OKLAHOMA

OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM

ACTUARIAL VALUATION REPORT AS OF JULY 1, 2025

SUBMITTED: OCTOBER 10, 2025

CavMac
Actuarial Consulting Services

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October 10, 2025

Board of Trustees
Oklahoma Public Employees Retirement System
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Members of the Board:

In this report are submitted the results of the annual valuation of the assets and liabilities of the Oklahoma Public Employees Retirement System ("OPERS" or "System"), prepared as of July 1, 2025. The purpose of this report is to provide a summary of the funded status of the System as of July 1, 2025 and to calculate the Actuarially Determined Contribution Rate. There have been no changes in the actuarial assumptions and methods or benefit provisions since the last valuation.

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, member data and financial information. While not verifying the data at its source, the actuary has performed tests for consistency and reasonability. We found this information to be reasonably consistent and comparable with information provided in prior years. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete, our results may be different, and our calculations may need to be revised.

As in recent valuations, liabilities have been calculated without considering future cost of living adjustments (COLAs) in keeping with House Bill 2132 (2011). Should funding of future COLAs and/or stipends be provided by the System, the COLAs and/or stipends should be included in the actuarial valuation. In addition, House Bill 2630 (2014) closed the plan to most new state employees hired after November 1, 2015.

We further certify that all costs, liabilities, rates of interest and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer our best estimate of anticipated experience affecting the System. Nevertheless, the emerging costs will vary from those presented in this report to the extent actual experience differs from that anticipated by the actuarial assumptions.

In order to prepare the results in this report, we have utilized actuarial models that were developed to measure liabilities and develop actuarial costs. These models include tools that we have produced and tested, along with commercially available valuation software that we have reviewed to confirm the appropriateness and accuracy of the output. In utilizing these models, we develop and use input parameters and assumptions about future contingent events along with recognized actuarial approaches to develop the needed results. Future actuarial results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Because the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not presented herein.

Actuarial computations presented in this report are for the purpose of calculating the required State contribution rates for funding the System. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. 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. Actuarial computations for the purposes of fulfilling financial accounting requirements for the System under Governmental Accounting Standards No. 67, No. 68, No. 74 and No. 75 are provided in separate reports.

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. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Respectfully submitted,

Alisa Bennett, FSA, EA, FCA, MAAA
President

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Chief Actuary

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SECTION 1 – EXECUTIVE SUMMARY

OVERVIEW

The Oklahoma Public Employees Retirement System ("OPERS" or "System") provides retirement benefits for most employees of the State of Oklahoma, for most county employees, and for employees of local governmental employers who have elected to participate in OPERS.

This report presents the results of the July 1, 2025 actuarial valuation for the System. The primary purposes of performing an actuarial valuation are to:

- Determine the employer contribution rate required to fund the System on an actuarial basis;
- Evaluate the sufficiency of the statutory contribution rate;
- Disclose asset and liability measures as of the valuation date;
- Assess and disclose the key risks associated with funding the System;
- Determine the experience of the System since the last valuation date; and
- Analyze and report on trends in System contributions, assets, and liabilities.

As in recent valuations, liabilities have been calculated without considering future cost of living adjustments (COLAs) and/or stipends in keeping with House Bill 2132 (2011). Should funding of future COLAs and/or stipends be provided by the System, the COLAs and/or stipends should be included in the actuarial valuation.

As described in previous valuation reports, the Plan has been amended by House Bill 2630, enacted in 2014, which states that effective November 1, 2015, OPERS shall create a defined contribution plan for most people first employed by a participating employer. Exemptions from the defined contribution plan include hazardous duty members and district attorneys, assistant district attorneys and employees of the district attorney's office. In order to reduce the liabilities of the defined benefit plan, each employer shall send to OPERS the difference between the required employer contribution to OPERS and the amount required to match the participating employee's contribution in the defined contribution plan, known as Pathfinder.

Senate Bill 2120, also enacted in 2014, amends House Bill 2630 to further exempt from the defined contribution plan county elected officials and employees of a county, county hospital, city or town, conservation district, circuit engineering district, and any public or private trust in which a county, city or town participates. Senate Bill 2120 also states that employees who participate in the defined contribution system are excluded from the $105 health care subsidy. New employees specifically exempted from the defined contribution plan will participate in the existing defined benefit plan.

Senate Bill 2120 and House Bill 2630 have, in combination, significantly reduced the number of new members entering the plan since November 1, 2015, and will continue to do so. While this had a small impact initially on the valuation results, as time goes by, there are potential ramifications of this legislation that will affect on-going plan funding. In particular, the current

amortization of the UAAL is based on the assumption of increasing payroll. The current provision of this legislation should provide at least as much toward the UAAL as would have been expected otherwise, so we are comfortable with this methodology. We would encourage the Board to study the long-term impact of this legislation.

There have been no changes to the plan provisions or actuarial assumptions and methods since the prior valuation. However, this is the first valuation that includes the additional hazardous duty members designated by House Bill 1068 and House Bill 1805, which were passed in the 2024 session and reflected in the July 1, 2024 valuation.

The valuation results provide a snapshot view of the System's financial condition on July 1, 2025. The unfunded actuarial accrued liability for the System decreased by $601.4 million due to various factors. A detailed analysis of the change in the unfunded actuarial accrued liability from July 1, 2024 to July 1, 2025 is shown on page 6.

The highlights of the valuation are shown below:

	Actuarial Valuation Date	
Funded Status $(millions)	**July 1, 2025**	**July 1, 2024**
Actuarial Accrued Liability	$11,805	$11,692
Actuarial Value of Assets	$12,726	$12,012
Unfunded Actuarial Accrued Liability	($921)	($320)
Funded Ratio (Actuarial Value)	107.8%	102.7%
Market Value of Assets	$13,352	$12,196
Funded Ratio (Market Value)	113.1%	104.3%

There was a liability gain of $59.8 million from demographic experience which resulted in an actuarial accrued liability that was smaller than expected (0.50% of expected liability). The components of this net liability gain are identified on page 7.

The return on the market value of assets as reported by the System was 12.4%, net of investment manager fees, for the year ended June 30, 2025. The actuarial value of assets is determined using a method to smooth investment gains and losses in order to develop more stable contribution rates. The return on the actuarial value of assets was approximately 8.9% which resulted in an actuarial gain of $280.7 million.

The actuarial contribution rate for the employer decreased from 2024 to 2025, however the ongoing cost of the plan, the normal cost plus budgeted expenses, increased from 2024 to 2025 as shown below:

	Actuarial Valuation Date	
Contribution Rate	**July 1, 2025**	**July 1, 2024**
Normal Cost	10.96%	10.97%
Amortization of UAAL*	(3.04%)	(0.87%)
Budgeted Expenses	0.58%	0.55%
Actuarially Determined Contribution Rate	8.50%	10.65%
Less Estimated Member Contribution Rate	4.33%	4.34%
Employer Actuarially Determined Contribution Rate	4.17%	6.31%
Less Employer Statutory Contribution Rate	16.50%	16.50%
Contribution Shortfall (Surplus)	(12.33%)	(10.19%)

*The amortization of UAAL contribution rate recognizes the employer contributions made on behalf of the defined contribution plan participant payroll.

The contribution surplus in the current valuation is 12.33%, which is an increase from last year's contribution surplus of 10.19% and includes a credit to spend down the liability surplus. Primarily due to the removal of the COLA assumption and reserve starting with the June 30, 2011 valuation, the employer actuarial contribution rate is less than the employer statutory contribution rate. It is recommended that the employer statutory contribution rate continue unchanged as this will accelerate progress on reaching long-term funding goals, ensure the normal cost is paid in full and protect against potential future investment and experience losses and/or unfunded COLAs.

EXPERIENCE: July 1, 2024 to July 1, 2025

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, 2025. On that date, the assets available for the payment of benefits are appraised. The assets are compared with the liabilities of the System. 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 July 1, 2024 and July 1, 2025. Each component is examined in the following discussion.

ASSETS

As of July 1, 2025, the System had total assets of $13.35 billion when measured on a market value basis. This was an increase of about $1.15 billion from the July 1, 2024 figure of $12.20 billion. The market value of assets is not used directly in the calculation of the actuarial contribution rate. An asset valuation method, which smooths the effect of market fluctuations, is used to determine the

value of assets used in the valuation, called the "actuarial value of assets." Differences between the actual return on the market value of assets and the assumed return on the actuarial value of assets are phased in over a five-year period. The resulting value must be no less than 80% of the market value and no more than 120% of market value, referred to as "the corridor." See Table 3 for the detailed development of the actuarial value of assets as of July 1, 2025.

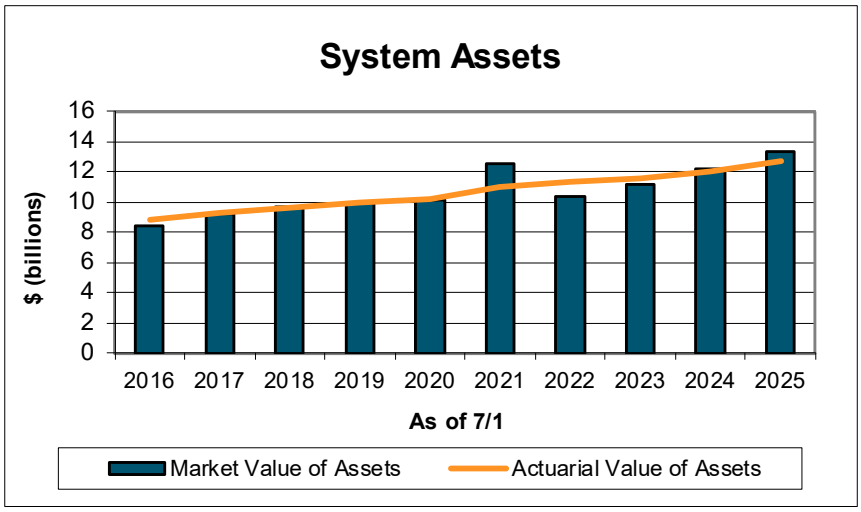
The actuarial value of assets as of July 1, 2025 was $12.73 billion. The annualized dollar-weighted rate of return for fiscal year 2025, measured on the actuarial value of assets, was approximately 8.9%, which resulted in an actuarial gain of $280.7 million. The return on the market value of assets, net of investment manager fees, was 12.4% as reported by the System.

The components of the change in the market and actuarial value of assets for the System are set forth below:

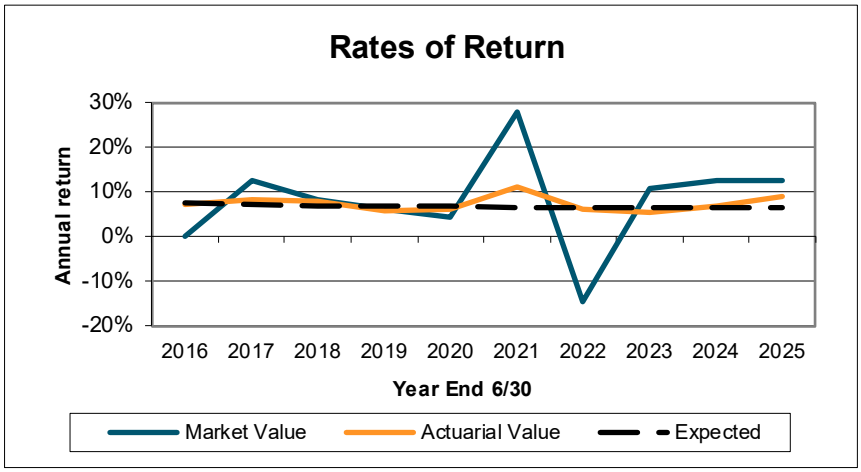
	Market Value $(millions)	Actuarial Value $(millions)
Net Assets, July 1, 2024	$12,196.3	$12,011.9
· Employer and Member Contributions	$413.1	$413.1
· Benefit Payments and Expenses	($750.0)	($750.0)
· Investment Income/(Loss)	$1,492.2	$1,050.7
Preliminary Value, July 1, 2025	$13,351.6	$12,725.7
Application of Corridor	N/A	N/A
Final Net Assets, July 1, 2025	$13,351.6	$12,725.7
Estimated Rate of Return*	12.4%	8.9%

*Rate of return on Market Value was reported by the System, net of investment manager fees.

Due to the use of an asset smoothing method, there is approximately $625.9 million of deferred investment gain that has not yet been recognized. This deferred investment experience will be reflected in the actuarial value of assets over the next five years.



There have been years during the last decade in which the actuarial value of assets has been either higher or lower than the market value, which is what would be expected using an asset smoothing method. As can be seen in the graph, there is currently a deferred gain resulting from market value returns greater than expected. This net gain will be smoothed into the actuarial value of assets over time.



Rates of return on the market value of assets are very volatile. The more stable 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 normal costs. The difference between this liability and the asset value at the same date is referred to as the unfunded actuarial accrued liability (UAAL). The UAAL will be reduced if the employers' contributions exceed the employers' normal cost for the year after allowing for interest earned on the previous years' balance of unfunded actuarial accrued liability. Since the UAAL is negative as of July 1, 2025, the valuation mechanism reduces the actuarially determined employer contribution below the employer's normal cost to spend down the surplus and bring the UAAL to $0. Once the UAAL is $0, the full amount of the normal cost will be included in the actuarially determined employer contribution. Benefit enhancements, experience gains/losses, and changes in the actuarial assumptions and methods will also impact the total actuarial accrued liability and the unfunded portion thereof.

The unfunded actuarial accrued liability as of July 1, 2025 is:

Actuarial Accrued Liability	$11,804,703,576
Actuarial Value of Assets	12,725,685,645
Unfunded Actuarial Accrued Liability/(Surplus)	($920,982,069)

See Table 5 for the detailed development of the Actuarial Accrued Liability and 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 (for assets and liabilities), changes in the actuarial assumptions, procedures or methods, as well as changes to the System's benefit provisions. The actual experience measured in this valuation is that which occurred during the plan year ended June 30, 2025. There was an experience gain on the actuarial value of assets due to the actual rate of return being higher than expected for the fiscal year. There was also a net experience gain on the liabilities due to demographic experience that was more favorable than expected. The aggregate gain resulted in a $340.5 million decrease in the UAAL (or increase in surplus).

Between July 1, 2024 and July 1, 2025, the change in the unfunded actuarial accrued liability for the System was as follows (in millions):

	$(millions)
Unfunded Actuarial Accrued Liability, July 1, 2024	($320)
- effect of contributions more than actuarial rate	(255)
- expected decrease due to amortization	0
- investment experience	(281)
- liability experience[1]	(60)
- assumption changes	0
- other experience	(5)
Unfunded Actuarial Accrued Liability, July 1, 2025	($921)

[1] Liability gain is about 0.50% of total expected actuarial accrued liability

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

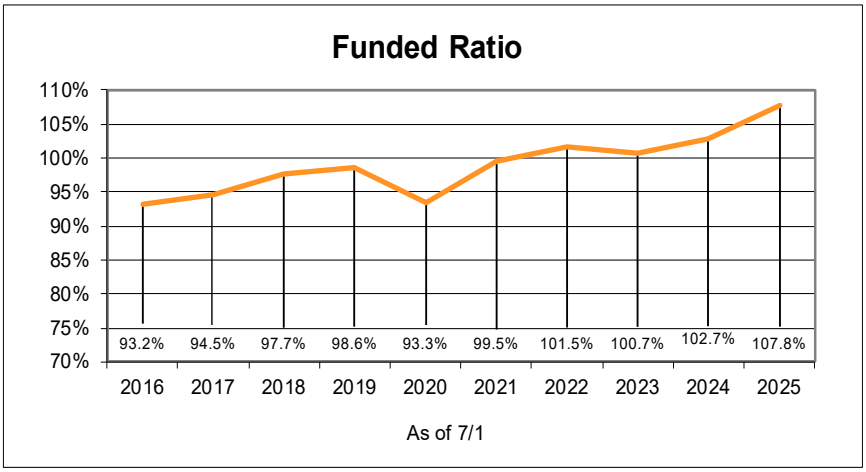
Liability Source	Impact of AAL $(millions)	% of Expected Liability
Salary Increases	($13.4)	(0.11%)
Mortality	(22.6)	(0.19%)
Termination of Employment	(27.5)	(0.23%)
Retirements	(17.4)	(0.15%)
Disability	1.6	0.01%
New Entrants and Rehires	28.2	0.24%
Miscellaneous/Data Changes	(8.7)	(0.07%)
Total (Gain)/Loss	($59.8)	(0.50%)

A detailed summary of the change in the UAAL is shown in Table 6.

In the current valuation, the actuarial value of assets exceeds the actuarial accrued liability. This does not mean that all future benefits are paid for; rather, it indicates that the System has accumulated more assets at this point than what is required by the funding method. The ability of the System to remain in this position will depend upon both future experience and maintaining sufficient contribution levels.

An evaluation of the unfunded actuarial accrued liability on a pure dollar basis may not provide a complete analysis because 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, which is the ratio of the actuarial value of assets to the actuarial accrued liability. These ratios do not indicate whether or not the plan could settle its liabilities with available assets, nor are they sufficient, on their own, to indicate the future funding needs of the System. The funded status information, on both an actuarial and market value basis, is shown in the following table in $(millions).

	7/1/20	7/1/21	7/1/22	7/1/23	7/1/24	7/1/25
Using Actuarial Value of Assets:						
Funded Ratio	93.3%	99.5%	101.5%	100.7%	102.7%	107.8%
Unfunded Actuarial Accrued Liability / (Surplus)	$731	$55	($172)	($75)	($320)	($921)
Using Market Value of Assets:						
Funded Ratio	92.3%	113.4%	93.3%	97.1%	104.3%	113.1%
Unfunded Actuarial Accrued Liability / (Surplus)	$845	($1,480)	$747	$330	($504)	($1,547)



The plan's funded ratio has greatly increased over the past decade. There was a decrease in 2020 that was largely due to a change in assumptions and an ad hoc COLA granted in 2020. However, the funded ratio rebounded in 2021 due primarily to large asset gains. Note that these gains have been offset by large asset losses in 2022 and by assumption changes in 2023.

CONTRIBUTION RATES

The funding objective of the System is to pay the normal cost rate plus an amount that will pay off the unfunded actuarial accrued liability.

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 "administrative expense" component for the expenses expected to be paid from the Trust for the year;
- 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. Since the UAAL is negative as of July 1, 2025, this contribution is also negative and reduces the actuarial contribution rate below the normal cost plus expenses.

Contributions to the 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 employer. Starting in 2004, most 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%. Hazardous Duty employees and most elected officials have a different required contribution rate (see Summary of Main Benefit Provisions section of this report).

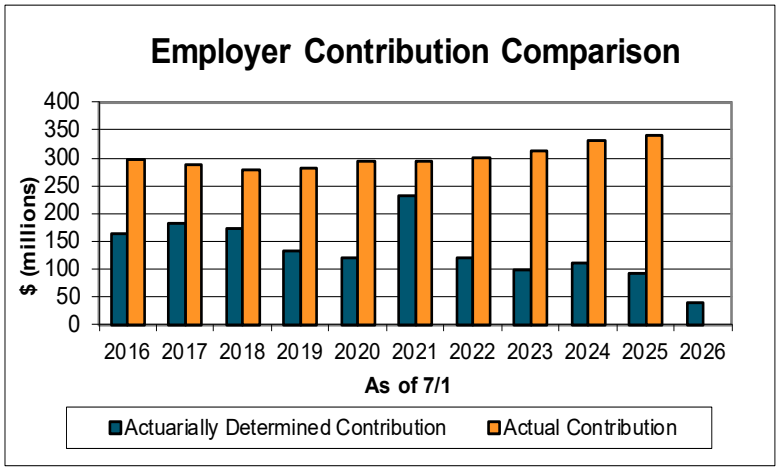
Effective July 1, 1999, the State's contribution rate was reduced from 12.5% to 10.0% of payroll and stayed at that level until 2005. For the same period, the combined employer and employee contribution rates for the county and local employees were 13.5% of payroll. As of July 1, 2005, the State's contribution rate increased to 11.5% of payroll with additional increases of 1.0% each

July until reaching 16.5%. The 1.0% increase that was supposed to be effective July 1, 2010 was delayed one year by the 2010 Legislature and was effective July 1, 2011. For county and local employees, the combined contribution rate increased to 15.0% on July 1, 2005 and increased an additional 1.0% of payroll each year beginning July 1, 2006 until it reached 20.0% on July 1, 2010.

As described in previous valuation reports, the Plan has been amended by House Bill 2630, enacted in 2014, which states that effective November 1, 2015, OPERS shall create a defined contribution plan for most people first employed by a participating employer. In order to reduce the liabilities of the defined benefit plan, each employer shall send to OPERS the difference between the required employer contribution to OPERS and the amount required to match the participating employee's contribution in the defined contribution plan. The amortization of UAAL contribution rate in this valuation recognizes the employer contributions made on behalf of the defined contribution plan participant payroll.

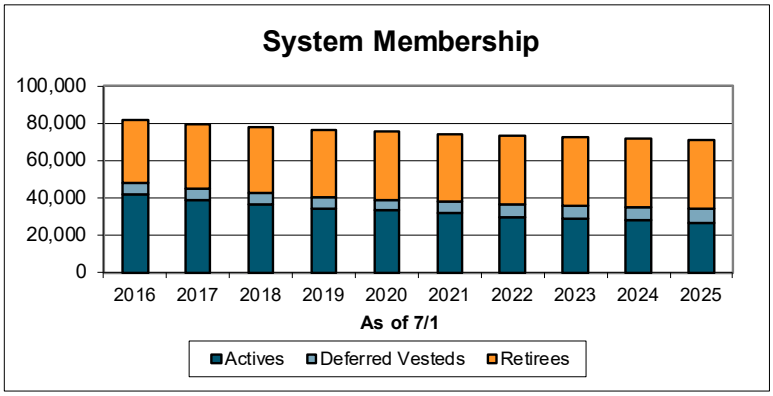
The ultimate contribution rate of 16.5% for the State is greater than the employer actuarial contribution rate for the fiscal year developed in this valuation. When contributions to the System are greater than the actuarial rate, the UAAL is expected to decrease and be paid down faster. As of the July 1, 2025 valuation, the plan is in a surplus position on both the actuarial value of assets basis and the market value of assets basis. If the System receives the statutory rate and the expected employer contributions on behalf of the defined contribution member payroll and all assumptions are met, it will help to protect against potential future investment and experience losses and/or unfunded COLAs.

The following graph shows the total actuarially determined 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 period was changed to 20 years from July 1, 2007 (no change in the number of years remaining). The amortization method was updated as of July 1, 2022 to amortize new experience bases over closed 15-year periods as a level percent of pay.

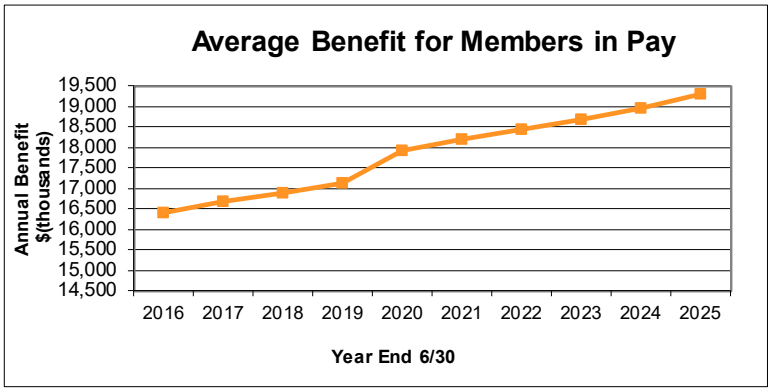


MEMBER INFORMATION

The number of active members included in the valuation decreased from 27,890 in the 2024 valuation to 26,895 in the 2025 valuation. The retired member population and the average retirement benefit amounts continued to increase steadily. There were 37,159 retirees and beneficiaries in the 2025 valuation, with an average benefit of $1,607 per month. This represents a 1.7% increase in the average monthly benefit from the previous year.



The number of active members has been declining and is expected to decline in the future due to the defined benefit plan being closed to most new entrants. The number of terminated vested 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 leave employment with higher salaries and, therefore, higher benefits than those already retired. In addition, most of the members who die are older with smaller benefits.

COMMENTS

As the graph on page 5 shows, investment experience continues to be extremely volatile which creates significant challenges when funding retirement systems. The rate of return on the market value of assets, net of investment manager fees, for fiscal year 2025 was reported by the System as 12.4%.

Due to the asset smoothing method, the rate of return on the actuarial value of assets was 8.9%. Because this return is higher than the prior valuation assumed rate of return for fiscal year 2025 of 6.50%, there was an actuarial gain from asset experience of about $280.7 million. There was also a net experience gain of $59.8 million on liabilities. With an aggregate actuarial gain of $340.5 million, the actuarial value of assets exceeds the actuarial accrued liability in the current valuation, and there is an excess of actuarial assets over actuarial accrued liability of $921.0 million. Note that there is a net deferred asset gain of $625.9 million that will be recognized over the next five years.

The employer contribution rate increased according to a statutory schedule to an ultimate rate of 16.50% which was reached July 1, 2011. It must be noted that the portion of the actuarial contribution rate to be used to amortize the unfunded actuarial accrued liability was calculated as a level percentage of payroll assuming payroll grows by 3.25% per year, even though House Bill 2630 closed the plan effective November 1, 2015 to all but specifically exempted new employees. This is because House Bill 2630 requires each employer to send to OPERS the difference between the required employer contribution to OPERS and the amount required to match the participating employee's contribution in the defined contribution plan. It is also important to note that this continued contribution stream payable on new employee payroll is incorporated into the actuarially determined rate calculated in this valuation, and any changes to reduce the funds received under this provision would negatively impact the actuarially determined rate either now or in the future.

As noted earlier in the report, due primarily to the removal of the COLA assumption and reserve starting on July 1, 2011 and the reduction in contribution to spend down the UAAL surplus, the actuarial contribution rate of 4.17% is less than what is currently being funded. As of the July 1, 2025 valuation, the plan has a negative UAAL. Paying the statutory rate will help to protect against potential future investment and experience losses.

Also, as noted earlier in the report, should funding of future COLAs and/or stipends be provided by the System, the COLAs and/or stipends should be included in the actuarial valuation.

A typical retirement plan faces many different risks. The term "risk" is most commonly associated with an outcome with undesirable results. However, in the actuarial world risk can be translated as uncertainty. The actuarial valuation process uses many actuarial assumptions to project how future contributions and investment returns will meet the cash flow needs for future benefit payments. Of course, we know that actual experience will not unfold exactly as anticipated by the

assumptions and that uncertainty, whether favorable or unfavorable, creates risk. Actuarial Standard of Practice Number 51 defines risk as the potential of actual future measurements to deviate from expected results due to actual experience that is different than the actuarial assumptions. Risk evaluation is an important part of managing a defined benefit plan. Please see Section 6 of this report for an in-depth discussion of the specific risks facing the Oklahoma Public Employees Retirement System. Any potential changes to the benefits or contribution levels could materially change the risk profile of the System, and so we would encourage careful consideration before initiating such a change.

SECTION 2 – SUMMARY OF FINDINGS

For convenience of reference, the principal results of the valuation and a comparison with the preceding year's results are summarized below.

COMPARISON OF PRINCIPAL VALUATION RESULTS

	7/1/2025 Valuation	7/1/2024 Valuation	% Change
1. PARTICIPANT DATA			
Number of:			
Active Members	26,895	27,890	(3.6)
Retired and Disabled Members and Beneficiaries	37,159	37,041	0.3
Inactive Members	7,066	6,908	2.3
Total Members	71,120	71,839	(1.0)
Projected Annual Salaries of Active Members	$ 1,561,448,387	$ 1,577,058,185	(1.0)
Annual Retirement Payments for Retired Members and Beneficiaries	$ 716,416,481	$ 702,520,874	2.0
2. ASSETS AND LIABILITIES			
Total Actuarial Accrued Liability	$ 11,804,703,576	$ 11,692,287,231	1.0
Market Value of Assets	$ 13,351,556,235	$ 12,196,287,161	9.5
Actuarial Value of Assets	$ 12,725,685,645	$ 12,011,852,702	5.9
Unfunded Actuarial Accrued Liability	$ (920,982,069)	$ (319,565,471)	188.2
Funded Ratio	107.8%	102.7%	5.0
3. EMPLOYER CONTRIBUTION RATES AS A PERCENT OF PAYROLL			
Normal Cost Rate	10.96%	10.97%	
Amortization of Unfunded Actuarial Accrued Liability	(3.04%)	(0.87%)	
Budgeted Expenses	0.58%	0.55%	
Total Actuarially Determined Contribution Rate	8.50%	10.65%	
Less Estimated Member Contribution Rate	4.33%	4.34%	
Employer Actuarially Determined Contribution Rate	4.17%	6.31%	
Less Statutory State Employer Contribution Rate	16.50%	16.50%	
Contribution Shortfall/(Surplus)	(12.33%)	(10.19%)	

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, the market value of assets provides the basis for measuring investment performance. As of July 1, 2025, the market value of assets for the System was $13.4 billion. Table 1 is a comparison, at market value, of System assets as of June 30, 2025 and June 30, 2024, in total and by investment category. Table 2 summarizes the change in the market value of assets from July 1, 2024 to June 30, 2025.

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. A technique which dampens swings in the market value while still recognizing its volatility is used for determining the actuarial value of assets.

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 shows the development of the actuarial value of assets (AVA) as of the valuation date.

Table 1

Analysis of Net Assets at Market Value

	June 30, 2025		June 30, 2024	
	Amount $(millions)	% of Total	Amount $(millions)	% of Total
Cash & Equivalents	$ 194.6	1.4%	$ 456.7	3.6%
Short-term Investments	42.4	0.3%	92.8	0.7%
Government Obligations	2,911.6	21.3%	2,871.6	22.3%
Corporate Bonds	1,186.5	8.7%	1,003.5	7.8%
Domestic Equity	5,332.8	38.9%	4,889.0	38.1%
International Equity	4,019.5	29.3%	3,512.5	27.4%
Real Estate	8.9	0.1%	7.5	0.1%
Subtotal	$ 13,696.3	100.0%	$ 12,833.6	100.0%
Property (net)	0.0		0.0	
Other Assets	1.0		1.0	
Net Receivables/(Payables)	(345.7)		(638.3)	
Net Assets	$ 13,351.6		$ 12,196.3	

Table 2

Statement of Changes in Net Assets

	Fiscal Year Ended June 30, 2025	Fiscal Year Ended June 30, 2024
1. Market Value of Net Assets at Beginning of Year	$ 12,196,287,161	$ 11,152,105,027
2. Contributions		
a. Members	$ 72,868,528	$ 71,567,884
b. State and local agencies	340,276,759	330,798,895
c. Total contributions (2a) + (2b)	$ 413,145,287	$ 402,366,779
3. Net Investment Income		
a. Net appreciation (depreciation) in fair value of investments	$ 1,282,718,248	$ 1,194,278,350
b. Interest	143,927,143	125,817,340
c. Dividends	74,488,062	69,422,448
d. Securities lending activities	1,805,463	1,727,160
e. Real estate	524,428	616,619
f. Total investment income/(loss) (3a) + (3b) + (3c) + (3d) + (3e)	$ 1,503,463,344	$ 1,391,861,917
g. Investment expenses	(11,352,637)	(9,758,763)
h. Net investment income/(loss) (3f) + (3g)	$ 1,492,110,707	$ 1,382,103,154
4. Total additions/(subtractions) (2c) + (3h)	$ 1,905,255,994	$ 1,784,469,933
5. Deductions		
a. Retirement, death, and survivor benefits	$ 728,270,842	$ 718,774,890
b. Refunds and withdrawals	14,368,381	14,070,399
c. Administrative expenses	7,347,697	7,442,510
d. Total deductions (5a) + (5b) + (5c)	$ 749,986,920	$ 740,287,799
6. Net Change in Assets (4) - (5d)	$ 1,155,269,074	$ 1,044,182,134
7. Market Value of Net Assets at End of Year (1) + (6)	$ 13,351,556,235	$ 12,196,287,161

Table 3

Determination of Actuarial Value of Assets

1. Market Value as of July 1, 2024	$	12,196,287,161
2. Contributions		
a. Member	$	72,868,528
b. Employer		340,276,759
c. Total (a) + (b)	$	413,145,287
3. Decreases During Year		
a. Benefit payments	$	(728,270,842)
b. Refunds and withdrawals		(14,368,381)
c. Administrative expenses		(7,347,697)
d. Total (a) + (b) + (c)	$	(749,986,920)
4. Expected Return on Assets at 6.50%	$	781,983,650
5. Expected Market Value as of June 30, 2025 (1) + (2c) + (3d) + (4)	$	12,641,429,178
6. Actual Market Value as of June 30, 2025	$	13,351,556,235
7. Year End 2025 Asset Gain/(Loss) (6) - (5)	$	710,127,057

Schedule of Asset Gains/(Losses)

Year End	Original Amount	Recognized in Prior Years	Recognized in This Year	Recognized in Future Years
2021	$ 2,118,749,352	$ 1,694,999,480	$ 423,749,872	$ 0
2022	(2,591,662,422)	(1,554,997,452)	(518,332,484)	(518,332,486)
2023	438,214,766	175,285,906	87,642,953	175,285,907
2024	668,025,871	133,605,174	133,605,174	400,815,523
2025	710,127,057	0	142,025,411	568,101,646
Total	$ 1,343,454,624	$ 448,893,108	$ 268,690,926	$ 625,870,590

8. Asset Gain/(Loss) to be Recognized in the Future	$	625,870,590
9. Initial Actuarial Value as of June 30, 2025 (6) - (8)	$	12,725,685,645
10. Constraining Values:		
a. 80% of market value (6) x 0.8	$	10,681,244,988
b. 120% of market value (6) x 1.2	$	16,021,867,482
11. Actuarial Value as of June 30, 2025 (9), but not less than (10a), nor greater than (10b)	$	12,725,685,645

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 July 1, 2025 valuation date. In this section, the discussion will focus on the commitments of the System, which are referred to as its liabilities.

Table 4 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 covering the three-year period ended June 30, 2022. This set of assumptions is shown in Appendix B. The liabilities reflect the benefit structure in place as of July 1, 2025.

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 "break down" 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, as well as the unfunded actuarial accrued liability.

In valuations prior to July 1, 2011, the System used an assumption of a 2% annual COLA each year in developing liabilities and contribution rates. The System did not have an automatic COLA provision, but ad hoc COLAs had historically been granted by the Legislature. The 2011 Oklahoma Legislature passed House Bill 2132 which removed COLAs from the definition of "non-fiscal retirement bills" in the Oklahoma Pension Legislation Actuarial Analysis Act (OPLAAA). The impact of this change was to make any COLA bill subject to all of the requirements of OPLAAA, including the requirement that such bills provide adequate funding to pay the cost. As a result,

beginning with the July 1, 2011 actuarial valuation, the liabilities of the System have been calculated without a COLA assumption. Also, as noted earlier in the report, should funding of future COLAs and/or stipends be provided by the System, the COLAs and/or stipends should be included in the actuarial valuation.

Table 4

Present Value of Future Benefits
As of July 1, 2025

	Regular	Elected Officials	Hazardous Duty	Total
1. Active Employees				
a. Retirement Benefit	$ 4,428,482,098	$ 166,683,078	$ 250,427,972	$ 4,845,593,148
b. Withdrawal Benefit	274,181,766	7,906,554	17,025,884	299,114,204
c. Pre-Retirement Death Benefit	92,114,988	1,804,052	3,516,439	97,435,479
d. Disability Benefit	76,179,810	2,311,576	3,896,552	82,387,938
e. Return of Member Contributions	32,761,805	476,159	5,489,126	38,727,090
f. Supplemental Medical Benefit	132,168,840	4,244,028	8,413,999	144,826,867
g. Subtotal	$ 5,035,889,307	$ 183,425,447	$ 288,769,972	$ 5,508,084,726
2. Inactive Nonvested Members				$ 77,121,593
3. Inactive Vested Members				535,288,474
4. Return of Excess Contributions				62,785
5. Disabled Members				91,493,512
6. Retirees				6,231,147,384
7. Beneficiaries				500,668,177
8. Supplemental Medical Benefit for Retirees and Inactive Vested Members				185,990,595
9. Total Inactive Liability Sum of (2) through (8)				$ 7,621,772,520
10. Total PVFB (1g) + (9)				$ 13,129,857,246

Table 5

Actuarial Accrued Liability
As of July 1, 2025

	Regular	Elected Officials	Hazardous Duty	Total
1. Present Value of Future Benefits for Active Members				
a. Retirement Benefit	$ 4,428,482,098	$ 166,683,078	$ 250,427,972	$ 4,845,593,148
b. Withdrawal Benefit	274,181,766	7,906,554	17,025,884	299,114,204
c. Pre-Retirement Death Benefit	92,114,988	1,804,052	3,516,439	97,435,479
d. Disability Benefit	76,179,810	2,311,576	3,896,552	82,387,938
e. Return of Member Contributions	32,761,805	476,159	5,489,126	38,727,090
f. Supplemental Medical Benefit	132,168,840	4,244,028	8,413,999	144,826,867
g. Subtotal	$ 5,035,889,307	$ 183,425,447	$ 288,769,972	$ 5,508,084,726
2. Present Value of Future Normal Costs for Active Members				
a. Retirement Benefit	$ 846,001,079	$ 21,880,568	$ 78,228,395	$ 946,110,042
b. Withdrawal Benefit	157,418,974	4,811,342	9,023,127	171,253,443
c. Pre-Retirement Death Benefit	21,366,918	326,687	1,223,487	22,917,092
d. Disability Benefit	23,998,921	602,418	1,479,427	26,080,766
e. Return of Member Contributions	106,406,029	2,552,333	12,022,149	120,980,511
f. Supplemental Medical Benefit	34,210,395	947,509	2,653,912	37,811,816
g. Subtotal	$ 1,189,402,316	$ 31,120,857	$ 104,630,497	$ 1,325,153,670
3. Present Value of Future Benefits for Inactive Members (Table 4)				$ 7,621,772,520
4. Total Actuarial Accrued Liability (1g) - (2g) + (3)				$ 11,804,703,576
5. Actuarial Value of Assets				$ 12,725,685,645
6. Unfunded Actuarial Accrued Liability (4) - (5)				$ (920,982,069)

Table 6

Calculation of Actuarial Gain/(Loss)

1. Expected Actuarial Accrued Liability		
a. Actuarial accrued liability at July 1, 2024	$	11,692,287,231
b. Normal cost at mid-year		173,069,150
c. Benefit payments for fiscal year ending June 30, 2025		(742,639,223)
d. Interest on (a), (b), and (c)		741,779,051
e. Impact of assumption changes		0
f. Impact of benefit changes		0
g. Expected actuarial accrued liability as of July 1, 2025 (a) + (b) + (c) + (d) + (e) + (f)	$	11,864,496,209
2. Actuarial Accrued Liability at July 1, 2025	$	11,804,703,576
3. Actuarial Accrued Liability Gain/(Loss) (1g) - (2)	$	59,792,633
4. Expected Actuarial Value of Assets		
a. Actuarial value of assets at July 1, 2024	$	12,011,852,702
b. Contributions for fiscal year ending June 30, 2025		413,145,287
c. Benefit payment and administrative expenses for fiscal year ending June 30, 2025		(749,986,920)
d. Interest on (a), (b), and (c)		769,995,410
e. Expected actuarial value of assets as of July 1, 2025 (a) + (b) + (c) + (d)	$	12,445,006,479
5. Actuarial Value of Assets at July 1, 2025	$	12,725,685,645
6. Actuarial Value of Assets Gain/(Loss) (5) - (4e)	$	280,679,166
7. Net Actuarial Gain/(Loss) (3) + (6)	$	340,471,799
8. Contributions Above/(Below) the Actuarially Determined Contribution and Other Gain/(Loss)		
a. Previous Year's Actual Contribution	$	340,276,759
b. Required Employer Contribution		93,082,092
c. Excess Contribution (a) - (b)	$	247,194,667
d. Interest on (c) assuming mid-year payment		7,907,355
e. Excess Contributions as of July 1, 2025 (c) + (d)	$	255,102,022
f. Impact of assumption changes		0
g. Other Gain/(Loss), such as miscellaneous timing adjustment		5,912,423
h. Excess Contributions and Other Gain/(Loss) (e) + (f) + (g)	$	261,014,445
9. Total Experience Gain/(Loss) (7) + (8h)	$	601,486,244

SECTION 5 – EMPLOYER CONTRIBUTIONS

In the previous two sections, attention has been focused on the assets and the liabilities (present value of future benefits) of the System. A comparison of Tables 3 and 4 indicates there is a shortfall in current actuarial assets needed to meet the present value of all future benefits for current members and beneficiaries.

In an active system, there will always be a difference between the assets and the present value of all future benefits. An actuarial valuation determines a schedule of future contributions that will provide for this funding 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 the actuarial assumptions. 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) cost method as a level percent of pay. 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 age. 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.

Historically, there has been a single UAAL base scheduled to be paid down by 2027. Effective with the July 1, 2022 valuation, new experience bases are amortized as a level percent of payroll over a closed 15-year period while the legacy unfunded liability as of July 1, 2021 is amortized over the remaining years until 2027. For members participating in the Pathfinder defined contribution plan, the employer sends to OPERS the difference between the OPERS required rate (16.5% for state members) and the amount required for the Pathfinder employer match. These extra contributions to OPERS allow the use of the level percent of payroll amortization method since they are expected to produce a payment stream that is constant, if not increasing, as a percent of covered payroll. Should this provision change, this method would also likely need to change.

SECTION 5 – EMPLOYER CONTRIBUTIONS

In our professional judgement, the funding policy used by the System produces a reasonable actuarially determined contribution as defined in Actuarial Standard of Practice Number 4. Contributions are developed with the intent of being level as a percentage of covered payroll, assuming the number of active members remains stable. Furthermore, the funding policy is expected to accumulate sufficient assets to make all future benefit payments as they become due, if all assumptions are met. Because the system currently has a surplus and contributions set in statute exceed the actuarially determined contribution, it helps protect the plan against future adverse experience.

Contribution Rate Summary

The normal cost rate is developed in Table 7. Because the plan is closed to most new state employees, the proportion of active plan members who are Hazardous Duty members is expected to increase over time, resulting in an increased normal cost rate. Table 8 illustrates the development of the contribution rate for amortization of the unfunded actuarial accrued liability shown in Table 5. Table 9 explains the development of the total actuarial contribution rate.

Table 7

Normal Cost Contribution Rates
As a Percentage of Salary

	Regular	Elected Officials	Hazardous Duty	Total	% of Pay
1. Normal Cost					
a. Retirement Benefit	$ 108,446,487	$ 3,803,033	$ 10,575,366	$ 122,824,886	7.86%
b. Withdrawal Benefit	18,162,843	759,116	1,249,081	20,171,040	1.29%
c. Pre-Retirement Death Benefit	2,679,461	54,115	176,778	2,910,354	0.19%
d. Disability Benefit	2,771,787	88,353	208,295	3,068,435	0.20%
e. Return of Member Contributions	13,690,476	447,778	1,657,776	15,796,030	1.01%
f. Supplemental Medical Benefit	5,735,581	195,125	414,229	6,344,935	0.41%
g. Total	$ 151,486,635	$ 5,347,520	$ 14,281,525	$ 171,115,680	10.96%
2. Estimated Payroll for the Year	$ 1,431,331,262	$ 38,324,558	$ 91,792,567	$ 1,561,448,387	
3. Normal Cost Rate (1g)/(2)	10.58%	13.95%	15.56%	10.96%	

Table 8

Unfunded Actuarial Accrued Liability Contribution Rate

1. Unfunded Actuarial Accrued Liability at July 1, 2024	$	(319,565,471)
2. Amortization Payment		(20,195,384)
3. Expected Unfunded Actuarial Accrued Liability at July 1, 2025 [(1)*1.065] - [(2)*(1.065$^{.5}$)]		(319,495,825)
4. Actual Unfunded Actuarial Accrued Liability at July 1, 2025		(920,982,069)
5. Experience for Fiscal Year 2025 (4) - (3)	$	(601,486,244)

Schedule of Amortization Bases

Amortization Bases	Original Amount	July 1, 2025 Remaining Payments	Date of Last Payment	Outstanding Balance as of July 1, 2025	Annual Contribution*
2021 UAAL	$ 55,034,895	2	7/1/2027	$ 22,153,392	$ 11,608,141
2022 Experience	(219,946,524)	12	7/1/2037	(202,238,064)	(20,506,966)
2023 Experience and Assumption Changes	99,270,732	13	7/1/2038	94,393,638	8,964,281
2024 Experience	(239,165,837)	14	7/1/2039	(233,804,791)	(20,917,190)
2025 Experience	(601,486,244)	15	7/1/2040	(601,486,244)	(50,949,489)
Total				**$ (920,982,069)**	**$ (71,801,223)**

*The UAAL is amortized as a level percent of payroll, assuming payroll increases 3.25% per year. Contribution amounts reflect mid-year timing.

1. Total UAAL Amortization Payment	$	(71,801,223)
2. Total Estimated Payroll for Year Ending June 30, 2026[1]	$	2,360,785,206
3. Amortization as a Percent of Payroll		(3.04%)

[1] Includes $799,336,819 in payroll on behalf of DC plan participants.

Table 9

Actuarial Contribution Rate

	July 1, 2025	July 1, 2024
1. Total Normal Cost Rate	10.96%	10.97%
2. Amortization of UAAL[1]	(3.04%)	(0.87%)
3. Budgeted Expenses[2]	0.58%	0.55%
4. Total Actuarial Contribution Rate (1) + (2) + (3)	8.50%	10.65%
5. Estimated Member Contribution Rate	4.33%	4.34%
6. Employer Actuarial Contribution Rate (4) - (5)	4.17%	6.31%

[1] Amortization of UAAL is a level percent of payroll. Recognizes contributions received on behalf of defined contribution plan members.

[2] Provided by the System.

Table 10

Summary of Contribution Requirements

	Actuarial Valuation as of July 1, 2025	Actuarial Valuation as of July 1, 2024	Percent Change
1. Expected Annual Payroll	$ 1,561,448,387	$ 1,577,058,185	(1.0%)
2. Total Normal Cost	$ 171,115,680	$ 173,069,150	(1.1%)
3. Unfunded Actuarial Accrued Liability	$ (920,982,069)	$ (319,565,471)	188.2%
4. Amortization of Unfunded Actuarial Accrued Liability*	$ (71,801,223)	$ (20,195,384)	255.5%
5. Budgeted Expenses (Provided by the System)	$ 9,059,560	$ 8,595,960	5.4%
6. Total Required Contribution (2) + (4) + (5)	$ 108,374,017	$ 161,469,726	(32.9%)
7. Estimated Member Contributions	$ 67,604,689	$ 68,387,634	(1.1%)
8. Required Employer Contribution (6) - (7)	$ 40,769,328	$ 93,082,092	(56.2%)
9. Previous Year's Actual Contribution			
a. Member	$ 72,868,528	$ 71,567,884	1.8%
b. Employer	340,276,759	330,798,895	2.9%
c. Total	$ 413,145,287	$ 402,366,779	2.7%

*Amortization of UAAL is a level percent of payroll.

SECTION 6 – RISK CONSIDERATIONS

Actuarial Standards of Practice are issued by the Actuarial Standards Board and are binding on credentialed actuaries practicing in the United States. These standards generally identify what the actuary should consider, document and disclose when performing an actuarial assignment. In September 2017, Actuarial Standard of Practice Number 51, *Assessment and Disclosure of Risk in Measuring Pension Obligations*, (ASOP 51) was issued as final with application to measurement dates on or after November 1, 2018. This ASOP, which applies to funding valuations, actuarial projections, and actuarial cost studies of proposed plan changes, was first applicable for the July 1, 2019 actuarial valuation for the Oklahoma Public Employees Retirement System.

A typical retirement plan faces many different risks, but the greatest risk is the inability to make benefit payments when due. If plan assets are depleted, benefits may not be paid which could create legal risk or the plan could become "pay as you go." The term "risk" is most commonly associated with an outcome with undesirable results. However, in the actuarial world, risk can be translated as uncertainty. The actuarial valuation process uses many actuarial assumptions to project how future contributions and investment returns will meet the cash flow needs for future benefit payments. Of course, we know that actual experience will not unfold exactly as anticipated by the assumptions and that uncertainty, whether favorable or unfavorable, creates risk. ASOP 51 defines risk as the potential of actual future measurements to deviate from expected results due to actual experience that differs from the actuarial assumptions.

The various risk factors for a given plan can have a significant impact – positive or negative – on the actuarial projection of liability and contribution rates.

There are a number of risks inherent in the funding of a defined benefit plan. These include:

- economic risks, such as investment return and price inflation;
- demographic risks such as mortality, payroll growth, aging population including the impact of baby boomers, and retirement ages;
- contribution risk, i.e., the potential for the contribution rates (or the methodology that sets them) to be inadequate to fund the plan; and
- external risks such as the regulatory and political environment.

There is a direct correlation between healthy, well-funded retirement plans and consistent contributions equal to the full actuarial contribution rate each year. The sources of funding for OPERS do not guarantee that the full contributions will be made, but because the System is currently well-funded, the amounts are currently sufficient. There is a risk if the funded status declines significantly that the contribution structure would not be able to return the System to being considered well-funded.

Another significant risk factor for OPERS is investment return because of the volatility of returns and the size of plan assets compared to payroll (see Table 11). A perusal of historical returns over 10-20 years reveals that the actual return each year is rarely close to the average return for

the same period. This is to be expected, given the underlying capital market assumptions and the System's asset allocation.

Under the revised Actuarial Standards of Practice (ASOP) No. 4 effective for valuations after February 15, 2023, we are required to include a low-default-risk obligation measure of the System's liability in our funding valuation report. This is an informational disclosure as described below and would not be appropriate for assessing the funding progress or health of the plan. This measure uses the unit credit cost method and reflects all the assumptions and provisions of the funding valuation except that the discount rate is derived from considering low-default-risk fixed income securities. We considered the FTSE Pension Discount Curve based on market bond rates published by the Society of Actuaries as of June 30, 2025 and with the 30-year spot rate used for all durations beyond 30. Using these assumptions, we calculate a liability of approximately $11,591,000,000. This amount approximates the termination liability if the plan (or all covered employment) ended on the valuation date and all of the accrued benefits had to be paid with cash-flow matched bonds. This assurance of funded status and benefit security is typically more relevant for corporate plans than for governmental plans since governments rarely have the need or option to completely terminate a plan.

Finally, because OPERS is a partially closed plan, there will be a decline in active membership for a number of years as current active employees leave but are not replaced by an OPERS defined benefit plan member due to their participation in Pathfinder. Usually this would raise concerns because there would be a shrinking payroll over which to fund the amortization of the UAAL. Since OPERS currently collects employer contributions on the pay of the state employees not covered by OPERS and because OPERS is currently well funded, there is less concern with the partial closure. Should the funding approach change, however, there could be a significant increase in the risks faced by OPERS.

A key demographic risk for all retirement systems, including OPERS, is improvements in mortality (longevity) greater than anticipated. While the actuarial assumptions anticipate some improvements in mortality experience over time and these assumptions are refined every experience study, the risk arises because there is a possibility of some sudden shift, perhaps from a significant medical breakthrough that could quickly increase liabilities. Likewise, there is some possibility of a significant public health crisis that could result in a significant number of additional deaths in a short time period, as experienced with the COVID-19 pandemic. This type of event is also significant, although more easily absorbed. While either of these events could happen, they are not frequent events and are generally modest in their impact, and thus represent much less risk than the volatility associated with investment returns.

The following exhibits summarize some historical information that helps indicate how certain key risk metrics have changed over time. Many are due to the maturing of the System.

Table 11

Historical Asset Volatility Ratios

As a retirement system matures, the size of the market value of assets increases relative to the covered payroll of active members, on which the System is funded. The size of the plan assets relative to covered payroll, sometimes referred to as the asset volatility ratio, is an important indicator of the contribution risk for the System. The higher this ratio, the more sensitive a plan's contribution rate is to the volatility of investment returns. In other words, it will be harder to recover from investment losses with increased contributions. The inclusion of employer contributions on the Pathfinder payroll, which is not reflected in the exhibit below, helps to mitigate this risk.

Actuarial Valuation Date	Market Value of Assets	Estimated Plan Year Payroll	Asset Volatility Ratio	Increase in ACR with a Return 10% Lower than Assumed*
7/1/2006	$5,817,165,538	$1,568,350,023	3.71	3.14%
7/1/2007	6,640,477,411	1,626,737,832	4.08	3.46%
7/1/2008	6,255,207,565	1,682,663,413	3.72	3.15%
7/1/2009	5,173,537,778	1,732,975,532	2.99	2.53%
7/1/2010	5,774,379,263	1,683,697,139	3.43	2.91%
7/1/2011	6,841,001,769	1,570,500,148	4.36	3.69%
7/1/2012	6,821,303,541	1,633,837,374	4.18	3.54%
7/1/2013	7,441,781,618	1,695,347,809	4.39	3.72%
7/1/2014	8,570,104,910	1,744,041,536	4.91	4.16%
7/1/2015	8,636,441,984	1,808,972,785	4.77	4.04%
7/1/2016	8,435,578,907	1,790,809,603	4.71	3.99%
7/1/2017	9,229,499,873	1,688,543,856	5.47	4.63%
7/1/2018	9,702,031,567	1,601,074,591	6.06	5.13%
7/1/2019	9,958,113,213	1,584,630,994	6.28	5.32%
7/1/2020	10,097,798,827	1,571,954,116	6.42	5.44%
7/1/2021	12,525,883,234	1,556,561,344	8.05	6.82%
7/1/2022	10,392,907,883	1,527,059,370	6.81	5.77%
7/1/2023	11,152,105,027	1,513,007,245	7.37	6.24%
7/1/2024	12,196,287,161	1,577,058,185	7.73	6.55%
7/1/2025	13,351,556,235	1,561,448,387	8.55	7.24%

Note: Years prior to 7/1/2010 were provided by the prior actuary.

*The impact of asset smoothing is not reflected in the impact on the Actuarial Contribution Rate (ACR). Current year assumptions and 15-year amortization are used for all years shown.

The assets at June 30, 2025 are 855% of payroll, so underperforming the investment return assumption by 1.00% (i.e., earn 5.50% for one year) is equivalent to 8.55% of payroll. While the actual impact in the first year is mitigated by the asset smoothing method and amortization of the UAAL, this illustrates the risk associated with volatile investment returns.

Table 12

Historical Cash Flows

Mature plans with negative cash flows will experience increased sensitivity to investment return volatility. Cash flows, for this purpose, are measured as contributions less benefit payments. Note that negative cash flows are expected in mature retirement systems. If the System has negative cash flows and then experiences returns below the assumed rate, there are fewer assets to be reinvested to earn the higher returns that typically follow. While any negative cash flow will produce such a result, it is typically a negative cash flow of more than 5% of the market value of assets ("MVA") that may cause significant concerns. OPERS has generally had negative cash flows of around 3% in recent years, so there is no concern for the foreseeable future.

Year End	Market Value of Assets (MVA)	Contributions	Benefit Payments and Expenses	Net Cash Flow	Net Cash Flow as a Percent of MVA
6/30/2006	$5,817,165,538	$227,261,755	$349,539,019	($122,277,264)	(2.10%)
6/30/2007	6,640,477,411	261,936,847	377,414,439	(115,477,592)	(1.74%)
6/30/2008	6,255,207,565	286,775,377	395,397,691	(108,622,314)	(1.74%)
6/30/2009	5,173,537,778	311,734,343	426,155,646	(114,421,303)	(2.21%)
6/30/2010	5,774,379,263	328,820,672	444,874,268	(116,053,596)	(2.01%)
6/30/2011	6,841,001,769	319,336,013	479,400,000	(160,063,987)	(2.34%)
6/30/2012	6,821,303,541	329,009,579	503,400,243	(174,390,664)	(2.56%)
6/30/2013	7,441,781,618	338,195,447	521,895,082	(183,699,635)	(2.47%)
6/30/2014	8,570,104,910	350,571,518	540,228,497	(189,656,979)	(2.21%)
6/30/2015	8,636,441,984	365,330,320	563,282,356	(197,952,036)	(2.29%)
6/30/2016	8,435,578,907	370,050,081	586,669,682	(216,619,601)	(2.57%)
6/30/2017	9,229,499,873	358,615,175	614,308,717	(255,693,542)	(2.77%)
6/30/2018	9,702,031,567	344,916,830	632,863,130	(287,946,300)	(2.97%)
6/30/2019	9,958,113,213	349,040,092	661,088,933	(312,048,841)	(3.13%)
6/30/2020	10,097,798,827	361,926,046	667,017,809	(305,091,763)	(3.02%)
6/30/2021	12,525,883,234	359,222,896	695,488,186	(336,265,290)	(2.68%)
6/30/2022	10,392,907,883	366,135,531	710,611,640	(344,476,109)	(3.31%)
6/30/2023	11,152,105,027	381,652,781	725,219,282	(343,566,501)	(3.08%)
6/30/2024	12,196,287,161	402,366,779	740,287,799	(337,921,020)	(2.77%)
6/30/2025	13,351,556,235	413,145,287	749,986,920	(336,841,633)	(2.52%)

Table 12 (continued)

Historical Cash Flows

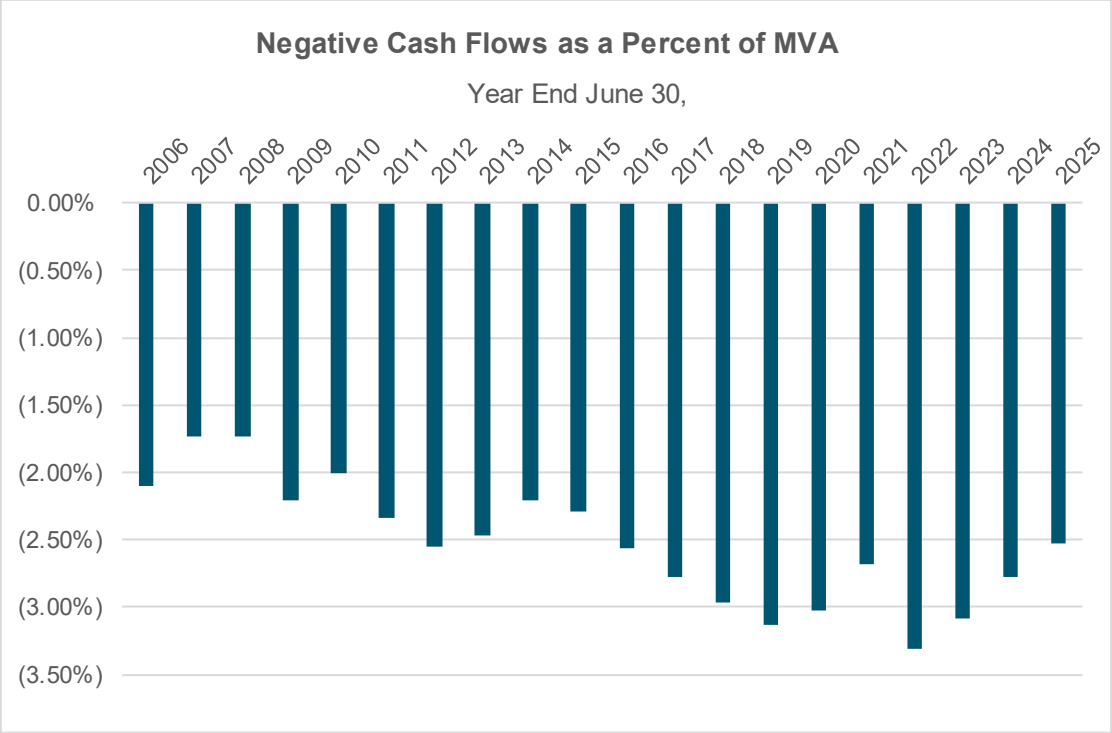


Table 13

Liability Maturity Measurement

Most public sector retirement systems have been in operation for many years. As a result, they have aging plan populations, and in some cases declining active populations, resulting in an increasing ratio of retirees to active members and a growing percentage of retiree liability. The retirement of the remaining baby boomers over the next decade is expected to further exacerbate the aging of the retirement system population. With more of the total liability residing with retirees, investment volatility has a greater impact on the funding of the System since it is more difficult to restore the System financially after losses occur when there is comparatively less payroll over which to spread costs.

Projections provide the most effective way of analyzing the impact of these changes on future funding measures, but studying several key metrics from the valuation can also provide some valuable insight.

Year End	Retiree Liability (a)	Total Actuarial Accrued Liability (b)	Retiree Percentage (a / b)	Covered Payroll (c)	Ratio (b/c)
6/30/2006	$3,533,634,732	$7,914,657,886	44.6%	$1,568,350,023	5.05
6/30/2007	3,742,715,550	8,413,248,130	44.5%	1,626,737,832	5.17
6/30/2008	4,050,368,848	8,894,287,254	45.5%	1,682,663,413	5.29
6/30/2009	4,241,876,602	9,291,457,837	45.7%	1,732,975,532	5.36
6/30/2010	4,484,099,170	9,622,627,833	46.6%	1,683,697,139	5.72
6/30/2011	4,153,994,755	8,179,767,661	50.8%	1,570,500,148	5.21
6/30/2012	4,321,790,926	8,334,637,900	51.9%	1,633,837,374	5.10
6/30/2013	4,512,915,419	8,556,121,906	52.7%	1,695,347,809	5.05
6/30/2014	4,652,763,014	8,753,669,153	53.2%	1,744,041,536	5.02
6/30/2015	4,864,693,645	8,996,125,901	54.1%	1,808,972,785	4.97
6/30/2016	5,173,659,555	9,427,809,623	54.9%	1,790,809,603	5.26
6/30/2017	5,526,693,946	9,781,617,070	56.5%	1,688,543,856	5.79
6/30/2018	5,677,148,092	9,884,133,615	57.4%	1,601,074,591	6.17
6/30/2019	5,828,546,805	10,047,374,213	58.0%	1,584,630,994	6.34
6/30/2020	6,377,870,941	10,943,079,053	58.3%	1,571,954,116	6.96
6/30/2021	6,457,479,509	11,046,240,166	58.5%	1,556,561,344	7.10
6/30/2022	6,698,814,533	11,139,885,081	60.1%	1,527,059,370	7.29
6/30/2023	6,800,610,872	11,481,956,397	59.2%	1,513,007,245	7.59
6/30/2024	6,868,417,718	11,692,287,231	58.7%	1,577,058,185	7.41
6/30/2025	6,948,907,849	11,804,703,576	58.9%	1,561,448,387	7.56

Table 13 (continued)

Liability Maturity Measurement

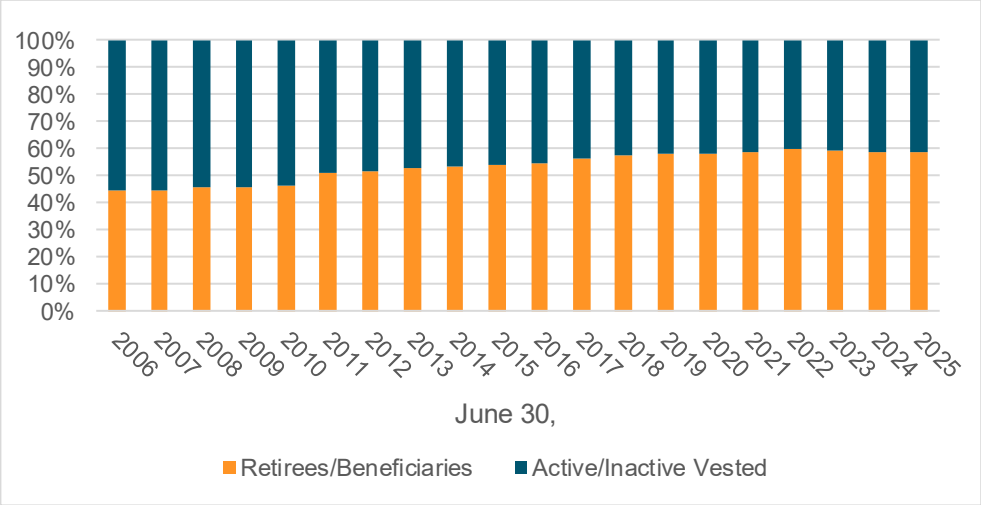


Table 14

Historical Member Statistics

Valuation Date July 1	Active Members				Retired Members			
			Average Salary			Active/	Average Benefits	
	Number	Payroll	$	% Incr.	Number	Retired	$	% Incr.
2006	45,472	$1,568,350,023	$34,490	4.16%	24,372	1.87	$13,529	4.88%
2007	44,712	1,626,737,832	36,383	5.49%	25,233	1.77	13,749	1.63%
2008	45,120	1,682,663,413	37,293	2.50%	26,033	1.73	14,449	5.09%
2009	45,683	1,732,975,532	37,935	1.72%	26,949	1.70	14,629	1.25%
2010	43,934	1,683,697,139	38,323	1.02%	28,009	1.57	14,877	1.70%
2011	40,551	1,570,500,148	38,729	1.06%	29,418	1.38	15,226	2.35%
2012	42,569	1,633,837,374	38,381	(0.90%)	30,263	1.41	15,422	1.29%
2013	43,273	1,695,347,809	39,178	2.08%	31,135	1.39	15,679	1.67%
2014	43,947	1,744,041,536	39,685	1.29%	31,833	1.38	15,862	1.17%
2015	43,843	1,808,972,785	41,260	3.97%	32,754	1.34	16,144	1.78%
2016	41,806	1,790,809,603	42,836	3.82%	33,749	1.24	16,404	1.61%
2017	38,873	1,688,543,856	43,437	1.40%	34,579	1.12	16,673	1.64%
2018	36,329	1,601,074,591	44,072	1.46%	35,260	1.03	16,884	1.27%
2019	34,536	1,584,630,994	45,883	4.11%	35,869	0.96	17,134	1.48%
2020	33,115	1,571,954,116	47,470	3.46%	36,179	0.92	17,930	4.65%
2021	31,711	1,556,561,344	49,086	3.40%	36,351	0.87	18,184	1.42%
2022	29,912	1,527,059,370	51,052	4.01%	36,649	0.82	18,442	1.42%
2023	28,671	1,513,007,245	52,771	3.37%	36,899	0.78	18,689	1.34%
2024	27,890	1,577,058,185	56,546	7.15%	37,041	0.75	18,966	1.48%
2025	26,895	1,561,448,387	58,057	2.67%	37,159	0.72	19,280	1.66%

Note: Years prior to 7/1/2010 were provided by the prior actuary.

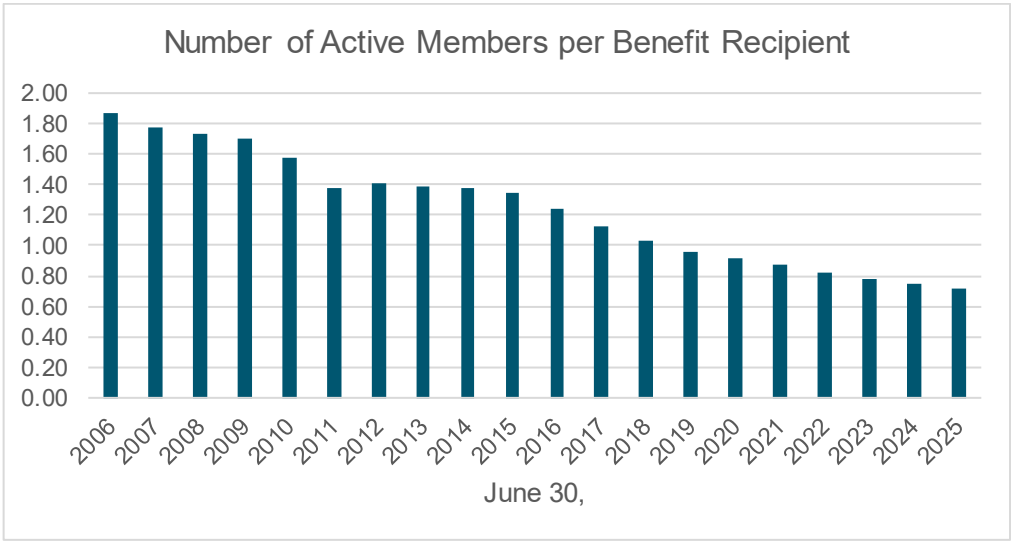


Table 15

Comparison of Valuation Results under Alternate Investment Return Assumptions

Investment Return Assumption	5.50%	6.00%	6.50%	7.00%	7.50%
Contributions					
Normal Cost Rate	13.98%	12.36%	10.96%	9.75%	8.71%
Amortization of UAAL	1.74%	(0.68%)	(3.04%)	(5.36%)	(7.64%)
Budgeted Expenses	0.58%	0.58%	0.58%	0.58%	0.58%
Total Actuarial Determined Contribution	16.30%	12.26%	8.50%	4.97%	1.65%
Member Contribution Rate	(4.33%)	(4.33%)	(4.33%)	(4.33%)	(4.33%)
Statutory State Contribution Rate	(16.50%)	(16.50%)	(16.50%)	(16.50%)	(16.50%)
Contribution Shortfall/(Surplus)	(4.53%)	(8.56%)	(12.33%)	(15.86%)	(19.18%)
Actuarial Value of Assets ($ in thousands)	$12,725,686	$12,725,686	$12,725,686	$12,725,686	$12,725,686
Actuarial Accrued Liability	$13,166,220	$12,455,581	$11,804,704	$11,207,641	$10,659,140
Funded Ratio	96.7%	102.2%	107.8%	113.5%	119.4%

Note: All other assumptions are unchanged for purposes of this sensitivity analysis.

SECTION 7 – OTHER INFORMATION

In this section we provide exhibits showing the funding history and the expected benefit payments.

Table 16

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)
7/1/2016	8,790,886,036	9,427,809,623	636,923,587	93.2%	1,790,809,603	35.6%
7/1/2017	9,241,292,469	9,781,617,070	540,324,601	94.5%	1,688,543,856	32.0%
7/1/2018	9,658,125,021	9,884,133,515	226,007,594	97.7%	1,601,074,591	14.1%
7/1/2019	9,909,683,940	10,047,374,213	137,690,273	98.6%	1,584,630,994	8.7%
7/1/2020	10,212,241,395	10,943,079,053	730,837,658	93.3%	1,571,954,116	46.5%
7/1/2021	10,991,205,271	11,046,240,166	55,034,895	99.5%	1,556,561,344	3.5%
7/1/2022	11,311,760,330	11,139,885,081	(171,875,249)	101.5%	1,527,059,370	(11.3%)
7/1/2023	11,557,389,515	11,481,956,397	(75,433,118)	100.7%	1,513,007,245	(5.0%)
7/1/2024	12,011,852,702	11,692,287,231	(319,565,471)	102.7%	1,577,058,185	(20.3%)
7/1/2025	12,725,685,645	11,804,703,576	(920,982,069)	107.8%	1,561,448,387	(59.0%)

*Covered Payroll shown is for the defined benefit plan members only although employer contributions toward the UAAL are being received on behalf of defined contribution plan members.

Table 17

Projected Benefit Payments

The table 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 the benefits expected to be paid to members currently active on July 1, 2025. The "Retirees" column shows benefits expected to be paid to members receiving benefit payments as of July 1, 2025 or to members who have terminated employment and are entitled to a deferred vested benefit.

Retirement, Survivor and Withdrawal Benefits

Year Ending June 30	Actives	Retirees	Total
2025	$ 31,135,000	$ 723,654,000	$ 754,789,000
2026	62,094,000	709,232,000	771,326,000
2027	91,198,000	694,032,000	785,230,000
2028	119,831,000	677,641,000	797,472,000
2029	147,775,000	661,086,000	808,861,000
2030	175,008,000	643,967,000	818,975,000
2031	201,929,000	626,639,000	828,568,000
2032	228,929,000	608,708,000	837,637,000
2033	256,805,000	590,259,000	847,064,000
2034	285,177,000	570,145,000	855,322,000

Supplemental Medical Premium Benefits

Year Ending June 30	Actives	Retirees	Total
2025	$ 955,000	$ 16,685,000	$ 17,640,000
2026	2,284,000	16,392,000	18,676,000
2027	3,492,000	16,066,000	19,558,000
2028	4,614,000	15,710,000	20,324,000
2029	5,666,000	15,380,000	21,046,000
2030	6,653,000	15,047,000	21,700,000
2031	7,574,000	14,746,000	22,320,000
2032	8,433,000	14,452,000	22,885,000
2033	9,249,000	14,166,000	23,415,000
2034	10,004,000	13,808,000	23,812,000

APPENDIX A – SUMMARY OF MAIN BENEFIT PROVISIONS

Following is a summary of the major System provisions used to determine the System's financial position as of July 1, 2025.

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 the Oklahoma Public Employees Retirement System Board of Trustees. The Board acts as the fiduciary for the investment and administration of the System.

Employees included

All permanent employees of the State of Oklahoma, and any other employer such as a county, county hospital, city or town, conservation districts, circuit engineering districts, and any trust in which a county, city or town participates and is the primary beneficiary, are eligible to join if:

a) 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; and

b) the employee is scheduled for at least 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. Effective November 1, 2015, the Plan is closed to most new State employees. Any employee with service in the System prior to November 1, 2015 will continue to be a member or will join the System upon re-employment with a participating employer.

Employer and employee contributions

Most State employees except Hazardous Duty employees and most elected officials:

Employee:	3.5%
Employer:	16.5%
Total:	20.0%

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.

Before November 1, 2010, elected officials selected a contribution rate of 4.5%, 6%, 7.5%, 8.5%, 9% or 10% which determined the computation factor used in calculating their benefit. Elected officials elected or appointed on or after November 1, 2010 (but before November 1, 2011) were limited to selecting either the 4.5% contribution rate or the 10% contribution rate. Those elected after November 1, 2011 contribute at 3.5% like most non-elected members.

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). Elected officials elected on or after November 1, 2011 may also elect Step-Up.

Contributions are based on compensation defined by the Board.

Employer and employee contributions
(continued)

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%	15.5%	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

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%
2009-2011	15.5%	3.5%	19.0%
2011-present	16.5%	3.5%	20.0%

Years of 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	to	More	5

A member who has withdrawn his or her 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 or her withdrawal.

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. For members joining on or after November 1, 2012, any additional months of unused sick leave credit will be added to the service credit without rounding the total service up to the next higher year. Any cost to the employer will be based on the actual number of months of unused sick leave.

Participating service
(continued)

A member may receive credit for those years of credited service accumulated 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. The result is rounded up to the next year if the number of remaining months is equal to or greater than six. Credited service of members joining on or after November 1, 2012 will not be rounded up. Members will be credited with, and their benefit calculation will be computed on, the actual number of years and months of credited service.

Compensation

The member's basic salary and wages as defined by the Board of Trustees, including amounts contributed to deferred compensation plans. Compensation shall not mean payment for overtime or moving expenses.

Final average compensation

The average of the thirty-six (36) highest months of compensation earned within the last ten (10) years of participating service. For members hired on or after July 1, 2013, final average compensation is the average of the sixty (60) highest months of compensation earned within the last ten (10) years of participating service. Final average compensation will be subject to any applicable salary caps and based on salary 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 a member with more than twenty (20) years of service, the minimum is $13,800.

Normal retirement date

Normal retirement is the earliest of: (1) first day of the month coinciding with or next following the 62nd birthday; or, (2) 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 (3) 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 (6) years of full-time equivalent employment with a participating employer before receiving any retirement benefits.

For regular employees hired on or after November 1, 2011, the retirement age is 65. Alternatively, they may retire under the "Rule of 90" if they are at least age 60.

The normal retirement date for elected officials is the first of the month coinciding with or following the official's 60th birthday 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).

For elected officials appointed or elected on or after November 1, 2011, the retirement age is 65 with a minimum of eight (8) years of elected service, or age 62 if they have ten (10) years of elected service.

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. Elected officials appointed or elected on or after November 1, 2011 are also eligible for the Step-Up Option.

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 computation factor:

% 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 elected officials for at least six (6) years to qualify for the elected official benefit formula on all years of previous non-elected participating service. For elected officials elected or appointed on or after November 1, 2011, the vesting period is eight (8) years.

OPERS members who are elected after August 21, 2008 have a benefit cap of 100% of their highest annual salary. Elected officials who become members after August 21, 2008 (but before November 1, 2011) 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.

Normal retirement date
(continued)

Elected officials who are appointed or elected on or after November 1, 2010 (but before November 1, 2011) have two benefit multiplier options: 1.9% and 4.0%. Those elected after November 1, 2011 contribute at 3.5% like most non-elected members, and have a multiplier of 2%. In addition, they must be age 62 with at least ten (10) years as an elected official, or age 65 with at least eight (8) years as an elected official, to qualify for retirement.

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	100.00%
59	94	61	93.33
58	88	60	86.67
57	82	59	80.00
56	76	58	73.33
55	70	57	66.67
		56	63.33
		55	60.00

The following tables apply to regular and hazardous duty employees employed, or elected officials appointed or elected, on or after November 1, 2011:

Elected Officials		Other Members	
Age	Percentage	Age	Percentage
62	100.00%	65	100.00%
61	93.33	64	93.33
60	86.67	63	86.67
		62	80.00
		61	73.33
		60	66.67

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 and having a date of disability 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 for non-elected members.

Vested benefit

A member who terminates after eight (8) years of credited service (six (6) years for most 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 for most elected officials), provided the member's contribution accumulation is not withdrawn and the member has at least six (6) years of full-time equivalent employment. A member with ten (10) or more years of service also has the option of reduced benefits at early retirement age.

Members terminating with less than eight (8) years (or six years for most elected officials) of credited service may elect to receive a refund of their member 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.

For regular employees employed on or after November 1, 2011, a vested benefit is not payable for Normal Retirement until age 65. For elected officials appointed or elected on or after November 1, 2011, a vested benefit requires at least eight (8) years of elected service and is not payable for normal retirement until age 65.

Pre-retirement death benefit

For a deceased active member who had met normal, early or vested retirement provisions, the spouse may elect a spouse's benefit. This spouse's benefit is the amount that would have been paid if the member had instead 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 deceased member's contribution accumulation in lieu of the Option B monthly benefit.

In addition to the provision above, the eligible spouse of a deceased elected official with at least six (6) years of elected service or eight (8) years if elected on or after November 1, 2011, and married at least three (3) years immediately preceding death, may elect to receive 50% of the maximum benefit the member would have been 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 of the surviving spouse.

Any other designated beneficiary of a member other than an eligible spouse will receive a refund of the deceased member's 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 form of retirement benefits

The normal form of benefit for an unmarried member, other than an elected official, is a single life monthly annuity with a guaranteed refund of the unpaid employee 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 provision. 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 or B, or a joint annuitant other than the spouse.

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 Office of Management and Enterprise Services, Employees Group Insurance Division (or other eligible employer health plans) for members receiving retirement benefits.

Expenses

The expenses of administering the System are paid from the retirement Trust Fund.

Hazardous Duty Members (Department of Corrections Officers, Grand River Dam Authority Public Safety Officers, Firefighters of the Military Department of the State of Oklahoma, Deputy Sheriffs, County Jailers, and Emergency Medical Personnel) 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 age is the earliest of: twenty (20) years of service as a member covered by the Department of Corrections (DOC) 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 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 (6) 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 twenty (20) years. For service in excess of twenty (20) years, the benefit formula is 2% of final average compensation.

For hazardous duty employees hired on or after November 1, 2011, the normal retirement age is age 65. Alternatively, they may retire under the earliest of (i) the "Rule of 90" if they are at least age 60 or (ii) twenty (20) years of service as a member covered by hazardous duty provisions.

Members eligible for these benefits with at least five (5) years of experience in their positions on or after June 30, 2004 remain eligible to retire after twenty (20) years even if they transfer to positions within DOC that are not eligible to retire after twenty (20) years.

Hazardous Duty Members (Department of Corrections Officers, Grand River Dam Authority Public Safety Officers, Firefighters of the Military Department of the State of Oklahoma, Deputy Sheriffs, County Jailers, and Emergency Medical Personnel) Benefits
(continued)

Special Surviving Spouse and Child benefits for any member employed by the 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 twenty (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 full time 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
July 1998 – June 1999	8.0%	N/A	N/A
July 1999 – June 2000	8.0%	N/A	N/A
July 2000 – June 2010	8.0%	N/A	N/A
July 2010 and after	8.0%	3.5%	3.5%

Grand River Dam Authority Public Safety Officers Hired for the First Time in the Position on or after July 1, 2016:

The normal retirement date is the first day of the month following the date the member accrues twenty (20) years of full-time equivalent service as a member covered by the Grand River Dam Authority Public Safety Officers Provisions.

Alternatively, for members who began participating in OPERS before November 1, 2011, the normal age of retirement is age 62 with at least six (6) years of full-time equivalent employment; or the first day of the month following the date at which the sum of the member's age and number of years of credited service totals eighty (80), if the member was hired before July

Hazardous Duty Members (Department of Corrections Officers, Grand River Dam Authority Public Safety Officers, Firefighters of the Military Department of the State of Oklahoma, Deputy Sheriffs, County Jailers, and Emergency Medical Personnel) Benefits
(continued)

1, 1992; or the first day of the month following the date at which the sum of the member's age and number of years of credited service totals ninety (90), if the member was hired on or after July 1, 1992. For members who began participating in OPERS on or after November 1, 2011, the normal age of retirement is age 65 with at least six (6) years of full-time equivalent employment, or the first day of the month following the date at which the sum of the member's age and number of years of credited service totals ninety (90) and the member is at least 60 years of age. Members must complete at least six (6) 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 twenty (20) years. For service in excess of twenty (20) years, the benefit formula is 2% of final average compensation.

Firefighters of the Military Department of the State of Oklahoma:

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 twenty (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.

Hazardous Duty Members (Department of Corrections Officers, Grand River Dam Authority Public Safety Officers, Firefighters of the Military Department of the State of Oklahoma, Deputy Sheriffs, County Jailers, and Emergency Medical Personnel) Benefits
(continued)

In contrast to DOC members, the 2.5% formula and 8% contribution rate apply to service after twenty (20) years.

Deputy Sheriffs and County Jailers First Employed as a Deputy Sheriff or County Jailer on or after November 1, 2020:

The normal retirement date is the first day of the month following the date the member accrues twenty (20) years of full-time equivalent service as a member covered by the Deputy Sheriff or County Jailer provisions.

Alternatively, for members who began participating in OPERS before November 1, 2020, the normal age of retirement is age 62 with at least six (6) years of full-time equivalent employment; or the first day of the month following the date at which the sum of the member's age and number of years of credited service totals eighty (80), if the member was hired before July 1, 1992; or the first day of the month following the date at which the sum of the member's age and number of years of credited service totals ninety (90), if the member was hired on or after July 1, 1992. For members who began participating in OPERS on or after November 1, 2011, the normal age of retirement is age 65 with at least six (6) years of full-time equivalent employment, or the first day of the month following the date at which the sum of the member's age and number of years of credited service totals ninety (90) and the member is at least 60 years of age. Members must complete at least six (6) 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, not exceeding twenty (20) years. For service in excess of twenty (20) years, the benefit formula is 2% of final average compensation.

Hazardous Duty Members (Department of Corrections Officers, Grand River Dam Authority Public Safety Officers, Firefighters of the Military Department of the State of Oklahoma, Deputy Sheriffs, County Jailers, and Emergency Medical Personnel) Benefits
(continued)

Special Surviving Spouse and Child benefits for any member employed as a Deputy Sheriff or County Jailer and who is 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 twenty (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 full time at an institution of higher education).

Deputy Sheriffs and County Jailers First Employed as a Deputy Sheriff or County Jailer prior to November 1, 2020:

The benefit for Deputy Sheriffs or County Jailers who began employment prior to November 1, 2020 is based on a 2.5% benefit multiplier for service on or after November 1, 2024. Oklahoma Deputy Sheriffs or County Jailers employed prior to November 1, 2020 were given a one-time option to apply the new benefit formula to all of the member's service and make a contribution equal to the increase in the actuarial value of the member's retirement benefit. Beginning November 1, 2024 the member contribution rate will be 8%, and members will be eligible for normal retirement with twenty (20) years of service upon which the 2.5% multiplier is used.

Licensed Emergency Medical Personnel First Employed as a Licensed Emergency Medical Personnel on or after November 1, 2024:

The normal retirement date is the first day of the month following the date the member accrues twenty (20) years of full-time equivalent service as a member covered by the Licensed Emergency Medical Personnel provisions.

Alternatively, for members who began participating in OPERS before November 1, 2024, the normal age of retirement is age 62 with at least six (6) years of full-

Hazardous Duty Members (Department of Corrections Officers, Grand River Dam Authority Public Safety Officers, Firefighters of the Military Department of the State of Oklahoma, Deputy Sheriffs, County Jailers, and Emergency Medical Personnel) Benefits
(continued)

time equivalent employment; or the first day of the month following the date at which the sum of the member's age and number of years of credited service totals eighty (80), if the member was hired before July 1, 1992; or the first day of the month following the date at which the sum of the member's age and number of years of credited service totals ninety (90), if the member was hired on or after July 1, 1992. For members who began participating in OPERS on or after November 1, 2011, the normal age of retirement is age 65 with at least six (6) years of full-time equivalent employment, or the first day of the month following the date at which the sum of the member's age and number of years of credited service totals ninety (90) and the member is at least 60 years of age. Members must complete at least six (6) 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, not exceeding twenty (20) years. For service in excess of twenty (20) years, the benefit formula is 2% of final average compensation.

Special Surviving Spouse and Child benefits for any member first employed as a Licensed Emergency Medical Personnel on or after November 1, 2024 and who is 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 twenty (20) years. In addition, an amount of $400 per month will be paid as a child of the deceased member is under the age of 18 (or 22 if enrolled full time at an institution of higher education).

Entry Age Actuarial Cost Method

Liabilities and contributions shown in this report are computed using the Individual Entry Age method of funding. Sometimes called the "funding method," this is a particular technique used by actuaries for establishing the amount of the annual actuarial cost of pension 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 had it existed (thus entry age) until his or her 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 actuarial 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 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 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

The unfunded actuarial accrued liability as of July 1, 2021 is amortized as a level percent of payroll over a 20-year closed period commencing July 1, 2007. New experience bases due to assumption changes or actual experience gains/losses will be established each year and will be amortized over closed 15-year periods. Given a stable active workforce, this amortization method is expected to produce a payment stream that is consistent as a percent of covered payroll.

Valuation Procedures

The actuarial accrued liability held for non-vested, inactive members who have a break in service, or for non-vested members who have quit or been terminated, even if a break in service has not occurred as of the valuation date, is equal to the amount of the individual's unclaimed contributions.

The wages used in the projection of benefits and liabilities are considered earnings for the year ending on the June 30 prior to the valuation date, 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 do 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. Service for this group was provided by the System.

All service for hazardous duty members was assumed to be hazardous duty service since the data distinguishing years of hazardous duty service from general service was unavailable.

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

These assumptions were recommended in the 2019-2022 Experience Study to the Board, which then adopted them. That report, which is available on the OPERS website (www.opers.ok.gov), provides the rationale for the recommendations.

Economic Assumptions

Price Inflation: 2.50% per annum, compounded annually

Investment Return: 6.50% net of investment expenses per annum, compounded annually

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

Nearest Age	% Increase
20 - 24	9.25
25 - 29	7.55
30 – 34	6.05
35 – 39	5.25
40 – 44	4.95
45 – 49	4.55
50 – 54	4.25
55 – 59	4.05
60 – 64	3.55
65+	3.25

Payroll Growth: 3.25% per year

Ad hoc benefit increase assumptions:

Monthly benefits: No increases assumed
Medical Supplement: No increases assumed

Projection of 401(a)(17) compensation limit: Projected with inflation at 2.50%

Demographic Assumptions

Annual Rates of Retirement Per 100 Eligible Regular Non-Elected Members

	Hired Prior to 11/1/2011		Hired on or After 11/1/2011	
Age	Those Eligible For Unreduced Retirement	Those Eligible For Reduced Retirement	Those Eligible For Unreduced Retirement	Those Eligible For Reduced Retirement
50	15	N/A	N/A	N/A
51	15	N/A	N/A	N/A
52	15	N/A	N/A	N/A
53	15	N/A	N/A	N/A
54	15	N/A	N/A	N/A
55	10	3.5	N/A	N/A
56	10	3.5	N/A	N/A
57	11	3.5	N/A	N/A
58	12	3.5	N/A	N/A
59	13	4.5	N/A	N/A
60	14	5.25	30/15*	5
61	20	11	30/15*	6
62	25	N/A	30/15*	6
63	15	N/A	30/15*	6
64	15	N/A	30/15*	13
65	30	N/A	30/15*	N/A
66	30	N/A	25	N/A
67	30	N/A	25	N/A
68	30	N/A	25	N/A
69	30	N/A	25	N/A
70	40	N/A	50	N/A
71	40	N/A	50	N/A
72	40	N/A	50	N/A
73	40	N/A	50	N/A
74	40	N/A	50	N/A
75	100	N/A	100	N/A

*30 when first eligible to retire and 15 thereafter

Demographic Assumptions (continued)

Annual Rates of Retirement Per 100 Eligible Elected Members

	Elected Prior to 11/1/2011		Elected on or After 11/1/2011	
Age	Those Eligible For Unreduced Retirement	Those Eligible For Reduced Retirement	Those Eligible For Unreduced Retirement	Those Eligible For Reduced Retirement
50	25	N/A	N/A	N/A
51	25	N/A	N/A	N/A
52	25	N/A	N/A	N/A
53	25	N/A	N/A	N/A
54	25	N/A	N/A	N/A
55	20	7.0	N/A	N/A
56	20	7.0	N/A	N/A
57	20	7.0	N/A	N/A
58	20	7.0	N/A	N/A
59	20	7.0	N/A	N/A
60	20	N/A	N/A	10
61	20	N/A	N/A	10
62	20	N/A	20	N/A
63	20	N/A	20	N/A
64	20	N/A	20	N/A
65	20	N/A	20	N/A
66	20	N/A	20	N/A
67	35	N/A	35	N/A
68	35	N/A	35	N/A
69-74	35	N/A	35	N/A
75	100	N/A	100	N/A

Demographic Assumptions (continued)

Annual Rates of Retirement Per 100 Eligible Hazardous Duty Members

Hired Prior to 11/1/2011				Hired on or After 11/1/2011			
Less Than 20 Years of Service		At Least 20 Years of Service		Less Than 20 Years of Service		At Least 20 Years of Service	
Age		**Service**		**Age**		**Service**	
50	N/A	20	25	50	N/A	20	25
51	N/A	21	25	51	N/A	21	25
52	N/A	22	20	52	N/A	22	20
53	N/A	23-24	15	53	N/A	23-34	15
54	N/A	25-29	23	54	N/A	25-29	23
55	4	30-34	25	55	N/A	30-34	25
56	5	35+	100	56	N/A	35+	100
57	5			57	N/A		
58	5			58	N/A		
59	5			59	N/A		
60	5			60	7		
61	20			61	20		
62	40			62	20		
63	22			63	20		
64	25			64	20		
65	40			65	40		
66	25			66	25		
67	25			67	23		
68	25			68	22		
69	25			69	21		
70	100			70	100		

Demographic Assumptions (continued)

Mortality Rates:

Active participants and nondisabled pensioners	Pub-2010 Below Median, General Membership Active/Retiree Healthy Mortality Table with base rates projected generationally using Scale MP-2019. Male rates are unadjusted and female rates are set forward two years.
Disabled pensioners	Nondisabled retiree mortality set forward 12 years for disabled experience.
Hazardous Duty members	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.

Disability Rates:

Graduated rates

Disabled rates per 100 members

Nearest Age	Regular/Elected	Hazardous Duty
20	0.009	0.009
30	0.009	0.022
40	0.022	0.058
50	0.139	0.180
60	0.200	0.400

Demographic Assumptions (continued)

Withdrawal Rates:

Service	Rate
0	26.0%
1	22.0%
2	18.0%
3	14.0%
4	12.0%
5	10.5%
6	9.0%
7	8.0%
8	7.0%
9	6.5%
10	6.0%
11	5.5%
12	5.0%
13	4.8%
14	4.5%
15	4.3%
16	4.0%
17	3.8%
18	3.5%
19	3.3%
20	3.0%
21	2.8%
22	2.5%
23	2.3%
24	2.0%
25	1.8%
26	1.5%
27	1.3%
28+	1.0%

Demographic Assumptions (continued)

Probability of Electing Vested Benefit:

Regular Members Only	
Duration	Rate
8	80%
13	85%
18	90%
23	95%
28	100%

Marital Status:

Percentage Married	85%
Age difference	Males 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. In the event an Elected Official has previously commenced their benefits, has no beneficiary on the record, and has no defined optional form of payment, it is assumed that 60% will receive the 50% joint and survivor annuity.

Demographic Assumptions (continued)

Assumed age for commencement of deferred benefits:	Currently active members assumed to terminate in the future prior to retirement eligibility are assumed to commence benefits at age 62 (non-elected members) or age 60 (elected members). Currently active members hired on or after 11/1/2011 assumed to terminate in the future prior to retirement eligibility are assumed to commence benefits at age 65. 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.

Oklahoma Public Employees Retirement System

Valuation Data Distribution – Actives – Regular Membership

Age	*Years of 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	934	11								945
Avg. Pay	$32,464	$46,094								$32,623
25 to 29	946	187	12							1,145
Avg. Pay	$36,922	$43,184	$50,176							$38,083
30 to 34	786	388	314	4						1,492
Avg. Pay	$38,040	$47,015	$57,733	$52,856						$44,558
35 to 39	811	444	940	187	2					2,384
Avg. Pay	$39,358	$50,375	$61,614	$64,699	$109,952					$52,232
40 to 44	631	430	965	682	170	4				2,882
Avg. Pay	$39,546	$48,951	$65,017	$70,721	$66,496	$66,130				$58,482
45 to 49	561	437	924	659	481	141				3,203
Avg. Pay	$39,451	$50,264	$63,225	$68,542	$71,145	$73,149				$60,013
50 to 54	498	410	783	608	531	484	108	2		3,424
Avg. Pay	$41,014	$47,468	$61,891	$65,721	$70,343	$73,205	$74,202	$93,800		$61,125
55 to 59	491	378	738	612	461	480	269	95	3	3,527
Avg. Pay	$40,910	$48,858	$58,974	$60,225	$66,500	$70,151	$71,574	$81,012	$68,932	$59,660
60 to 64	423	372	651	489	451	378	233	206	91	3,294
Avg. Pay	$40,077	$46,382	$55,890	$58,851	$63,383	$64,269	$70,752	$77,541	$74,210	$58,124
65 to 69	187	182	332	263	188	145	87	76	99	1,559
Avg. Pay	$34,520	$49,109	$58,643	$63,679	$64,790	$64,825	$72,958	$70,962	$73,021	$59,115
70 & up	118	102	141	108	55	54	38	30	40	686
Avg. Pay	$33,259	$40,830	$62,060	$61,448	$65,876	$66,561	$68,095	$71,290	$71,012	$55,773
Total	6,386	3,341	5,800	3,612	2,339	1,686	735	409	233	24,541
Avg. Pay	$37,895	$48,037	$61,103	$64,975	$67,611	$69,377	$71,684	$76,746	$73,088	$55,735

Oklahoma Public Employees Retirement System

Valuation Data Distribution – Actives – Elected Membership

Age	*Years of 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 Avg. Pay										0 $0
25 to 29 Avg. Pay	1 $48,908									1 $48,908
30 to 34 Avg. Pay	5 $50,445	2 $40,871	4 $53,719							11 $49,895
35 to 39 Avg. Pay	9 $60,555	14 $54,459	7 $53,742	3 $61,044						33 $56,568
40 to 44 Avg. Pay	10 $55,579	13 $47,571	12 $50,908	9 $58,309	10 $64,060					54 $54,638
45 to 49 Avg. Pay	17 $53,119	11 $48,083	26 $71,134	13 $57,534	16 $58,922	5 $56,174				88 $59,693
50 to 54 Avg. Pay	11 $53,820	16 $57,181	20 $57,419	6 $62,767	24 $62,900	14 $67,170	3 $48,174	2 $57,477		96 $59,806
55 to 59 Avg. Pay	17 $59,741	15 $63,155	25 $57,073	13 $72,264	17 $64,544	16 $58,444	8 $56,124	4 $59,309		115 $61,285
60 to 64 Avg. Pay	10 $63,868	11 $55,682	17 $61,102	15 $60,182	17 $57,959	14 $57,783	9 $52,275	9 $72,001	2 $66,023	104 $59,975
65 to 69 Avg. Pay	7 $61,107	9 $58,981	17 $57,264	12 $72,460	12 $70,241	5 $80,157	8 $55,610	5 $61,914	2 $104,425	77 $65,046
70 & up Avg. Pay	3 $52,544	8 $58,269	9 $73,833	5 $59,777	2 $57,356	1 $45,000	1 $70,700	1 $164,349	2 $57,792	32 $65,547
Total Avg. Pay	90 $57,074	99 $55,184	137 $60,609	76 $63,724	98 $62,583	55 $62,020	29 $54,468	21 $70,196	6 $76,080	611 $60,230

Oklahoma Public Employees Retirement System

Valuation Data Distribution – Actives – Hazardous Duty Membership

Age	Years of 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	107									107
Avg. Pay	$41,493									$41,493
25 to 29	179	83								262
Avg. Pay	$44,589	$49,174								$46,042
30 to 34	127	134	43							304
Avg. Pay	$45,633	$50,644	$52,041							$48,748
35 to 39	96	97	83	14						290
Avg. Pay	$45,046	$50,027	$54,559	$57,472						$50,035
40 to 44	51	50	59	60	11					231
Avg. Pay	$46,066	$51,282	$55,753	$57,925	$68,712					$53,828
45 to 49	35	35	35	47	18	3				173
Avg. Pay	$43,266	$52,799	$53,126	$58,680	$63,601	$57,926				$53,747
50 to 54	34	33	26	42	13	4	1			153
Avg. Pay	$46,380	$53,813	$52,787	$57,257	$59,418	$48,996	$71,214			$53,396
55 to 59	26	28	19	24	9	6	1			113
Avg. Pay	$46,373	$49,865	$48,785	$50,440	$53,966	$59,032	$50,125			$49,818
60 to 64	21	18	16	17	11	3	1			87
Avg. Pay	$44,338	$52,564	$50,715	$47,699	$58,707	$57,091	$52,504			$50,220
65 to 69	8	4	1	3	2	1				19
Avg. Pay	$46,018	$51,045	$47,987	$53,570	$43,304	$75,859				$49,657
70 & up	1	2	1							4
Avg. Pay	$47,341	$48,480	$50,609							$48,727
Total	685	484	283	207	64	17	3			1,743
Avg. Pay	$44,575	$50,727	$53,443	$56,159	$60,799	$57,123	$57,948			$49,840

Oklahoma Public Employees Retirement System

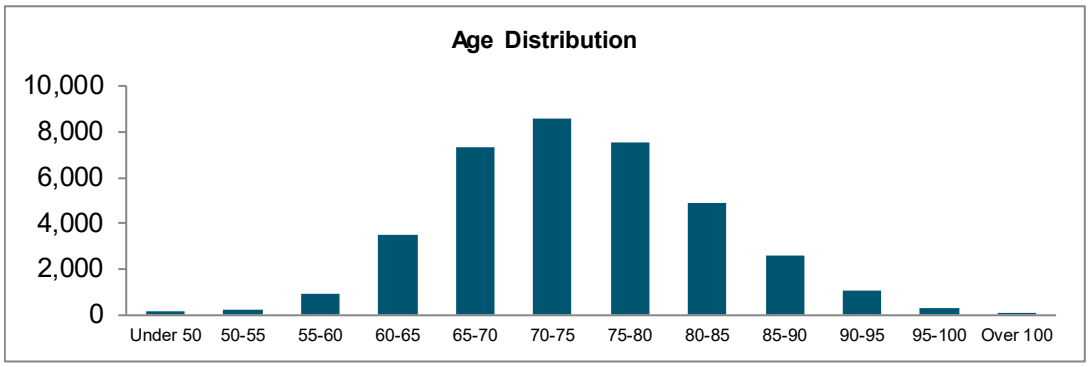
Valuation Data Distribution – Actives – All Membership Groups

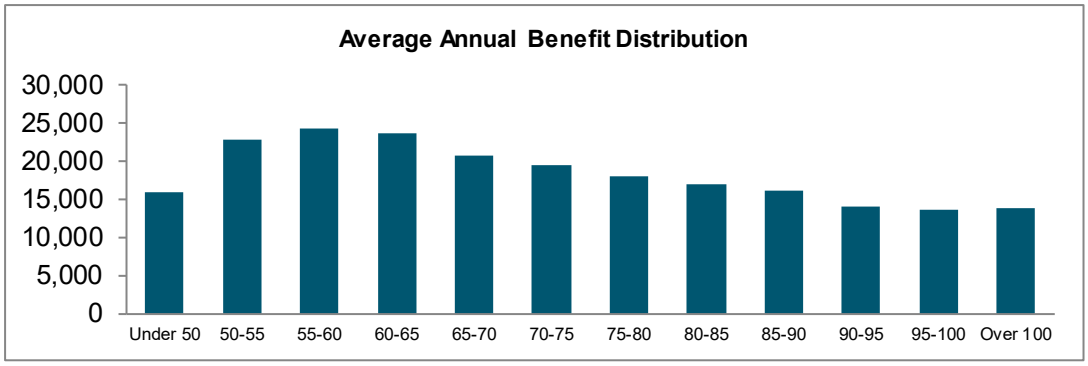
Age	*Years of Service*									
	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & Up	Total
Under 25	1,041	11								1,052
Avg. Pay	$33,392	$46,094								$33,525
25 to 29	1,126	270	12							1,408
Avg. Pay	$38,151	$45,025	$50,176							$39,572
30 to 34	918	524	361	4						1,807
Avg. Pay	$39,158	$47,919	$57,011	$52,856						$45,295
35 to 39	916	555	1,030	204	2					2,707
Avg. Pay	$40,162	$50,417	$60,992	$64,149	$109,952					$52,049
40 to 44	692	493	1,036	751	191	4				3,167
Avg. Pay	$40,258	$49,151	$64,326	$69,550	$66,496	$66,130				$58,077
45 to 49	613	483	985	719	515	149				3,464
Avg. Pay	$40,048	$50,398	$63,075	$67,699	$70,502	$72,273				$59,692
50 to 54	543	459	829	656	568	502	112	4		3,673
Avg. Pay	$41,609	$48,263	$61,498	$65,152	$69,778	$72,844	$73,478	$75,639		$60,768
55 to 59	534	421	782	649	487	502	278	99	3	3,755
Avg. Pay	$41,775	$49,434	$58,666	$60,105	$66,200	$69,645	$71,053	$80,135	$68,932	$59,414
60 to 64	454	401	684	521	479	395	243	215	93	3,485
Avg. Pay	$40,798	$46,915	$55,899	$58,525	$63,083	$63,984	$69,993	$77,309	$74,034	$57,982
65 to 69	202	195	350	278	202	151	95	81	101	1,655
Avg. Pay	$35,896	$49,605	$58,545	$63,949	$64,901	$65,406	$71,497	$70,404	$73,643	$59,282
70 & up	122	112	151	113	57	55	39	31	42	722
Avg. Pay	$33,848	$42,212	$62,686	$61,374	$65,577	$66,169	$68,161	$74,292	$70,383	$56,167
Total	7,161	3,924	6,220	3,895	2,501	1,758	767	430	239	26,895
Avg. Pay	$38,775	$48,549	$60,744	$64,482	$67,240	$69,029	$70,979	$76,426	$73,163	$55,455

Oklahoma Public Employees Retirement System

Valuation Data Distribution – Retired Members

	Number			Annual Benefits		
Age	Male	Female	Total	Male	Female	Total
Under 50	83	69	152	$ 1,540,517	$ 872,071	$ 2,412,588
50-55	127	116	243	3,258,696	2,275,806	5,534,502
55-60	459	484	943	11,844,166	11,019,660	22,863,826
60-65	1,544	1,987	3,531	38,968,878	44,542,416	83,511,294
65-70	2,893	4,455	7,348	64,666,240	88,631,297	153,297,537
70-75	3,428	5,178	8,606	71,576,447	97,250,449	168,826,896
75-80	3,031	4,497	7,528	60,247,292	76,416,109	136,663,401
80-85	1,886	2,975	4,861	35,427,937	47,175,028	82,602,965
85-90	944	1,639	2,583	18,008,875	23,616,023	41,624,898
90-95	312	755	1,067	5,413,120	9,624,409	15,037,529
95-100	65	205	270	1,064,421	2,602,488	3,666,909
Over 100	3	24	27	68,254	305,882	374,136
Total	14,775	22,384	37,159	$312,084,843	$404,331,638	$716,416,481





Oklahoma Public Employees Retirement System

	Actuarial Valuation as of 7/1/2025	Actuarial Valuation as of 7/1/2024	% Change
1. Active members			
a. Number	26,895	27,890	(3.6%)
b. Annual compensation	$ 1,561,448,387	$ 1,577,058,185	(1.0%)
c. Average annual compensation	58,057	56,546	2.7%
d. Average age	48.3	48.3	0.0%
e. Average service	12.3	12.3	0.0%
2. Accumulated member contributions			
a. Active members	$ 576,259,298	$ 571,158,558	0.9%
b. Unclaimed contribution amounts	77,121,593	73,708,443	4.6%
c. Total	$ 653,380,891	$ 644,867,001	1.3%
3. Vested terminated members			
a. Number	2,289	2,506	(8.7%)
b. Annual deferred benefits	$ 27,767,577	$ 30,425,751	(8.7%)
c. Average annual deferred benefit	12,131	12,141	(0.1%)
d. Annual supplemental medical insurance premiums	$ 2,884,140	$ 3,157,560	(8.7%)
4. Assumed deferred vested - count	4,777	4,402	8.5%
5. Retired members			
a. Number	31,204	31,157	0.2%
b. Annual retirement benefits	$ 640,882,744	$ 629,047,177	1.9%
c. Average annual retirement benefit	20,538	20,190	1.7%
d. Annual supplemental medical insurance premiums	$ 15,072,120	$ 15,597,540	(3.4%)
6. Beneficiaries			
a. Number	4,863	4,752	2.3%
b. Annual retirement benefits	$ 63,514,127	$ 61,084,154	4.0%
c. Average annual retirement benefit	13,061	12,854	1.6%
7. Disabled members			
a. Number	1,092	1,132	(3.5%)
b. Annual retirement benefits	$ 12,019,610	$ 12,389,543	(3.0%)
c. Average annual retirement benefit	11,007	10,945	0.6%
d. Annual supplemental medical insurance premiums	$ 454,860	$ 487,620	(6.7%)
8. Total members included in valuation	71,120	71,839	(1.0%)

Oklahoma Public Employees Retirement System

	Actuarial Valuation as of 7/1/2025	Actuarial Valuation as of 7/1/2024
Regular Members		
Number	24,541	25,473
Average reported compensation	$ 55,735	$ 54,235
Average age	48.8	48.8
Average service	12.6	12.5
Elected officials		
Number	611	616
Average reported compensation	$ 60,230	$ 59,450
Average age	55.0	55.5
Average service	15.5	15.9
Hazardous Duty		
Number	1,743	1,801
Average reported compensation	$ 49,840	$ 49,036
Average age	39.6	39.7
Average service	7.6	7.6
Total		
Number	26,895	27,890
Average reported compensation	$ 55,455	$ 54,015
Average age	48.3	48.3
Average service	12.3	12.3

Oklahoma Public Employees Retirement System

	Actuarial Valuation as of 7/1/2025	Actuarial Valuation as of 7/1/2024
Retirees		
Number	31,204	31,157
Average annual benefit	$ 20,538	$ 20,190
Average age	73.4	73.1
Disability Retirees		
Number	1,092	1,132
Average annual benefit	$ 11,007	$ 10,945
Average age	69.0	68.5
Beneficiaries		
Number	4,863	4,752
Average annual benefit	$ 13,061	$ 12,854
Average age	76.2	75.8
Total		
Number	37,159	37,041
Average annual benefit	$ 19,279	$ 18,966
Average age	73.6	73.3
Vested Members		
Number	7,066	6,908
Average annual benefit	$ 11,204	$ 10,834
Average age	53.0	52.6

Oklahoma Public Employees Retirement System

			Receiving Benefits			
	Active Members	Vested Terminated	Retirees	Disability Retirees	Beneficiaries	Total Members
As of July 1, 2024	**27,890**	**6,908**	**31,157**	**1,132**	**4,752**	**71,839**
Age retirements	(1,016)	(252)	1,268	0	0	0
Disability retirements	(8)	(14)	0	22	0	0
Deaths without payments continuing	(10)	(1)	(889)	(53)	(270)	(1,223)
Deaths with payments continuing	(26)	(18)	(324)	(13)	381	0
Nonvested terminations/refund of contributions	(1,803)	(117)	0	0	0	(1,920)
Vested terminations	(682)	682	0	0	0	0
Transfers	0	0	0	0	0	0
Data adjustments	0	0	(4)	4	0	0
Rehires	639	(122)	(4)	0	0	513
New entrants during the year	1,911	0	0	0	0	1,911
Net change	(995)	158	47	(40)	111	(719)
As of July 1, 2025	**26,895**	**7,066**	**31,204**	**1,092**	**4,863**	**71,120**

	Active	Retired	Terminated Vested	Total
Records submitted on data file	26,583	72,189	2,289	101,061
Remove deceased retirees	0	(35,029)	0	(35,029)
Remove unusable data	(35)	0	0	(35)
Remove those with another status	(10)	(1)	0	(11)
Add those with no application	357	0	0	357
Add assumed vesteds	0	0	4,777	4,777
Total valued	**26,895**	**37,159**	**7,066**	**71,120**

APPENDIX D – GLOSSARY

Accrued Benefit
The amount of an individual's benefit (whether or not vested) as of a specific date, determined in accordance with the terms of a pension plan and based on compensation and service to that date.

Actuarial Accrued Liability
That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of pension plan benefits and expenses which is not provided for by future Normal Costs.

Actuarial Assumptions
Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement, and retirement; changes in compensation, rates of investment earnings, and asset appreciation or depreciation; procedures used to determine the Actuarial Value of Assets; and other relevant items.

Actuarial Cost Method
A procedure for determining the Actuarial Present Value of pension plan benefits and expenses and for developing an actuarially equivalent allocation of such value to time periods, usually in the form of a Normal Cost and an Actuarial Accrued Liability.

Actuarial Gain (Loss)
A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions during the period between two Actuarial Valuation dates, as determined in accordance with a particular Actuarial Cost Method.

Actuarial Present Value
The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions.

Actuarial Valuation
The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a pension plan.

Actuarial Value of Assets
The value of cash, investments and other property belonging to a pension plan, as used by the actuary for the purpose of an Actuarial Valuation.

Actuarially Equivalent
Of equal Actuarial Present Value, determined as of a given date with each value based on the same set of Actuarial Assumptions.

APPENDIX D – GLOSSARY

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

Deferred Vested Participant
A vested member who has terminated employment prior to early or normal retirement age who does not withdraw his or her contributions and is, therefore, due a retirement benefit at a later date.

Entry Age Actuarial Cost Method
A method under which the Actuarial Present Value of the Projected Benefits of each individual included in an Actuarial Valuation is allocated on a level basis over the earnings of the individual between entry age and assumed exit ages. The portion of this Actuarial Present Value allocated to a valuation year is called the Normal Cost. The portion of this Actuarial Present Value not provided for at a valuation date by the Actuarial Present Value of future Normal Costs is called the Actuarial Accrued Liability.

Market Value of Assets
The fair value of cash, investments and other property belonging to a pension plan that could be acquired by exchanging them on the open market.

Normal Cost
That portion of the Actuarial Present Value of pension plan benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method Projected Benefits.

Projected Benefits
Those pension plan benefit amounts which are expected to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age and past and anticipated future compensation and service credits.

Unaccrued Benefit
The excess of an individual's Projected Benefits over the Accrued Benefits as of a specified date.

Unfunded Actuarial Accrued Liability
The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets.

Withdrawal Liability
The liability due to an active member terminating employment with a deferred vested benefit.