



# ACTUARIAL

## TRANSITION SEASON

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November 6, 2019

Board of Trustees  
Oklahoma Public Employees Retirement System  
5400 N. Grand Boulevard  
Suite 400  
Oklahoma City, OK 73112

Members of the Board:

In this report are submitted the results of the annual valuation of the assets and liabilities of the Uniform Retirement System for Justices and Judges (URSJJ), prepared as of July 1, 2019.

The purpose of this report is to provide a summary of the funded status of the System as of July 1, 2019 and to provide the actuarially determined rate. While not verifying the data at the source, the actuary performed tests for consistency and reasonability. There have been no changes to the actuarial assumptions or methods since the last valuation.

The promised benefits of the System are included in the actuarially calculated contribution rates which are developed using the Entry Age Normal cost method. A five-year market-related value of assets is used for actuarial valuation purposes. Gains and losses are reflected in the unfunded actuarial accrued liability (UAAL) that is being amortized by regular annual contributions as a level percentage of payroll, on the assumption that payroll will increase by 3.50% annually.

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). We note that House Bill 1340 (2018) granted a one-time stipend to retirees funded by the System. 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.

We have prepared the Schedule of Funding Progress and Trend Information shown in the financial section of the Comprehensive Annual Financial Report. All historical information that references a valuation date prior to July 1, 2010 was prepared by the previous actuarial firm.

This is to certify that the independent consulting actuaries are members of the American Academy of Actuaries and have experience in performing valuations for public retirement systems, that the valuation was prepared in accordance with principles of practice prescribed by the Actuarial Standards Board, and that the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the retirement system and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the System.

Future actuarial results may differ significantly from the current results presented in this report due to factors such 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.

We have also reviewed the supplemental medical benefits provided by the System under Section 401(h) of the Internal Revenue Code and have determined that these benefits are subordinate to the retirement benefits as required.

In our opinion, in order for the System to meet all the benefit obligations of the plan for current active and retired members, contributions equal to at least the actuarially determined rate are necessary for future fiscal years. Assuming these contributions are made to the System, from year to year in the future at the rates recommended on the basis of the successive actuarial valuations, the continued sufficiency of the retirement fund to provide the benefits called for under the System may be safely anticipated. Because the statutory contribution exceeds the actuarially determined rate in this valuation, we recommend the statutory contribution be used to protect against future investment and experience losses.

The Table of Contents, which immediately follows, outlines the material contained in the report.

Respectfully submitted,



Alisa Bennett, FSA, EA, FCA, MAAA  
President



Brent Banister, PhD, FSA, EA, FCA, MAAA  
Chief Actuary

# Summary of Results

	7/1/2019 Valuation	7/1/2018 Valuation	% Change
<b>1. PARTICIPANT DATA</b>			
Number of:			
Active Members	269	265	1.5
Retired and Disabled Members and Beneficiaries	300	272	10.3
Inactive Members	18	14	28.6
Total members	587	551	6.5
Projected Annual Salaries of Active Members	\$ 35,112,886	\$ 33,838,528	3.8
Annual Retirement Payments for Retired Members and Beneficiaries	\$ 21,569,313	\$ 18,534,201	16.4
<b>2. ASSETS AND LIABILITIES</b>			
Total Actuarial Accrued Liability	\$ 308,615,185	\$ 293,103,489	5.3
Market Value of Assets	\$ 347,536,802	\$ 338,035,386	2.8
Actuarial Value of Assets	\$ 345,235,761	\$ 336,354,636	2.6
Unfunded Actuarial Accrued Liability	\$ (36,620,576)	\$ (43,251,147)	(15.3)
Funded Ratio	111.9%	114.8%	(2.5)
<b>3. EMPLOYER CONTRIBUTION RATES AS A PERCENT OF PAYROLL</b>			
Normal Cost Rate	24.76%	25.18%	
Amortization of Unfunded Actuarial Accrued Liability	(15.11%)	(16.72%)	
Budgeted Expenses	0.62%	0.59%	
Total Actuarial Required Contribution Rate	10.27%	9.05%	
<b>Less</b> Member Contribution Rate	8.00%	8.00%	
Employer Actuarial Required Contribution Rate	2.27%	1.05%	
<b>Less</b> Statutory State Employer contribution Rate	22.00%	22.00%	
Contribution Shortfall/(Surplus)	(19.73%)	(20.95%)	

# Analysis of Financial Experience

## Gains & Losses in Actuarial Accrued Liability During the Year Ended June 30, 2019 Resulting from Differences Between Assumed Experience & Actual Experience

Type of Activity	(Gain) or Loss for Year End 2019
1. <b>Age &amp; Service Retirements.</b> If members retire at older ages or with smaller benefits than assumed, there is a gain. If they retire at younger ages or have higher average pays, a loss occurs.	\$ 5,570,000
2. <b>Disability Retirements.</b> If disability claims are less than assumed, then there is a gain. If more claims, a loss.	0
3. <b>Death Benefits.</b> If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	2,320,000
4. <b>Withdrawal from Employment.</b> If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	(70,000)
5. <b>Pay Increases.</b> If there are smaller pay increase than assumed, there is a gain. If greater increases, a loss.	(270,000)
6. <b>New Entrants.</b> All new entrants to the System create a loss.	30,000
7. <b>Other.</b> Miscellaneous gains and losses resulting from data adjustments, employee transfers, valuation methods, etc.	(350,000)
8. <b>(Gain) or Loss During Year From Financial Experience.</b>	<u>3,470,000</u>
9. <b>Composite (Gain) or Loss During Year.</b>	<u>\$ 10,700,000</u>

# Solvency Test

The Judges funding objective is to be able to pay long-term benefit promises through contributions that remain approximately level from year to year as a percent of salaries earned by members. In this way, members and employers in each year pay their fair share for retirement service accrued in that year by System members.

If the retirement system follows level contribution rate financing principles, the system will pay all promised benefits when due – the ultimate test of financial soundness.

A short-term solvency test is one means of checking the funding progress. In a short-term solvency test, the retirement System’s present valuation assets are compared with: 1) active member contributions on deposit, 2) the liabilities for future benefits to persons who have retired and the liabilities for terminated employees with vested benefits, and 3) the liabilities for service already rendered by active members. In a system that has been following the discipline of level contribution rate financing, the liabilities for member contributions on deposit (liability 1), the liabilities for future benefits to present retirees and the liabilities for future benefits for terminated employees (liability 2) will be fully covered by present assets, except in rare circumstances.

In addition, the liabilities for service already rendered by members (liability 3) will be partially covered by the remainder of present assets. Generally, if the system has been using level contribution rate financing, the funded portion of liability 3 will increase over time; however, a decrease generally occurs in those years when substantial benefit improvements are granted by the Legislature. It is unusual for liability 3 to be fully funded. The funded ratio of the System based on total actuarial accrued liabilities (1 + 2 + 3) provides an indication of how well the System is funded.

The schedule below illustrates the progress of funding the actuarial accrued liabilities.

Date	Actuarial Accrued Liabilities <sup>1</sup> and Valuation Assets					Portion of Actuarial Accrued Liabilities Covered by Reported Assets			
	Active Member Contributions (Liability 1)	Retirees, Beneficiaries and Terminated Vested Members (Liability 2)	Employer Financed Portion of Active Members (Liability 3)	Total Liability (1 + 2 + 3)	Reported Assets <sup>1</sup>	(1)	(2)	(3)	Funded Ratio of Total Actuarial Liabilities
July 1, 2010	20,768,871	138,619,902	123,376,632	282,765,405	230,010,299	100	100	57.2	81.3
July 1, 2011	20,060,127	134,336,252	92,395,853	246,792,232	237,626,663	100	100	90.1	96.3
July 1, 2012	21,278,738	137,448,040	90,652,122	249,378,900	238,553,638	100	100	88.1	95.7
July 1, 2013	23,130,164	136,834,202	94,444,597	254,408,963	247,531,035	100	100	92.7	97.3
July 1, 2014	24,434,587	140,084,348	94,268,742	258,787,677	274,070,696	100	100	100.0	105.9
July 1, 2015	23,390,700	158,199,138	84,810,188	266,400,026	295,355,061	100	100	100.0	110.9
July 1, 2016	25,199,268	159,092,241	92,142,032	276,433,541	306,256,213	100	100	100.0	110.8
July 1, 2017	25,438,215	172,934,885	87,163,806	285,536,906	321,405,873	100	100	100.0	112.6
July 1, 2018	26,453,365	177,660,433	88,989,691	293,103,489	336,354,636	100	100	100.0	114.8
July 1, 2019	22,988,211	209,998,302	75,628,672	308,615,185	345,235,761	100	100	100.0	111.9

<sup>1</sup> Actuarial value of assets based on the smoothing technique adopted by the Board.

## Schedule of Active Member Valuation Data

<u>Valuation Date</u>	<u>Number</u>	<u>Annual Payroll</u>	<u>Annual Average Pay</u>	<u>% Increase in Average Pay</u>
July 1, 2019	269	\$35,112,886	\$130,531	2.22%
July 1, 2018	265	33,838,528	127,693	0.28
July 1, 2017	262	33,359,101	127,325	(1.61)
July 1, 2016	269	34,810,851	129,408	1.54
July 1, 2015	271	34,537,376	127,444	1.86
July 1, 2014	274	34,281,695	125,116	(0.49)
July 1, 2013	273	34,325,368	125,734	0.33
July 1, 2012	266	33,336,632	125,326	(2.13)
July 1, 2011	271	34,700,819	128,047	(0.92)
July 1, 2010	271	35,023,262	129,237	5.45

## Schedule of Retirants, Disabled Retirants, and Beneficiaries Added to and Removed from Rolls

<u>Year Ended</u>	<u>Added to Rolls</u>		<u>Removed from Rolls</u>		<u>Rolls – End of Year</u>		<u>% Increase in Annual Allowances</u>	<u>Average Annual Allowances</u>
	<u>No.</u>	<u>Annual Allowances</u>	<u>No.</u>	<u>Annual Allowances</u>	<u>No.</u>	<u>Annual Allowances</u>		
June 30, 2019	35	\$3,235,367	7	\$200,255	300	\$21,569,313	16.38%	\$71,898
June 30, 2018	11	1,003,518	4	314,465	272	18,534,201	3.86	68,140
June 30, 2017	16	1,470,169	11	581,210	265	17,845,148	5.24	67,340
June 30, 2016	5	409,553	5	412,096	260	16,956,189	0.01	65,216
June 30, 2015	30	2,395,473	5	298,613	260	16,958,732	14.11	65,226
June 30, 2014	19	1,330,374	14	838,912	235	14,861,872	3.42	63,242
June 30, 2013	7	439,982	10	576,225	230	14,370,410	(0.94)	62,480
June 30, 2012	7	550,850	9	188,030	233	14,506,653	2.57	62,260
June 30, 2011	28	2,415,131	3	73,279	235	14,143,833	19.84	60,187
June 30, 2010	17	1,533,568	7	277,053	210	11,801,981	11.92	56,200

# Summary of System Provisions

<i>Employees Included:</i>	All Justices and Judges of the Supreme Court, Court of Criminal Appeals, Workers Compensation Court, Courts of Appeals or District Court who serve in the State of Oklahoma participate in the Uniform Retirement System for Justices and Judges.
<i>System Contributions:</i>	The contributions are received from the employer agencies based on a percentage of salary of covered members. Effective for the fiscal year ending June 30, 2006, employer contributions increased to 3.0% of the member's salary and will increase annually up to 22.0% of member payroll for fiscal years ending June 30, 2019, and thereafter.
<i>Member Contributions:</i>	Before September 1, 2005, basic member contributions equal 5% of salary, while married members could have elected an 8% contribution rate in order to provide survivor coverage. After September 1, 2005, the member contribution rate for all members is 8% of salary.
<i>Final Average Salary:</i>	The average monthly salary received during the highest three (3) years of active service as a Justice or Judge in a court of record.
<i>Retirement Date:</i>	A member who completes eight (8) years of service and attains age sixty-five (65), or completes ten (10) years of service and attains age sixty (60), or completes eight (8) years of service and whose sum of years of service and age equals or exceeds eighty (80), may begin receiving retirement benefits at his/her request. For judges taking office after January 1, 2012, retirement age is sixty-seven (67) with eight (8) years of service or age sixty-two (62) with ten (10) years of service.
<i>Normal Retirement Benefit:</i>	General formula is 4% of average monthly salary multiplied by service, up to a maximum benefit of 100% of final average salary.
<i>Disability Benefit:</i>	After fifteen (15) years of service and age fifty-five (55), provided the member is ordered to retire by reason of disability and is eligible for disability retirement benefits. This benefit, payable for life, is calculated in the same manner as a normal retirement benefit but cannot exceed 100% of final average salary.

## Summary of System Provisions (continued)

*Survivor Benefit:*

The spouse of a deceased active member who had met normal or vested retirement provisions may elect a spouse's benefit. The spouse's benefit is the benefit that would have been paid if the member had retired and elected the joint and 100% survivor option (Option B), or a 50% unreduced benefit for certain married participants making 8% of pay contributions prior to September 1, 2005. If the member has ten (10) years of service and the death is determined to be employment related, this benefit is payable immediately to the spouse. In order to be eligible for this survivor coverage, members must be married to their spouse for three (3) years preceding death and they must be married ninety (90) days prior to the member's termination of employment as a Justice or Judge. Effective October 1, 2004, the benefit for surviving spouses may be higher than 50% of the member's benefit, up to 65% for certain members who made additional voluntary survivor benefit contributions of 3% of salary prior to July 1, 1999, and who die or retire after July 1, 1999.

*Optional Forms of Retirement Benefits:*

The normal form of benefit for a single member is a single life monthly annuity with a guaranteed refund of the contribution accumulation. The normal form for a married member is a 50% joint and survivor annuity benefit. Optional forms of payment with actuarial reduction (if applicable) are available to all members retiring under the normal retirement or vested retirement provisions. After September 1, 2005, the options providing post-retirement death benefits 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.

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

*Participant Death Benefit:*

\$5,000 lump sum.

*Supplemental Medical Insurance Premium:*

The System contributes the lesser of \$105 per month or the Medicare Supplement Premium to the Oklahoma State and Education Employee's Group Health Insurance Program for members receiving retirement benefits.

# Summary of Actuarial Assumptions and Methods

1. The investment return rate used in the valuation was 7.00 percent per year, net of investment expenses, compounded annually. This rate of return is not the assumed real rate of return. The real rate of return is the rate of return in excess of the inflation rate. Considering other financial assumptions, the 7.00 percent investment return rate translates to an assumed real rate of return of 4.25 percent.
2. The RP-2024 Mortality Table projected to 2025 using Scale MP-2016 with male rates multiplied by 95% under age 70 and 105% over age 70, while female rates are multiplied by 90% and 115%. After all adjustments, ages are set back one year.
3. The probability of withdrawal from service is 2% for all years of service. The individual pay increase assumption is 3.75% per year.
4. The probabilities of retirement are shown in Schedule 1.
5. Because of the passage of House Bill 2132, benefits are not assumed to increase due to future ad hoc cost-of-living increases. We note that House Bill 1340 (2018) granted a one-time stipend to retirees funded by the System.
6. The individual entry-age normal actuarial cost method of valuation was used in determining actuarial accrued liability and normal cost. Actuarial gains and losses reduce or increase the unfunded actuarial accrued liability and are amortized over the remaining amortization period (8 years as of July 1, 2019).
7. The actuarial value of assets is based on a five-year moving average of expected actuarial values and market values. A preliminary expected value is determined equal to the prior year's actuarial value of assets plus net cash flow for the year ending on the valuation date, assuming the valuation investment return. The expected actuarial asset value is equal to the preliminary expected actuarial value plus the unrecognized investment gains and losses as of the beginning of the previous fiscal year. Twenty percent (20%) of the gain/loss as measured by the difference between the expected actuarial value and the market value at the valuation date is added to the preliminary expected actuarial value plus twenty percent (20%) of the unrecognized gains or losses for the four preceding fiscal years. The final result is constrained to a value no less than 80% and no more than 120% of the market value at the valuation date.
8. The actuarial assumptions and methods used in the valuation were adopted by the Board on based on System experience from July 1, 2013 through June 30, 2016.

## Summary of Actuarial Assumptions and Methods (continued)

### Schedule 1

#### Percent of Eligible Active Members Retiring Within Next Year

<b>Retirement Ages</b>	<b>Percent</b>	<b>Retirement Ages</b>	<b>Percent</b>
Below 59	7%	67	20%
59	10%	68	20%
60	10%	69	25%
61	10%	70	25%
62	15%	71	25%
63	15%	72	25%
64	15%	73	25%
65	15%	74	25%
66	15%	75	100%