GRS Gabriel Roeder Smith & Company
Consultants & Actuaries

TEACHERS' RETIREMENT SYSTEM OF OKLAHOMA
ANNUAL ACTUARIAL VALUATION
FOR THE YEAR BEGINNING JUNE 30, 2008

GRS Gabriel Roeder Smith & Company
Consultants & Actuaries
5605 N. MacArthur Blvd.
Suite 870
Irving, TX 75038-2631
469.524.0000 phone
469.524.0003 fax
www.gabrielroeder.com

October 22, 2008

Board of Trustees
Teachers' Retirement System of Oklahoma
Oliver Hodge Education Building
2500 N. Lincoln Boulevard, 5th Floor
Oklahoma City, Oklahoma 73105

Dear Members of the Board:

SUBJECT: ACTUARIAL VALUATION AS OF JUNE 30, 2008

We certify that the information contained in this report is accurate and fairly presents the actuarial position of the Teachers' Retirement System of Oklahoma (the System) as of June 30, 2008

All calculations have been made in conformity with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, the results presented comply with the requirements of the Oklahoma statutes and, where applicable, the Internal Revenue Code, ERISA, and the Statements of the Governmental Accounting Standards Board. The undersigned are independent actuaries. They are Enrolled Actuaries and Members of the American Academy of Actuaries, and they are experienced in performing valuations for large public retirement systems. They meet the Qualification Standards of the American Academy of Actuaries.

ACTUARIAL VALUATION

The primary purposes of the valuation report are to determine the adequacy of the current employer contribution rate, to describe the current financial condition of the System, and to analyze changes in the System's condition. In addition, the report provides information required by the System in connection with Governmental Accounting Standards Board Statement No. 25 (GASB 25), and it provides various summaries of the data.

Valuations are prepared annually, as of June 30 of each year, the last day of the System's plan and fiscal year.

FINANCING OBJECTIVES

The member, employer, State, and "federal matching" contribution rates are established by law. Members contribute 7.00% of covered compensation. The fiscal year 2008 contribution rates for employers covered by the Education Employees Service Incentive Plan (EESIP) were 7.85% effective July 1, 2007 and 8.35% effective Jan. 1, 2008. This rate increases to 8.50% effective July 1, 2008, 9.00% effective Jan. 1, 2009, and 9.50% effective Jan. 1, 2010. For employers not covered by the EESIP—the comprehensive and regional four-year universities—the contribution rate for FY 2008 was 7.05% and increased to 7.55% on Jan. 1, 2008. This rate will increase to 8.05% on Jan. 1, 2009, and 8.55% on Jan. 1, 2010. In addition, the State of Oklahoma contributes a percentage of its revenues from sales taxes, use taxes, corporate income taxes, and individual income taxes to the System. This percentage is currently 5.00%, and no increases are scheduled in this rate. Additionally, the System receives "federal matching contributions" for positions whose funding comes from federal sources or certain grants. The federal matching contribution rate for FY 2008 was 7.00% and increased to 7.50% for FY 2009. This federal matching rate is intended to approximate the contribution from the State of Oklahoma measured as a percentage of "state" payroll, i.e., payroll excluding that paid from federal or grant sources.

In the fiscal year ending June 30, 2008, the state's contribution plus the federal contribution was equivalent to a contribution of approximately 7.3% of covered payroll. The employer contributions averaged about 7.8% of payroll, so on a combined basis, the employing entities contributed about 15.1% of covered payroll for FY 2008. This is expected to increase as the contribution rates for the employers increase in the future. We project that by FY 2011, when the higher employer contribution rates are fully phased in, the combined employer, State, and federal contributions will amount to about 16.8% of payroll.

The state, local and federal contributions, when combined with the contributions made by members, are intended to pay for the normal cost and to amortize the unfunded actuarial accrued liability (UAAL).

PROGRESS TOWARD REALIZATION OF FINANCING OBJECTIVES

The UAAL at June 30, 2007 was $7,603 million, and it increased to $9,090 million this year. The funded ratio - actuarial value of assets divided by actuarial accrued liability – decreased from 52.6% to 50.5%.

Last year, the period required to completely amortize the UAAL (the funding period) based on the contribution schedule in effect at that time was 21.6 years, measured from June 30, 2007. This year, the funding period is 54.4 years. The increase in the UAAL and the funding period is principally due to the increase in our assumed rate of future ad hoc cost of living adjustments (COLA) from 1% to 2%. This added over $1.4 billion to the UAAL.

Based on the current contribution schedule, assuming no actuarial gains or losses in the future, the UAAL is expected to decrease starting in FY 2044 until it reaches zero in FY 2063.

DEFERRED ASSET LOSSES/GAINS

The UAAL and the funded ratio cited above are based on actuarial calculations that make use of the actuarial value of assets, not the market value. The actuarial value of assets is based on the market value, but asset gains and losses – earnings greater or less than the 8.00% investment return assumption – are recognized at a rate of 20% per year for five years. The current actuarial value, $9,257 million, is $623 million larger than the market value of $8,634 million. The actuarial value is now 107.2% of the market value. The funded ratio determined using the market value rather than the actuarial value is 47.1%.

BENEFIT PROVISIONS

The actuarial valuation reflects the benefit and contribution provisions set forth in current statutes, including those adopted in the 2008 legislative session.

HB 3112 was passed during the 2008 legislative session. This bill implements a 2% ad hoc COLA for TRS retirees who retired prior to July 1, 2007.

ASSUMPTIONS AND METHODS

Assumptions are set by the Board of Trustees, taking into account the recommendations of the plan's actuaries. In July of this year, the Board voted to increase the assumed future ad hoc COLA assumption from 1% to 2%. Otherwise, the actuarial assumptions and methods used in this report are unchanged from last year.

We believe the assumptions are internally consistent and are reasonable, based on the actual experience of the plan.

The results of the actuarial valuation are dependent on the actuarial assumptions used. Actual results can and almost certainly will differ, as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities, calculated contribution rates and funding periods.

The Retirement Board is required to submit actuarial information about the System to the Oklahoma State Pension Commission. The required information is based on a prescribed set of actuarial assumptions which is different from the assumption set used in preparing the actuarial valuation. This information appears as an addendum to this report in Appendix IV.

DATA

Member data for retired, active, and inactive participants was supplied as of June 30, 2008 by the System's staff. We have not subjected this data to any auditing procedures, but have examined the data for reasonableness and consistency with the prior year's data. Asset information was supplied by the auditors and by the System's staff.

We thank both the staff and the auditors for their assistance.

Sincerely,

J. Christian Conradi

J. Christian Conradi, ASA, MAAA, EA
Senior Consultant

Mark R. Randall

Mark R. Randall, FCA, EA, MAAA
Senior Consultant

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SECTION A
EXECUTIVE SUMMARY

Executive Summary

Item	2008	2007
Membership		
• Number of		
- Active members	88,678	88,133
- Retirees and beneficiaries	45,238	43,506
- Inactive, vested	6,915	6,637
- Inactive, nonvested	6,908	6,613
- Total	147,739	144,889
• Payroll	$ 3,751 million	$ 3,599 million
Statutory contribution rates	FY 2009	FY 2008
• Employers in EESIP	8.50%/9.00% *	7.85%/8.35% *
• Regional universities	7.55%/8.05% *	7.05%/7.55% *
• Federal/grant salaries	7.50%	7.00%
• Members	7.00%	7.00%
• State (% of tax revenues)	5.00%	5.00%
Assets		
• Market value	$ 8,634 million	$ 9,293 million
• Actuarial value	$ 9,257 million	$ 8,422 million
• Return on market value	-7.5%	18.0%
• Return on actuarial value	9.4%	12.4%
• State/local/federal contributions	$ 597 million	$ 536 million
• External cash flow %	0.4%	0.2%
• Ratio of actuarial to market value	107.2%	90.6%
Actuarial Information		
• Normal cost %	11.25%	10.52%
• Unfunded actuarial accrued liability (UAAL)	$ 9,090 million	$ 7,603 million
• Funded ratio	50.5%	52.6%
• Funding period (years)	54.4	21.6
GASB 25 ARC (30 year, level %)	FY 2009	FY 2008
• Dollar amount	$714,367,558	$590,495,652
• Percent of pay	18.19%	15.68%
Gains/(losses)		
• Asset experience	$ 118 million	$ 333 million
• Liability experience	(31) million	(123) million
• Benefit changes	(67) million	0 million
• Assumption Changes	(1,406) million	0 million
• Total	($1,386) million	$ 210 million

* First rate shown is effective for July-December, second rate shown is effective for January-June

SECTION B
INTRODUCTION

INTRODUCTION

The results of the June 30, 2008 actuarial valuation of the Teachers' Retirement System of Oklahoma are presented in this report.

The purposes of any actuarial valuation report are to describe the financial condition of the System, to assess the adequacy of the current contributions, and to analyze changes in the funding requirements. In addition, this report presents information required by the System in connection with Governmental Accounting Standards Board Statement No. 25 (GASB 25).

Section C discusses the determination of the current funding period. Section D analyzes the changes in the Unfunded Actuarial Accrued Liability. This section also discusses the gains and losses resulting from differences between actual experience and the actuarial assumptions.

Section E deals with the System's assets, while Section F discusses the changes in the benefit and contribution provisions since the previous valuation. Section G discusses liabilities calculated for GASB 25 purposes. Sections H and I discuss the actuarial assumptions and methods used and the membership data. Section J discusses the alternative valuation results based on the set of assumptions prescribed for reporting to the State's Pension Commission. (Results of this alternative valuation are shown in Appendix IV.)

All of the tables referenced by the other sections appear in Section K.

SECTION C

FUNDED STATUS

FUNDED STATUS

Because the employer contribution rates are set by statute, this report determines the funding period required to amortize the Unfunded Actuarial Accrued Liability (UAAL).

The UAAL increased by $1.488 billion, from $7.603 billion to $9.090 billion. The funded ratio – the ratio of the actuarial value of assets to actuarial accrued liability – decreased from 52.6% to 50.5%. The funding period – the number of years that would be required under the current contribution schedule to amortize the UAAL – has gone from 21.6 years to 54.4 years. We now project that the System will not reach 80% funded until after 2050, assuming no further changes in benefits or contribution rates and assuming no actuarial gains or losses.

These effects are primarily due to an increase in the assumed rate of future cost of living adjustments from 1% to 2% per year.

OTRS remains among the most poorly funded of all statewide plans. The actuarial value of assets is just sufficient to cover the liabilities for currently retired members. Despite an increase in contribution rates, future contributions are not projected to reach the GASB 25 ARC (the benchmark contribution) until FY 2034.

The current combined state/local/federal contribution for FY 2008 was not sufficient to pay the normal cost and pay the interest on the UAAL, so negative amortization is occurring. This is expected to continue over the next 35 years.

This report also determines the GASB Annual Required Contribution (ARC). This is the contribution required to fund the normal cost and to amortize the UAAL as a level percent of pay over 30 years. This amount is 18.19% of salary as shown in Table 1, compared to 15.68% last year. Our projections show that the ARC is expected to increase over the next decade before starting to decrease.

SECTION D

ANALYSIS OF CHANGES

ANALYSIS OF CHANGES

UAAL

Table 12a shows an analysis of the change in the UAAL. The UAAL, which was $7,602.5 million last year, has increased to $9,090.1 million this year.

The increase in the UAAL was primarily due the assumption change for the current year. Increasing the assumed future ad hoc cost of living adjustments from 1% to 2% per year increased the UAAL by $1,406.0 million. Despite the loss on the market value of assets in FY 2008, the System had a gain on the actuarial value of assets (AVA) of $117.7 million, due to the phase in of previously deferred gains. There was a $30.5 million liability loss related to deviation from our assumptions. This loss excludes the effect of the COLA assumption and the adoption of the2% ad hoc COLA. There was a $67.3 million loss due 2% ad hoc COLA. (This figure is the additional liability produced, in excess of the assumed 1% COLA.)

The rest of the change in the UAAL since the last valuation is due to the negative amortization that occurs because statutory contributions are not sufficient to reduce the UAAL.

Funding Period

The funding period (the period required to amortize the UAAL) increased from 21.6 years to 54.4 years. This was primarily due the assumption change for the current year that increased the future ad hoc cost of living adjustment from 1% to 2% per year

The funding period shown on Table 1, and the projection of the UAAL shown on Table 13, are based upon a deterministic projection that takes into account future increases in employer contribution rates and the phase in of the difference between the actuarial and market values of assets. This projection assumes: (a) future market earnings, net of expenses, will equal 8.00% per year, (b) there will be no liability gains/losses or changes in assumptions, (c) the number of active members will remain unchanged, (d) active members who leave employment will be replaced by new entrants each year, (e) the State's contribution for FY 2009 will be $268 million as projected by the Office of State Finance (OSF), and (f) future state revenues will increase at 3.5% per year, except that, due to changes in the State's income tax, increases will only be 2.25% until FY 2010.

SECTION E
SYSTEM ASSETS

SYSTEM ASSETS

This report contains several tables that summarize key information with respect to the System's assets. Assets are reported at market value as required under GASB 25.

Table 6a summarizes the assets held by class. The total market value of assets decreased from $9.293 billion to $8.634 billion. This excludes the value of the Teachers' Deposit Fund, which is subtracted from the assets in determining actuarial liabilities and costs. (The Teachers' Deposit Fund is the fund that holds the 403(b) plan assets.) Table 6b shows a comparison of the distribution of assets by category at the current and prior valuation dates. Equity investments decreased from 68% to about 64% of total invested assets.

Table 7 reconciles the changes in the fund during the year. Employer contributions increased from $271.0 million to $308.8 million, in part due to the increase in the contribution rate paid by the employers. The contribution rate for the EESIP employers increased from 7.60% to 7.85% effective July 1, 2007 and to 8.35% effective Jan. 1, 2008. The contribution rate for non-EESIP employers increased from 7.05% to 7.55% effective Jan. 1, 2008. The State's contribution increased from $243.5 million to $266.8 million, reflecting (a) the increase in state tax revenues, and (b) the fact that the System received 5.00% of these revenues in FY 2008, compared to 4.50% in FY 2007. Active member contributions increased slightly from $285.4 million to $286.7 million, including state credits for contributions.

Table 8 shows the development of the actuarial value of assets. Rather than use the System's market value of assets, the valuation reflects a smoothed asset value. This actuarial value is calculated using a five-year average of the difference between expected and actual earnings. The actuarial value is 107.2% of market.

Table 9a provides a calculation of the estimated investment return for the year. As shown, the approximate investment return for FY 2008 is -7.5% when measured on market value, and 9.4% when measured on actuarial value. Table 9b shows a history of return rates since FY 1990. The plan's ten-year average market return, net of investment expenses, is 6.6%.

Table 10 shows an external cash flow history. External cash flow is a positive 0.4% of assets this year. Table 11a shows the development of the asset gain of $117.7 million. The actuarial value of assets does not recognize $623 million in deferred investment losses. These deferred losses will be recognized over the next four years, if not used to offset future asset gains.

SECTION F

BENEFIT AND CONTRIBUTION PROVISIONS

BENEFIT AND CONTRIBUTION PROVISIONS

Appendix I provides a summary of benefit and contribution provisions of the System, while Appendix II is a historical summary of legislative changes.

The only material change to benefit provisions since the prior valuation was the enactment of a 2% ad hoc COLA for retirees retired prior to July 1, 2007, effective in July 2008. This change increased the current UAAL by $67.3 million. (The actuarial present value of the benefits due to the ad hoc COLA was $134.7 million, but half of this was already anticipated by the assumption that future ad hoc COLAs would average 1% per year, so the net impact of the legislation was to increase the UAAL this year by $67.3 million.)

SECTION G

GASB 25 DISCLOSURE

GASB 25 DISCLOSURE

This report includes three tables—Tables 4a, 4b and 4c—showing information required to be reported under GASB 25.

Table 4a shows a history of funding progress. The funded ratio decreased from 52.6% at June 30, 2007 to 50.5% currently. The decrease in the funded ratio at June 30, 2008 occurred primarily due to the change in our assumption as to future ad hoc COLAs.

Table 4b shows the Annual Required Contribution (ARC) as computed under GASB 25, and it shows what percent of this amount was actually received. The ARC is computed as the normal cost plus a 30-year level percent-of-payroll amortization of the UAAL. The 30-year period is re-determined each year (i.e., this is an "open amortization period"). The actual contributions that are compared with the ARC were the contributions received from employers, plus federal matching funds, plus the state's contribution. For FY 2008, the System received 101.1% of its ARC. However, we expect the actual future contributions, made per the statutes, to drop back below 100% of the ARC, because of the increase in the ARC occasioned by the change to a 2% ad hoc COLA assumption.

In interpreting these schedules, keep in mind that a number of changes that impact comparability have occurred:

- The determination of the ARC was changed from a 40-year level-dollar amortization of the UAAL to a 30-year level-percent of payroll quantity, effective for FY 2006
- Plan benefit changes were made in most years. See Appendix II
- Assumptions were changed in 2000 and in 2005, following experience studies
- Other assumption changes were made in 2001, and in 2006 in connection with the EESIP.
- The assumption with regard to future ad hoc COLAs has been changed several times. No assumption was made prior to 2001. A 1% assumption was used in 2001 and 2002. No assumption was used in 2003, and a 1% assumption was reflected from 2004 to 2007. This assumption was increased to 2% this year.

Table 4c shows other information that must be included in the financial report.

SECTION H

ACTUARIAL ASSUMPTIONS AND METHODS

ACTUARIAL ASSUMPTIONS AND METHODS

Appendix III summarizes the actuarial assumptions used to determine the plan's liabilities and the actuarial methods used to determine the normal cost, UAAL and funding period.

In July, prior to the preparation of this report, the Board of Trustees voted to increase the assumption about future ad hoc cost-of-living increases from 1% to 2%. There were no other changes to the actuarial assumptions and methods for this year.

The change in the assumption about future ad hoc COLAs increased the plan's UAAL by just over $1.4 billion, and was the primary reason for the increase in the funding period and the decrease in the funded ratio.

SECTION I
MEMBERSHIP DATA

MEMBERSHIP DATA

Data on all members of the System, whether active, receiving a benefit, or entitled to a future benefit, was supplied by the System. See Item V of Appendix III for more information.

We did not verify the correctness of the data at the source, but we did perform various tests to ensure the internal consistency of the data and its overall reasonableness. In our review of this data we encountered a small number of records with missing or inconsistent information. We made adjustments to these records, but this did not materially impact the results shown.

Tables 5a and 5b show some key statistics for the various groups included, and Table 15 shows the distribution of active members by age and service.

There was a 0.6% increase in the number of active members since the previous valuation, and a 4.2% increase in the payroll for active members.

Membership has grown an average of 1.3% over the last five years, and by 1.0% over the last ten years. Payroll for covered members (without regard to the pay caps) has grown an average of 4.3% over the last five years, and it has grown at an average of 4.0% over the last ten years.

Over the last several years, the active group has slowly gotten older. As shown on Table 5b, the average active member is now 45.9 years old, the average age for the active group has increased 1.6 years during the last ten years. During the same period, the average tenure of members has increased 0.3 years.

SECTION J

PRESCRIBED ASSUMPTIONS FOR REPORTING PURPOSES

PRESCRIBED ASSUMPTIONS FOR REPORTING PURPOSES

During the 2002 legislative session, legislation was adopted that requires the Retirement Board to annually submit information on the System to the Oklahoma State Pension Commission based on the following prescribed set of assumptions.

Interest rate = 7.5%
Future ad hoc COLA assumption = 2.0%
Mortality = RP 2000 Generational Mortality Tables for active members, healthy annuitants, and disabled annuitants
Amortization Period = 30 years open period, level dollar payments

All contributions and revenues, including dedicated fee revenue and federal monies, must be reflected. All other assumptions, methodologies, and plan provisions used must be consistent with those used in the regular actuarial valuation.

We have presented this information as an addendum to this report in Appendix IV.

SECTION K
TABLES

TABLES

Development of Employer Cost

	June 30, 2008 (1)	June 30, 2007 (2)
1. Payroll		
a. Supplied by system	$ 3,751,436,376	$ 3,598,926,888
b. Adjusted for one year's pay increase	3,926,476,288	3,766,989,331
2. Present value of future pay (paid monthly)	$ 29,734,468,919	$ 28,625,597,268
3. Normal cost rate (payable monthly)		
a. Total normal cost rate	11.25%	10.52%
b. Less: member rate	(7.00%)	(7.00%)
c. Employer normal cost rate	4.25%	3.52%
4. Actuarial accrued liability for active members		
a. Present value of future benefits for active members	$ 12,402,320,069	$ 10,973,945,087
b. Less: present value of future employer normal costs (Item 3c * Item 2)	(1,263,714,929)	(1,007,621,024)
c. Less: present value of future member contributions	(2,081,412,824)	(2,003,791,809)
d. Actuarial accrued liability	$ 9,057,192,316	$ 7,962,532,254
5. Total actuarial accrued liability for:		
a. Retirees and beneficiaries	$ 8,919,572,410	$ 7,730,260,900
b. Inactive members	370,099,726	331,600,462
c. Active members (Item 4d)	9,057,192,316	7,962,532,254
d. Total	$ 18,346,864,452	$ 16,024,393,616
6. Actuarial value of assets	$ 9,256,786,936	$ 8,421,866,942
7. Unfunded actuarial accrued liability (UAAL) (Item 5d - Item 6)	$ 9,090,077,516	$ 7,602,526,674
8. Funding period based on statutory contribution rates	54.4 years	21.6 years
9. GASB 25 ARC		
a. Employer normal cost (Item 1b * 3c)	$ 166,875,242	$ 132,598,024
b. Level % 30-year amortization of UAAL (payable monthly)	547,492,316	457,897,628
c. Total	$ 714,367,558	$ 590,495,652
d. Contributions as percentage of payroll	18.19%	15.68%

Actuarial Present Value of Future Benefits

		June 30, 2008 (1)	June 30, 2007 (2)
1.	Active members		
	a. Service retirement benefits	$ 11,005,919,339	$ 9,659,766,185
	b. Deferred termination benefits	526,742,358	491,618,941
	c. Refunds	29,187,692	29,203,497
	d. Death benefits	207,201,059	186,709,472
	e. Disability retirement benefits	254,810,876	226,636,138
	f. Supplemental medical insurance	344,820,144	346,973,635
	g. $5,000 post-retirement death benefit	33,638,601	33,037,219
	h. Total	$ 12,402,320,069	$ 10,973,945,087
2.	Retired members		
	a. Service retirements	$ 7,990,530,539	$ 6,872,645,397
	b. Disability retirements	150,564,821	132,443,995
	c. Beneficiaries	261,621,315	226,494,181
	d. Supplemental medical insurance	439,818,068	424,662,044
	e. $5,000 post-retirement death benefit	77,037,667	74,015,283
	f. Total	$ 8,919,572,410	$ 7,730,260,900
3.	Inactive members		
	a. Vested terminations	$ 317,453,733	$ 285,381,471
	b. Nonvested terminations	25,114,016	24,373,611
	c. Suspense fund	27,531,977	21,845,380
	d. Total	$ 370,099,726	$ 331,600,462
4.	Total actuarial present value of future benefits	$ 21,691,992,205	$ 19,035,806,449

Analysis of Normal Cost

	June 30, 2008 (1)	June 30, 2007 (2)
1. Gross normal cost rate (payable monthly)		
a. Retirement benefits	8.31%	7.65%
b. Deferred termination benefits	1.36%	1.33%
c. Refunds	0.78%	0.78%
d. Supplemental medical insurance	0.28%	0.28%
e. $5,000 Post-retirement death benefits	0.04%	0.04%
f. Death Benefits	0.15%	0.14%
g. Disability retirement benefits	0.33%	0.30%
h. Total	11.25%	10.52%
2. Less: member rate	7.00%	7.00%
3. Employer normal cost rate	4.25%	3.52%

Schedule of Funding Progress
(As required by GASB #25)

Valuation Date	Actuarial Value of Assets (AVA)	Actuarial Accrued Liability (AAL)	Unfunded Actuarial Accrued Liability (UAAL) (3) - (2)	Funded Ratio (2)/(3)	Annual Covered Payroll	UAAL as % of Payroll (4)/(6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
June 30, 1995	$2,869.9	$7,480.4	$4,610.5	38.4%	$2,336.1	197.4%
June 30, 1996	$3,103.0	$7,843.2	$4,740.2	39.6%	$2,375.5	199.5%
June 30, 1997	$3,544.9	$8,257.2	$4,712.3	42.9%	$2,428.7	194.0%
June 30, 1998	$4,085.0	$8,891.3	$4,806.3	45.9%	$2,537.7	189.4%
June 30, 1999	$4,708.0	$9,458.6	$4,750.5	49.8%	$2,648.4	179.4%
June 30, 2000	$5,373.5	$10,009.2	$4,635.7	53.7%	$2,738.3	169.3%
June 30, 2001	$5,959.0	$11,591.1	$5,632.1	51.4%	$2,990.5	188.3%
June 30, 2002	$6,310.9	$12,275.9	$5,965.0	51.4%	$3,047.1	195.8%
June 30, 2003	$6,436.9	$11,925.2	$5,488.3	54.0%	$3,045.7	180.2%
June 30, 2004	$6,660.9	$14,080.1	$7,419.2	47.3%	$3,030.7	244.8%
June 30, 2005	$6,952.7	$14,052.4	$7,099.7	49.5%	$3,175.2	223.6%
June 30, 2006	$7,470.4	$15,143.4	$7,672.9	49.3%	$3,354.9	228.7%
June 30, 2007	$8,421.9	$16,024.4	$7,602.5	52.6%	$3,598.9	211.2%
June 30, 2008	$9,256.8	$18,346.9	$9,090.1	50.5%	$3,751.4	242.3%

Note : Dollar amounts in millions

Schedule of Employer Contributions
(As required by GASB #25)

Year Ending June 30,	Annual Required Contribution	Percentage Contributed
(1)	(2)	(3)
1996	$434,728,781	40.8%
1997	$446,459,961	62.0%
1998	$446,219,296	59.1%
1999	$456,864,002	53.5%
2000	$455,265,033	60.6%
2001	$451,463,258	72.7%
2002	$556,201,571	65.6%
2003	$585,168,488	61.9%
2004	$534,811,845	70.2%
2005	$722,095,783	56.2%
2006	$535,228,038	85.8%
2007	$575,745,142	93.1%
2008	$590,495,652	101.1%

Notes to Required Supplementary Information
(as required by GASB #25)

The information presented in the required supplementary schedules was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation follows:

Valuation date	June 30, 2008
Actuarial cost method	Entry Age Normal
Amortization method	Level percent of payroll, open period
Remaining amortization period	30 years
Asset valuation method	5-year smoothed market
Actuarial assumptions:	
Investment rate of return *	8.00%
Projected salary increase *	4.25% to 6.00%
* Includes inflation at:	3.00%
Cost of living adjustment	2.00%

Membership Data

		June 30, 2008 (1)	June 30, 2007 (2)
1.	Active members		
	a. Number	88,678	88,133
	b. Total payroll supplied by System	$ 3,751,436,376	$ 3,598,926,888
	c. Average salary	$ 42,304	$ 40,835
	d. Average age	45.9	45.8
	e. Average service	11.5	11.5
2.	Vested inactive members		
	a. Number	6,915	6,637
	b. Total annual deferred benefits	$ 51,446,164	$ 49,993,687
	c. Average annual deferred benefit	$ 7,440	$ 7,533
3.	Nonvested inactive members		
	a. Number	6,908	6,613
	b. Member contributions with interest due	$ 25,114,016	$ 24,373,611
	c. Average refund due	$ 3,635	$ 3,686
4.	Service retirees		
	a. Number	41,685	40,068
	b. Total annual benefits[1,2]	$ 747,336,202	$ 696,685,159
	c. Average annual benefit	$ 17,928	$ 17,388
5.	Special service retirees		
	a. Number	63	91
	b. Total annual benefits[1,2]	$ 146,762	$ 208,106
	c. Average annual benefit	$ 2,330	$ 2,287
6.	Disabled retirees		
	a. Number	1,513	1,471
	b. Total annual benefits[1,2]	$ 16,606,561	$ 15,770,285
	c. Average annual benefit	$ 10,976	$ 10,721
7.	Beneficiaries and spouses		
	a. Number	1,977	1,876
	b. Total annual benefits[1,2]	$ 29,045,325	$ 26,691,199
	c. Average annual benefit	$ 14,692	$ 14,228

[1] Benefit amounts exclude the supplemental medical insurance payment.

[2] Benefit amounts for 2008 include 2.00% COLA effective July 1, 2008

Historical Summary of Active Member Data

	Active Members		Covered Payroll		Average Salary			
Valuation as of June 30,	Number	Percent Increase	Amount in $ Millions	Percent Increase	$ Amount	Percent Increase	Average Age	Average Service
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1990	69,062	2.0%	1,745	8.4%	25,265	5.0%	43.1	10.5
1991	71,936	4.2%	1,921	10.1%	26,709	5.7%	43.1	10.5
1992	73,568	2.3%	2,002	4.2%	27,218	1.9%	43.3	10.6
1993	75,599	2.8%	2,122	6.0%	28,069	3.1%	43.4	10.7
1994	76,280	0.9%	2,190	3.2%	28,704	2.3%	43.6	10.8
1995	79,044	3.6%	2,336	6.7%	29,555	3.0%	43.6	10.7
1996	78,942	(0.1%)	2,375	1.7%	30,091	1.8%	44.0	11.1
1997	79,510	0.7%	2,429	2.3%	30,546	1.5%	44.2	11.2
1998	80,578	1.3%	2,538	4.5%	31,493	3.1%	44.3	11.2
1999	81,851	1.6%	2,648	4.3%	32,356	2.7%	44.4	11.2
2000	83,024	1.4%	2,738	3.4%	32,982	1.9%	44.5	11.0
2001	84,387	1.6%	2,991	9.2%	35,438	7.4%	44.7	11.0
2002	85,366	1.2%	3,047	1.9%	35,695	0.7%	44.9	11.1
2003	83,127	(2.6%)	3,046	(0.0%)	36,639	2.6%	45.3	11.5
2004	81,683	(1.7%)	3,031	(0.5%)	37,104	1.3%	45.6	11.8
2005	84,286	3.2%	3,175	4.8%	37,671	1.5%	45.6	11.6
2006	87,194	3.5%	3,355	5.7%	38,476	2.1%	45.7	11.6
2007	88,133	1.1%	3,599	7.3%	40,835	6.1%	45.8	11.5
2008	88,678	0.6%	3,751	4.2%	42,304	3.6%	45.9	11.5

Plan Net Assets
(Assets at Market or Fair Value)

Item	Valuation as of June 30, 2008	Valuation as of June 30, 2007
(1)	(2)	(3)
1. Cash and cash equivalents	$ 2,124,625	$ 4,771,218
2. Receivables		
a. Employer and member contributions	$ 54,776,735	$ 45,465,506
b. State contribution	28,969,735	25,074,415
c. Net investment income and other accruals	33,221,531	28,251,274
d. Total receivables	$ 116,968,001	$ 98,791,195
3. Investments		
a. Invested cash and other	$ 441,182,511	$ 480,385,331
b. Domestic equities	4,381,924,106	5,052,869,614
c. International equities	1,472,723,735	1,640,103,192
d. Fixed income	2,819,869,159	2,679,194,330
e. Real estate, furniture & equipment	247,186	262,461
f. Total investments	$ 9,115,946,697	$ 9,852,814,928
4. Total assets	$ 9,235,039,323	$ 9,956,377,341
5. Liabilities		
a. Benefits payable, including insurance payments	$ 67,389,081	$ 16,768,162
b. Net due to brokers	213,584,916	279,245,962
c. Other liabilities	8,206,044	9,321,354
d. Total liabilities	$ 289,180,041	$ 305,335,478
6. Net assets available (Item 4 - Item 5)	$ 8,945,859,282	$ 9,651,041,863
7. Less: Teachers' Deposit Fund	(312,159,587)	(357,840,841)
8. Net assets available for OTRS benefits	$ 8,633,699,695	$ 9,293,201,022

Distribution of Assets at Market Value
(Percentage of Total Investments)

		Valuation as of	
	Item	June 30, 2008	June 30, 2007
	(1)	(2)	(3)
a.	Invested cash and other	4.8%	4.9%
b.	Domestic equities	48.1%	51.3%
c.	International equities	16.2%	16.6%
d.	Fixed income	30.9%	27.2%
e.	Real estate, furniture & equipment	0.0%	0.0%
f	Total investments	100.0%	100.0%

Reconciliation of Plan Net Assets

	Year Ending June 30, 2008 (1)	Year Ending June 30, 2007 (2)
1. Market value of assets at beginning of year, net of Teachers' Deposit Fund	$ 9,293,201,022	$ 7,858,937,186
2. Revenue for the year		
a. Contributions		
i. Member contributions, including state credit	$ 286,738,943	$ 285,408,749
ii. Federal matching funds	21,274,957	21,402,183
iii. State contribution	266,761,597	243,501,987
iv. Employer/district contributions	308,804,479	271,012,403
v. Total	$ 883,579,976	$ 821,325,322
b. Net investment earnings		
i. Interest, dividends and other income	$ 269,601,388	$ 236,385,329
ii. Net appreciation/(depreciation)	(959,036,578)	1,269,034,289
iii. Less: investment expenses	(32,992,027)	(30,790,763)
iv. Less: transfers to Teachers' Deposit Fund	25,932,253	(56,098,820)
v. Net investment earnings	$ (696,494,964)	$ 1,418,530,035
c. Total revenue	$ 187,085,012	$ 2,239,855,357
3. Expenditures for the year		
a. Refunds	35,254,496	$ 33,829,653
b. Benefit payments, including insurance payments	806,540,725	767,212,709
c. Administrative expenses	4,791,118	4,549,159
d. Total expenditures	846,586,339	$ 805,591,521
4. Increase in net assets (Item 2 - Item 3)	$ (659,501,327)	$ 1,434,263,836
5. Market value of assets at end of year, net of Teachers' Deposit Fund (Item 1 + Item 4)	$ 8,633,699,695	$ 9,293,201,022

Development of Actuarial Value of Assets

				Year Ending June 30, 2008
1. Market value of assets at beginning of year				$ 9,293,201,022
2. Net new investments				
a. Contributions				$ 883,579,976
b. Benefits paid				(806,540,725)
c. Refunds				(35,254,496)
d. Subtotal				41,784,755
3. Market value of assets at end of year				$ 8,633,699,695
4. Net earnings (3-1-2)				$ (701,286,082)
5. Assumed investment return rate				8.00%
6. Expected return				$ 745,127,472
7. Excess return (4-6)				$ (1,446,413,554)
8. Excess return on assets for last four years :				
	Period End	Excess Return (2)	Percent Deferred (3)	Deferred Amount (4)
a.	June 30, 2005	129,636,869	20%	$ 25,927,374
b.	June 30, 2006	93,608,695	40%	37,443,478
c.	June 30, 2007	784,454,583	60%	470,672,750
d.	June 30, 2008	(1,446,413,554)	80%	(1,157,130,843)
				$ (623,087,241)
9. Actuarial value of assets (Item 3 - Item 8)				$ 9,256,786,936
10. Actuarial value as percentage of market value				107.2%

Estimation of Yields

	Year Ending June 30, 2008 (1)	Year Ending June 30, 2007 (2)
A. Market value yield		
1. Beginning of year market assets	$ 9,293,201,022	$ 7,858,937,186
2. Net investment income (including realized and unrealized gains and losses)	$ (696,494,964)	$ 1,418,530,035
3. End of year market assets	$ 8,633,699,695	$ 9,293,201,022
4. Estimated dollar weighted market value yield	-7.5%	18.0%
B. Actuarial value yield		
1. Beginning of year actuarial assets	$ 8,421,866,942	$ 7,470,433,915
2. Actuarial return	$ 793,135,239	$ 931,150,067
3. End of year actuarial assets	$ 9,256,786,936	$ 8,421,866,942
4. Estimated actuarial value yield	9.4%	12.4%

History of Investment Return Rates

Year Ending June 30 of (1)	Market (2)	Actuarial (3)
1990	9.7%	10.4%
1991	9.7%	9.0%
1992	13.7%	12.0%
1993	13.5%	12.7%
1994	2.0%	6.5%
1995	14.9%	11.2%
1996	14.6%	11.6%
1997	20.9%	13.5%
1998	21.4%	15.8%
1999	11.9%	17.1%
2000	10.5%	15.5%
2001	-2.3%	11.4%
2002	-5.4%	5.8%
2003	4.8%	2.9%
2004	20.2%	4.6%
2005	10.0%	5.7%
2006	9.4%	8.2%
2007	18.0%	12.4%
2008	-7.5%	9.4%
Average Returns		
Last Five Years:	9.6%	8.0%
Last Ten Years:	6.6%	9.2%
Last Fifteen Years:	9.2%	10.0%

Table 10

History of Cash Flow

Year Ending June 30, (1)	Contributions (2)	Distributions and Expenditures: Benefit Payments (3)	Refunds (4)	Administrative Expenses (5)	Total (6)	External Cash Flow for the Year[1] (7)	Market Value of Assets (8)	External Cash Flow as Percent of Market Value (9)
1999	435.0	(479.6)	(24.5)	(2.7)	(506.9)	(71.8)	5,387	(1.3%)
2000	471.8	(500.3)	(29.5)	(3.0)	(532.7)	(60.9)	5,890	(1.0%)
2001	544.8	(537.3)	(31.4)	(3.5)	(572.2)	(27.4)	5,732	(0.5%)
2002	591.5	(561.2)	(26.7)	(3.9)	(591.9)	(0.4)	5,418	(0.0%)
2003	582.5	(609.0)	(30.2)	(4.0)	(643.2)	(60.7)	5,614	(1.1%)
2004	608.4	(647.3)	(33.7)	(3.9)	(684.9)	(76.5)	6,666	(1.1%)
2005	640.8	(701.9)	(26.8)	(4.2)	(732.9)	(92.1)	7,238	(1.3%)
2006	708.4	(727.4)	(30.9)	(4.4)	(762.7)	(54.3)	7,859	(0.7%)
2007	821.3	(767.2)	(33.8)	(4.5)	(805.5)	15.8	9,293	0.2%
2008	883.6	(806.5)	(35.3)	(4.8)	(846.6)	37.0	8,634	0.4%

Dollar amounts in millions

[1] Column (7) = Column (2) + Column (6).

Investment Experience Gain or Loss

Item (1)	Year Ending June 30, 2008 (2)	Year Ending June 30, 2007 (3)
1. Actuarial assets, beginning of year	$ 8,421,866,942	$ 7,470,433,915
2. Contributions during year	$ 883,579,976	$ 821,325,322
3. Benefits and refunds paid	$ (841,795,221)	$ (801,042,362)
4. Assumed net investment income at 8%		
a. Beginning of year assets	$ 673,749,355	$ 597,634,713
b. Contributions	35,343,199	32,853,013
c. Benefits and refunds paid	(33,671,809)	(32,041,694)
d. Total	$ 675,420,745	$ 598,446,032
5. Expected actuarial assets, end of year (Sum of items 1 through 4)	$ 9,139,072,442	$ 8,089,162,907
6. Actual actuarial assets, end of year	$ 9,256,786,936	$ 8,421,866,942
7. Asset gain (loss) for year (Item 6 - Item 5)	$ 117,714,494	$ 332,704,035

Total Experience Gain or Loss

Item (1)	Year Ending June 30, 2008 (2)	Year Ending June 30, 2007 (3)
A. Calculation of total actuarial gain or loss		
1. Unfunded actuarial accrued liability (UAAL), previous year	$ 7,602,526,674	$ 7,672,923,905
2. Normal cost for the year (employer and employee)	$ 396,287,278	$ 364,799,297
3. Less: total contributions for the year	$ (883,579,976)	$ (821,325,322)
4. Interest at 8 %		
a. On UAAL	$ 608,202,134	$ 613,833,912
b. On normal cost	15,851,491	14,591,972
c. On contributions	(35,343,199)	(32,853,013)
d. Total	$ 588,710,426	$ 595,572,871
5. Expected UAAL (Sum of Items 1 - 4)	$ 7,703,944,402	$ 7,811,970,751
6. Actual UAAL	$ 9,090,077,516	$ 7,602,526,674
7. Total gain (loss) for the year (Item 5 - Item 6)	$ (1,386,133,114)	$ 209,444,077
B. Source of gains and losses		
8. Asset gain (loss) for the year	$ 117,714,494	$ 332,704,035
9. Liability gain (loss) for the year	(30,504,190)	(123,259,958)
10. 2% Ad-Hoc COLA	(67,332,566)	-
11. Increase in future ad hoc COLA assumption	(1,406,010,852)	-
12. Total	$ (1,386,133,114)	$ 209,444,077

Analysis of Change in Unfunded Actuarial Accrued Liability (UAAL)

Basis (1)	June 30, 2008 UAAL (in $ Millions) (2)	June 30, 2007 UAAL (in $ Millions) (3)
1. From prior valuation	$ 7,602.5	$ 7,672.9
2. Impact of changes, gains and losses		
a. Expected increase based on expected contributions and passage of time	130.2	222.5
b. Liability (gain)/loss	30.5	123.3
c. Asset (gain)/loss	(117.7)	(332.7)
d. Impact of actual ctrb (more)/less than expected under schedule	(28.8)	(83.4)
e. 2% Ad-Hoc COLA	67.3	0.0
f. Increase in future ad hoc COLA assumption	1,406.0	0.0
h. Total	1,487.5	(70.3)
3. Current UAAL (1+2h)	$ 9,090.1	$ 7,602.5

Columns may not total due to rounding

Analysis of Change in GASB ARC

Basis	June 30, 2008 GASB ARC (Percent of Pay)	June 30, 2007 GASB ARC (Percent of Pay)
(1)	(2)	(3)
1. Prior Valuation GASB 25 Contribution as a percentage of payroll	15.68%	16.60%
2. Increases/(Decreases) due to:		
a. Impact of 2% ad hoc COLA	0.10%	0.00%
b. Impact of changes in actuarial assumptions and methods	2.89%	0.00%
c. Asset (gain)/loss	-0.18%	-0.53%
d. All other plan experience: liability (gain) or loss, differences between actual and expected payroll, differences between actual and expected contributions, etc.	-0.29%	-0.40%
e. Total	2.52%	-0.93%
3. Current GASB 25 Contribution as a percentage of payroll	18.19%	15.68%

Projection of UAAL

Valuation Date	UAAL (Millions)
(1)	(2)
June 30, 2008	9,090.1
June 30, 2009	9,474.1
June 30, 2010	9,876.1
June 30, 2011	10,297.7
June 30, 2012	10,883.1
June 30, 2013	11,186.1
June 30, 2014	11,495.9
June 30, 2015	11,812.1
June 30, 2016	12,134.6
June 30, 2017	12,462.8
June 30, 2018	12,796.5
June 30, 2019	13,135.1
June 30, 2020	13,478.1
June 30, 2021	13,824.6
June 30, 2022	14,174.0
June 30, 2023	14,525.6
June 30, 2024	14,878.5
June 30, 2025	15,231.8
June 30, 2026	15,584.5
June 30, 2027	15,935.8
June 30, 2028	16,284.4
June 30, 2029	16,629.2
June 30, 2030	16,968.8
June 30, 2031	17,301.6
June 30, 2032	17,625.8
June 30, 2033	17,939.7
June 30, 2034	18,241.0
June 30, 2035	18,527.3
June 30, 2036	18,796.1
June 30, 2037	19,044.2

Solvency Test

Actuarial Accrued Liability and Percent of Active Member Payroll for:

	Accumulated Member Contributions Including Interest		Retirees and Beneficiaries Currently Receiving Benefits		Terminated Employees Not Yet Receiving Benefits		Employer Financed Portion of Vested and Nonvested Benefits			Portion of Accrued Liabilities Covered by Assets			
June 30,	(1)	% of Payroll	(2)	% of Payroll	(3)	% of Payroll	(4)	% of Payroll	Actuarial Value of Assets	(1)	(2)	(3)	(4)
1999	2,330.6	88%	4,415.0	167%	136.4	5%	2,576.5	97%	4,708.0	100%	54%	0%	0%
2000	2,518.2	92%	4,803.8	175%	151.1	6%	2,536.1	93%	5,373.5	100%	59%	0%	0%
2001	2,728.4	91%	5,459.6	183%	173.1	6%	3,230.0	108%	5,959.0	100%	59%	0%	0%
2002	2,934.3	96%	5,959.9	196%	184.9	6%	3,196.8	105%	6,310.9	100%	57%	0%	0%
2003	3,072.8	101%	5,894.0	194%	191.0	6%	2,767.4	91%	6,436.9	100%	57%	0%	0%
2004	3,212.9	106%	6,899.0	228%	284.7	9%	3,683.6	122%	6,660.9	100%	50%	0%	0%
2005	3,381.7	107%	7,046.5	222%	301.4	9%	3,322.9	105%	6,952.7	100%	51%	0%	0%
2006	3,853.7	115%	7,340.0	219%	314.3	9%	3,635.3	108%	7,470.4	100%	51%	0%	0%
2007	4,057.5	113%	7,730.3	215%	331.6	9%	3,905.0	109%	8,421.9	100%	56%	0%	0%
2008	4,323.0	115%	8,919.6	238%	370.1	10%	4,734.2	126%	9,256.8	100%	55%	0%	0%

Note : Dollar amounts in millions

Distribution of Active Members by Age and by Years of Service
As of 06/30/2008

	Years of Credited Service												
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	Total
Attained Age	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.
Under 25	262 $20,444	795 $29,661	216 $29,743	48 $24,890	13 $21,046	7 $30,691	0 $0	0 $0	0 $0	0 $0	0 $0	0 $0	1,341 $27,624
25-29	357 $21,213	1,724 $31,281	1,602 $33,535	1,496 $34,275	1,007 $35,462	859 $36,279	6 $36,190	0 $0	0 $0	0 $0	0 $0	0 $0	7,051 $33,129
30-34	321 $18,640	1,028 $31,519	1,011 $33,859	897 $34,926	891 $36,377	3,551 $39,413	648 $41,893	0 $0	0 $0	0 $0	0 $0	0 $0	8,347 $36,356
35-39	364 $17,544	933 $30,216	947 $33,230	900 $34,651	800 $36,764	2,998 $41,755	2,998 $44,267	724 $45,481	4 $42,951	0 $0	0 $0	0 $0	10,668 $39,149
40-44	281 $16,942	814 $29,723	826 $31,036	726 $32,914	648 $35,263	2,609 $41,276	1,979 $46,975	2,468 $47,902	581 $49,711	4 $41,067	0 $0	0 $0	10,936 $41,081
45-49	292 $16,834	784 $29,112	794 $30,893	695 $32,417	637 $33,139	2,738 $40,241	2,257 $44,293	2,135 $48,760	2,127 $50,825	874 $52,456	5 $47,194	0 $0	13,338 $42,311
50-54	218 $17,868	633 $30,684	582 $32,118	551 $34,092	528 $35,555	2,247 $39,620	2,204 $43,798	2,400 $47,014	1,803 $52,331	2,432 $54,744	795 $56,055	3 $100,552	14,396 $45,173
55-59	162 $16,045	435 $32,270	442 $34,886	376 $34,319	373 $35,448	1,745 $40,895	1,686 $44,111	2,164 $45,921	1,967 $50,509	1,397 $60,141	1,604 $59,191	477 $59,970	12,828 $47,568
60-64	87 $15,547	228 $29,711	197 $35,968	182 $30,477	213 $34,155	911 $41,773	964 $46,085	1,262 $46,648	1,074 $52,170	745 $59,888	665 $65,944	755 $68,815	7,283 $50,232
65 & Over	68 $13,565	131 $20,379	96 $24,713	91 $22,318	84 $26,614	338 $31,020	292 $41,465	380 $45,251	306 $49,192	211 $60,175	181 $73,044	312 $92,159	2,490 $48,090
Total	2,412 $18,136	7,505 $30,383	6,713 $32,710	5,962 $33,659	5,194 $35,286	18,003 $40,177	13,034 $44,533	11,533 $47,128	7,862 $51,125	5,663 $56,592	3,250 $60,559	1,547 $70,857	88,678 $42,304

APPENDICES

SUMMARY OF PLAN PROVISIONS

1. Effective Date: July 1, 1943.

2. Plan Year: Twelve-month period ending June 30th.

3. Administration: The System is administered by a Board of Trustees, which is responsible for administration of the System and investment of System assets. Three members serve ex officio, while a total of ten others are appointed by the Governor (six), the President of the Senate (two), and the Speaker of the House (two), according to various guidelines.

4. Type of Plan: The System is a qualified governmental defined benefit retirement plan. For GASB purposes, it is a cost-sharing multiple-employer PERS.

5. Eligibility: All employees of any public school in Oklahoma, including public colleges and universities, are eligible to participate in the System. Classified personnel (teachers, supervisors, principals, registered school nurses, administrators, etc.) are required to participate, beginning at their date of employment. Non-classified employees (all other employees, such as drivers, secretaries, janitors, cooks, etc.) may, but are not required to, participate. Certain other State employees, such as employees of the System itself, participate in the System. Beginning July 1, 2004, new employees hired by the comprehensive universities (Oklahoma University, the Health Sciences Center, and Oklahoma State University) may elect to join an alternate plan provided by the universities in lieu of joining OTRS. The election to join the alternate plan is irrevocable.

6. Maximum Pay: Prior to July 1, 1995, contributions under this system were based on pay up to a maximum dollar amount. Members could choose between a $40,000 maximum and a $25,000 maximum. The member's Final Average Compensation was limited by this same maximum, so the member's election affected both benefits and contributions.

   The maximum was removed for most members effective July 1, 1995. It no longer applies in determining the required member and employer contributions. It does still have an impact, however. As noted below, benefits based on service earned before July 1, 1995 are limited by the $40,000 or $25,000 maximum, whichever was elected. This cap may be modified for members in the Education Employees Service Incentive Plan (EESIP). See item 22 below discussing the EESIP provisions.

   In addition, the cap on salary continued to apply after June 30, 1995 to members employed by one of the comprehensive universities who entered the system before

July 1, 1995. The cap on salary for contribution purposes is shown in the schedule below. All caps were removed effective July 1, 2007.

	Elected $40,000 Maximum	Elected $25,000 Maximum
1995/1996	$44,000	$27,500
1996/1997	49,000	32,500
1997/1998	54,000	37,500
1998/1999	59,000	42,500
1999/2000	59,000	42,500
2000/2001	64,000	47,500
2001/2002	69,000	52,500
2002/2003	74,000	57,500
2003/2004	79,000	62,500
2004/2005	84,000	67,500
2005/2006	89,000	72,500
2006/2007	94,000	77,500
Thereafter	No limit	No limit

Benefits for the members employed by the comprehensive universities, except for those hired on or after July 1, 1995, are limited by the pay caps for the period before July 1, 2007.

7. <u>Member Contributions</u>: Generally, active members contribute 7.00% of all compensation to the System. A school district may pay all or part of the contribution for its employees.

8. <u>Employer Contributions</u>: Employers are required to contribute a fixed percentage of pay on behalf of active members. The employer contribution rate is now applied to all pay, although historically the rate was not applied to pay above the cap on salary.

   The employer contribution rate for years from July 1, 2002 through December 31, 2006 was 7.05% of covered salary. Effective Jan. 1, 2007, the employer contribution rate paid by all employers covered by the EESIP increased to 7.60%. This rate then increases to 7.85% effective July 1, 2007, 8.35% effective Jan. 1, 2008, 8.50% effective July 1, 2008 9.00% effective Jan. 1, 2009, and 9.50% effective Jan. 1, 2010. For employers not covered by the EESIP—the comprehensive and regional four-year universities—the rate increases to 7.55% effective Jan. 1, 2008, 8.05% effective Jan. 1, 2009, and 8.55% effective Jan. 1, 2010.

   In addition, the State of Oklahoma contributes 5.00% percent of revenues from sales taxes, use taxes, corporate income taxes and individual income taxes. The 5.00% rate became effective on July 1, 2007. The rates applied before July 1, 2007 are shown in the following schedule.

Fiscal Year	**Contribution Percentage**
FY 2003	3.54%
FY 2004	3.54%
FY 2005	3.75%
FY 2006	4.00%
FY 2007	4.50%
FY 2008	5.00%

Beginning in FY 2006, the State also contributes 5.0 % of lottery proceeds.

If a member's salary is paid from federal funds or certain grant money, an additional contribution (the federal matching contribution) is required. The federal contribution rate is set by the Board of Trustees annually, and is intended to approximate the state's contribution, expressed as a percentage of non federal/grant salaries.

9. <u>Service</u>: Employees receive credit for a year of service if they are contributing members for at least six months within one school year. Credit may also be granted for service prior to the System's effective date, and non-classified employees can purchase credit for their prior service once they have joined the System. Credit is also available for some out-of-state and military service under certain circumstances. Finally, members receive a year of service credit if they have accumulated 120 days of unused sick leave at termination.

10. <u>Final Average Compensation (FAC)</u>: The average of the member's compensation for the three or five years on which the highest contributions are paid. For persons becoming members before July 1, 1992, the averaging period is three years. For other members, the averaging period is five years. For service prior to July 1, 1995, the FAC is limited to $40,000 or $25,000, depending on the member's election and participation in the EESIP as discussed in Item 6 above and in Item 22 below.

11. <u>Normal Retirement</u>

    a. <u>Eligibility</u>: A member is eligible to retire and receive a Normal Retirement benefit if (i) the member is at least age 62 and has credit for 5 or more years of service, or (ii) the sum of the member's age and service is at least 80 (Rule of 80). (For members joining after June 30, 1992, a "Rule of 90" is used instead of the "Rule of 80".)

    b. <u>Monthly Benefit</u>: 2% of FAC (limited to $40,000 or $25,000, as appropriate) times years of service prior to July 1, 1995, plus 2% of FAC (unlimited) times years of service after June 30, 1995. Special provisions apply to members covered by the EESIP (see Item 22 below.) Other special provisions apply to higher education members for service during the period July 1, 1995 through June 30, 2007 if their pay in any year in this period exceeded the applicable maximum. Monthly benefits are equal to one-twelfth of the calculated amount.

c. Payment Form: Benefits are paid as a monthly life annuity, with a guarantee that if the payments made do not exceed the member's accumulated contributions, determined as of the date of retirement, the balance will be paid in a lump-sum to the member's beneficiary. Optional forms of payment are available; see below.

12. Early Retirement

a. Eligibility: A member may retire early after reaching age 55 with credit for five years of service, or at any age after 30 years of service.

b. Monthly Benefit: The normal retirement benefit (based on current years of service) multiplied by the early retirement factor below.

c. Early Retirement Factor:

Retirement	Factor
62 or later	1.0000
61	.9333
60	.8666
59	.8000
58	.7523
57	.7038
56	.6595
55	.6189
54	.5817
53	.5474
52	.5159
51	.4868
50	.4598
49	.4349
48	.4117
47	.3902

d. Payment Form: Same as for Normal Retirement above.

13. Disability Retirement

a. Eligibility: A member is eligible provided (i) he/she has credit for at least 10 years of service and (ii) the disability is approved by the Medical Board appointed by the Board of Trustees.

b. Monthly Benefit: Same as for Normal Retirement above (based on current service).

c. Payment Form: The disability benefit commences immediately upon the member's retirement. Benefits are reduced or cease entirely upon recovery or reemployment prior to age 60. Disability benefits are payable as a monthly life annuity, with a guarantee that if the payments made do not exceed the sum of the member's accumulated contributions as of the date of retirement, the balance will be paid in a lump-sum to the member's beneficiary. A married, disabled member may elect a reduced benefit under the Joint & 100% Survivor option (with pop up) form of payments (Option 2 described in item 17 below). The reduction factor is determined using a disabled-life mortality table for the retiree.

14. Vested Termination Benefit

a. Eligibility: A member with at least 5 years of service who does not withdraw his/her contributions from the fund is eligible for a vested termination benefit.

b. Monthly Benefit: Same as for Normal Retirement above (based on current service). If benefits commence prior to age 62, they may be reduced as for Early Retirement above.

c. Payment Form: Benefits commence at age 62, or optionally as early as age 55. The form of payment is the same as for Normal Retirement above.

15. Withdrawal (Refund) Benefit

a. Eligibility: All members leaving covered employment with less than 5 years of service for a reason other than the member's death. Optionally, members eligible for other benefits may withdraw their contributions in lieu of the regular benefits due.

b. Benefit: The member who withdraws receives a lump-sum payment of his/her employee contributions, plus a portion of the interest credited by the System on these contributions. Interest is credited at an annual rate of 8%. The portion of the interest paid on termination depends on the member's years of service as follows:

Years of Service	Percent of Interest Refunded
0-15	50%
16-21	60%
22-25	75%
26 or more	90%

16. Death in Service

a. Eligibility: Death must have occurred while an active member

b. Benefit: Upon the death of an active member, a refund of the member's contributions and 100% of the interest credited is paid. In addition, a lump sum of $18,000 will be paid. If the member is eligible for retirement (early or normal) at the time of death, and the member is married, the spouse may elect to receive a monthly life annuity equal to the retirement benefit for which the member was eligible, reduced as though the member had elected to receive benefits under Option 2 (see below). This annuity is paid in lieu of both (i) the $18,000 lump-sum death benefit and (ii) the refund of contributions.

The spouse of an EESIP eligible member can elect to receive the enhanced benefit described under Item 22 below.

17. Optional Forms of Payment: There are optional forms of payment available on an actuarially equivalent basis, as follows:

a. Option 1 - A life annuity with a guaranteed refund of the member's contributions and interest, less a monthly adjustment for benefits paid.

b. Option 2 - A joint life annuity payable while both the member and the joint annuitant are alive; and if the member dies before the joint annuitant, continuing without change to the joint annuitant; or if the joint annuitant dies before the member, "popping-up" to the original life annuity amount and continuing for the life of the member.

c. Option 3 - A joint life annuity payable while both the member and the joint annuitant are alive; and if the member dies before the joint annuitant, continuing at 50% of this amount for the joint annuitant's lifetime; or if the joint annuitant dies before the member, "popping-up" to the original life annuity amount and continuing for the life of the member.

d. Option 4 - A life annuity with a guarantee that if the member dies before 120 payments (10 years) have been made; the payments will be continued to the member's beneficiary for the balance of the ten-year period.

e. Option 5 - A partial lump-sum option (PLSO) would be allowed for those members with at least 30 years of service upon retirement. The amount of the PLSO would be equal to 12, 24, or 36 times the member's monthly retirement benefit, determined before applying any reduction for the PLSO or any other optional form of payment. A member who elects to receive a PLSO will have his/her monthly retirement benefit reduced on an actuarial basis to compensate for the fact that a PLSO is provided. A member who elects a PLSO may elect any of the other optional forms of payment as well, taking a further reduction in the annuity amount.

Actuarial equivalence is based on tables adopted by the Board of Trustees.

18. Special Retirees: This is a group of retirees who have been granted a special $150 per month benefit although they did not fulfill the requirements for service retirement. With cost of living increases, the special retirees now average $194 per month.

19. Supplemental Medical Insurance

a. Eligibility: All retired members (including service retirees and disabled retirees but excluding the special retirees and spouses or beneficiaries) who have at least 10 years of service credit are eligible for a supplemental medical insurance payment.

b. Monthly Benefit: Eligible members receive the smaller of (i) a Medicare supplement benefit, if eligible, or (ii) an amount between $100 and $105 per month, depending on service and Final Average Compensation.

c. Payment Form: Benefits are payable as a life annuity on behalf of the retired member to (i) the Oklahoma Employees' Group Insurance plan, if the member has health coverage under this plan, or (ii) to the member's former employer, if the member retains health coverage under a plan maintained by the former employer.

20. Post-retirement Death Benefit

a. Eligibility: All retired members (including service retirees and disabled retirees but excluding the special retirees and spouses or beneficiaries) are eligible for a post-retirement death benefit.

b. Benefit: A lump-sum payment of $5,000.

21. Cost-of-living Increase: From time to time, the System has been amended to grant certain post-retirement benefit increases. However, the System has no automatic cost-of-living increase features.

22. EESIP: The Education Employees Service Incentive Plan (EESIP) was created in 2006. Active members are eligible for the EESIP if they have service prior to July 1, 1995, are active on or after July 1, 2006, and are not employed by one of the comprehensive or regional four-year universities.

The EESIP allows for two years of service prior to July 1, 1995 to be computed at an enhanced or eliminated cap for each year that the employee has worked beyond Normal Retirement Age at the time of retirement.

For each "uncapped" year, the $40,000 cap applicable to service before July 1, 1995 is increased to $60,000 for retirements in FY 2007, to $80,000 for retirements in FY

2008, and the cap is removed beginning July 1, 2008. The employee that elects the enhanced benefit must pay the accumulations, at 10% interest, of contributions that would have been required but for the cap then in place. Payment is required only for years FY 1988 through FY 1995 even if more than 8 years of service prior to July 1, 1995 are being "uncapped." Payment is required only for those years of service that are computed at an elevated or eliminated cap.

Contributions are required at the following rates for salary in excess of the $25,000 or $40,000 cap earned in years FY 1998 through FY 1995:

Fiscal Year	Contribution Percentage
FY 1995	8.00%
FY 1994	9.00%
FY 1993	11.00%
FY 1992	11.00%
FY 1991	11.00%
FY 1990	10.50%
FY 1989	10.00%
FY 1988	10.00%

For those members electing the enhanced benefit, the payment required is 50% of the accumulated balance in FY 2007, 75% of the accumulated balance in FY 2008 and 100% of the accumulated balance on or after FY 2009.

HISTORY OF MAJOR LEGISLATIVE CHANGES

A. *1990 Legislative Session*

1. An ad hoc benefit increase was granted to retirees and beneficiaries who had been receiving benefits for at least one year. Special retirees were not granted this increase. The increase was determined by adding an amount to the Final Average Compensation for the member, and then re-determining the benefit due. For classified members, the amount added was $950, while for non-classified members, the amount added was $475. In all cases, Final Average Compensation was capped at $40,000.

2. The local employer contribution rate was increased from 1.0% of covered compensation in accordance with the following schedule:

Year Beginning July 1	Local Employer Contribution Rate
(1)	(2)
1990	1.0%
1991	1.5%
1992	2.0%
1993	2.5%

B. *1991 Legislative Session*

No changes.

C. *1992 Legislative Session*

SB 568 made the following changes:

- Increased employer rates (grading from 7% for 1992/1993 to 18% for 2004/2005) and changed State contributions to offset for employer contributions.
- Eliminated the salary cap effective July 1, 1995.
- Changed the member contribution rate to 7% (after July 1, 1997, phased in prior to that date).
- Changed the FAC averaging period to five years for new members.
- Eliminated the $18,000 death benefit (and the optional survivor annuity) for new members.

- Changed the formula to cap FAC with the member's pay cap for service prior to July 1, 1995.

- Changed the Rule of 80 to the Rule of 90 for new members.

D. 1993 Legislative Session

SB 535 set forth a schedule which reduces the maximum payment for supplemental medical insurance from $75/month to an amount between $70 and $75 per month, depending on service and Final Average Compensation.

E. 1994 Legislative Session

1. HB 2228 provided for an ad hoc COLA payable to members receiving benefits. The average increase is about 2.5%.

2. SB 768 changed the System's joint options to "pop-up" options. This change was and to $48,000 and $30,000 for 1996-97. The member contribution rate for these made for both current and future retirees. Under a pop-up option, if the joint annuitant predeceases the member, the member's benefit is increased to the amount it would have been if the member had elected a life only annuity.

3. SB 767 provided for the transfers of service credit between this System and the Oklahoma Public Employees Retirement System.

4. SB 615 provides that the local employer's contribution rate shall not be less than the local employer's contribution rate for the prior year.

F. 1995 Legislative Session

SB 527 modified the provisions affecting members employed in higher education who became members prior to July 1, 1995. For these members, the $40,000 and $25,000 pay caps were left in place for two additional years, but were indexed to $44,000 and $27,500 for 1995-96 members was set to 6.0% for 1995-96 and 6.5% for 1996-97. The benefit provisions were also modified so that only pay up to the maximum would be recognized for these years. After June 30, 1997, these members will contribute 7% of total pay like all other members. In addition, SB 527 modified the SB 568 employer contribution rate schedule. The new employer rates are 50 basis points lower in each year until the rate reaches 18.00%.

G. *1996 Legislative Session*

SB 832 modified the provisions relating to (i) member contributions, (ii) maximum compensation, and (iii) the benefit formula, for members employed in higher education. Beginning July 1, 1995, all members will contribute on all pay, except for members employed by a comprehensive university who became a member before July 1, 1995, whose recognized compensation is limited to

	For members who elected the $25,000 limit prior to June 30, 1995	For all other members
1996-97	$32,500	$49,000
1997-98	37,500	54,000
1998-99	42,500	59,000
1999-00	47,500	64,000
2000-01	52,500	69,000
thereafter	no limit	no limit

Employer contributions will be based on the same compensation as member contributions. In 1996-98, member contributions will be 6.5% of pay up to $25,000 plus 7% of pay in excess of $25,000, up to the maximum recognized compensation. The benefit formula was also adjusted so that for service earned between July 1, 1995 and June 30, 2001, members in higher education have their benefits adjusted for the compensation limits.

H. *1997 Legislative Session*

The post-retirement death benefit was increased from $4,000 to $5,000.

I. *1998 Legislative Session*

1. An ad hoc benefit increase was granted to retirees and beneficiaries who had been receiving benefits for at least one year. The increase was determined by adding an amount to the Final Average Compensation for the member, and then redetermining the benefit due. For classified members, the amount added was $1,400, while for non-classified members, the amount added was $700. Special retirees received a 5.4% increase.

2. The funding mechanism was changed, eliminating the state's contribution of 78% of its Gross Production Tax receipts after the 1999 fiscal year and substituting a contribution based on a percentage of general revenue available for appropriation (95% of general revenue). The percentage is 3.25% for the fiscal year ending June 30, 2000, and 3.50% thereafter. The local employer's contribution rates were revised for years after the 1999 fiscal year as follows:

Year	Employer Rate
1999/2000	4.80%
2000/2001	5.80%
2001/2002	6.80%
Thereafter	7.05%

J. 1999 Legislative Session

1. The pay caps applicable to certain members employed by one of the comprehensive universities were extended to FY 2007. The cap in effect for FY 1999 was left unchanged for FY 2000, and then will be increased $5,000 each year thereafter. This change affects both contributions and benefit calculations for these members.

2. The state's funding mechanism was changed again. Now the state's annual contribution will be 3.54% of certain specified sales and income tax revenues. This amount is subject to a $136.0 million maximum contribution for FY 2000 only.

K. 2000 Legislative Session

1. An ad hoc benefit increase was granted to retirees and beneficiaries who had been receiving benefits for at least one year. The increase was determined by adding an amount to the Final Average Compensation for the member, and then redetermining the benefit due. For classified members, the amount added was $500, while for non-classified members, the amount added was $250. Special retirees received a 1.8% increase.

2. SB 994 set forth a schedule which increases the maximum payment for supplemental medical insurance by $30/month from an amount between $70 and $75 per month to an amount between $100 and $105 per month, depending on service and Final Average Compensation.

L. 2001 Legislative Session

No changes.

M. 2002 Legislative Session

1. An ad hoc benefit increase was granted to retirees and beneficiaries, beginning July 1, 2002, if they had been receiving benefits for at least one year. Retirees were given a 3% increase if they had less than 30 years of credited service and a 4% increase if they had 30 or more years of credited service. Special retirees received a 3% increase.

2. The State's contribution is equal to a percentage of the State's revenue from certain sales and income taxes. The percentage is currently 3.54%, but a bill was passed to increase the percentage over the next five years to 5.00%, according to this schedule.

FY 2003	3.54%
FY 2004	3.54%
FY 2005	3.75%
FY 2006	4.00%
FY 2007	4.50%
FY 2008	5.00%

N. 2003 Legislative Session

1. The service requirement for vesting was changed from ten years to five years. Under this provision, a member is now able to retire with an unreduced retirement benefit after reaching age 62 with credit for 5 or more years of service. A member who has reached age 55, but not age 62, with at least 5 years of service, is able to retire and receive a reduced retirement benefit. A member who has terminated before being eligible to retire, but who has at least 5 years of service, may elect a deferred retirement benefit in lieu of a refund. However, members must still have credit for at least 10 years of service in order to be eligible for a disability benefit or the medical insurance premium supplement.

2. Refunds for members who have less than seven years of service will receive their contributions plus 50% of the interest on their account. Previously members with less than seven years of service received no interest. Interest is computed at 8.00%

3. A partial lump-sum option (PLSO) was added. Members who retire with at least 30 years of service may elect a PLSO equal to 12, 24, or 36 times the member's monthly retirement benefit, determined before applying any reduction for the PLSO or any other optional form of payment. A member who elects to receive a PLSO will have his/her monthly retirement benefit reduced on an actuarial basis to compensate for the fact that a PLSO is provided.
4. Disabled members may now elect Option 2—the Joint & 100% Survivor option (with pop up).

O. 2004 Legislative Session

1. An ad hoc benefit increase was granted to retirees and beneficiaries, beginning August 1, 2004, if they had retired on or before June 30, 2003. Special retirees received a 4.0% increase, and increases for other eligible retirees are as follows:

Years of Service	Monthly Benefit at 6/30/04	Benefit Increase
20 Years or more	Less than $1,500.00	4.5%
	$1,500.00 to $2,500.00	4.0%
	Over $2,500.00	3.5%
15 to 19 Years	Less than $1,000.00	4.0%
	$1,000.00 to $2,000.00	3.5%
	Greater than $2,000.00	3.0%
Fewer than 15 years	Less than $801.00	3.5%
	$801.00 to $1,499.99	3.0%
	$1,500.00 or greater	2.5%

2. Members who joined TRS on or after July 1, 1992 receive a year of service credit if they have accumulated 120 days of unused sick leave. Previously, this additional service was only available to members hired prior to July 1, 1992.

3. Beneficiaries of members hired on or after July 1, 1992 are eligible to receive an $18,000 lump sum death benefit in addition the member's contribution balance with 100% of credited interest. If the member was eligible for early or normal retirement, the beneficiary may choose the retirement benefit for which the member was eligible in lieu of the contribution balance and $18,000 lump sum. Previously, the annuity option and $18,000 lump sum had only been available to members hired before July 1, 1992.

4. The benefit formula for members hired in FY 1996 at any of the colleges or universities in the Oklahoma State System of Higher Education is 2.0% of final average salary, computed at retirement, for each year of service. Previously, the formula was 2.0% of salary for service in FY 1996 plus 2.0% of final average salary, computed at retirement, for each year of service earned after June 30, 1996.

5. Employees hired by one of the comprehensive universities – Oklahoma University, the Health Sciences Center, and Oklahoma State University – after June 30, 2004 may

make an irrevocable election to join an alternate plan established by the universities in lieu of becoming a member of OTRS.

6. The Board of Trustees is required to adopt an assumption as to the level of probable future ad hoc cost-of-living adjustments that will be granted by the legislature in the future.

7. The supplemental medical insurance credit is restricted to members who retire with at least 10 years of service credit.

8. The formula used to determine benefits accrued for service earned between July 1, 1995 and June 30, 2007, for members employed by a comprehensive university, is modified. Retirees who had service at a comprehensive university after June 30, 1995 will receive a benefit increase because of this formula change, effective as of January 1, 2005. No retroactive increase will be paid to such retirees.

9. Members who are employed by a comprehensive university before July 1, 2004 will be given a future opportunity to make a one-time irrevocable election to leave OTRS and join an alternative plan established by the universities. The timing of the election depends on if and when IRS approval is received.

10. The comprehensive universities will make additional contributions to OTRS on behalf of members in their alternative plan.

P. 2005 Legislative Session

No Changes.

Q. 2006 Legislative Session

1. The Education Employees Service Incentive Plan (EESIP) was created:

   Active members are eligible for the EESIP if they have service prior to July 1, 1995, are active on or after July 1, 2006, and are not employed by one of the comprehensive or regional four-year universities.

   The EESIP allows for two years of service prior to July 1, 1995 to be computed at an enhanced or eliminated cap for each year that the employee has worked beyond Normal Retirement Age at the time of retirement.

   For each "uncapped" year, the $40,000 cap applicable to service before July 1, 1995 is increased to $60,000 for retirements in FY 2007, to $80,000 for retirements in FY 2008, and the cap is removed beginning July 1, 2008. The employee that elects the enhanced benefit must pay the accumulations, at 10% interest, of contributions that would have been required but for the cap then in place. Payment is required only for years FY 1988 through

FY 1995 even if more than 8 years of service prior to July 1, 1995 are being "uncapped." Payment is required only for those years of service that are computed at an elevated or eliminated cap.

For those members electing the enhanced benefit, the payment required is 50% of the accumulated balance in FY 2007, 75% of the accumulated balance in FY 2008 and 100% of the accumulated balance on or after FY 2009.

2. The employer contribution rate was increased for employers covered by the EESIP. The rate increased from 7.05% to 7.60% effective Jan. 1, 2007, and then to 7.85% for FY 2008 and to 8.00% for FY 2009. The employer contribution rate for the employers not covered by the EESIP—the comprehensive and regional four-year universities—remained at 7.05%.

3. A 2.00% ad hoc cost-of-living adjustment (COLA) was provided, effective July 1, 2006. All retirees who retired before July 1, 2005 were eligible, including disabled retirees, special retirees and beneficiaries receiving payments.

R. 2007 Legislative Session

The employer contribution rates, beginning July 1, 2007, were increased as shown in the following schedule. Different rates are paid by employers in the Education Employees Service Incentive Plan (EESIP) and those not in EESIP (the comprehensive and regional four-year universities):

	Employer Contribution Rates	
Period:	EESIP Employers	Non-EESIP Employers
7/1/2006 – 12/31/2006	7.05%	7.05%
1/1/2007 – 6/30/2007	7.60%	7.05%
7/1/2007 – 12/31/2007	7.85%	7.05%
1/1/2008 – 6/30/2008	8.35%	7.55%
7/1/2008 – 12/31/2008	8.50%	7.55%
1/1/2009 – 6/30/2009	9.00%	8.05%
7/1/2009 – 12/31/2009	9.00%	8.05%
1/1/2010 – 6/30/2010	9.50%	8.55%
FY 2011 and later	9.50%	8.55%

S. 2008 Legislative Session

A 2.00% ad hoc cost-of-living adjustment (COLA) was provided, effective July 1, 2008. All retirees who retired before July 1, 2007 were eligible, including disabled retirees, special retirees and beneficiaries receiving payments.

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

I. *Valuation Date*

The valuation date is June 30th of each plan year. This is the date as of which the actuarial present value of future benefits and the actuarial value of assets are determined.

II. *Actuarial Cost Method*

Because the employer contribution rate is set by statute, the actuarial valuation is used to determine the funding period--the number of years required to amortize the Unfunded Actuarial Accrued Liability (UAAL). It is also used to calculate the Annual Required Contribution (ARC) as defined by GASB 25.

The actuarial valuation uses the Entry Age actuarial cost method. Under this method, a normal cost rate is first determined. This is the contribution rate (level as a percentage of pay) required to provide the benefits of the average new member. The normal cost rate consists of two pieces: (i) the member's own contribution rate, and (ii) a portion of the employer contribution rate. This second piece is called the employer normal cost rate.

The total normal cost is determined by dividing the present value of future benefits for a hypothetical group of new members by the present value of their future pay. In calculating the benefits for this group, all changes in provisions or member contribution rates scheduled to occur in the future are assumed to already be in effect. The hypothetical group of new entrants was reset in the 2005 experience study, based on actual new members joining during FY 2000 through FY 2004.

Next, the UAAL is determined. This is the liability for future benefits which is in excess of (i) the actuarial value of assets, and (ii) the present value of future normal costs. The employer contribution that is not used for the employer normal cost is applied to amortize the UAAL.

The funding period is calculated as the number of years required to fully amortize the UAAL, assuming that the System's payroll increases at the payroll growth rate and the State's contribution increases at the State's revenue growth rate. Both employer and member contributions are assumed to be made monthly.

The Entry Age actuarial cost method is an "immediate gain" method (i.e., experience gains and losses are separately identified as part of the UAAL). However, they are amortized over the same period applied to all other components of the UAAL.

The actuarial valuation also determines the GASB Annual Required Contribution (ARC). This is the contribution required to pay the normal cost and amortize the UAAL over 30 years as a level percent of pay. The 30-year period applies to all components of the UAAL and is recalculated each year (open amortization method).

III. *Actuarial Value of Assets*

The actuarial value of assets is equal to the market value, adjusted for a five-year phase in of actual investment return in excess of expected investment return. The actual return is calculated net of investment and administrative expenses, and the expected investment return is equal to the assumed investment return rate multiplied by the prior year's market value of assets, adjusted for contributions, benefits paid, and refunds.

IV. *Actuarial Assumptions*

A. Economic Assumptions

1. Investment return: 8% per year, compounded annually, composed of an assumed 3.00% inflation rate and a 5.00% net real rate of return.

2. Salary increase rate: A merit/promotional component dependent on service, plus a 3% inflation component, plus a 1.25% productivity increase, as follows:

Years of Service	Merit/ Promotional Component	Total Salary Increase Rate
(1)	(2)	(3)
0	1.75%	6.00%
1	1.50%	5.75
2	1.00%	5.25
3	1.00%	5.25
4	1.00%	5.25
5	0.75%	5.00
6	0.50%	4.75
7	0.50%	4.75
8	0.50%	4.75
9	0.50%	4.75
10	0.25%	4.50
11	0.25%	4.50
12	0.25%	4.50
13	0.25%	4.50
14	0.25%	4.50
15 or more	0.00%	4.25

3. Payroll growth rate: In the amortization of the unfunded actuarial accrued liability, payroll is assumed to increase 3.5% per year. This increase rate has no allowance for future membership growth.

4. State revenue growth rate: In determining the funding period, the state's sales and income tax revenues are anticipated to grow at 3.5% per year. However, for years FY 2007 through FY 2010, revenue growth was decreased, reflecting the expected impact of new income tax rates.

5. Future ad hoc cost-of-living increases: 2.0% per year.

B. Demographic Assumptions

1. Mortality rates - after retirement or termination.

   a. Healthy males - 1994 Unisex Pension Mortality Table for males, set back one year.

   b. Healthy females - 1994 Unisex Pension Mortality Table for females, set back one year.

   c. Disabled males - PBGC Table Va for disabled males eligible for Social Security disability benefits weighted by 80%.

   d. Disabled females - PBGC Table VIa for disabled females eligible for Social Security disability benefits.

   Sample rates are shown below:

	Expected Deaths per 100 Lives			
Age	Healthy Males	Healthy Females	Disabled Males	Disabled Females
(1)	(2)	(3)	(4)	(4)
40	0.11	0.07	2.26	2.09
45	0.16	0.10	2.58	2.24
50	0.25	0.14	3.06	2.57
55	0.43	0.22	3.86	2.95
60	0.76	0.42	4.82	3.31
65	1.39	0.82	5.42	3.70
70	2.34	1.37	5.91	4.11
75	3.66	2.19	6.74	4.92
80	6.01	3.80	9.02	7.46

2. Mortality rates - active members - Based on 1989 Experience Study, males and females separate. Sample rates are shown below:

	Expected Deaths per 100 Lives	
Age	Male Members	Female Members
(1)	(2)	(3)
25	.04	.02
30	.06	.04
35	.08	.06
40	.11	.08
45	.16	.11
50	.23	.16
55	.32	.23
60	.43	.32
65	.59	.43

3. Disability rates - Based on 2005 Experience Study, males and females separate. Sample rates are shown below:

	Expected Disabilities Occurring per 100 Lives	
Age	Male Members	Female Members
(1)	(2)	(3)
25	.025	.025
30	.025	.025
35	.035	.050
40	.065	.125
45	.100	.200
50	.300	.300
55	.450	.420
60	.175	.420
65	.000	.000

Disability rates are applied only for members with 10 or more years of service, since rates were developed based on exposure for this group.

4. Termination Rates - Separate male and female rates, based on both age and service, developed from the 2005 Experience Study. Rates reflect terminations for causes other than death, disability or retirement. Sample rates are shown below:

a. <u>During the first ten years of Credited Service</u>:

Expected Terminations per 100 Lives

Credited Service (Years)	Males	Females
(1)	(2)	(3)
0	34.00	24.00
1	19.00	16.00
2	14.00	12.25
3	11.50	10.50
4	9.50	9.00
5	7.75	7.75
6	6.75	6.75
7	6.00	6.00
8	5.50	5.00
9	5.00	4.00

b. <u>With 10 or More Years of Credited Service:</u>

Expected Terminations per 100 Lives

Age	Males	Females
(1)	(2)	(3)
25	4.74	7.01
30	4.10	5.09
35	3.51	3.66
40	2.97	2.74
45	2.51	2.34
50	2.09	2.08
55	1.66	1.63
60	1.32	1.14
65	1.28	0.82

Termination rates are not applied to a member who is eligible for a retirement benefit (reduced or unreduced).

5. Retirement rates - Separate male and female rates, based on age, developed from the 2005 Experience Study. Sample rates are shown below:

Expected Retirements per 100 Lives

	Unreduced Retirement		Reduced Retirement	
Age	Male	Female	Male	Female
49	00	00	0	0
50	20	20	0	0
51	20	20	0	0
52	20	20	0	0
53	20	20	0	0
54	15	20	0	0
55	15	20	1	2
56	15	20	1	2
57	15	20	2	2
58	15	20	2	2
59	15	20	3	2
60	15	20	4	5
61	15	20	4	5
62	25	30		
63	20	25		
64	20	20		
65	30	40		
66	25	25		
67	25	25		
68	20	20		
69	20	20		
70	100	100		

C. <u>Other Assumptions</u>

1. Percent married: 80% of employees are assumed to be married.

2. Age difference: Male members are assumed to be three years older than their spouses, and female members are assumed to be three years younger than their spouses.

3. Percent electing annuity on death (when eligible): All of the spouses of married participants who die after becoming eligible for a retirement benefit are assumed to elect an annuity, in lieu of the $18,000 lump sum and refund.

4. Percent electing deferred termination benefit: vested terminating members are assumed to elect a refund or a deferred benefit, whichever is more valuable at the time of termination.

5. Assumed age for commencement of deferred benefits: Members electing to receive a deferred benefit are assumed to commence receipt at age 62.

6. Administrative expenses: The assumed investment return rate represents the anticipated net return after payment of all investment and administrative expenses.

7. Supplemental medical insurance: All members, whether currently active, inactive, or retired, are assumed to be eligible to receive the supplemental insurance benefit, if they have at least 10 years of service credit at retirement.

8. Members who retire with at least 24 years of credited service are assumed to have 120 days of unused sick leave for which they will receive one year of service credit. This assumption only applies to reduced and unreduced retirement.

9. No assumption was made that current active members employed by the comprehensive universities will elect to transfer out of OTRS.

10. Reemployment, purchase of service, transfers: No recognition is made of (i) future member reimbursements upon reemployment, (ii) future purchase of additional service, or (iii) special transfer provisions.

11. For EESIP eligible employees, if the refund amount to be paid exceeds the actuarial present value of the additional benefit, then we assume the member does not elect the enhanced benefit.

12. For those participants eligible for the EESIP, it is assumed that retirement is delayed in each year past first eligibility by 10%, until all eligible years are uncapped, at which point those delayed members are assumed to retire.

V. Participant Data

Participant data was supplied on an electronic file for (i) active members, (ii) inactive vested members who are entitled to a future deferred benefit, (iii) inactive nonvested members who are entitled to a refund of their employee contributions, and in some cases a portion of the accumulated interest, and (iv) members and beneficiaries receiving benefits.

The data for active and inactive, non-retired members included birthdate, sex, years of service, a classified/non-classified status code, salary, employee contributions and accumulated interest on employee contributions. The data also included a code to indicate whether the employee had elected to make contributions on salary above $25,000, and a code indicating the type of employer (comprehensive university, other college or university, or other employer). For retired members and beneficiaries, the data included date of birth, sex, spouse's date of birth (where applicable), amount of monthly benefit, date of retirement, and a form of payment code.

Salary supplied for the current year was based on the earnings for the October preceding the valuation date. This salary was adjusted by the salary increase rate for one year, and limited by the maximum pay where appropriate.

Assumptions were made to correct for missing, bad, or inconsistent data. These had no material impact on the results presented.

Some inactive, nonvested employees who are entitled to a refund are not included in the data, but a liability for their refund is included instead in the Suspense Fund, which is included in the liability.

VI. Dates of Adoption of Assumptions and Methods

Generally, actuarial assumptions and methods were developed from the 2005 experience study, and were adopted by the Board of Trustees in August 2005 and first reflected in the June 30, 2005 actuarial valuation. The adopted assumptions were recommended by the actuary. Some assumptions were left unchanged from the prior experience study in 1999, including female mortality for disabled retirees, the investment return rate, and active member mortality for males and females.

Since the June 30, 2004 valuation, there is an assumption that future ad hoc cost-of-living increases would be granted from time to time, without additional funding. The initial assumptions were that these would average 1.00% per year. Effective July 1, 2008, the assumption was modified from 1.0% to 2.0% per year.

Effective July 1, 2006, retirement assumptions were modified for members eligible for the EESIP.

ADDENDUM TO JUNE 30, 2008 ACTUARIAL VALUATION

Certification

We have prepared an actuarial valuation of the Oklahoma Teachers' Retirement System as of June 30, 2008, for the plan year ending June 30, 2009. The results of the valuation are set forth in this report, which reflects the provisions of the System as amended and effective on June 30, 2008.

The valuation is based on employee and financial data which were provided by the Oklahoma Teachers' Retirement System and the independent auditor, respectively, and which are summarized in this report.

The results in this Addendum have been prepared for the sole purpose of meeting the Retirement Board's requirement to submit this information to the Oklahoma State Pension Commission, based on the following prescribed assumptions (70 O.S. 2001, Section 17-106.1, Section H):

Interest rate: 7.5%
COLA assumption: 2.0%
Mortality: RP 2000 Generational Mortality Tables (active members, healthy annuitants, and disabled annuitants)
Amortization period: 30 years, open period
Sources of all contributions and revenues, including dedicated tax fee revenue and federal monies

All other assumptions, methodologies, and plan provisions used are consistent with those used in the regular June 30, 2008 valuation prepared for the Board of Trustees.

The results shown in this Addendum are not consistent with those in the June 30, 2008 valuation. The June 30, 2008 valuation results were determined in accordance with generally accepted actuarial principles and procedures, and are in compliance with the Actuarial Standards of Board Actuarial Standard of Practice No. 27-Selection of Economic Assumptions for Measuring Pension Obligations. The results shown in this Addendum are not based on the assumptions and methodologies adopted by the Board of Trustees. For those results, see the regular June 30, 2008 actuarial valuation.

We are available to answer any questions on the material contained in the report, or to provide explanations or further details as may be appropriate.

J. Christian Conradi

J. Christian Conradi, ASA, MAAA, EA — October 16, 2008

Mark R. Randall

Mark R. Randall, FCA, EA, MAAA — October 16, 2008

Summary of Valuation Results under Prescribed Assumptions

This supplemental report has been prepared by Gabriel, Roeder, Smith & Company for the Oklahoma Teachers' Retirement System to present the results of a valuation of the Oklahoma Teachers' Retirement System as of June 30, 2008, based on the prescribed assumptions under 70 O.S. 2001, Section 17-106.1, Section H of current State Statutes and regulations issued thereunder.

A summary of principal valuation results from the current valuation and the prior valuation.

	Actuarial Valuation as of		Change Between Years	
	June 30, 2008	**June 30, 2007**	**Amount**	**Percent**
Summary of Costs				
Required State Contribution for Current Year under Prescribed Assumptions	$710,809,846	$719,292,712	-$8,482,866	-1.18%
Actual State Contribution Received in Prior Year	$266,761,597	$243,501,987	$23,259,610	9.55%
Funded Status				
Actuarial Accrued Liability	$19,566,540,948	$18,494,245,830	$1,072,295,118	5.80%
Actuarial Value of Assets	$9,256,786,936	$8,421,866,942	$834,919,994	9.91%
Unfunded Actuarial Accrued Liability	$10,309,754,012	$10,072,378,888	$237,375,124	2.36%
Market Value of Assets and Additional Liabilities				
Market Value of Assets	$8,633,699,695	$9,293,201,022	-$659,501,327	-7.10%
Present Value of Projected System Benefits	$23,507,582,253	$22,287,584,027	$1,219,998,226	5.47%

Summary of Contribution Requirements	Actuarial Valuation as of				% of Change
	June 30, 2008		June 30, 2007		
	Amount	% of Active Covered Comp	Amount	% of Active Covered Comp	
1. Payroll					
a. Supplied by system	$3,751,436,376		$3,598,926,888		4.24%
b. Adjusted for 1-year's pay increase	$3,926,476,288		$3,766,989,331		4.23%
2. Total normal cost (mid-year)	$502,131,944	12.79%	$481,736,177	12.79%	4.23%
3. Unfunded actuarial accrued liability (UAAL)	$10,309,754,012		$10,072,378,888		2.36%
4. Amortization of UAAL over 30 years from valuation date	$844,295,883	21.50%	$824,856,541	21.90%	2.36%
5. Total required contribution under prescribed assumptions (2+4)	$1,346,427,827	34.29%	$1,306,592,718	34.69%	3.05%
6. Estimated employee contribution (7% x 1b)	$274,853,340	7.00%	$263,689,253	7.00%	4.23%
7. Estimated local employer and federal/grant contributions					
a. Local employers	$335,733,355	8.55%	$298,797,594	7.93%	
b. Federal/grant	$25,031,286	0.64%	$24,813,159	0.66%	0.88%
c. Total	$360,764,641	9.19%	$323,610,753	8.59%	11.48%
8. Required state contribution to amortize UAAL over 30 years from valuation date (5 - 6 - 7c)	$710,809,846	18.10%	$719,292,712	19.09%	-1.18%
9. Previous year's actual State Contribution	$266,761,597	7.08%	$243,501,987	7.02%	9.55%
10. Projected State Contribution per OSF	$268,427,420	6.84%	$268,627,400	7.13%	-0.07%
11. Funding period	Not Sufficient to Amortize UAAL		Not Sufficient to Amortize UAAL		N/A

Unfunded Actuarial Accrued Liability

The actuarial accrued liability is the present value of projected system benefits allocated to past service by the actuarial funding method being used.

	Total System	
	June 30, 2008	**June 30, 2007**
1. Actuarial Present Value of Benefits		
a. Active members	$ 13,854,041,486	$ 13,271,404,967
b. Inactives	400,910,797	381,809,950
c. Retirees and beneficiaries	9,252,629,970	8,634,369,110
d. Total	23,507,582,253	22,287,584,027
2. Actuarial Present Value of Future Normal Costs	$ 3,941,041,305	$ 3,793,338,197
3. Total Actuarial Accrued Liability (1d - 2)	$ 19,566,540,948	$ 18,494,245,830
4. Actuarial Value of Assets	$ 9,256,786,936	$ 8,421,866,942
5. Unfunded Actuarial Accrued Liability (3-4, not less than $0)	**$ 10,309,754,012**	**$ 10,072,378,888**

Normal Cost

The components of normal cost under the System's funding method are:

Component	June 30, 2008	June 30, 2007
Retirement Benefits	$ 380,082,905	$ 364,644,567
Withdrawal Benefits	56,904,606	54,593,236
Active Death Benefits	8,707,975	8,354,271
Refunds	26,309,632	25,240,978
Supplemental Medical Insurance	11,860,967	11,379,195
Post Retirement Death Benefits	1,837,004	1,762,388
Disability Benefits	16,428,855	15,761,542
Total Normal Cost (Mid-year)	**$ 502,131,944**	**$ 481,736,177**
Annual Covered Payroll (with pay caps)	$ 3,926,476,288	$ 3,766,989,331
Normal Cost Rate At Mid-year	12.79%	12.79%

Actuarial Assumptions

This section presents and describes the actuarial assumptions used for this supplemental valuation. The census of members, market and actuarial value of assets, actuarial basis and provisions of the Plan are the same as described elsewhere in this valuation report. The valuation is based on the premise that the Plan will continue in existence.

Economic Assumptions

1. Investment Return: 7.5%, net of investment and administrative expenses, per annum, compound annually.

2. Earnings Progression Sample rates below:

Years of Service	Merit/ Promotional Component	Total Salary Increase Rate
(1)	(2)	(3)
0	1.75%	6.00%
1	1.50%	5.75
2	1.00%	5.25
3	1.00%	5.25
4	1.00%	5.25
5	0.75%	5.00
6	0.50%	4.75
7	0.50%	4.75
8	0.50%	4.75
9	0.50%	4.75
10	0.25%	4.50
11	0.25%	4.50
12	0.25%	4.50
13	0.25%	4.50
14	0.25%	4.50
15 or more	0.00%	4.25

3. Payroll growth rate: In the amortization of the unfunded actuarial accrued liability, payroll is assumed to increase 3.5% per year. This increase rate has no allowance for future membership growth.

4. State revenue growth rate: In determining the funding period, the state's sales and income tax revenues are anticipated to grow at 3.5% per year. However, for years FY 2007 through FY 2010, revenue growth was decreased, reflecting the expected impact of new income tax rates.

5. Future ad hoc cost-of-living increases: We assume that in future years, cost-of-living increases will be granted that will average 2% per year.

Demographic Assumptions

1. Retirement rate - Sample rates are shown below:

Expected Retirements per 100 Lives

Age	Unreduced Retirement		Reduced Retirement	
	Male	Female	Male	Female
49	00	00	0	0
50	20	20	0	0
51	20	20	0	0
52	20	20	0	0
53	20	20	0	0
54	15	20	0	0
55	15	20	1	2
56	15	20	1	2
57	15	20	2	2
58	15	20	2	2
59	15	20	3	2
60	15	20	4	5
61	15	20	4	5
62	25	30		
63	20	25		
64	20	20		
65	30	40		
66	25	25		
67	25	25		
68	20	20		
69	20	20		
70	100	100		

2. Mortality rates - Active members – RP-2000 Generational Mortality Tables for active employees, males and females separate, projected with Scale AA.

   Retirees (non-disabled) and beneficiaries – RP-2000 Generational Mortality Tables for healthy annuitants, males and females separate, projected with Scale AA.

   Disabled retirees – RP-2000 Generational Mortality Tables for disabled annuitants, males and females separate, projected with Scale AA

3. Disability rates: Sample rates are shown below:

	Expected Disabilities Occurring per 100 Lives	
Age	Male Members	Female Members
(1)	(2)	(3)
25	.025	.025
30	.025	.025
35	.035	.050
40	.065	.125
45	.100	.200
50	.300	.300
55	.450	.420
60	.175	.420
65	.000	.000

Disability rates are applied only for members with 10 or more years of service, since rates were developed based on exposure for this group.

4. Withdrawal Rates: Sample rates are shown below:

<u>During the first ten years of Credited Service</u>:

Expected Terminations per 100 Lives		
Credited Service (Years)	Males	Females
(1)	(2)	(3)
0	34.00	24.00
1	19.00	16.00
2	14.00	12.25
3	11.50	10.50
4	9.50	9.00
5	7.75	7.75
6	6.75	6.75
7	6.00	6.00
8	5.50	5.00
9	5.00	4.00

With 10 or More Years of Credited Service:

Expected Terminations per 100 Lives

Age	Males	Females
(1)	(2)	(3)
25	4.74	7.01
30	4.10	5.09
35	3.51	3.66
40	2.97	2.74
45	2.51	2.34
50	2.09	2.08
55	1.66	1.63
60	1.32	1.14
65	1.28	0.82

Termination rates are not applied to a member who is eligible for a retirement benefit (reduced or unreduced).

Other Assumptions

1. Percent married: 80% of employees are assumed to be married.

2. Age difference: Male members are assumed to be three years older than their spouses, and female members are assumed to be three years younger than their spouses.

3. Percent electing annuity on death (when eligible): All of the spouses of married participants who die after becoming eligible for a retirement benefit are assumed to elect an annuity, in lieu of the $18,000 lump sum and refund.

4. Percent electing deferred termination benefit: vested terminating members are assumed to elect a refund or a deferred benefit, whichever is more valuable at the time of termination.

5. Assumed age for commencement of deferred benefits: Members electing to receive a deferred benefit are assumed to commence receipt at age 62.

6. Administrative expenses: The assumed investment return rate represents the anticipated net return after payment of all investment and administrative expenses.

7. Supplemental medical insurance: All members, whether currently active, inactive, or retired, are assumed to be eligible to receive the supplemental insurance benefit, if they have at least 10 years of service credit at retirement.

8. Members who retire with at least 24 years credit are assumed to have 120 days of unused sick leave for which they will receive one year of service credit. This assumption only applies to reduced and unreduced retirement.

9. No assumption was made that current active members employed by the comprehensive universities will elect to transfer out of OTRS.

10. Reemployment, purchase of service, transfers: No recognition is made of (i) future member reimbursements upon reemployment, (ii) future purchase of additional service, or (iii) special transfer provisions.

11. For EESIP eligible employees, if the refund amount to be paid exceeds the additional APV of the enhanced benefit, then the employee does not elect the enhanced benefit.

12. For those participants eligible for the EESIP, it is assumed that retirement is delayed in each ear past first eligibility by 10%.

GLOSSARY

Actuarial Accrued Liability (AAL): That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of Future Plan Benefits which is not provided for by future Normal Costs. It is equal to the Actuarial Present Value of Future Plan Benefits minus the actuarial present value of future Normal Costs.

Actuarial Assumptions: Assumptions as to future experience under the Fund. These include assumptions about the occurrence of future events affecting costs or liabilities, such as:

- mortality, withdrawal, disablement, and retirement;
- future increases in salary;
- future rates of investment earnings and future investment and administrative expenses;
- characteristics of members not specified in the data, such as marital status;
- characteristics of future members;
- future elections made by members; and
- other relevant items.

Actuarial Cost Method or ***Funding Method:*** A procedure for allocating the Actuarial Present Value of Future Benefits to various time periods; a method used to determine the Normal Cost and the Actuarial Accrued Liability. These items are used to determine the ARC.

Actuarial Gain or ***Actuarial Loss:*** A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two Actuarial Valuation dates. Through the actuarial assumptions, rates of decrements, rates of salary increases, and rates of fund earnings have been forecasted. To the extent that actual experience differs from that assumed, Actuarial Accrued Liabilities emerge which may be the same as forecasted, or may be larger or smaller than projected. Actuarial gains are due to favorable experience, e.g., the Fund's assets earn more than projected, salaries do not increase as fast as assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. On the other hand, actuarial losses are the result of unfavorable experience, i.e., actual results that produce actuarial liabilities which are larger than projected. Actuarial gains will shorten the time required for funding of the actuarial balance sheet deficiency while actuarial losses will lengthen the funding period.

Actuarially Equivalent: Of equal actuarial present value, determined as of a given date and based on a given set of Actuarial Assumptions.

Actuarial Present Value (APV): The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. For purposes of this standard, each such amount or series of amounts is:

a. adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, marital status, etc.)

b. multiplied by the probability of the occurrence of an event (such as survival, death, disability, termination of employment, etc.) on which the payment is conditioned, and

c. discounted according to an assumed rate (or rates) of return to reflect the time value of money.

Actuarial Present Value of Future Plan Benefits: The Actuarial Present Value of those benefit amounts which are expected to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age and past and anticipated future compensation and service credits. The Actuarial Present Value of Future Plan Benefits includes the liabilities for active members, retired members, beneficiaries receiving benefits, and inactive, nonretired members either entitled to a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would be provide sufficient assets to pay all projected benefits and expenses when due.

Actuarial Valuation: The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan. An Actuarial valuation for a governmental retirement system typically also includes calculations of items needed for compliance with GASB 25, such as the funded ratio and the ARC.

Actuarial Value of Assets or ***Valuation Assets:*** The value of the Fund's assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets, but commonly actuaries use a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the ARC.

Actuarially Determined: Values which have been determined utilizing the principles of actuarial science. An actuarially determined value is derived by application of the appropriate actuarial assumptions to specified values determined by provisions of the law.

Amortization Method: A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the Amortization payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the stream of payments increases at the assumed rate at which total covered payroll of all active members will increase.

Amortization Payment: That portion of the pension plan contribution or ARC which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.

Annual Required Contribution (ARC): The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation, determined under GASB 25. The ARC consists of the Employer Normal Cost and the Amortization Payment

Closed Amortization Period: A specific number of years that is counted down by one each year, and therefore declines to zero with the passage of time. For example if the amortization period is initially set at 30 years, it is 29 years at the end of one year, 28 years at the end of two years, etc. See Funding Period and Open Amortization Period.

Decrements: Those causes/events due to which a member's status (active-inactive-retiree-beneficiary) changes, that is: death, retirement, disability, or termination.

Defined Benefit Plan: A retirement plan that is not a Defined Contribution Plan. Typically a defined benefit plan is one in which benefits are defined by a formula applied to the member's compensation and/or years of service.

Defined Contribution Plan: A retirement plan, such as a 401(k) plan, a 403(b) plan, or a 457 plan, in which the contributions to the plan are assigned to an account for each member, and the plan's earnings are allocated to each account, and each member's benefits are a direct function of the account balance.

Employer Normal Cost: The portion of the Normal Cost to be paid by the employers. This is equal to the Normal Cost less expected member contributions.

Experience Study: A periodic review and analysis of the actual experience of the Fund which may lead to a revision of one or more actuarial assumptions. Actual rates of decrement and salary increases are compared to the actuarially assumed values and modified as deemed appropriate by the Actuary.

Funded Ratio: The ratio of the actuarial value of assets (AVA) to the actuarial accrued liability (AAL). Plans sometimes calculate a market funded ratio, using the market value of assets (MVA), rather than the AVA, although GASB 25 reporting requires the use of the AVA.

Funding Period or ***Amortization Period:*** The term "Funding Period" is used it two ways. In the first sense, it is the period used in calculating the Amortization Payment as a component of the ARC. This funding period is chosen by the Board of Trustees. In the second sense, it is a calculated item: the number of years in the future that will theoretically be required to amortize (i.e., pay off or eliminate) the Unfunded Actuarial Accrued Liability, based on the statutory employer contribution rate, and assuming no future actuarial gains or losses.

GASB: Governmental Accounting Standards Board.

GASB 25 and ***GASB 27***: Governmental Accounting Standards Board Statements No. 25 and No. 27. These are the governmental accounting standards that set the accounting rules for public retirement systems and the employers that sponsor or contribute to them. Statement No. 27 sets the accounting rules for the employers that sponsor or contribute to public retirement systems, while Statement No. 25 sets the rules for the systems themselves.

Normal Cost: That portion of the Actuarial Present Value of pension plan benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method. Any payment in respect of an Unfunded Actuarial Accrued Liability is not part of Normal Cost (see Amortization Payment). For pension plan benefits which are provided in part by employee contributions, Normal Cost refers to the total of employee contributions and employer Normal Cost unless otherwise specifically stated. Under the entry age normal cost method, the Normal Cost is intended to be the level cost (when expressed as a percentage of pay) needed to fund the benefits of a member from hire until ultimate termination, death, disability or retirement.

Open Amortization Period: An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. In other words, if the initial period is set as 30 years, the same 30-year period is used in determining the Amortization Period each year. In theory, if an Open Amortization Period is used to amortize the Unfunded Actuarial Accrued Liability, the UAAL will never completely disappear, but will become smaller each year, either as a dollar amount or in relation to covered payroll.

Unfunded Actuarial Accrued Liability: The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. This value may be negative in which case it may be expressed as a negative Unfunded Actuarial Accrued Liability, also called the Funding Surplus.

Valuation Date or Actuarial Valuation Date: The date as of which the value of assets is determined and as of which the Actuarial Present Value of Future Plan Benefits is determined. The expected benefits to be paid in the future are discounted to this date.