State of Oklahoma
Public Employees
Retirement System

Actuarial Valuation Report as of July 1, 2008

Prepared: October 2008

Milliman

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Oklahoma Public Employees Retirement System
Actuarial Valuation Report

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October 16, 2008

Board of Trustees
Oklahoma Public Employees Retirement System
5801 N. Broadway Extension, Suite 400
P.O. Box 53007
Oklahoma City, OK 73152-3007

Dear Members of Board:

At your request, we have completed an actuarial valuation of the Oklahoma Public Employees Retirement System (OPERS) as of July 1, 2008 for the purpose of determining the actuarial contribution rate for the fiscal year ending June 30, 2009 and calculating and analyzing key financial measurements. The major findings of the valuation are contained in this report, which reflects a new set of actuarial assumptions adopted by the Board in May 2008 as the result of an Experience Study. The Board also adopted a new methodology for amortizing the unfunded actuarial accrued liability, the level percent of payroll methodology. This report reflects the four percent COLA for members who were retired as of June 30, 2007, granted by the 2008 legislature. The valuation process anticipates that a COLA will be granted so there was no impact on the valuation results.

In preparing our report, we relied, without audit, on information (some oral and some written) supplied by the System's staff. This information includes, but is not limited to, statutory provisions, member data and financial information. In our examination of these data, we have found them to be reasonably consistent and comparable with data used for other purposes. Since the valuation results are dependent on the integrity of the data supplied, the results can be expected to differ if the underlying data is incomplete or missing. It should be noted that if any data or other information is inaccurate or incomplete, our calculations may need to be revised.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the Actuarial Standards of Practice promulgated by the Actuarial Standards Board (ASB) and the applicable Guides to Professional Conduct, amplifying Opinions, and supporting recommendations of the American Academy of Actuaries.

We hereby further certify that, in our opinion, each actuarial assumption used is reasonably related to the experience of the System and to reasonable expectations which, in combination, represent our best estimate of anticipated experience under the System. Nevertheless, the emerging costs will vary from those presented in this report to the extent actual experience differs from that projected by the actuarial assumptions. The Board of Trustees has the final decision regarding the appropriateness of the assumptions and has adopted them as indicated in Appendix C.

In the course of our valuation, we have examined the relative magnitude of medical benefits provided under Section 401(h) of the Internal Revenue Code. We have determined that these medical benefits are subordinate to the retirement benefits as required.

Actuarial computations presented in this report are for purposes of determining the recommended funding amounts for the System. Actuarial computations under GASB Statement No. 25 are for purposes of fulfilling financial accounting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in this report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and of GASB Statement No. 25. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman's work product was prepared exclusively for OPERS for a specific and limited purpose. It is a complex, technical analysis that assumes a high level of knowledge concerning OPERS' operations, and uses OPERS' data, which Milliman has not audited. It is not for the use or benefit of any third party for any purpose. Any third party recipient of Milliman's work product who desires professional guidance should not rely upon Milliman's work product, but should engage qualified professionals for advice appropriate to its own specific needs.

We would like to express our appreciation to the OPERS staff, who gave substantial assistance in supplying the data on which this report is based.

I, Patrice A. Beckham F.S.A., am a member of the American Academy of Actuaries and a Fellow of the Society of Actuaries, and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

I, Brent A. Banister F.S.A., am a member of the American Academy of Actuaries and a Fellow of the Society of Actuaries, and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

We respectfully submit the following report and look forward to discussing it with you.

MILLIMAN, Inc.

Sincerely,

Patrice Beckham

Patrice A. Beckham, F.S.A.
Consulting Actuary

Brent A. Banister

Brent A. Banister, F.S.A.
Consulting Actuary

SECTION I
BOARD SUMMARY

OVERVIEW

The Oklahoma Public Employees Retirement System provides retirement benefits for most employees of the State of Oklahoma, for most County employees and for employees of Local Employers who have elected to participate in OPERS. This report presents the results of the July 1, 2008 actuarial valuation for the System.

The primary purposes of performing an actuarial valuation are to:

- determine the employer contribution rates required to fund each System on an actuarial basis,
- disclose asset and liability measures as of the valuation date,
- determine the experience of the System since the last valuation date, and
- analyze and report on trends in System contributions, assets, and liabilities over the past several years.

The 2008 Oklahoma Legislature passed two bills (HB3112 and SB1641) that impact members of OPERS. The major provisions of these bills are:

1) HB3112 provides a four percent (4%) COLA for members who were retired as of June 30, 2007 and still receiving a benefit as of July 1, 2008.

2) HB3112 also prevents a retiree from returning to work with the same agency for a period of one year unless the member waives the receipt of their OPERS benefit and returns to work as a regular employee. This also applies to performing services under contract with the same employer.

3) SB1641 provides a benefit cap of 100% of a member's highest annual salary for current OPERS members who are elected after August 21, 2008. Members who are elected officials prior to the effective date of August 21, 2008 are not affected. Members who join OPERS after August 21, 2008 receive a benefit comprised of two separate calculations. Their non-elected years will be multiplied by 2%, and their elected years multiplied by the applicable percentage elected and paid for by the member.

The four percent (4%) COLA is reflected in this valuation. However, the valuation process anticipates that a COLA will be granted so there was no change in the unfunded actuarial accrued liability resulting from the legislation. Although items (2) and (3) are expected to have a positive impact on the System's funding over the long term, they had no impact on the valuation results.

There were changes in the actuarial assumptions and methods used in the actuarial valuation, as the result of the 2007 Experience Study. These include:

- Increase the inflation assumption from 2.5% to 3.0%.
- Set the general wage growth assumption to 4.25%.
- Modify retirement rates for Regular, Elected and Hazardous Duty employees.
- Extend the select period for the termination of employment assumption from 5 to10 years.
- Introduce an assumption regarding election of a refund by terminating vested members.
- Change the amortization methodology for the unfunded actuarial accrued liability from level dollar to level percent of payroll. The Board reset the amortization period to 20 years from July 1, 2007. The previous amortization period was 40 years from July 1, 1987 so the remaining amortization period was unchanged.

The change in assumptions increased the unfunded actuarial accrued liability by $56 million and increased the normal cost rate by 0.06%. The change in the UAAL amortization methodology did not impact the amount of the UAAL or the normal cost rate. However, this change decreased the actuarial contribution rate from 26.68% to 22.98%, or 3.70% of pay.

The valuation results provide a "snapshot" view of the System's financial condition on July 1, 2008. The unfunded actuarial accrued liability for the System increased by $99 million due to various factors. A detailed analysis of the change in the unfunded actuarial accrued liability from July 1, 2007 to July 1, 2008 is shown on page 4.

The highlights of the valuation are:

	Actuarial Valuation Date	
Funded Status ($M)	**July 1, 2008**	**July 1, 2007**
Actuarial Accrued Liability	$8,894	$8,413
Actuarial Value of Assets	$6,492	$6,110
Unfunded Actuarial Accrued Liability (UAAL)	$2,402	$2,303
Funded Ratio (Actuarial Value)	73.0%	72.6%
Funded Ratio (Market Value)	70.3%	78.9%

There was a small liability gain, which decreased the actuarial accrued liability by $16 million more than expected (0.18% of expected liability). The components of this net liability gain are identified on page 5 of this report.

The net return on the market value of assets was a - 4.2% for the year ended June 30, 2008. The actuarial value of assets is determined using a method to smooth gains and losses in order to develop more stable contribution rates. The return on the actuarial value of assets was approximately 8.1%, which resulted in an actuarial gain of $36 million.

The actuarial contribution rate for the employer decreased from 2007 to 2008:

	Actuarial Valuation Date	
Contribution Rate	**July 1, 2008**	**July 1, 2007**
Normal Cost	12.46%	12.34%
Amortization of UAAL	10.13%	13.39%
Budgeted Expenses	0.39%	0.40%
Actuarial Contribution Rate	22.98%	26.13%
Less Estimated Member Contribution Rate	(4.04%)	(4.02%)
Employer Actuarial Contribution Rate	18.94%	22.11%
Less State Statutory Contribution Rate	(14.50%)	(13.50%)
Contribution Shortfall	4.44%	8.61%

The amortization methodology was changed from level dollar to level percent of payroll, which decreased the UAAL payment for the current year from 13.83% to 10.13%. In addition, the employer contribution rate increased 1% and there was favorable experience for the year. As a result, the shortfall between the employer actuarial contribution rate and the statutory contribution rate decreased significantly. However, a shortfall still exists between the statutory and actuarial contribution rate, which results in an increase in the UAAL.

EXPERIENCE

July 1, 2007 – June 30, 2008

In many respects, an actuarial valuation can be thought of as an inventory process. The inventory is taken as of the actuarial valuation date, which for this valuation is July 1, 2008. On that date, the assets available for the payment of benefits are appraised. The assets are compared with the liabilities of the System, which are generally in excess of assets. The actuarial process leads to a method of determining the contributions needed by members and employers in the future to balance the System assets and liabilities.

Changes in the System's assets and liabilities impacted the change in the actuarial contribution rates between the July 1, 2007 and July 1, 2008 actuarial valuations. Each component is examined in the following discussion.

ASSETS

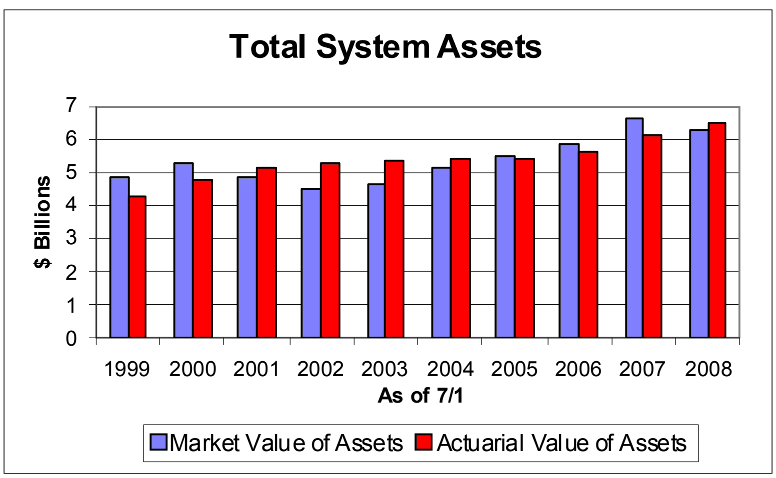
As of July 1, 2008, the System had total funds when measured on a market value basis of $6.3 billion. This was a decrease of $0.3 billion from the July 1, 2007 figure of $6.6 billion. The market value of assets is not used directly in the calculation of contribution rates. An asset valuation method is used to smooth the effect of market fluctuations. See Table 3 on page 14 for the detailed development of the actuarial value of assets as of July 1, 2008.

The actuarial value of assets as of July 1, 2008, was $6.5 billion. The annualized dollar-weighted rate of return for FY2008, measured on the actuarial value of assets, was approximately 8.1% and measured on the market value of assets was a - 4.2%, net of investment expenses.

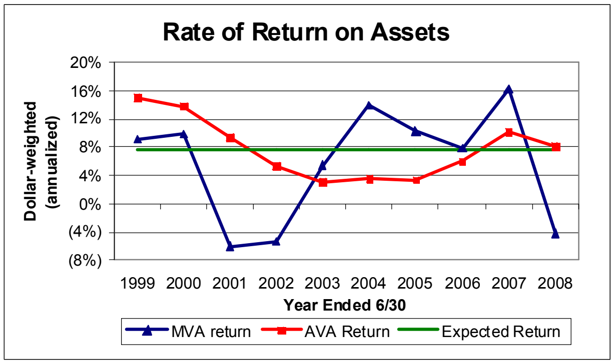
The components of the change in the market and actuarial value of assets for the System (in millions) are set forth below.

	Market Value $(millions)	Actuarial Value $(millions)
Net Assets, July 1, 2007	$6,640	$6,110
• Employer and Member Contributions	286	286
• Benefit Payments and Expenses	(395)	(395)
• Investment Income	(276)	491
Net Assets, July 1, 2008	$6,255	$6,492
Estimated Rate of Return	- 4.2%	8.1%

Due to the use of an asset smoothing method, there is $237 million of net deferred investment loss that has not yet been recognized. This deferred investment experience will be reflected in the actuarial value of assets over the next four years.



The market value of assets during this period has been both higher and lower than the actuarial value of assets. This is to be expected when using an asset smoothing method.



Rates of return on the market value of assets are very volatile. The return on the actuarial value of assets illustrates the advantage of using an asset smoothing method.

SYSTEM LIABILITIES

The actuarial accrued liability is that portion of the present value of future benefits that will not be paid by future employer normal costs or member contributions. The difference between this liability and asset values at the same date is referred to as the unfunded actuarial accrued liability (UAAL). The unfunded actuarial accrued liability will be reduced if the employer's contributions exceed the employer's normal cost for the year, after allowing for interest earned on the previous balance of the unfunded actuarial accrued liability. Benefit improvements, experience gains and losses, and changes in actuarial assumptions and methods will also impact the total actuarial accrued liability (AAL) and the unfunded portion thereof.

The unfunded actuarial accrued liability is as follows:

Actuarial Accrued Liability	$ 8,894,287,254
Actuarial Value of Assets	6,491,928,362
Unfunded Actuarial Accrued Liability	$ 2,402,358,892

See Table 5 on page 17 for the detailed development of the Actuarial Accrued Liability and Table 8 on page 21 for the calculation of the Unfunded Actuarial Accrued Liability.

Other factors influencing the UAAL from year to year include actual experience versus that expected based on the actuarial assumptions (both asset and liability), changes in actuarial assumptions, procedures or methods and changes in benefit provisions. The change in the actuarial assumptions increased the UAAL by $56 million. The actual experience measured in this valuation is that which occurred during the prior plan year (fiscal year 2008). There was an experience gain from both the experience on the actuarial value of assets and experience on the actuarial accrued liability.

Between July 1, 2007 and July 1, 2008 the change in the unfunded actuarial accrued liability for the System was as follows (in millions):

	$ millions
Unfunded Actuarial Accrued Liability, July 1, 2007	$2,303
• effect of contributions less than actuarial rate	148
• expected decrease due to amortization method	(53)
• investment experience	(36)
• liability experience[1]	(16)
• change in actuarial assumptions	56
• change in benefit provisions	0
Unfunded Actuarial Accrued Liability, July 1, 2008	$2,402

[1] Liability loss is about 0.18% of total actuarial accrued liability.

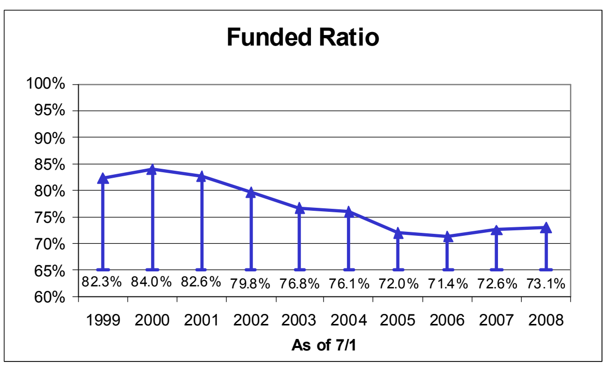
The liability loss for the System can be allocated to experience related to each actuarial assumption as follows:

Liability Source	Impact on AAL ($M)	% of Expected Liability
Salary increases	$(42.1)	(0.47%)
Mortality	(70.4)	(0.79)
Termination of employment	33.0	0.37
Retirements	11.0	0.12
Disability	4.4	0.05
New entrants and rehires	33.8	0.39
Miscellaneous/data change	14.1	0.15
Total (gain)/loss	$(16.2)	(0.18%)

A detailed summary of the change in the unfunded actuarial accrued liability is shown in Table 10 on page 23.

An evaluation of the unfunded actuarial accrued liability on a pure dollar basis may not provide a complete analysis since only the difference between the assets and liabilities (which are both very large numbers) is reflected. Another way to evaluate the unfunded actuarial accrued liability and the progress made in its funding is to track the funded status, the ratio of the actuarial value of assets to the actuarial accrued liability. The funded status information is shown below (in millions).

	7/1/05	7/1/06	7/1/07	7/1/08
Actuarial Value of Assets	$5,450	$5,654	$6,110	$6,492
Actuarial Accrued Liability	7,575	7,914	8,413	8,894
Funded Ratio	72.0%	71.4%	72.6%	73.0%
Unfunded Actuarial Accrued Liability (UAAL)	$2,125	$2,260	$2,303	$2,402



The System's funded status has decreased significantly over the past 10 years. Numerous factors have contributed to the decline including changes in benefit provisions, contributions less than the actuarial rate, changes in actuarial assumptions, demographic experience and investment experience from 2001-03. The funded status has stabilized and increased slightly in recent years.

CONTRIBUTION RATES

The funding objective of the System is to pay the normal cost rate plus an amount which will pay off the unfunded actuarial accrued liability over a 20-year period commencing July 1, 2007 (the Board reset the amortization period, but it did not change the number of years remaining in the period).

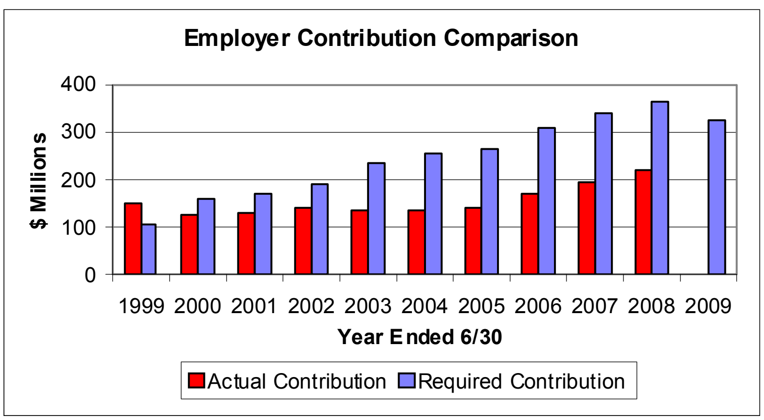
Under the Entry Age Normal cost method, the actuarial contribution rate consists of:

- a "normal cost" for the portion of projected liabilities allocated by the actuarial cost method to service of members during the year following the valuation date,
- an "unfunded actuarial accrued liability contribution" for the excess of the portion of projected liabilities allocated to service to date over the actuarial value of assets.

Contributions to the Retirement System are made by the members and their employers. Most State employees pay 3.5% of compensation. Local government employees contribute from 3.5% to 8.5% of compensation, depending on the rate chosen by their employers. Starting in 2004, participants were eligible to make an election to contribute an additional 2.91% of pay and to increase their benefit accrual multiplier for future years of service to 2.5%. Elected officials and Hazardous Duty employees have different required contributions (see the Summary of System Provisions section of this report).

Effective July 1, 1999, the State's contribution rate was reduced from 12.5% to 10.0% of payroll and stayed at that level until 2005. For the same period, the total employer and employee contribution rates for county and local employees was 13.5% of payroll. As of July 1, 2005, the State's contribution rate increased to 11.5% of payroll and increases an additional 1% each July 1 until it reaches 16.5% on July 1, 2010. It is scheduled to remain at 16.5% thereafter. For county and local employees, the contribution rate increased to 15.0% on July 1, 2005 and increases an additional 1% of payroll each year beginning July 1, 2006 until it reaches 20.0% on July 1, 2010. The ultimate contribution rate for the State is still less than the employer actuarial contribution rate for fiscal year 2009 of 18.94% developed in this valuation.

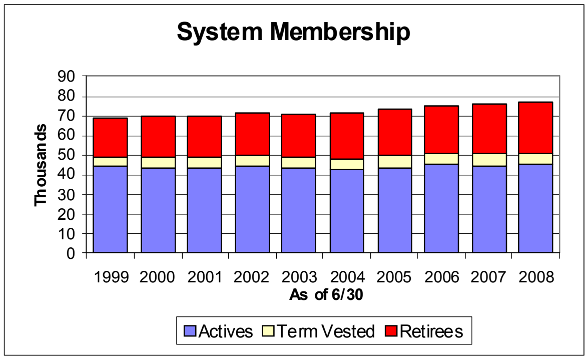
The following graph shows the total required employer contribution compared to the amount actually received in each year. The funding policy contribution equals the System's normal cost, budgeted expenses and an amortization of the unfunded actuarial accrued liability. For July 1, 1998 and prior years, the unfunded actuarial accrued liability was amortized over 25 years from July 1, 1987. For the July 1, 1999 valuation, the amortization period was changed to 40 years from July 1, 1987. For the July 1, 2008 valuation, the amortization was changed to 20 years from July 1, 2007 (no change in the number of years remaining). At July 1, 2008, 19 years remain in the amortization period.



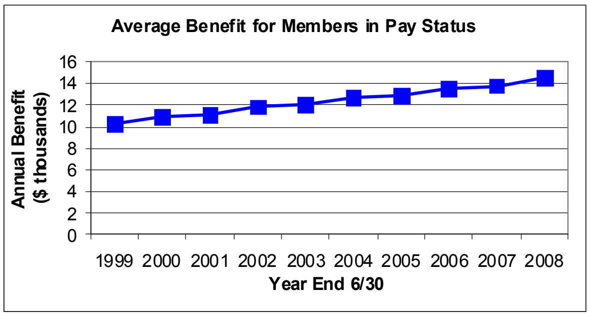
MEMBER INFORMATION

The number of active members included in the valuation increased by just under 1% from 2007 to 2008. Historically, the size of the active group has remained fairly stable. There was a change in the way the data records were transmitted and handled for members for whom no application has been filed. Last year, only new "No App" records from FY 2007 were included in that category. This year, the System provided a full data file for this group. Actual data was used where available. If data was missing, an assumption was made regarding the missing item.

Retired member counts and average retirement benefit amounts continue to increase steadily. There were 26,033 retirees and beneficiaries in the 2008 valuation, with an average benefit of $1,204 per month. This represents a 5.1% increase in the average monthly benefit from the previous year.



The size of the active group has been very stable over the last 10 years. The number of terminated vested members and retirees has increased, which is to be expected in an ongoing retirement system.



The average benefit for retirees has climbed steadily over the past 10 years as new retirees retire with higher salaries and, therefore, receive higher benefits than those already retired. In addition, most of the members who die are older with smaller benefits. Ad hoc COLAs granted by the Legislature have also increased the average benefit during this period.

SUMMARY

Under the System's funding policy, the unfunded actuarial accrued liability (UAAL) is paid off over the remaining amortization period of 19 years with payments that are a level percent of payroll. Given the current funded status of the System, the relative values of market and actuarial value of assets, and the current schedule for increased employer contributions, the System is not expected to be in actuarial balance over the long term (current assets plus present value of future contributions is equal to or greater than the present value of future benefits). Based on the projection model developed in conjunction with the 2007 valuation, the statutory contribution rate and the actuarial contribution rate are not expected to converge before the end of the amortization period. Based on these projections, which assume that all assumptions are met each year (including a 7.5% return on the market value of assets), the current schedule of contributions will be insufficient to amortize the UAAL by 2027. If the UAAL is to be amortized by 2027, a higher contribution rate will be necessary. To the extent actual experience is less favorable than expected, particularly investment return, the contribution shortfall will be greater and the System's funded status will be lower.

A summary of key data elements and valuation results as of July 1, 2008 and July 1, 2007 are presented on the following page. More detail on each of these elements can be found in the following Sections of this report.

SUMMARY OF PRINCIPAL RESULTS

OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM

	7/1/2008 Valuation	7/1/2007 Valuation	% Change
1. PARTICIPANT DATA			
Number of:			
Active Members*	45,120	44,712	0.9
Retired and Disabled Members and Beneficiaries	26,033	25,233	3.2
Inactive Members	5,580	5,637	(1.0)
Total Members	76,733	75,582	1.5
Projected Annual Salaries of Active Members*	$ 1,682,663,413	$ 1,626,737,832	3.4
Annual Retirement Payments for Retired Members and Beneficiaries	$ 376,147,494	$ 346,932,229	8.4
*Includes "No Application" members			
2. ASSETS AND LIABILITIES			
Total Actuarial Accrued Liability	$ 8,894,287,254	$ 8,413,248,130	5.7
Market Value of Assets	6,255,207,565	6,640,477,411	(5.8)
Actuarial Value of Assets	6,491,928,362	6,110,230,058	6.2
Unfunded Actuarial Accrued Liability	2,402,358,892	2,303,018,072	4.3
Funded Ratio	73.0%	72.6%	0.6
3. EMPLOYER CONTRIBUTION RATES AS A PERCENT OF PAYROLL			
Normal Cost Rate	12.46%	12.34%	1.0
Amortization of Unfunded Actuarial Accrued Liability	10.13%	13.39%	(24.3)
Budgeted Expenses	0.39%	0.40%	(2.5)
Actuarial Required Contribution Rate	22.98%	26.13%	(12.1)
Less Estimated Member Contribution Rate	4.04%	4.02%	0.5
Employer Actuarial Required Contribution Rate	18.94%	22.11%	(14.3)
Less Statutory State Employer Contribution Rate	14.50%	13.50%	7.4
Contribution Shortfall	4.44%	8.61%	(48.4)

SECTION 2

SCOPE OF THE REPORT

This report presents the actuarial valuation of the Oklahoma Public Employees Retirement System (OPERS) as of July 1, 2008. This valuation was prepared at the request of the System's Board of Trustees.

The reader is encouraged to review the actuarial certification letter, where the guidelines employed in the preparation of this report are outlined. Also included in this letter are comments on the sources and reliability of both the data and the actuarial assumptions upon which our findings are based. Those comments are the basis for our certification that this report is complete and accurate to the best of our knowledge and belief.

A summary of the findings resulting from this valuation is presented in the previous section. Section 3 describes the assets and investment experience of the System. Sections 4 and 5 describe how the obligations of the System are to be met under the actuarial cost method in use.

This report includes several appendices and an addendum:

- Appendix A — Schedules of valuation data classified by various categories of members.
- Appendix B — A summary of the current benefit structure, as determined by the provisions of governing law on July 1, 2008.
- Appendix C — A summary of the actuarial methods and assumptions used to estimate liabilities and determine contribution rates.
- Appendix D — A glossary of actuarial terms.
- Addendum — Provides actuarial results based on assumptions prescribed in 74 Okla. Stat, Section 909.1(H)

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SECTION 3

ASSETS

Market Value of Assets

The current market value represents the "snapshot" or "cash-out" value of System assets as of the valuation date. In addition, market values of assets provide a basis for measuring investment performance from time to time. At July 1, 2008 the market value of assets for the Retirement System was $6.3 billion. Table 1 on page 12 is a comparison, at market values, of System assets as of July 1, 2008, and July 1, 2007, in total and by investment category. Table 2 on page 13 summarizes the change in the market value of assets from July 1, 2007 to June 30, 2008.

Actuarial Value of Assets

Neither the market value of assets, representing a "cash-out" value of System assets, nor the book value of assets, representing the cost of investments, may be the best measure of the System's ongoing ability to meet its obligations.

To arrive at a suitable value for the actuarial valuation, a technique for determining the actuarial value of assets is used, which dampens swings in the market value while still indirectly recognizing market values.

The actuarial value of assets is based on a five-year moving average of expected and actual market values determined as follows:

- at the beginning of each fiscal year, a preliminary expected actuarial asset value is calculated as the sum of the previous year's actuarial value increased with a year's interest at the System valuation rate plus net cash flow adjusted for interest (at the same rate) to the end of the previous fiscal year;

- the expected actuarial asset value is set equal to the preliminary expected actuarial value plus the unrecognized investment gains and losses as of the beginning of the previous fiscal year;

- the difference between the expected actuarial asset value and the market value is the investment gain or loss for the previous fiscal year;

- the (final) actuarial asset value is the preliminary value plus 20% of the investment gains and losses for each of the five previous fiscal years, but in no case more than 120% of the market value or less than 80% of the market value.

Table 3 on page 14 shows the development of the actuarial value of assets (AVA) as of the valuation date.

TABLE 1
OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM
ANALYSIS OF NET ASSETS AT MARKET VALUE

	June 30, 2008			June 30, 2007		
		Amount ($ Millions)	% of Total		Amount ($ Millions)	% of Total
Cash & Equivalents	$	61.5	1.0	$	42.8	0.6
Short-term Investments		29.6	0.5		163.2	2.4
Government Obligations		1,468.1	22.9		1,580.2	22.9
Corporate Bonds		1,013.3	15.8		907.8	13.1
Domestic Equity		2,378.7	37.1		2,882.5	41.8
International Equity		1,456.6	22.7		1,321.0	19.2
Subtotal	$	6,407.8	100.0	$	6,897.5	100.0
Property (net)		0.6			0.7	
Other assets		0.1			0.1	
Net Receivables/(Payables)		(153.3)			(257.8)	
Net Assets	$	6,255.2		$	6,640.5	

TABLE 2
OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM
SUMMARY OF CHANGES IN NET ASSETS

(Market Value)

	Fiscal Year Ended June 30	
	2008	**2007**
1. Market Value of Net Assets at Beginning of Year	$ 6,640,477,411	$ 5,817,165,538
2. Contributions:		
a. Members	66,699,385	64,179,909
b. State and Local Agencies	220,075,992	197,756,938
c. Total Contributions (2a) + (2b)	286,775,377	261,936,847
3. Net Investment Income:		
a. Net appreciation/(depreciation) in fair value of investments	(434,708,712)	800,498,608
b. Interest	123,079,649	111,670,097
c. Dividends	35,326,965	31,227,351
d. Securities lending activities	5,428,770	1,549,987
e. Other	75,945	57,300
f. Total investment income/(loss) (3a) + (3b) + (3c) + (3d) + (3e)	(270,797,383)	945,003,343
g. Investment expenses	(5,850,149)	(6,213,878)
h. Net investment income/(loss) (3f) + (3g)	(276,647,532)	938,789,465
i. Total additions (2c) + (3h)	10,127,845	1,200,726,312
4. Deductions:		
a. Retirement, death, and survivor benefits	377,974,103	361,045,265
b. Refunds and withdrawals	12,848,142	11,815,777
c. Administrative expenses	4,575,446	4,553,397
d. Total deductions (4a) + (4b) + (4c)	395,397,691	377,414,439
5. Net Change in Assets (3i) - (4d)	(385,269,846)	823,311,873
6. Market Value of Net Assets at End of Year (1) + (5)	$ 6,255,207,565	$ 6,640,477,411

TABLE 3
OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM
ACTUARIAL VALUE OF ASSETS

Schedule Of Asset Gains/(Losses)

Year End	Original Amount	Recognized in Prior Years	Recognized in This Year	Recognized in Future Years
2004	$ 239,722,094	$ 191,777,676	$ 47,944,418	$ 0
2005	121,831,139	73,098,684	24,366,228	24,366,227
2006	30,656,285	12,262,514	6,131,257	12,262,514
2007	518,970,886	103,794,177	103,794,177	311,382,532
2008	(730,915,087)	0	(146,183,017)	(584,732,070)
Total	$ 180,265,317	$ 380,933,051	$ 36,053,063	$ (236,720,797)

Development of Actuarial Value of Assets

1. Actuarial value as of July 1, 2007	$	6,110,230,058
2. Contributions		
a. Member	$	66,699,385
b. Employer		220,075,992
c. Total (a) + (b)	$	286,775,377
3. Decreases during year		
a. Benefit payments	$	(377,974,103)
b. Return of member contributions		(12,848,142)
c. Noninvestment expenses		(4,575,446)
d. Total (a) + (b) + (c)	$	(395,397,691)
4. Expected return at 7.5% on:		
a. Item 1	$	458,267,254
b. Item 2 (one-half year)		10,559,662
c. Item 3 (one-half year)		(14,559,361)
d. Total (a) + (b) + (c)	$	454,267,555
5. Expected actuarial value as of June 30, 2008 (1) + (2) + (3) + (4)	$	6,455,875,299
6. Unrecognized asset gain/(loss) as of June 30, 2007	$	530,247,353
7. Expected actuarial value June 30, 2007, plus previous year's unrecognized asset gain/(loss) (5) + (6)	$	6,986,122,652
8. Market value June 30, 2008	$	6,255,207,565
9. Year end 2008 asset gain/(loss) (8) – (7)	$	(730,915,087)
10. Asset gain/(loss) to be recognized as of June 30, 2008	$	36,053,063
11. Initial actuarial value July 1, 2008 (5) + (10)	$	6,491,928,362
12. Constraining values:		
a. 80% of market value (8) x 0.8	$	5,004,166,052
b. 120% of market value (8) x 1.2	$	7,506,249,078
13. Actuarial value as of July 1, 2008 (11), but no less than (12a), nor greater than (12b)	$	6,491,928,362

SECTION 4

SYSTEM LIABILITIES

In the previous section, an actuarial valuation was compared with an inventory process, and an analysis was given of the inventory of assets of the System as of the valuation date, July 1, 2008. In this section, the discussion will focus on the commitments of the System, which are referred to as its liabilities.

Table 4 on page 16 contains an analysis of the actuarial present value of all future benefits (PVFB) for contributing members, inactive members, retirees and their beneficiaries. The analysis is provided for each group.

The liabilities summarized in Table 4 include the actuarial present value of all future benefits expected to be paid with respect to each member. For an active member, this value includes measures of both benefits already earned and future benefits expected to be earned. For all members, active and retired, the value extends over benefits earnable and payable for the rest of their lives and, if an optional benefit is chosen, for the lives of the surviving beneficiaries.

The actuarial assumptions used to determine liabilities are based on the results of an Experience Study based on the three year period ended June 30, 2007. This set of assumptions, as shown in Appendix C, was first used for the July 1, 2008 valuation.

The liabilities reflect the benefit structure in place as of July 1, 2008. Additionally, the liabilities shown in the report assume a 2% annual COLA will be granted by the Legislature in future years.

Actuarial Liabilities

A fundamental principle in financing the liabilities of a retirement program is that the cost of its benefits should be related to the period in which benefits are earned, rather than to the period of benefit distribution. An actuarial cost method is a mathematical technique that allocates the present value of future benefits into annual costs. In order to do this allocation, it is necessary for the funding method to "breakdown" the present value of future benefits into two components:

(1) that which is attributable to the past, and

(2) that which is attributable to the future.

Actuarial terminology calls the part attributable to the past the "past service liability" or the "actuarial accrued liability". The portion allocated to the future is known as the present value of future normal costs, with the specific piece of it allocated to the current year being called the "normal cost". Table 5 contains the calculation of actuarial liabilities for all groups.

The System uses an assumption of a 2% annual COLA each year in developing liabilities and contribution rates even though the System does not have an automatic COLA provision. Ad hoc COLAs have historically been granted by the Legislature every other year. In order to avoid actuarial gains in the year in which a COLA is not granted and an actuarial loss in the years in which a COLA is granted, the System's liabilities include a "COLA Reserve". The COLA Reserve is included in the actuarial accrued liability to account for expected cost of living adjustments to the benefits of retired participants that have not been granted by the valuation date. Any ad hoc increase granted will decrease the reserve amount by the cost of the increase. When the cost of an ad hoc increase is greater than the amount of the reserve, the reserve is set to zero and the period for calculating ungranted increases is set to the valuation date.

TABLE 4
OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM
PRESENT VALUE OF FUTURE BENEFITS (PVFB)
AS OF JULY 1, 2008

	Regular	Elected Officials	Hazardous Duty	Total
1. Active employees				
a. Retirement Benefit	$ 4,323,597,405	$ 274,723,881	$ 291,201,991	$ 4,889,523,277
b. Withdrawal Benefit	260,039,638	12,559,814	13,882,567	286,482,019
c. Pre-Retirement Death Benefit	110,098,631	3,425,120	5,356,692	118,880,443
d. Disability Benefit	172,967,052	9,129,382	7,764,186	189,860,620
e. Return of Member Contributions	35,005,883	551,272	4,100,919	39,658,074
f. Supplementary Medical Benefit	186,687,447	5,394,352	10,275,118	202,356,917
g. Total	$ 5,088,396,056	$ 305,783,821	$ 332,581,473	$ 5,726,761,350
2. Inactive Nonvested Members				21,201,495
3. Inactive Vested Members				344,355,716
4. Return of Excess Contributions				970,852
5. Disabled Members				123,443,866
6. Retirees				3,687,844,379
7. Beneficiaries				239,080,603
8. Supplementary Medical Benefit for Retirees and Inactive Vested Members				172,674,554
9. COLA Reserve				33,638,825
10. Total PVFB				$ 10,349,971,640

TABLE 5
OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM
ACTUARIAL ACCRUED LIABILITY
AS OF JULY 1, 2008

	Regular	Elected Officials	Hazardous Duty	Total
1. Present Value of Future Benefits for Active Members				
a. Retirement Benefit	$ 4,323,597,405	$ 274,723,881	$ 291,201,991	$ 4,889,523,277
b. Withdrawal Benefit	260,039,638	12,559,814	13,882,567	286,482,019
c. Pre-Retirement Death Benefit	110,098,631	3,425,120	5,356,692	118,880,443
d. Disability Benefit	172,967,052	9,129,382	7,764,186	189,860,620
e. Return of Member Contributions	35,005,883	551,272	4,100,919	39,658,074
f. Supplementary Medical Benefit	186,687,447	5,394,352	10,275,118	202,356,917
g. Total	$ 5,088,396,056	$ 305,783,821	$ 332,581,473	$ 5,726,761,350
2. Present Value of Future Normal Costs for Active Members				
a. Retirement Benefit	$ 916,097,651	$ 39,567,337	$ 75,955,531	$ 1,031,620,519
b. Withdrawal Benefit	146,651,601	7,617,023	8,225,194	162,493,818
c. Pre-Retirement Death Benefit	28,739,038	688,864	1,926,630	31,354,532
d. Disability Benefit	56,525,734	2,298,204	2,768,800	61,592,738
e. Return of Member Contributions	93,543,132	3,349,859	10,894,970	107,787,961
f. Supplementary Medical Benefit	56,398,090	1,351,465	3,085,263	60,834,818
g. Total	$ 1,297,955,246	$ 54,872,752	$ 102,856,388	$ 1,455,684,386
3. Present Value of Future Benefits for Inactive Members				4,623,210,290
4. Total Actuarial Accrued Liability (1g) - (2g) + 3				$ 8,894,287,254

TABLE 6
OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM
DEVELOPMENT OF COLA RESERVE

1. Reserve as of July 1, 2007	$	88,225,940
2. Interest at 7.5%		6,616,946
3. Reserve increment		80,052,750
4. Expected reserve as of July 1, 2008 (1) + (2) + (3)		174,895,636
5. Ad hoc cost of living increase during year ended June 30, 2008		(141,256,810)
6. Actual reserve on July 1, 2008 (4) less (5), not less than $0	$	33,638,825

SECTION 5

EMPLOYER CONTRIBUTIONS

The previous two sections were devoted to a discussion of the assets and liabilities of the System. A comparison of Tables 3 and 4 indicates that current assets fall short of meeting the present value of future benefits (total liability). This is expected in all but a fully closed down fund, where no further contributions are anticipated.

In an active system, there will almost always be a difference between the actuarial value of assets and total liabilities. This deficiency has to be made up by future contributions and investment returns. An actuarial valuation sets out a schedule of future contributions that will deal with this deficiency in an orderly fashion.

The method used to determine the incidence of the contributions in various years is called the actuarial cost method. Under an actuarial cost method, the contributions required to meet the difference between current assets and current liabilities are allocated each year between two elements: (1) the normal cost and (2) the payment on the unfunded actuarial accrued liability.

The term "fully funded" is often applied to a system in which contributions at the normal cost rate are sufficient to pay for the benefits of existing employees as well as for those of new employees. More often than not, systems are not fully funded, either because of past benefit improvements that have not been completely funded and/or because of actuarial deficiencies that have occurred because experience has not been as favorable as anticipated. Under these circumstances, an unfunded actuarial accrued liability (UAAL) exists.

Description of Rate Components

The actuarial cost method used by the System is the traditional Entry Age Normal (EAN) – level percent of pay cost method. Under the EAN cost method, the actuarial present value of each member's projected benefit is allocated on a level basis over the member's compensation between the entry age of the member and the assumed exit ages. The portion of the actuarial present value allocated to the valuation year is called the normal cost. The actuarial present value of benefits allocated to prior years of service is called the actuarial accrued liability. The unfunded actuarial accrued liability represents the difference between the actuarial accrued liability and the actuarial value of assets as of the valuation date. The unfunded actuarial accrued liability is calculated each year and reflects experience gains/losses.

Effective with the July 1, 2008 valuation, the UAAL is amortized as a level percent of payroll over a closed 20-year period commencing July 1, 2007. Prior to 2008, the unfunded actuarial accrued liability was amortized as a level dollar amount over a 40-year period from July 1, 1987. Given a stable active workforce, the level percent of payroll amortization method is expected to produce a payment stream that is constant as a percent of covered payroll.

Contribution Rate Summary

The normal cost rate is developed in Table 7 on page 20. Table 8 on page 21 develops the contribution rate for amortization of the unfunded actuarial accrued liability. Table 9 on page 22 develops the total actuarial contribution rate.

TABLE 7
OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM
NORMAL COST RATE
AS OF JULY 1, 2008

	Regular	Elected Officials	Hazardous Duty	Total	% of Pay
1. Normal Cost at Beginning of Year					
a. Retirement Benefit	$ 132,863,595	$ 7,702,024	$ 10,659,734	$ 151,225,353	8.99%
b. Withdrawal Benefit	18,817,924	1,287,909	1,121,123	21,226,956	1.26%
c. Pre-Retirement Death Benefit	3,995,359	130,529	271,661	4,397,549	0.26%
d. Disability Benefit	7,460,919	406,152	377,669	8,244,740	0.49%
e. Return of Member Contributions	12,501,696	601,518	1,519,953	14,623,167	0.87%
f. Supplementary Medical Benefit	9,189,899	292,358	443,542	9,925,799	0.59%
g. Total	$ 184,829,391	$ 10,420,491	$ 14,393,682	$ 209,643,564	12.46%
2. Estimated Payroll for the Year	$ 1,558,653,572	$ 36,674,028	$ 87,335,813	$ 1,682,663,413	
3. Normal Cost Rate [(1g) / (2)]	11.86%	28.41%	16.48%	12.46%	

TABLE 8
OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM
UNFUNDED ACTUARIAL ACCRUED LIABILITY CONTRIBUTION RATE
AS OF JULY 1, 2008

1. Actuarial Present Value of Future Benefits	$	10,349,971,640
2. Actuarial Present Value of Future Normal Costs		1,455,684,386
3. Actuarial Accrued Liability (1) - (2)	$	8,894,287,254
4. Actuarial Value of Assets		6,491,928,362
5. Unfunded Actuarial Accrued Liability (UAAL) (3) - (4)	$	2,402,358,892
6. Amortization of UAAL over 20 years from July 1, 2007 (assumed mid-year) *	$	170,395,498
7. Total Estimated Payroll for Year Ending June 30, 2009	$	1,682,663,413
8. Amortization as a Percent of Payroll		10.13%

* The UAAL is amortized as a level percent of payroll, assuming payroll increases of 4.25% per year.

TABLE 9
OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM
ACTUARIAL CONTRIBUTION RATE

	July 1 2008	July 1 2007
1. Total Normal Cost Rate	12.46%	12.34%
2. Amortization of UAAL	10.13% [1]	13.39% [2]
3. Budgeted Expenses [3]	0.39%	0.40%
4. Total Actuarial Contribution Rate (1) + (2) + (3)	22.98%	26.13%
5. Estimated Member Contribution Rate	4.04%	4.02%
6. Employer Actuarial Contribution Rate (4) - (5)	18.94%	22.11%

[1] Amortization of UAAL is level percent of payroll.
[2] Amortization of UAAL is level dollar payment.
[3] Provided by the system

TABLE 10
OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM
CALCULATION OF ACTUARIAL GAIN/(LOSS)

The actuarial gain/(loss) is comprised of both the liability and the actuarial asset gain/(loss). Each of these represents the difference between the expected and actual values as of July 1, 2008.

1. Expected actuarial accrued liability		
a. Actuarial accrued liability at July 1, 2007	$	8,413,248,130
b. Normal cost at July 1, 2007		200,716,279
c. Benefit payments for fiscal year ending June 30, 2008		(390,822,245)
d. Interest on (a), (b), and (c)		631,656,447
e. Change in assumptions		55,650,163
f. Change in plan provisions		0
g. Expected actuarial accrued liability at July 1, 2008 (a) + (b) + (c) + (d) + (e) + (f)	$	8,910,448,774
2. Actuarial accrued liability at July 1, 2008	$	8,894,287,254
3. Actuarial accrued liability gain/(loss) (1g) – (2)	$	16,161,520
4. Expected actuarial value of assets		
a. Actuarial value of assets at July 1, 2007	$	6,110,230,058
b. Contributions for fiscal year ending June 30, 2008		286,775,377
c. Benefit payments and administrative expenses for fiscal year ending June 30, 2008		(395,397,691)
d. Interest on (a), (b), and (c)		454,267,556
e. Expected actuarial value of assets at July 1, 2008 (a) + (b) + (c) +(d)	$	6,455,875,300
5. Actuarial value of assets at July 1, 2008	$	6,491,928,362
6. Actuarial value of assets gain/(loss) (5) – (4e)	$	36,053,062
7. Net actuarial gain/(loss) (3) + (6)	$	52,214,582

TABLE 11
OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM
SUMMARY OF CONTRIBUTION REQUIREMENTS

	Actuarial Valuation as of		
	July 1, 2008	July 1, 2007	
	Amount	Amount	Percent Change in Amount
1. Expected annual payroll	$ 1,682,663,413	$ 1,626,552,249	3.4%
2. Total normal cost	$ 209,643,564	$ 200,716,279	4.4%
3. Unfunded actuarial accrued liability	$ 2,402,358,892	$ 2,303,018,072	4.3%
4. Amortization of unfunded actuarial accrued liability over 20 years from July 1, 2007	$ 170,395,498 [1]	$ 217,885,110 [2]	(21.8%)
5. Budgeted expenses (provided by the System)	$ 6,548,483	$ 6,429,870	1.8%
6. Total required contribution (2) + (4) + (5)	$ 386,587,545	$ 425,031,259	(9.0%)
7. Estimated member contribution	$ 63,482,772	$ 61,116,907	3.9%
8. Required employer contribution (6) – (7)	$ 323,104,773	$ 363,914,352	(11.2%)
9. Previous year's actual contribution			
a. Member	$ 66,699,385	$ 64,179,909	3.9%
b. Employer	220,075,992	197,756,938	11.3%
c. Total	$ 286,775,377	$ 261,936,847	9.5%

[1] Amortization of UAAL is level percent of payroll.
[2] Amortization of UAAL is level dollar payment.

SECTION 6

ACCOUNTING AND OTHER INFORMATION

Governmental Accounting Standards Board Statement No. 25, Financial Reporting for Defined Benefit Pension Plans as amended by GASB 50, (referred to as GASB 25), establishes financial reporting standards for defined benefit pension plans. In addition to two required statements regarding plan assets, the statement requires two schedules and accompanying notes disclosing information relative to the funded status of the plan and historical contribution patterns.

- The Schedule of Funding Progress provides information about whether the financial strength of the Plan is improving or deteriorating over time.

- The Schedule of Employer Contributions provides historical information about the annual required contribution (ARC) and the percentage of the ARC that was actually contributed.

In addition to information required by GASB, we also provide an exhibit showing the present value of accumulated benefits under FASB Statement No. 35 and an exhibit showing the expected benefit payments for the System.

TABLE 12
OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM
ACCOUNTING INFORMATION FOR GASB 25

Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percent of Covered Payroll ((b-a)/c)
7/1/2003	$5,354,795,771	$6,974,586,356	$1,619,790,585	76.8%	$1,411,719,256	114.7%
7/1/2004	5,412,166,797	7,114,778,205	1,702,611,408	76.1%	1,383,965,233	123.0%
7/1/2005	5,450,664,963	7,575,419,808	2,124,754,845	72.0%	1,454,210,509	146.1%
7/1/2006	5,654,276,043	7,914,657,886	2,260,381,843	71.4%	1,568,350,023	144.1%
7/1/2007	6,110,230,058	8,413,248,130	2,303,018,072	72.6%	1,626,737,832	141.6%
7/1/2008	6,491,928,362	8,894,287,254	2,402,358,892	73.0%	1,682,663,413	142.8%

Valuation Date	7/1/08
Actuarial Cost Method	Entry Age Normal
Amortization Method	Level Percent of Pay, Closed
Remaining Amortization Period	19 years
Asset Valuation Method	5 Year Moving Average (see Appendix C)
Actuarial Assumptions:	
Investment Rate of Return	7.5%
Projected Salary Increases	5.1% - 9.0%
Cost of Living Adjustment	2%

TABLE 13
OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM
ACCOUNTING INFORMATION FOR GASB 25

Schedule of Employer Contributions
For the Fiscal Year Ended June 30

Year	Annual Required Contribution	Percentage Contributed
2003	$232,891,719	59.1%
2004	257,038,902	51.9%
2005	266,044,444	52.5%
2006	309,980,339	55.3%
2007	338,550,016	58.4%
2008	363,914,352	60.5%

The Annual Required Contribution (ARC) is calculated each year as part of the actuarial valuation. The ARC includes the employer's normal cost and an amortization payment of the unfunded actuarial accrued liability, in accordance with the parameters in GASB 25. This exhibit shows the dollar amount of ARC applicable each of the last six years and the percentage of the ARC that was actually contributed by the employer.

TABLE 14
OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM
FASB NO. 35 INFORMATION
ACTUARIAL PRESENT VALUE OF ACCUMULATED BENEFITS

The actuarial present value of vested and nonvested accumulated System benefits is computed on an ongoing System basis in order to provide information on benefit liabilities calculated in accordance with Financial Accounting Standards Board Statement No. 35. In this calculation, a determination is made of all benefits earned by current participants as of the valuation date; the actuarial present value is then computed using demographic assumptions and an assumed interest rate. Assumptions regarding future salary and accrual of future benefit service are not necessary for this purpose. *An assumption of 2% annual future ad hoc cost-of-living increases is not reflected in this liability. Only System liabilities accrued (and in statute) as of the valuation date are included.*

	July 1	
	2008	**2007**
Vested benefits		
Active members	$ 2,044,393,656	$ 1,899,501,811
Terminated vested members	290,628,014	288,683,063
Unclaimed contributions	21,201,495	18,972,309
Limited benefit	970,852	1,029,680
Retirees and beneficiaries	3,476,574,503	3,212,312,158
Supplemental medical insurance premiums	302,656,684	297,663,694
Total vested benefits	$ 6,136,425,204	$ 5,718,162,715
Nonvested benefits		
Active members	$ 208,208,380	$ 201,137,897
Members who have not completed an application	0	1,031,938
Total nonvested benefits	$ 208,208,380	$ 202,169,835
Total accumulated benefits	$ 6,344,633,584	$ 5,920,332,549
Market value of assets available for benefits	$ 6,255,207,565	$ 6,640,477,411
Funded ratio	98.6%	112.2%
Number of members		
Vested members		
Active members	22,670	22,475
Terminated vested members	5,580	5,637
Retirees and beneficiaries	26,033	25,233
Total vested members	54,283	53,345
Nonvested active members	22,450	22,237
Total members	76,733	75,582

TABLE 14 (continued)
OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM
FASB NO. 35 INFORMATION
ACTUARIAL PRESENT VALUE OF ACCUMULATED BENEFITS

A statement of changes in the actuarial present value of accumulated System benefits follows. This statement shows the effect of certain events on the actuarial present value shown on the previous page.

Present value of accrued benefits as of July 1, 2007	$	5,920,332,549
Increase/(decrease) during the year attributable to:		
Benefits accrued and (gains)/losses		226,572,565
Increase for interest due to discount period		429,369,107
Benefits paid		(390,822,245)
Plan provision change (COLA)		141,256,810
Assumption change		17,924,797
Net increase/(decrease)	$	424,301,034
Present value of accrued benefits as of July 1, 2008	$	6,344,633,584

TABLE 15
OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM
TEN-YEAR PROJECTED BENEFIT PAYMENTS

The chart below shows estimated benefits expected to be paid over the next ten years, based on the assumptions used in this valuation. The "Actives" column shows benefits expected to be paid to members currently active on July 1, 2008. The "Retirees" column shows benefits expected to be paid to all other members. This includes those who, as of July 1, 2008, are receiving benefit payments or who terminated employment and are entitled to a deferred vested benefit.

Retirement, Survivor, and Withdrawal Benefits

Year Ending June 30	Actives	Retirees	Total
2009	$20,361,715	$378,574,593	$398,936,308
2010	51,503,132	380,165,470	431,668,602
2011	84,579,234	380,887,822	465,467,056
2012	119,342,435	381,065,579	500,408,014
2013	156,274,259	380,886,681	537,160,940
2014	194,787,204	380,155,532	574,942,736
2015	234,647,093	379,409,735	614,056,828
2016	275,026,797	377,952,744	652,979,541
2017	316,139,662	376,094,621	692,234,283
2018	357,774,774	373,381,909	731,156,683

Supplementary Medical Premium Benefits

Year Ending June 30	Actives	Retirees	Total
2009	$1,479,426	$17,076,489	$18,555,915
2010	3,290,718	16,757,447	20,048,165
2011	5,112,765	16,425,979	21,538,744
2012	6,935,024	16,069,950	23,004,974
2013	8,762,697	15,722,148	24,484,845
2014	10,573,923	15,348,722	25,922,645
2015	12,310,784	15,021,767	27,332,551
2016	13,929,128	14,699,372	28,628,500
2017	15,490,310	14,412,808	29,903,118
2018	16,969,698	14,115,962	31,085,660

APPENDIX A
OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM
COMPARATIVE SUMMARY OF MEMBER DATA

	Actuarial Valuation as of 7/1/2008	7/1/2007	% Change
Summary of Data			
1. Active members			
a. Number			
i) Active members	45,120	43,666	3.3%
ii) Members without an application	0	1,046	(100.0%)
iii) Total	45,120	44,712	0.9%
b. Annual compensation	$ 1,682,663,413	$ 1,626,737,832	3.4%
c. Average annual compensation	37,293	36,383	2.5%
d. Average age	46.2	46.3	(0.2%)
e. Average service	10.5	10.7	(2.5%)
2. Accumulated member contributions			
a. Active members	$ 439,754,417	$ 409,159,195	7.5%
b. Unclaimed contribution amounts	21,201,495	18,972,309	11.7%
c. Members without applications	(incl. in active)	510,956	
d. Total	$ 460,955,912	$ 428,642,460	7.5%
3. Vested terminated members			
a. Number	4,014	4,030	(0.4%)
b. Annual deferred benefits	$ 33,661,975	$ 33,334,936	1.0%
c. Average annual deferred benefit	$ 8,386	$ 8,272	1.4%
d. Annual supplemental medical insurance premiums	$ 5,057,640	$ 5,077,800	(0.4%)
4. Assumed deferred vested - count	1,566	1,607	(2.6%)
5. Retired members			
a. Number	21,980	21,349	3.0%
b. Annual retirement benefits	$ 337,999,824	$ 312,237,017	8.3%
c. Average annual retirement benefit	15,378	$ 14,625	5.1%
d. Annual supplemental medical insurance premiums	$ 16,066,260	$ 15,871,273	1.2%
6. Beneficiaries			
a. Number	2,618	2,496	4.9%
b. Annual retirement benefits	$ 24,750,345	$ 22,362,876	10.7%
c. Average annual deferred benefit	$ 9,454	$ 8,959	5.5%
7. Disabled members			
a. Number	1,435	1,388	3.4%
b. Annual retirement benefits	$ 13,397,325	$ 12,332,336	8.6%
c. Average annual retirement benefit	9,336	$ 8,885	5.1%
d. Annual supplemental medical insurance premiums	$ 992,880	$ 980,954	1.2%
8. Total members included in valuation	76,733	75,582	1.5%

APPENDIX A
OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM
MEMBER RECORD RECONCILIATION

			Receiving Benefits			
	Active Members	**Vested Terminated**	**Retirees**	**Disability Retirees**	**Benefici-aries**	**Total Members**
As of July 1, 2007	**44,712**	**5,637**	**21,349**	**1,388**	**2,496**	**75,582**
Age retirements	(1,141)	(291)	1,432	0	0	0
Disability retirements	(54)	(40)	0	94	0	0
Deaths without payments continuing	(63)	(29)	(632)	(29)	(129)	(882)
Deaths with payments continuing	(32)	(18)	(181)	(19)	250	0
Nonvested terminations/refund of contributions	(3,400)	(119)	0	0	0	(3519)
Vested terminations	(572)	572	0	0	0	0
Transfers	0	0	(1)	1	0	0
Data adjustments	0	18	16	0	1	35
Rehires	153	(150)	(3)	0	0	0
New entrants during the year	5,517	0	0	0	0	5,517
Net Change	432	(57)	631	47	122	1,175
As of July 1, 2008	**45,120**	**5,580**	**21,980**	**1,435**	**2,618**	**76,733**

APPENDIX A
OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM
DATA TAPE RECONCILIATION

	Active	Retired	Vested Terminated	Total
Records submitted on data tape	43,971	43,532	4,039	91,542
Remove deceased retiree records	0	(17,499)	0	(17,499)
Remove unusable data	(24)	0	0	(24)
Remove those with another status	(96)	0	(25)	(121)
Add those with no application	1,269	0	0	1,269
Add assumed vesteds	0	0	1,566	1,566
Total valued	**45,120**	**26,033**	**5,580**	**76,733**

APPENDIX A
OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM
SUMMARY OF MEMBERSHIP DATA

ACTIVE MEMBER DATA

	7/1/2008	7/1/2007
Regular		
Number	41,913	40,538
Average Current Age	46.4	46.5
Average Service	10.5	10.8
Average Pay	$37,188	$36,521
Elected Officials		
Number	761	758
Average Current Age	53.6	53.1
Average Service	14.8	14.3
Average Pay	$48,192	$45,548
Hazardous Duty		
Number	2,446	2,370
Average Current Age	40.6	40.6
Average Service	8.6	8.6
Average Pay	$35,706	$35,783
Total		
Number	45,120	43,666*
Average Current Age	46.2	46.3
Average Service	10.5	10.7
Average Pay	$37,293	$36,638

*Count excludes those with no application

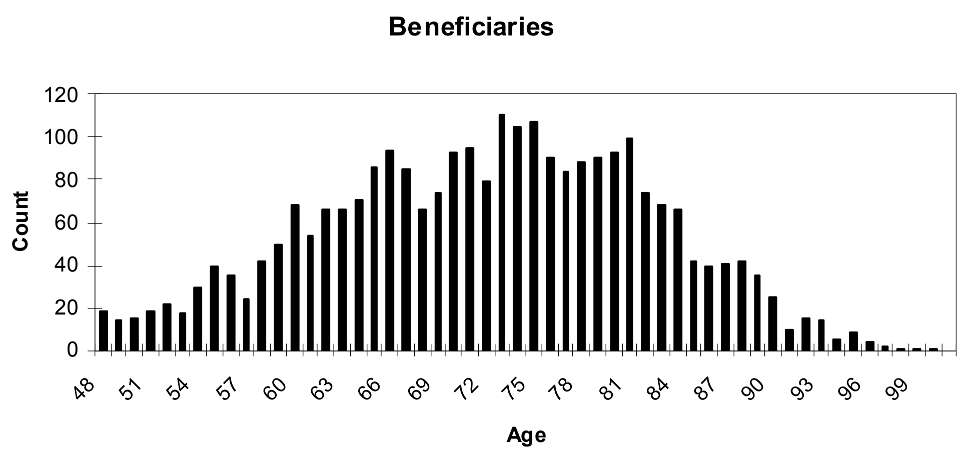
APPENDIX A
OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM
SUMMARY OF MEMBERSHIP DATA

INACTIVE MEMBER DATA

	7/1/2008	7/1/2007
Retirees		
Number	21,980	21,349
Average Annual Benefit	$15,378	$14,625
Average Age	70.9	70.9
Disability Retirees		
Number	1,435	1,388
Average Annual Benefit	$9,336	$8,885
Average Age	61.0	60.6
Beneficiaries		
Number	2,618	2,496
Average Annual Benefit	$9,454	$8,959
Average Age	71.9	71.9
Total		
Number	26,033	25,233
Average Annual Benefit	$14,449	$13,749
Average Age	70.5	70.4
Vested Members		
Number	5,580	5,637
Average Annual Benefit	$9,622	$9,654
Average Age	50.7	50.5

APPENDIX A
OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM
DISTRIBUTION OF RETIREES AND BENEFICIARIES
as of July 1, 2008

Count: 23,415 Average age: 70.3 Average benefit: $ 15,007



Count: 2,618 Average age: 71.9 Average benefit: $ 9,454

APPENDIX A
OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM
DISTRIBUTION OF VESTED MEMBERS
as of July 1, 2008

Count: 5,580 Average age: 50.7 Average benefit: $ 9,622

Includes assumed vested members

APPENDIX A

OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM

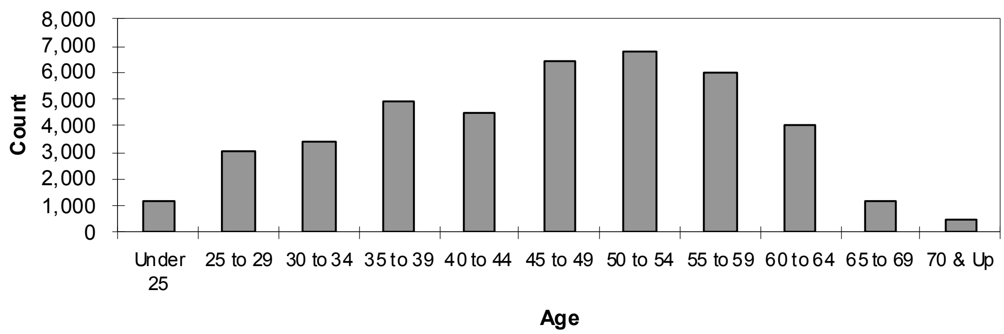
DISTRIBUTION OF ACTIVE MEMBERS

as of July 1, 2008

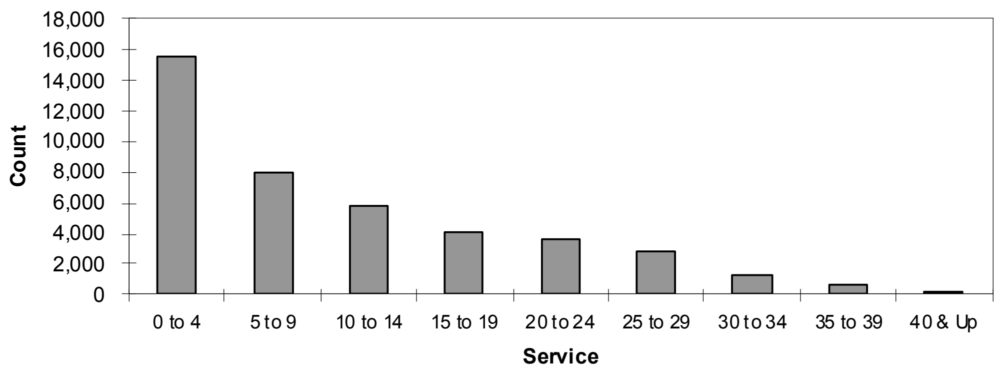
Regular Members

	Service									
Age	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & Up	Total
Under 25	1,191	25	0	0	0	0	0	0	0	1,216
25 to 29	2,620	456	9	0	0	0	0	0	0	3,085
30 to 34	2,002	1,080	281	4	0	0	0	0	0	3,367
35 to 39	2,707	1,146	857	201	11	0	0	0	0	4,922
40 to 44	1,556	983	879	658	350	32	0	0	0	4,458
45 to 49	1,709	1,155	939	820	947	750	70	0	0	6,390
50 to 54	1,569	1,147	929	838	847	964	421	74	1	6,790
55 to 59	1,200	971	893	771	779	623	460	283	29	6,009
60 to 64	710	678	661	565	540	336	207	203	99	3,999
65 to 69	208	244	227	190	133	85	50	37	27	1,201
70 & Up	90	85	86	89	54	35	17	7	13	476
Total	15,562	7,970	5,761	4,136	3,661	2,825	1,225	604	169	41,913

Age Distribution



Service Distribution



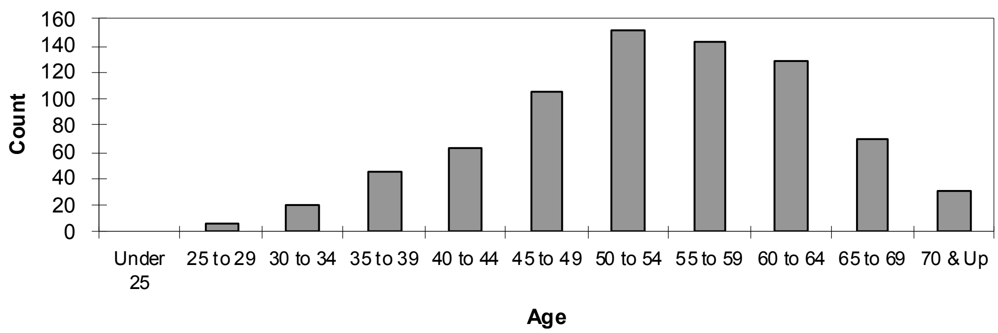
Excludes members who have not filed an application

APPENDIX A
OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM
DISTRIBUTION OF ACTIVE MEMBERS
as of July 1, 2008

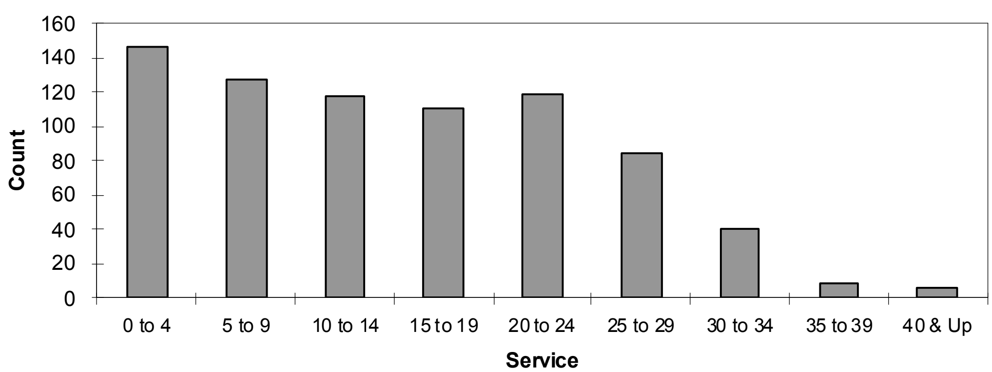
Elected Members

Age	Service: 0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & Up	Total
Under 25	0	0	0	0	0	0	0	0	0	0
25 to 29	5	1	0	0	0	0	0	0	0	6
30 to 34	13	2	5	0	0	0	0	0	0	20
35 to 39	16	15	12	2	0	0	0	0	0	45
40 to 44	20	9	15	8	8	2	0	0	0	62
45 to 49	14	20	13	20	18	19	1	0	0	105
50 to 54	19	20	16	17	34	30	15	1	0	152
55 to 59	23	19	13	28	29	13	14	3	0	142
60 to 64	21	19	22	23	17	15	6	4	2	129
65 to 69	10	17	16	6	11	4	4	1	1	70
70 & Up	6	5	6	7	2	1	0	0	3	30
Total	147	127	118	111	119	84	40	9	6	761

Age Distribution



Service Distribution

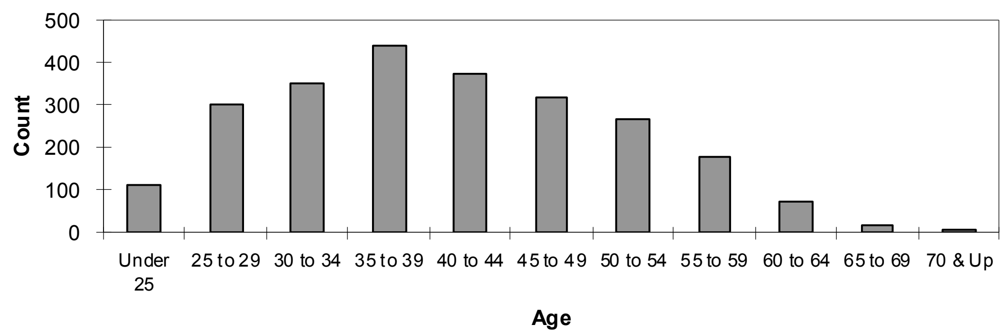


APPENDIX A
OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM
DISTRIBUTION OF ACTIVE MEMBERS
as of July 1, 2008

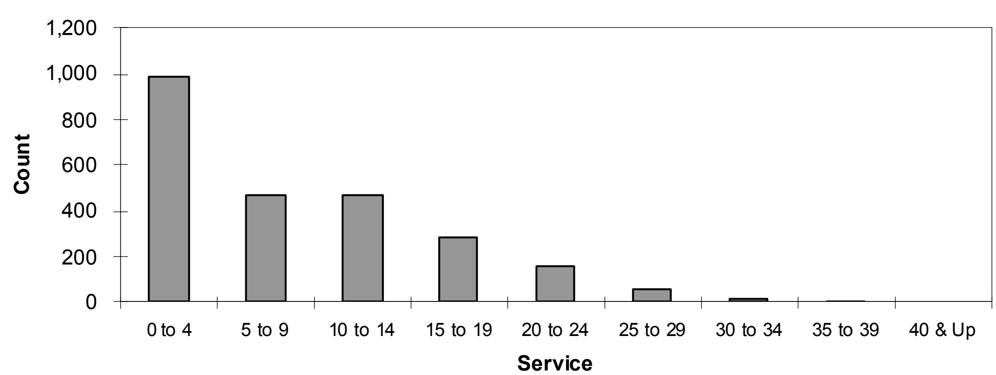
Hazardous Duty Members

	Service									
Age	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & Up	Total
Under 25	112	1	0	0	0	0	0	0	0	113
25 to 29	249	52	0	0	0	0	0	0	0	301
30 to 34	180	123	51	0	0	0	0	0	0	354
35 to 39	194	97	124	23	1	0	0	0	0	439
40 to 44	80	56	108	100	31	0	0	0	0	375
45 to 49	72	59	56	60	60	9	0	0	0	316
50 to 54	51	37	63	51	34	25	9	0	0	270
55 to 59	36	28	38	34	24	11	4	5	0	180
60 to 64	8	14	23	14	8	5	2	2	0	76
65 to 69	3	2	5	3	2	1	0	0	0	16
70 & Up	2	2	1	0	0	1	0	0	0	6
Total	987	471	469	285	160	52	15	7	0	2,446

Age Distribution



Service Distribution



APPENDIX B
OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM
SUMMARY OF SYSTEM PROVISIONS

Following is a summary of the major System provisions used in the actuarial valuation of the System.

Effective date and fiscal year

The System became effective January 1, 1964. The fiscal year is July 1 to June 30.

Administration

The System is administered by a 13 member Oklahoma Public Employees Retirement System Board of Trustees. The Board acts as the fiduciary for investment and administration of the System.

Employees included

All permanent employees of the State of Oklahoma, legislated agencies, and any other employer such as county, county hospital, city, or trust in which a municipality is the primary beneficiary, are eligible to join if:

- the employee is not eligible for or participating in another retirement system authorized under Oklahoma law, is covered by Social Security and is not participating in the U.S. Civil Service Retirement System,
- the employee is scheduled for 1,000 hours per year and salary is not less than the hourly rate of the monthly minimum wage for State employees (for employees of local government employers, not less than the hourly rate of the monthly minimum wage for such employees).

Membership is mandatory for new eligible employees on the first of the month following employment.

Employer and employee contributions

Most State employees except elected officials and Hazardous Duty employees:

Employee: 3.5%
Employer: 14.5%*
Total: 18.0%

* The employer contribution rate will increase by 1% annually through the fiscal year ending June 30, 2011 at which time it reaches 16.5%.

Prior to July 1, 2006 the employee contribution rate varied on pay above/below $25,000 as shown in the chart at the end of this section. This plan provision was changed by the 2006 Legislature.

Elected officials select a contribution rate of 4.5%, 6%, 7.5%, 8.5%, 9%, or 10% which determines the computation factor used in determining their benefit.

Employer and employee contributions (continued)

Contributions for Hazardous Duty employees are summarized at the end of this appendix.

Local government employees contribute from 3.5% to 8.5% of pay, depending on the rate chosen by their employers.

Starting in 2004, regular members may make an election to contribute an additional 2.91% of pay and increase their accrual rate for future years of service to 2.5% (referred to as Step-Up Option).

Contributions are based on compensation defined by the Board.

Contribution Summary: Regular State Contributions (By Statute)

	For Pay Under $25,000			
Fiscal Year	**Employer Contribution**	**Employee Contribution**	**Total Contribution**	**Applicable Salary Cap**
1994-1995	11.5%	2.0%	13.5%	$50,000
1995-1996	11.5%	2.0%	13.5%	$60,000
1996-1997	12.0%	2.5%	14.5%	$70,000
1997-1998	12.5%	3.0%	15.5%	$80,000
1998-1999	12.5%	3.0%	16.0%	No Cap
1999-2005	10.0%	3.0%	13.0%	No Cap
2005-2006	11.5%	3.0%	14.5%	No Cap

	For Pay Between $25,000 and Cap			
Fiscal Year	**Employer Contribution**	**Employee Contribution**	**Total Contribution**	**Applicable Salary Cap**
1994-1995	11.5%	3.5%	15.0%	$50,000
1995-1996	11.5%	3.5%	15.0%	$60,000
1996-1997	12.0%	3.5%	15.5%	$70,000
1997-1998	12.5%	3.5%	16.0%	$80,000
1998-1999	12.5%	3.5%	16.0%	No Cap
1999-2005	10.0%	3.5%	13.5%	No Cap
2005-2006	11.5%	3.5%	15.0%	No Cap

Employer and employee contributions
(continued)

	For All Pay		
Fiscal Year	**Employer Contribution**	**Employee Contribution**	**Total Contribution**
2006-2007	12.5%	3.5%	16.0%
2007-2008	13.5%	3.5%	17.0%
2008-2009	14.5%	3.5%	18.0%
2009-2010	15.5%	3.5%	19.0%
2010-2011	16.5%	3.5%	20.0%

Service

Prior service

All service of the employee prior to the employer's entry date is credited prior service providing the participating employer joined on or before January 1, 1975. Prior service for employees of employers who join after January 1, 1975, may be purchased by the employee. Prior service is allowed for certain active wartime military service (maximum 5 years credit) for members employed prior to July 1, 2000 and for employment with public schools or Board of Regents for Higher Education prior to July, 1943. Service need not be continuous employment to be credited.

Participating service

After the employer's entry date, a member's participating service is credited for all periods of employment for which required contributions are made. Service is prorated according to hours worked per month on and after July 1, 1979. Certain active wartime military service is credited, provided the contribution accumulation is not withdrawn. Active and retired members are credited with additional participating service based on their accumulated contributions prior to June 30, 1977 (if not withdrawn prior to retirement), according to the following:

Member Accumulation			Additional Years
$ 1	to	$ 500	1
501	to	1,000	2
1,001	to	1,500	3
1,501	to	2,000	4
2,001	or	More	5

A member who has withdrawn his contributions and later returns to membership may repay the amount withdrawn plus interest as determined by the Board to reinstate participating service which was canceled by his withdrawal.

Service (continued)

Participating service

A member may receive credit for those years of service as an elected official if the member is not receiving credit for that service in any other public retirement system. The member must pay an amount equal to the actuarial cost to fund the difference between the member's projected benefits with and without the additional service credit.

The total participating service of a member who retires or terminates employment and elects a vested benefit shall include up to one hundred thirty (130) days of unused sick leave accumulated subsequent to August 1, 1959, during the member's employment with any participating employer. Such credit shall be added in terms of whole months. If unused sick leave entitles the member to an additional year of service, the additional cost is borne by the employer.

A member may receive credit for those years of credited service accumulated by the member while a member of the Oklahoma Firefighters Pension and Retirement System, the Oklahoma Police Pension and Retirement System, the Uniform Retirement System for Justices and Judges, the Oklahoma Law Enforcement Retirement System, or the Teachers' Retirement System of Oklahoma, if the member is not receiving or eligible to receive retirement credit or benefits from this service in any other public retirement system. The member may receive credit for this service by paying the amount actuarially determined to cover the cost of the previous service.

Credited service

Credited service equals prior service plus participating service. This service is added together and the result is rounded up to the next year if the number of remaining months is equal to or greater than six.

Compensation

The member's basic salary and wages as defined by the Board of Trustees, including amounts contributed to deferred compensation plans. Overtime and moving expenses are excluded.

Final average compensation

The average of the thirty-six highest months of compensation earned within the last ten (10) years of participating service, subject to any applicable salary caps and on which contributions have been made.

Final average compensation (continued)

For all members hired prior to July 1, 1995, the minimum final average compensation is $13,800. For members hired on or after July 1, 1995, no minimum is applied until the member has fifteen (15) years of service. For members with between fifteen (15) and twenty (20) years of service, the minimum final average compensation is $6,900. For members with more than twenty (20) years of service, the minimum is $13,800.

Normal retirement date

Normal retirement is the earliest of: first day of the month coinciding with or next following the 62nd birthday; or, the first day of the month coinciding with or following the date at which the sum of a member's age and number of years of credited service total eighty (80) if the member was hired prior to July 1, 1992; or following the date at which the sum of member's age and number of years of credited service total ninety (90) if the member was hired after July 1, 1992. Members employed after January 1, 1983 must complete at least six years of full-time equivalent employment with a participating employer before receiving any retirement benefits.

The normal retirement date for elected officials is the first of the month coinciding with or following the official's 60th birth date or the first day of the month coinciding with or following the date at which the sum of the member's age and years of credited service total eighty (80).

Normal retirement benefit

The benefit on or after normal retirement, payable monthly for life to non-elected members, is as follows:

2% of final average compensation multiplied by years of credited service.

For members who have elected the Step-Up Option, a 2.5% multiplier is applied to the "stepped-up" full years.

The benefit payable monthly for life to elected officials is the greater of 1) the preceding benefit, or 2) the benefit calculated using highest annual compensation as an elected official times credited service multiplied by the following applicable contribution rate):

% of Compensation Contributed	% of Highest Annual Compensation
4.5%	1.9%
6.0	2.5
7.5	3.0
8.5	3.4
9.0	3.6
10.0	4.0

Elected officials who became members after July 1, 1990 must participate in the System as an elected official for at least six years to qualify for the elected official benefit formula.

OPERS members who are elected after August 21, 2008 have a benefit cap of 100% of their highest annual salary. Elected officials that become members after August 21, 2008 receive a benefit that consists of two separate calculations. Their non-elected years are multiplied by 2% and their elected years are multiplied by the applicable percentage selected and paid for by the members.

Early retirement benefit

A member with at least ten (10) years of participating service may retire as early as age 55. The benefit is determined by the normal retirement formula based on years of credited service and Final Average Compensation (highest annual compensation for elected officials) at termination. The percentage payable at early retirement age is:

Elected Officials		Other Members	
Age	Percentage	Age	Percentage
60	100%	62	100.0%
59	94	61	93.3
58	88	60	86.7
57	82	59	80.0
56	76	58	73.3
55	70	57	66.7
		56	63.3
		55	60.0

Disability benefit

A member with at least eight (8) years of credited service is eligible for a disability benefit provided the member qualifies for disability benefits as certified by the Social Security Administration or the Railroad Retirement Board within one year after the date last physically on the job. The benefit is determined by the normal retirement formula based on service and salary history at date of disability. The benefit is payable immediately without actuarial reduction.

Option A is the only available form of survivor payment.

Vested benefit	A member who terminates after eight years of credited service (six years for elected officials) is eligible for a vested benefit determined by the normal retirement formula, based on service and compensation to date of termination. The benefit is payable at age 62 (or age 60 if an elected official), provided the member's contribution accumulation is not withdrawn and the member has at least six years of full time equivalent employment. A member with 10 or more years of service also has the option of reduced benefits at early retirement age. Members terminating with less than eight years (or six years if an elected official) of credited service may elect to receive a refund of their contribution accumulation. A limited additional retirement service benefit of $200 per month is payable up to the total of excess contributions paid by the member for those vested members as of July 1, 1998. This is not applicable for active members who received a transfer of excess contributions or retired members as of July 1, 1998.
Preretirement death benefit	The spouse of a deceased active member who had met normal, early or vested retirement provisions may elect a spouse's benefit. The spouse's benefit is the benefit that would have been paid if the member had retired and elected the joint and 100% survivor option (Option B). If named as the designated beneficiary, the spouse may elect a refund of the member's contribution accumulation in lieu of the Option B monthly benefit. In addition to the provisions above, the eligible spouse of a deceased elected official with at least six (6) years of elected service and married at least three years immediately preceding death may elect to receive 50% of the benefit the member would be eligible to receive. The starting date of benefits is the date the deceased member would have been eligible for early or normal retirement. Benefits cease upon death or remarriage of the surviving spouse. Any other designated beneficiary of a member other than an eligible spouse will receive a refund of the members' contribution accumulation.

Post-retirement death benefit

Upon the death of a retired member, a $5,000 lump-sum death benefit will be paid to the member's beneficiary, or estate if there is no beneficiary.

Optional forms of retirement benefits

The normal form of benefit for a single member other than an elected official is a single life monthly annuity with a guaranteed refund of the contribution accumulation. The normal form for a married member is a 50% joint and survivor annuity benefit. Optional forms of payment with actuarial reduction are available to all members retiring under the normal retirement, early retirement or vested retirement provisions. These options are:

Option A – Joint and 50% Survivor Annuity with a return to the unreduced amount if the joint annuitant dies.

Option B – Joint and 100% Survivor Annuity with a return to the unreduced amount if the joint annuitant dies.

Option C – Life Annuity with a minimum of 120 monthly payments.

For married members, spousal consent is required for any option other than Option A.

Medicare Gap Benefit Option allows members under age 65 to receive a higher benefit before age 65 (to help pay health insurance premiums) and a permanently lower benefit after age 65.

Post-retirement medical benefit

The System will contribute the lesser of $105 per month or the Medicare Supplement Premium to the Oklahoma State and Education Employee's Group Health Insurance Program (or other eligible employer health plans) for members receiving retirement benefits.

Expenses

The expenses of administering the retirement system are paid from the retirement trust fund.

Hazardous Duty Members (Department of Corrections, Oklahoma Military Department Firefighters) Benefits

Members covered by the Hazardous Duty Provisions have the retirement eligibility requirements, contribution rates and benefit formula described below.

Department of Corrections:

The normal retirement is the earliest of: 20 years of service as a member covered by the Department of Corrections Hazardous Duty Provisions; or, the first day of the month coinciding with or next following the 62nd birthday; or, the first day of the month coinciding with or following the date at which the sum of a member's age and number of years of credited service total eighty (80) if the member was hired prior

Hazardous Duty Members (Department Of Corrections, Oklahoma Military Department Firefighters) Benefits (continued)

to July 1, 1992, or following the date at which the sum of a member's age and number of years of credited service total ninety (90) if the member was hired after July 1, 1992. Members employed after January 1, 1983 must complete at least six years of full-time equivalent employment with a participating employer before receiving any retirement benefits. The benefit formula is 2.5% of final average compensation, multiplied by the number of years of service as an eligible officer for service, not exceeding 20 years. For service in excess of 20 years the benefit formula is 2% of final average compensation.

Members eligible for these benefits with at least five years of experience in their positions on or after June 30, 2004 remain eligible to retire after 20 years even if they transfer to positions within DOC that are not eligible to retire after 20 years.

Special Surviving Spouse and Child benefits for any member employed by the Department of Corrections (DOC) killed or mortally wounded during the performance of duty are equal to 2.5% of final average monthly compensation multiplied by the greater of the member's actual service or 20 years.

In addition, an amount of $400 per month will be paid as long as a child of the deceased member is under the age of 18 (or 22 if enrolled fulltime at an institution of higher education).

Contributions for members covered by the Department of Corrections Hazardous Duty Provisions are:

Year	Up to $25,000	Above $25,000
1994/1995	6.5%	8.0%
1995/1996	6.5%	8.0%
1996/1997	7.0%	8.0%
1997/1998	7.5%	8.0%

	First 20 Years of Service	Service Beyond 20 Years	
		Up to $25,000	Above $25,000
1998/1999	8.0%	3.0%	0.0%
1999/2000	8.0%	3.0%	0.0%
2000 and on	8.0%	3.0%	3.5%

Hazardous Duty Members (Department of Corrections, Oklahoma Military Department Firefighters) Benefits (continued)

Oklahoma Military Department Firefighters:

The benefit for Oklahoma Military Department firefighters who began employment July 1, 2002 and after is based on a 2.5% benefit multiplier. They are also eligible for full benefits after 20 years as a firefighter and their employee contribution rate is 8%. Oklahoma Military Department firefighters employed prior to July 1, 2002 were given a one time option to (a) have their benefit formula, retirement eligibility, and employee contribution rate remain unchanged, (b) apply the new provisions (including the new contribution rate) to service after January 1, 2003, or (c) apply the new benefit formula and retirement eligibility to all of the member's service, apply the 8% contribution rate for service after July 1, 2002, and make a contribution equal to the increase in the actuarial value of the member's retirement benefit.

In contrast to DOC members, the 2.5% formula and 8% contribution rate applies to service after 20 years.

APPENDIX C
OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM
ACTUARIAL METHODS AND ASSUMPTIONS

Actuarial Cost Method

Liabilities and contributions shown in this report are computed using the Individual Entry Age method of funding.

Sometimes called "funding method," this is a particular technique used by actuaries for establishing the amount of the annual actuarial cost of pension System benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily the annual contribution to the System is comprised of (1) the normal cost and (2) an amortization payment on the unfunded actuarial accrued liability.

Under the Entry Age Actuarial Cost Method, the **Normal Cost** is computed as the level percentage of pay which, if paid from the earliest time each member would have been eligible to join the System if it then existed (thus, entry age) until his retirement or termination, would accumulate with interest at the rate assumed in the valuation to a fund sufficient to pay all benefits under the System.

The **Actuarial Accrued Liability** under this method at any point in time is the theoretical amount of the fund that would have accumulated had annual contributions equal to the normal cost been made in prior years (it does not represent the liability for benefits accrued to the valuation date). The **Unfunded Actuarial Accrued Liability** is the excess of the actuarial accrued liability over the actuarial value of System assets on the valuation date.

Under this method experience gains or losses, i.e. decreases or increases in accrued liabilities attributable to deviations in experience from the actuarial assumptions, adjust the unfunded actuarial accrued liability.

Asset Valuation Method

The actuarial value of assets is based on a five-year moving average of expected and actual market values determined as follows:

- at the beginning of each fiscal year, a preliminary expected actuarial asset value is calculated as the sum of the previous year's actuarial value increased with a year's interest at the System valuation rate <u>plus</u> net cash flow adjusted for interest (at the same rate) to the end of the previous fiscal year;

- the expected actuarial asset value is set equal to the preliminary expected actuarial value plus the unrecognized investment gains and losses as of the beginning of the previous fiscal year;

- the difference between the expected actuarial asset value and the market value is the investment gain or loss for the previous fiscal year;

- the (final) actuarial asset value is the preliminary value plus 20% of the investment gains and losses for each of the five previous fiscal years, but in no case more than 120% of the market value or less than 80% of the market value.

Amortization Method

Effective July 1, 2008, the unfunded actuarial accrued liability is amortized as a level percent of payroll over a 20-year closed period from July 1, 2007. Given a stable active workforce, this amortization method is expected to produce a payment stream that is constant as a percent of covered payroll.

Valuation Procedures

No actuarial accrued liability in excess of the unclaimed contributions is held for nonvested, inactive members who have a break in service, or for nonvested members who have quit or been terminated, even if a break in service has not occurred as of the valuation date.

The wages used in the projection of benefits and liabilities are considered earnings for the year ending June 30, 2008, increased by the salary scale to develop expected earnings for the current valuation year. Earnings are annualized for members with less than twelve months of reported earnings.

In computing accrued benefits, average earnings are determined using actual pay history provided for valuation purposes.

The calculations for the required employer contribution are determined as of mid-year. This is a reasonable estimate since contributions are made on a monthly basis throughout the year.

We did not value the 415 limit for active participants. The impact was assumed to be *de minimus*.

The compensation limitation under IRC Section 401(a)(17) is considered in this valuation.

Liability is included for members who appear to be deferred vested, but who are not in the vested data provided. An estimated benefit was calculated based on pay and service from prior valuations. A corrected benefit and status will be provided by the System when the actual benefit and status have been finalized.

Members who are contributing to the System, but have not yet filled out an enrollment application, are included as active members. Where data elements are missing, reasonable estimates are used. Service is estimated based on hours worked. Age is based on average entry age for other members. Gender is assigned in proportion to the overall group.

A liability is included for contribution amounts due to be refunded to terminated vested members who made voluntary contributions to increase the maximum compensation limit prior to July 1, 1998. The System supplied the included amounts.

The System uses an assumption of a 2% annual COLA each year in developing liabilities and contribution rates. The System does not have an automatic COLA provision, but ad hoc COLAs have historically been granted by the Legislature every other year. In order to avoid actuarial gains in the year in which a COLA is not granted and an actuarial loss in the years in which a COLA is granted, the System's liabilities include a "COLA Reserve". The COLA Reserve is included in the actuarial accrued liability to account for expected cost of living adjustments to the benefits of retired participants that have not been granted by the valuation date. Any ad hoc increase granted will decrease the reserve amount by the cost of the increase. When the cost of an ad hoc increase is greater than the amount of the reserve, the reserve is set to zero and the period for calculating ungranted increases is set to the valuation date.

SUMMARY OF ACTUARIAL ASSUMPTIONS

Economic Assumptions

Investment Return: 7.5% net of investment expenses per annum, compounded annually.

Salary Increases: Sample rates below (midpoint of range shown):

Nearest Age	% Increase
20 - 24	9.0
25 - 29	8.0
30 - 34	6.7
35 - 39	6.1
40 - 44	5.8
45 - 49	5.4
50 - 54	5.1
55 - 59	5.1
60 - 64	5.1
65+	5.1

Payroll Growth: 4.25% per year

Ad hoc benefit increase assumption:

Monthly benefits: 2% per year.

Medical supplement: No increases assumed.

Projection of 401(a)(17) compensation limit: Projected with inflation at 3.0%.

Demographic Assumptions

Retirement age:

Non-elected members

	Annual Rates of Retirement Per 100 Eligible Members	
Nearest Age	Those Eligible For Unreduced Retirement	Those Not Eligible For Unreduced Retirement
50	20	N/A
51	20	N/A
52	20	N/A
53	20	N/A
54	20	N/A
55	10	4
56	10	5
57	11	5
58	12	6
59	13	7
60	14	7
61	20	20
62	30	N/A
63	15	N/A
64	15	N/A
65	30	N/A
66	20	N/A
67	20	N/A
68	20	N/A
69	25	N/A
70	100	N/A

Demographic Assumptions (continued)

Retirement age (continued):

Elected members

Nearest Age	Annual Rates of Retirement Per 100 Eligible Members: Those Eligible For Unreduced Retirement	Those Not Eligible For Unreduced Retirement
50	30	N/A
51	30	N/A
52	30	N/A
53	30	N/A
54	30	N/A
55	10	10
56	10	10
57	20	10
58	20	10
59	20	10
60	20	10
61	20	10
62	20	N/A
63	20	N/A
64	20	N/A
65	20	N/A
66	40	N/A
67	40	N/A
68	40	N/A
69	40	N/A
70	100	N/A

Demographic Assumptions (continued)

Retirement age (continued):

Hazardous Duty

Annual Rates of Retirement Per 100 Eligible Members

Service	Rate	Nearest Age	Less than 20 Years of Service
20	20	50	N/A
21-24	15	51	N/A
25-29	20	52	N/A
30-34	25	53	N/A
35+	100	54	N/A
		55	4
		56	5
		57	5
		58	6
		59	7
		60	7
		61	20
		62	40
		63	22
		64	25
		65	40
		66	25
		67	23
		68	22
		69	21
		70	100

Mortality Rates:

Active Participants and nondisabled pensioners — RP-2000 Combined Active/Retiree Healthy Mortality Table projected to 2010 using Scale AA.

Disabled pensioners — RP-2000 Combined Active/Retiree Healthy Mortality Table projected to 2010 using Scale AA set forward 15 years for disabled experience.

Hazardous Duty — For Department of Corrections officers, we assumed the mortality rate is 10% higher than the above table while the participant is active. This 10% is assumed to be in-line-of-duty.

Demographic Assumptions (continued)

Disability Rates:

Graduated rates
Disabled rates per 100 members

Nearest Age	Male	Female
20	.01	.01
30	.02	.03
40	.08	.10
50	.41	.31
60	.85	.63

Withdrawal Rates:

Age	0-2 Years	2-3 Years	3-4 Years	4-5 Years	5-6 Years	6-7 Years	7-8 Years	8-9 Years	9-10 Years	Over 10 Years
25	0.2600	0.2000	0.1709	0.1369	0.1426	0.1426	0.1426	0.1426	0.1426	0.0800
30	0.2400	0.1750	0.1554	0.1268	0.1050	0.1050	0.1050	0.1050	0.1050	0.0800
35	0.2150	0.1590	0.1365	0.1215	0.0850	0.0850	0.0850	0.0850	0.0850	0.0680
40	0.1930	0.1400	0.1208	0.1094	0.0725	0.0725	0.0725	0.0725	0.0725	0.0480
45	0.1880	0.1200	0.1132	0.0945	0.0600	0.0600	0.0600	0.0600	0.0600	0.0320
50	0.1830	0.0970	0.1030	0.0835	0.0500	0.0500	0.0500	0.0500	0.0500	0.0320
55	0.1800	0.0900	0.0869	0.0705	0.0500	0.0500	0.0500	0.0500	0.0500	0.0320

Probability of Electing Vested Benefit:

Regular Members Only	
Age	Rate
Under 35	80%
36-46	85%
47+	100%

Marital Status:

Percentage married: Males: 85%; Females: 85%

Age difference: Males are assumed to be four years older than spouses.

Children: Special death benefits are provided upon the in-line-of-duty death of Department of Corrections employees who have young children. We have assumed the average age of the youngest child of such employees is nine and that 50% of such children will attend an institution of higher education to age 22.

Form of Payment: Participants are assumed to elect a life-only form of payment.

<u>**Other Assumptions**</u>

Assumed age of commencement for deferred benefits	Currently active members assumed to terminate in the future prior to retirement eligibility are assumed to benefits at age 62 (non-elected members) or age 60 (elected members). Currently inactive members with deferred benefits are assumed to commence benefits on a date provided by OPERS.
Provision for expenses	Administrative expenses, as budgeted by the Oklahoma Public Employees Retirement System.

APPENDIX D
OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM
GLOSSARY OF TERMS

Actuarial Accrued Liability
The difference between the actuarial present value of system benefits and the actuarial value of future normal costs. Also referred to as "accrued liability" or "actuarial liability".

Actuarial Assumptions
Estimates of future experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

Accrued Service
Service credited under the system which was rendered before the date of the actuarial valuation.

Actuarial Equivalent
A single amount or series of amounts of equal actuarial value to another single amount or series of amounts, computed on the basis of appropriate assumptions.

Actuarial Cost Method
A mathematical budgeting procedure for allocating the dollar amount of the actuarial present value of retirement system benefit between future normal cost and actuarial accrued liability. Sometimes referred to as the "actuarial funding method".

Experience Gain (Loss)
The difference between actual experience and actuarial assumptions anticipated experience during the period between two actuarial valuation dates.

Actuarial Present Value
The amount of funds currently required to provide a payment or series of payments in the future. It is determined by discounting future payments at predetermined rates of interest and by probabilities of payment.

Amortization
Paying off an interest-discounted amount with periodic payments of interest and principal, as opposed to paying off with lump sum payment.

Normal Cost
The actuarial present value of retirement system benefits allocated to the current year by the actuarial cost method.

Unfunded Actuarial Accrued Liability

The difference between actuarial accrued liability and the valuation assets. Sometimes referred to as "unfunded actuarial liability" or "unfunded accrued liability".

Most retirement systems have unfunded actuarial accrued liability. They arise each time new benefits are added and each time an actuarial loss is realized.

The existence of unfunded actuarial accrued liability is not in itself bad, any more than a mortgage on a house is bad. Unfunded actuarial accrued liability does not represent a debt that is payable today. What is important is the ability to amortize the unfunded actuarial accrued liability and the trend in its amount (after due allowance for devaluation of the dollar).

ADDENDUM

ADDENDUM

OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM CERTIFICATION

We have prepared an actuarial valuation of the State of Oklahoma Public Employees Retirement System as of July 1, 2008, for the fiscal year ending June 30, 2009. The results of the valuation are set forth in this addendum, which reflects the benefit provisions in effect on July 1, 2008.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, statutory provisions, employee data, and financial information. In our examination of these data, we have found them to be reasonably consistent and comparable with data used for other purposes. Since the valuation results are dependent on the integrity of the data supplied, the results can be expected to differ if the underlying data is incomplete, or missing. It should be noted that if any data or other information is inaccurate or incomplete, our calculations may need to be revised.

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 (74 Okla.Stat, Section 909.1(H)):

Interest rate: 7.50%
COLA assumption: 2.00%
Mortality: RP-2000 Mortality Table for Employees, Healthy Retirees and Disabled Retirees with Mortality Projected Forward from 2000 using Scale AA.
Amortization period: 30 years, open period
Sources of all contributions and revenues, including dedicated tax free revenue and federal monies

All other assumptions, methodologies, and System provisions used are consistent with those used in the July 1, 2008 valuation.

The results shown in this Addendum are not consistent with those in the July 1, 2008, valuation. The July 1, 2008, valuation results were determined in accordance with generally accepted actuarial principles and practices that are consistent with the Actuarial Standards of Practice promulgated by the Actuarial Standards Board and the applicable Guides to Professional Conduct, amplifying opinion and supporting recommendations of the American Academy of Actuaries. The results shown in this Addendum are not based on the assumptions and methodologies adopted by the Retirement Board.

Milliman's work product was prepared exclusively for the Oklahoma Public Employees Retirement System (OPERS) for a specific and limited purpose. It is a complex technical analysis that assumes a high level of knowledge concerning OPERS' operations, and used OPERS data, which Milliman has not audited. It is not for the use or benefit of any third party for any purpose other than to provide the required reporting to the Oklahoma State Pension Commission. Any third party recipient of Milliman's work product who desires professional guidance should not rely upon Milliman's work product, but should engage a qualified professional for advice appropriate to its own specific needs.

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

The undersigned credentialed actuaries meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained in this report.

Patrice Beckham

Patrice A. Beckham, F.S.A.

October 16, 2008
Date

Brent A. Banister

Brent A. Banister, F.S.A.

October 16, 2008
Date

ADDENDUM

OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM
SUMMARY OF VALUATION RESULTS UNDER PRESCRIBED ASSUMPTIONS

This supplemental report has been prepared to present the results of a valuation of the State of Oklahoma Public Employees Retirement System as of July 1, 2008, based on the prescribed assumptions under 74 Okla.Stat, Section 909.1(H), of current statutes and regulations issued thereunder.

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

	Actuarial Valuation as of		Change Between Years	
	July 1, 2008	**July 1, 2007**	**Amount**	**Percent**
Summary of Costs				
Required employer contribution for current year	$294,996,088	$350,874,899	($55,878,811)	-15.9%
Actual employer contributions received in prior year	220,075,992	197,756,938	22,319,054	11.3%
Funded Status				
Actuarial accrued liability	$9,079,172,849	$8,527,422,705	$551,750,144	6.5%
Actuarial value of assets	6,491,928,362	6,110,230,058	381,698,304	6.2%
Unfunded actuarial accrued liability	2,587,244,487	2,417,192,647	170,051,840	7.0%
Funded Ratio	71.5%	71.7%	(0.2%)	(0.2%)
Market Value of Assets and Additional Liabilities				
Market value of assets	$6,255,207,565	$6,640,477,411	($385,269,846)	-5.8%

ADDENDUM

OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM
SUMMARY OF VALUATION RESULTS UNDER PRESCRIBED ASSUMPTIONS
(continued)

This supplemental report has been prepared to present the results of a valuation of the State of Oklahoma Public Employees Retirement System as of July 1, 2008, based on the prescribed assumptions under 74 Okla.Stat, Section 909.1(H), of current statutes and regulations issued thereunder.

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

	Actuarial Valuation as of		
	July 1, 2008	July 1, 2007	
	Amount	Amount	Percent Change in Amount
Summary of Contribution Requirements			
1. Expected annual payroll	$ 1,682,663,413	$ 1,626,737,832	3.4%
2. Total normal cost	$ 217,184,359	$ 208,163,852	4.3%
3. Unfunded actuarial accrued liability	$ 2,587,244,487	$ 2,417,192,647	7.0%
4. Amortization of unfunded actuarial accrued liability over 30 years	$ 134,746,018 [1]	$ 197,398,083 [2]	(31.7%)
5. Budgeted expenses (provided by the System)	$ 6,548,483	$ 6,429,870	1.8%
6. Total required contribution (2) + (4) + (5)	$ 358,478,860	$ 411,991,805	(13.0%)
7. Estimated member contribution	$ 63,482,772	$ 61,116,907	3.9%
8. Required employer contributions (not less than $0) (6) – (7)	$ 294,996,088	$ 350,874,899	(15.9%)
9. Previous year's actual contribution			
a. Member	$ 66,699,385	$ 64,179,909	3.9%
b. Employer	220,075,992	197,756,938	11.3%
c. Total	$ 286,775,377	$ 261,936,847	9.5%

[1] Amortization of UAAL is level percent of payroll.
[2] Amortization of UAAL is level dollar payment.

ADDENDUM

OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM
UNFUNDED ACTUARIAL ACCRUED LIABILITY

This supplemental report has been prepared to present the results of a valuation of the State of Oklahoma Public Employees Retirement System as of July 1, 2008, based on the prescribed assumptions under 74 Okla.Stat, Section 909.1(H), of current statutes and regulations issued thereunder.

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

	July 1, 2008	July 1, 2007
1. Actuarial present value of benefits		
a. Active members	$ 5,931,154,271	$ 5,607,784,120
b. Terminated vested members and other nonactives	412,035,156	406,660,836
c. Retirees, disableds and beneficiaries	4,252,885,059	3,930,792,779
d. Total (a) + (b) + (c)	$ 10,596,074,486	$ 9,945,237,735
2. Actuarial present value of future normal costs	$ 1,516,901,637	$ 1,417,815,030
3. Total actuarial accrued liability (1 – 2)	$ 9,079,172,849	$ 8,527,422,705
4. Actuarial value of assets	$ 6,491,928,362	$ 6,110,230,058
5. Unfunded actuarial accrued liability (3) – (4), not less than $0	$ 2,587,244,487	$ 2,417,192,647

ADDENDUM

OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM
NORMAL COST

This supplemental report has been prepared to present the results of a valuation of the State of Oklahoma Public Employees Retirement System as of July 1, 2008, based on the prescribed assumptions under 74 Okla.Stat, Section 909.1(H), of current statutes and regulations issued thereunder.

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

Component		**July 1, 2008**		**July 1, 2007**
Retirement benefits	$	155,997,494	$	143,986,662
Withdrawal benefits		21,977,395		26,293,204
Disability benefits		4,533,570		2,821,554
Death benefits		9,912,648		8,913,323
Refunds		14,624,561		12,473,699
Supplemental medical insurance premiums		10,138,690		10,337,693
Normal cost for people who have not submitted an application		0*		3,337,718
Total normal cost	$	217,184,359	$	208,163,852

* Not separately calculated. Included in active Normal Cost.