

Public Education Employee Retirement System of Missouri

Actuarial Valuation
as of June 30, 2010

October 19, 2010

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, 2010. This valuation was completed in accordance with our engagement letter dated October 27, 2008.

This valuation provides data on the funding status of PEERS. The results of the valuation show that the total contribution level should be increased to 13.72% for the 2012 fiscal year to fund the Annual Required Contribution.

This valuation is based on the provisions of PEERS in effect as of June 30, 2010, 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 accuracy of the results presented in this report is dependent upon the accuracy and completeness of the underlying information.

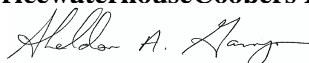
The actuarial cost methods and assumptions used in this valuation are the same as those disclosed in the actuarial valuation report as of June 30, 2009 and have been approved by the Board.

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. The undersigned actuaries are members of the Society of Actuaries and other professional organizations, including the American Academy of Actuaries (M.A.A.A.), as indicated and meet the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States relating to pension plans. There is no relationship between PwC and PEERS that may impair our objectivity.

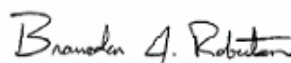
This document was not intended or written to be used, and it cannot be used, for the purpose of avoiding U.S. federal, state or local tax penalties. This includes penalties that may apply if the transaction that is the subject of this document is found to lack economic substance or fails to satisfy any other similar rule of law. This document has been prepared pursuant to an engagement letter between PricewaterhouseCoopers LLP and PEERS, and is intended solely for the use and benefit of PEERS and not for reliance by any other person.

Respectfully submitted,

PricewaterhouseCoopers LLP



Sheldon Gamzon, FSA, MAAA



Brandon Robertson, ASA, MAAA

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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, 2010.

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, 2012, under the statute, and
- To provide accounting information and other data required by PEERS.

REPORT HIGHLIGHTS

The key results of the valuation are summarized in the following table along with comparable values from the prior year.

	<u>June 30, 2009</u>	<u>June 30, 2010</u>
	<u>(\$ in Millions)</u>	
A. Summary of Results		
(1) Present Value of Future Benefits for:		
(a) Active Members	\$ 3,294.0	\$ 3,424.0
(b) Retired Members	1,305.0	1,392.8
(c) Inactive Members and Other Liabilities	94.1	97.7
(d) Total	\$ 4,693.1	\$ 4,914.5
(2) Present Value of Future Normal Costs	1,235.1	1,255.8
(3) Actuarial Accrued Liability: (1) – (2)	\$ 3,458.0	\$ 3,658.7
(4) Actuarial Value of Assets	2,792.2	2,892.4
(5) Unfunded Actuarial Accrued Liability: (3) – (4)	\$ 665.8	\$ 766.3
(6) Total Contribution Rate, Member + Employer	13.00%	13.26%
(7) Normal Cost Rate	10.88%	11.01%
(8) Approximate Rate Available for Unfunded Actuarial Accrued Liability: (6) – (7)	2.12%	2.25%
(9) 30-Year Contribution Rate	13.26%	13.72%
(10) Recommended Contribution Fiscal Year End 2011 and 2012 Based on Statute	13.26%	13.72%

	<u>June 30, 2009</u>	<u>June 30, 2010</u>
B. Highlights of Report		
(1) Actuarial Accrued Liability Funding Ratio:		
(a) Actuarial Value of Assets (millions)	\$ 2,792.2	\$ 2,892.4
(b) Actuarial Accrued Liability (millions)	3,458.0	3,658.7
(c) Funding Ratio: (a) / (b)	80.7%	79.1%
(2) Active Members:		
(a) Number:		
Male	12,600	12,511
Female	<u>38,634</u>	<u>37,852</u>
Total	51,234	50,363
(b) Compensation for Fiscal Year (millions):		
Male	\$ 427.5	\$ 433.2
Female	<u>990.0</u>	<u>1,000.5</u>
Total	\$ 1,417.5	\$ 1,433.7
(c) Average Age:		
Male	47.8	48.0
Female	46.8	47.4
Total	47.1	47.5
(d) Average Service:		
Male	7.3	7.6
Female	7.6	8.2
Total	7.5	8.0
(e) Average Compensation for Fiscal Year (not in millions):		
Male	\$ 33,932	\$ 34,622
Female	\$ 25,624	\$ 26,433
Total	\$ 27,667	\$ 28,467
(f) Average Amount of Assets per Active Member (based on actuarial value):	\$ 27,606	\$ 28,076
(3) Retired Members and Beneficiaries:		
(a) Number Service Retired:		
Life Annuities	12,624	13,120
Options	<u>4,933</u>	<u>5,238</u>
Total	17,557	18,358
(b) Number Disability Retired:	541	577
(c) Number Survivors, Beneficiaries:	<u>1,150</u>	<u>1,223</u>
(d) Total Persons Receiving Benefits:	19,248	20,158
(e) Average Monthly Pension Being Paid at Valuation Date for New Service Retired, Including Options:	\$ 1,008	\$ 586
(f) Average Amount of Assets per Service Retired (based on actuarial value):	\$ 70,308	\$ 71,659
(g) Average Amount of Assets per New Service Retired (based on actuarial value):	\$ 106,638	\$ 97,365

MEMBERSHIP CHARACTERISTICS

Active and Inactive Membership

A total of 66,978 active and inactive members of PEERS are included in this 2010 actuarial valuation.

Active members	50,363
Inactive members	<u>16,615</u>
Total active and inactive members	66,978

Between the 2009 and 2010 actuarial valuations, the number of active employees decreased by 871 or 1.7%. The average annual salaries of employees increased by 2.9% to \$28,467.

Summary of Changes in Membership

	<u>Male</u>	<u>Female</u>	<u>Total</u>
Active and Inactive Members 7/1/2009	17,277	52,056	69,333
New Membership 7/1/2009 to 6/30/2010	1,602	3,789	5,391
Data Adjustments	<u>(906)</u>	<u>(1,019)</u>	<u>(1,925)</u>
Total Membership Before Decreases	17,973	54,826	72,799
Decreases:			
Service Retirements	372	1,019	1,391
Disability Retirements	11	40	51
Withdrawals	1,044	2,593	3,637
Deaths	47	65	112
Other Terminations	545	1,308	1,853
Reciprocity	<u>0</u>	<u>0</u>	<u>0</u>
Total Decreases	2,019	5,025	7,044
Additional Members Valued ¹	384	839	1,223
Active and Inactive members Valued at 6/30/2010	16,338	50,640	66,978

1. Includes members who had terminated employment but were yet to be cashed out as of the valuation date.

Benefit Recipients

On June 30, 2010, PEERS was paying benefits to 20,071 retired members, beneficiaries and survivors. In addition, 87 members had benefits that were on hold due to returning to work. The headcount for current benefit recipients for valuation purposes increased 4.7% from 19,248 on June 30, 2009, to 20,158 on June 30, 2010. The June 30, 2010 headcount consists of 18,358 service retirees, 577 disability retirees, and 1,223 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 2009-2010 year were as follows:

	<u>Service Retirements</u>	<u>Disability Retirements</u>	<u>Beneficiaries</u> ¹	<u>Total</u>
Retired Members 7/1/2009	17,557	541	1,150	19,248
Added During Year	1,371	50		
Benefits Taken Off Hold	30	1		
Data Adjustments	<u>(86)</u>	<u>0</u>		
Total Membership Before Decreases	18,872	592		
Decreases:				
Died During Year	570	13		
Benefits Placed On Hold	<u>14</u>	<u>2</u>		
Total Decreases	584	15		
Additional Members Valued ²	70	0		
Retired Members Valued 6/30/2010	18,358	577	1,223	20,158

1. Due to certain participants with multiple beneficiaries, duplicate identification numbers exist. Therefore, no detailed reconciliation was completed.

2. Includes retired members with benefits on hold that earned additional retirement benefits.

As of June 30, 2010, the average monthly benefit payable to new service retirees was \$586 compared to \$1,008 as of June 30, 2009. 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 methods and assumptions used in this valuation are the same as those disclosed in the actuarial valuation report as of June 30, 2009. The assumptions and methods are described in Appendix E.

EXPERIENCE DURING FY 2010

Overall, the system experienced a net actuarial loss of about \$81.6 million.

The total net actuarial loss for the year ending June 30, 2010, is shown below and is broken out further in Table 18:

	<u>(\$ in millions)</u>
1. Actuarial (Gain) or Loss on Assets (at actuarial value)	\$ 153.9
2. Actuarial (Gain) or Loss on Liabilities Due to no actual COLA in 2011 vs. 3.25% expected	(23.1)
3. Actuarial (Gain) or Loss on Unfunded Liabilities Due to Reinstated and Purchased Service	7.9
4. Actuarial (Gain) or Loss on Liabilities Due to Legislative Changes	0.0
5. Actuarial (Gain) or Loss on Liabilities Due to Salary, Demographic, and Other Experience	<u>(57.1)</u>
6. Total Actuarial (Gain) or Loss (Sum 1-5)	\$ 81.6

For the plan year ending June 30, 2010, the funds experienced an asset loss of \$153.9 million; based on actuarial value of assets. The use of the five year smoothing method to determine the actuarial value of assets recognizes 20% of the total gain or loss for each of the preceding five years.

There is no COLA increase scheduled for January 1, 2011. This produced a gain of \$23.1 million. The reinstatement of forfeited service generated a liability loss of approximately \$2.4 million. The purchase of service other than reinstated service generated a liability loss of approximately \$5.5 million.

In addition, due to a contribution shortfall of \$0.6 million, the unfunded liability was increased as well.

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 2010 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 increased from \$2.11 billion as of June 30, 2009 to \$2.40 billion as of June 30, 2010. The actuarial value of assets increased from \$2.79 billion as of June 30, 2009, to \$2.89 billion as of June 30, 2010. Actuarial value of assets now exceeds the market value by \$0.49 billion.

Based on the actuarial value, the assets of the fund returned about 2.5% which compares to the market value return of 12.3%. The difference is due to the recognition of investment losses from prior years under the asset smoothing method.

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, which 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 benefit liability measure that ties most closely to your funding strategy is the Actuarial Accrued Liability (“AAL”).

Using the actuarial (smoothed) value of assets, the PEERS actuarial accrued liability funding ratio decreased from 82.5% at June 30, 2008 to 80.7% at June 30, 2009, to 79.1% as of June 30, 2010. The majority of the decrease is due to asset losses.

Using the market value of assets, the PEERS actuarial accrued liability funding ratio decreased from 78.6% at June 30, 2008 to 61.1% at June 30, 2009, and increased to 65.7% as of June 30, 2010.

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.

This information is presented in draft form for review by the System's auditor. Please let us know if there are any changes so that we may maintain consistency with the System's financial statements.

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 2012 fiscal year may not increase by more than 0.5% of pay over the rate for the current fiscal year.

In the 2007 session of the Legislature, it was determined that the unfunded actuarial accrued liabilities associated with benefit changes shall be amortized over a twenty-year period. This provision has had no impact on the contribution requirements of the Plan, as the Plan contribution requirements were already limited by the annual increase limitation of 0.5% of pay established in the 2003 session of the Legislature.

APPENDICES

APPENDIX A
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				
	2006	2007	2008	2009	2010
Number	11,818	12,013	12,481	12,600	12,511
Average Age	47.3	47.4	47.6	47.8	48.0
Average Years of Service	7.0	7.1	7.0	7.1	7.6
Average Annual Salary	\$ 30,652	\$ 32,012	\$ 33,447	\$ 33,932	\$ 34,622
Total Payroll (000's)	\$ 362,245	\$ 384,561	\$ 417,454	\$ 427,538	\$ 433,160

Female

Item	Actuarial Valuation as of June 30				
	2006	2007	2008	2009	2010
Number	36,370	37,268	38,384	38,634	37,852
Average Age	46.1	46.3	46.5	46.8	47.4
Average Years of Service	7.2	7.3	7.4	7.6	8.2
Average Annual Salary	\$ 22,787	\$ 23,898	\$ 25,012	\$ 25,624	\$ 26,433
Total Payroll (000's)	\$ 828,749	\$ 890,638	\$ 960,052	\$ 989,947	\$ 1,000,531

Total

Item	Actuarial Valuation as of June 30				
	2006	2007	2008	2009	2010
Number	48,188	49,281	50,865	51,234	50,363
Average Age	46.4	46.6	46.8	47.1	47.5
Average Years of Service	7.1	7.2	7.3	7.5	8.0
Average Annual Salary	\$ 24,716	\$ 25,876	\$ 27,082	\$ 27,667	\$ 28,467
Total Payroll (000's)	\$ 1,190,994	\$ 1,275,199	\$ 1,377,506	\$ 1,417,485	\$ 1,433,691

Table 2

**Employee Distribution by Age and Years of Service
June 30, 2010**

Age	Years of Service							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30 & Over	
Under 25	1,307	35	0	0	0	0	0	1,342
25-29	2,619	448	21	0	0	0	0	3,088
30-34	2,526	918	259	2	0	0	0	3,705
35-39	2,580	1,223	547	112	7	0	0	4,469
40-44	2,830	1,844	977	245	103	8	0	6,007
45-49	2,892	2,392	1,764	647	297	145	23	8,160
50-54	2,421	2,193	2,054	1,105	497	215	129	8,614
55-59	1,858	1,610	1,549	1,051	727	261	143	7,199
60-64	1,145	1,154	947	681	526	241	168	4,862
65 & Over	705	890	520	270	214	134	184	2,917
Total	20,883	12,707	8,638	4,113	2,371	1,004	647	50,363

Table 3
Salary Distribution
Employees in Active Service
on June 30, 2010

Annual Salary	Number	Percent
Under \$5,000	1,466	2.9%
\$5,000 - 9,999	2,721	5.4%
\$10,000 - 14,999	4,947	9.8%
\$15,000 - 19,999	8,086	16.1%
\$20,000 - 24,999	8,198	16.3%
\$25,000 - 29,999	6,885	13.7%
\$30,000 - 34,999	5,332	10.6%
\$35,000 - 39,999	4,090	8.1%
\$40,000 - 44,999	3,037	6.0%
\$45,000 - 49,999	1,988	4.0%
\$50,000 - 54,999	1,153	2.3%
\$55,000 - 59,999	805	1.6%
\$60,000 - 64,999	510	1.0%
\$65,000 - 69,999	326	0.6%
\$70,000 - 74,000	220	0.4%
\$75,000 & Over	<u>599</u>	<u>1.2%</u>
Total	50,363	100.0%

Table 4

**Salary Increase Rates by Service Group
Employees in Both 2009 and 2010 Actuarial Valuations**

Service as of June 30, 2010	Number	Percent Increase In Average Salary	
		Expected	Actual
Under 5	13,101	6.7%	1.1%
5-9	11,800	5.5%	1.9%
10-14	7,992	5.0%	2.2%
15-19	3,838	5.0%	2.1%
20 & Over	<u>3,719</u>	<u>5.0%</u>	<u>2.5%</u>
Total	40,450	5.7%	1.8%

Table 5

**Pensions in Force on June 30, 2010
by Type and Monthly Amount**

Monthly	Service	Disability	Beneficiary	Total
			163	1,697
Less than \$100	1,506	28		
\$100 - 199	3,469	134	278	3,881
\$200 - 299	2,729	119	225	3,073
\$300 - 399	2,004	94	157	2,255
\$400 - 499	1,537	54	115	1,706
\$500 - 999	4,471	136	209	4,816
\$1,000 - 1,499	1,768	11	57	1,836
\$1,500 & Over	<u>874</u>	<u>1</u>	<u>19</u>	<u>894</u>
Total	18,358	577	1,223	20,158

Table 6

**Pensions in Force on June 30, 2010
by Type and Age**

Age	Service	Disability	Beneficiary	Total
Under 55	161	134	132	427
55-59	677	134	66	877
60-64	2,822	113	98	3,033
65-69	4,002	100	140	4,242
70-74	3,624	52	176	3,852
75-79	2,958	31	218	3,207
80-84	2,130	8	198	2,336
85-89	1,288	3	139	1,430
90 & Over	<u>696</u>	<u>2</u>	<u>56</u>	<u>754</u>
Total	18,358	577	1,223	20,158

Table 7

**Cost of Living Increases to Retired Members
June 30, 2010**

Retirement In	Effective Date of First COLA	First COLA Percentage Increase	Total Increases Through January 2010	January 2011 Increase	Total Increases Through January 2011	Number of Retired Members at 6/30/10¹
1986 & Earlier	Various	Various	80.00%	0.00%	80.00%	1,135
1987	Jan. 1991	4.00%	74.21%	0.00%	74.21%	242
1988	Jan. 1992	4.00%	67.48%	0.00%	67.48%	354
1989	Jan. 1993	3.10%	61.05%	0.00%	61.05%	349
1990	Jan. 1994	3.00%	56.23%	0.00%	56.23%	420
1991	Jan. 1995	2.50%	51.68%	0.00%	51.68%	418
1992	Jan. 1996	3.00%	47.97%	0.00%	47.97%	473
1993	Jan. 1997	2.80%	43.66%	0.00%	43.66%	473
1994	Jan. 1998	2.30%	39.73%	0.00%	39.73%	537
1995	Jan. 1999	1.70%	36.59%	0.00%	36.59%	592
1996	Jan. 2000	2.00%	34.30%	0.00%	34.30%	631
1997	Jan. 2001	3.70%	31.68%	0.00%	31.68%	711
1998	Jan. 2002	3.30%	26.98%	0.00%	26.98%	716
1999	Jan. 2003	1.10%	22.93%	0.00%	22.93%	812
2000	Jan. 2004	2.10%	21.59%	0.00%	21.59%	857
2001	Jan. 2005	3.30%	19.08%	0.00%	19.08%	851
2002	Jan. 2006	2.50%	15.29%	0.00%	15.29%	899
2003	Jan. 2007	4.30%	12.48%	0.00%	12.48%	976
2004	Jan. 2008	2.70%	7.84%	0.00%	7.84%	1,028
2005	Jan. 2009	5.00%	5.00%	0.00%	5.00%	1,061
2006	Jan. 2010	0.00%	0.00%	0.00%	0.00%	1,088
2007	Jan. 2011	0.00%		0.00%	0.00%	1,241
2008						1,266
2009						1,352
2010						<u>453</u>
Total						18,935

¹ Includes Service Retirees and Disabled Retirees as of June 30, 2010

Table 8**Analysis of Retired Membership by Type of Benefit
(Dollar Amounts in Millions)
June 30, 2010**

Type of Benefit	Number	Annual Benefit	Total Liability
Service Retirees			
Options 1 & 10 (Life Only)	13,120	78.9	807.9
Options 2 & 21 (100% J&S with Pop-Up)	2,822	19.3	270.3
Option 3 & 31 (75% J&S with Pop-Up)	373	3.7	48.8
Option 4 & 41 (50% J&S with Pop-Up)	730	7.3	94.6
Option 5 (10 Years Certain & Life)	538	3.1	37.2
Option 6 (5 Years Certain & Life)	174	1.2	13.1
Option 20 (100% J&S)	145	0.7	6.3
Option 30 (75% J&S)	1	0.0	0.0
Option 40 (50% J&S)	20	0.1	1.1
Accelerated Payment	<u>435</u>	<u>2.7</u>	<u>36.2</u>
Total	18,358	\$117.0	\$1,315.5
Disability Retirees	577	\$2.6	\$24.7
Beneficiaries of Retiree Deaths	1,223	\$5.5	\$52.5

Note: Excludes retirees that have returned to work.

APPENDIX B
ASSET INFORMATION

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

	June 30, 2009	June 30, 2010
Assets:		
Cash	\$ 8,492,059	\$ 12,840,334
Contribution Receivable	16,500,599	16,179,559
Accrued Interest and Dividends	22,961,699	21,890,085
Investments	2,095,636,749	2,384,688,961
Trades Pending	213,973,847	229,410,169
Other Assets	25,853	24,570
Capital Assets	0	0
Prepaid Expenses	0	120,658
Due from PSRS	<u>0</u>	<u>0</u>
Total	\$ 2,357,590,806	\$ 2,665,154,336
Liabilities:		
Accounts Payable	\$ 1,299,927	\$ 1,656,117
Employer Pay Liability	471,191	464,995
Interest Payable	112,917	96,870
Trades Pending	233,272,051	251,058,867
Net OPEB Obligation	145,200	218,440
Other Liabilities	8,090,424	6,557,570
Due to PSRS	<u>525,465</u>	<u>676,848</u>
Total	\$ 243,917,175	\$ 260,729,707
Net Assets	\$ 2,113,673,631	\$ 2,404,424,629

Table 10

**Statement of Revenue and Expenses
Market Value Reconciliation For Fiscal Year Ended June 30, 2010**

Operating Revenues	Amount
Contributions:	
Employers	\$ 91,478,725
Members	<u>95,924,251</u>
Total Contributions	187,402,976
Net Investment Income:	
Interest	26,637,626
Dividends	42,386,721
Net Income from Security Lending Activities	<u>2,250,285</u>
Total Investment Income	71,274,632
Investment Return	
Net Capital Appreciation / (Depreciation)	196,334,554
Investment Expenses	<u>(6,473,744)</u>
Total Investment Return	189,860,810
Other Income	284
Total Operating Revenues	448,538,702
Operating Expenses	
Benefit Payments	135,796,464
Refunds to Members	16,710,950
Administrative Expenses	5,280,239
Other Expenses	<u>51</u>
Total Operating Expenses	157,787,704
Excess of Revenues over Expenses	\$ 290,750,998
Fund Balance, June 30, 2009	<u>2,113,673,631</u>
Fund Balance, June 30, 2010	\$ 2,404,424,629

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			
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
2007	142,306	(116,880)	(4,427)	(121,307)	20,999	1,275,199	9.5
2008	159,359	(129,573)	(4,681)	(134,254)	25,105	1,377,506	9.7
2009	175,343	(142,340)	(5,440)	(147,780)	27,563	1,417,485	10.4
2010	187,403	(152,508)	(5,280)	(157,788)	29,615	1,433,691	11.0

Table 12

Development of the Actuarial Value of Assets

1. Actuarial Value of Assets June 30, 2009		\$ 2,792,182,350
2. Activity for FY 2010		
a. Contributions	\$ 187,402,976	
b. Benefits and Expenses	<u>(157,787,704)</u>	
c. Net Cash Flow	29,615,272	
3. Expected Returns	224,559,199	
4. Assets Before Allocation of G/L (1+2+3)		3,046,356,821
5. Actual Returns for 2010	261,135,442	
6. Excess Returns for 2010 (5-3)	36,576,243	
7. Recognized Excess Returns		
2010	7,315,249	
2009	(141,391,161)	
2008	(66,025,676)	
2007	38,976,583	
2006	<u>7,179,033</u>	
Total		<u>(153,945,972)</u>
8. Actuarial Value of Assets June 30, 2010		\$ 2,892,410,849

APPENDIX C
ACTUARIAL DETERMINATIONS

Table 13

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

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Active Members	45,517	46,728	46,863	45,880	46,598	48,188	49,281	50,865	51,234	50,363
Retired Members	13,673	14,270	14,837	15,445	16,142	16,760	17,539	18,288	19,248	20,158
Actuarial Assets	\$ 1,686,242	\$ 1,810,619	\$ 1,677,770	\$ 1,837,308	\$ 2,011,566	\$ 2,218,638	\$ 2,481,562	\$ 2,703,762	\$ 2,792,182	\$ 2,892,411
UAAL	\$ (50,166)	\$ 45,363	\$ 371,946	\$ 383,902	\$ 402,928	\$ 538,195	\$ 501,250	\$ 574,840	\$ 665,862	\$ 766,302
Benefit Payments and Refunds	\$ 58,239	\$ 67,737	\$ 75,432	\$ 85,290	\$ 95,798	\$ 104,704	\$ 116,880	\$ 129,573	\$ 142,340	\$ 152,507
Accumulated Members' Contributions	\$ 301,936	\$ 354,296	\$ 394,925	\$ 444,318	\$ 466,259	\$ 524,014	\$ 580,853	\$ 650,970	\$ 693,962	\$ 743,146
APV of Retirees' Benefits	\$ 565,126	\$ 651,295	\$ 731,059	\$ 804,864	\$ 904,292	\$ 1,020,486	\$ 1,093,650	\$ 1,215,036	\$ 1,305,025	\$ 1,392,753

Table 14

**Determination of Normal Cost
For the 2010 - 2011 Plan Year**

	Dollar (mid-year)	Rate¹
Active Members		
Retirement Benefits	\$ 125,418,943	8.74%
Termination Benefits	26,748,922	1.87%
Death Benefits	3,551,815	0.25%
Disability Benefits	<u>2,169,743</u>	<u>0.15%</u>
Total Normal Cost	\$ 157,889,423	11.01%
Estimated Employee Payroll	\$ 1,433,691,299	
Employee Contribution Rate		6.63%
Estimated Employee Contributions	<u>95,053,733</u>	
Employer Normal Cost (Total Normal Cost less Employee Contributions)	\$ 62,835,690	

¹ Normal cost rate was determined using an expected payroll of \$1,433,691,299.

Table 15

**Determination of the Unfunded Actuarial Accrued Liability
June 30, 2010**

Active Members:

Service Retirement	\$ 2,149,653,755
Death Benefits	46,346,844
Disability Benefits	19,631,130
Termination Benefits	(47,406,251)
Inactives	<u>97,733,696</u>
Total for Active and Inactive Members	2,265,959,174

Pay Status Members:

Service Retirees	1,315,521,886
Disability Retirees	24,687,490
Survivors	<u>52,543,995</u>
Total for Pay Status Members	1,392,753,371

Total Actuarial Accrued Liability 3,658,712,545

Actuarial Value of Assets 2,892,410,849

Total Unfunded Actuarial Accrued Liability \$ 766,301,696

Table 16

GASB 25 Exhibits

Schedule of Funding Progress
(\$ In Thousands)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial 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)
6/30/2001	1,686,242	1,636,076	(50,166)	103.1%	814,158	-6.2%
6/30/2002	1,810,619	1,855,982	45,363	97.6%	895,420	5.1%
6/30/2003	1,677,770	2,049,716	371,946	81.9%	971,177	38.3%
6/30/2004	1,837,308	2,221,210	383,902	82.7%	984,866	39.0%
6/30/2005	2,011,566	2,414,494	402,928	83.3%	1,055,204	38.2%
6/30/2006	2,218,638	2,756,833	538,195	80.5%	1,190,994	45.2%
6/30/2007	2,481,562	2,982,813	501,250	83.2%	1,275,199	39.3%
6/30/2008	2,703,762	3,278,602	574,840	82.5%	1,377,506	41.7%
6/30/2009	2,792,182	3,458,044	665,862	80.7%	1,417,485	47.0%
6/30/2010	2,892,411	3,658,713	766,302	79.1%	1,433,691	53.4%

Schedule of Employer Contributions

Fiscal Year Ending	Annual Required Contribution	Employer Contribution	Percentage Contributed
6/30/2001	37,500,243	37,500,243	100.0%
6/30/2002	45,773,119	45,773,119	100.0%
6/30/2003	52,847,992	48,933,326	92.6%
6/30/2004	62,315,910	49,976,898	80.2%
6/30/2005	73,948,917	53,109,687	71.8%
6/30/2006	79,707,834	61,745,505	77.5%
6/30/2007	89,945,503	69,235,160	77.0%
6/30/2008	90,727,016	77,988,839	86.0%
6/30/2009	96,775,289	85,915,562	88.8%
6/30/2010 ¹	95,821,957	91,478,725	95.5%

¹ Annual Required Contribution determined by applying the 30-year contribution rate (13.26%), net of the employee contribution rate (6.5%), to the estimated payroll on which contributions were made (\$1,417,484,574).

Notes in Trend Data Information:

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

Data
6/30/2010
Entry Age Normal
Level Percent, Open
30
5-Year Smoothed Market

Actuarial

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

8.0%
5.0% - 10.0%
3.25%

Table 17

**Unfunded Actuarial Accrued Liability
June 30, 2010**

	<u>Amount</u>
(1) Present Value of Future Benefits for:	
Active Members	\$ 3,424,002,990
Service Retirees	1,315,521,886
Disability Retirees	24,687,490
Beneficiaries and Survivors	52,543,995
Inactive Members	<u>97,733,696</u>
Total	4,914,490,057
(2) Present Value of Future Normal Costs	<u>1,255,777,512</u>
(3) Actuarial Accrued Liability ((1)-(2))	3,658,712,545
(4) Actuarial Value of Assets	<u>2,892,410,849</u>
(5) Unfunded Actuarial Accrued Liability ((3)-(4))	\$ 766,301,696

**Required Contribution Rate and Amortization of Unfunded Liability
for the Fiscal Year Ending 2012**

	<u>Percentage of Payroll</u>
(1) Total Contribution Rate, Member + Employer, for Fiscal Year 2011	13.26%
(2) Normal Cost Rate ¹	<u>11.01%</u>
(3) Approximate Rate Available for Unfunded Actuarial Accrued Liability ((1)-(2))	2.25%
(4) True Unfunded Actuarial Accrued Liability	2.71%
(5) Benchmark Contribution Rate - Normal Cost Plus a Rate to fund UAAL over 30 Years ²	13.72%
(6) Recommended Total Contribution Rate, Member + Employer, for Fiscal Year 2012	13.72%

¹ Normal cost rate was determined at mid-year using an expected payroll of \$1,433,691,299.

² Contribution rate to amortize the UAAL was determined using valuation payroll of \$1,433,691,299. The benchmark contribution shown here has been adjusted for the 20 year amortization of unfunded liabilities due to changes in benefit provisions as amended in the 2007 legislative session. The increase in unfunded liabilities as of June 30, 2007, was \$1,120,898.

Table 18

Analysis of Actuarial Gains and Losses

	<u>Amount</u>
1. Unfunded Actuarial Liability as of July 1, 2009	\$ 665,861,634
2. Normal Cost for 2010 Plan Year (Mid-year)	154,284,267
3. Contribution Expected to be Received During Year (30-Year Rate)	(187,958,455)
4. Interest to Year End @ 8.00% on 1., 2., and 3.	51,921,963
5. Expected Unfunded Actuarial Liability as of June 30, 2010	684,109,409
6. Contribution Shortfall	555,479
7. Actuarial (Gain)/Loss During the Year	
a. From Investment	153,945,972
b. From Actuarial Liabilities Due to Actual vs. Expected COLA ¹	(23,108,230)
c. From Unfunded Actuarial Liabilities Due to Reinstated Service	2,409,210
d. From Unfunded Actuarial Liabilities Due to Other Purchased Service	5,498,152
e. From Actuarial Liabilities Due to Legislative Changes	0
f. From Actuarial Liabilities Due to Unexpected Salary Changes	(43,436,506)
g. From Actuarial Liabilities Due to Demographic Experience	(13,014,140)
h. From Actuarial Liabilities Due to Other ²	<u>(657,650)</u>
i. Total	81,636,808
8. Actual Unfunded Actuarial Liability as of June 30, 2010	\$ 766,301,696

¹ For COLA granted January 1, 2011 (0.00%).

² Includes impact of administrative and other expenses.

APPENDIX D
ADDITIONAL DATA

Table 19**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
6/30/1991	28,554	\$ 389,080	\$ 13,626	5.1%	45.5	7.4
6/30/1992	28,410	398,147	14,014	2.8%	45.7	7.6
6/30/1993	29,055	415,672	14,306	2.1%	45.7	7.7
6/30/1994	30,662	452,339	14,752	3.1%	45.5	7.6
6/30/1995	32,598	495,449	15,199	3.0%	45.3	7.3
6/30/1996	34,153	538,022	15,753	3.6%	45.2	7.2
6/30/1997	35,982	556,534	15,467	-1.8%	45.1	7.1
6/30/1998	38,672	616,303	15,937	3.0%	44.8	6.7
6/30/1999	41,599	685,272	16,473	3.4%	44.6	6.5
6/30/2000	43,533	735,400	16,893	2.5%	44.5	6.4
6/30/2001	45,517	814,158	17,887	5.9%	44.6	6.3
6/30/2002	46,728	895,420	19,162	7.1%	44.8	6.4
6/30/2003	46,863	971,177	20,724	8.2%	45.3	6.6
6/30/2004	45,880	984,866	21,466	3.6%	46.2	7.0
6/30/2005	46,598	1,055,204	22,645	5.5%	46.6	7.1
6/30/2006	48,188	1,190,994	24,716	9.1%	46.4	7.1
6/30/2007	49,281	1,275,199	25,876	4.7%	46.6	7.2
6/30/2008	50,865	1,377,506	27,082	4.7%	46.8	7.3
6/30/2009	51,234	1,417,485	27,667	2.2%	47.1	7.5
6/30/2010	50,363	1,433,691	28,467	2.9%	47.5	8.0

Table 20

Solvency Test
(\$ in 000's)

Actuarial Valuation Date	Actuarial Accrued Liability			Net Assets Available for Benefits	Percentage of Actuarial Liabilities Covered by Net Assets for:		
	Member Contributions (1)	Current Retirees & Beneficiaries (2)	Active & Inactive Members Employer Financed Portion (3)		(1)	(2)	(3)
6/30/1994	155,238	224,650	306,192	698,988	100.0%	100.0%	104.2%
6/30/1995	169,846	252,034	364,519	778,325	100.0%	100.0%	97.8%
6/30/1996	185,763	293,937	399,861	876,886	100.0%	100.0%	99.3%
6/30/1997	204,757	312,390	447,065	1,001,035	100.0%	100.0%	108.2%
6/30/1998	225,454	350,860	460,033	1,150,311	100.0%	100.0%	124.8%
6/30/1999	231,252	396,846	540,413	1,335,308	100.0%	100.0%	130.9%
6/30/2000	274,167	467,653	653,480	1,522,660	100.0%	100.0%	119.5%
6/30/2001	301,936	565,126	769,014	1,686,242	100.0%	100.0%	106.5%
6/30/2002	354,296	651,295	850,391	1,810,619	100.0%	100.0%	94.7%
6/30/2003	394,925	731,059	923,732	1,677,770	100.0%	100.0%	59.7%
6/30/2004	444,318	804,864	972,028	1,837,308	100.0%	100.0%	60.5%
6/30/2005	466,259	904,292	1,043,943	2,011,566	100.0%	100.0%	61.4%
6/30/2006	524,014	1,020,486	1,212,333	2,218,638	100.0%	100.0%	55.6%
6/30/2007	580,853	1,093,650	1,308,310	2,481,562	100.0%	100.0%	61.7%
6/30/2008	650,970	1,215,036	1,412,596	2,703,762	100.0%	100.0%	59.3%
6/30/2009	693,962	1,305,025	1,459,057	2,792,182	100.0%	100.0%	54.4%
6/30/2010	743,146	1,392,753	1,522,813	2,892,411	100.0%	100.0%	49.7%

Table 21

Schedule of Retirees and Beneficiaries Added to
and Removed From Valuation Headcount

Actuarial Valuation Date	Service Retirees			Disability Retirees			Beneficiaries		
	Added	Removed	End of Year	Added	Removed	End of Year	Added	Removed	End of Year
6/30/1991	712	277	8,505	24	13	175	54	4	219
6/30/1992	715	316	8,904	28	7	196	46	5	260
6/30/1993	689	336	9,257	26	10	215	40	7	293
6/30/1994	658	358	9,557	29	9	235	60	9	344
6/30/1995	782	372	9,967	33	19	249	54	12	386
6/30/1996	799	390	10,376	26	8	267	47	18	415
6/30/1997	823	388	10,811	22	13	276	63	18	460
6/30/1998	841	424	11,218	29	17	288	59	22	497
6/30/1999	813	431	11,600	35	7	316	67	19	545
6/30/2000	945	432	12,113	45	14	347	76	20	601
6/30/2001	987	468	12,632	53	22	378	76	14	663
6/30/2002	980	471	13,141	30	21	387	97	18	742
6/30/2003	979	501	13,619	31	13	405	96	25	813
6/30/2004	1,081	541	14,159	44	18	431	86	44	855
6/30/2005	1,116	505	14,770	43	26	448	98	29	924
6/30/2006	1,080	528	15,322	53	23	478	86	50	960
6/30/2007	1,250	563	16,009	29	18	489	120	39	1,041
6/30/2008	1,256	569	16,696	46	21	514	99	62	1,078
6/30/2009	1,439	578	17,557	45	18	541	113	41	1,150
6/30/2010	1,471	670	18,358	51	15	577	N/A	N/A	1,223

Table 22

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

Actuarial Valuation Date	Service Retirees		Disability		Beneficiaries	
	Number	Benefits	Number	Benefits	Number	Benefits
6/30/1994	9,557	18,534	235	417	344	572
6/30/1995	9,967	20,842	249	481	383	699
6/30/1996	10,376	23,785	267	550	415	820
6/30/1997	10,811	27,250	276	616	460	1007
6/30/1998	11,218	30,240	288	672	497	1,126
6/30/1999	11,600	35,395	316	826	545	1,384
6/30/2000	12,113	41,091	347	1002	601	1,653
6/30/2001	12,632	50,512	378	1,232	663	2,038
6/30/2002	13,141	57,697	387	1,346	742	2,413
6/30/2003	13,619	63,860	405	1,449	813	2,752
6/30/2004	14,159	70,710	431	1,558	855	3,076
6/30/2005	14,770	78,435	448	1,709	924	3,569
6/30/2006	15,322	85,639	478	1,873	960	3,736
6/30/2007	16,009	95,809	489	2,011	1,041	4,277
6/30/2008	16,696	105,791	514	2,177	1,078	4,582
6/30/2009	17,557	130,472	541	2,406	1,150	4,998
6/30/2010	18,358	116,962	577	2,595	1,223	5,474

Average New Retiree Statistics

Actuarial Valuation Date	New Service Retirees	Average New Benefit	% Change From Previous Year
6/30/1994	571	306.20	11
6/30/1995	679	298.76	(3)
6/30/1996	797	330.40	11
6/30/1997	823	327.16	(1)
6/30/1998	805	324.82	(1)
6/30/1999	813	366.42	13
6/30/2000	945	431.89	18
6/30/2001	987	565.29	31
6/30/2002	980	660.51	17
6/30/2003	979	676.19	2
6/30/2004	1,081	665.97	(2)
6/30/2005	1,116	652.87	(2)
6/30/2006	1,080	676.06	4
6/30/2007	1,250	717.59	6
6/30/2008	1,256	760.85	6
6/30/2009	1,439	1,008.17	33
6/30/2010	1,359	585.94	(42)

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. The benchmark contribution shown has been adjusted for the 20 year amortization of unfunded liabilities due to changes in benefit provisions as amended in the 2007 legislative session. However, this amendment had no impact on the final contribution rates, which were limited by the annual increase limitation of 0.5% of pay established in the 2003 session of the legislature.
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.

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. Mortality for active members are based on the following percentages of retiree mortality:

Male 70%
Female 60%

Illustrative rates per 1,000 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

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

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

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 for the Rule of 80 are applicable through 2013.

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.

Interest on Member Accounts

2% per year.

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. Future COLAs for current benefit recipients reflect actual cumulative adjustments granted at the time of valuation.

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.

Joint and Survivor Election

To recognize the subsidy present in the joint and survivor reduction factors calculated without provision for cost-of-living adjustments, the active member costs resulting from all decrements except disability and refunds were loaded by 0.75%.

Terminations

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

If the present value of the deferred benefit is less than the member account balance, the value of the member account balance is valued.

Return of Unused Member Account Balance

Under the single life annuity payment option, any unused balance of contributions and interest in the member account balance at the time of death is paid in a lump sum to a designated beneficiary. This benefit is approximated with a 3-year certain benefit.

Missing/Incomplete Data

Members without a date of birth provided are assumed to be 30 years old. Pensionable pay for valuation purposes is assumed to be the greater of the current year's salary, the previous year's salary and \$5,000. Pensionable pay for active members hired in the current year is assumed to be the greater of annualized pay and \$5,000. Pensionable pay for valuation purposes for inactive members is assumed to be the greater of the two most recent years of salary history provided and \$5,000.

Changes in Assumptions Since Prior Valuation

None.

APPENDIX F
SUMMARY OF BENEFIT PROVISIONS OF PEERS

MEMBER CONTRIBUTIONS

Half the total PEERS contribution rate. For fiscal year 2010, the current total PEERS contribution rate is 13.26% of pay and may increase 0.5% each year.

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.

COMPENSATION

All regular earnings as an employee of a PEERS-covered employer. Compensation or salary includes, but is not limited to, payments for extra duties, overtime payments and employer-paid medical, dental and vision insurance premiums for the member.

FINAL AVERAGE SALARY

Average monthly salary over the Member's three highest consecutive years of service. Effective August 28, 2007, the maximum increase in the annual compensation used for the final average salary shall not exceed ten percent.

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%), term certain (60 or 120 months) and life thereafter, partial lump sum option (PLSO), and accelerated payment plan (APP).

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, 2013 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.

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.