. Contribution rates will now be established by actuarial valuation.
3. The annual increase in the total contribution rate may not exceed 0.5% of pay.

As a result, the total contribution rate for the 2008 fiscal year may not increase by more than 0.5% of pay over the rate for the current fiscal year.

Appendices



Appendices

Membership Data



Table 1**Number, Average Age-Service-Salary, and Total Payroll
of Active Members Included in Actuarial Valuations****Male**

| Item | Actuarial Valuation as of June 30 | | | | |
|--------------------------|--|-------------|-------------|-------------|-------------|
| | 2002 | 2003 | 2004 | 2005 | 2006 |
| Number | 11,529 | 11,564 | 11,346 | 11,492 | 11,818 |
| Average Age | 45.4 | 45.8 | 46.9 | 47.5 | 47.3 |
| Average Years of Service | 6.3 | 6.5 | 6.8 | 6.9 | 7.0 |
| Average Annual Salary | \$23,467 | \$25,384 | \$26,265 | \$27,708 | \$30,652 |
| Total Payroll (000's) | \$270,555 | \$293,537 | \$298,006 | \$318,421 | \$362,245 |

Female

| Item | Actuarial Valuation as of June 30 | | | | |
|--------------------------|--|-------------|-------------|-------------|-------------|
| | 2002 | 2003 | 2004 | 2005 | 2006 |
| Number | 35,199 | 35,299 | 34,534 | 35,106 | 36,370 |
| Average Age | 44.6 | 45.1 | 46.0 | 46.3 | 46.1 |
| Average Years of Service | 6.4 | 6.6 | 7.0 | 7.2 | 7.2 |
| Average Annual Salary | \$17,752 | \$19,197 | \$19,889 | \$20,987 | \$22,787 |
| Total Payroll (000's) | \$624,865 | \$677,640 | \$686,860 | \$736,783 | \$828,749 |

Total

| Item | Actuarial Valuation as of June 30 | | | | |
|--------------------------|--|-------------|-------------|-------------|-------------|
| | 2002 | 2003 | 2004 | 2005 | 2006 |
| Number | 46,728 | 46,863 | 45,880 | 46,598 | 48,188 |
| Average Age | 44.8 | 45.3 | 46.2 | 46.6 | 46.4 |
| Average Years of Service | 6.4 | 6.6 | 7.0 | 7.1 | 7.1 |
| Average Annual Salary | \$19,162 | \$20,724 | \$21,466 | \$22,645 | \$24,716 |
| Total Payroll (000's) | \$895,420 | \$971,177 | \$984,866 | \$1,055,204 | \$1,190,994 |

Table 2**Employee Distribution by Age and Years of Service
June 30, 2006**

| Age | Years of Service | | | | | | | Total |
|--------------|-------------------------|---------------|--------------|--------------|--------------|--------------|----------------------|---------------|
| | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30 & Over | |
| Under 20 | 97 | 0 | 0 | 0 | 0 | 0 | 0 | 97 |
| 20-24 | 1,677 | 18 | 0 | 0 | 0 | 0 | 0 | 1,695 |
| 25-29 | 2,420 | 426 | 5 | 0 | 0 | 0 | 0 | 2,851 |
| 30-34 | 2,784 | 783 | 103 | 4 | 0 | 0 | 0 | 3,674 |
| 35-39 | 2,997 | 1,311 | 316 | 96 | 5 | 0 | 0 | 4,725 |
| 40-44 | 3,471 | 2,284 | 715 | 284 | 142 | 13 | 0 | 6,909 |
| 45-49 | 3,198 | 2,717 | 1,310 | 532 | 236 | 187 | 7 | 8,187 |
| 50-54 | 2,445 | 2,184 | 1,421 | 881 | 372 | 192 | 67 | 7,562 |
| 55-59 | 1,901 | 1,467 | 1,054 | 881 | 547 | 254 | 97 | 6,201 |
| 60-64 | 1,184 | 962 | 532 | 473 | 367 | 240 | 107 | 3,865 |
| 65 & Over | 851 | 641 | 318 | 197 | 153 | 135 | 127 | 2,422 |
| Unknown | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 23,025 | 12,793 | 5,774 | 3,348 | 1,822 | 1,021 | 405 | 48,188 |

Table 3

**Salary Distribution
Employees in Active Service
on June 30, 2006**

| Annual Salary | Number | Percent |
|----------------------|---------------|----------------|
| Under \$10,000 | 5,673 | 11.8% |
| \$10,000 - 12,499 | 3,069 | 6.4% |
| \$12,500 - 14,999 | 4,057 | 8.4% |
| \$15,000 - 17,499 | 4,834 | 10.0% |
| \$17,500 - 19,999 | 4,520 | 9.4% |
| \$20,000 - 22,499 | 4,216 | 8.8% |
| \$22,500 - 24,999 | 3,483 | 7.2% |
| \$25,000 - 27,499 | 3,249 | 6.7% |
| \$27,500 - 29,999 | 2,797 | 5.8% |
| \$30,000 & Over | <u>12,290</u> | <u>25.5%</u> |
| Total | 48,188 | 100.0% |

Table 4

**Salary Increase Rates by Service Group
Employees in Both 2005 & 2006 Actuarial Valuations**

| Service in 2005 | Number | Percent Increase In Average Salary | |
|----------------------------|---------------|---|-----------------|
| | | Actual | Expected |
| 1-4 | 14,009 | 10.50% | 6.80% |
| 5-9 | 11,035 | 7.83% | 5.49% |
| 10-14 | 5,014 | 6.85% | 5.00% |
| 15-19 | 3,134 | 6.14% | 5.00% |
| 20 & Over | <u>2,660</u> | <u>5.68%</u> | <u>5.00%</u> |
| Total | 35,852 | 8.35% | 5.86% |

Table 5

**Pensions in Force on June 30, 2006
by Type and Monthly Amount**

| <u>Monthly Amount</u> | <u>Service</u> | <u>Disability</u> | <u>Beneficiary</u> | <u>Total</u> |
|-----------------------|----------------|-------------------|--------------------|--------------|
| Less than \$100 | 1,711 | 38 | 166 | 1,915 |
| \$100 - 199 | 3,301 | 140 | 241 | 3,682 |
| \$200 - 299 | 2,431 | 93 | 197 | 2,721 |
| \$300 - 399 | 1,691 | 66 | 113 | 1,870 |
| \$400 - 499 | 1,343 | 46 | 78 | 1,467 |
| \$500 - 999 | 3,274 | 91 | 129 | 3,494 |
| \$1,000 – 1,499 | 955 | 4 | 25 | 984 |
| \$1,500 & Over | <u>616</u> | <u>0</u> | <u>11</u> | <u>627</u> |
| Total | 15,322 | 478 | 960 | 16,760 |

Table 6

**Pensions in Force on June 30, 2006
by Type and Age**

| Age | Service | Disability | Beneficiary | Total |
|------------|----------------|-------------------|--------------------|--------------|
| Under 55 | 121 | 135 | 88 | 344 |
| 55-59 | 738 | 99 | 49 | 886 |
| 60-64 | 2,326 | 116 | 79 | 2,521 |
| 65-69 | 3,303 | 61 | 131 | 3,495 |
| 70-74 | 3,042 | 40 | 186 | 3,268 |
| 75-79 | 2,505 | 16 | 173 | 2,694 |
| 80-84 | 1,778 | 6 | 154 | 1,938 |
| 85-89 | 1,022 | 3 | 84 | 1,109 |
| 90 & Over | <u>487</u> | <u>2</u> | <u>16</u> | <u>505</u> |
| Total | 15,322 | 478 | 960 | 16,760 |

Table 7

**Cost of Living Increases to Retired Members
June 30, 2006**

| Retirement In | First Increase Effective Date | Percentage Increase | Total Increases Through January 2006 | January 2007 Increase | Total Increases Through January 2007 | Number of Retired Members at 6/30/06 |
|----------------------|--------------------------------------|----------------------------|---|------------------------------|---|---|
| 1982&Earlier | Jan. 1986 | Various | 80.00% | 0.00% | 80.00% | 912 |
| 1983 | Jan. 1987 | 1.70% | 75.63% | 2.49% | 80.00% | 173 |
| 1984 | Jan. 1988 | 3.70% | 73.00% | 4.05% | 80.00% | 202 |
| 1985 | Jan. 1989 | 4.00% | 67.27% | 4.30% | 74.47% | 296 |
| 1986 | Jan. 1990 | 4.00% | 61.08% | 4.30% | 68.01% | 330 |
| 1987 | Jan. 1991 | 4.00% | 54.87% | 4.30% | 61.53% | 324 |
| 1988 | Jan. 1992 | 4.00% | 48.92% | 4.30% | 55.33% | 425 |
| 1989 | Jan. 1993 | 3.10% | 43.20% | 4.30% | 49.35% | 432 |
| 1990 | Jan. 1994 | 3.00% | 38.90% | 4.30% | 44.87% | 519 |
| 1991 | Jan. 1995 | 2.50% | 34.85% | 4.30% | 40.65% | 499 |
| 1992 | Jan. 1996 | 3.00% | 31.56% | 4.30% | 37.22% | 562 |
| 1993 | Jan. 1997 | 2.80% | 27.73% | 4.30% | 33.22% | 539 |
| 1994 | Jan. 1998 | 2.30% | 24.24% | 4.30% | 29.58% | 624 |
| 1995 | Jan. 1999 | 1.70% | 21.45% | 4.30% | 26.67% | 668 |
| 1996 | Jan. 2000 | 2.00% | 19.41% | 4.30% | 24.55% | 698 |
| 1997 | Jan. 2001 | 3.70% | 17.07% | 4.30% | 22.11% | 772 |
| 1998 | Jan. 2002 | 3.30% | 12.90% | 4.30% | 17.76% | 769 |
| 1999 | Jan. 2003 | 1.10% | 9.29% | 4.30% | 13.99% | 857 |
| 2000 | Jan. 2004 | 2.10% | 8.11% | 4.30% | 12.75% | 922 |
| 2001 | Jan. 2005 | 3.30% | 5.88% | 4.30% | 10.44% | 892 |
| 2002 | Jan. 2006 | 2.50% | 2.50% | 4.30% | 6.91% | 942 |
| 2003 | Jan. 2007 | 4.30% | | 4.30% | 4.30% | 1,021 |
| 2004 | | | | | | 1,074 |
| 2005 | | | | | | 1,095 |
| 2006 | | | | | | 253 |
| Total | | | | | | 15,800 |

Table 8**Analysis of Retired Membership by Type of Benefit
(Dollar Amounts in Millions)
June 30, 2006**

| Type of Benefit | Number | Annual Benefit | Total Liability |
|---------------------------------------|---------------|-----------------------|------------------------|
| Service Retirees | | | |
| Options 1 & 10 (Life Only) | 11,310 | 57.7 | 606.6 |
| Options 2 & 21 (100% J&S with Pop-Up) | 2,111 | 13.4 | 183.5 |
| Option 3 & 31 (75% J&S with Pop-Up) | 253 | 2.3 | 30.9 |
| Option 4 & 41 (50% J&S with Pop-Up) | 528 | 4.8 | 61.1 |
| Option 5 (10 Years Certain & Life) | 347 | 2.0 | 24.2 |
| Option 6 (5 Years Certain & Life) | 105 | 0.8 | 9.0 |
| Option 20 (100% J & S) | 249 | 1.0 | 9.2 |
| Option 30 (75% J & S) | 1 | 0.0 | 0.0 |
| Option 40 (50% J & S) | 38 | 0.2 | 1.4 |
| Accelerated Payment | <u>380</u> | <u>3.5</u> | <u>34.4</u> |
| Total | 15,322 | \$85.6 | \$960.3 |
| Disability Retirees | 478 | \$1.9 | \$18.4 |
| Beneficiaries of Retiree Deaths | 960 | \$3.7 | \$38.1 |

Note: Excludes retirees returned to work.

Appendix B
Asset Information



Table 9**Market Value of Assets
Balance Sheet**

| | <u>June 30, 2005</u> | <u>June 30, 2006</u> |
|--------------------------------|-------------------------|-------------------------|
| Assets: | | |
| Cash | \$ 5,281,379 | \$ 5,546,786 |
| Contribution Receivable | 12,355,045 | 13,563,050 |
| Accrued Interest and Dividends | 8,212,815 | 7,395,963 |
| Investments | 2,105,444,311 | 2,321,936,301 |
| Investment Sales – Receivable | 344,534,582 | 258,554,784 |
| Due to PSRS | (191,749) | (691,452) |
| Other Assets | 15,302 | 14,554 |
| Capital Assets | 259 | - |
| Prepaid Expenses | (40) | (2,325) |
| Total | <u>\$ 2,475,651,904</u> | <u>\$ 2,606,317,661</u> |
| Liabilities: | | |
| Accounts Payable | 1,086,687 | 1,820,994 |
| Investment Purchases – Payable | 405,654,430 | 316,720,765 |
| Other Liabilities | 263,621 | 796,064 |
| Total | <u>\$ 407,004,738</u> | <u>\$ 319,337,823</u> |
| Net Assets | \$ 2,068,647,166 | \$ 2,286,979,838 |

Table 10**Statement of Revenue and Expenses
Market Value Reconciliation For Fiscal Year Ended June 30, 2006**

| Operating Revenues | Amount |
|---|---------------------------|
| <i>Contributions:</i> | |
| Employers | \$ 61,745,505 |
| Members | <u>68,017,547</u> |
| Total Contributions | 129,763,052 |
| <i>Net Investment Income:</i> | |
| Interest | 32,603,324 |
| Dividends | 21,958,710 |
| Net Income from Security Lending Activities | <u>1,017,072</u> |
| Total Investment Income | 55,579,106 |
| Net Capital Appreciation (Depreciation) | 146,577,267 |
| Less: Investment Expenses | <u>(4,527,261)</u> |
| Total Investment Return | 197,629,112 |
| <i>Other Income</i> | <u>3,396</u> |
| Total Operating Revenues | <u><u>327,395,560</u></u> |
| | |
| Operating Expenses | |
| Benefit Payments | 92,660,848 |
| Refunds to Members | 12,043,611 |
| Administrative Expenses | 4,358,443 |
| Other Expense | <u>(13)</u> |
| Total Operating Expenses | <u><u>109,062,888</u></u> |
| | |
| Excess of Revenues over Expenses | 218,332,672 |
| | |
| Fund Balance, June 30, 2005 | 2,068,647,166 |
| | |
| Fund Balance, June 30, 2006 | \$ 2,286,979,838 |

Table 11

**Growth of Cash Flow
(In Thousands)**

| Year Ending June 30 | Contributions for the Year | Payments During the Year | | | External Cash Flow for the Year | Covered Payroll | Payments as Percent of Covered Payroll |
|------------------------|-------------------------------|--|----------|-----------|---------------------------------------|--------------------|--|
| | | Benefit Payments and Refund of Contributions | Expenses | Total | | | |
| 1985 | \$18,956 | (\$7,333) | (\$424) | (\$7,757) | \$11,199 | \$228,781 | 3.4 % |
| 1986 | 20,140 | (8,974) | (411) | (9,385) | 10,755 | 245,407 | 3.8 |
| 1987 | 21,986 | (9,641) | (500) | (10,141) | 11,845 | 268,173 | 3.8 |
| 1988 | 23,927 | (10,886) | (538) | (11,424) | 12,503 | 304,029 | 3.8 |
| 1989 | 26,110 | (12,567) | (585) | (13,152) | 12,958 | 331,352 | 4.0 |
| 1990 | 28,176 | (14,643) | (712) | (15,355) | 12,821 | 359,577 | 4.3 |
| 1991 | 30,505 | (16,634) | (721) | (17,355) | 13,150 | 389,080 | 4.5 |
| 1992 | 31,470 | (18,858) | (813) | (19,671) | 11,799 | 398,147 | 4.9 |
| 1993 | 32,640 | (21,025) | (821) | (21,846) | 10,794 | 415,672 | 5.3 |
| 1994 | 35,298 | (23,772) | (901) | (24,673) | 10,625 | 452,339 | 5.5 |
| 1995 | 38,706 | (27,067) | (905) | (27,972) | 10,734 | 495,449 | 5.6 |
| 1996 | 42,122 | (30,338) | (1,233) | (31,571) | 10,551 | 538,022 | 5.9 |
| 1997 | 49,009 | (34,425) | (1,950) | (36,375) | 12,634 | 556,534 | 6.5 |
| 1998 | 54,844 | (38,460) | (2,652) | (41,112) | 13,732 | 616,303 | 6.7 |
| 1999 | 60,385 | (41,813) | (1,604) | (43,417) | 16,967 | 685,272 | 6.3 |
| 2000 | 68,684 | (51,432) | (1,920) | (53,352) | 15,332 | 735,362 | 7.3 |
| 2001 | 75,434 | (58,239) | (2,246) | (60,485) | 14,949 | 814,158 | 7.4 |
| 2002 | 91,990 | (67,737) | (2,574) | (70,311) | 21,679 | 895,420 | 7.8 |
| 2003 | 97,927 | (75,432) | (2,946) | (78,378) | 19,549 | 971,177 | 8.1 |
| 2004 | 100,602 | (85,290) | (3,210) | (88,500) | 12,102 | 984,866 | 9.0 |
| 2005 | 108,809 | (95,798) | (3,564) | (99,362) | 9,447 | 1,055,204 | 9.4 |
| 2006 | 129,763 | (104,704) | (4,358) | (109,062) | 20,701 | 1,190,989 | 9.2 |

Table 12

Development of the Actuarial Value of Assets

| | | |
|--|----------------------|-------------------|
| 1. Valuation Assets June 30, 2005 | | \$2,011,565,783 |
| 2. Activity for FY 2006 | | |
| a. Contributions | \$129,763,052 | |
| b. Benefits and Expenses | <u>(109,062,888)</u> | |
| c. Net Cash Flow | 20,700,164 | |
| 3. Expected Returns | 161,737,340 | |
| 4. Assets Before Allocation of G/L (1+2+3) | | 2,194,003,287 |
| 5. Actual Returns for 2006 | 197,632,508 | |
| 6. Excess Returns for 2006 (5-3) | 35,895,168 | |
| 7. Recognized Excess Returns | | |
| 2006 | 7,179,034 | |
| 2005 | 4,714,942 | |
| 2004 | 12,740,539 | |
| 2003 | 0 | |
| 2002 | 0 | |
| Total | | <u>24,634,515</u> |
| 8. Actuarial Value of Assets June 30, 2006 | | \$2,218,637,802 |

Note: Excess returns are total return on assets at market in excess of expected investment return at 8% on actuarial value.

Appendix C
Actuarial Determinations



Table 13**Ten Year Historical Summary
(All Dollar Figures in Thousands)**

| | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Active Members | 35,982 | 38,672 | 41,599 | 43,533 | 45,517 | 46,728 | 46,863 | 45,880 | 46,598 | 48,188 |
| Retired Members | 10,811 | 11,218 | 12,461 | 13,061 | 13,673 | 14,270 | 14,837 | 15,445 | 16,142 | 16,760 |
| Actuarial Assets | \$1,001,035 | \$1,150,311 | \$1,335,308 | \$1,522,660 | \$1,686,242 | \$1,810,619 | \$1,677,770 | \$1,837,308 | \$2,011,566 | \$2,218,638 |
| UAAL | (\$36,823) | (\$113,965) | (\$166,796) | (\$127,360) | (\$50,166) | \$45,363 | \$371,946 | \$383,902 | \$402,928 | \$538,195 |
| Benefit And Refunds | \$34,425 | \$38,460 | \$41,813 | \$51,432 | \$58,239 | \$67,737 | \$75,432 | \$85,290 | \$95,798 | \$104,704 |
| Accumulated Members' Contributions | \$204,757 | \$225,373 | \$250,327 | \$274,167 | \$301,936 | \$354,296 | \$394,925 | \$444,318 | \$466,259 | \$524,014 |
| APV of Retirees' Benefits | \$312,390 | \$350,860 | \$396,846 | \$467,653 | \$565,126 | \$651,295 | \$731,059 | \$804,864 | \$904,292 | \$1,020,486 |

Table 14

**Determination of Normal Cost
June 30, 2006
For the 2006 - 2007 Plan Year**

| | <u>Dollar</u> | <u>Rate</u> |
|--|-----------------------|--------------|
| Active Members | | |
| Retirement Benefits | \$ 99,359,207 | 8.93% |
| Termination Benefits | 19,195,297 | 1.73% |
| Death Benefits | 2,010,365 | 0.18% |
| Disability Benefits | <u>1,637,063</u> | <u>0.15%</u> |
| Total Normal Cost | \$ 122,201,932 | 10.99% |
| Estimated Employee Contributions | <u>63,962,902</u> | |
| Employer Normal Cost | \$ 58,239,030 | |
| (Total Normal Cost less Employee Contributions) | | |

Table 15

**Determination of the Unfunded Actuarial Accrued Liability
June 30, 2006**

Active Members:

| | |
|---------------------------------------|-----------------|
| Service Retirement | \$1,626,524,050 |
| Death Benefits | 27,521,522 |
| Disability Benefits | 15,686,471 |
| Termination Benefits | (13,454,654) |
| Inactives | 80,069,735 |
| Total for Active and Inactive Members | 1,736,347,124 |

Pay Status Members:

| | |
|------------------------------|---------------|
| Service Retirees | 963,915,145 |
| Disability Retirees | 18,412,130 |
| Survivors | 38,158,542 |
| Total for Pay Status Members | 1,020,485,817 |

Total Actuarial Accrued Liability 2,756,832,941

Actuarial Value of Assets 2,218,637,802

Total Unfunded Actuarial Accrued Liability 538,195,140

Table 16
GASB 25 Exhibits
Schedule of Funding Progress
(In Thousands)

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) Entry Age (b) | Unfunded AAL (UAAL) (b-a) | Funded Ratio (a/b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a)/c) |
|--------------------------------|--|--|---------------------------------|--------------------------|---------------------------|--|
| 06/30/1996 | 876,886 | 879,561 | 2,675 | 99.7% | 538,022 | 0.5% |
| 06/30/1997 | 1,001,035 | 964,212 | (36,823) | 103.8% | 556,534 | -6.6% |
| 06/30/1998 | 1,150,311 | 1,036,347 | (113,964) | 111.0% | 616,303 | -18.5% |
| 06/30/1999 | 1,335,308 | 1,168,511 | (166,797) | 114.3% | 685,272 | -24.3% |
| 06/30/2000 | 1,522,660 | 1,395,300 | (127,360) | 109.1% | 735,400 | -17.3% |
| 06/30/2001 | 1,686,242 | 1,636,076 | (50,166) | 103.1% | 814,158 | -6.2% |
| 06/30/2002 | 1,810,619 | 1,855,982 | 45,363 | 97.6% | 895,420 | 5.1% |
| 06/30/2003 | 1,677,770 | 2,049,716 | 371,946 | 81.9% | 971,177 | 38.3% |
| 06/30/2004 | 1,837,308 | 2,221,210 | 383,902 | 82.7% | 984,866 | 39.0% |
| 06/30/2005 | 2,011,566 | 2,414,494 | 402,928 | 83.3% | 1,055,204 | 38.2% |
| 06/30/2006 | 2,218,638 | 2,756,833 | 538,195 | 80.5% | 1,190,994 | 45.2% |

Schedule of Employer Contributions

| Actuarial Valuation Date | Annual Required Contribution | Employer Contribution | Percentage Contributed |
|--------------------------------|------------------------------------|--------------------------|---------------------------|
| 06/30/1997 | 24,393,542 | 24,393,542 | 100.0% |
| 06/30/1998 | 27,315,729 | 27,315,729 | 100.0% |
| 06/30/1999 | 30,012,859 | 30,012,859 | 100.0% |
| 06/30/2000 | 34,185,605 | 34,185,605 | 100.0% |
| 06/30/2001 | 37,500,243 | 37,500,243 | 100.0% |
| 06/30/2002 | 45,773,119 | 45,773,119 | 100.0% |
| 06/30/2003 | 52,847,992 | 48,933,326 | 92.6% |
| 06/30/2004 | 62,315,910 | 49,976,898 | 80.2% |
| 06/30/2005 | 73,948,917 | 53,109,687 | 71.8% |
| 06/30/2006 | 79,707,834 | 61,745,505 | 77.5% |

Notes in Trend Data

Information:

Valuation Date
Actuarial Cost Method
Amortization Method
Remaining Amortization Period (years)
Asset Valuation Method

Data

06/30/2006
Entry Age Normal
Level Percent, Open
30
5-Year Smoothed Market
Marked to Market as of June 30, 2003

Actuarial

Investment rate of return
Projected salary increases
Cost-of-living adjustments

8.0%
5.0% - 10.0%
3.25%

Table 17
GASB
Annual Pension Cost and Contributions

| <i>Fiscal Year Ending</i> | | 06/30/2006 |
|--------------------------------------|---|----------------------|
| <i>Annual Pension Cost</i> | Annual Required Contribution (ARC) | \$ 79,707,834 |
| | Interest on Net Pension Obligation | 3,017,226 |
| | Adjustment to ARC | <u>(1,860,171)</u> |
| | Total Annual Pension Cost | \$ 80,864,889 |
| <hr/> | | |
| <i>Net Pension Obligation (NPO):</i> | Net Pension Obligation (NPO) at beginning of fiscal year | 37,715,329 |
| | Total Annual Pension Cost | 80,864,889 |
| | Total Employer Contribution | <u>(61,745,505)</u> |
| | Net Pension Obligation (NPO) at end of fiscal year | \$ 56,834,713 |
| <hr/> | | |
| <i>Contribution rates:</i> | | |
| <i>Employer</i> | | 5.50% |
| <i>Plan members</i> | | 5.50% |

Table 18

**GASB
Schedule of Employer Contributions**

| Fiscal Year Ending | Annual Pension Cost | Total Employer Contribution | Net Pension Obligation |
|-------------------------------|------------------------------------|--|---------------------------------------|
| 06/30/2002 | 45,773,119 | 45,773,119 | 0 |
| 06/30/2003 | 52,847,992 | 48,933,326 | 3,914,666 |
| 06/30/2004 | 62,436,006 | 49,976,898 | 16,373,774 |
| 06/30/2005 | 74,451,242 | 53,109,687 | 37,715,329 |
| 06/30/2006 | 80,864,889 | 61,745,505 | 56,834,713 |

Table 19

**Calculation of Unfunded Actuarial Accrued Liability
June 30, 2006**

| | <u>Amount</u> |
|--|----------------------|
| (1) Present Value of Future Benefits for: | |
| Active Members | \$ 2,648,894,111 |
| Service Retirees | 963,915,145 |
| Disability Retirees | 18,412,130 |
| Survivors | 38,158,542 |
| Inactive Members | 80,069,735 |
| Total | <u>3,749,449,663</u> |
| (2) Present Value of Future Normal Costs | 992,616,722 |
| (3) Actuarial Accrued Liability ((1)-(2)) | 2,756,832,941 |
| (4) Actuarial Value of Assets | 2,218,637,802 |
| (5) Unfunded Actuarial Accrued Liability ((3)-(4)) | \$ 538,195,140 |

**Required Contribution Rate & Amortization of Unfunded Liability
for the Fiscal Year Ending 2007**

| | <u>Percentage of Payroll</u> |
|--|------------------------------|
| (1) Total Contribution Rate, Member + Employer | 11.50% |
| (2) Normal Cost Rate | 10.99% |
| (3) Approximate Rate Available for Unfunded Actuarial Accrued Liability ((1)-(2)) | 0.51% |
| (4) Benchmark Contribution Rate for the System to Amortize the Unfunded Actuarial Accrued Liability in 30 Years | 13.22% |

Table 20

Analysis of Actuarial Gains and Losses

| | <u>Amount</u> |
|---|--------------------|
| 1. Unfunded Actuarial Liability as of July 1, 2005 | \$ 402,927,887 |
| 2. Normal Cost for 2006 Plan Year | 107,158,697 |
| 3. Contribution Received during Year | (129,763,052) |
| 4. Interest to Year End @ 8.00% on 1., 2., and 3. | 31,347,451 |
| 5. Expected Unfunded Actuarial Liability as of June 30, 2006 | 411,670,983 |
| 6. Actuarial (Gain)/Loss During the Year | |
| a. From Investment | (24,634,515) |
| b. From Actuarial Liabilities Due to Actual vs. Expected COLA | (5,687,876) |
| c. From Actuarial Liabilities Due to Reinstated Service | 8,055,883 |
| d. From Actuarial Liabilities Due to Assumption Changes | 113,709,153 |
| e. From Actuarial Liabilities Due to Demographic Experience | 35,081,512 |
| f. Total | <u>126,524,157</u> |
| 7. Actuarial Unfunded Actuarial Liability as of June 30, 2006 | 538,195,140 |

Appendix D

Additional Data



Table 21

Schedule of Active Member Valuation Data

| Actuarial Valuation Date | Number of Members | Covered Annual Payroll (000) | Average Annual Salary | % Increase in Average Salary | Average Attained Age | Average Years of Service |
|---|------------------------------|---|--------------------------------------|---|-------------------------------------|---|
| 06/30/1991 | 28,554 | \$389,080 | \$13,626 | 5.1% | 45.5 | 7.4 |
| 06/30/1992 | 28,410 | 398,147 | 14,014 | 2.8% | 45.7 | 7.6 |
| 06/30/1993 | 29,055 | 415,672 | 14,306 | 2.1% | 45.7 | 7.7 |
| 06/30/1994 | 30,662 | 452,339 | 14,752 | 3.1% | 45.5 | 7.6 |
| 06/30/1995 | 32,598 | 495,449 | 15,199 | 3.0% | 45.3 | 7.3 |
| 06/30/1996 | 34,153 | 538,022 | 15,753 | 3.6% | 45.2 | 7.2 |
| 06/30/1997 | 35,982 | 556,534 | 15,467 | -1.8% | 45.1 | 7.1 |
| 06/30/1998 | 38,672 | 616,303 | 15,937 | 3.0% | 44.8 | 6.7 |
| 06/30/1999 | 41,599 | 685,272 | 16,473 | 3.4% | 44.6 | 6.5 |
| 06/30/2000 | 43,533 | 735,400 | 16,893 | 2.5% | 44.5 | 6.4 |
| 06/30/2001 | 45,517 | 814,158 | 17,887 | 5.9% | 44.6 | 6.3 |
| 06/30/2002 | 46,728 | 895,420 | 19,162 | 7.1% | 44.8 | 6.4 |
| 06/30/2003 | 46,863 | 971,177 | 20,724 | 8.2% | 45.3 | 6.6 |
| 06/30/2004 | 45,880 | 984,866 | 21,466 | 3.6% | 46.2 | 7.0 |
| 06/30/2005 | 46,598 | 1,055,204 | 22,645 | 5.5% | 46.6 | 7.1 |
| 06/30/2006 | 48,188 | 1,190,994 | 24,716 | 9.1% | 46.4 | 7.1 |

Table 22

**Solvency Test
(\$ in 000's)**

Actuarial Accrued Liability

| Actuarial Valuation Date | Member Contributions (1) | Current Retirees & Beneficiaries (2) | Active & Inactive Members | | Net Assets Available for Benefits | Percentage of Actuarial Liabilities Covered by Net Assets for: | | |
|---|---|---|--|--|--|---|------------|------------|
| | | | Employer Financed Portion (3) | | | (1) | (2) | (3) |
| 06/30/1993 | 140,790 | 196,936 | 277,693 | | 583,058 | 100.0% | 100.0% | 88.3% |
| 06/30/1994 | 155,238 | 224,650 | 306,192 | | 698,988 | 100.0% | 100.0% | 104.2% |
| 06/30/1995 | 169,846 | 252,034 | 364,519 | | 778,325 | 100.0% | 100.0% | 97.8% |
| 06/30/1996 | 185,763 | 293,937 | 399,861 | | 876,886 | 100.0% | 100.0% | 99.3% |
| 06/30/1997 | 204,757 | 312,390 | 447,065 | | 1,001,035 | 100.0% | 100.0% | 108.2% |
| 06/30/1998 | 225,454 | 350,860 | 460,033 | | 1,150,311 | 100.0% | 100.0% | 124.8% |
| 06/30/1999 | 231,252 | 396,846 | 540,413 | | 1,335,308 | 100.0% | 100.0% | 130.9% |
| 06/30/2000 | 274,167 | 467,653 | 653,480 | | 1,522,660 | 100.0% | 100.0% | 119.5% |
| 06/30/2001 | 301,936 | 565,126 | 769,014 | | 1,686,242 | 100.0% | 100.0% | 106.5% |
| 06/30/2002 | 354,296 | 651,295 | 850,391 | | 1,810,619 | 100.0% | 100.0% | 94.7% |
| 06/30/2003 | 394,925 | 731,059 | 923,732 | | 1,677,770 | 100.0% | 100.0% | 59.7% |
| 06/30/2004 | 444,318 | 804,864 | 972,028 | | 1,837,308 | 100.0% | 100.0% | 60.5% |
| 06/30/2005 | 466,259 | 904,292 | 1,043,943 | | 2,011,566 | 100.0% | 100.0% | 61.4% |
| 06/30/2006 | 524,014 | 1,020,486 | 1,212,333 | | 2,218,638 | 100.0% | 100.0% | 55.6% |

Table 23

**Schedule of Retirees and Beneficiaries Added to
and Removed From Retirement Rolls**

| Actuarial Valuation Date | Service Retirees | | | Disability Retirees | | | Beneficiaries | | |
|---|---------------------------|-------------------------------|------------------------------|----------------------------|-------------------------------|------------------------------|---------------------------|-------------------------------|------------------------------|
| | Added to Rolls | Removed from Rolls | Rolls End of Year | Added to Rolls | Removed from Rolls | Rolls End of Year | Added to Rolls | Removed from Rolls | Rolls End of Year |
| 06/30/1989 | 703 | 272 | 7,645 | 24 | 14 | 151 | 30 | 1 | 148 |
| 06/30/1990 | 678 | 253 | 8,070 | 23 | 10 | 164 | 29 | 8 | 169 |
| 06/30/1991 | 712 | 277 | 8,505 | 24 | 13 | 175 | 54 | 4 | 219 |
| 06/30/1992 | 715 | 316 | 8,904 | 28 | 7 | 196 | 46 | 5 | 260 |
| 06/30/1993 | 689 | 336 | 9,257 | 26 | 10 | 215 | 40 | 7 | 293 |
| 06/30/1994 | 658 | 358 | 9,557 | 29 | 9 | 235 | 60 | 9 | 344 |
| 06/30/1995 | 782 | 372 | 9,967 | 33 | 19 | 249 | 54 | 12 | 386 |
| 06/30/1996 | 799 | 390 | 10,376 | 26 | 8 | 267 | 47 | 18 | 415 |
| 06/30/1997 | 823 | 388 | 10,811 | 22 | 13 | 276 | 63 | 18 | 460 |
| 06/30/1998 | 841 | 424 | 11,218 | 29 | 17 | 288 | 59 | 22 | 497 |
| 06/30/1999 | 813 | 431 | 11,600 | 35 | 7 | 316 | 67 | 19 | 545 |
| 06/30/2000 | 945 | 432 | 12,113 | 45 | 14 | 347 | 76 | 20 | 601 |
| 06/30/2001 | 987 | 468 | 12,632 | 53 | 22 | 378 | 76 | 14 | 663 |
| 06/30/2002 | 980 | 471 | 13,141 | 30 | 21 | 387 | 97 | 18 | 742 |
| 06/30/2003 | 979 | 501 | 13,619 | 31 | 13 | 405 | 96 | 25 | 813 |
| 06/30/2004 | 1,081 | 541 | 14,159 | 44 | 18 | 431 | 86 | 44 | 855 |
| 06/30/2005 | 1,116 | 505 | 14,770 | 43 | 26 | 448 | 98 | 29 | 924 |
| 06/30/2006 | 1,080 | 528 | 15,322 | 53 | 23 | 478 | 86 | 50 | 960 |

Table 24

Schedule of Retirees by Type
 (\$ in 000's)

| Actuarial Valuation Date | <u>Service Retirees</u> | | <u>Disability Retirees</u> | | <u>Beneficiaries</u> | |
|---|--------------------------------|------------------------|-----------------------------------|------------------------|-----------------------------|------------------------|
| | <u>Number</u> | <u>Benefits</u> | <u>Number</u> | <u>Benefits</u> | <u>Number</u> | <u>Benefits</u> |
| 06/30/1993 | 9,257 | 16,464 | 215 | 347 | 293 | 478 |
| 06/30/1994 | 9,557 | 18,534 | 235 | 417 | 344 | 572 |
| 06/30/1995 | 9,967 | 20,842 | 249 | 481 | 383 | 699 |
| 06/30/1996 | 10,376 | 23,785 | 267 | 550 | 415 | 820 |
| 06/30/1997 | 10,811 | 27,250 | 276 | 616 | 460 | 1,007 |
| 06/30/1998 | 11,218 | 30,240 | 288 | 672 | 497 | 1,126 |
| 06/30/1999 | 11,600 | 35,395 | 316 | 826 | 545 | 1,384 |
| 06/30/2000 | 12,113 | 41,091 | 347 | 1,002 | 601 | 1,653 |
| 06/30/2001 | 12,632 | 50,512 | 378 | 1,232 | 663 | 2,038 |
| 06/30/2002 | 13,141 | 57,697 | 387 | 1,346 | 742 | 2,413 |
| 06/30/2003 | 13,619 | 63,860 | 405 | 1,449 | 813 | 2,752 |
| 06/30/2004 | 14,159 | 70,710 | 431 | 1,558 | 855 | 3,076 |
| 06/30/2005 | 14,770 | 78,435 | 448 | 1,709 | 924 | 3,569 |
| 06/30/2006 | 15,322 | 85,639 | 478 | 1,873 | 960 | 3,736 |

Average New Retiree Statistics

| <u>Actuarial Valuation Date</u> | <u>New Service Retirees</u> | <u>Average New Benefit</u> | <u>% Change From Previous Year</u> |
|--|--|---------------------------------------|---|
| 06/30/1993 | 597 | 275.23 | 12 |
| 06/30/1994 | 571 | 306.20 | 11 |
| 06/30/1995 | 679 | 298.76 | (3) |
| 06/30/1996 | 797 | 330.40 | 11 |
| 06/30/1997 | 823 | 327.16 | (1) |
| 06/30/1998 | 805 | 324.82 | (1) |
| 06/30/1999 | 813 | 366.42 | 13 |
| 06/30/2000 | 945 | 431.89 | 18 |
| 06/30/2001 | 987 | 565.29 | 31 |
| 06/30/2002 | 980 | 660.51 | 17 |
| 06/30/2003 | 979 | 676.19 | 2 |
| 06/30/2004 | 1,081 | 665.97 | (2) |
| 06/30/2005 | 1,116 | 652.87 | (2) |
| 06/30/2006 | 1,080 | 676.06 | 4 |

Appendix E

Actuarial Methods and Assumptions



Statement of Funding Policy

In order to establish long-term, consistent methods in the funding of the System, the Board of Trustees has adopted this statement of its funding policy. The funding of the System shall be carried out in such a way that the burden of paying retirement costs shall be shared equitably by present and succeeding generations of members and taxpayers. To this end, the following principles shall apply:

1. The Board of Trustees shall adopt actuarial assumptions, each of which individually represents a reasonable long-term estimate of anticipated experience under the System, derived from experience studies conducted every fifth year.
2. The actuarial funding method used shall be the Entry Age Normal Method with normal costs calculated as a percentage of payroll.
3. It shall be the general objective to maintain an amortization period of 30 years or less in the funding of the Unfunded Actuarial Accrued Liability. Whenever a change is made in the System's benefit and contribution rate structures, the amortization period for the System after this change should not exceed 30 years initially.
4. If an escalation in future payroll is assumed in determining the amortization payments toward the Unfunded Actuarial Accrued Liability, then the annual rate of such escalation shall not exceed the expected rate of expansion in total System payroll based upon the actuarial assumptions.
5. Assets used in the actuarial valuation shall be valued using adjusted market values averaged over a period of five years.
6. Annual actuarial valuations shall be made of the System's assets and liabilities. The contribution rate shall be established based on the results of these valuations.

Actuarial Assumptions

(Adopted for Use with the June 30, 2006, Valuation)

Investment Return

It is assumed that investments of the System will return, on average, a yield of 8% per annum compound, net of system expenses (investment and administrative expenses).

Salary and Payroll Increases

Salaries are assumed to increase each year at the rate of 5%. Longevity adjustments are made for those with less than 10 years of service.

| <u>Service</u> | <u>Longevity Adjustment</u> | <u>Total Increase</u> |
|----------------|-----------------------------|-----------------------|
| 0 | 5.00% | 10.00% |
| 1 | 3.25 | 8.25 |
| 2 | 1.75 | 6.75 |
| 3 | 1.05 | 6.05 |
| 4 | 0.90 | 5.90 |
| 5 | 0.75 | 5.75 |
| 6 | 0.60 | 5.60 |
| 7 | 0.45 | 5.45 |
| 8 | 0.30 | 5.30 |
| 9 | 0.15 | 5.15 |
| 10 and Over | 0.00 | 5.00 |

Total covered payroll of the entire membership is assumed to increase 5.0% per year in the future.

Disability Rates

Retirement for disability prior to age 60 is assumed in accordance with the following illustrative rates per 1,000 eligible members:

| <u>Age</u> | <u>Male and Female Rates</u> |
|------------|------------------------------|
| 30 | 0.100 |
| 35 | 0.200 |
| 40 | 0.400 |
| 45 | 1.050 |
| 50 | 1.700 |
| 55 | 2.700 |

Withdrawal Rates

Termination of membership prior to eligibility for retirement from all causes other than death, disability or retirement, whether resulting in a refund or a deferred benefit, is assumed in accordance with the following illustrative rates per 1,000 members:

| <u>Service</u> | <u>Rate</u> |
|----------------|-------------|
| 0 | 300.0 |
| 1 | 220.0 |
| 2 | 150.0 |
| 3 | 120.0 |
| 4 | 100.0 |
| 5 | 81.0 |
| 10 | 48.0 |
| 15 | 33.0 |
| 20 | 18.0 |
| 25 | 0.0 |

Mortality Rates

Mortality Rates for retirees, beneficiaries, and survivors are based on the GAM94 Table with male ages set forward one year and female ages set back two years. Rates for active members are 70% of retiree rates for males and 60% of retiree rates for females. Illustrative rates per 1,000 for retirees and disabled members at various ages are as follows:

Service Retired Members, Beneficiaries and Survivors

| <u>Age</u> | <u>Male</u> | <u>Female</u> |
|------------|-------------|---------------|
| 20 | 0.530 | 0.273 |
| 30 | 0.821 | 0.314 |
| 40 | 1.156 | 0.598 |
| 50 | 2.872 | 1.206 |
| 60 | 8.986 | 3.359 |
| 70 | 25.951 | 11.763 |
| 80 | 68.615 | 31.727 |
| 90 | 167.260 | 93.820 |
| 100 | 333.461 | 237.713 |
| 110 | 496.356 | 444.368 |

Disability Retired Members, Male and Female

| <u>Age</u> | <u>Rate</u> |
|------------|-------------|
| 40 | 24.075 |
| 50 | 26.175 |
| 60 | 31.500 |
| 70 | 44.625 |
| 80 | 76.650 |
| 90 | 173.276 |
| 100 | 507.128 |

Retirement Rates

Retirement rates are only applied to those eligible for retirement. Retirement is assumed in accordance with the following rates per 1,000 eligible members:

| Age | Service | | | | | | |
|------------------|------------------|------|------|------|------|------|------|
| | <25 ² | 25 | 26 | 27 | 28 | 29 | 30+ |
| <50 ¹ | | 50 | 50 | 50 | 50 | 50 | 150 |
| 50 ¹ | | 50 | 50 | 50 | 50 | 50 | 250 |
| 51 ¹ | | 50 | 50 | 50 | 50 | 250 | 150 |
| 52 ¹ | | 50 | 50 | 50 | 250 | 150 | 150 |
| 53 ¹ | | 50 | 50 | 250 | 150 | 150 | 150 |
| 54 ¹ | | 50 | 250 | 150 | 150 | 150 | 150 |
| 55 | 30 | 270 | 170 | 170 | 170 | 170 | 170 |
| 56 | 30 | 170 | 170 | 170 | 170 | 170 | 170 |
| 57 | 30 | 170 | 170 | 170 | 170 | 170 | 170 |
| 58 | 30 | 170 | 170 | 170 | 170 | 170 | 170 |
| 59 | 30 | 170 | 170 | 170 | 170 | 170 | 170 |
| 60 | 160 | 160 | 160 | 160 | 160 | 160 | 160 |
| 61 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| 62 | 240 | 240 | 240 | 240 | 240 | 240 | 240 |
| 63 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| 64 | 140 | 140 | 140 | 140 | 140 | 140 | 140 |
| 65 | 260 | 260 | 260 | 260 | 260 | 260 | 260 |
| 66 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| 67 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| 68 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| 69 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| 70 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| 71 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| 72 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| 73 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| 74 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| 75+ | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |

¹ Rates for members with less than 30 years of service and not eligible under the Rule of 80 are applicable from 1999-2008

² Rates for members who are younger than 60 are for early (age reduced) retirement.

Age-based rates are increased by 10 percent at first eligibility for retirement under the Rule of 80 for participants under age 60.

Cost of Living Adjustments

The cost of living adjustment assumed in the valuation is 3.25% per year. The total lifetime COLA cannot exceed 80% of the original benefit.

Asset Valuation Method

The Actuarial Value of Assets is based on a five-year average of adjusted market value returns. The actuarial value for a year is computed by taking the actuarial value at June 30 of the prior year, subtracting all expenses (including benefit payments), and adding contributions and expected investment return at 8%. The difference between the actual returns at market value for the year and expected returns is determined. Twenty percent (20%) of that difference is added to the actuarial value along with corresponding amounts from each of the prior four years. The Actuarial Value of Assets has been marked to the market value as of June 30, 2003.

Provisions for Expenses

The assumed investment return rate is intended to represent the net rate of return after payment of all investment and administrative expenses.

Beneficiaries

Eighty percent (80%) of males and females are assumed to be married or to have eligible dependent beneficiaries. Beneficiaries are assumed to be of the opposite sex from the member. Female beneficiaries are assumed to be 3 years younger than the member, and male beneficiaries are assumed to be 3 years older than the member.

Terminations

Half of all active members who terminate for reasons other than death, disability or retirement are assumed to take of refund of their member account balance. The other half are expected to elect a termination benefit deferred to age 60. The same approach is used to value vested, inactive members.

Appendix F
Summary of Benefit Provisions of PEERS



Member Contributions

Half the total PEERS contribution rate. The current total PEERS contribution rate is 11.5% of pay.

Normal (Unreduced) Retirement

Eligibility

Attainment of age 60 with at least five years of Creditable Service, or
Completion of 30 years of Creditable Service at any age, or
Age plus Creditable Service is at least 80.

Benefit

1.61% of Final Average Salary for each year of Membership Service. A year of Prior Service is treated as 0.6 year of Membership Service. Any person retiring prior to age 62 under the Rule of 80 or with 30 years of creditable service will receive an additional benefit payable to attainment of age 62. This benefit is equal to 0.8% of Final Average Salary for each year of Membership Service.

Final Average Salary

Average monthly salary over the Member's three highest consecutive years of service.

Membership Service

Service while a participating member of PEERS. Service is measured each year in relation to minimum salary for 20 hours per week in the position for that year.

Prior Service

Service rendered in a covered position prior to November 1, 1965.

Creditable Service

Membership Service plus any Prior Service.

Normal Form of Benefit

Single Life Annuity

Options available include joint and survivor (50%, 75%, or 100%) and term certain (60 or 120 months) and life thereafter.

Early (Age Reduced) Retirement

Eligibility

Attainment of age 55 and under age 60 with at least five years of creditable service.

Benefit

Normal retirement benefit accrued to the date of early retirement, actuarially reduced from age 60.

Special Normal Retirement – Under Modified Formula

Eligibility

Retirement on or before July 1, 2008 at an age under 55 and with at least 25 years of creditable service but not eligible for the Rule of 80.

Benefit

Based on a percentage of final average salary per year of creditable service. Percentages are as follows:

| <u>Years of Service</u> | <u>Benefit Percentage</u> |
|-------------------------|---------------------------|
| 25-25.9 | 1.51% |
| 26-26.9 | 1.53 |
| 27-27.9 | 1.55 |
| 28-28.9 | 1.57 |
| 29-29.9 | 1.59 |

COLA Adjustments

In any year in which the Board determines that the CPI has increased, the Board may provide for annual increases in the current benefit of up to 5%. For any member such adjustments commence in the fourth January after commencement of benefits. The total of such increases may not exceed 80% of the original benefit for any member.

Disability Benefits

Definition of Disability

Incapacity for performance of gainful employment after completion of five years of creditable service and before age 60.

Benefit

Lifetime benefit equal to 90% of accrued normal retirement benefit.

Form of Benefit

If eligible, surviving spouse may elect a survivor benefit. COLA adjustments similar to those provided retirees are provided on this benefit.

Vesting

Eligibility

Completion of five years of creditable service.

Benefit

Accrued normal retirement benefit payable at earliest retirement age based on service at date of termination. Benefit is based on formula in effect at commencement of benefit.

Death / Survivor Benefits

Refund

Refund of accumulated member contributions with interest

Survivor Benefits

If the member has at least 5 years of creditable service at date of death, the spouse may receive a survivor benefit based on 100% J & S equivalent of the benefit accrued to date of death. The benefit may commence:

1. immediately if member is eligible to retire at date of death, or
2. at a future retirement date of the deceased member.

The benefit may be reduced for early commencement if the deceased member would not have been eligible for unreduced retirement at that date based on service to date of death.

COLA adjustments similar to those provided retirees are provided on these benefits.