Arkansas Public Employees Retirement System

Actuarial Valuation and Experience Gain/Loss Analysis

June 30, 2024

Outline of Contents

Outline of Contents

800.521.0498 | P: 248.799.9000 | www.grsconsulting.com

October 31, 2024

Board of Trustees
Arkansas Public Employees Retirement System
Little Rock, Arkansas

Ladies and Gentlemen:

The results of the ***June 30, 2024 actuarial valuation*** of the Arkansas Public Employees Retirement System together with ***the annual gain and loss analysis*** for the year ended June 30, 2024 are presented in this report. The purpose of the valuation and gain/loss analysis is to measure funding progress in relation to the actuarial cost method and to determine the employer contribution rate for the fiscal year beginning July 1, 2026.

Calculations required for compliance with the Governmental Accounting Standards Board (GASB) Statements No. 67 and No. 68 have been issued in separate reports.

This report should not be relied on for any other purpose than those described above. It was prepared at the request of the Board and is intended for use by the Retirement System and those designated or approved by the Board. This report may be provided to parties other than the System only in its entirety and only with permission of the Board. Gabriel, Roeder, Smith & Company is not responsible for the unauthorized use of this report.

The findings in this report are based on data and other information through June 30, 2024. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as: plan experience differing from that anticipated by the economic and 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. Due to the limited scope of the actuary's assignment, the actuary did not perform an analysis of the potential range of such future measurements.

The actuarial methods and assumptions used in the actuarial valuation are summarized in Section E of this report. The assumptions are established by the Board after consulting with the actuary. The actuarial assumptions used for the valuation produce results which, individually and in the aggregate, are reasonable. The combined effect of the assumptions, excluding prescribed assumptions or methods set by law, is expected to have no significant bias (i.e., not significantly optimistic or pessimistic).

The cooperation of the Executive Director and the APERS staff in furnishing the materials required for these valuations is acknowledged with appreciation.

The contribution rate in this report is determined using the actuarial assumptions and methods disclosed in Section E of this report. This report includes risk metrics on pages A-14 through A-17 but does not include a more robust assessment of the risks of future experience not meeting the actuarial assumptions. Additional assessment of risks was outside the scope of this assignment.

We have assessed that the contribution rate calculated under the current funding policy is a reasonable Actuarially Determined Employer Contribution (ADEC) and it is consistent with the plan accumulating adequate assets to make benefit payments when due.

This valuation assumed the continuing ability of the plan sponsor to make the contributions necessary to fund this plan. A determination regarding whether or not the plan sponsor is actually able to do so is outside our scope of expertise and was not performed.

This report was prepared using our proprietary valuation model and related software which, in our professional judgment, has the capability to provide results that are consistent with the purposes of the valuation and has no material limitations or known weaknesses. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge, this report is complete and accurate and was made in accordance with standards of practice promulgated by the Actuarial Standards Board and in conformance with Title 24 of the Arkansas Code.

Mita D. Drazilov and Heidi G. Barry are Members of the American Academy of Actuaries (MAAA), and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

The signing actuaries are independent of the plan sponsor.

Respectfully submitted,
Gabriel, Roeder, Smith & Company

Mita D. Drazilov, ASA, FCA, MAAA

Heidi G. Barry, ASA, FCA, MAAA

MDD/HGB:sc

292

SECTION A

VALUATION RESULTS

Comments

General Financial Objective. Section 24-2-701 of the Arkansas Code provides as follows:

> The general financial objective of each Arkansas public employee retirement plan shall be to establish and receive contributions that, expressed as percentages of active member payroll, will remain approximately level from generation to generation of Arkansas citizens. More specifically, contributions received each year shall be sufficient both:
>
> (1) To fully cover the costs of benefit commitments being made to members for their service being rendered in that year;
>
> (2)(A) To make a level payment that, if paid annually over a reasonable period of future years, will fully cover the unfunded costs of benefit commitments for service previously rendered; and
>
> (B) Alternatively, if the costs of benefit commitments for service previously rendered are overfunded, the plan may deduct a level payment that, if deducted annually over a reasonable period of future years, will fully liquidate the overfunded portion of such costs.

Benefit Changes. The most recent benefit changes were reflected in the June 30, 2021 valuation. No benefit changes have been adopted for consideration in the June 30, 2024 valuation.

Assumption Changes. The most recent assumption changes were reflected in the June 30, 2023 valuation. No assumption changes have been adopted for consideration in the June 30, 2024 valuation.

Method Changes. The most recent method changes for APERS were reflected in the June 30, 2023 valuation. No method changes have been adopted for consideration in the June 30, 2024 valuation.

APERS Status. Based upon the results of the June 30, 2024 actuarial valuation, ***APERS continues to satisfy the general financial objective*** of level contribution financing.

APERS Reserve Strength. As a by-product of achieving level contribution financing, actuarial accrued liabilities usually become more and more funded over a period of years. On a funding value of assets basis, the System has an 84% funded ratio. On a market value of assets basis, the System has a 82% funded ratio.

Employer Contribution Rates. Based upon experience through June 30, 2024, the preliminary State and Local Government contribution rate (including General Assembly members) was computed to be 14.33% of covered payroll. At the August 21, 2024 Board meeting, the Board established a minimum employer contribution rate of 15.32% for the fiscal year beginning July 1, 2026. ***The State and Local Government contribution rate (including General Assembly members) will be 15.32% of covered payroll for the fiscal year beginning July 1, 2026.***

District Judges. Results for the District Judges are presented in Section D. These results are not included in any of the numbers presented in Sections A, B and C.

Recommendations

Reserve Transfers. Each year reserve transfers are recommended so that there will be a balance between assets and actuarial accrued liabilities in the Retirement Reserve Account and the Deferred Annuity Account.

- The Retirement Reserve Account is responsible for future annuity payments to present retired lives.
- The Deferred Annuity Account is responsible for future annuity payments to present inactive members.

This year's recommended transfer amounts are as follows:

Employer Accum. Account Before Transfers	Transfers as of July 1, 2024 (from) to:		Employer Accum. Account After Transfers
	Retirement Reserve Account	Deferred Annuity Account	
$2,665,583,287	$387,812,858	$27,419,056	$2,250,351,373

For the purposes of this valuation it was assumed that these transfers would be made.

Other Observations

General Implications of Contribution Allocation Procedure or Funding Policy on Future Expected Plan Contributions and Funded Status.

Given the plan's contribution allocation procedure, if all actuarial assumptions are met (including the assumption of the plan earning 7.00% on the actuarial value of assets), it is expected that:

(1) The employer normal cost as a percentage of pay will decrease to approximately 4.4% (the employer normal cost for the new contribution plans) as non-contributory members leave employment and employee contributions increase;

(2) The unfunded actuarial accrued liabilities will be fully amortized as of June 30, 2046; and

(3) The funded status of the plan will increase gradually towards a 100% funded ratio.

Limitations of Funded Status Measurements

Unless otherwise indicated, a funded status measurement presented in this report is based upon the actuarial accrued liability and the actuarial value of assets. Unless otherwise indicated, with regard to any funded status measurements presented in this report:

(1) The measurement is inappropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations.

(2) The measurement is dependent upon the actuarial cost method which, in combination with the plan's amortization policy, affects the timing and amounts of future contributions. The amounts of future contributions will most certainly differ from those assumed in this report due to future actual experience differing from assumed experience based upon the actuarial assumptions. A funded status measurement in this report of 100% is not synonymous with no required future contributions. If the funded status were 100%, the plan would still require future normal cost contributions (i.e., contributions to cover the cost of the active membership accruing an additional year of service credit).

(3) The measurement would produce a different result if the market value of assets were used instead of the actuarial value of assets, unless the market value of assets is used in the measurement.

Employer Contribution Rates Computed for Fiscal Year Beginning July 1, 2026

Contribution for	Contributions Expressed as %'s of Active Payroll for Fiscal Year Beginning July 1, 2026			
	Non-Contributory	Contributory	DROP	Total
Normal Cost:				
Age and service annuities (including DROP and reduced retirement)				8.66%
Separation benefits				2.70%
Disability benefits				0.56%
Death-in-service annuities				0.18%
Administrative expenses				0.40%
Total	9.93%	13.03%	9.76%	12.50%
Member contributions	0.00%	6.25%	0.00%	5.16%
Employer Normal Cost	9.93%	6.78%	9.76%	7.34%
Unfunded Actuarial Accrued Liabilities				6.99% *
Preliminary Computed Employer Contribution Rate				14.33%
Board Adopted Minimum Employer Contribution Rate				**15.32%**

* *The unfunded actuarial accrued liability and total payroll is projected to the end of Fiscal Year 2026 when determining the unfunded amortization rate. Unfunded actuarial accrued liabilities were amortized over multiple amortization periods as shown on page A-4. The weighted average amortization period was calculated to be 15.7 years. To maintain the minimum employer contribution rate, the weighted average amortization period would be 13.1 years.*

Note: The above contribution rates are based upon State and Local payroll that includes payroll for DROP participants and retired members who have returned to work. The total payroll is $2,254,920,503 as of June 30, 2024.

Amortization of Unfunded Actuarial Accrued Liabilities

Source of Unfunded Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability Initial Amount	Financing Period	6/30/2026 UAAL Amount	Remaining Period Beginning 7/1/2026	Amortization Factor	FY 2027 Contribution as a % of Payroll
Initial Unfunded Actuarial Accrued Liability.						
	$ 2,237,467,492	N/A	$ 2,146,204,007	16 yrs.	11.999553	7.21%
Changes from experience deviations.						
6/30/2024	$ (260,752,119)	20	$ (303,267,605)	20	14.072825	(0.87)%
Changes from actuarial assumptions and actuarial cost method revisions.						
6/30/2023	$ 192,713,806	20	$ 219,855,653	19	13.581905	0.65%
Totals			**$ 2,062,792,055**			**6.99%**

Weighted average remaining financing period: 15.7 years

Summary Statement of System Resources and Obligations
Year Ended June 30, 2024

Present Resources and Expected Future Resources

A.	Present Valuation Assets:		
	1. Net assets from System financial statements	$	11,012,029,201
	2. Market value adjustment		225,581,440
	3. Valuation assets		11,237,610,641
B.	Actuarial present value of expected future employer contributions:		
	1. For normal costs		1,029,915,144
	2. For unfunded actuarial accrued liability		2,154,851,145
	3. Total		3,184,766,289
C.	Actuarial present value of expected future member contributions		1,084,517,214
D.	Total Present and Expected Future Resources	$	15,506,894,144

Actuarial Present Value of Expected Future Benefit Payments

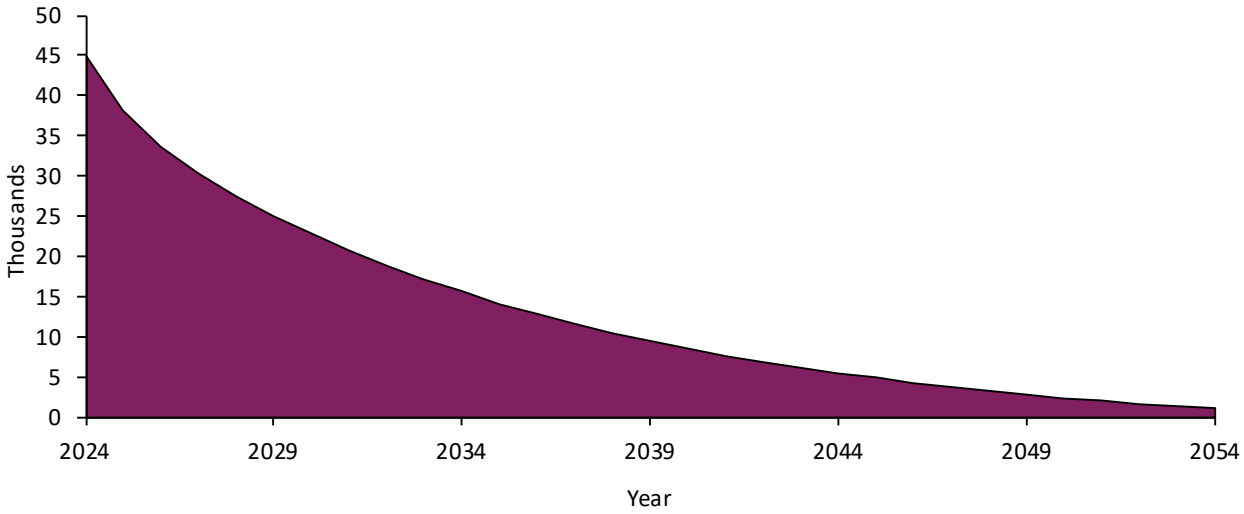
A.	To retirees and beneficiaries	$	7,139,426,941
B.	To vested terminated members		697,520,047
C.	To present active and DROP members:		
	1. Allocated to service rendered prior to valuation date - actuarial accrued liability		5,555,514,798
	2. Allocated to service likely to be rendered after valuation date		2,114,432,358
	3. Total		7,669,947,156
D.	Total Actuarial Present Value of Expected Future Benefit Payments	$	15,506,894,144

Computed Actuarial Liabilities and Allocation Using Entry Age Actuarial Cost Method as of June 30, 2024

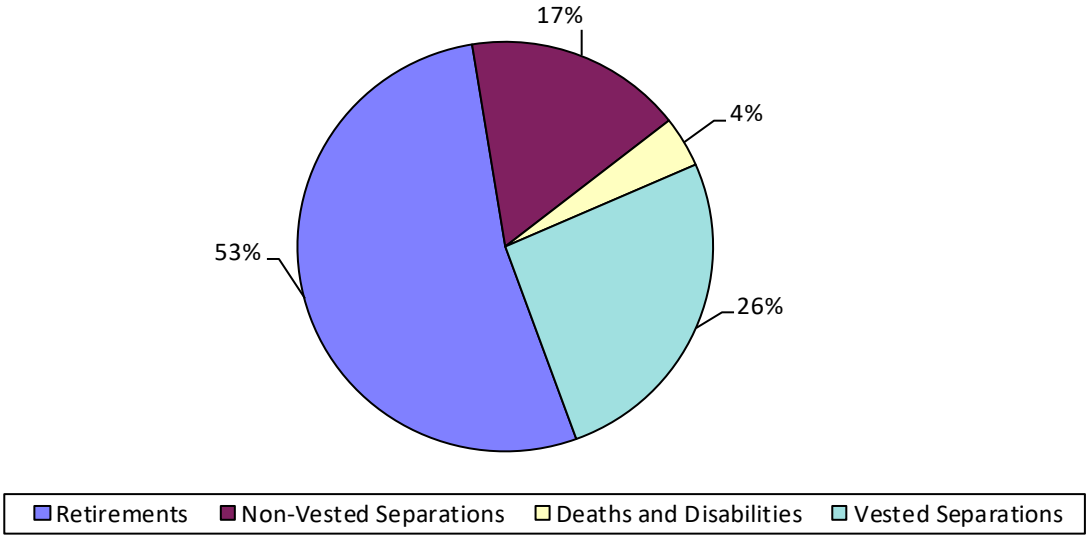
Actuarial Present Value of	Total Present Value	Portion Covered by Future Normal Cost Contributions	Actuarial Accrued Liabilities (1) - (2)
Benefits to be paid to current retirees, beneficiaries, and future beneficiaries of current retirees	$ 7,139,426,941	$ -	$ 7,139,426,941
Age and service allowances based on total service likely to be rendered by present active members and current DROP participants	6,706,231,828	1,513,304,481	5,192,927,347
Separation benefits (refunds of contributions and deferred allowances) likely to be paid to present active and inactive members	1,358,137,392	471,815,485	886,321,907
Disability benefits likely to be paid to present active members	215,564,375	97,858,026	117,706,349
Death-in-service benefits likely to be paid on behalf of present active members	87,533,608	31,454,366	56,079,242
Total	$ 15,506,894,144	$ 2,114,432,358	$ 13,392,461,786
Applicable assets (funding value)	$ 11,237,610,641	$ -	$ 11,237,610,641
Liabilities to be covered by future contributions	$ 4,269,283,503	$ 2,114,432,358	$ 2,154,851,145

Expected Development of Present Population
June 30, 2024

Closed Group Population Projection



Expected Termination Type from Active Employment



The charts show the expected future development of the present population in simplified terms. The Retirement System presently covers 44,873 active members (includes DROP). Eventually, 17% of the population is expected to terminate covered employment prior to retirement and forfeit eligibility for an employer provided benefit. About 79% of the present population is expected to receive monthly retirement benefits either by retiring directly from active service, retiring from DROP, or retiring from vested deferred status. About 4% of the present population is expected to become eligible for death-in-service or disability benefits. Within 8 years, over half of the covered membership is expected to consist of new hires.

Valuation Results
Comparative Statement
($ Millions)

Valuation Date June 30,	Actuarial Accrued Liabilities & Reserves	Valuation Assets	% Funded	Unfunded Actuarial Accrued Liabilities & Reserves			Contribution Rate Computed Percents	
				Dollars	Amortiz. Period *	% of Payroll	General Assembly	State & Local**
2001 @	$ 4,111	$ 4,342	105.6 %	$ (231)	50	(22) %	148.78 %	10.00 %
2002 #	4,398	4,404	100.1	(6)	6	(1)	150.95	10.00
2003 #	4,674	4,416	94.5	258	30	22	222.80	11.09
2004	5,005	4,438	88.7	567	30	48	201.39	12.54
2005 @#	5,619	4,584	81.6	1,035	22	85	459.47	12.54
2006	5,936	4,949	83.4	987	19	78	464.67	12.54
2007 @	6,174	5,498	89.1	676	18	52	410.58	11.01
2008 #	6,543	5,866	89.7	677	14	49	408.06	11.00
2009 @	6,938	5,413	78.0	1,525	30	106	521.36	12.46
2010	7,304	5,409	74.1	1,895	30	124	518.69	13.47
2011 #	7,734	5,467	70.7	2,267	30	147	939.81	14.24
2012	8,163	5,625	68.9	2,538	30	151		14.88
2013 #	8,284	6,159	74.3	2,125	25	126		14.76
2014 #	8,864	6,895	77.8	1,969	23	113		14.50
2015 #	9,295	7,352	79.1	1,943	25	111		14.50
2016	9,663	7,769	80.4	1,894	21	106		14.75
2017 #	10,321	8,157	79.0	2,164	25	121		15.32
2018	10,694	8,416	78.7	2,278	26	123		15.32
2019	11,129	8,739	78.5	2,390	24	124		15.32
2020	11,513	9,090	79.0	2,423	23	126		15.32
2021 @	11,821	9,893	83.7	1,928	16	101		15.32
2022	12,226	10,220	83.6	2,006	14	98		15.32
2023 #	13,069	10,638	81.4	2,431	17-20	108		15.32
2024	**13,392**	**11,238**	**83.9**	**2,154**	16-20	**96**		**15.32**

* *Amortization period is for State and Local division for 2001 and later and may be rounded above. General Assembly unfunded actuarial accrued liabilities are amortized over an 18-year period as of June 30, 2008. Beginning in 2023, unfunded actuarial accrued liabilities were amortized over multiple amortization periods according to the Board's Funding Policy.*

** *Local Government rate was 6.00% for the 1998 valuation, 7.00% for the 1999 valuation, and 8.00% for the 2000 valuation. Beginning with the June 30, 2012 valuation, results include General Assembly.*

@ *After legislated changes in benefit provisions.*

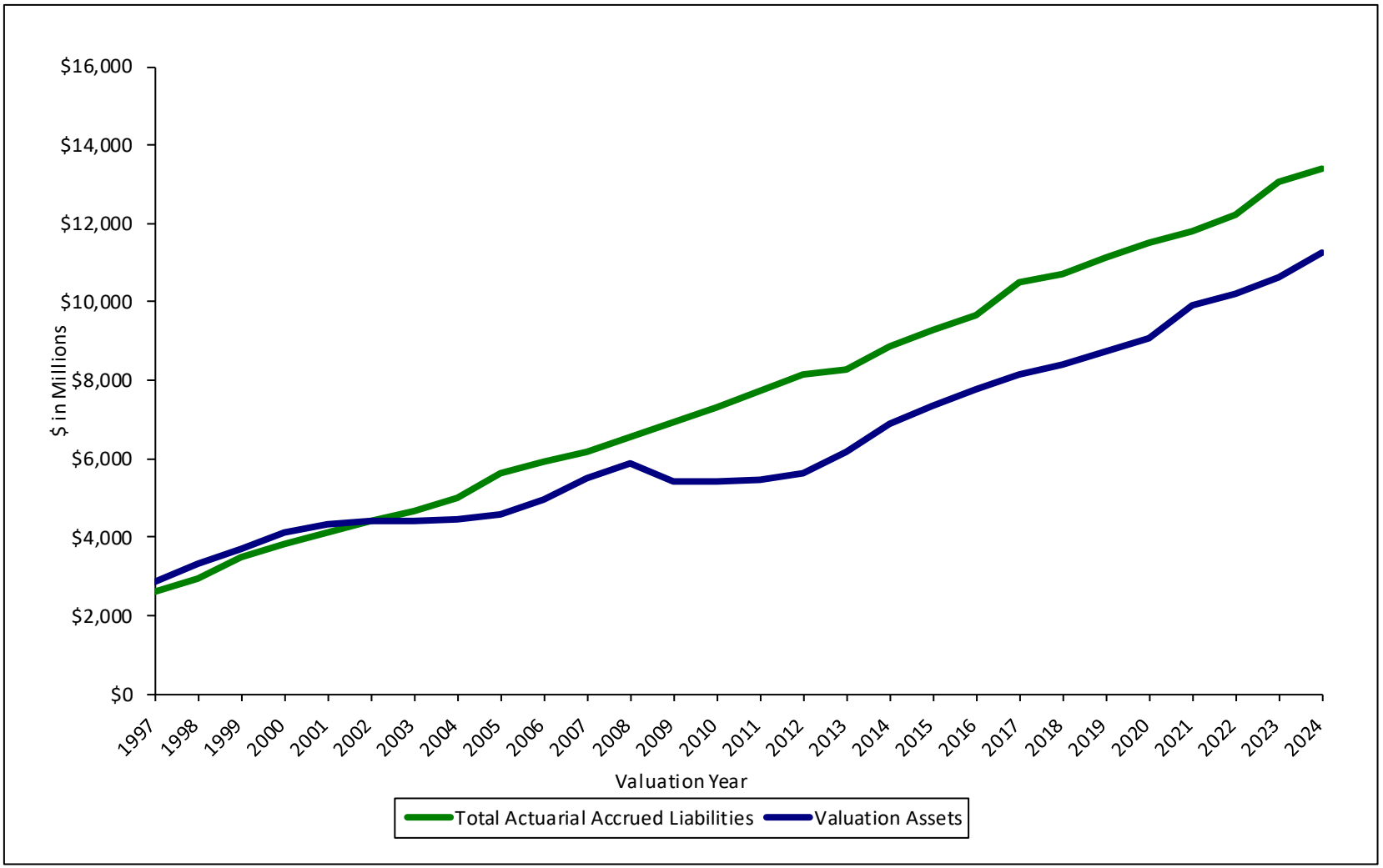
\# *After changes in actuarial assumptions.*

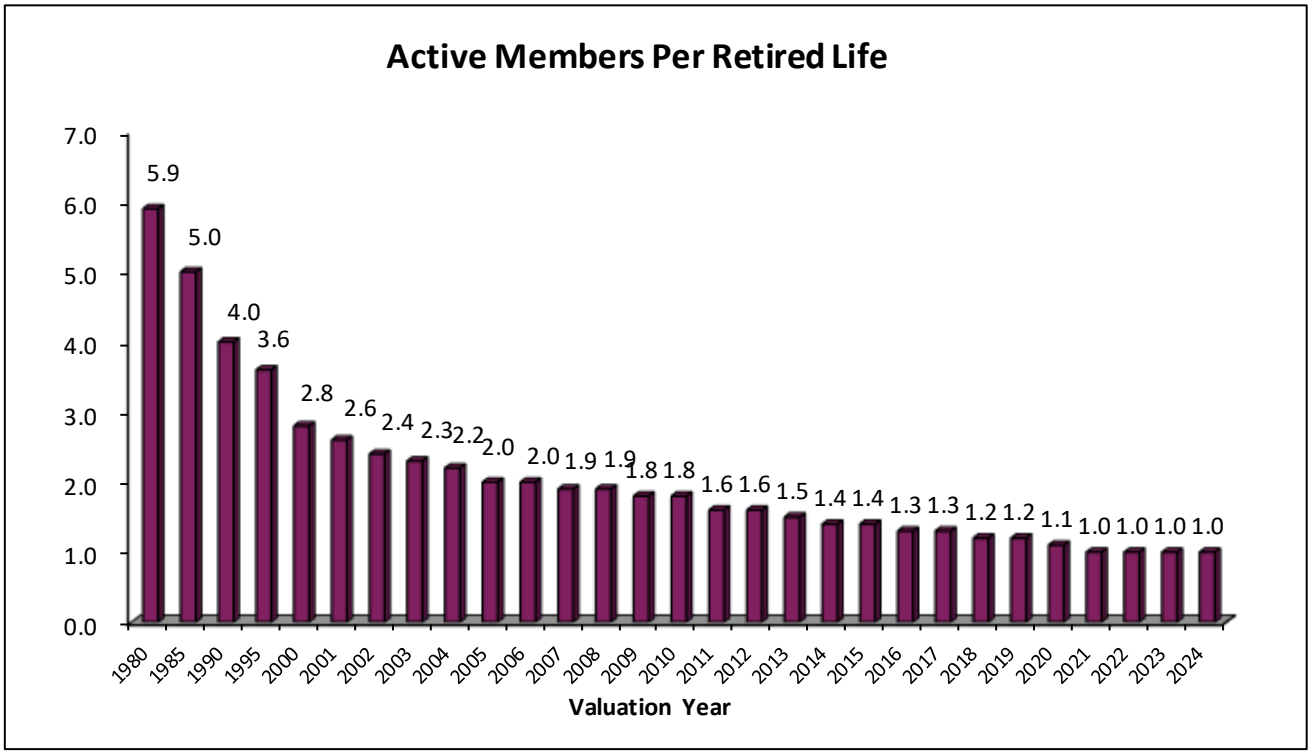
Active Members and Retired Lives
Historical Comparative Schedule

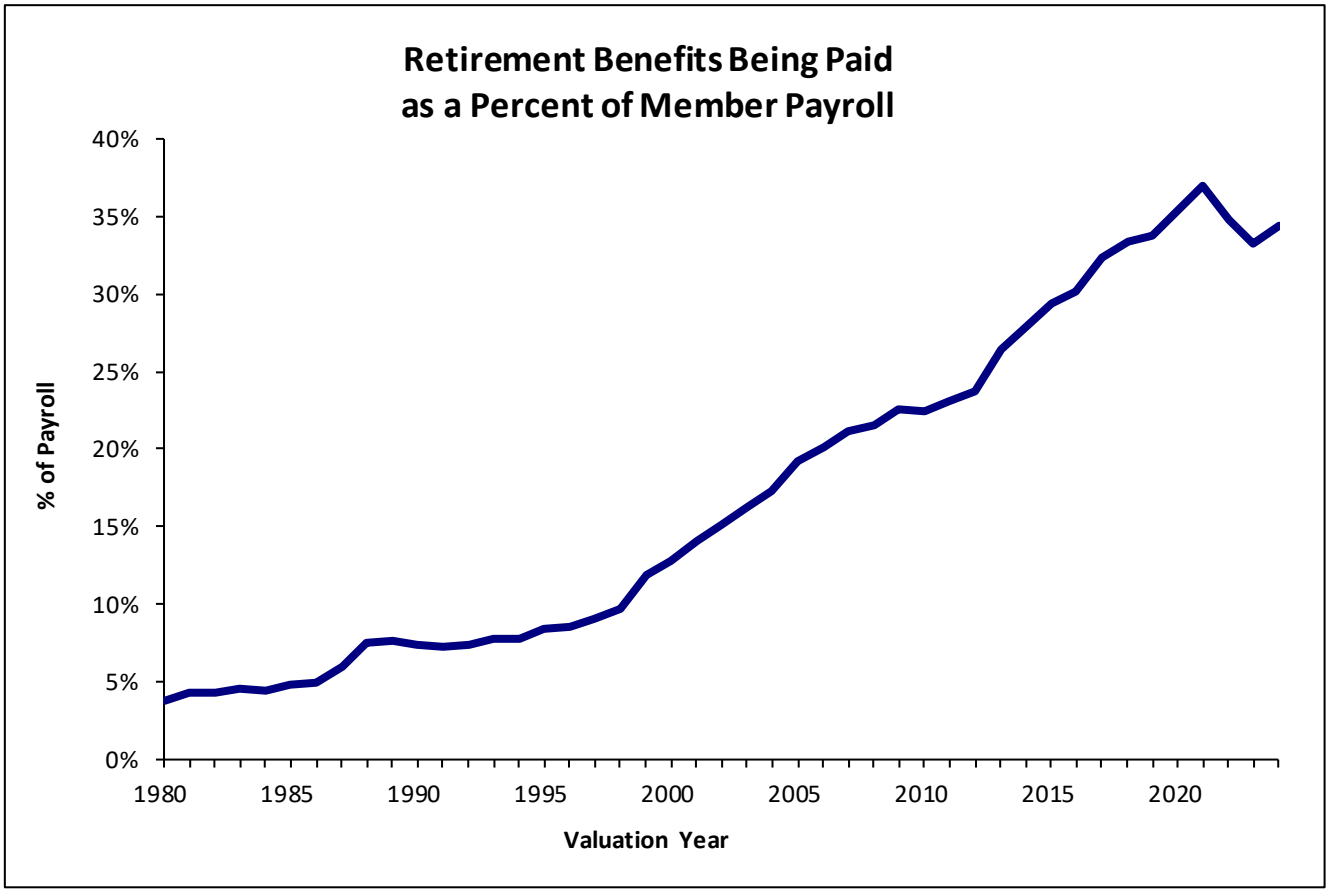
Valuation Date	Active Members				Retired Lives (Including DROP Members)			
		Valuation Payroll				Active per	Annual Benefits	
	No.	$ Millions	Average	% Incr.	No.	Retired	$ Millions	As a % of Pay
6/30/84	NA	NA	NA	NA	7,036	NA	$ 19.1	4.4%
6/30/85	NA	NA	NA	NA	7,331	NA	22.0	4.8%
6/30/86	NA	NA	NA	NA	7,649	NA	24.1	4.9%
6/30/87	NA	NA	NA	NA	8,074	NA	30.2	6.0%
6/30/88	NA	NA	NA	NA	9,155	NA	39.6	7.5%
6/30/89	NA	NA	NA	NA	9,418	NA	42.9	7.6%
6/30/90	NA	NA	NA	NA	9,747	NA	44.9	7.4%
6/30/91	NA	NA	NA	NA	10,110	NA	49.2	7.6%
6/30/92	39,752	$ 698.2	$ 17,564	NA	10,456	3.8	51.9	7.4%
6/30/93	39,849	733.4	18,404	4.8%	10,840	3.7	56.8	7.7%
6/30/94	40,940	778.7	19,021	3.3%	11,213	3.7	60.7	7.8%
6/30/95	42,041	834.5	19,850	4.4%	11,683	3.6	70.1	8.4%
6/30/96	42,712	889.3	20,821	4.9%	12,073	3.5	76.2	8.6%
6/30/97	43,068	938.5	21,791	4.7%	12,644	3.4	84.8	9.0%
6/30/98	43,047	974.7	22,644	3.9%	13,480	3.2	94.6	9.7%
6/30/99	43,064	1,008.9	23,427	3.5%	14,688	2.9	119.3	11.8%
6/30/00	43,121	1,050.0	24,351	3.9%	15,544	2.8	133.6	12.7%
6/30/01	42,556	1,070.1	25,146	3.3%	16,643	2.6	150.0	14.0%
6/30/02	42,230	1,111.5	26,320	4.7%	17,748	2.4	167.6	15.1%
6/30/03	42,879	1,147.9	26,772	1.7%	18,838	2.3	186.0	16.2%
6/30/04	42,826	1,175.8	27,455	2.6%	19,872	2.2	203.4	17.3%
6/30/05	42,938	1,214.9	28,295	3.1%	21,080	2.0	232.9	19.2%
6/30/06	43,453	1,267.1	29,159	3.1%	22,234	2.0	254.7	20.1%
6/30/07	43,630	1,302.6	29,855	2.4%	22,409	1.9	274.8	21.1%
6/30/08	44,357	1,379.8	31,106	4.2%	23,555	1.9	297.0	21.5%
6/30/09	44,702	1,433.7	32,073	3.1%	24,972	1.8	323.1	22.5%
6/30/10	45,394	1,522.7	33,544	4.6%	25,880	1.8	342.2	22.5%
6/30/11	45,145	1,542.9	34,177	1.9%	28,137	1.6	375.7	24.3%
6/30/12	45,937	1,606.1	34,962	2.3%	29,282	1.6	399.5	24.9%
6/30/13	45,707	1,612.7	35,285	0.9%	30,533	1.5	426.2	26.4%
6/30/14	45,841	1,638.0	35,735	1.3%	31,914	1.4	457.1	27.9%
6/30/15	45,722	1,645.0	35,979	0.7%	33,106	1.4	483.9	29.4%
6/30/16	45,676	1,686.5	36,923	2.6%	34,214	1.3	509.7	30.2%
6/30/17	46,094	1,668.8	36,204	(1.9)%	36,260	1.3	540.1	32.4%
6/30/18	46,207	1,723.6	37,302	3.0%	37,398	1.2	575.1	33.4%
6/30/19	45,965	1,802.4	39,212	5.1%	38,543	1.2	609.1	33.8%
6/30/20	44,373	1,795.7	40,469	3.2%	39,805	1.1	637.1	35.5%
6/30/21	42,669	1,781.8	41,759	3.2%	40,762	1.0	658.8	37.0%
6/30/22	42,771	1,925.5	45,020	7.8%	41,390	1.0	671.2	34.9%
6/30/23	43,352	2,112.3	48,724	8.2%	42,276	1.0	703.5	33.3%
6/30/24	**43,394**	**2,117.4**	**48,794**	**0.1%**	**42,797**	**1.0**	**730.0**	**34.5%**

The above valuation payroll results do not include DROP payroll.

Actuarial Accrued Liabilities and Assets




Active Members Per Retired Life
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
5.9
5.0
4.0
3.6
2.8
2.6
2.4
2.3
2.2
2.0
2.0
1.9
1.9
1.8
1.8
1.6
1.6
1.5
1.4
1.4
1.3
1.3
1.2
1.2
1.1
1.0
1.0
1.0
1.0
1980
1985
1990
1995
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
Valuation Year


Retirement Benefits Being Paid
as a Percent of Member Payroll
40%
35%
30%
25%
20%
15%
10%
5%
0%
% of Payroll
1980
1985
1990
1995
2000
2005
2010
2015
2020
Valuation Year

Short Condition Test

The APERS funding objective is to meet long-term benefit promises through contributions that remain approximately level from year to year as a percent of member payroll. If the contributions to the System are level in concept and soundly executed, the System will ***pay all promised benefits when due -- the ultimate test of financial soundness***. Testing for level contribution rates is ***the*** long-term condition test.

A short condition test is one means of checking a System's progress under its funding program. In a short condition test, the Plan's present assets (cash and investments) are compared with:

1) Active member contributions on deposit;
2) The liabilities for future benefits to present retired lives; and
3) The liabilities for service already rendered by active members.

In a System that has been following the discipline of level percent-of-payroll financing, the liabilities for active member contributions on deposit (liability 1) and the liabilities for future benefits to present retired lives (liability 2) will be fully covered by present assets (except in unusual circumstances). In addition, the liabilities for service already rendered by active members (liability 3) will be partially covered by the remainder of present assets. The larger the funded portion of liability 3, the stronger the condition of the System. Liability 3 being fully funded is uncommon.

Short Condition Test
Comparative Statement
($ in Millions)

Val'n. Date: June 30	Entry Age Accrued Liability (1) Active Member Contr.	(2) Retirees and Benef.	(3) Active Members (Employer Financed Portion)	Valuation Assets	Portion of Present Values Covered by Present Assets (1)	(2)	(3)	Total
	STATE DIVISION (including sub-divisions)							
1998@	$17.2	$ 640.3	$1,395.9	$2,328.5	100%	100%	119%	113%
1999@#	16.9	784.0	1,634.2	2,637.1	100%	100%	112%	108%
2000	15.8	747.5	1,865.7	2,943.3	100%	100%	117%	112%
	LOCAL GOVERNMENT DIVISION							
1998@	$ 8.8	$ 337.9	$ 501.1	$ 968.1	100%	100%	124%	114%
1999#	8.8	446.9	587.9	1,074.7	100%	100%	105%	103%
2000	7.6	440.0	706.0	1,178.1	100%	100%	103%	102%
	STATE AND LOCAL GOVERNMENT DIVISION							
2001#	$23.4	$1,305.0	$2,759.2	$4,335.5	100%	100%	109%	106%
2002@	20.5	1,502.7	2,850.8	4,397.2	100%	100%	101%	101%
2003@	20.5	1,624.7	3,004.7	4,408.3	100%	100%	92%	95%
2004	20.5	1,762.2	3,197.6	4,429.9	100%	100%	83%	89%
2005@	15.5	1,878.2	3,701.7	4,576.1	100%	100%	72%	82%
2006	15.5	1,990.6	3,907.3	4,941.1	100%	100%	75%	84%
2007#	29.7	2,268.5	3,856.7	5,489.3	100%	100%	83%	89%
2008@	45.8	2,463.9	4,014.9	5,858.1	100%	100%	83%	90%
2009	66.4	2,750.3	4,059.9	5,406.8	100%	100%	64%	79%
2009#	66.4	2,750.3	4,103.5	5,406.8	100%	100%	63%	78%
2010	92.8	2,928.7	4,266.1	5,403.5	100%	100%	56%	74%
2011@	119.2	3,268.3	4,327.8	5,462.6	100%	100%	48%	71%
2012	122.1	3,518.7	4,521.9	5,625.4	100%	100%	44%	69%
2013@	147.9	3,855.2	4,281.1	6,159.3	100%	100%	50%	74%
2014@	176.3	4,246.7	4,440.6	6,894.9	100%	100%	56%	78%
2015@	201.1	4,654.5	4,439.2	7,351.7	100%	100%	56%	79%
2016	228.4	4,929.2	4,505.1	7,768.9	100%	100%	58%	80%
2017	291.1	5,547.3	4,671.8	8,157.0	100%	100%	50%	78%
2017@	291.1	5,460.9	4,568.5	8,157.0	100%	100%	53%	79%
2018	334.7	5,717.9	4,641.7	8,416.4	100%	100%	51%	79%
2019	376.0	6,015.8	4,737.0	8,738.7	100%	100%	50%	79%
2020	410.2	6,270.1	4,832.7	9,090.4	100%	100%	50%	79%
2021#	439.2	6,531.0	4,851.3	9,892.5	100%	100%	60%	84%
2022	473.0	6,677.8	5,075.3	10,220.3	100%	100%	60%	84%
2023@	516.8	6,937.6	5,614.2	10,638.4	100%	100%	57%	81%
2024	**563.4**	**7,139.4**	**5,689.7**	**11,237.6**	**100%**	**100%**	**62%**	**84%**

 # After legislated changes in benefit provisions.

@ After changes in actuarial assumptions.

Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution

The determination of the accrued liability and the actuarially determined contribution requires the use of assumptions regarding future economic and demographic experience. Risk measures, as illustrated in this report, are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the accrued liability and the actuarially determined contribution that result from the differences between actual experience and the actuarial assumptions.

Future actuarial measurements may differ significantly from the current measurements 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 due to changing conditions; 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. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the plan's future financial condition include:

1. **Investment Risk** – actual investment returns may differ from the expected returns;
2. **Asset/Liability Mismatch** – changes in asset values may not match changes in liabilities, thereby altering the gap between the accrued liability and assets and consequently altering the funded status and contribution requirements;
3. **Contribution Risk** – actual contributions may differ from expected future contributions. For example, actual contributions may not be made in accordance with the plan's funding policy or material changes may occur in the anticipated number of covered employees, covered payroll, or other relevant contribution base;
4. **Salary and Payroll Risk** – actual salaries and total payroll may differ from expected, resulting in actual future accrued liability and contributions differing from expected;
5. **Longevity Risk** – members may live longer or shorter than expected and receive pensions for a period of time other than assumed; and
6. **Other Demographic Risks** – members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected.

The effects of certain trends in experience can generally be anticipated. For example, if the investment return since the most recent actuarial valuation is less (or more) than the assumed rate, the cost of the plan can be expected to increase (or decrease). Likewise, if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.

The computed contribution rate shown on page A-3 may be considered as a minimum contribution rate that complies with the Board's funding policy. The timely receipt of the actuarially determined contributions is critical to support the financial health of the plan. Users of this report should be aware that contributions made at the actuarially determined rate do not necessarily guarantee benefit security.

Plan Maturity Measures

Risks facing a pension plan evolve over time. A young plan with virtually no investments and paying few benefits may experience little investment risk. An older plan with a large number of members in pay status and a significant trust may be much more exposed to investment risk. Generally accepted plan maturity measures include the following:

	2024	2023	2022
Ratio of the market value of assets to total payroll	4.88	4.56	4.73
Ratio of actuarial accrued liability to payroll	5.94	5.81	5.96
Ratio of actives to retirees and beneficiaries	1.0	1.0	1.0
Ratio of net cash flow to market value of assets	(2.3)%	(2.4)%	(2.6)%
Duration of present value of future benefits	14.62	14.81	14.43

Funded Ratio

The ratio of actuarial value of assets to actuarial accrued liabilities is expected to trend toward 100% by June 30, 2046 under the current amortization period.

Ratio of Market Value of Assets to Payroll

The relationship between assets and payroll is a useful indicator of the potential volatility of contributions. For example, if the market value of assets is 2.0 times the payroll, a return on assets 5% different than assumed would equal 10% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in plan sponsor contributions as a percentage of payroll.

Ratio of Actuarial Accrued Liability to Payroll

The relationship between actuarial accrued liability and payroll is a useful indicator of the potential volatility of contributions for a fully funded plan. A funding policy that targets a funded ratio of 100% is expected to result in the ratio of assets to payroll and the ratio of liability to payroll converging over time. The ratio of liability to payroll may also be used as a measure of sensitivity of the liability itself. For example, if the actuarial accrued liability is 2.5 times the payroll, a change in liability 2% other than assumed would equal 5% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in liability (and also plan sponsor contributions) as a percentage of payroll.

Ratio of Unfunded Actuarial Accrued Liability to Payroll

The ratio of the unfunded actuarial accrued liability to payroll is expected to trend toward 0% by June 30, 2046.

Ratio of Actives to Retirees and Beneficiaries

A young plan with many active members and few retirees will have a high ratio of actives to retirees. A mature open plan may have close to the same number of actives to retirees resulting in a ratio near 1.0. A super-mature or closed plan may have significantly more retirees than actives resulting in a ratio below 1.0.

Ratio of Net Cash Flow to Market Value of Assets

A positive net cash flow means contributions exceed benefits and expenses. A negative cash flow means existing funds are being used to make payments. A certain amount of negative net cash flow is generally expected to occur when benefits are prefunded through a qualified trust. Large negative net cash flows as a percent of assets may indicate a super-mature plan or a need for additional contributions.

Standard Deviation of Investment Return to Payroll

This measure illustrates the impact of a one standard deviation change in investment return as a percent of payroll. Investment return experience other than expected ultimately affects the employer contribution rates. The higher the ratio of this risk metric, the greater the expected volatility in employer contribution rates. Absent changes in investment policy, this metric is expected to increase as the assets grow to 100% of the AAL.

Duration of Present Value of Future Benefits

The duration of the present value of future benefits may be used to approximate the sensitivity to a 1% change in the assumed rate of return. For example, a duration of 10 indicates that the present value of future benefits would increase approximately 10% if the assumed rate of return were lowered 1%.

Additional Risk Assessment

Additional risk assessment is outside the scope of the annual actuarial valuation. Additional assessment may include scenario tests, sensitivity tests, stochastic modeling, stress tests, and a comparison of the present value of accrued benefits at low-risk discount rates with the actuarial accrued liability.

Summary of Risk Measures

Valuation Date June 30,	Funded Ratio Based on AVA	Funded Ratio Based on MVA	UAAL Amortization Period^	Total UAAL / Total Payroll	Total Actuarial Value of Assets / Total Payroll	Total AAL / Total Payroll	Standard Deviation of Investment Return / Total Payroll
2005 @#	82 %	83 %	22	0.9	3.8	4.6	**
2006	83	87	19	0.8	3.9	4.7	**
2007 @	89	97	18	0.5	4.2	4.7	**
2008 #	90	86	14	0.5	4.3	4.7	**
2009 @	78	62	30	1.1	3.8	4.8	**
2010	74	65	30	1.2	3.6	4.8	**
2011 #	71	75	30	1.5	3.4	4.8	**
2012	69	70	30	1.5	3.3	4.8	**
2013 #	74	77	25	1.3	3.6	4.9	**
2014 #	78	85	23	1.1	4.0	5.1	59 %
2015 #	79	81	25	1.1	4.2	5.3	58 %
2016	80	76	21	1.1	4.3	5.4	56 %
2017 #	78	76	25	1.3	4.6	5.9	56 %
2018	79	80	26	1.2	4.6	5.8	63 %
2019	79	79	24	1.2	4.5	5.8	62 %
2020	79	76	23	1.3	4.7	6.0	62 %
2021 @	84	94	16	1.0	5.2	6.2	76 %
2022	84	79	14	1.0	5.0	6.0	70 %
2023 #	81	79	17-20	1.1	4.7	5.8	60 %
2024	84	82	16-20	0.9	5.0	5.9	63 %

@ After legislated changes in benefit provisions.

 # After changes in actuarial assumptions.

^ UAAL is amortized over multiple amortization periods according to the Board's Funding Policy beginning with the June 30, 2023 valuation.

*** Unavailable.*

Funded ratio: The funded ratio is expected to trend toward 100%.

UAAL Amortization Period: The UAAL is amortized over multiple amortization periods according to the Board's Funding Policy. Each amortization base's amortization period is expected to decrease by one year each year until that base is fully funded.

UAAL / Total Payroll: The ratio of the unfunded actuarial accrued liability to payroll is expected to trend towards 0%.

Funding Value of Assets / Total Payroll: As the funded ratio increases, this ratio is expected to converge to the ratio of Total AAL / Payroll.

Total AAL / Total Payroll: This measure is expected to increase as the System matures.

Standard Deviation of Investment Return / Total Payroll: This measure illustrates the impact of a one standard deviation change in investment return as a percent of payroll. Investment return experience other than expected ultimately affects the employer contribution rates. The higher the ratio of this risk metric, the greater the expected volatility in employer contribution rates. Absent changes in investment policy, this metric is expected to increase as the assets grow to 100% of the AAL.

Low-Default-Risk Obligation Measure

Introduction

In December 2021, the Actuarial Standards Board (ASB) adopted a revision to Actuarial Standard of Practice (ASOP) No. 4, *Measuring Pension Obligations and Determining Pension Plan Costs or Contributions*. The revised ASOP No. 4 requires the calculation and disclosure of a liability referred to by the ASOP as the "Low-Default-Risk Obligation Measure" (LDROM). The rationale that the ASB cited for the calculation and disclosure of the LDROM was included in the Transmittal Memorandum of ASOP No. 4 and is presented below (emphasis added):

> The ASB believes that the calculation and disclosure of this measure provides **appropriate, useful information for the intended user regarding the funded status of a pension plan**. The calculation and disclosure of this additional measure is **not intended to suggest that this is the "right" liability measure** for a pension plan. However, the ASB does believe that **this additional disclosure provides a more complete assessment of a plan's funded status and provides additional information regarding the security of benefits that members have earned as of the measurement date.**

Comparing the Accrued Liabilities and the LDROM

One of the fundamental financial objectives of APERS is to finance each member's retirement benefits over the period from the member's date of hire until the member's projected date of retirement (entry age actuarial cost method) as a level percentage of payroll. To fulfill this objective, the discount rate that is used to value the accrued liabilities of APERS is set equal to the **expected return** on the System's diversified portfolio of assets (referred to sometimes as the investment return assumption). For APERS, the investment return assumption is 7.0%.

The LDROM is meant to approximately represent the lump sum cost to a plan to purchase low-default-risk fixed income securities whose resulting cash flows essentially replicate in timing and amount the benefits earned (or the costs accrued) as of the measurement date. The LDROM is very dependent upon market interest rates at the time of the LDROM measurement. The lower the market interest rates, the higher the LDROM, and vice versa. The LDROM results presented in this report are based on the projected unit credit actuarial cost method and discount rates based upon the June 2024 Treasury Yield Curve Spot Rates (monthly average). The 1-, 5-, 10- and 30-year rates follow: 5.12%, 4.34%, 4.22% and 4.45%.

Presented below are the actuarial accrued liability and the LDROM as of June 30, 2024 for APERS.

Type of Member	Valuation Accrued Liabilities	LDROM
Retirees	$ 7,139,426,941	$ 8,931,220,623
Deferreds	697,520,047	1,094,905,393
Actives	5,555,514,798	7,299,910,051
Totals	**$ 13,392,461,786**	**$17,326,036,067**

Low-Default-Risk Obligation Measure

Commentary Regarding the LDROM

Some ways in which the LDROM can assist the APERS Board of Trustees in a decision-making process include:

(1) It provides information to potentially allow for better risk management for APERS.
(2) It places the appropriateness of potential employer contribution rate reductions or benefit enhancements in a better context.
(3) It provides more complete information regarding the benefit security of the membership's benefits earned as of the measurement date.
(4) It brings into consideration a potential value for a "withdrawal liability" for employers that may want to leave APERS.

Potentially Allows for Better Risk Management: A very useful risk metric to exhibit potential contribution rate volatility (or amortization period volatility for fixed rate plans) is the ratio of assets to payroll or AAL to payroll. How could we reduce that potential contribution rate volatility (or amortization period volatility for fixed rate plans)? The LDROM and Liability Driven Investing (LDI) are closely related concepts.

Other than reducing benefits, all other things being equal, the only way to reduce that volatility is to immunize (i.e., LDI) a portion of the System's liability. This does not mean that the System needs to immunize all of the liability. For example, if they could immunize half of it, they could reduce the contribution rate volatility in half. This would require the actuary to use a cash flow matching method to value that portion of the liabilities. This means that the actuary would not use the System's investment return assumption for this portion of the liability, but the yield curve resulting from the fixed income portfolio that is being used to immunize the liability. The value of the assets (i.e., fixed income portfolio) and the value of the immunized liability would move in tandem with any changes (up or down) in future interest rates. The result being that the immunized portion of the System's liability would reduce the potential of producing new unfunded actuarial accrued liabilities. However, the fixed income portfolio would still have the minor potential for credit default risk.

Places the Appropriateness of Potential Employer Contribution Rate Reductions or Benefit Enhancements in a Better Context: Many PERS have adopted a funding policy. Many funding policies already take into account the System's funded ratio (based upon the AAL) when considering whether to allow for benefit enhancements or contribution rate reductions. For example, a System may not allow for a benefit enhancement if the funded ratio does not exceed a certain threshold. Similarly, a System may not allow for an employer contribution rate reduction in some circumstances. For example, a reduction to the employer normal cost contribution may not be allowed until the System reaches a funded ratio of 120%. Given the fact that most criteria are based upon the expectation of earning the investment return assumption, a System may want to consider extending these criteria to a funded ratio based upon the LDROM in addition to the AAL.

Provides more Complete Information Regarding the Benefit Security of the Membership's Benefits Earned as of the Measurement Date: Too often a high funded ratio (e.g., 100% funded) on an AAL basis is interpreted as benefit security for the participants. The fact that this funded ratio is based upon an expected measure is many times overlooked. If the AAL and LDROM measures are relatively close, then the System at least has the opportunity to make benefits payable in the future more secure.

SECTION B

VALUATION DATA

Summary of Provisions Evaluated
(Excludes Special Provisions for General Assembly)

The Non-Contributory Plan applies to all persons first hired after January 1, 1978 and before July 1, 2005 in APERS-covered employment. The New Contributory Plan applies to all persons hired after July 1, 2005 in APERS-covered employment or Non-Contributory members who elected to participate in the New Contributory Plan.

New Contributory Plan	Non-Contributory Plan
Voluntary Retirement	
With a full benefit, after either (a) age 65 with 5 years of service, or (b) 28 years of actual service, regardless of age. For sheriff and public safety members, the age 65 requirement is reduced 1 month for each 2 months of actual service, but not below age 55 (age 52 for sheriff members with a minimum of 10 years of actual service).	***With a full benefit***, after either (a) age 65 with 5 years of service, or (b) 28 years of actual service, regardless of age. For sheriff and public safety members, the age 65 requirement is reduced 1 month for each 2 months of actual service, but not below age 55 (age 52 for sheriff members with a minimum of 10 years of actual service).
With a reduced benefit, after age 55 with 5 years of service or any age with 25 years of service. The reduction is equal to ½ of 1% for each month retirement precedes normal retirement age or 1% for each month below 28 years of actual service, whichever is less.	***With a reduced benefit***, after age 55 with 5 years of service or any age with 25 years of service. The reduction is equal to ½ of 1% for each month retirement precedes normal retirement age or 1% for each month below 28 years of actual service, whichever is less.
Final Average Compensation (FAC)	
Average of highest 36 calendar months of covered compensation (60 months for members hired on or after July 1, 2022).	Average of highest 36 calendar months of covered compensation.
Full Age & Service Retirement Benefit	
2.00% of FAC times years of service (2.03% for service prior to July 1, 2007), plus .5% of FAC times years of service over 28 years for service after July 1, 2009. The minimum monthly benefit is $150 minus any age and beneficiary option reductions.	1.72% of FAC times years and months of credited service (1.75% for service prior to July 1, 2007), plus .5% of FAC times years of service over 28 years for service after July 1, 2009. If retirement is prior to age 62, an additional .33% of FAC times years of service will be paid until age 62. The portion of the APERS benefit based on service before 1978 cannot be less than the amount provided by contributory provisions in effect at the time of retirement. The minimum monthly benefit is $150 minus any age and beneficiary option reductions.

Summary of Provisions Evaluated

New Contributory Plan	Non-Contributory Plan
Benefit Increases After Retirement	
Annually, there will be a cost-of-living adjustment equal to 3% of the current benefit. For members first hired on or after July 1, 2022, the redetermined amount is the monthly benefit payable as of the preceding July 1 increased by the lesser of three percent (3%), or the percentage change in the Consumer Price Index for Urban Wage Earnings and Clerical Workers (CPI-W) over the one-year period ending in the December preceding the redetermination date.	Annually, there will be a cost-of-living adjustment equal to 3% of the current benefit.
Member Contribution Rates	
5% of covered compensation (pre-tax). Beginning July 1, 2022, the member contribution rate will increase in increments of 0.25% per year until it reaches the maximum 7%. Member contributions are refundable if APERS-covered employment terminates before a monthly benefit is payable. Members will earn interest on the contributions at a rate of 2% annually.	No employee contributions for service after January 1, 1978. If there is service before January 1, 1978, contributions for that period are refundable later in the same manner as under the Contributory Plan.
Vested Retirement Benefits	
5 or more years of service, and leaving APERS-covered employment before full retirement age. Deferred full retirement benefit, based on service and pay at termination, begins at age 65. A death benefit is payable to surviving spouse of member who dies before benefit commencement. In place of deferred full benefit, at age 55 or older a qualifying member can elect an immediate reduced benefit.	5 or more years of service, and leaving APERS-covered employment before full retirement age. Deferred full retirement benefit, based on service and pay at termination, begins at age 65. A death benefit is payable to surviving spouse of member who dies before benefit commencement. In place of deferred full benefit, at age 55 or older a qualifying member can elect an immediate reduced benefit.
Total and Permanent Disability	
Disabled after 5 or more years of service, including credit for 18 of the 24 months preceding disability. Amount is computed as an age & service benefit, based on service and pay at disability.	Disabled after 5 or more years of service, including credit for 18 of the 24 months preceding disability. Amount is computed as an age & service benefit, based on service and compensation at disability.

Summary of Provisions Evaluated

New Contributory Plan	Non-Contributory Plan
Death After Retirement	
If death occurs before total monthly benefit payments equal member's accumulated contributions, the difference is refunded.	Member contributions before 1978 are protected in the same manner as under the Contributory Plan.
A retiring member can also elect an optional form of benefit, which provides beneficiary protection paid for by reducing the retired member's benefit amount. Should the member elect a straight life benefit and decease within 12 months of the date of retirement, a benefit may be payable to the surviving spouse under certain conditions.	A retiring member can also elect an optional form of benefit, which provides beneficiary protection paid for by reducing the retired member's benefit amount. Should the member elect a straight life benefit and decease within 12 months of the date of retirement, a benefit may be payable to the surviving spouse under certain conditions.
Death While in APERS-Covered Employment	
Member's accumulated contributions are refundable.	Member's accumulated contributions before 1978 are refundable.
If the member had 5 or more years of service, monthly benefits are payable instead. Surviving spouse receives a benefit computed as if member had retired and elected the Joint & 75% Survivor Option. Payment begins immediately.	If the member had 5 or more years of service, monthly benefits are payable instead. Surviving spouse receives a benefit computed as if member had retired and elected the Joint & 75% Survivor Option. Payment begins immediately.
Each dependent child receives benefit of 10% of compensation (maximum of 25% for all children).	Each dependent child receives benefit of 10% of compensation (maximum of 25% for all children).
Dependent parents benefits are payable if neither spouse nor children's benefits are payable.	Dependent parents benefits are payable if neither spouse nor children's benefits are payable.

Summary of Provisions Evaluated
Credited Service

Membership Group	Service Credits
Public Safety Members (including State Capitol Police and Wildlife Sub-Division members) hired before July 1, 1997	1-1/2 times regular rate with 5 years actual service required to meet benefit eligibility rules.
Governor (hired before July 1, 1999)	3 times regular rate with 5 years actual service required to meet death-in-service eligibility and 4 years actual service required for other benefit eligibility.
Elected State Constitutional Officers (hired before July 1, 1999)	2-1/2 times regular rate with 5 years actual service required to meet benefit eligibility.
General Assembly	Regular crediting rate with 5 years of actual service required to meet death-in-service eligibility and 10 years of actual service required for other benefit eligibility.
Other Elected Public Officials (municipal and county officials)	2 times regular rate with 5 years actual service required to meet benefit eligibility.
All Other Members	Regular rate.

Arkansas Public Employees Deferred Retirement Option Plan

Members with 28 years of actual service in APERS or in combination with a reciprocal system are eligible to participate.

Members, for a maximum of 10 years, may continue employment and have 75% of their accrued benefit (at date of participation with 30 or more years of service) paid into the Deferred Retirement Option Plan in lieu of any further benefit accruals.

The payments into the Deferred Retirement Option Plan accumulate with interest at a rate established by the Board. The interest is paid on the mean balance and is paid to the member at termination of active membership in either a lump sum or as an annuity.

Employer contributions continue for members participating in the DROP.

Summary of Provisions Evaluated
General Assembly Division
Additional Benefit Provisions

Voluntary Retirement Eligibility

Age 65 with 10 or more years of credited service, 28 years of actual service regardless of age, or age 55 with 12 or more years of actual service, 10 of which must be as a member of the General Assembly. In addition, a member of the General Assembly who was a member of the General Assembly on July 1, 1979, or holding any other Arkansas elective office on July 1, 1979, is eligible to retire with 17.5 years of actual service regardless of age.

Vesting

Termination of employment prior to normal retirement age after completing 10 or more years of credited service.

Retirement Benefit

$35.00 per month times years of General Assembly service. The amount is $40.00 per month per year of service for any member who served as Speaker of the House of Representatives or President Pro Tempore of the Senate.

Disability

Eligibility: 10 years of credited service.

Amount: Accrued retirement benefit.

Death-in-Service

Eligibility: 5 years of service.

Amount - Less than 10 years in General Assembly: Same as for regular members.

Amount - 10 or more years in General Assembly: 100% of the benefit the member would have been entitled to had he or she been at retirement age payable to an eligible surviving spouse.

Death-After-Retirement

100% of the benefit the member was receiving payable to an eligible surviving spouse.

Participation

A member of the General Assembly may, at any time, elect either (i) to be covered by regular benefit provisions, or (ii) to discontinue an APERS membership.

Summary of Provisions Evaluated
Illustration of Benefit Changes During Recent
Years of Retirement and Related Changes in Purchasing Power

Year Ended June 30	Increase Beginning of Year	Benefit Dollars in Year	Inflation (Loss) in Year#	Purchasing Power at Year End	
				1985 $	% of 1985
1985	--	$ 8,000	(3.7)%	$8,000	100%
1986	$ 240	8,240	(1.7)%	8,102	101%
1987	240	8,480	(3.7)%	8,041	101%
1988	240	8,720	(3.9)%	7,958	99%
1989	240	8,960	(5.1)%	7,780	97%
1990	240	9,200	(4.7)%	7,630	95%
1991	240	9,440	(4.7)%	7,478	93%
1992	661	10,101	(3.1)%	7,761	97%
1993	303	10,404	(3.0)%	7,761	97%
1994	584	10,988	(2.5)%	7,996	100%
1995	275	11,263	(3.0)%	7,958	99%
1996	1,064	12,327	(2.8)%	8,472	106%
1997	345	12,672	(3.0)%	8,506	106%
1998	760	13,432	(2.3)%	8,761	110%
1999	309	13,741	(1.7)%	8,896	111%
2000	990	14,731	(3.7)%	9,194	115%
2001	442	15,173	(3.2)%	9,172	115%
2002	713	15,886	(1.1)%	9,502	119%
2003	477	16,363	(2.1)%	9,586	120%
2004	491	16,854	(3.0)%	9,586	120%
2005	506	17,360	(3.2)%	9,570	120%
2006	521	17,881	(4.1)%	9,465	118%
2007	715	18,596	(2.4)%	9,617	120%
2008	558	19,154	(5.6)%	9,380	118%
2009	575	19,729	2.1 %	9,864	123%
2010	592	20,321	(1.2)%	10,036	125%
2011	610	20,931	(3.6)%	9,962	125%
2012	628	21,559	(1.4)%	10,118	126%
2013	647	22,206	(2.0)%	10,221	128%
2014	666	22,872	(2.0)%	10,322	129%
2015	686	23,558	(0.2)%	10,614	133%
2016	707	24,265	(0.8)%	10,843	136%
2017	728	24,993	(1.7)%	10,979	137%
2018	750	25,743	(2.9)%	10,984	137%
2019	772	26,515	(1.8)%	11,112	139%
2020	795	27,310	(1.0)%	11,334	142%
2021	819	28,129	(5.4)%	11,080	139%
2022	844	28,973	(8.5)%	10,516	131%
2023	869	29,842	(3.2)%	10,498	131%
2024	895	30,737	(2.9)%	10,509	131%
2025	922	31,659			

 # Based on Consumer Price Index for Urban Consumers, United States City Average (July values).

Revenues and Expenditures
July 1, 2023 Through June 30, 2024
Market Value

	Totals
Balance 7/1/2023	**$ 10,267,781,923**
Revenues	
Member contributions	101,220,195
Employer contributions	347,481,831
Transfers	3,004,211
Other	1,455,313
Investment return*	1,006,619,326
Total	1,459,780,876
Expenditures	
Benefits paid and refunds	699,312,693
Expenses	12,130,690
Total	711,443,383
Reserve Adjustments	0
Balance 6/30/2024	**$ 11,016,119,416**
Less Contributions Receivable	**4,090,215**
Balance Available for Funding Valuation	**$ 11,012,029,201**

** Net of investment expenses.*

Note: Results may not total due to rounding.

Reported Accrued Assets Available for Benefits
June 30, 2024

Retirement System Account	Reported Assets June 30, 2024	
Employer Accumulation Account	$ 2,250,351,373	*
Members Deposit Account	684,886,447	
Members Deposit Interest Reserve	122,819,293	
Retirement Reserve Account	7,139,426,941	*
Deferred Annuity Reserve Account	697,520,047	*
DROP Reserve	121,039,525	
Miscellaneous Reserves	75,790	
Total Market Value	$ 11,016,119,416	
Less Contributions Receivable	4,090,215	
Market Value Available for Funding	$ 11,012,029,201	
Funding Value of Assets	$ 11,237,610,641	
Valuation Asset Adjustment	225,581,440	
Adjusted Employer Accum. Account	$ 2,475,932,813	

* *After recommended reserve transfers (see page A-2).*

Reported Accrued Assets Available for Benefits
June 30, 2024
(Concluded)

The Employers Accumulation Account represents employer contributions accumulated for benefits on behalf of present members.

The Members Deposit Account represents member contributions accumulated for (1) monthly benefits at retirement, and (2) refunds upon termination if monthly benefits are not payable.

The Members Deposit Interest Reserve Account represents interest credited on member contributions.

The Retirement Reserve Account represents reserves, from employer and member contributions, held for the monthly benefits being paid to present retired lives.

The Deferred Annuity Account represents employer reserves held for future monthly benefits to present inactive members.

In financing the liabilities, the Fund balances displayed on the previous page were applied to the actuarial accrued liabilities.

Development of Funding Value of Assets

	Valuation Date June 30:	2022	2023	2024	2025	2026	2027
A.	Funding Value Beginning of Year	$ 9,892,522,828	$ 10,220,259,497	$ 10,638,398,858			
B.	Market Value End of Year	9,703,178,137	10,263,062,809	11,012,029,201			
C.	Market Value Beginning of Year	11,148,502,679	9,703,178,137	10,263,062,809			
D.	Non-Investment Net Cash Flow	(256,674,121)	(247,166,785)	(258,281,831)			
E.	Investment Income						
	E1. Market Total: B - C - D	(1,188,650,421)	807,051,457	1,007,248,223			
	E2. Assumed Rate	7.15%	7.15%	7.00%			
	E3. Amount for Immediate Recognition	698,244,890	722,014,038	735,749,986			
	E4. Amount for Phased-In Recognition	(1,886,895,311)	85,037,419	271,498,237			
F.	Phased-In Recognition of Investment Income						
	F1. Current Year: 0.25 x E4	(471,723,828)	21,259,355	67,874,559			
	F2. First Prior Year	504,333,542	(471,723,828)	21,259,355	$ 67,874,559		
	F3. Second Prior Year	(110,576,961)	504,333,542	(471,723,828)	21,259,355	$ 67,874,559	
	F4. Third Prior Year	(35,866,853)	(110,576,961)	504,333,542	(471,723,827)	21,259,354	$ 67,874,560
	F5. Total Phase-Ins	(113,834,100)	(56,707,892)	121,743,628	(382,589,913)	89,133,913	67,874,560
G.	Preliminary Funding Value End of Year: A + D + E3 + F5	$ 10,220,259,497	$ 10,638,398,858	$ 11,237,610,641			
H.	Adjustment to Minimum of 75% of B, Maximum 125% of B	0	0	0			
I.	**Funding Value End of Year**	**$ 10,220,259,497**	**$ 10,638,398,858**	**$ 11,237,610,641**			
J.	Difference Between Market & Funding Value	(517,081,360)	(375,336,049)	(225,581,440)			
K.	**Recognized Rate of Return**	**6.0%**	**6.6%**	**8.2%**			
L.	Market Rate of Return	(10.8)%	8.4%	9.9%			
M.	Ratio of Funding Value to Market Value	105%	104%	102%			

The Funding Value of Assets recognizes assumed investment return (line E3) fully each year. Differences between actual and assumed investment return (Line E4) are phased-in over a closed 4-year period. During periods when investment performance exceeds the assumed rate, Funding Value of Assets will tend to be less than Market Value. During periods when investment performance is less than the assumed rate, Funding Value of Assets will tend to be greater than Market Value. If assumed rates are exactly realized for 3 consecutive years, Funding Value will become equal to Market Value.

Summary of Annuitants on Rolls

Retirees and beneficiaries (including DROP participants) on rolls included in the valuation totaled 42,797 involving annual annuities of $730,047,384, distributed as follows:

Division	Number	Annuities Being Paid July 1, 2024	
		Monthly	Annualized
State & Local	41,047	$ 55,964,921	$ 671,579,052
General Assembly	89	138,699	1,664,388
Governor	2	7,796	93,552
Wildlife	145	537,121	6,445,452
State Constitutional Officers	10	41,521	498,252
Penitentiary	0	0	0
Sub-total	**41,293**	**56,690,058**	**680,280,696**
DROP	1,479	4,136,152	49,633,824
DROP "Frozen"	25	11,072	132,864
Totals	**42,797**	**$ 60,837,282**	**$ 730,047,384**

DROP “Frozen” members are members who previously participated in the APERS DROP, but are currently working with another agency and are no longer accruing DROP benefits with APERS. Because their date of retirement is unknown, they were assumed to retire in the following year.

Inactive members, entitled to deferred annuities, included in the valuation totaled 15,301, involving deferred monthly annuities of $8,040,029, distributed as follows:

Division	Number of Inactive Members	Deferred Annuities	
		Monthly	Annualized
State and Local	15,293	$ 8,033,813	$ 96,405,756
General Assembly	4	1,863	22,356
Wildlife	2	665	7,980
State Constitutional Officers	2	3,688	44,256
Totals	**15,301**	**$ 8,040,029**	**$ 96,480,348**

Retirement System Totals
Annuities Being Paid Retirees and Beneficiaries
and DROP Participants
June 30, 2024
by Attained Age and Type of Retirement

Attained Ages	DROP Members Currently Active in APERS		DROP "Frozen" Members Currently Active in Another Agency		Age & Service*		Disability		Death-in-Service Beneficiaries		Totals	
	No.	Annual Amount	No.	Annual Amount	No.	Annual Annuities	No.	Annual Annuities	No.	Annual Annuities	No.	Annual Annuities
Under 40					89	$ 678,012	8	$ 42,888	192	$ 904,356	289	$ 1,625,256
40-44					37	335,244	27	206,040	17	92,952	81	634,236
45-49	16	$ 404,172			80	1,047,288	73	637,056	46	277,944	215	2,366,460
50-54	190	6,159,384			400	8,981,976	179	2,040,240	76	708,960	845	17,890,560
55-59	524	18,852,132			1,728	32,758,932	322	3,770,328	125	1,237,788	2,699	56,619,180
60-64	516	16,718,784	9	$ 79,308	4,663	77,372,148	607	6,684,252	195	1,806,264	5,990	102,660,756
65-69	179	5,785,764	7	25,896	8,476	140,773,800	624	7,598,868	214	2,149,776	9,500	156,334,104
70-74	40	1,227,492	4	9,912	8,646	151,287,756	584	6,813,708	167	1,713,504	9,441	161,052,372
75-79	12	450,588	5	17,748	6,621	117,784,776	375	4,323,060	126	1,433,928	7,139	124,010,100
80-84	2	35,508			3,656	59,857,836	137	1,452,504	70	804,840	3,865	62,150,688
85-89					1,793	29,236,560	33	432,228	42	456,828	1,868	30,125,616
90-94					670	11,644,020	5	80,232	8	110,508	683	11,834,760
95-99					153	2,403,432	2	37,956	6	39,816	161	2,481,204
Over 100					20	252,528			1	9,564	21	262,092
Totals	**1,479**	**$ 49,633,824**	**25**	**$ 132,864**	**37,032**	**$ 634,414,308**	**2,976**	**$34,119,360**	**1,285**	**$11,747,028**	**42,797**	**$730,047,384**

** Including survivor beneficiaries of deceased retirees and QDRO alternate payees.*

Annuities Being Paid June 30, 2024
by Type of Annuity

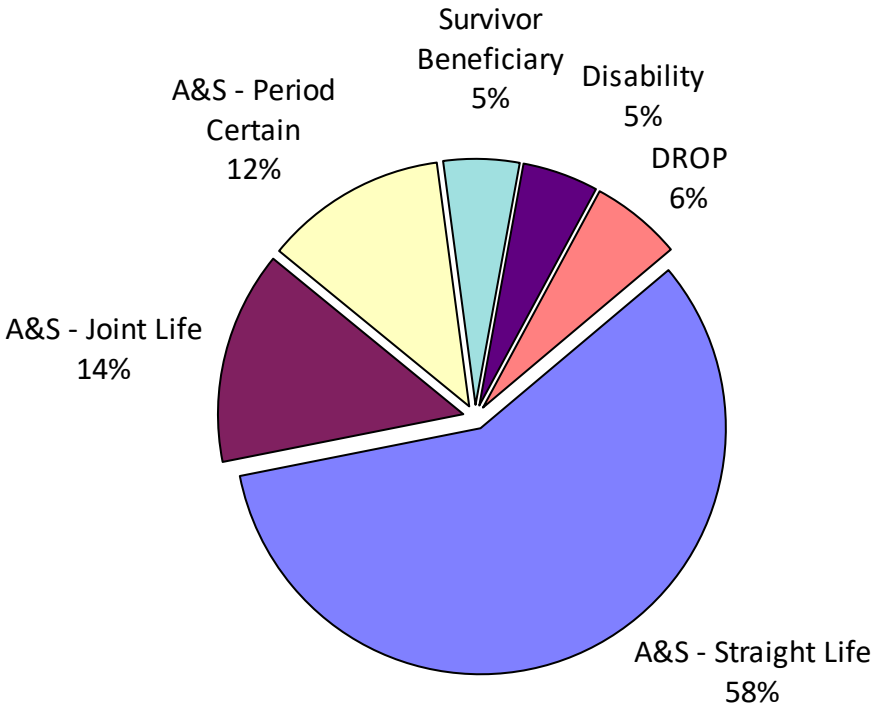
Type of Annuity	Number	Annual Annuities
Age & Service Retirees		
Life	23,234	$ 418,018,188
Option A-60 (5 years certain)	2,603	36,659,508
Option A-120 (10 years certain)	3,773	52,054,980
Option B-50 (joint and 50% survivor)	2,072	45,621,120
Option B-75 (joint and 75% survivor)	3,137	57,112,824
Totals	34,819	609,466,620
Disability Retirees		
Life	2,016	23,392,248
Option A-60	180	1,979,820
Option A-120	368	4,109,916
Option B-50	140	1,691,628
Option B-75	272	2,945,748
Totals	2,976	34,119,360
Beneficiaries of Age & Service and Disability Retirees		
Life	34	839,220
Option A-60	47	383,964
Option A-120	333	3,255,444
Option B-50	487	5,213,844
Option B-75	972	12,402,228
Totals	1,873	22,094,700
Total Age & Service Retirees & Beneficiaries	36,692	631,561,320
Death-in-Service Beneficiaries	1,285	11,747,028
Total Death and Disability Retirees & Beneficiaries	4,261	45,866,388
QDRO Alternate Payees	340	2,852,988
Total Retirees & Beneficiaries	**41,293**	**680,280,696**
DROP Participants	1,479	49,633,824
DROP "Frozen" Participants	25	132,864
Total Including DROP Participants	**42,797**	**$ 730,047,384**

The average monthly benefit is $1,421.53

Schedule of Average Benefit Payments (Voluntary Retirements Still Receiving Benefits as of June 30, 2024)

	Years of Credited Service				
	10-14	15-19	20-24	25-29	30+
Retirement Effective Dates					
July 1, 2023 to June 30, 2024					
Average Monthly Benefit	$ 544.13	$ 1,213.43	$ 1,669.85	$2,399.40	$3,333.07
Average Monthly FAS	3,543.60	4,098.36	4,488.07	4,352.27	4,094.49
Number of Active Retirees	878	256	237	377	128
Retirement Effective Dates					
July 1, 2022 to June 30, 2023					
Average Monthly Benefit	580.36	1,174.83	1,626.03	2,423.58	3,464.59
Average Monthly FAS	3,439.43	3,800.22	4,082.56	4,228.73	3,801.48
Number of Active Retirees	837	284	229	341	160
Retirement Effective Dates					
July 1, 2021 to June 30, 2022					
Average Monthly Benefit	498.31	1,101.65	1,536.64	2,232.21	3,105.72
Average Monthly FAS	3,110.68	3,775.53	3,966.87	3,636.86	3,305.26
Number of Active Retirees	915	245	233	329	172
Retirement Effective Dates					
July 1, 2020 to June 30, 2021					
Average Monthly Benefit	473.29	1,038.09	1,623.91	2,338.70	3,164.45
Average Monthly FAS	2,951.48	3,504.49	3,913.21	3,557.87	3,198.81
Number of Active Retirees	1,076	278	218	345	194
Retirement Effective Dates					
July 1, 2019 to June 30, 2020					
Average Monthly Benefit	461.73	1,036.95	1,617.57	2,350.22	3,126.38
Average Monthly FAS	2,817.34	3,388.22	3,986.93	3,123.73	2,636.26
Number of Active Retirees	888	264	205	342	176
Retirement Effective Dates					
July 1, 2018 to June 30, 2019					
Average Monthly Benefit	518.91	1,013.28	1,625.86	2,330.60	2,923.47
Average Monthly FAS	2,768.75	3,270.39	3,736.86	2,822.24	2,568.94
Number of Active Retirees	824	248	216	383	187
Retirement Effective Dates					
July 1, 2017 to June 30, 2018					
Average Monthly Benefit	489.29	1,058.80	1,547.32	2,220.87	2,918.14
Average Monthly FAS	2,747.73	3,347.32	3,765.19	2,613.09	2,060.78
Number of Active Retirees	720	261	183	409	220
Retirement Effective Dates					
July 1, 2016 to June 30, 2017					
Average Monthly Benefit	511.21	1,085.80	1,581.64	2,377.85	2,981.28
Average Monthly FAS	2,820.63	3,288.13	3,416.76	3,450.91	3,613.06
Number of Active Retirees	798	274	185	464	229
Retirement Effective Dates					
July 1, 2015 to June 30, 2016					
Average Monthly Benefit	514.66	1,072.35	1,562.97	2,383.39	2,995.90
Average Monthly FAS	2,855.86	3,250.74	3,726.24	3,594.95	3,706.60
Number of Active Retirees	783	226	151	428	229
Retirement Effective Dates					
July 1, 2014 to June 30, 2015					
Average Monthly Benefit	512.17	1,211.14	1,680.52	2,464.96	3,045.12
Average Monthly FAS	2,785.80	3,239.11	3,538.93	3,441.01	3,453.77
Number of Active Retirees	788	231	202	453	218
Retirement Effective Dates					
July 1, 2014 to June 30, 2024					
Average Monthly Benefit	**509.36**	**1,100.04**	**1,609.61**	**2,355.22**	**3,084.47**
Average Monthly FAS	**2,992.35**	**3,502.43**	**3,884.93**	**3,467.69**	**3,213.94**
Number of Active Retirees	**8,507**	**2,567**	**2,059**	**3,871**	**1,913**

Annuities Being Paid by Type
June 30, 2024



New Retirees
June 30, 2024

	New Retirees June 30, 2024	
	Age & Service	Disability
Number*	1,867	187
Average Age (yrs.)	63.0	57.7
Average Service (yrs.)	17.1	15.3
Average Monthly Benefit	$ 1,343	$ 992

** May include members who become new retirees from a non-active status.*

Retirement System Totals
Annuities Likely to be Paid Present Inactive Members
June 30, 2024
by Attained Age

Attained Ages	No.	Estimated Annual Annuities
Under 40	1,776	$ 11,066,832
40-44	1,908	13,386,924
45-49	2,448	16,804,572
50-54	3,127	20,569,152
55-59	2,820	17,453,340
60-64	2,038	12,232,008
65-69	1,184	4,967,520
Totals	**15,301**	**$ 96,480,348**

Liabilities for Deferred Annuities June 30, 2024

Number of Inactive Members	Estimated Annual Annuities	Annuity Liabilities
15,301	$ 96,480,348	$ 697,520,047

State and Local Division
(Excluding General Assembly)
Active Members* in Valuation June 30, 2024
by Attained Age and Years of Service

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 plus	No.	Valuation Payroll
Under 20	370							370	$ 11,107,089
20-24	2,764	26						2,790	101,940,665
25-29	3,597	650	12					4,259	178,086,411
30-34	2,757	1,385	319	7				4,468	203,294,986
35-39	2,243	1,263	828	316	12			4,662	228,685,873
40-44	1,934	1,185	876	863	342	8		5,208	269,239,885
45-49	1,611	1,000	805	812	678	211	1	5,118	268,991,014
50-54	1,538	1,016	787	750	761	504	36	5,392	287,904,973
55-59	1,259	932	722	674	605	420	119	4,731	244,463,048
60	233	219	144	125	137	63	22	943	47,618,279
61	210	197	137	124	112	69	17	866	43,118,931
62	199	161	130	116	98	69	17	790	40,127,791
63	167	141	147	91	97	62	23	728	37,863,525
64	119	115	109	102	85	59	31	620	32,977,729
65	79	102	78	78	58	45	11	451	23,787,171
66	91	64	72	42	44	29	13	355	18,770,629
67	77	71	46	38	32	13	10	287	14,470,248
68	68	62	45	30	25	18	19	267	14,147,007
69	64	44	35	24	17	11	7	202	10,223,376
70 & over	239	198	147	114	87	56	46	887	40,560,689
Totals	**19,619**	**8,831**	**5,439**	**4,306**	**3,190**	**1,637**	**372**	**43,394**	**$2,117,379,319**

* *Not including DROP participants.*

Group Averages

Age:	44.3 years
Service:	8.5 years
Annual Pay:	$48,794

As of June 30, 2023, there are no longer any active General Assembly members with special provisions.

SECTION C

GAIN/(LOSS) ANALYSIS

Gain/(Loss) Analysis
Comments

Purpose of Gain/(Loss) Analysis. Regular actuarial valuations give valuable information about the composite change in unfunded actuarial accrued liabilities – whether or not the liabilities are increasing or decreasing and by how much.

But valuations do not show the portion of the change attributable to each risk area within the Retirement System: the rate of investment return which plan assets earn; the rates of withdrawal of active members who leave covered employment; the rates of mortality; the rates of disability; the rates of pay increases; and the ages at actual retirement. In an actuarial valuation, assumptions must be made as to what these rates will be, for the next year and for decades in the future.

The objective of a gain and loss analysis is to determine the portion of the change in actuarial condition (unfunded actuarial accrued liabilities) attributable to each risk area.

The fact that actual experience differs from assumed experience is to be expected – ***the future cannot be predicted with precision***. The economic risk areas (particularly investment return and pay increases) are volatile. Inflation directly affects economic risk areas, and inflation seems to defy reliable prediction.

Changes in the valuation assumed experience for a risk area should be made when the differences between assumed and actual experience have been observed to be sizable and persistent. A gain and loss analysis covering a relatively short period may or may not be indicative of ***long-term trends, which are the basis of actuarial assumptions***.

Changes in Unfunded Actuarial Accrued Liabilities During the Period July 1, 2023 to June 30, 2024

		Total ($ in millions)
(1)	UAAL* at beginning of year	$ 2,430.2
(2)	Employer normal cost from last valuation	171.9
(3)	Actual employer contributions	347.5
(4)	Interest accrual: [(1) + ½[(2) - (3)]]x .07	164.0
(5)	Expected UAAL before changes: (1) + (2) - (3) + (4)	2,418.6
(6)	Increase from benefit changes	0.0
(7)	Changes from revised actuarial assumptions and methods	0.0
(8)	New entrant liabilities	77.1
(9)	Expected UAAL after changes: (5) + (6) + (7) + (8)	2,495.7
(10)	Actual UAAL at end of year	2,154.9
(11)	Gain/(Loss): (9) - (10)	$ 340.8
(12)	Actuarial accrued liability at start of year	$ 13,068.6
(13)	Gain/(loss) as percent of actuarial accrued liabilities at start of year: (11) / (12)	2.6%
(14)	Investment gain/(loss)	$ 121.7
	As a percent of AAL at the start of the year: (14) / (12)	0.9%
(15)	Liability gain/(loss)	$ 219.1
	As a percent of AAL at the start of the year: (15) / (12)	1.7%

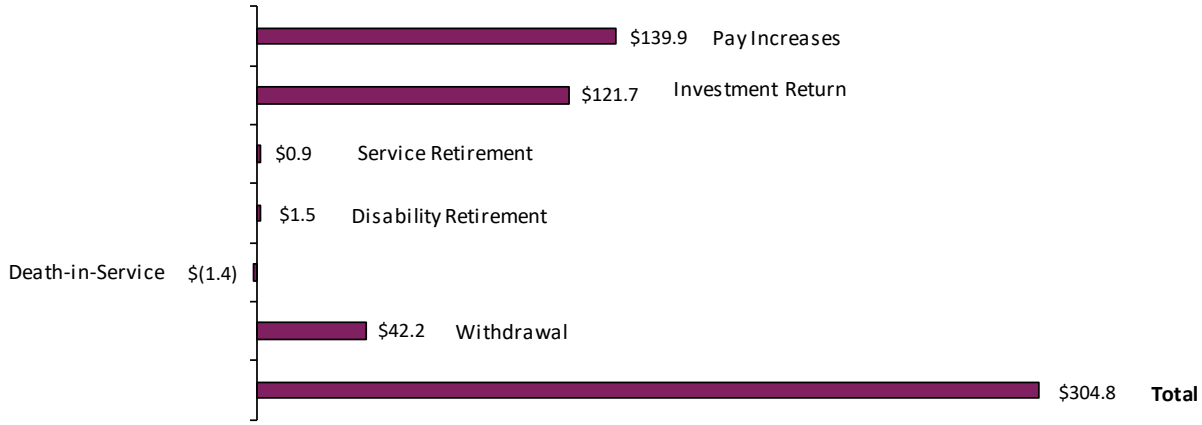
** Unfunded actuarial accrued liability.*

Experience Gains/(Losses) by Risk Area
During the Period July 1, 2023 to June 30, 2024

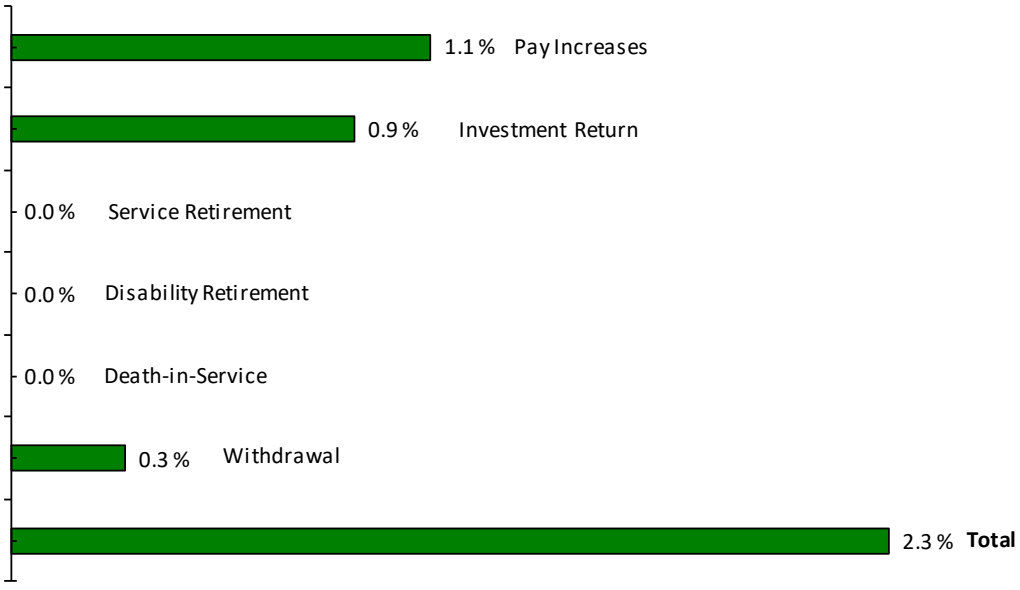
Type of Risk Area	Total ($ in millions)	% of BOY Accrued Liabilities
ECONOMIC RISK AREAS		
Pay Increases. If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	$ 139.9	1.1 %
Investment Return. If there is greater investment return than assumed, there is a gain. If less return, a loss.	121.7	0.9 %
NON-ECONOMIC RISK AREAS		
Non-Casualty Retirements. If members retire at older ages or with lower final average pays than assumed, there is a gain. If younger ages or higher average pays, a loss.	0.9	0.0 %
Disability Retirements. If there are fewer disabilities than assumed, there is a gain. If more, a loss.	1.5	0.0 %
Death-in-Service Benefits. If there are fewer claims than assumed, there is a gain. If more, a loss.	(1.4)	0.0 %
Withdrawal. If more liabilities are released by other separations than assumed, there is a gain. If smaller releases, a loss.	42.2	0.3 %
Total Active Member Actuarial Gains/(Losses)	$ 304.8	2.3 %
Retired Life Mortality.	69.1	0.5 %
Other. Includes data adjustments at retirement, timing of financial transactions, and miscellaneous unidentified sources.	(33.1)	(0.3)%
Total Actuarial Gains/(Losses)	$ 340.8	2.6 %

Actuarial Gains/(Losses)
Active Members
2023-2024 Plan Year

Amounts in $ Millions



% of Accrued Liabilities



Actuarial Gains/(Losses) by Risk Area
Active Members - Comparative Statement
($ in Millions)

Year Ending June 30	Gain/(Loss) By Risk Area: Pay Increases	Invest-ments	Age & Service Retirement	Disability	Death-in-Service	Withdrawal	Total Experience Gain/(Loss): Dollars	% of AAL	Total Accrued Liability End of Year
1992	$ 2.7	$ 27.9	$ 2.7	$ 1.2	$ 2.1	$ (6.1)	$ 30.5	3.2 %	$ 1,607.6
1993	(2.6)	36.3	1.6	1.3	3.1	4.2	43.9	2.7 %	1,711.3
1994	26.0	21.5	3.8	1.4	2.4	(2.2)	52.9	3.1 %	1,853.8
1995	32.0	68.1	(2.1)	(1.5)	(3.0)	(1.7)	91.8	4.5 %	2,057.4
1996	(0.7)	103.5	5.7	2.9	1.4	5.3	118.1	5.8 %	2,290.6
1997	(2.2)	155.3	7.7	3.6	1.9	4.9	171.2	7.5 %	2,605.6
1998	18.2	197.4	(4.4)	4.2	2.1	20.6	238.1	9.1 %	2,882.5
1999	(0.6)	153.1	(0.3)	3.2	(0.1)	25.8	181.1	5.5 %	3,478.7
2000	(13.1)	134.1	2.2	2.8	(0.1)	20.7	146.6	4.2 %	3,803.4
2001	31.3	(37.0)	3.3	3.0	0.1	18.9	19.6	0.5 %	4,111.0
2002	5.4	(247.1)	3.7	(2.5)	0.5	(4.2)	(244.2)	(5.6)%	4,398.0
2003	36.0	(292.6)	11.2	3.3	(0.1)	15.2	(227.0)	(4.9)%	4,398.0
2004	16.2	(274.0)	18.4	0.5	0.2	8.6	(230.0)	(4.6)%	5,004.5
2005	46.7	(143.4)	20.1	0.5	0.5	28.5	(47.1)	(0.8)%	5,619.4
2006	(15.4)	46.5	17.0	0.8	0.0	11.4	60.3	1.0 %	5,936.3
2007	53.2	215.5	12.4	0.8	0.1	17.2	299.2	4.8 %	6,173.8
2008	(35.8)	(0.5)	(1.4)	0.9	0.1	10.0	(26.7)	(0.4)%	6,542.7
2009	1.9	(808.1)	(7.3)	1.1	0.0	4.9	(807.5)	(11.6)%	6,937.9
2010	(2.8)	(319.7)	(2.1)	2.4	(0.1)	(7.7)	(330.0)	(4.5)%	7,304.2
2011	65.1	(259.8)	10.7	(5.9)	(0.1)	7.7	(182.3)	(2.4)%	7,734.1
2012	35.8	(189.5)	11.1	0.8	(0.2)	(4.2)	(146.1)	(1.8)%	8,162.7
2013	89.2	190.9	27.6	0.8	(0.3)	3.4	311.6	3.7 %	8,284.2
2014	86.7	351.3	13.4	0.9	(0.3)	5.6	457.6	5.3 %	8,863.6
2015	93.6	71.4	17.1	1.3	(0.3)	23.8	206.9	2.3 %	9,294.8
2016	(10.8)	47.7	18.7	1.2	(0.3)	14.6	71.1	0.8 %	9,662.7
2017	110.6	17.6	25.5	1.9	(0.3)	29.7	185.0	1.8 %	10,510.2
2018	4.9	(108.4)	5.3	1.6	(2.8)	64.8	(34.6)	(0.4)%	10,694.3
2019	2.6	(52.5)	0.1	1.2	(2.6)	47.6	(3.6)	(0.1)%	11,128.8
2020	2.2	(25.7)	(0.5)	1.0	(3.1)	36.4	10.3	0.1 %	11,513.0
2021	(14.7)	409.3	(2.1)	0.8	(3.5)	56.4	446.2	3.9 %	11,821.5
2022	(106.5)	(113.8)	2.8	1.2	(3.2)	82.5	(137.0)	(1.1)%	12,226.1
2023	(209.8)	(56.7)	(4.7)	1.0	(2.9)	69.2	(203.9)	(1.5)%	13,068.6
2024	**139.9**	**121.7**	**0.9**	**1.5**	**(1.4)**	**42.2**	**304.8**	**2.3 %**	**13,392.5**

Development of Gain/(Loss) from Investment Return* During the Period July 1, 2023 to June 30, 2024

		$ Millions
1.	Total Assets Beginning of Year	$ 10,638.4
2.	Total Assets End of Year (Funding Value)	
	a. Actual	$ 11,237.6
	b. If net investment return had been 7.0%	$ 11,115.9
3.	Gain/(Loss): 2a. minus 2b.	$ 121.7

* *"Investment return" as used in this Gain/(Loss) Analysis means essentially: assumed investment income; plus/minus a four-year phase-in of differences between actual and assumed investment return (see page B-10).*

Active and DROP Members Who Became Age and Service Retirees During the Period July 1, 2023 to June 30, 2024 (Retirement with Unreduced Benefit Beginning Immediately) Attained Age of 65 or Older with Less Than 28 Years of Service

Ages	State & Local Retirements	
	Actual#	Expected
65	115	89
66	76	78
67	50	55
68	29	32
69	26	24
70	24	24
71	17	19
72	12	15
73	10	11
74	14	14
75 & Up	32	43
	405	**404**

 # Additionally, there were 255 new age and service retirees with less than 28 years of non-reciprocal service and under the age of 65.

Averages, in Years:

Age at retirement	68.5
Service at retirement	13.7

Active Members
Who Became Reduced Early Retirees
During the Period July 1, 2023 to June 30, 2024
(Early Retirements with Reduced Benefits Beginning Immediately)

Ages	State & Local Early Retirement	
	Actual	Expected
55	10	13
56	11	13
57	9	13
58	13	15
59	16	20
60	15	18
61	18	25
62	60	86
63	31	68
64	38	50
Totals	**221**	**321**

Averages, in Years:

Age at retirement	60.6
Service at retirement	17.9

Active and DROP Members Who Retired or Active Members Who Entered the DROP During the Period July 1, 2023 to June 30, 2024 (28 or More Years of Service)

Years of Service	State & Local			
	Retirement		DROP	
	Actual	Expected	Actual	Expected
28	34	48	33	n/a
29	43	43	18	n/a
30	25	35	8	n/a
31	28	31	9	n/a
32	20	33	6	n/a
33	33	31	5	n/a
34	29	38	4	n/a
35	32	34	2	n/a
36	12	23		n/a
37	14	16		n/a
38 & Up	40	130	3	n/a
Totals	**310**	**462**	**88**	

Averages, in Years:

Age at retirement	61.4	58.2
Service at retirement	32.3	30.1

Active Members Who Became Disability Retirees During the Period July 1, 2023 to June 30, 2024 (and Who Were Active Members as of June 30, 2023)

Ages	State & Local Disabilities	
	Actual	Expected
20- 24		
25- 29		
30- 34		1
35- 39		3
40- 44	1	5
45- 49	3	9
50- 54	5	16
55- 59	12	23
60 & Up	14	25
Totals	**35**	**82**

Averages, in Years:

Age at retirement	57.1
Service at retirement	17.7

Active Members Who Left Active Status with a Deferred Benefit Payable During the Period July 1, 2023 to June 30, 2024 (Vested Separations)

Ages	State & Local Vested Separations	
	Actual	Expected
Below 30	58	116
30- 34	121	200
35- 39	163	190
40- 44	181	188
45- 49	151	155
50- 54	151	129
55- 59	107	82
60 & Up	96	53
Totals	**1,028**	**1,113**

Averages, in Years:

Age at termination	46.7
Service at termination	10.3

Active Members Who Left Active Status with No Benefit Payable During the Period July 1, 2023 to June 30, 2024 (Non-Vested Separations)

Service at Termination	State & Local Non-Vested Separations	
	Actual	Expected
0	2,274	2,233
1	1,148	1,126
2	619	596
3	335	313
4	204	1
Totals	**4,580**	**4,269**

Averages, in Years:

Age at termination	45.2
Service at termination	1.8

Members Active Both Beginning and End of Year
Salary Increases by Age Group
During the Period July 1, 2023 to June 30, 2024

Age Groups	Number	Beginning Pay	Ending Pay		Percentage Increase	
			Expected	Actual	Expected	Actual
Below 25	1,737	$ 62,607,376	$ 69,201,299	$ 66,928,156	10.5%	6.9%
25- 29	3,098	132,358,212	143,335,633	137,657,902	8.3%	4.0%
30- 34	3,586	166,587,487	177,614,427	172,100,079	6.6%	3.3%
35- 39	3,912	196,037,593	207,362,929	202,300,597	5.8%	3.2%
40- 44	4,579	239,258,934	251,802,047	245,060,685	5.2%	2.4%
45- 49	4,627	246,872,615	258,637,795	252,835,373	4.8%	2.4%
50- 54	5,002	269,662,594	281,586,830	275,423,141	4.4%	2.1%
55- 59	4,800	258,067,640	268,922,539	262,848,894	4.2%	1.9%
60-64	3,960	210,649,708	218,590,281	213,726,642	3.8%	1.5%
65 & Over	2,280	117,377,455	121,258,260	118,812,814	3.3%	1.2%
Totals	**37,581**				**5.2%**	**2.5%**

SECTION D

DISTRICT JUDGES – VALUATION RESULTS AND VALUATION DATA

District Judges
Computed Employer Contribution Rates

Contribution for	Computed Employer Contributions New Plan and Paid-Off Old Plan (% of Active Payroll) For Fiscal Year Beginning July 1, 2026	Still Paying Old Plan (Annual $) For Fiscal Year Beginning July 1, 2024
Normal Cost:		
Age and service annuities (including reduced retirement)	18.49%	
Separation benefits	1.85%	
Disability benefits	1.74%	
Death-in-service annuities	0.72%	
Total	22.80%	
Member contributions	5.00%	
Employer Normal Cost	17.80%	
Unfunded Actuarial Accrued Liabilities	61.76% *	$519,600 **
Total Employer Contribution	79.56%	$519,600

* *Unfunded actuarial accrued liabilities were amortized over a 2.6-year period.*
** *Unfunded actuarial accrued liabilities were amortized over a 11-year period.*

District Judges
Summary Statement of System Resources and Obligations
Year Ended June 30, 2024

Present Resources and Expected Future Resources

		Totals
A.	Present Valuation Assets:	
	1. Net assets from system financial statements	$ 28,838,065
	2. Market value adjustment	1,170,628
	3. Valuation assets	30,008,693
B.	Actuarial present value of expected future employer contributions:	
	1. For normal costs	799,747
	2. For unfunded actuarial accrued liability	6,828,331
	3. Total	7,628,078
C.	Actuarial present value of expected future member contributions	224,373
D.	Total Present and Expected Future Resources	$ 37,861,144

Actuarial Present Value of Expected Future Benefit Payments and Reserves

A.	To retirees and beneficiaries	$ 23,375,176
B.	To vested terminated members	3,899,737
C.	To present active members:	
	1. Allocated to service rendered prior to valuation date - actuarial accrued liability	9,562,111
	2. Allocated to service likely to be rendered after valuation date	1,024,120
	3. Total	10,586,231
D.	Reserve	0
E.	Total Actuarial Present Value of Expected Future Benefit Payments	$ 37,861,144

District Judges
Computed Actuarial Liabilities and
Allocation Using Entry Age Actuarial Cost Method
as of June 30, 2024

Actuarial Present Value of	(1) Total Present Value	(2) Portion Covered by Future Normal Cost Contributions	Actuarial Accrued Liabilities (1) - (2)
Benefits to be paid to current retirees, beneficiaries, and future beneficiaries of current retirees	$23,375,176	$ 0	$23,375,176
Age and service allowances based on total service likely to be rendered by present active members	10,431,645	837,465	9,594,180
Separation benefits (refunds of contributions and deferred allowances) likely to be paid to present active and inactive members	3,903,422	81,894	3,821,528
Disability benefits likely to be paid to present active members	0	73,480	(73,480)
Death-in-service benefits likely to be paid on behalf of present active members	150,901	31,281	119,620
Total	$37,861,144	$1,024,120	$36,837,024
Applicable assets (funding value)	30,008,693	0	30,008,693
Liabilities to be covered by future contributions	$ 7,852,451	$1,024,120	$ 6,828,331

District Judges
Summary of Provisions Evaluated

Voluntary Retirement	*With a full benefit*, after either (a) age 50 with 20 years of eligibility service, (b) age 60 with 16 years of eligibility service, or (c) age 65 with 8 years of eligibility service.
Final Average Compensation (FAC)	Average of the final three calendar years of employment.
Benefit Service	Service performed on or after January 1, 2005.
Eligibility Service	Benefit service plus service in Old Local District Judges Plan.
Full Age & Service Retirement Benefit	2.50% of FAC times actual service.
Benefit Increases After Retirement	Annually, there will be a cost-of-living adjustment equal to 3% of the current benefit.
Member Contribution Rates	Active members contribute 5% of their salaries. If a member leaves service before becoming eligible to retire, accumulated contributions may be refunded.
Vested Retirement Benefits	8 years of eligibility service. Deferred full retirement benefit, based on benefit service and pay at termination, begins when member would have been eligible for voluntary retirement.
Total and Permanent Disability	An active member with 3 or more consecutive years of eligibility service who becomes totally and permanently disabled may be retired and receive a disability annuity computed in the same manner as an age and service annuity.
Death After Retirement	If the member was eligible for normal retirement at the time of death, an eligible beneficiary will begin receiving a 50% joint and survivor pension computed in the same manner as a service retirement pension as if the member had retired the last day of his life.

District Judges
Revenues and Expenditures
July 1, 2023 Through June 30, 2024
Market Value

	Plan		
	New Plan and Paid-Off Old Plan	Still Paying Old Plan	Totals
Balance 7/1/2023	$ 25,053,356	$ 2,469,112	$ 27,522,468
Adjustment	-	-	-
Revenues			
Member contributions	88,272	-	88,272
Employer contributions	1,170,486	536,747	1,707,233
Other	-	-	-
Investment return	2,076,641	204,178	2,280,819
Total	$ 3,335,399	$ 740,925	$ 4,076,324
Expenditures			
Benefits paid	1,904,781	611,924	2,516,705
Refunds	-	-	-
Investment Expenses	192,572	18,934	211,506
Administrative Expenses	29,605	2,911	32,516
Total	$ 2,126,958	$ 633,769	$ 2,760,727
Preliminary Balance	$ 26,261,797	$ 2,576,268	$ 28,838,065
Employer Paid Off Old Liability	15,602	(15,602)	-
Balance 6/30/2024	**$ 26,277,399**	**$ 2,560,666**	**$ 28,838,065**

Note: Results may not total due to rounding.

Development of Funding Value of Assets
New Plan and Paid-Off Old Plan

	Valuation Date June 30:	2022	2023	2024	2025	2026	2027
A.	Funding Value Beginning of Year	$ 26,116,025	$ 26,053,522	$ 26,383,422			
B.	Market Value End of Year	23,891,992	25,053,356	26,277,399			
C.	Market Value Beginning of Year	28,693,760	23,891,992	25,053,356			
D.	Non-Investment Net Cash Flow	(957,908)	(1,070,911)	(660,026)			
E.	Investment Income						
	E1. Market Total: B - C - D	(3,843,860)	2,232,275	1,884,069			
	E2. Assumed Rate	7.15%	7.15%	7.00%			
	E3. Amount for Immediate Recognition	1,833,445	1,824,982	1,823,999			
	E4. Amount for Phased-In Recognition	(5,677,305)	407,293	60,070			
F.	Phased-In Recognition of Investment Income						
	F1. Current Year: 0.25 x E4	(1,419,326)	101,823	15,018			
	F2. First Prior Year	1,203,116	(1,419,326)	101,823	$ 15,018		
	F3. Second Prior Year	(309,785)	1,203,116	(1,419,326)	101,823	$ 15,018	
	F4. Third Prior Year	(412,045)	(309,784)	1,203,117	(1,419,327)	101,824	$ 15,016
	F5. Total Phase-Ins	(938,040)	(424,171)	(99,368)	(1,302,486)	116,842	15,016
G.	Preliminary Funding Value End of Year: A + D + E3 + F5	$ 26,053,522	$ 26,383,422	$ 27,448,027			
H.	Adjustment to Minimum of 75% of B, Maximum 125% of B	0	0	0			
I.	**Funding Value End of Year**	**$ 26,053,522**	**$ 26,383,422**	**$ 27,448,027**			
J.	Difference Between Market & Funding Value	(2,161,530)	(1,330,066)	(1,170,628)			
K.	**Recognized Rate of Return**	**3.5%**	**5.5%**	**6.6%**			
L.	Market Rate of Return	(13.6)%	9.6%	7.6%			
M.	Ratio of Funding Value to Market Value	109%	105%	104%			

The Funding Value of Assets recognizes assumed investment return (line E3) fully each year. Differences between actual and assumed investment return (Line E4) are phased-in over a closed 4-year period. During periods when investment performance exceeds the assumed rate, Funding Value of Assets will tend to be less than Market Value. During periods when investment performance is less than the assumed rate, Funding Value of Assets will tend to be greater than Market Value. If assumed rates are exactly realized for 3 consecutive years, Funding Value will become equal to Market Value.

District Judges
Summary of Annuitants on Rolls

Retirees and beneficiaries on rolls included in the valuation totaled 189, involving monthly annuities of $221,111, distributed as follows:

Plan	Number of Retired Records	Annuities Being Paid July 1, 2024	
		Monthly	Annualized
New Plan	49	$ 87,064	$ 1,044,768
Old Plan Paid Off	81	76,080	912,960
Still Paying Old Plan	59	57,967	695,604
Totals	**189**	**$ 221,111**	**$ 2,653,332**

A retiree's monthly benefit may be allocated to more than one employer or more than one plan. The actual number of retired members as of June 30, 2024 was reported to be 132, consisting of 112 original retirees and 20 survivors.

Actual Number of Retired Members:	132
Average Age:	75.5 years
Average Age at Retirement:	62.3 years
Average Years of Service:	7.8 years
Average Monthly Benefit:	$1,675.08

Inactive members, entitled to deferred annuities, included in the valuation totaled 69, involving estimated deferred monthly annuities of $30,878 distributed as follows:

Plan	Number of Inactive Records	Estimated Deferred Annuities	
		Monthly	Annualized
New Plan	9	$ 7,211	$ 86,532
Old Plan Paid Off	32	14,018	168,216
Still Paying Old Plan	28	9,649	115,788
Totals	**69**	**$ 30,878**	**$ 370,536**

An inactive member's monthly benefit may be allocated to more than one employer or more than one plan. The actual number of deferred members as of June 30, 2024 was reported to be 60.

District Judges
Detail by Employer

Employer	ER ID	Participants Covered: Deferred Vested	Participants Covered: Retired	Retiree Mon. Ben. 7/1/2024	Deferred Mon. Ben. 7/1/2024	Retiree Liability 6/30/2024	Deferred Liability 6/30/2024	Total Liability 6/30/2024	Assets Allocated 6/30/2024	Unfunded Actuarial Liability (UAL)	11-Year Payoff of Unfunded Liability
Ashdown	90141	1	1	$ 243.26	$ 516.35	$ 11,070	$ 57,766	$ 68,836	$ 57,602	$ 11,234	$ 1,448
Ashdown (County)	90941	1	1	402.57	854.48	19,735	95,593	115,328	106,579	8,749	1,128
Batesville	90132	0	2	1,218.61	0.00	134,188	0	134,188	39,956	94,232	12,146
Benton District Court	90962	0	2	2,398.38	0.00	161,282	0	161,282	3,358	157,924	20,356
Biscoe	90159	0	1	150.00	0.00	17,081	0	17,081	1,263	15,818	2,039
Conway	90123	0	3	4,379.71	0.00	390,052	0	390,052	149,988	240,064	30,943
Dermott	90109	2	1	312.50	205.08	30,379	30,564	60,943	25,513	35,430	4,567
Dermott (County)	90909	2	1	312.50	205.08	30,379	30,564	60,943	25,375	35,568	4,585
Devalls Bluff	90359	0	1	225.00	0.00	25,995	0	25,995	2,240	23,755	3,062
Greenwood	90265	0	1	771.00	0.00	73,969	0	73,969	(5,658)	79,627	10,264
Helena	90154	2	0	0.00	27.72	0	2,948	2,948	(14,729)	17,677	2,279
Helena (County)	90954	2	0	0.00	27.72	0	2,948	2,948	(14,748)	17,696	2,281
Hope	90110	0	1	650.00	0.00	64,231	0	64,231	(15,765)	79,996	10,311
Hope (County)	90929	0	1	650.00	0.00	64,231	0	64,231	(9,285)	73,516	9,476
Lawrence County	90938	0	2	1,016.99	0.00	91,384	0	91,384	17,991	73,393	9,460
Little Rock	90260	9	14	19,450.98	4,244.95	1,856,852	537,700	2,394,552	1,001,758	1,392,794	179,526
Marshall	90964	0	1	701.31	0.00	53,164	0	53,164	2,176	50,988	6,572
Mt. Home	90103	0	2	2,844.09	0.00	258,146	0	258,146	32,466	225,680	29,089
North Little Rock	90460	6	11	14,641.61	2,227.40	1,322,360	304,574	1,626,934	753,144	873,790	112,628
Ozark	90124	0	1	593.47	0.00	58,019	0	58,019	43,205	14,814	1,909
Ozark (County)	90924	0	1	593.47	0.00	58,019	0	58,019	41,816	16,203	2,089
Pocahontas	90161	0	2	676.25	0.00	85,539	0	85,539	28,917	56,622	7,298
Pocahontas (County)	90961	0	2	676.25	0.00	85,539	0	85,539	(12,523)	98,062	12,640
Prairie Grove	90372	0	2	1,861.93	0.00	167,494	0	167,494	(12,247)	179,741	23,168
Searcy	90273	1	1	466.66	1,179.36	47,013	123,947	170,960	133,350	37,610	4,848
Stuttgart	90201	0	2	951.56	0.00	88,468	0	88,468	54,660	33,808	4,358
Tyronza	90456	1	1	850.64	40.12	96,732	6,238	102,970	48,917	54,053	6,967
West Helena	90254	1	1	928.00	120.27	89,832	17,809	107,641	75,347	32,294	4,163
UAL>0 as of 6/30/2024		**28**	**59**	**$57,966.74**	**$9,648.53**	**$5,381,153**	**$1,210,651**	**$6,591,804**	**$2,560,666**	**$4,031,138**	**$519,600**

Totals may not add due to rounding.

District Judges
Active Members in Valuation June 30, 2024
by Attained Age and Years of Eligibility Service

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 plus	No.	Valuation Payroll
Under 20									
20-24									
25-29									
30-34									
35-39									
40-44									
45-49									
50-54				1				1	$ 165,557
55-59									
60					1			1	165,557
61									
62									
63									
64					1			1	165,557
65									
66						1		1	165,557
67				2			1	3	496,671
68				1				1	165,557
69				1				1	165,557
70 & over						1	1	2	206,233
Totals				**5**	**2**	**2**	**2**	**11**	**$ 1,696,246**

Group Averages

Age:	65.6 years
Benefit Service:	19.5 years
Eligibility Service:	24.0 years
Annual Pay:	$154,204

District Judges
Change in Unfunded Actuarial Accrued Liabilities
During the Period July 1, 2023 to June 30, 2024

	New Plan and Paid Off Old Plan	Still Paying Old Plan	Total
(1) UAAL* at beginning of year	$ 3,826,145	$ 4,338,818	$ 8,164,963
(2) Normal cost from last valuation	386,744	-	386,744
(3) Actual contributions	1,258,758	536,747	1,795,505
(4) Interest accrual: [(1) + ½[(2) - (3)]]x .07	237,310	284,931	522,241
(5) Expected UAAL before changes: (1) + (2) - (3) + (4)	3,191,441	4,087,002	7,278,443
(6) Increase from benefit changes	-	-	-
(7) Changes from revised actuarial assumptions and methods	-	-	-
(8) Expected UAAL after changes: (5) + (6) + (7)	3,191,441	4,087,002	7,278,443
(9) Actual UAAL at end of year	2,797,208	4,031,123	6,828,331
(10) Gain/(Loss): (8) - (9)	$ 394,233	$ 55,879	$ 450,112

** Unfunded actuarial accrued liability.*

District Judges
Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Entry Age AAL (b)	UAAL (b)-(a)	Funded Ratio (a)/(b)	Annual Covered Payroll (c)	UAAL as a Percentage of Covered Payroll [(b-a)/(c)]
6/30/05	$ 7,569,919	$ 24,134,114	$ 16,564,195	31.4%	$ 3,222,495	514.0%
6/30/06	10,141,040	24,943,381	14,802,341	40.7%	3,313,454	446.7%
6/30/07	12,582,548	24,387,433	11,804,885	51.6%	3,366,861	350.6%
6/30/08 @	12,398,225	24,797,303	12,399,078	50.0%	3,526,319	351.6%
6/30/09	10,004,394	25,671,893	15,667,499	39.0%	3,368,169	465.2%
6/30/10	11,112,521	26,775,249	15,662,728	41.5%	3,554,044	440.7%
6/30/11	12,950,730	27,524,848	14,574,118	47.1%	3,345,497	435.6%
6/30/12	13,925,350	28,343,368	14,418,018	49.1%	3,374,982	427.2%
6/30/13 @	16,090,536	28,823,709	12,733,173	55.8%	2,989,465	425.9%
6/30/14 @	18,562,875	30,005,138	11,442,263	61.9%	3,108,024	368.2%
6/30/15 @	19,950,819	31,433,278	11,482,459	63.5%	3,173,245	361.9%
6/30/16	21,388,494	32,390,780	11,002,286	66.0%	3,328,256	330.6%
6/30/17 @	23,024,203	34,345,233	11,321,030	67.0%	2,278,470	496.9%
6/30/18	24,898,896	35,101,000	10,202,104	70.9%	2,437,807	418.5%
6/30/19	26,127,578	35,407,678	9,280,100	73.8%	2,458,323	377.5%
6/30/20	26,976,127	35,839,843	8,863,716	75.3%	2,465,194	359.6%
6/30/21	29,064,041	36,989,802	7,925,761	78.6%	1,507,871	525.6%
6/30/22	28,375,216	37,296,169	8,920,953	76.1%	1,600,875	557.3%
6/30/23 @	28,852,534	37,017,497	8,164,963	77.9%	1,681,105	485.7%
6/30/24	**30,008,693**	**36,837,024**	**6,828,331**	**81.5%**	**1,696,246**	**402.6%**

@ After changes in actuarial assumptions and methods.

Low-Default-Risk Obligation Measure

Introduction

In December 2021, the Actuarial Standards Board (ASB) adopted a revision to Actuarial Standard of Practice (ASOP) No. 4, *Measuring Pension Obligations and Determining Pension Plan Costs or Contributions*. The revised ASOP No. 4 requires the calculation and disclosure of a liability referred to by the ASOP as the "Low-Default-Risk Obligation Measure" (LDROM). The rationale that the ASB cited for the calculation and disclosure of the LDROM was included in the Transmittal Memorandum of ASOP No. 4 and is presented below (emphasis added):

> The ASB believes that the calculation and disclosure of this measure provides **appropriate, useful information for the intended user regarding the funded status of a pension plan**. The calculation and disclosure of this additional measure is **not intended to suggest that this is the "right" liability measure** for a pension plan. However, the ASB does believe that **this additional disclosure provides a more complete assessment of a plan's funded status and provides additional information regarding the security of benefits that members have earned as of the measurement date.**

Comparing the Accrued Liabilities and the LDROM

One of the fundamental financial objectives of ADJRS is to finance each member's retirement benefits over the period from the member's date of hire until the member's projected date of retirement (entry age actuarial cost method) as a level percentage of payroll. To fulfill this objective, the discount rate that is used to value the accrued liabilities of ADJRS is set equal to the **expected return** on the System's diversified portfolio of assets (referred to sometimes as the investment return assumption). For ADJRS, the investment return assumption is 7.0%.

The LDROM is meant to approximately represent the lump sum cost to a plan to purchase low-default-risk fixed income securities whose resulting cash flows essentially replicate in timing and amount the benefits earned (or the costs accrued) as of the measurement date. The LDROM is very dependent upon market interest rates at the time of the LDROM measurement. The lower the market interest rates, the higher the LDROM, and vice versa. The LDROM results presented in this report are based on the projected unit credit actuarial cost method and discount rates based upon the June 2024 Treasury Yield Curve Spot Rates (monthly average). The 1-, 5-, 10- and 30-year rates follow: 5.12%, 4.34%, 4.22% and 4.45%.

Presented below are the actuarial accrued liability and the LDROM as of June 30, 2024 for ADJRS.

Type of Member	Valuation Accrued Liabilities	LDROM
Retirees	$23,375,176	$28,190,577
Deferreds	3,899,737	5,084,084
Actives	9,562,111	12,752,892
Totals	**$36,837,024**	**$46,027,553**

For more detailed information regarding the LDROM, please see page A-18.

SECTION E

ACTUARIAL METHODS AND ASSUMPTIONS AND OTHER TECHNICAL ASSUMPTIONS

Summary of Assumptions Used for APERS Actuarial Valuations Assumptions Adopted by Board of Trustees After Consulting with Actuary

In accordance with Section 24-4-105 of the Arkansas Code, the Board of Trustees adopts the actuarial assumptions used for actuarial valuation purposes.

The actuarial assumptions used in the valuation are shown in this section. Assumptions were established based upon an Experience Study covering the period July 1, 2017 through June 30, 2022 (please see our report dated May 10, 2023). The actuarial assumptions represent estimates of future experience.

Economic Assumptions

The investment return rate used in making the valuation was 7.00% per year, compounded annually (net after investment expenses). This rate of return is not the assumed real rate of return. The real rate of return is the portion of investment return which is more than the wage inflation rate. Considering the assumed wage inflation rate of 3.25%, the 7.00% investment return rate translates to an assumed net real rate of return of 3.75%. The wage inflation assumption was first used for the June 30, 2015 valuation, including also the District Judges division. The investment return assumption was first used for the June 30, 2023 valuation, including also the District Judges division.

Pay increase assumptions for individual active members are shown on pages E-7 and E-8. Part of the assumption for each age is for a merit and/or seniority increase, and the other 3.25% recognizes wage inflation. The wage inflation assumption consists of 2.50% for price inflation and 0.75% for real wage growth. These assumptions were first used for the June 30, 2023 valuation and for the District Judges division for the June 30, 2015 valuation.

Total active member payroll is assumed to increase 3.25% a year, which is the portion of the individual pay increase assumptions attributable to wage inflation. This assumption was first used for the June 30, 2015 valuation and for the District Judges division for the June 30, 2015 valuation.

The number of active members is assumed to continue at the present number.

Non-Economic Assumptions

The **healthy retiree mortality tables**, for post-retirement mortality, used in evaluating allowances to be paid were 114% and 132% of the PubG-2010 Amount-Weighted Below-Median Income General Retiree Mortality tables, for males and females, respectively. The **disabled retiree mortality tables**, for post-retirement disabled mortality, used in evaluating allowances to be paid were 114% and 132% of the PubNS-2010 Amount-Weighted Disabled Retiree Mortality tables for males and females, respectively. The **pre-retirement mortality tables** used were 75% of the PubG-2010 Amount-Weighted Below-Median General Employee Mortality tables for active mortality experience. Mortality rates for a particular calendar year are determined by applying the MP-2021 mortality improvement scale to the above described tables. Related values are shown on pages E-3 (post-retirement) and E-7 (pre-retirement). These assumptions were first used for the June 30, 2023 valuation.

Non-Economic Assumptions (Concluded)

The probabilities of retirement for members eligible to retire are shown on pages E-4 through E-6. These probabilities were first used for the June 30, 2023 valuation and for the June 30, 2007 valuation for the District Judges division.

The probabilities of withdrawal from service, death-in-service and ***disability*** are shown for sample ages on pages E-7 and E-8. These probabilities were first used for the June 30, 2023 valuation and for the District Judges division for the June 30, 2018 valuation.

The individual entry-age normal actuarial cost method of the valuation was used in determining liabilities and normal cost.

Differences in the past between assumed experience and actual experience (actuarial gains and losses) become part of actuarial accrued liabilities.

For APERS, unfunded actuarial accrued liabilities are amortized to produce contribution amounts (principal and interest) which are level percent-of-payroll contributions. Beginning with the 2023 annual actuarial valuation, the amortization period will remain closed and the remaining UAAL will be amortized over a 17-year closed period. Changes in the UAAL due to the actuarial gains or losses for each annual actuarial valuation or from changes to the actuarial assumptions will be amortized over a new closed 20-year period on an annual basis. Changes in the UAAL due to changes in benefit provisions that would result in an increase in the employer contribution rate shall be amortized over a closed 15-year period for active members and a closed 5-year period for non-active members (i.e., retired members and deferred members). Changes in the UAAL due to changes in benefit provisions that would result in a decrease in the employer contribution rate shall be amortized over a closed 30-year period for active members and a closed 15-year period for non-active members (i.e., retired members and deferred members). The maximum amortization period to finance the total UAAL shall not exceed 30 years.

For the District Judges division, unfunded actuarial accrued liabilities are amortized as a level dollar contribution. Beginning with the 2023 annual actuarial valuation, the amortization period is a closed 4-year period for the New Plan and Paid-Off Old Plan and a closed 12-year period for the Still Paying Old Plan.

Current amortization periods and applicable fiscal years are shown on pages A-4 and D-1.

Recognizing the special circumstances of the General Assembly division, modifications of the above assumptions were made where appropriate.

Present assets (cash & investments) were valued on a market related basis in which differences between actual and assumed returns are phased-in over a four-year period (including District Judges New Plan and Paid Off Old Plan). The funding value of assets may not deviate from the market value of assets by more than 25%. District Judges Still Paying Old Plan present assets (cash & investments) were valued on a market value basis.

The data about persons now covered and about present assets were furnished by the System's administrative staff. Although examined for general reasonableness, the data was not audited by the Actuary.

The actuarial valuation computations were made by or under the supervision of a Member of the American Academy of Actuaries (MAAA).

Single Life Retirement Values
Based on the PubG-2010
Amount-Weighted Below-Median Income
General Retiree Mortality Tables
and 7.00% Interest
June 30, 2024

Sample Attained Ages	Present Value of $1.00 Monthly for Life		Present Value of $1.00 Monthly for Life Increasing 3% Annually		Future Life Expectancy (Years) 2024 *	
	Men	Women	Men	Women	Men	Women
40	$ 159.19	$ 163.98	$ 235.24	$ 246.82	41.24	45.07
45	152.55	158.74	219.62	233.07	36.00	39.77
50	144.88	152.43	202.95	217.86	31.13	34.73
55	137.67	146.15	187.24	202.74	26.86	30.16
60	128.78	137.88	169.55	185.02	22.74	25.65
65	117.60	126.85	149.47	164.14	18.74	21.20
70	103.42	112.60	126.70	140.19	14.87	16.88
75	87.20	95.69	102.94	114.52	11.35	12.89
80	69.86	76.99	79.60	88.65	8.28	9.37
85	53.37	58.27	58.93	64.75	5.84	6.47

Sample Attained Ages	Benefit Increasing 3.0% Yearly	Portion of Age 60 Lives Still Alive *	
		Men	Women
60	$100	100 %	100 %
65	116	93	96
70	134	85	91
75	155	73	82
80	180	57	69

* *Applicable to calendar year 2024. Life expectancies and rates in future years are determined by the fully generational MP-2021 projection scale.*

State and Local Government Division
Age-Based Retirement
June 30, 2024

Retirement Ages (with less than 28 years of service)	Percent of Eligible Active Members Retiring Within Next Year	
	Unreduced	Reduced
55		2.5 %
56		2.5
57		3.0
58		3.0
59		4.0
60		4.0
61		5.5
62		18.0
63		17.0
64		14.0
65	22.0 %	
66	25.0	
67	23.0	
68	18.0	
69	18.0	
70	18.0	
71	18.0	
72	18.0	
73	18.0	
74-84	20.0	
85 & Over	100.0	

A member was assumed eligible for unreduced retirement after attaining age 65 with 5 years of service or 28 years regardless of age. A member was assumed eligible for reduced retirement after attaining age 55 with 10 or more years of service.

State and Local Government Division
Service-Based Retirement
June 30, 2024

Service	Percent of Eligible Active Members Retiring Within Next Year
28	15 %
29	17
30	15
31	15
32	15
33	15
34	15
35	20
36	22
37	22
38	22
39	25
40	25
41	25
42 & Over	100

District Judges Division
Age-Based Retirement
June 30, 2024

Retirement Ages	Percent of Eligible Active Members Retiring Within Next Year
50	10 %
51	10
52	10
53	10
54	10
55	12
56	12
57	14
58	14
59	14
60	18
61	18
62-73	30
74 & Over	100

Members may retire at age 50 with 20 or more years of service, age 60 with 16 or more years of service, or age 65 with 8 or more years of service.

State and Local Government Division
Separations from Active Employment Before Service Retirement
June 30, 2024

Sample Ages	Years of Service	Percent of Active Members Separating within the Next Year: Withdrawal Men	Withdrawal Women	Death * Men	Death * Women	Disability Men	Disability Women	Pay Increase Assumptions for an Individual Employee: Merit & Seniority	Base (Economy)	Increase Next Year
	0	40.0 %	40.0 %							
	1	25.0	25.0							
	2	20.0	20.0							
	3	15.0	15.0							
	4	12.0	12.0							
20	5+	12.5	12.5	0.03 %	0.01 %	0.01 %	0.01 %	7.75 %	3.25 %	11.00 %
25		12.5	12.5	0.04	0.01	0.04	0.04	6.10	3.25	9.35
30		11.0	11.0	0.06	0.02	0.07	0.07	3.98	3.25	7.23
35		7.8	7.8	0.08	0.03	0.09	0.09	2.82	3.25	6.07
40		5.5	5.5	0.10	0.04	0.13	0.13	2.20	3.25	5.45
45		4.3	4.3	0.12	0.05	0.17	0.17	1.70	3.25	4.95
50		3.4	3.4	0.15	0.07	0.34	0.34	1.29	3.25	4.54
55		2.4	2.4	0.23	0.11	0.60	0.60	1.06	3.25	4.31
60		1.5	1.5	0.35	0.18	0.85	0.85	0.70	3.25	3.95

** Applicable to calendar year 2024. Rates in future years are determined by the above rates and the MP-2021 projection scale.*

Pay increase rates are age based only, and not service based.

District Judges
Separations from Active Employment Before Service Retirement
June 30, 2024

	Percent of Active Members Separating within the Next Year				Pay Increase Assumptions For An Individual Employee		
	Withdrawal		Disability				
Sample Ages	Men	Women	Men	Women	Merit & Seniority	Base (Economy)	Increase Next Year
20	2.0 %	2.0 %	0.08 %	0.08 %	2.70 %	3.25 %	5.95 %
25	2.0	2.0	0.08	0.08	2.60	3.25	5.85
30	2.0	2.0	0.08	0.08	2.20	3.25	5.45
35	2.0	2.0	0.08	0.08	1.90	3.25	5.15
40	2.0	2.0	0.20	0.20	1.40	3.25	4.65
45	2.0	2.0	0.27	0.27	1.20	3.25	4.45
50	2.0	2.0	0.49	0.49	0.70	3.25	3.95
55	2.0	2.0	0.89	0.89	0.70	3.25	3.95
60	2.0	2.0	1.41	1.41	0.00	3.25	3.25

Summary of Assumptions Used
June 30, 2024
Miscellaneous and Technical Assumptions

Marriage Assumption. 80% of males and 80% of females are assumed to be married for purposes of death-in-service benefits. District Judges division - 100% of males and 100% of females are assumed to be married for purposes of death-in-service benefits. 80% of males and 80% of females are assumed to be married for purposes of death-after-retirement benefits for active member valuation purposes.

Pay Increase Timing. Beginning of (Fiscal) year. This is equivalent to assuming that reported pays represent amounts paid to members during the year ended on the valuation date.

Decrement Timing. Decrements of all types are assumed to occur mid-year.

Other Liability Adjustments. Active member non-refund normal costs and actuarial accrued liabilities were increased by 1.5% to reflect non-reported reciprocal service. Also, a 0.2% load to the normal cost and actuarial accrued liabilities is being used to account for survivor benefits payable if a retiree dies within the first year of retirement. Actuarial accrued liabilities were also increased by $130 million to account for revisions to the data submitted and by $87.2 million for pending refunds.

Eligibility Testing. Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.

Benefit Service. Exact fractional service is used to determine the amount of benefit payable.

Decrement Relativity. Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.

Normal Form of Benefit. The assumed normal form of benefit is the straight life form.

District Judges Division Old Plan Deferred Members. For members that are eligible for a deferred benefit in the Old Plan and are currently active in the New Plan, it is assumed that the deferred benefit will commence at the first age at which the member is eligible to receive the benefit.

Incidence of Contributions. Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made. New entrant normal cost contributions are applied to the funding of new entrant benefits.

DROP Duration. Members participating in the DROP are not allowed to participate in the DROP for more than 10 years.

***DROP Participation*.** It was assumed that members will participate in the forward DROP to the extent that participating in the forward DROP would provide the highest value of benefits.

Summary of Assumptions Used
June 30, 2024
Miscellaneous and Technical Assumptions

DROP Interest Credit. The current interest rate credit for DROP accounts is assumed to be 3.0%.

Payroll for DROP Participants and Retired Members Returned to Work. Employers contribute on the pays of DROP participants and retired members returned to work. For the June 30, 2024 valuation the reported payroll for these members was approximately $102 million.

Pre-Retirement Mortality. The weighting of duty and ordinary deaths-in-service is 0%/100%.

Administrative Expenses. The normal cost was increased by 0.40% of payroll to fund administrative expenses.

Data Adjustments. Payroll for active participants reported with $0 payroll was assumed to be equal to the average payroll of post 2022 active participants which is $38,000. Payroll for new hires with less than one year of service and reported payroll of $0 was assumed to be $24,000. We assumed a minimum payroll of $12,000 for all active members.

SECTION F

FINANCIAL PRINCIPLES

Financial Principles and Operational Techniques of APERS

Promises Made, and To Be Paid For. As each year is completed, APERS in effect hands an "IOU" to each member then acquiring a year of service credit --- the "IOU" says: "The Arkansas Public Employees Retirement System owes you one year's worth of retirement benefits, payments in cash commencing when you qualify for retirement."

The related ***key financial questions*** are:

Which generation of taxpayers contributes the money to cover the IOU?

The present taxpayers, who receive the benefit of the member's present year of service? ***Or the future taxpayers,*** who happen to be in Arkansas at the time the IOU becomes a cash demand, years and often decades later?

The law governing APERS financing intends that this year's taxpayers contribute the money to cover the IOUs being handed out this year. With this financial objective, ***the employer contribution rate is expected to remain approximately level from generation to generation of taxpayers.***

There are systems which have a design for deferring contributions to future taxpayers. Lured by a lower contribution rate now, they put aside the consequence that the contribution rate must then relentlessly grow to a level much higher than would be required if a level contribution pattern were followed.

An inevitable by-product of the level-cost design is the accumulation of reserve assets, for decades, and the income produced when the assets are invested. ***Investment income*** becomes ***the third and largest contributor*** for benefits to employees, and is interlocked with the contribution amounts required from employees and employers.

Translated to actuarial terminology, this level-cost objective means that the contribution rates must total at least the following:

> Normal Cost (the cost of members' service being rendered this year)
>
> ... plus ...
>
> Interest on Unfunded Actuarial Accrued Liabilities (unfunded actuarial accrued liabilities are the difference between: the actuarial accrued liabilities for service already rendered and the actuarial value of assets).

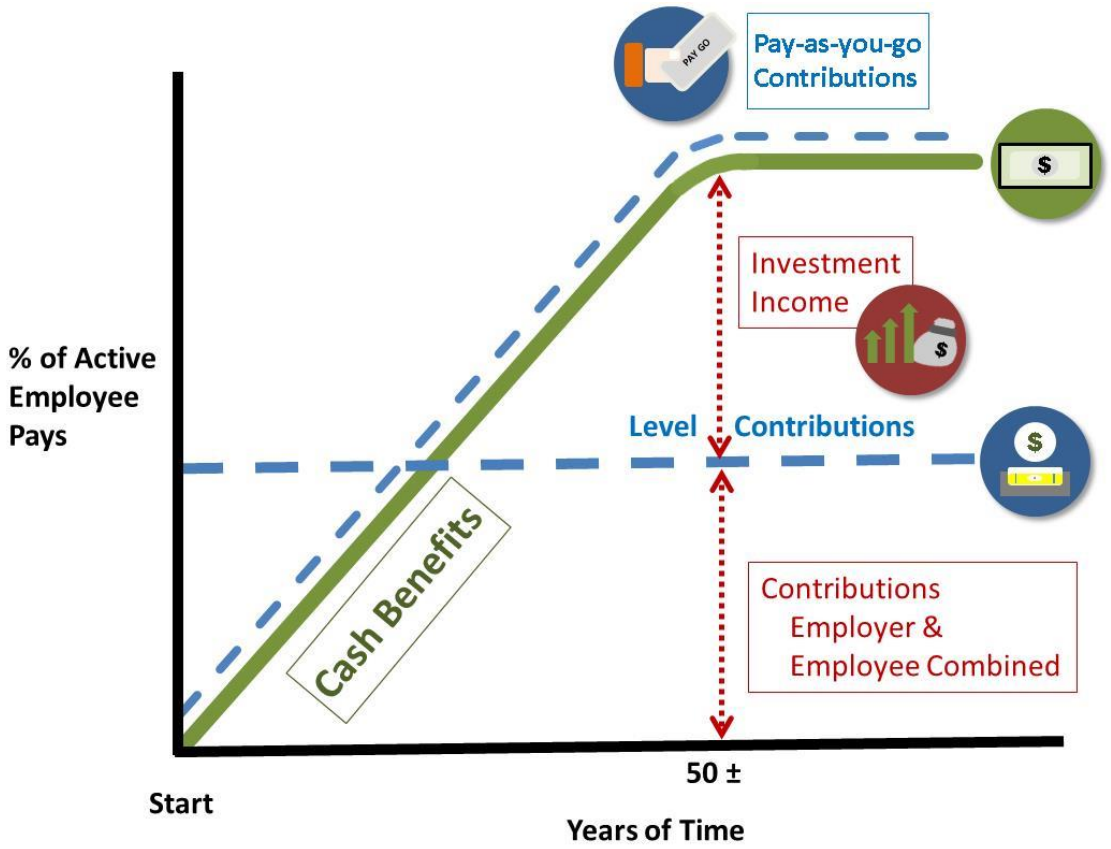
Computing Contributions to Support Fund Benefits. From a given schedule of benefits and from employee and asset data, the actuary calculates the contribution rates to support the benefits by means of ***an actuarial valuation and a funding method.***

An actuarial valuation has a number of ingredients such as: the rate of investment return which plan assets will earn; the rates of withdrawal of active members who leave covered employment; the rates of mortality; the rates of disability; the rates of pay increases; and the assumed age or ages at actual retirement.

In an actuarial valuation, assumptions must be made as to what the above rates will be for the next year and for decades in the future. The assumptions are established by the Retirement Board after receiving the advice of the actuary.

Reconciling Differences Between Assumed Experience and Actual Experience. Once actual experience has occurred and has been observed, it will not coincide exactly with assumed experience, regardless of the skill of the actuary and the many calculations made. The future cannot be predicted with 100% precision.

APERS copes with these continually changing differences by having annual actuarial valuations. Each actuarial valuation is a complete recalculation of assumed future experience, taking into account all past differences between assumed and actual experience. The result is ***continuing adjustments in financial position.***



CASH BENEFITS LINE. This relentlessly increasing line is the fundamental reality of retirement plan financing. It happens each time a new benefit is added for future retirements (and happens regardless of the design for contributing for benefits).

LEVEL CONTRIBUTION LINE. Determining the level contribution line requires detailed assumptions concerning a variety of experiences in future decades, including:

- **Economic Risk Areas**
  - Rates of investment return
  - Rates of pay increase
  - Changes in active member group size
- **Non-Economic Risk Areas**
  - Ages at actual retirement
  - Rates of mortality
  - Rates of withdrawal of active members (turnover)
  - Rates of disability

Actuarial Valuation Process

The financing diagram on the preceding page shows the relationship between ***the two fundamentally different philosophies of paying*** for retirement benefits: the method where contributions match cash benefit payments (or barely exceed cash benefit payments, as in the Federal Social Security program) which is thus an ***increasing contribution method;*** and, the ***level contribution method*** which attempts to equalize contributions between the generations.

The actuarial valuation is the mathematical process by which the level contribution rate is determined. The activity constituting the valuation may be summarized as follows:

A. ***Census Data,*** including:

Retired lives now receiving benefits
Former employees with vested benefits not yet payable
Active employees

B. + ***Asset data*** (cash & investments)

C. + ***Benefit provisions*** that establish eligibility and amounts of payments to members

D. + ***Assumptions concerning future experience*** in various risk areas

E. + ***The funding method*** for employer contributions (the long-term, planned pattern for employer contributions)

F. + ***Mathematically combining the assumptions, the funding method, and the data***

G. = Determination of:

Plan Financial position; and/or
New Employer Contribution Rate

Glossary

Accrued Service. The service credited under the plan which was rendered before the date of the actuarial valuation.

Accumulated Benefit Obligation. The actuarial present value of vested and non-vested benefits based on service to date and past and current salary levels.

Actuarial Accrued Liability. The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as "accrued liability" or "past service liability."

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

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

Actuarial Equivalent. A single amount or series of amounts of equal value to another single amount or series of amounts, computed on the basis of the rate(s) of interest and mortality tables used by the plan.

Actuarial Present Value. The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Amortization. Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.

Glossary

Experience 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, in accordance with the actuarial cost method being used.

Normal Cost. The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as "current service cost." Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.

Plan Termination Liability. The actuarial present value of future plan benefits based on the assumption that there will be no further accruals for future service and salary. The termination liability will generally be less than the liabilities computed on a "going concern" basis and is not normally determined in a routine actuarial valuation.

Reserve Account. An account used to indicate that funds have been set aside for a specific purpose and are not generally available for other uses.

Unfunded Actuarial Accrued Liability. The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as "unfunded accrued liability."

Valuation Assets. The value of current plan assets recognized for valuation purposes. Generally based on a phase-in of differences between actual and assumed market rates of return.

Meaning of "Unfunded Actuarial Accrued Liabilities"

"***Actuarial accrued liabilities***" are ***the present value of the portions of promised benefits that are not covered by future normal cost contributions*** --- a liability has been established ("accrued") because the service has been rendered but the resulting monthly cash benefit may not be payable until years in the future.

If "actuarial accrued liabilities" at any time exceed the plan's accrued assets (cash & investments), the difference is "***unfunded actuarial accrued liabilities***." This is the common condition. It is less common when a plan's assets equal or exceed the plan's "actuarial accrued liabilities."

Each time a plan adds a new benefit which applies to service already rendered, an "actuarial accrued liability" is created, which is also an "unfunded actuarial accrued liability" because the plan can't print instant cash to cover the value of the new benefit promises. Payment for such unfunded actuarial accrued liabilities is spread over a period of years, commonly in the 15-30 year range.

Unfunded actuarial accrued liabilities can occur in another way: if actual plan experience is less favorable than assumed, the difference is added to unfunded actuarial accrued liabilities. For example, in plans where benefits are directly related to an employee's pay near time of retirement, unfunded actuarial accrued liabilities increased rapidly during the 1970's because unexpected rates of pay increase created additional actuarial accrued liabilities which could not be matched by reasonable investment results. Most of the unexpected pay increases were the direct result of inflation, which is a very destructive force on financial stability.

The existence of unfunded actuarial accrued liabilities is not bad but the changes from year to year in the amount of unfunded actuarial accrued liabilities are important --- "bad" or "good" or somewhere in between.

Nor are unfunded actuarial accrued liabilities a bill payable immediately, but it is important that policy-makers prevent the amount from becoming unreasonably high and ***it is vital for plans to have a sound method for making payments toward them*** so that they are controlled.

800.521.0498 | P: 248.799.9000 | www.grsconsulting.com

October 31, 2024

Ms. Amy Fecher
Executive Director
Arkansas Public Employees Retirement System
One Union National Plaza
124 West Capitol, Suite 400
Little Rock, Arkansas 72201

Re: Report of the June 30, 2024 Actuarial Valuation and Gain/(Loss) Analysis of Financial Experience

Dear Ms. Fecher:

Enclosed are 25 copies of this report.

Sincerely,
Gabriel, Roeder, Smith & Company

Mita D. Drazilov, ASA, FCA, MAAA

MDD:sc
Enclosures

cc: Heidi G. Barry, GRS

One Towne Square | Suite 800 | Southfield, Michigan 48076-3723