# Teachers' Retirement System of Oklahoma

# ACTUARIAL VALUATION June 30, 2006



5605 N. MacArthur Blvd. Suite 870 Irving, TX 75038-2631

October 25, 2006

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

Dear Members of the Board:

### Subject: Actuarial Valuation as of June 30, 2006

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, 2006.

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.

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#### **Financing Objectives**

The member, employer, State, and "federal matching" contribution rates are established by law. Members contribute 7.00% of covered compensation. Employers contributed 7.05% of covered member salaries in FY 2006. For employers covered by the new Education Employees Service Incentive Plan (EESIP), this rate is scheduled to increase to 7.60% effective Jan. 1, 2007, followed by increases to 7.85% for FY 2007 and 8.00% for FY 2008. For employers not covered by the EESIP—the comprehensive and regional four-year universities—the contribution rate will remain at 7.05% of salary. 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 was 4.00% in FY 2006, and it increased to 4.50% effective July 1, 2006. It is scheduled to increase again, to 5.00%, for FY 2008. 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 2006 was 5.00%, and this rate increased to 7.00% for FY 2007. 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, 2006, the state's contribution plus the federal contribution was equivalent to a contribution of 6.38% of covered payroll. Combined with the 7.05% employer contribution rate, the employing entities contributed 13.43% of covered payroll for FY 2006. This is expected to increase as the contribution rates for the employers covered by the EESIP and the State of Oklahoma are scheduled to increase. On the other hand, Oklahoma decreased income tax rates in 2006. This reduction is scheduled to be phased in over the next few years. Based on information provided by legislative staff, we project that by 2011, the combined employer/State/federal contributions will amount to about 15.36% 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, 2005 was \$7,100 million, and it increased to \$7,673 million this year. The funded ratio - actuarial value of assets divided by actuarial accrued liability – decreased from 49.5% to 49.3%.

Last year, the period required to completely amortize the UAAL (the funding period) based on the contribution schedule in effect at that time was 42.6 years, measured from June 30, 2005. This year, the funding period is 37.4 years. The increase in the UAAL and the decrease in the Funded Ratio are primarily due to the enactment of HB 1179. This bill created the new EESIP and provided a 2% ad-hoc cost-of-living adjustment (COLA). Although the benefit increases under the EESIP are phased in over three years, the entire impact had to be recognized in this valuation. The scheduled increase in the contribution rates for the employers covered by the

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EESIP, together with the increase in the State's contribution due to the improved economy in Oklahoma were sufficient to cover the costs of these benefit improvements and cause a decrease in the funding period.

Based on the current contribution schedule, assuming no actuarial gains or losses in the future, the UAAL is expected to increase until FY 2025, when it is projected to reach about \$9.5 billion, after which it is projected to decrease until it reaches zero in FY 2044.

### **Deferred** Asset Losses/Gains

The figures above (the UAAL, the funded ratio, and the funding period) 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, \$7,470 million, is \$389 million smaller than the market value of \$7,859 million. The actuarial value is now 5% below the market value. The funded ratio determined using the market value rather than the actuarial value is 51.9%.

#### **Benefit Provisions**

The actuarial valuation reflects the benefit provisions as set forth in current statutes, including those adopted in the 2006 legislative session.

HB 1179 was enacted in 2006. This bill created the EESIP, which allows members whose benefits earned before July 1, 1995 are limited by the salary cap in effect at the time to increase or remove the cap. To do this, the member must work beyond his/her normal retirement age. A lump-sum payment to the System of additional member contributions for years before July 1, 1995 may also be required. Members employed by the comprehensive universities or by the regional four-year universities are not covered by the EESIP. HB 1179 also granted a 2.00% COLA, and it mandated higher contribution rates in the future for covered employers, as previously described.

#### Assumptions and Methods

Assumptions are set by the Board of Trustees, taking into account the recommendations of the plan's actuaries. The actuarial assumptions and methods used in this report are unchanged from last year, except that, to reflect the probable impact of the EESIP, retirement rates were reduced by 10% to reflect the fact that members will be encouraged to work beyond normal retirement to take advantage of the EESIP.

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.

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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, 2006 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, Gabriel, Roeder, Smith & Company

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Item	2006	2005
Membership • Number of		
<ul> <li>Active members</li> <li>Retirees and beneficiaries</li> <li>Inactive, vested</li> <li>Inactive, nonvested</li> <li>Total</li> <li>Payroll</li> </ul>	87,194 41,782 6,171 <u>6,606</u> 141,753 \$ 3,355 million	84,286 40,879 6,008 <u>7,072</u> 138,245 \$ 3,175 million
<ul> <li>Statutory contribution rates</li> <li>Employers in EESIP</li> <li>Regional universities</li> <li>Federal/grant salaries</li> <li>Members</li> <li>State (% of tax revenues)</li> </ul>	FY 2007 7.60% * 7.05% 7.00% 7.00% 4.50%	FY 2006 7.05% 7.05% 5.00% 7.00% 4.00%
Assets <ul> <li>Market value</li> <li>Actuarial value</li> <li>Return on market value</li> <li>Return on actuarial value</li> <li>State/local/federal contributions</li> <li>External cash flow %</li> <li>Ratio of actuarial to market value</li> </ul>	\$ 7,859 million \$ 7,470 million 9.4% 8.2% \$ 459 million -0.7% 95.1%	\$ 7,238 million \$ 6,953 million 10.0% 5.7% \$ 406 million -1.3% 96.1%
<ul> <li>Actuarial Information</li> <li>Normal cost %</li> <li>Unfunded actuarial accrued liability (UAAL)</li> <li>Funded ratio</li> <li>Funding period</li> </ul>	10.52% \$ 7,673 million 49.3% 37.4 years	10.52% \$ 7,100 million 49.5% 42.6 years
<ul> <li>GASB 25 ARC (30 year, level %)</li> <li>Dollar amount</li> <li>Percent of pay</li> </ul>	FY 2007 \$575,745,142 16.60%	FY 2006 \$535,228,038 16.32%
<ul> <li>Gains/(losses)</li> <li>Asset experience</li> <li>Liability experience</li> <li>Benefit changes</li> <li>Assumption changes</li> <li>Total</li> </ul>	\$ 13 million 119 million (515) million <u>0 million</u> (\$383) million	(\$150) million 28 million 0 million <u>721 million</u> \$ 600 million

### **Executive Summary**

\* Change effective January 1, 2007

### Introduction

The results of the June 30, 2006 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.

### **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 \$573 million, from \$7.100 billion to \$7.673 billion. The funded ratio – the ratio of the actuarial value of assets to actuarial accrued liability – decreased from 49.5% to 49.3%. The funding period – the number of years that would be required under the current contribution schedule to amortize the UAAL – has gone from 42.6 years to 37.4 years. We now project that the System will be about 85% funded in 30 years, assuming no further changes in benefits or contribution rates and assuming no actuarial gains or losses.

These effects are primarily due to the establishment in 2006 of the Education Employees Service Incentive Plan (EESIP) by HB 1179. Under the EESIP, members not employed by a comprehensive or regional four-year university have the option to reduce or eliminate the impact of the salary cap on the portion of their benefit related to service before July 1, 1995. Currently, this part of the member's benefit is limited by the pre-1995 salary cap. The member can reduce or eliminate the effect of this cap by working beyond normal retirement and contributing an amount equal to the additional member contribution that would have been made but for the salary cap. Each year worked beyond normal retirement uncaps two years of service. This potential benefit enhancement, coupled with a 2% ad-hoc COLA provided for in the bill, caused an increase in liabilities and a decrease in the funded ratio. In addition, the contribution rate for employers covered by the EESIP will be increased to 7.60% effective January 1, 2007, 7.85% for FY 2008 and 8.00% for FY 2009.

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.

The current combined state/local/federal contribution rate of about 13.43% of pay for FY 2006 was not large enough to pay the normal cost and pay the interest on the UAAL. Therefore, negative amortization results. The UAAL is projected to increase until larger employer and State contributions are effective and for a number of years thereafter, reaching about \$9.5 billion in 2025. The UAAL is then projected to begin decreasing, and it is projected to be completely amortized in FY 2044.

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 16.60% of salary as shown in Table 1.

### **Analysis of Changes**

#### UAAL

Table 12a shows an analysis of the change in the UAAL. The UAAL, which was \$7,099.7 million last year, has increased to \$7,672.9 million this year. However, an increase of \$240.6 million was expected, since the current statutory employer/state/federal contribution rate is not large enough to pay for the normal cost and for interest on the UAAL. Therefore, negative amortization is expected to occur.

The System had a small gain on the actuarial value of assets (AVA). This asset gain decreased the UAAL by \$13.3 million. The gain was due to the fact that the AVA calculation reflects 20% of the asset returns greater than 8.00% for FY 2006, FY 2005, and FY 2004, more than offsetting the remaining deferred losses from FY 2003 and FY 2002. The return on the actuarial value was 8.2% just larger than the assumed 8.00% investment return rate. This is the first year since 2001 that the actuarial return was greater than the assumed 8.00% rate. The actual return on market value was 9.4%.

There was a liability gain of \$186.2 million, a result of actual experience being more favorable than expected based on our assumptions.

The 2.00% ad-hoc COLA effective July 1, 2006 increased the UAAL by \$134.4 million, and the enhanced benefits provided by the EESIP increased the UAAL by \$448.3 million.

#### **Funding Period**

The funding period (the period required to amortize the UAAL) decreased from 42.6 years to 37.4 years due primarily to the increased statutory contributions for EESIP employers provided for in HB 1179, and due to the increase in the State's revenue in FY 2006, which significantly increased the State's contribution. This increase in revenue roughly offset the impact of lower future tax rates in our projections. Also relevant was the 3.5% increase in the number of active members, which increased the expected future amortization contributions for the System.

### 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 increased from \$7.238 billion to \$7.859 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 66% of total invested assets.

Table 7 reconciles the changes in the fund during the year. Employer contributions increased from \$227.8 million to \$241.2 million (7.05% of pay during the year). The state's contribution increased from \$163.9 million to \$202.2 million, reflecting the increase in state tax revenues and the fact that the system received 4.00% of these revenues in FY 2006, compared to 3.75% in FY 2005. Active member contributions increased from \$235.0 million to \$249.0 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 95.1% of market.

Table 9a provides a calculation of the estimated investment return for the year. As shown, the approximate investment return for FY 2006 is 9.4% when measured on market value, and 8.2% when measured on actuarial value. Table 9b shows a history of return rates since FY 1990.

Table 10 shows an external cash flow history. External cash flow is a negative 0.7% of assets this year. However, the negative cash flow is small enough that it is currently covered by dividend and coupon receipts. Since contribution rates will continue to increase for the next three years, negative cash flow should remain unimportant.

Table 11a shows the development of the asset gain. Since the System earned over the assumed rate of 8%, based on the actuarial value of assets, and recognized 20% of actuarial gains from FY 2006, FY 2005 and FY 2004, the UAAL has been decreased. This decrease was \$13.3 million for the current year.

### **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 new legislation materially effecting this valuation was HB 1179, enacted in 2006. HB 1179 made three major changes to the System:

1. It established the Education Employees Service Incentive Plan (EESIP):

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.

The \$40,000 cap applicable to service before July 1, 1995 is increased to \$60,000 in FY 2007, to \$80,000 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. Increased the employer contribution rates:

With the exception of the comprehensive and regional four-year universities, whose employer contribution rate remains at 7.05%, the employer contribution rate increases to 7.60%, effective January 1, 2007. Further increases to 7.85% in FY 2008 and to 8.00% in FY 2009 are scheduled.

3. Provision for an ad hoc cost-of-living adjustment (COLA):

As of July 1, 2006, a 2.00% COLA is applied to all retirees (including disabled retirees, special retirees and beneficiaries receiving payments) who were retired before July 1, 2005.

### GASB 25 Disclosure

This report includes three Tables—4a, 4b and 4c—showing information required to be reported under GASB 25. Table 4a shows a history of funding progress.

This table shows a slight decrease in funded status in comparison to the slight increase from last year. The funded ratio decreased from 49.5% at June 30, 2005 to 49.3% currently. The decrease in the funded ratio at June 30, 2006 occurred due to the passage of HB 1179 and the establishment of the EESIP and the associated cost of the enhanced benefits it provides.

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 redetermined each year (i.e., this is an "open amortization method"). The actual contributions that were compared with the ARC were the contributions received from employers, plus federal matching funds, plus the state's contribution.

It's worth noting that the fact that the ARC decreased from \$722 million for FY 2005 to \$535 million for FY 2006 is the result of the change in the computation of the amortization charges effective July 1, 2005. The ARC is now determined using a 30-year amortization of the UAAL as a level percentage of payroll, rather than as a 40-year level-dollar amortization.

It is also worth noting that, in interpreting these schedules, a number of changes that impact comparability, in addition to the change in amortization, have occurred:

- Plan benefit changes were made in most years. See Appendix II
- Assumptions were changed in 2000 and in 2005, and slightly modified in 2001
- An assumption that future ad hoc COLAs will be granted, averaging 1% per year, has been reflected since 2001, except in 2003.

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

### **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.

There were no changes to the actuarial assumptions and methods for this year, except that the retirement rates were modified in connection with the adoption of the EESIP. We decreased the rates of unreduced retirement by 10% per year, except that after having "uncapped" all service before July 1, 1995, the member's who were assumed to have deferred retirement because of the EESIP are assumed to retire immediately. For example, if a member had only six years of capped service, we decreased the retirement rate for three years, and then assumed the retirement rate would increase at that time, so that anyone who would have, but for the EESIP, already retired would now do so. This adjustment to the retirement rates was made only for members eligible for the EESIP.

We also assumed members would receive the EESIP benefits only if the value of the enhanced benefit exceeds the contribution required of the member, if any.

### **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 3.5% increase in the number of active members since the previous valuation, and a 5.7% increase in the payroll for active members.

Membership has grown an average of 0.8% 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 2.3% over the last five years, and it has grown at an average of 3.5% 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 45.7 years old, the average age for the active group has increased 1.7 years during the last ten years. During the same period, the average tenure of members has increased 0.5 years.

### **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% COLA assumption = 2.0% Mortality = RP 2000 Generational Mortality Tables / 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.

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# **Development of Employer Cost**

		June 30, 2006	June 30, 2005
		 (1)	 (2)
1.	Payroll		
	a. Supplied by system	\$ 3,354,876,252	\$ 3,175,161,612
	b. Adjusted for one year's pay increase	3,511,499,005	3,323,397,002
	c. Adjusted for one year's pay increase with pay caps	3,467,673,925	3,279,424,196
2.	Present value of future pay (paid monthly, with pay caps)	\$ 26,659,708,976	\$ 25,247,432,031
3.	Normal cost rate (payable monthly)		
	a. Total normal cost rate	10.52%	10.52%
	b. Less: member rate	<u>(7.00%)</u>	<u>(7.00%)</u>
	c. Employer normal cost rate	3.52%	3.52%
4.	Actuarial accrued liability for active members		
	a. Present value of future benefits for active members	\$ 10,293,629,599	\$ 9,360,586,434
	b. Less: present value of future employer normal costs		
	(Item 3c * Item 2)	(938,421,756)	(888,709,607)
	c. Less: present value of future member contributions	(1,866,179,628)	(1,767,320,242)
	d. Actuarial accrued liability	\$ 7,489,028,215	\$ 6,704,556,585
5.	Total actuarial accrued liability for:		
	a. Retirees and beneficiaries	\$ 7,340,004,548	\$ 7,046,505,663
	b. Inactive members	314,325,057	301,371,813
	c. Active members (Item 4d)	7,489,028,215	 6,704,556,585
	d. Total	\$ 15,143,357,820	\$ 14,052,434,061
6.	Actuarial value of assets	\$ 7,470,433,915	\$ 6,952,687,592
7.	Unfunded actuarial accrued liability		
	(UAAL) (Item 5d - Item 6)	\$ 7,672,923,905	\$ 7,099,746,469
8.	Funding period based on statutory contribution rates	37.4 years	42.6 years
9.	GASB 25 ARC		
	a. Employer normal cost (Item 1c * 3c)	\$ 122,062,122	\$ 115,435,732
	b. Level % 30-year amortization of UAAL (payable monthly)	\$ 453,683,020	\$ 419,792,306
	c. Total	\$ 575,745,142	\$ 535,228,038
	d. Contributions as percentage of payroll	16.60%	16.32%

# **Actuarial Present Value of Future Benefits**

		June 30, 2006	June 30, 2005
		(1)	(2)
1.	Active members		
	a. Service retirement benefits	\$ 9,034,813,069	\$ 8,155,574,579
	b. Deferred termination benefits	467,179,118	448,226,981
	c. Refunds	26,790,728	23,436,304
	d. Death benefits	174,901,014	157,014,237
	e. Disability retirement benefits	211,711,810	202,444,915
	f. Supplemental medical insurance	345,836,668	342,098,386
	g. \$5,000 post-retirement death benefit	32,397,192	31,791,032
	h. Total	\$ 10,293,629,599	\$ 9,360,586,434
2.	Retired members		
	a. Service retirements	\$ 6,515,186,407	\$ 6,257,694,491
	b. Disability retirements	129,088,372	121,757,402
	c. Beneficiaries	215,501,453	195,003,598
	d. Supplemental medical insurance	409,315,232	402,810,718
	e. \$5,000 post-retirement death benefit	70,913,084	69,239,454
	f. Total	\$ 7,340,004,548	\$ 7,046,505,663
3.	Inactive members		
	a. Vested terminations	\$ 266,107,858	\$ 254,209,777
	b. Nonvested terminations	24,825,328	24,940,262
	c. Suspense fund	23,391,871	22,221,774
	d. Total	\$ 314,325,057	\$ 301,371,813
4.	Total actuarial present value of future benefits	\$ 17,947,959,204	\$ 16,708,463,910

# **Analysis of Normal Cost**

		June 30, 2006 (1)	June 30, 2005 (2)
1.	Gross normal cost rate (payable monthly)		
	a. Retirement benefits	7.65%	7.65%
	b. Deferred termination benefits	1.33%	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	0.14%	0.14%
	g. Disability retirement benefits	0.30%	0.30%
	h. Total	10.52%	10.52%
2.	Less: member rate	<u>7.00%</u>	7.00%
3.	Employer normal cost rate	3.52%	3.52%

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

			Unfunded Actuarial			
Valuation	Actuarial Value of	Actuarial Accrued	Accrued Liability	Funded Ratio	Annual Covered	UAAL as % of
Date	Assets (AVA)	Liability (AAL)	(UAAL) (3) - (2)	(2)/(3)	Payroll	Payroll (4)/(6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
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%

Year Ending	Annual Required	Percentage
June 30,	Contribution	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%

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

## 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, 2006		
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	1.00%		

		June 30, 2006		June 30, 2005	
		 (1)		(2)	
1.	Active members				
	a. Number	87,194		84,286	
	b. Total payroll supplied by System	\$ 3,354,876,252	\$	3,175,161,612	
	c. Average salary	\$ 38,476	\$	37,671	
	d. Average age	45.7		45.6	
	e. Average service	11.6		11.6	
2.	Vested inactive members				
	a. Number	6,171		6,008	
	b. Total annual deferred benefits	\$ 46,902,081	\$	43,694,160	
	c. Average annual deferred benefit	\$ 7,600	\$	7,273	
3.	Nonvested inactive members				
	a. Number	6,606		7,072	
	b. Member contributions with interest due	\$ 24,825,328	\$	24,940,262	
	c. Average refund due	\$ 3,758	\$	3,527	
4.	Service retirees				
	a. Number	38,426		37,650	
	b. Total annual benefits <sup>1, 2</sup>	\$ 660,869,739	\$	633,232,293	
	c. Average annual benefit	\$ 17,199	\$	16,819	
5.	Special service retirees				
	a. Number	122		159	
	b. Total annual benefits <sup>1, 2</sup>	\$ 279,076	\$	356,642	
	c. Average annual benefit	\$ 2,288	\$	2,243	
6.	Disabled retirees				
	a. Number	1,427		1,378	
	b. Total annual benefits $^{1,2}$	\$ 15,331,143	\$	14,507,143	
	c. Average annual benefit	\$ 10,744	\$	10,528	
7.	Beneficiaries and spouses				
	a. Number	1,807		1,692	
	b. Total annual benefits <sup>1, 2</sup>	\$ 25,244,296	\$	22,954,816	
	c. Average annual benefit	\$ 13,970	\$	13,567	

<sup>1</sup> Benefit amounts exclude the supplemental medical insurance payment.

 $^2\,$  Benefit amounts for 2006 include 2.00% COLA effective July 1, 2006

	Active	Members	Covered	Payroll	Average	e 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

### Historical Summary of Active Member Data

		Valuation as of				
	Item		June 30, 2006	June 30, 2005		
	(1)	(2)			(3)	
1.	Cash and cash equivalents	\$	3,812,625	\$	5,865,559	
2.	Receivables					
	a. Employer and member contributions	\$	36,461,726	\$	36,439,084	
	b. State contribution		21,461,402		16,964,703	
	c. Net investment income and other accruals		(141,683,726)		(148,165,641)	
	d. Total receivables	\$	(83,760,598)	\$	(94,761,854)	
3.	Investments					
	a. Invested cash and other	\$	462,979,733	\$	370,052,039	
	b. Domestic equities		3,953,519,890		4,027,784,349	
	c. International equities		1,548,705,880		1,228,377,976	
	d. Fixed income		2,314,691,783		2,068,431,073	
	e. Real estate, furniture & equipment		292,931		320,400	
	f. Total investments	\$	8,280,190,217	\$	7,694,965,837	
4.	Total assets	\$	8,200,242,244	\$	7,606,069,542	
5.	Liabilities					
	a. Benefits payable	\$	14,353,399	\$	55,876,956	
	b. Insurance premium payable		2,500,540		2,515,082	
	c. Expenses		8,042,858		6,713,569	
	d. Total liabilities	\$	24,896,797	\$	65,105,607	
6.	Net assets available (Item 4 - Item 5)	\$	8,175,345,447	\$	7,540,963,935	
7.	Less: Teachers' Deposit Fund		(316,408,261)		(302,876,611)	
8.	Net assets available for OTRS benefits	\$	7,858,937,186	\$	7,238,087,324	

# Plan Net Assets (Assets at Market or Fair Value)

		Valuation as of				
	Item	June 30, 2006	June 30, 2005			
	(1)	(2)	(3)			
a.	Invested cash and other	5.59%	4.81%			
b.	Domestic equities	47.75%	52.34%			
c.	International equities	18.70%	15.96%			
d.	Fixed income	27.95%	26.88%			
e.	Real estate, furniture & equipment	0.01%	0.01%			
f	Total investments	100.00%	100.00%			

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

# **Reconciliation of Plan Net Assets**

		Year Ending				
			June 30, 2006	June 30, 2005		
			(1)		(2)	
1.	Market value of assets at beginning of year, net of Teachers' Deposit Fund	\$	7,238,087,324	\$	6,666,489,439	
2.	Revenue for the year					
	a. Contributions					
	i. Member contributions, including state credit	\$	248,961,067	\$	235,048,239	
	ii. Federal matching funds		16,094,158		14,047,582	
	iii. State contribution		202,200,425		163,919,337	
	iv. Employer/district contributions		241,174,960		227,791,719	
	v. Total	\$	708,430,610	\$	640,806,877	
	b. Net investment earnings					
	i. Interest, dividends and other income	\$	203,649,117	\$	186,376,250	
	ii. Net appreciation/(depreciation)		525,282,129		528,399,334	
	iii. Less: investment expenses		(25,899,915)		(22,819,283)	
	iv. Less: transfers to Teachers' Deposit Fund		(27,943,176)		(28,301,788)	
	v. Net investment earnings	\$	675,088,155	\$	663,654,513	
	c. Total revenue	\$	1,383,518,765	\$	1,304,461,390	
3.	Expenditures for the year					
	a. Refunds		30,864,619	\$	26,755,453	
	b. Benefit payments, including insurance payments		727,379,278		701,895,788	
	c. Administrative expenses		4,425,006		4,212,264	
	d. Total expenditures		762,668,903	\$	732,863,505	
4.	Increase in net assets					
	(Item 2 - Item 3)	\$	620,849,862	\$	571,597,885	
5.	Market value of assets at end of year, net of					
	Teachers' Deposit Fund (Item 1 + Item 4)	\$	7,858,937,186	\$	7,238,087,324	

		Year Ending June 30, 2006		
1.	Market value of assets at beginning of year	\$	7,238,087,324	
2.	Net new investments			
	<ul> <li>a. Contributions</li> <li>b. Benefits paid</li> <li>c. Refunds</li> <li>d. Subtotal</li> </ul>	\$	708,430,610 (727,379,278) (30,864,619) (49,813,287)	
3.	Market value of assets at end of year	\$	7,858,937,186	
4.	Net earnings (3-1-2)	\$	670,663,149	
5.	Assumed investment return rate		8.00%	
6.	Expected return	\$	577,054,454	
7.	Excess return (4-6)	\$	93,608,695	

# **Development of Actuarial Value of Assets**

### 8. Excess return on assets for last four years :

	Period End	Excess Return	Percent Deferred	D	eferred Amount
		(2)	(3)		(4)
a.	June 30, 2003	(178,333,513)	20%	\$	(35,666,703)
b.	June 30, 2004	678,752,243	40%		271,500,897
c.	June 30, 2005	129,636,869	60%		77,782,121
d.	June 30, 2006	93,608,695	80%		74,886,956
				\$	388,503,271
9. Ac	tuarial value of assets	\$	7,470,433,915		
10. Ac	tuarial value as percen		95.1%		

# **Estimation of Yields**

			Year Ending			
				June 30, 2006	June 30, 2005	
				(1)		(2)
A.	Ma	rket value yield				
	1.	Beginning of year market assets	\$	7,238,087,324	\$	6,666,489,439
	2.	Net investment income (including realized and unrealized gains and losses)	\$	675,088,155	\$	663,654,513
	3.	End of year market assets	\$	7,858,937,186	\$	7,238,087,324
	4.	Estimated dollar weighted market value yield		9.4%		10.0%
B.	Ac	tuarial value yield				
	1.	Beginning of year actuarial assets	\$	6,952,687,592	\$	6,660,918,318
	2.	Actuarial return	\$	567,559,610	\$	379,613,638
	3.	End of year actuarial assets	\$	7,470,433,915	\$	6,952,687,592
	4.	Estimated actuarial value yield		8.2%		5.7%

June 30 of	Market	Actuarial
(1)	(2)	(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%

# **History of Investment Return Rates**

Average Returns					
Last Five Years:	7.5%	5.4%			
Last Ten Years:	9.8%	9.9%			
Last Fifteen Years:	10.4%	10.2%			

### **History of Cash Flow**

Distributions and Expenditures								
Year Ending		Benefit		Administrative		External Cash Flow	Market Value	External Cash Flow as Percent
June 30,	Contributions	Payments	Refunds	Expenses	Total	for the Year <sup>1</sup>	of Assets	of Market Value
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1997	443.2	(418.0)	(20.1)	(2.4)	(440.5)	2.7	4,041	0.1%
1998	444.8	(439.2)	(23.0)	(3.3)	(465.5)	(20.7)	4,884	(0.4%)
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%)

Dollar amounts in millions

<sup>1</sup> Column (7) = Column (2) + Column (6).

	Item	Year Ending June 30, 2006			Year Ending June 30, 2005		
	(1)		(2)		(3)		
1.	Actuarial assets, beginning of year	\$	6,952,687,592	\$	6,660,918,318		
2.	Contributions during year	\$	708,430,610	\$	640,806,877		
3.	Benefits and refunds paid	\$	(758,243,897)	\$	(728,651,241)		
4.	Assumed net investment income at 8%						
	a. Beginning of year assets	\$	556,215,007	\$	532,873,465		
	b. Contributions		28,337,224		25,632,275		
	c. Benefits and refunds paid		(30,329,756)		(29,146,050)		
	d. Total	\$	554,222,475	\$	529,359,690		
5.	Expected actuarial assets, end of year (Sum of items 1 through 4)	\$	7,457,096,780	\$	7,102,433,644		
6.	Actual actuarial assets, end of year	\$	7,470,433,915	\$	6,952,687,592		
7.	Asset gain (loss) for year (Item 6 - Item 5)	\$	13,337,135	\$	(149,746,052)		

# **Investment Experience Gain or Loss**

	Item	Year Ending June 30, 2006	Year Ending June 30, 2005
	(1)	(2)	(3)
A.	Calculation of total actuarial gain or loss		
	1. Unfunded actuarial accrued liability (UAAL), previous year	\$ 7,099,746,469	\$ 7,419,230,014
	2. Normal cost for the year (employer and employee)	\$ 344,995,425	\$ 339,379,553
	3. Less: total contributions for the year	\$ (708,430,610)	\$ (640,806,877)
	<ul> <li>4. Interest at 8 %</li> <li>a. On UAAL</li> <li>b. On normal cost</li> </ul>	\$ 567,979,718 13,799,817	\$ 593,538,401 13,575,182
	c. On contributions	(28,337,224)	(25,632,275)
	d. Total	\$ 553,442,311	\$ 581,481,308
	5. Expected UAAL (Sum of Items 1 - 4)	\$ 7,289,753,595	\$ 7,699,283,998
	6. Actual UAAL	\$ 7,672,923,905	\$ 7,099,746,469
	7. Total gain (loss) for the year (Item 5 - Item 6)	\$ (383,170,310)	\$ 599,537,529
B.	Source of gains and losses		
	8. Asset gain (loss) for the year	\$ 13,337,135	\$ (149,746,052)
	9. Liability gain (loss) for the year	119,005,533	27,992,764
	10. 2% Ad-Hoc COLA	(67,219,288)	-
	11. EESIP*	(448,293,690)	-
	12. Assumption changes (Experience Study)		721,290,817
	13. Total	\$ (383,170,310)	\$ 599,537,529

### **Total Experience Gain or Loss**

\*Education Employees Service Incentive Plan

	Basis	e 30, 2006 UAAL § Millions)	1	e 30, 2005 UAAL S Millions)
1.	From prior valuation	\$ 7,099.7	\$	7,419.2
2.	Impact of changes, gains and losses			
	a. Expected increase based on statutory contributions and passage of time	240.6		321.8
	b. Liability (gain)/loss	(119.0)		(28.0)
	c. Asset (gain)/loss	(13.3)		149.7
	d. Impact of actual ctrb less than expected under schedule	(50.5)		(41.7)
	e. 2% Ad-Hoc COLA	67.2		N/A
	f. EESIP*	448.3		N/A
	g. Assumption changes (Change due to revised actuarial assumptions from 2005 experience study)	 0.0		(721.3)
	h. Total	573.2		(319.5)
3.	Current UAAL (1+2h)	\$ 7,672.9	\$	7,099.7

## Analysis of Change in Unfunded Actuarial Accrued Liability (UAAL)

\*Education Employees Service Incentive Plan

Columns may not total due to rounding

		Basis	June 30, 2006 GASB ARC (Percent of Pay)			
1.	Prie	or Valuation GASB 25 Contribution as a percentage of payroll	16.32%			
2.	Inc	reases/(Decreases) due to:				
	a.	Impact of EESIP*	0.76%			
	b.	Impact of 2% Ad-hoc COLA	0.11%			
	c.	Changes in Assumptions and Methods	0.00%			
	d.	Asset (gain)/loss	-0.02%			
	e.	All other plan experience (liability (gain) or loss, differences between actual and expected payroll, differences between actual and expected contributions, etc.)	-0.57%			
	f.	Total	0.28%			
3.	3. Current GASB 25 Contribution as a percentage of payroll16.60%					
	*Education Employees Complex Incentive Disc					

## Analysis of Change in GASB ARC

\*Education Employees Service Incentive Plan

## **Projection of UAAL**

	Valuation Date	UAAL (Millions)
	(1)	(2)
A A	Lana 20, 1002	¢ 2.007.7
A. Actual	June 30, 1993	\$ 3,887.7
	June 30, 1994	4,038.8
	June 30, 1995	4,610.5
	June 30, 1996	4,740.2
	June 30, 1997	4,712.3
	June 30, 1998	4,806.2
	June 30, 1999	4,750.5
	June 30, 2000	4,635.7
	June 30, 2001	5,632.1
	June 30, 2002	5,965.0
	June 30, 2003	5,488.3
	June 30, 2004	7,419.2
	June 30, 2005	7,099.7
	June 30, 2006	7,672.9
D Droinstad	June 20, 2007	7 710 6
B. Projected	June 30, 2007 June 30, 2008	7,719.6
		7,695.9
	June 30, 2009	7,805.7
	June 30, 2010	7,945.5
	June 30, 2011	8,102.4
	June 30, 2012	8,256.7
	June 30, 2013	8,407.5
	June 30, 2014	8,553.9
	June 30, 2015	8,694.9
	June 30, 2016	8,829.4
	June 30, 2017	8,956.0
	June 30, 2018	9,073.4
	June 30, 2019	9,180.0
	June 30, 2020	9,274.1
	June 30, 2021	9,353.9
	June 30, 2022	9,417.2
	June 30, 2023	9,461.9
	June 30, 2024	9,485.5
	June 30, 2025	9,485.5
	June 30, 2026	9,459.2
	<i>vane 50, 2020</i>	2,132.2

	UAAL
Valuation Date	(Millions)
(1)	(2)
June 30, 2027	9,403.5
June 30, 2028	9,315.2
June 30, 2029	9,190.8
June 30, 2030	9,026.2
June 30, 2031	8,817.4
June 30, 2032	8,559.5
June 30, 2033	8,247.7
June 30, 2034	7,876.4
June 30, 2035	7,439.6
June 30, 2036	6,930.7
June 30, 2037	6,342.5
June 30, 2038	5,667.5
June 30, 2039	4,897.3
June 30, 2040	4,022.7
June 30, 2041	3,034.0
June 30, 2042	1,920.3
June 30, 2043	670.2

# Projection of UAAL (cont.)

## **Solvency Test**

Actuarial Accrued Liability and Percent of Active Member Payroll for:

	Accumulate Contribution Inter	s Including	Retiree Beneficiaries Receiving	s Currently	Termir Employees Receiving	Not Yet	Employer I Portion of and Nonveste	Vested		Portion o		ied Liab y Assets	
June 30,	(1)	% of Payroll	(2)	% of Payroll	(3)	% of Payroll	(4)	% of Payroll	Actuarial Value of Assets	(1)	(2)	(3)	(4)
1996	1,799.1	76%	3,586.3	151%	106.7	4%	2,351.1	99%	3,103.0	100%	36%	0%	0%
1997	1,967.9	81%	3,797.8	156%	114.4	5%	2,377.1	98%	3,544.9	100%	42%	0%	0%
1998	2,143.4	84%	4,195.9	165%	125.7	5%	2,426.3	96%	4,085.0	100%	46%	0%	0%
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%	49%	0%	0%

Note : Dollar amounts in millions

## Distribution of Active Members by Age and by Years of Service As of 06/30/2006

						Years o	of Credited	l Service					
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	Total
Attained Age	Count & <u>Avg. Comp.</u>	Count & <u>Avg. Comp.</u>	Count & <u>Avg. Comp.</u>										
Under 25	293 \$17,880		232 \$26,725	33 \$21,789	18 \$20,957	7 \$27,490	0 \$0		0 \$0	0 \$0	0 \$0	0 \$0	1,333 \$25,017
25-29	384 \$19,657	1,885 \$29,284	1,655 \$31,012	905 \$32,224	688 \$32,647	1,014 \$32,648	4 \$28,320		0 \$0	0 \$0		0 \$0	6,535 \$30,439
30-34	339 \$18,099	,	971 \$30,944	608 \$35,564	676 \$34,354	4,023 \$35,487	574 \$38,474	2 \$29,448	0 \$0	0 \$0		0 \$0	8,322 \$33,491
35-39	368 \$16,923	1,105 \$28,128	908 \$31,501	591 \$34,186	618 \$37,634	3,277 \$37,247	2,706 \$39,943	787 \$40,545	4 \$30,927	0 \$0	0 \$0	0 \$0	10,364 \$35,850
40-44	365 \$16,346		789 \$28,597	510 \$32,996	576 \$33,050	3,070 \$36,679	1,950 \$41,428	2,400 \$42,681	711 \$44,938	3 \$51,568	0 \$0	0 \$0	11,342 \$36,891
45-49	334 \$16,779		716 \$29,990	490 \$31,480	484 \$32,997	3,101 \$36,152	2,237 \$39,101	2,140 \$44,427	2,175 \$46,124	1,145 \$47,783	1 \$84,912	0 \$0	13,593 \$38,942
50-54	244 \$15,192		572 \$30,562	383 \$32,768	382 \$36,200	2,665 \$36,887	2,115 \$39,144	2,516 \$42,085	1,922 \$47,248	2,646 \$49,928	872 \$51,549	1 \$41,424	14,946 \$41,585
55-59	198 \$18,565		397 \$30,616	283 \$32,288	249 \$35,588	1,795 \$38,626	1,668 \$38,897	2,277 \$41,559	1,925 \$45,006	1,462 \$53,726	1,565 \$54,481	476 \$55,402	12,723 \$43,394
60-64	89 \$15,709	190 \$24,575	168 \$29,268	134 \$32,846	125 \$29,893	808 \$36,006	807 \$40,066	1,121 \$41,163	842 \$44,252	678 \$52,802	473 \$60,504	597 \$63,049	6,032 \$44,100
65 & Over	57 \$11,958		75 \$22,181	44 \$21,954	63 \$23,115	288 \$29,283	272 \$31,910	344 \$40,135	225 \$44,423	153 \$47,916	143 \$61,788	254 \$84,650	2,004 \$42,389
Total	2,671 \$17,290	7,939 \$28,319	6,483 \$30,299	3,981 \$32,911	3,879 \$34,083	20,048 \$36,313	12,333 \$39,505	11,587 \$42,284	7,804 \$45,758	6,087 \$50,707	3,054 \$54,929	1,328 \$64,423	87,194 \$38,476

## **Summary of Plan Provisions**

- 1. <u>Effective Date</u>: July 1, 1943.
- 2. <u>Plan Year</u>: Twelve-month period ending June 30th.
- 3. <u>Administration</u>: 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. <u>Type of Plan</u>: The System is a qualified governmental defined benefit retirement plan. For GASB purposes, it is a cost-sharing multiple-employer PERS.
- 5. <u>Eligibility</u>: 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 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. <u>Maximum Pay</u>: At one time, 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 his/her benefits, as well as contributions.

This maximum no longer applies in determining the required member and employer contributions for most members. 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, members employed by one of the comprehensive universities who entered the system before July 1, 1995 still have their current member and employer contributions limited according to the following schedule.

	Elected \$40,000 Maximum	Elected <u>\$25,000 Maximum</u>
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 some members employed by one of the comprehensive universities are likewise limited for the period before July 1, 2007.

- 7. <u>Member Contributions</u>: Generally, active members contribute 7% of all compensation to the System. As noted in the preceding item, however, contributions for some members in higher education are limited by a pay maximum. 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 applied to all pay, except as already noted in the case of certain higher education employees. The employer contribution rate for years from July 1, 2002 through December 31, 2006 is 7.05% of covered salary.

Effective Jan. 1, 2007, the employer contribution rate paid by all employers covered by the EESIP increases to 7.60%. This rate then increases to 7.85% for FY 2008 and to 8.00% for FY 2009 and beyond. For employers not covered by the EESIP—the comprehensive and regional four-year universities—the rate remains at 7.05%.

In addition, the State of Oklahoma contributes a percentage of revenues from sales taxes, use taxes, corporate income taxes and individual income taxes. That

percentage is 4.50% for FY 2007 and is scheduled to increase to 5.00% by FY 2008, as shown below.

<b>Fiscal Year</b>	<b>Contribution Percentage</b>
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. Normal Retirement

- 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. <u>Payment Form</u>: 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. <u>Eligibility</u>: 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. <u>Monthly Benefit</u>: 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. <u>Payment Form</u>: Same as for Normal Retirement above.

#### 13. Disability Retirement

- a. <u>Eligibility</u>: 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. <u>Monthly Benefit</u>: Same as for Normal Retirement above (based on current service).
- c. <u>Payment Form</u>: 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. <u>Eligibility</u>: 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. <u>Monthly Benefit</u>: 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. <u>Payment Form</u>: 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. <u>Eligibility</u>: 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. <u>Benefit</u>: 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:

	Percent of
Years of	Interest
Service	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
- <u>Benefit</u>: 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. <u>Optional Forms of Payment</u>: There are optional forms of payment available on an actuarially equivalent basis, as follows:
  - a. <u>Option 1</u> A life annuity with a guaranteed refund of the member's contributions and interest, less a monthly adjustment for benefits paid.
  - b. <u>Option 2</u> 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. <u>Option 3</u> 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. <u>Option 4</u> 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. <u>Option 5</u> 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. <u>Special Retirees</u>: 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 \$191 per month.
- 19. <u>Supplemental Medical Insurance</u>
  - 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. <u>Cost-of-living Increase</u>: 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. <u>EESIP</u>: 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:

<b>Fiscal Year</b>	<b>Contribution Percentage</b>
FY 1995	8.00%
FY 1994	9.00%
FY 1993	11.00%
FY 1992	10.50%
FY 1991	10.00%
FY 1990	10.00%
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 \$950, while for non-classified members, the amount added was \$950.
- 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

1. 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
	Less than \$1,500.00	4.5%
20 Years or more	\$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%
	Less than \$801.00	3.5%
Fewer than 15 years	\$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

1. 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.

## **Summary of Actuarial Assumptions and Methods**

#### I. <u>Valuation Date</u>

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. <u>Actuarial Cost Method</u>

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 2001 through FY 2005.

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. <u>Actuarial Value of Assets</u>

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. <u>Actuarial Assumptions</u>

- 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: 1.0% per year

#### B. <u>Demographic Assumptions</u>

- 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)
10	0.11	0.0 <b>7</b>		• • • •
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

	Expected Deaths per 100 Lives		
Age	Male Female Members 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	

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

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

	Expected Disabilities Occurring per 100 Lives			
	Male	Female		
Age	Members	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:

Expected Terminations per 100 Lives						
Credited Service (Years)						
(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				

a. During the first ten years of Credited Service:

#### b. With 10 or More Years of Credited Service:

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

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

Expected Retirements per 100 Lives				
		educed	Reduced	
	Retir	rement	Retir	rement
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		

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

## C. 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.

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- 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.
- 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. <u>Participant Data</u>

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-ofliving increases would be granted from time to time, without additional funding, and these would average 1.00% per year.

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

## Addendum to June 30, 2006 Actuarial Valuation

## **Certification**

We have prepared an actuarial valuation of the Oklahoma Teachers' Retirement System as of June 30, 2006, for the plan year ending June 30, 2007. 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, 2006.

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 June 30, 2006 valuation.

The results shown in this Addendum are not consistent with those in the June 30, 2006 valuation. The June 30, 2006 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 Retirement Board. For those results, see the June 30, 2006 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, ASA, MAAA, EA

W. Michael Carter, FSA, MAAA, EA

October 26, 2006

October 26, 2006

William B. Fornia, FSA, MAAA, EA

October 26, 2006

## **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, 2006, 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, 2006	June 30, 2005	Amount	Percent
Summary of Costs				
Required State Contribution for				
Current Year under Prescribed				
Assumptions	\$750,523,585	\$730,904,901	\$19,618,684	2.68%
Actual State Contribution Received				
in Prior Year	\$202,200,425	\$163,919,337	\$38,281,088	23.35%

Funded Status				
Actuarial Accrued Liability	\$17,448,276,520	\$16,144,811,021	\$1,303,465,499	8.07%
Actuarial Value of Assets	\$7,470,433,915	\$6,952,687,592	\$517,746,323	7.45%
Unfunded Actuarial Accrued				
Liability	\$9,977,842,605	\$9,192,123,429	\$785,719,176	8.55%

Market Value of Assets and Additional Liabilities						
Market Value of Assets	\$7,858,937,186	\$7,238,087,324	\$620,849,862	8.58%		
Present Value of Projected System						
Benefits						
	\$20,982,590,103 \$19,491,327,483 \$1,491,262,620 7.65%					

		Actuarial Valuation as of				
		June 30,	2006	June 30,		
	Summary of Contribution Requirements	Amount	% of Active Covered Comp	Amount	% of Active Covered Comp	% of Change
1.	Payroll					
	a. Supplied by system	\$3,354,876,252		\$3,175,161,612		5.66%
	b. Adjusted for 1-year's pay increase	\$3,511,499,005		\$3,323,397,002		5.66%
	c. Adjusted for 1-year's pay increase with pay caps	\$3,467,673,925		\$3,279,424,196		5.74%
2.	Total Normal Cost Mid-Year	\$443,458,644	12.79%	\$419,498,676	12.79%	5.71%
3.	Unfunded Actuarial Accrued Liability	\$9,977,842,605		\$9,192,123,429		8.55%
4.	Amortization of Unfunded Actuarial Accrued Liability over 30 years from July 1, 2006	\$817,114,688	23.56%	\$788,020,125	24.03%	3.69%
5.	Total Required Contribution under Prescribed Assumptions (2+4)	\$1,260,573,332	36.35%	\$1,207,518,801	36.82%	4.39%
6.	Estimated Employee Contribution (7% x 1c)	\$242,737,175	7.00%	\$229,559,694	7.00%	5.74%
7.	Estimated local employer and Federal contributions					
	a. Local employers (7.05%)	\$244,471,012	7.05%	\$231,199,406	7.05%	5.74%
	b. Federal	\$22,841,560	0.66%	\$15,854,800	0.48%	44.07%
	c. Total	\$267,312,572	7.71%	\$247,054,206	7.53%	8.20%
8.	Required State Contribution to amortize Unfunded Actuarial Accrued Liability over 30 years from July 1, 2006 (5 - 6 - 7c)	\$750,523,585	21.64%	\$730,904,901	22.29%	2.68%
9.	Previous year's actual State Contribution	\$202,200,425	6.17%	\$163,919,337	5.27%	23.35%
10.	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		em	
		June 30, 2006		June 30, 2005
1. Actuarial Present Value of Benefits				
a. Active members	\$	12,431,232,745	\$	11,286,997,374
b. Inactives		360,883,499		346,072,986
c. Retirees and beneficiaries		8,190,473,859		7,858,257,123
d. Total		20,982,590,103		19,491,327,483
2. Actuarial Present Value of Future Normal Costs	\$	3,534,313,583	\$	3,346,516,462
3. Total Actuarial Accrued Liability (1d - 2)	\$	17,448,276,520	\$	16,144,811,021
4. Actuarial Value of Assets	\$	7,470,433,915	\$	6,952,687,592
5. Unfunded Actuarial Accrued Liability				
(3-4, not less than \$0)	\$	9,977,842,605	\$	9,192,123,429

## **Normal Cost**

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

Component	June 30, 2006	June 30, 2005
Retirement Benefits	\$ 335,670,836	\$ 317,300,185
Withdrawal Benefits	50,255,396	47,527,179
Active Death Benefits	7,690,462	7,272,970
Refunds	23,235,394	21,974,013
Supplemental Medical Insurance	10,475,033	10,168,539
Post Retirement Death Benefits	1,622,353	1,534,280
Disability Benefits	14,509,170	13,721,510
Total Normal Cost (Mid-year)	\$ 443,458,644	\$ 419,498,676
Annual Covered Payroll (with pay caps)	\$ 3,467,673,925	\$ 3,279,424,196
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 (Prescribed)

7.5%, net of investment and administrative expenses, per annum, compound annually.

2. Earnings Progression Sample rates below:

	Merit/ Promotional	Total Salary
Years of Service	Component	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:

		educed rement		luced rement
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		

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			
	Male	Female		
Age	Members	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:

## During the first ten years of Credited Service:

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		

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		

With 10 or More Years of Credited Service:

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

5. Marital Status – Percentage married: 80% of employees are assumed to be married. Age Difference: Males are assumed to be three (3) years older than females.

#### **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%.