

Arkansas Local Police and Fire Retirement System

GASB Statement Nos. 67 and 68 Accounting and
Financial Reporting for Pensions
December 31, 2020





April 2, 2021

Board of Trustees
Arkansas Local Police and Fire Retirement System
Little Rock, Arkansas

Dear Trustees:

This report provides accounting and financial reporting information that is intended to comply with the Governmental Accounting Standards Board (GASB) Statement Nos. 67 and 68 for the Arkansas Local Police and Fire Retirement System ("LOPFI"). These calculations have been made on a basis that is consistent with our understanding of these Statements. This report does not include Pension and Relief Funds under LOPFI Administration. Calculations required for compliance with GASB Statement No. 68 for Pension and Relief Funds under LOPFI Administration will be issued in separate reports.

GASB Statement No. 67 is the accounting standard that applies to the stand-alone financial reports issued by retirement systems. GASB Statement No. 68 establishes accounting and financial reporting for state and local government employers who provide their employees (including former employees) pension benefits through a trust.

Our calculation of the liability associated with the benefits described in this report was performed for the purpose of providing reporting and disclosure information that satisfies the requirements of GASB Statement Nos. 67 and 68. The Net Pension Liability is not an appropriate measure for measuring the sufficiency of plan assets to cover the estimated cost of settling the employer's benefit obligation. The Net Pension Liability is not an appropriate measure for assessing the need for or amount of future employer contributions. A calculation of the plan's liability for purposes other than satisfying the requirements of GASB Statement Nos. 67 and 68 may produce significantly different results. This report may be provided to parties other than LOPFI only in its entirety and only with the permission of LOPFI. GRS is not responsible for unauthorized use of this report.

This report is based upon information, furnished to us by LOPFI, concerning retirement and ancillary benefits, active members, deferred vested members, retirees and beneficiaries, and financial data. This information was checked for internal consistency, but it was not audited. We are not responsible for the accuracy or completeness of the data provided by LOPFI staff.

This report complements the actuarial valuation report that was provided to LOPFI and should be considered in conjunction with that report. Please see the actuarial valuation report as of December 31, 2020 for additional discussion of the nature of actuarial calculations and more information related to participant data, demographic assumptions, and benefit provisions. The economic assumptions for purposes of the GASB disclosures were selected by the actuary based on the results of an experience study covering the period from January 1, 2012 through December 31, 2016.

To the best of our knowledge, the information contained within this report is accurate and fairly represents the actuarial position of the Arkansas Local Police and Fire Retirement System. All calculations have been made in conformity with generally accepted actuarial principles and practices as well as with the Actuarial Standards of Practice issued by the Actuarial Standards Board.

This report assumes 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.

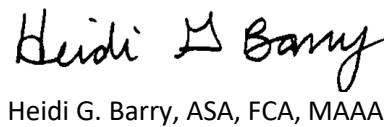
It is our understanding that this information, which was previously issued in draft form, has been reviewed and approved by the plan's auditor. This information is intended to assist in preparation of the financial statements of the Arkansas Local Police and Fire Retirement System. Financial statements are the responsibility of management, subject to the auditor's review. Please let us know if there are any items that the auditor changes so that we may maintain consistency with the plan's financial statements.

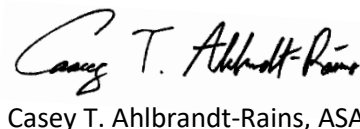
The signing individuals are independent of the plan sponsor.

Heidi G. Barry and Casey T. Ahlbrandt-Rains 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.

Respectfully submitted,


David L. Hoffman


Heidi G. Barry, ASA, FCA, MAAA


Casey T. Ahlbrandt-Rains, ASA, MAAA

DLH/HGB/CAR:dj

1508



Table of Contents

	<u>Page</u>
Section A	Executive Summary
	Executive Summary 1
	Discussion..... 2
Section B	Financial Statements
	Statement of Pension Expense Under GASB Statement No. 68 7
	Statement of Outflows and Inflows Arising from Current Reporting Period..... 8
	Statement of Outflows and Inflows Arising from Current and Prior Reporting Periods..... 9
	Statement of Fiduciary Net Position 13
	Statement of Changes in Fiduciary Net Position..... 14
Section C	Required Supplementary Information
	Schedule of Changes in Net Pension Liability and Related Ratios Current Period 16
	Schedule of Changes in Net Pension Liability and Related Ratios Multiyear..... 17
	Schedule of Net Pension Liability Multiyear 19
	Schedule of Contributions Multiyear 20
	Notes to Schedule of Contributions..... 21
	Schedule of Investment Returns Multiyear 23
Section D	Notes to Financial Statements
	Asset Allocation..... 25
	Sensitivity of Net Pension Liability to the Single Discount Rate Assumption 26
	Summary of Population Statistics 27
Section E	Summary of Benefits 29
Section F	Summary of Actuarial Assumptions and Methods
	Summary of Assumptions Used for Actuarial Reports..... 36
Section G	Calculation of the Single Discount Rate
	Calculation of the Single Discount Rate 46
	Paid Service
	Projection of Contributions..... 47
	Projection of Plan Fiduciary Net Position..... 49
	Present Values of Projected Benefits..... 51
	Projection of Plan Net Position and Benefit Payments..... 53
	Volunteer Service
	Projection of Contributions..... 54
	Projection of Plan Fiduciary Net Position..... 56
	Present Values of Projected Benefits..... 58
	Projection of Plan Net Position and Benefit Payments..... 60
Section H	Glossary of Terms 62



SECTION A

EXECUTIVE SUMMARY

Executive Summary as of December 31, 2020

	2020
Actuarial Valuation Date	December 31, 2020
Measurement Date of the Net Pension Liability	December 31, 2020
Employer's Fiscal Year Ending Date (Reporting Date)	December 31, 2020

	Paid	Volunteer
Membership		
Number of		
- Retirees and Beneficiaries (Including DROP)	3,868	3,454
- Inactive, Nonretired Members	6,289	6,674
- Active Members	6,509	7,508
- Total	16,666	17,636
Covered Payroll	\$ 386,909,993	N/A

Net Pension Liability		
Total Pension Liability	\$ 3,094,818,981	\$ 144,039,300
Plan Fiduciary Net Position	2,407,334,337	108,456,488
Net Pension Liability	\$ 687,484,644	\$ 35,582,812
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	77.79%	75.30%
Net Pension Liability as a Percentage of Covered Payroll	177.69%	N/A

Development of the Single Discount Rate		
Single Discount Rate	7.00%	7.00%
Long-Term Expected Rate of Investment Return	7.00%	7.00%
Long-Term Municipal Bond Rate*	2.00%	2.00%
Last year ending December 31 in the 2021 to 2120 projection period for which projected benefit payments are fully funded	2120	2120

Total Pension Expense \$ 132,243,307 \$ 5,132,315

Deferred Outflows and Deferred Inflows of Resources by Source to be Recognized in Future Pension Expenses

	Paid		Volunteer	
	Deferred Outflows of Resources	Deferred Inflows of Resources	Deferred Outflows of Resources	Deferred Inflows of Resources
Difference between expected and actual experience	\$ 77,618,366	\$ -	\$ 184,856	\$ 243,993
Changes in assumptions	19,164,016	-	-	-
Net difference between projected and actual earnings on pension plan investments	70,812,730	247,266,843	3,122,432	11,145,942
Total	\$ 167,595,112	\$ 247,266,843	\$ 3,307,288	\$ 11,389,935

**Source: Fixed-income municipal bonds with 20 years to maturity that include only federally tax-exempt municipal bonds as reported in Fidelity Index's "20-Year Municipal GO AA Index" as of December 31, 2020. In describing this index, Fidelity notes that the municipal curves are constructed using option-adjusted analytics of a diverse population of over 10,000 tax-exempt securities.*



Discussion

Accounting Standard

For pension plans that are administered through trusts or equivalent arrangements, Governmental Accounting Standards Board (GASB) Statement No. 67 establishes standards of financial reporting for separately issued financial reports and specifies the required approach for measuring the pension liability. Similarly, GASB Statement No. 68 establishes standards for state and local government employers (as well as non-employer contributing entities) to account for and disclose the net pension liability, pension expense, and other information associated with providing retirement benefits to their employees (and former employees) on their basic financial statements.

The following discussion provides a summary of the information that is required to be disclosed under these accounting standards. A number of these disclosure items are provided in this report. However, certain information, such as notes regarding accounting policies and investments, is not included in this report and the retirement system and/or plan sponsor will be responsible for preparing and disclosing that information to comply with these accounting standards.

Financial Statements

GASB Statement No. 68 requires state or local governments to recognize the net pension liability and the pension expense on their financial statements. The net pension liability is the difference between the total pension liability and the plan's fiduciary net position. In traditional actuarial terms, this is analogous to the accrued liability less the market value of assets (not the smoothed actuarial value of assets that is often encountered in actuarial valuations performed to determine the employer's contribution requirement).

The pension expense recognized each fiscal year is equal to the change in the net pension liability from the beginning of the year to the end of the year, adjusted for deferred recognition of the liability and investment experience.

Pension plans that prepare their own, stand-alone financial statements are required to present two financial statements – a statement of fiduciary net position and a statement of changes in fiduciary net position in accordance with GASB Statement No. 67. The *statement of fiduciary net position* presents the assets and liabilities of the pension plan at the end of the pension plan's reporting period. The *statement of changes in fiduciary net position* presents the additions, such as contributions and investment income, and deductions, such as benefit payments and expenses, and net increase or decrease in the fiduciary net position.

Notes to Financial Statements

GASB Statement No. 68 requires the notes of the employer's financial statements to disclose the total pension expense, the pension plan's liabilities and assets, and deferred outflows and inflows of resources related to pensions.

GASB Statement Nos. 67 and 68 require the notes of the financial statements for the employers and pension plans to include certain additional information. The list of disclosure items should include:

- A description of benefits provided by the plan;
- The type of employees and number of members covered by the pension plan;
- A description of the plan's funding policy, which includes member and employer contribution requirements;
- The pension plan's investment policies;
- The pension plan's fiduciary net position, net pension liability, and the pension plan's fiduciary net position as a percentage of the total pension liability;
- The net pension liability using a discount rate that is 1% higher and 1% lower than used to calculate the total pension liability and net pension liability for financial reporting purposes;
- Significant assumptions and methods used to calculate the total pension liability;
- Inputs to the discount rates; and
- Certain information about mortality assumptions and the dates of experience studies.

Retirement systems that issue stand-alone financial statements are required to disclose additional information in accordance with GASB Statement No. 67. This information includes:

- The composition of the pension plan's Board and the authority under which benefit terms may be amended;
- A description of how fair value is determined;
- Information regarding certain reserves and investments, which include concentrations of investments greater than or equal to 5%, receivables, and insurance contracts excluded from plan assets; and
- Annual money-weighted rate of return.

Required Supplementary Information

GASB Statement No. 67 requires a 10-year fiscal history of:

- Sources of changes in the net pension liability;
- Information about the components of the net pension liability and related ratios, including the pension plan's fiduciary net position as a percentage of the total pension liability, and the net pension liability as a percent of covered-employee payroll; and
- Comparison of the actual employer contributions to the actuarially determined contributions based on the plan's funding policy.

Timing of the Valuation

An actuarial valuation to determine the total pension liability is required to be performed at least every two years. The net pension liability and pension expense should be measured as of the pension plan's fiscal year end (measurement date) on a date that is within the employer's prior fiscal year. If the actuarial valuation used to determine the total pension liability is not calculated as of the measurement date, the total pension liability is required to be rolled-forward from the actuarial valuation date to the measurement date.

The total pension liability shown in this report is based on an actuarial valuation performed as of December 31, 2020 and a measurement date of December 31, 2020.

Single Discount Rate

Projected benefit payments are required to be discounted to their actuarial present values using a Single Discount Rate that reflects: (1) a long-term expected rate of return on pension plan investments (to the extent that the plan's fiduciary net position is projected to be sufficient to pay benefits); and (2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating as of the measurement date (to the extent that the plan's projected fiduciary net position is not sufficient to pay benefits).

For the purpose of this valuation, the expected rate of return on pension plan investments is 7.00%; the municipal bond rate is 2.00% (based on the weekly rate closest to but not later than the measurement date of the Fidelity "20-Year Municipal GO AA Index"); and the resulting Single Discount Rate is 7.00%.

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 unfunded liability may decrease in dollar amount each year in the future.
- (2) The unfunded liability will be paid off in approximately 16 years for paid and 16 years for volunteer, which is the number of years remaining in the closed amortization schedule of the unfunded liability beginning January 1, 2022.
- (3) The funded status of the plan will increase gradually towards a 100% funded ratio.

This funding policy results in the projected plan fiduciary net position being sufficient to pay benefits for all future years and a discount rate of 7.00%. The projections in this report are strictly for the purposes of determining the GASB discount rate and are different from a funding projection for the ongoing plan.

Limitations of Assets as a Percent of Total Pension Liability Measurements

This report includes a measure of the plan fiduciary net position as a percent of total pension liability. Unless otherwise indicated, with regard to any such 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 inappropriate for assessing the need for or amount of future employer contributions.

Limitation of Project Scope

Actuarial standards do not require the actuary to evaluate the ability of the plan sponsor or other contributing entity to make required contributions to the plan when due. Such an evaluation was not within the scope of this project and is not within the actuary's domain of expertise. Consequently, the actuary performed no such evaluation.

SECTION B

FINANCIAL STATEMENTS

Statement of Pension Expense Under GASB Statement No. 68

Fiscal Year Ended December 31, 2020

	Paid	Volunteer	Total
A. Expense			
1. Service Cost	\$ 59,999,825	\$ 2,439,560	\$ 62,439,385
2. Interest on the Total Pension Liability	200,733,314	9,494,066	210,227,380
3. Current-Period Benefit Changes	(2,985,529)	-	(2,985,529)
4. Employee Contributions (made negative for addition here)	(26,577,992)	-	(26,577,992)
5. Projected Earnings on Plan Investments (made negative for addition here)	(148,445,106)	(6,660,250)	(155,105,356)
6. Pension Plan Administrative Expense	3,435,447	155,204	3,590,651
7. Other Changes in Plan Fiduciary Net Position	-	-	-
8. Recognition of Outflow (Inflow) of Resources Due to Liabilities	92,285,367	1,814,911	94,100,278
9. Recognition of Outflow (Inflow) of Resources Due to Assets	(46,202,019)	(2,111,176)	(48,313,195)
10. Total Pension Expense	\$132,243,307	\$ 5,132,315	\$137,375,622

Statement of Outflows and Inflows Arising from Current Reporting Period Fiscal Year Ended December 31, 2020

	Paid Service	Volunteer Service
A. Outflows (Inflows) of Resources Due to Liabilities		
1. Difference between expected and actual experience of the Total Pension Liability (gains) or losses	\$ 46,305,562	\$ (328,954)
2. Assumption Changes (gains) or losses	\$ -	\$ -
3. Recognition period for Liabilities: Average of the expected remaining service lives of all employees {in years}	3.8770	3.3561
4. Outflow (Inflow) of Resources to be recognized in the current pension expense for the difference between expected and actual experience of the Total Pension Liability	\$ 11,943,658	\$ (98,017)
5. Outflow (Inflow) of Resources to be recognized in the current pension expense for Assumption Changes	\$ -	\$ -
6. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Liabilities	\$ 11,943,658	\$ (98,017)
7. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses for the difference between expected and actual experience of the Total Pension Liability	\$ 34,361,904	\$ (230,937)
8. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses for Assumption Changes	\$ -	\$ -
9. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Liabilities	\$ 34,361,904	\$ (230,937)
B. Outflows (Inflows) of Resources Due to Assets		
1. Net difference between projected and actual earnings on pension plan investments (gains) or losses	\$ (129,331,483)	\$ (5,888,911)
2. Recognition period for Assets {in years}	5.0000	5.0000
3. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Assets	\$ (25,866,297)	\$ (1,177,782)
4. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Assets	\$ (103,465,186)	\$ (4,711,129)

Paid Service

Statement of Outflows and Inflows Arising from Current and Prior Reporting Periods Fiscal Year Ended December 31, 2020*

A. Outflows and Inflows of Resources due to Liabilities and Assets to be Recognized in Current Pension Expense

	Outflows of Resources	Inflows of Resources	Net Outflows of Resources
1. Due to liabilities	\$ 92,285,367	\$ -	\$ 92,285,367
2. Due to assets	40,613,182	86,815,201	(46,202,019)
3. Total	\$ 132,898,549	\$ 86,815,201	\$ 46,083,348

B. Outflows and Inflows of Resources by Source to be Recognized in Current Pension Expense

	Outflows of Resources	Inflows of Resources	Net Outflows of Resources
1. Differences between expected and actual experience	\$ 44,720,176	\$ -	\$ 44,720,176
2. Assumption changes	47,565,191	-	47,565,191
3. Net difference between projected and actual earnings on pension plan investments	40,613,182	86,815,201	(46,202,019)
4. Total	\$ 132,898,549	\$ 86,815,201	\$ 46,083,348

C. Deferred Outflows and Deferred Inflows of Resources by Source to be Recognized in Future Pension Expenses

	Deferred Outflows of Resources	Deferred Inflows of Resources	Net Deferred Outflows of Resources
1. Differences between expected and actual experience	\$ 77,618,366	\$ -	\$ 77,618,366
2. Assumption changes	19,164,016	-	19,164,016
3. Net difference between projected and actual earnings on pension plan investments	70,812,730	247,266,843	(176,454,113)
4. Total	\$ 167,595,112	\$ 247,266,843	\$ (79,671,731)

D. Deferred Outflows and Deferred Inflows of Resources by Year to be Recognized in Future Pension Expenses

Year Ending December 31	Net Deferred Outflows of Resources
2021	\$ 6,144,439
2022	(3,131,790)
2023	(56,818,085)
2024	(25,866,295)
2025	-
Thereafter	-
Total	\$ (79,671,731)

* Totals may not add due to rounding.



Paid Service
Statement of Outflows and Inflows Arising from
Current and Prior Reporting Periods
Fiscal Year Ended December 31, 2020

Year Established	Initial Amount	Initial Recognition Period	Current Year Recognition	Remaining Recognition	Remaining Recognition Period
Deferred Outflow (Inflow) due to Differences Between Expected and Actual Experience on Liabilities					
2016	\$ 20,160,705	4.5797	\$ 2,551,949	\$ -	0.0000
2017	27,865,374	4.4029	6,328,868	2,549,902	0.4029
2018	32,386,236	4.1228	7,855,398	8,820,042	1.1228
2019	63,967,124	3.9879	16,040,303	31,886,518	1.9879
2020	46,305,562	3.8770	11,943,658	34,361,904	2.8770
Total			\$ 44,720,176	\$ 77,618,366	
Deferred Outflow (Inflow) due to Assumption Changes					
2016	\$ -	4.5797	\$ -	\$ -	0.0000
2017	209,424,780	4.4029	47,565,191	19,164,016	0.4029
2018	-	4.1228	-	-	1.1228
2019	-	3.9879	-	-	1.9879
2020	-	3.8770	-	-	2.8770
Total			\$ 47,565,191	\$ 19,164,016	
Deferred Outflow (Inflow) due to Differences Between Projected and Actual Earnings on Plan Investments					
2016	\$ 26,034,086	5.0000	\$ 5,206,818	\$ -	0.0000
2017	(97,612,641)	5.0000	(19,522,528)	(19,522,529)	1.0000
2018	177,031,822	5.0000	35,406,364	70,812,730	2.0000
2019	(207,131,880)	5.0000	(41,426,376)	(124,279,128)	3.0000
2020	(129,331,483)	5.0000	(25,866,297)	(103,465,186)	4.0000
Total			\$ (46,202,019)	\$ (176,454,113)	

Volunteer Service

Statement of Outflows and Inflows Arising from Current and Prior Reporting Periods Fiscal Year Ended December 31, 2020*

A. Outflows and Inflows of Resources due to Liabilities and Assets to be Recognized in Current Pension Expense

	Outflows of Resources	Inflows of Resources	Net Outflows of Resources
1. Due to liabilities	\$ 2,042,876	\$ 227,965	\$ 1,814,911
2. Due to assets	1,783,342	3,894,518	(2,111,176)
3. Total	\$ 3,826,218	\$ 4,122,483	\$ (296,265)

B. Outflows and Inflows of Resources by Source to be Recognized in Current Pension Expense

	Outflows of Resources	Inflows of Resources	Net Outflows of Resources
1. Differences between expected and actual experience	\$ 126,866	\$ 227,965	\$ (101,099)
2. Assumption changes	1,916,010	-	1,916,010
3. Net difference between projected and actual earnings on pension plan investments	1,783,342	3,894,518	(2,111,176)
4. Total	\$ 3,826,218	\$ 4,122,483	\$ (296,265)

C. Deferred Outflows and Deferred Inflows of Resources by Source to be Recognized in Future Pension Expenses

	Deferred Outflows of Resources	Deferred Inflows of Resources	Net Deferred Outflows of Resources
1. Differences between expected and actual experience	\$ 184,856	\$ 243,993	\$ (59,137)
2. Assumption changes	-	-	-
3. Net difference between projected and actual earnings on pension plan investments	3,122,432	11,145,942	(8,023,510)
4. Total	\$ 3,307,288	\$ 11,389,935	\$ (8,082,647)

D. Deferred Outflows and Deferred Inflows of Resources by Year to be Recognized in Future Pension Expenses

Year Ending December 31	Net Deferred Outflows of Resources
2021	\$ (2,317,507)
2022	(1,515,634)
2023	(3,071,723)
2024	(1,177,783)
2025	-
Thereafter	-
Total	\$ (8,082,647)

* Totals may not add due to rounding.



Volunteer Service

Statement of Outflows and Inflows Arising from Current and Prior Reporting Periods Fiscal Year Ended December 31, 2020

Year Established	Initial Amount	Initial Recognition Period	Current Year Recognition	Remaining Recognition	Remaining Recognition Period
Deferred Outflow (Inflow) due to Differences Between Expected and Actual Experience on Liabilities					
2016	\$ (996,748)	3.7857	\$ -	\$ -	0.0000
2017	(578,714)	3.6685	(105,458)	-	0.0000
2018	(86,526)	3.5331	(24,490)	(13,056)	0.5331
2019	438,588	3.4571	126,866	184,856	1.4571
2020	(328,954)	3.3561	(98,017)	(230,937)	2.3561
Total			\$ (101,099)	\$ (59,137)	
Deferred Outflow (Inflow) due to Assumption Changes					
2016	\$ -	3.7857	\$ -	\$ -	0.0000
2017	10,514,403	3.6685	1,916,010	-	0.0000
2018	-	3.5331	-	-	0.5331
2019	-	3.4571	-	-	1.4571
2020	-	3.3561	-	-	2.3561
Total			\$ 1,916,010	\$ -	
Deferred Outflow (Inflow) due to Differences Between Projected and Actual Earnings on Plan Investments					
2016	\$ 1,110,621	5.0000	\$ 222,125	\$ -	0.0000
2017	(4,288,479)	5.0000	(857,696)	(857,695)	1.0000
2018	7,806,083	5.0000	1,561,217	3,122,432	2.0000
2019	(9,295,198)	5.0000	(1,859,040)	(5,577,118)	3.0000
2020	(5,888,911)	5.0000	(1,177,782)	(4,711,129)	4.0000
Total			\$ (2,111,176)	\$ (8,023,510)	

Statement of Fiduciary Net Position as of December 31, 2020

	2020		
	Paid	Volunteer	Total
Assets			
Cash and Short Term Investments	\$ 82,064,724	\$ 3,697,223	\$ 85,761,947
Receivables			
Accrued Interest and Other Dividends	\$ -	\$ -	\$ -
Contributions Receivable	7,944,844	357,934	8,302,778
Accounts Receivable - Other	-	-	-
Total Receivables	<u>\$ 7,944,844</u>	<u>\$ 357,934</u>	<u>\$ 8,302,778</u>
Prepaid Expense	\$ 11,819,760	\$ 532,510	\$ 12,352,270
Investments			
U.S. Treasury Securities	\$ 68,629,096	\$ 3,091,914	\$ 71,721,010
Corporate Bonds	64,715,920	2,915,616	67,631,536
Mortgage-backed Securities	3,153,671	142,081	3,295,752
Alternative Investments	216,262,219	9,743,159	226,005,378
Equity Securities	396,382,800	17,858,046	414,240,846
Mutual Funds	1,548,785,155	69,776,681	1,618,561,836
Real Estate Investment Trusts	6,938,961	312,618	7,251,579
Total Investments	<u>\$ 2,304,867,822</u>	<u>\$ 103,840,115</u>	<u>\$ 2,408,707,937</u>
Land, Building, Furniture and Equipment	\$ 2,488,503	\$ 112,113	\$ 2,600,616
Other Assets	\$ 156,598	\$ 7,055	\$ 163,653
Total Assets	<u>\$ 2,409,342,251</u>	<u>\$ 108,546,950</u>	<u>\$ 2,517,889,201</u>
Liabilities			
Payables			
Accounts Payable and Accrued Expenses	\$ 1,106,342	\$ 49,844	\$ 1,156,186
Refunds Payable	236,991	10,677	247,668
Due to Pension Review Board	326,996	14,732	341,728
Total Liabilities	<u>\$ 1,670,329</u>	<u>\$ 75,253</u>	<u>\$ 1,745,582</u>
Deferred Inflows of Resources			
Deferred amounts for leases	\$ 337,585	\$ 15,209	\$ 352,794
Net Position Restricted for Pensions	<u>\$ 2,407,334,337</u>	<u>\$ 108,456,488</u>	<u>\$ 2,515,790,825</u>



Statement of Changes in Fiduciary Net Position for Year Ended December 31, 2020

	2020		
	Paid	Volunteer	Total
Additions			
Contributions			
Employer	\$ 88,292,104	\$ 5,627,223	\$ 93,919,327
Employee	26,577,992	-	26,577,992
Other	98,204	-	98,204
Total Contributions	<u>\$ 114,968,300</u>	<u>\$ 5,627,223</u>	<u>\$ 120,595,523</u>
Investment Income			
Net Appreciation in Fair Value of Investments	\$ 261,960,585	\$ 11,834,638	\$ 273,795,223
Interest and Dividends	21,442,329	968,704	22,411,033
Less Investment Expense	(5,626,325)	(254,181)	(5,880,506)
Net Investment Income	<u>\$ 277,776,589</u>	<u>\$ 12,549,161</u>	<u>\$ 290,325,750</u>
Other	\$ -	\$ -	\$ -
Total Additions	<u>\$ 392,744,889</u>	<u>\$ 18,176,384</u>	<u>\$ 410,921,273</u>
Deductions			
Benefit Payments, including Refunds of Employee Contributions and DROP Distributions			
	\$ 93,706,107	\$ 3,950,209	\$ 97,656,316
Pension Plan Administrative Expense	3,435,447	155,204	3,590,651
Other	-	-	-
Total Deductions	<u>\$ 97,141,554</u>	<u>\$ 4,105,413</u>	<u>\$ 101,246,967</u>
	<u>\$ 295,603,335</u>	<u>\$ 14,070,971</u>	<u>\$ 309,674,306</u>
Net Increase in Net Position			
	<u>\$ 295,603,335</u>	<u>\$ 14,070,971</u>	<u>\$ 309,674,306</u>
Amount to Reconcile Beginning and End of Year Assets	\$ -	\$ -	\$ -
Net Position Restricted for Pensions			
Beginning of Year	\$ 2,111,731,002	\$ 94,385,517	\$ 2,206,116,519
End of Year	<u>\$ 2,407,334,337</u>	<u>\$ 108,456,488</u>	<u>\$ 2,515,790,825</u>



SECTION C

REQUIRED SUPPLEMENTARY INFORMATION

Schedule of Changes in Net Pension Liability and Related Ratios Current Period Fiscal Year Ended December 31, 2020

	Paid	Volunteer	Total
A. Total Pension Liability			
1. Service Cost	\$ 59,999,825	\$ 2,439,560	\$ 62,439,385
2. Interest on the Total Pension Liability	200,733,314	9,494,066	210,227,380
3. Changes of benefit terms	(2,985,529)	-	(2,985,529)
4. Difference between expected and actual experience of the Total Pension Liability	46,305,562	(328,954)	45,976,608
5. Changes of assumptions	-	-	-
6. Benefit payments, including refunds of employee contributions & DROP distributions	(93,706,107)	(3,950,209)	(97,656,316)
7. Net change in Total Pension Liability	\$ 210,347,065	\$ 7,654,463	\$ 218,001,528
8. Total Pension Liability – beginning	2,884,471,916	136,384,837	3,020,856,753
9. Total Pension Liability – ending	\$3,094,818,981	\$ 144,039,300	\$3,238,858,281
B. Plan Fiduciary Net Position			
1. Employer contributions	\$ 88,292,104	\$ 5,627,223	\$ 93,919,327
2. Employee contributions	26,577,992	-	26,577,992
3. Other contributions	98,204	-	98,204
4. Pension plan net investment income	277,776,589	12,549,161	290,325,750
5. Benefit payments, including refunds of employee contributions & DROP distributions	(93,706,107)	(3,950,209)	(97,656,316)
6. Pension plan administrative expense	(3,435,447)	(155,204)	(3,590,651)
7. Net change in Plan Fiduciary Net Position	\$ 295,603,335	\$ 14,070,971	\$ 309,674,306
8. Plan Fiduciary Net Position – beginning	2,111,731,002	94,385,517	2,206,116,519
9. Plan Fiduciary Net Position – ending	\$2,407,334,337	\$ 108,456,488	\$2,515,790,825
C. Net Pension Liability	\$ 687,484,644	\$ 35,582,812	\$ 723,067,456
D. Plan Fiduciary Net Position as a percentage of the Total Pension Liability	77.79%	75.30%	77.68%
E. Covered Payroll	\$ 386,909,993	N/A	N/A
F. Net Pension Liability as a percentage of Covered Payroll	177.69%	N/A	N/A



Paid Service

Schedules of Required Supplementary Information

Schedule of Changes in Net Pension Liability and Related Ratios

Multiyear

Ultimately 10 Fiscal Years Will Be Displayed

Fiscal year ending December 31,	2020	2019	2018	2017	2016	2015	2014
Total Pension Liability							
Service Cost	\$ 59,999,825	\$ 57,317,733	\$ 58,728,968	\$ 50,862,406	\$ 50,307,455	\$ 48,365,128	\$ 49,060,513
Interest on the Total Pension Liability	200,733,314	185,373,080	174,000,936	162,537,756	149,980,786	139,022,240	127,980,919
Benefit Changes	(2,985,529)	-	(24,831,215)	-	-	-	50,330
Difference between Expected and Actual Experience	46,305,562	63,967,124	32,386,236	27,865,374	20,160,705	6,985,822	(352,391)
Assumption Changes	-	-	-	209,424,780	-	51,592,627	-
Benefit Payments, DROP Distributions and Refunds	(93,706,107)	(83,428,020)	(70,812,207)	(61,502,387)	(55,899,631)	(43,058,437)	(33,691,888)
Net Change in Total Pension Liability	210,347,065	223,229,917	169,472,718	389,187,929	164,549,315	202,907,380	143,047,483
Total Pension Liability - Beginning	2,884,471,916	2,661,241,999	2,491,769,281	2,102,581,352	1,938,032,037	1,735,124,657	1,592,077,174
Total Pension Liability - Ending (a)	\$ 3,094,818,981	\$ 2,884,471,916	\$ 2,661,241,999	\$ 2,491,769,281	\$ 2,102,581,352	\$ 1,938,032,037	\$ 1,735,124,657
Plan Fiduciary Net Position							
Employer Contributions	\$ 88,292,104	\$ 82,853,422	\$ 78,694,349	\$ 72,369,349	\$ 70,486,795	\$ 62,792,095	\$ 58,994,602
Employee Contributions	26,577,992	25,157,606	24,456,628	23,351,970	21,816,086	21,187,024	21,844,747
Other Contributions	98,204	180,761	87,759	54,467	38,872	34,066	56,744
Pension Plan Net Investment Income	277,776,589	331,017,020	(51,333,962)	217,674,675	84,905,505	1,567,555	91,210,386
Benefit Payments, DROP Distributions and Refunds	(93,706,107)	(83,428,020)	(70,812,207)	(61,502,387)	(55,899,631)	(43,058,437)	(33,691,888)
Pension Plan Administrative Expense	(3,435,447)	(2,911,241)	(3,403,120)	(2,826,897)	(2,554,334)	(2,380,241)	(2,167,353)
Net Change in Plan Fiduciary Net Position	295,603,335	352,869,548	(22,310,553)	249,121,177	118,793,293	40,142,062	136,247,238
Plan Fiduciary Net Position - Beginning	2,111,731,002	1,758,861,454	1,781,172,007	1,532,050,830	1,413,257,537	1,373,115,475	1,236,868,237
Plan Fiduciary Net Position - Ending (b)	\$ 2,407,334,337	\$ 2,111,731,002	\$ 1,758,861,454	\$ 1,781,172,007	\$ 1,532,050,830	\$ 1,413,257,537	\$ 1,373,115,475
Net Pension Liability - Ending (a) - (b)	687,484,644	772,740,914	902,380,545	710,597,274	570,530,522	524,774,500	362,009,182
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	77.79 %	73.21 %	66.09 %	71.48 %	72.87 %	72.92 %	79.14 %
Covered Payroll	\$ 386,909,993	\$ 371,574,513	\$ 356,127,157	\$ 339,098,676	\$ 329,344,355	\$ 320,487,331	\$ 310,870,608
Net Pension Liability as a Percentage of Covered Payroll	177.69 %	207.96 %	253.39 %	209.55 %	173.23 %	163.74 %	116.45 %
Notes to Schedule:	N/A	N/A	N/A	N/A	N/A	N/A	N/A



Volunteer Service

Schedules of Required Supplementary Information

Schedule of Changes in Net Pension Liability and Related Ratios

Multiyear

Ultimately 10 Fiscal Years Will Be Displayed

Fiscal year ending December 31,	2020	2019	2018	2017	2016	2015	2014
Total Pension Liability							
Service Cost	\$ 2,439,560	\$ 2,383,968	\$ 2,328,231	\$ 2,137,477	\$ 2,103,552	\$ 2,100,948	\$ 2,087,131
Interest on the Total Pension Liability	9,494,066	8,934,417	8,427,795	8,007,679	7,542,093	7,204,736	6,767,758
Benefit Changes	-	-	-	-	-	-	222,045
Difference between Expected and Actual Experience	(328,954)	438,588	(86,526)	(578,714)	(996,748)	(1,813,451)	(1,426,660)
Assumption Changes	-	-	-	10,514,403	-	2,138,654	-
Benefit Payments	(3,950,209)	(3,629,357)	(3,290,465)	(2,917,621)	(2,398,981)	(2,349,142)	(2,040,757)
Refunds	-	-	-	-	-	-	-
Net Change in Total Pension Liability	7,654,463	8,127,616	7,379,035	17,163,224	6,249,916	7,281,745	5,609,517
Total Pension Liability - Beginning	136,384,837	128,257,221	120,878,186	103,714,962	97,465,046	90,183,301	84,573,784
Total Pension Liability - Ending (a)	\$ 144,039,300	\$ 136,384,837	\$ 128,257,221	\$ 120,878,186	\$ 103,714,962	\$ 97,465,046	\$ 90,183,301
Plan Fiduciary Net Position							
Employer Contributions	\$ 5,627,223	\$ 5,671,414	\$ 5,166,749	\$ 5,040,672	\$ 4,811,421	\$ 4,832,505	\$ 4,969,527
Employee Contributions	-	-	-	-	-	-	-
Pension Plan Net Investment Income	12,549,161	14,799,316	(2,270,359)	9,538,538	3,686,585	74,751	3,842,540
Benefit Payments	(3,950,209)	(3,629,357)	(3,290,465)	(2,917,621)	(2,398,981)	(2,349,142)	(2,040,757)
Refunds	-	-	-	-	-	-	-
Pension Plan Administrative Expense	(155,204)	(130,156)	(150,511)	(123,875)	(111,065)	(101,882)	(91,307)
Reconciliation Adjustment	-	-	-	-	-	-	-
Net Change in Plan Fiduciary Net Position	14,070,971	16,711,217	(544,586)	11,537,714	5,987,960	2,456,232	6,680,003
Plan Fiduciary Net Position - Beginning	94,385,517	77,674,300	78,218,886	66,681,172	60,693,212	58,236,980	51,556,977
Plan Fiduciary Net Position - Ending (b)	\$ 108,456,488	\$ 94,385,517	\$ 77,674,300	\$ 78,218,886	\$ 66,681,172	\$ 60,693,212	\$ 58,236,980
Net Pension Liability - Ending (a) - (b)	35,582,812	41,999,320	50,582,921	42,659,300	37,033,790	36,771,834	31,946,321
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	75.30 %	69.21 %	60.56 %	64.71 %	64.29 %	62.27 %	64.58 %
Covered Payroll	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Net Pension Liability as a Percentage of Covered Payroll	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Notes to Schedule:	N/A	N/A	N/A	N/A	N/A	N/A	N/A



Schedules of Required Supplementary Information

Schedule of the Net Pension Liability Multiyear

LOPFI Paid Service Employers

Ultimately 10 Fiscal Years Will Be Displayed

FY Ending December 31,	Total Pension Liability	Plan Net Position	Net Pension Liability	Plan Net Position as a % of Total Pension Liability	Covered Payroll*	Net Pension Liability as a % of Covered Payroll
2014	\$ 1,735,124,657	\$ 1,373,115,475	\$ 362,009,182	79.14%	\$ 310,870,608	116.45%
2015	1,938,032,037	1,413,257,537	524,774,500	72.92%	320,487,331	163.74%
2016	2,102,581,352	1,532,050,830	570,530,522	72.87%	329,344,355	173.23%
2017	2,491,769,281	1,781,172,007	710,597,274	71.48%	339,098,676	209.55%
2018	2,661,241,999	1,758,861,454	902,380,545	66.09%	356,127,157	253.39%
2019	2,884,471,916	2,111,731,002	772,740,914	73.21%	371,574,513	207.96%
2020	3,094,818,981	2,407,334,337	687,484,644	77.79%	386,909,993	177.69%

* Actual payroll reported.

LOPFI Volunteer Service Employers

Ultimately 10 Fiscal Years Will Be Displayed

FY Ending December 31,	Total Pension Liability	Plan Net Position	Net Pension Liability	Plan Net Position as a % of Total Pension Liability	Covered Payroll	Net Pension Liability as a % of Covered Payroll
2014	\$ 90,183,301	\$ 58,236,980	\$ 31,946,321	64.58%	N/A	N/A
2015	97,465,046	60,693,212	36,771,834	62.27%	N/A	N/A
2016	103,714,962	66,681,172	37,033,790	64.29%	N/A	N/A
2017	120,878,186	78,218,886	42,659,300	64.71%	N/A	N/A
2018	128,257,221	77,674,300	50,582,921	60.56%	N/A	N/A
2019	136,384,837	94,385,517	41,999,320	69.21%	N/A	N/A
2020	144,039,300	108,456,488	35,582,812	75.30%	N/A	N/A



Schedule of Contributions Multiyear

LOPFI Paid Service Employers

Last 10 Fiscal Years

FY Ending December 31,	Actuarially	Actual Contribution	Contribution	Covered Payroll*	Actual Contribution
	Determined Contribution#		Deficiency (Excess)		as a % of Covered Payroll
2011	\$ 46,312,346	\$ 46,312,346	\$ -	\$ 274,656,592	16.86%
2012	48,370,995	48,370,995	-	282,170,105	17.14%
2013	54,034,420	54,034,420	-	296,617,370	18.22%
2014	58,994,602	58,994,602	-	310,870,608	18.98%
2015	62,792,095	62,792,095	-	320,487,331	19.59%
2016	70,486,795	70,486,795	-	329,344,355	21.40%
2017	72,369,349	72,369,349	-	339,098,676	21.34%
2018	78,694,349	78,694,349	-	356,127,157	22.10%
2019	82,853,422	82,853,422	-	371,574,513	22.30%
2020	88,292,104	88,292,104	-	386,909,993	22.82%

* Actual payroll reported for years beginning December 31, 2014 and thereafter. Census payroll reported for valuation at year end for years prior to December 31, 2014. Contributions are made on actual payroll during the year.

We do not compute a dollar amount for the Actuarially Determined Contribution. It is our understanding that employers contribute the Actuarially Determined Contribution. The amount shown in this column, therefore, matches the actual contributions.

LOPFI Volunteer Service Employers

Last 10 Fiscal Years

FY Ending December 31,	Actuarially	Actual Contribution	Contribution	Covered Payroll	Actual Contribution
	Determined Contribution#		Deficiency (Excess)		as a % of Covered Payroll
2011	\$ 3,960,764	\$ 3,960,764	\$ -	N/A	N/A
2012	4,195,779	4,195,779	-	N/A	N/A
2013	4,359,914	4,359,914	-	N/A	N/A
2014	4,969,527	4,969,527	-	N/A	N/A
2015	4,832,505	4,832,505	-	N/A	N/A
2016	4,811,421	4,811,421	-	N/A	N/A
2017	5,040,672	5,040,672	-	N/A	N/A
2018	5,166,749	5,166,749	-	N/A	N/A
2019	5,671,414	5,671,414	-	N/A	N/A
2020	5,627,223	5,627,223	-	N/A	N/A

We do not compute a dollar amount for the Actuarially Determined Contribution. It is our understanding that employers contribute the Actuarially Determined Contribution. The amount shown in this column, therefore, matches the actual contributions.



Paid Service

Notes to Schedule of Contributions

Valuation Date: December 31, 2018
Notes Actuarially determined contribution rates are calculated as of December 31, which is one year prior to the beginning of the fiscal year in which contributions are reported.

Methods and Assumptions Used to Determine Contribution Rates for Fiscal Year 2020:

Actuarial Cost Method	Entry Age Normal
Amortization Method	Level Percentage of Payroll, Closed
Remaining Amortization Period	16 years beginning January 1, 2020
Asset Valuation Method	5-Year smoothed market; 20% corridor
Wage Inflation	3.25%
Price Inflation	2.50%
Salary Increases	3.75% to 18.25%, including inflation
Investment Rate of Return	7.50%, as adopted by the Board
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the 2017 valuation pursuant to an experience study of the period 2012-2016.
Mortality	RP-2014 Healthy Annuitant, Disabled Retiree and Employee mortality tables for males and females. The tables applied credibility adjustments of 135% for males and 125% for females and were adjusted for fully generational mortality improvements using Scale MP-2016.

Other Information:

Notes There were no changes in methods or assumptions in the December 31, 2018 actuarial valuation. There were changes in benefit provisions in the December 31, 2018 actuarial valuation resulting from legislation passed during the 2019 General Assembly Session.

Volunteer Service

Notes to Schedule of Contributions

Valuation Date: December 31, 2018
Notes Actuarially determined contribution rates are calculated as of December 31, which is one year prior to the beginning of the fiscal year in which contributions are reported.

Methods and Assumptions Used to Determine Contribution Rates for Fiscal Year 2020:

Actuarial Cost Method	Entry Age Normal
Amortization Method	Increasing Dollar, Closed
Remaining Amortization Period	17 years beginning January 1, 2020
Asset Valuation Method	5-Year smoothed market; 20% corridor
Price Inflation	2.50%
Investment Rate of Return	7.50%, as adopted by the Board
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the 2017 valuation pursuant to an experience study of the period 2012-2016.
Mortality	RP-2014 Healthy Annuitant, Disabled Retiree and Employee mortality tables for males and females. The tables applied credibility adjustments of 135% for males and 125% for females and were adjusted for fully generational mortality improvements using Scale MP-2016.

Other Information:

Notes There were no changes in benefit changes, methods or assumptions in the December 31, 2018 actuarial valuation.

Schedule of Investment Returns Multiyear

Last 10 Fiscal Years

<u>FY Ending December 31,</u>	<u>Annual Return¹</u>
2011	0.20 %
2012	11.17 %
2013	17.33 %
2014	6.80 %
2015	(0.05)%
2016	5.76 %
2017	13.91 %
2018	(3.06)%
2019	18.59 %
2020	12.97 %

¹ Money-weighted annual return determined by GRS. Monthly money-weighted returns are not available.

SECTION D

NOTES TO FINANCIAL STATEMENTS

Long-Term Expected Return on Plan Assets

Information about the assumed rate of investment return is included in the 2012-2016 five-year experience study. The assumed rate of investment return falls within a reasonable range of the long-term expected rate of return.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These real rates of return are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real returns for the 10-year period from 2020 to 2029 were based on capital market assumptions collected from thirteen national investment consultants. For each major asset class that is included in the pension plan's target asset allocation as of December 31, 2020, these best estimates are summarized in the following table:

Asset Allocation

<u>Asset Class</u>	<u>Target Allocation</u>	<u>Long-Term Expected Real Rate of Return</u>	<u>Allocation-Weighted Long-Term Expected Real Rate of Return</u>
Fixed Income	25%	0.9%	0.22%
Domestic Equity	42%	5.1%	2.15%
Foreign Equity	18%	7.1%	1.27%
Alternative Investments	15%	7.4%	1.12%
Total	100%		4.76%
Expected Inflation			2.25%
Total Return			7.01%

Gabriel, Roeder, Smith & Company does not provide investment advice.

Single Discount Rate

A Single Discount Rate of 7.00% was used to measure the total pension liability. This Single Discount Rate was based on the expected rate of return on pension plan investments of 7.00%. The projection of cash flows used to determine this Single Discount Rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on these assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Regarding the sensitivity of the net pension liability to changes in the Single Discount Rate, the following presents the plan's net pension liability, calculated using a Single Discount Rate of 7.00%, as well as what the plan's net pension liability would be if it were calculated using a Single Discount Rate that is one percent lower or one percent higher:

Sensitivity of Net Pension Liability to the Single Discount Rate Assumption

	1% Decrease 6.00%	Current Single Discount Rate Assumption 7.00%	1% Increase 8.00%
Paid Service	\$1,173,701,529	\$687,484,644	\$295,329,211
Volunteer Service	59,756,655	35,582,812	16,300,154
Total	\$1,233,458,184	\$723,067,456	\$311,629,365

Summary of Population Statistics

	Paid Service	Volunteer Service
Inactive Plan Members or Beneficiaries Currently Receiving Benefits (Including DROP)	3,868	3,454
Inactive Plan Members Entitled to But Not Yet Receiving Benefits #	6,289	6,674
Active Plan Members	6,509	7,508
Total Plan Members	16,666	17,636

These counts include 1,862 and 2,663 inactive linked records for paid service and volunteer service, respectively. These records will generate separate checks at retirement as well as separate counts.

SECTION E

SUMMARY OF BENEFITS

Arkansas Local Police and Fire Retirement System
Brief Summary as of December 31, 2020 of LOPFI Coverage for
BENEFIT PROGRAM 1 PAID SERVICE
Benefits and Conditions Evaluated and/or Considered
(Section references are to Arkansas Code of 1987, including
amendments from 2021 General Assembly Session)

Voluntary Retirement. Section 24-10-604. A member may retire with an age & service annuity after both (i) completing 5 years (10 years for members hired on or after July 1, 2013) of credited service, and (ii) attaining his normal retirement age. The normal retirement age is age 60 for a member with less than 20 years credited service, age 55 for a member with at least 20 years credited service or any age for a member with 28 or more years of credited service.

Compulsory Retirement. Section 24-10-605. Established by each employer.

Paid Service. Section 24-10-102(13). Covered employment which is half-time employment or more, and for which a minimum dollar amount is paid. For each calendar month in 1981, the minimum is \$500 for the month. For each later calendar year, the \$500 is indexed for inflation (Consumer Price Index). Accordingly, the monthly minimum during 2020 was \$1,470.

Volunteer Service. Section 24-10-102(14). Covered employment which cannot be classified as Paid Service.

Final Average Pay. Section 24-10-102(16)(A). The average of a member's monthly pay during the period of 36 consecutive months of credited Paid Service producing the highest monthly average, which period is contained within the 120 consecutive months of credited Paid Service immediately preceding retirement. Not applicable to Volunteer Service.

Age & Service Annuity. Section 24-10-602. The annuity, payable monthly for life, equals a specified amount multiplied by the member's number of years of credited service. The amount depends upon the conditions related to covered employment:

- A. **Paid Service Not Covered by Social Security.** For each year of such service, 2.94% of the member's final average pay.
- B. **Paid Service Also Covered by Social Security.** For each year of such service, 1.94% of the member's final average pay. In addition, there is a temporary annuity equal to 1.0% of the member's final average pay for each year of service, payable to normal Social Security retirement age.
- C. At time of retirement, the total of A plus B cannot exceed 100% of final average pay.



Early Annuity. Section 24-10-606. A member may retire with an early annuity after both (i) completing 20 years of credited service, and (ii) attaining age 50 or (iii) after completing 25 years of credited paid service. The early annuity amount, payable monthly for life, is computed in the same manner as an age & service annuity, based upon his service and pay record to time of early retirement, but reduced to reflect the fact that his age when payments begin is younger than his normal retirement age. The amount of the reduction is 1/2 of 1% (.005) for each month his age at early retirement is younger than his normal retirement age (age 55 for members with 25 years of credited paid service).

Vested Termination Annuity. Section 24-10-611. If a member leaves LOPFI-covered employment (i) before attaining his early retirement age, and (ii) after completing 5 years (10 years for members hired on or after July 1, 2013) of credited service, he becomes eligible for a vested termination annuity; provided he lives to his normal retirement age and does not withdraw his accumulated contributions. The vested annuity amount, payable monthly for life from his normal retirement age, is computed in the same manner as an age & service annuity, based upon his service and pay record to time of leaving LOPFI coverage.

Non-Duty Disability Annuity. Section 24-10-607(a)(1)(A). A member with 5 or more years (10 or more years for members hired on or after July 1, 2013) of credited service who becomes totally and permanently disabled from other than duty-connected causes receives a non-duty disability annuity computed in the same manner as an age & service annuity, based upon his service and pay record to time of disability.

Duty Disability Annuity. Section 24-10-607(c)(1)(A). A member who becomes totally and permanently disabled from duty-connected causes receives a duty disability annuity computed in the same manner as an age & service annuity, based upon his or her service and pay record to time of disability.

The minimum annuity payable is 65% of the member's final average pay for duty disability retirements approved prior to April 1, 2021.

An approved duty disability retirement that is effective on or after April 1, 2021, shall be classified as catastrophic duty disability, hazardous duty disability, or ordinary duty disability in accordance with the criteria in the rules for disability retirement established by the board.

The minimum annuity payable to

- (i) a catastrophic duty disability retiree shall be an annuity based on twenty-eight (28) years of accrued paid service credit;
- (ii) a hazardous duty disability retiree shall be sixty-five percent (65%) of the final average pay of the member;
- (iii) an ordinary duty disability retiree shall be fifteen percent (15%) of the final average pay of the member.

Non-Duty Death-in-Service. Paid Member. Section 24-10-608(a)(1). Upon the death, from other than duty-connected causes, of a Paid Service member who had completed 5 years (10 years for members hired on or after July 1, 2013) of paid service, his eligible surviving dependents receive the following benefits:

- (a) The surviving spouse receives an annuity equal to the Option B50 annuity (joint and 50% survivor benefit) computed based upon the deceased member's service (and pay) record to time of death. Minimum of 20% of member's final average pay, or \$125 monthly if greater.
- (b) While a spouse benefit is payable, each dependent child under age 18 (age 23 if full time student) receives 10% of member's final average pay, or \$25 monthly if greater. The totals for 4 or more children cannot exceed 30% of final average pay, or \$125 monthly if greater.



- (c) While no spouse benefit is payable, each dependent child under age 18 (age 23 if full time student) receives 20% of member's final average pay, or \$25 monthly if greater. The total for 3 or more children cannot exceed 50% of final average pay, or \$125 monthly if greater.
- (d) If there is neither spouse nor child at time of member's death, each dependent parent receives 20% of final average pay.

Duty Death-in-Service. Section 24-10-608(b)(1). Upon the death of a Paid Service member from duty-connected causes, regardless of length of service, his eligible surviving dependents receive the same benefits as for Non-Duty Death, except that if credited service at time of death is less than 25 years, credited service is increased to 25 years.

Benefit Changes After Retirement. Section 24-10-612. There is an annual redetermination of monthly benefit amount, beginning the July first following 12 months of retirement. The redetermined amount is 3.0% of the monthly benefit from the preceding July.

Member Contributions. Sections 24-10-404 and 24-10-613. Each member contributes 8.5% of his covered pay if his covered employment is resulting in Paid Service credit and is not covered by Social Security. For other covered employment conditions, each member contributes 2.5% of his covered pay. Individual member deposit accounts do not receive interest credit. If a member leaves LOPFI-covered employment before an annuity is payable on his behalf, the member may choose to have his accumulated contributions refunded to him. If he dies, his accumulated contributions are refunded to his designated beneficiary.

Employer Contributions. Section 24-10-405. Each employer contributes the remainder amounts necessary to finance its employees' participation in LOPFI. Contributions to LOPFI are determined based upon level-rate principles, so that contribution rates do not have to increase over decades of time.

DROP (Deferred Retirement Option Plan). Sections 24-10-701 through 24-10-708. Paid service members who have attained age 55 with at least 20 years of service or members with at least 28 years of service may participate. A participant with 28 years of service will receive 75% of his accrued benefit at time of DROP election while in the DROP, payable into the participant's DROP account (which will be credited with 6% interest annually). A participant with less than 28 years of service will receive 72% of his accrued benefit at time of DROP election while in the DROP, payable into the participant's DROP account (which will be credited with 6% interest annually). The duration of participation in the DROP shall not exceed 7 years. When a member has reached year 6 of participation in the DROP, the amount of the accrued benefit at the time of DROP election shall be redetermined. The redetermined amount shall be the amount of the benefit as of the immediately preceding July 1 increased by 3%. The redetermined amount shall be payable only when the member elects to cease employment and receive a service retirement and shall not be added to the plan account. Employer and employee contributions continue and are used to finance System benefits (i.e., they are not deposited to the participant's DROP account). For additional details please refer to Arkansas Code, Title 24, Chapter 10, Subchapter 7.

Arkansas Local Police and Fire Retirement System
Brief Summary as of December 31, 2020 of LOPFI Coverage for
BENEFIT PROGRAM 2 PAID SERVICE
Benefits and Conditions Evaluated and/or Considered
(Section references are to Arkansas Code of 1987, including
amendments from 2021 General Assembly Session)

The provisions for Benefit Program 2 employers are the same as those for Benefit Program 1 employers with the following exception:

Age & Service Annuity. Section 24-10-602. The annuity, payable monthly for life, equals a specified amount multiplied by the member's number of years of credited service. The amount depends upon the conditions related to covered employment:

A. *Paid Service Not Covered by Social Security.*

- **Paid Service Before Adoption of Benefit Program 2.** For each year of such service, 2.94% of the member's final average pay.
- **Paid Service After Adoption of Benefit Program 2.** For each year of such service, 3.28% of the member's final average pay.
- At time of retirement, the total cannot exceed 100% of final average pay.

B. *Paid Service Also Covered by Social Security.*

- **Paid Service Before Adoption of Benefit Program 2.** For each year of such service, 1.94% of the member's final average pay, plus a temporary annuity equal to 1.0% of the member's final average pay for each year of service, payable to normal Social Security retirement age.
- **Paid Service After Adoption of Benefit Program 2.** For each year of such service, 2.94% of the member's final average pay.
- At time of retirement, the total cannot exceed 100% of final average pay.

Arkansas Local Police and Fire Retirement System
Brief Summary as of December 31, 2020 of LOPFI Coverage for
VOLUNTEER SERVICE
Benefits and Conditions Evaluated and/or Considered
(Section references are to Arkansas Code of 1987, including
amendments from 2021 General Assembly Session)

Voluntary Retirement. Section 24-10-604. A member may retire with an age & service annuity after both (i) completing 5 years (10 years for members hired on or after July 1, 2013) of credited service, and (ii) attaining his normal retirement age. The normal retirement age is age 60 for a member with less than 20 years credited service, age 55 for a member with at least 20 years credited service or any age for a member with 28 or more years of credited service.

Compulsory Retirement. Section 24-10-605. Established by each employer.

Paid Service. Section 24-10-102(13). Covered employment which is half-time employment or more, and for which a minimum dollar amount is paid. For each calendar month in 1981, the minimum is \$500 for the month. For each later calendar year, the \$500 is indexed for inflation (Consumer Price Index). Accordingly, the monthly minimum during 2020 was \$1,470.

Volunteer Service. Section 24-10-102(14). Covered employment which cannot be classified as Paid Service.

Age & Service Annuity. Section 24-10-102(16)(A). The annuity, payable monthly for life, equals a specified amount multiplied by the member's number of years of credited service. The amount depends upon the conditions related to covered employment:

Volunteer Service. For each year of Benefit Program 3 Volunteer Service, \$5.00 monthly, to a maximum of \$200 monthly for all volunteer service. Beginning in 2003, each July 1 these amounts are indexed for inflation by any percentage increase in the inflation index for the period from December 2003 to the December immediately preceding July 1, for members retiring in the next 12 months. Accordingly, the basic benefit factor reflected in the December 31, 2020 valuations was \$7.06 monthly. For each year of Benefit Program 4 Volunteer Service, \$10.00 monthly, to a maximum benefit of \$400 monthly for all volunteer service. Beginning in 2013, each July 1 these amounts are indexed for inflation by any percentage increase in the inflation index for the period from December 2011 to the December immediately preceding July 1, for members retiring in the next 12 months. Accordingly, the basic benefit factor reflected in the December 31, 2020 valuations was \$11.44 monthly.

Early Annuity. Section 24-10-606. A member may retire with an early annuity after both (i) completing 20 years of credited service, and (ii) attaining age 50. The early annuity amount, payable monthly for life, is computed in the same manner as an age & service annuity, based upon his service record to time of early retirement, but reduced to reflect the fact that his age when payments begin is younger than his normal retirement age. The amount of the reduction is 1/2 of 1% (.005) for each month his age at early retirement is younger than his normal retirement age.



Vested Termination Annuity. Section 24-10-611. If a member leaves LOPFI-covered employment (i) before attaining his early retirement age, and (ii) after completing 5 years (10 years for members hired on or after July 1, 2013) of credited service, he becomes eligible for a vested termination annuity; provided he lives to his normal retirement age (and does not withdraw any accumulated contributions). The vested annuity amount, payable monthly for life from his normal retirement age, is computed in the same manner as an age & service annuity, based upon his service record to time of leaving LOPFI coverage.

Non-Duty Disability Annuity. Section 24-10-607(a)(1)(A). A member with 5 or more years (10 or more years for members hired on or after July 1, 2013) of credited service who becomes totally and permanently disabled from other than duty-connected causes receives a non-duty disability annuity computed in the same manner as an age & service annuity, based upon his service record to time of disability.

Duty Disability Annuity. Section 24-10-607(c)(1)(A). A member who becomes totally and permanently disabled from duty-connected causes receives a duty disability annuity computed in the same manner as an age & service annuity, based upon his service and pay record to time of disability. If the member had less than 25 years of service at time of disability, credited service is increased to 25 years.

Non-Duty Death-in-Service. Volunteer Member. Section 24-10-609. Upon the death, from other than duty-connected causes, of a Volunteer member who had completed 5 years (10 years for members hired on or after July 1, 2013) of volunteer service, or who was eligible for normal retirement, his eligible surviving dependents receive the following benefits:

- (a) The surviving spouse receives an annuity equal to the Option B50 annuity (joint and 50% survivor benefit) computed based upon the deceased member's service record to time of death.
- (b) Each dependent child under age 18 (age 23 if full time student) receives \$15 monthly. The totals for 3 or more children cannot exceed \$40 monthly.

Duty Death-in-Service. Section 24-10-608(b)(1). Upon the death of a Paid Service member from duty-connected causes, regardless of length of service, his eligible surviving dependents receive the same benefits as for Non-Duty Death, except that if credited service at the time of death is less than 25 years, credited service is increased to 25 years.

Benefit Changes After Retirement. Section 24-10-612. There is an annual redetermination of monthly benefit amount, beginning the July first following 12 months of retirement. The redetermined amount is 3.0% of the monthly benefit from the preceding July.

Member Contributions. For Volunteer Service credit, members do not contribute.

Employer Contributions. Section 24-10-405. Each employer contributes the amounts necessary to finance all employees participation in LOPFI. Contributions to LOPFI are determined based upon level-rate principles, so that contribution rates do not have to increase over decades of time.

SECTION F

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

Summary of Assumptions Used for LOPFI GASB Accounting Reports

The actuarial assumptions used in the calculation of the Total Pension Liabilities are shown in this section of the report. The assumptions are established by the Board after consulting with the actuary as outlined in A.C.A. 24-10-205(a)(1) with the exception of the economic assumptions. The economic assumptions for purposes of the GASB Accounting reports were selected by the actuary based on the results of an experience study covering the period from January 1, 2012 through December 31, 2016.

ECONOMIC ASSUMPTIONS

The investment return rate used in this report was 7.00% per year, compounded annually (net after administrative expenses). This rate of return is not the assumed real rate of return. The real rate of return is defined to be the portion of investment return which is more than the wage inflation rate. With a 3.25% wage inflation assumption, the 7.00% investment return rate translates to an assumed real rate of return of 3.75%.

Price inflation was assumed to be 2.50% a year. This assumption was utilized to increase the basic benefit factor for volunteer members.

Pay increase assumptions for individual active members are summarized in Schedule A-5. Part of the assumption for each age is for a merit and/or seniority increase, and the other 3.25% recognizes wage inflation.

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.

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

NON-ECONOMIC ASSUMPTIONS

The mortality tables used to measure retired life mortality were the RP-2014 Healthy Annuitant benefit weighted generational mortality tables for males and females. The disability post-retirement mortality tables used were the RP-2014 Disabled Retiree benefit weighted generational mortality tables for males and females. The death-in-service mortality tables used were the RP-2014 Employee benefit weighted generational mortality tables for males and females. Fifty percent of deaths-in-service were assumed to be duty related. The tables applied credibility adjustments of 135% for males and 125% for females and were adjusted for fully generational mortality improvements using Scale MP-2016. Related retired life mortality values are shown in Schedule A-1.

The probabilities of retirement for members eligible to retire are shown in Schedule A-3.

The probabilities of withdrawal from service are summarized in Schedule A-4, and the **probabilities of disability** are summarized in Schedule A-2.



An individual entry age actuarial cost method of valuation was used in determining age & service allowance normal costs and the allocation of actuarial present values between service rendered before and after the valuation date. The entry-age actuarial cost method has the following characteristics:

- (i) The annual normal costs for each individual active member, payable from the member's actual date of employment to the member's projected date of retirement are sufficient to accumulate the actuarial present value of the member's benefit at the time of retirement; and
- (ii) Each annual normal cost is: (a) a constant percentage of the member's year by year projected covered pay for paid service plans, or (b) an increasing dollar amount for volunteer service plans.

Differences in the past between assumed experience and actual experience ("actuarial gains and losses") are inevitable and become part of accrued liabilities. In LOPFI, cumulative actuarial losses and gains are the same as unfunded (or overfunded) accrued liabilities.

Unfunded accrued liabilities are amortized to produce contribution amounts (principal and interest) which are (a) level percent of payroll contributions over a period of future years for paid service plans, or (b) increasing dollar amounts for volunteer service plans.

For Benefit Program 3 volunteer service plans, the contribution rates from the December 31, 2002 valuation were developed based on a \$5.00 per month basic benefit factor. This factor is \$7.06 effective July 1, 2021 and is assumed to increase at the assumed rate of price inflation in future years. For Benefit Program 4 volunteer service plans, the contribution rates from the December 31, 2012 valuation were developed based on a \$10.00 per month basic benefit factor. This factor is \$11.44 effective July 1, 2021 and is assumed to increase at the assumed rate of price inflation in future years.

OTHER TECHNICAL ASSUMPTIONS -----

Decrements are assumed to occur at the middle of the valuation year.

The probability of being married, for death-in-service benefits, is assumed to be 90%.

Members who are eligible to participate in the DROP are assumed to participate in the DROP program in such a manner that is the most advantageous to them.

Future service credit is always assumed to accrue at the rate of 1 year of credit every 12 calendar months. Lower service accrual rates (service breaks or less-than-full-time employment) or higher service accrual rates (addition of military credit or reinstatement of prior service) are reflected as they are reported. Any lower or higher accrual rates may result in small financial gains or losses when reported.

The form of benefit payment assumed in the valuation for paid service and volunteer service plans is the Five Year Certain and Life Option. For local plans under LOPFI administration, the assumed form of benefit payment is 100% joint and survivor for police plans and the Life Option for fire plans. For local fire plans under LOPFI administration who have adopted Act 397, the assumed form of benefit payment is 100% joint and survivor.

Employer contribution dollars were assumed to be **paid in equal installments** throughout the employer fiscal year.

Present assets (cash & investments) were used based on a smoothed market value.

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.

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.

Schedule A-1

Single Life Retirement Values

Based on the RP-2014 Healthy Annuitant Generational Mortality Tables and 7.00% Interest

Sample Attained Ages	Probability of Dying		Value at Retirement		Future Life Expectancy (years)*					
	Next Year*		\$1.00 Monthly for Life		2020		2025		2030	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
35	0.171%	0.135%	\$ 163.49	\$ 166.35	46.55	50.22	47.11	50.74	47.67	51.26
40	0.252%	0.207%	159.20	163.03	41.45	45.10	41.99	45.61	42.53	46.11
45	0.358%	0.261%	153.83	158.85	36.49	40.10	37.01	40.59	37.53	41.08
50	0.523%	0.329%	147.11	153.31	31.70	35.16	32.20	35.63	32.70	36.11
55	0.751%	0.461%	138.90	145.99	27.10	30.30	27.58	30.76	28.05	31.22
60	1.059%	0.693%	128.88	136.80	22.71	25.62	23.16	26.05	23.60	26.49
65	1.532%	1.036%	116.88	125.63	18.58	21.19	18.97	21.57	19.37	21.98
70	2.282%	1.593%	102.78	112.12	14.74	17.01	15.07	17.36	15.43	17.72
75	3.609%	2.590%	86.64	96.20	11.23	13.14	11.52	13.46	11.83	13.79
80	6.060%	4.426%	69.13	78.49	8.14	9.69	8.39	9.97	8.64	10.25

* Life expectancies in future years are determined by the fully generational MP-2016 projection scale.

Sample Attained Ages	Benefit Increasing 3.00% Yearly	Portion of Age 55 Lives Still Alive	Sample Attained Ages
55	\$100	100 %	55
60	116	95	60
65	134	89	65
70	156	81	70
75	181	69	75
80	209	54	80



Schedule A-2 Probabilities of Disability Retirement

Paid Service Members

Sample Ages	Percent Becoming Disabled within Next Year	
	Non-Duty	Duty
20	0.07 %	0.12 %
25	0.07	0.12
30	0.10	0.15
35	0.13	0.21
40	0.20	0.32
45	0.31	0.49
50	0.52	0.84
55	0.91	1.45
60	1.36	2.18

Given the relatively small number of disabilities in total and the sensitivity of the results to the actual disability benefit that members would qualify for, we have assumed the minimum disability benefit would be based on duty disabilities being split 1/3 catastrophic, 1/3 hazardous and 1/3 ordinary duty. The resulting weighted minimum disability benefit is approximately 55% of final average pay. This assumption will be reviewed and updated as experience emerges.

Volunteer Service Members

Sample Ages	Percent Becoming Disabled within Next Year	
	Non-Duty	Duty
20	0.04 %	0.00 %
25	0.04	0.00
30	0.04	0.00
35	0.04	0.00
40	0.09	0.01
45	0.12	0.01
50	0.23	0.02
55	0.41	0.04
60	0.65	0.06

Schedule A-3

Probabilities of Retirement for Members Eligible to Retire

Paid Service Members

Retirement Ages	Percents of Active Members Retiring within Next Year		Years of Service	Percents of Active Members Retiring within Next Year
	Early	Normal		
45-49	6 %			
50-54	6			
55		18 %	28	20 %
56		15	29	15
57		15	30	15
58		15	31	15
59		15	32	15
60		20	33	25
61		15	34	100
62		25		
63		25		
64		25		
65		50		
66		60		
67		70		
68		80		
69		90		
70+		100		

A member was assumed eligible for retirement after attaining age 55 with 20 years of service or age 60 with 5 years of service or any age with 28 or more years of service. A member was assumed to retire with 100% probability at 34 or more years of service credit.

A member was assumed eligible for a reduced benefit after attaining age 50 with 20 or more years of service or any age with 25 or more years of paid service credit.

The probabilities of retirement shown above represent ultimate termination of employment (whether or not the member participates in the DROP).

Schedule A-3

Probabilities of Retirement for Members Eligible to Retire (Concluded)

Volunteer Service Members

Retirement Ages	Percents of Active Members Retiring within Next Year	
	Early	Normal
Under 50		18 %
50-54	2.5 %	18
55-59		15
60-64		10
65-69		15
70-74		20
75+		100

A member was assumed to be eligible for retirement after 28 years of service, attaining age 55 with 20 years of service, or age 60 with 5 years of service.

A member was assumed eligible for a reduced benefit after attaining age 50 with 20 or more years of service.

Schedule A-4

Rates of Separation (Excluding Deaths and Disability) from Active Employment Before Retirement

Paid Service Members

Sample Ages	Years of Service	% of Active Members Separating within Next Year
ALL	0	18.00 %
	1	16.00
	2	13.00
	3	11.00
	4	10.00
25	5 & Over	9.42
30		7.92
35		6.07
40		4.84
45		3.87
50		3.08
55		0.88
60		0.00

Volunteer Service Members

Sample Ages	Years of Service	% of Active Members Separating within Next Year
ALL	0	23.00 %
	1	21.00
	2	19.00
	3	17.00
	4	15.00
25	5 & Over	9.50
30		9.50
35		9.50
40		9.50
45		9.50
50		9.50
55		9.50
60		9.50

Schedule A-5

Pay Increase Assumptions for an Individual Paid Service Member

Pay Increase Assumptions for an Individual Member			
Service Years	Merit and Seniority	Base (Economic)	Increase Next Year
1	15.00%	3.25%	18.25%
2	9.00%	3.25%	12.25%
3	4.00%	3.25%	7.25%
4	3.00%	3.25%	6.25%
5	2.00%	3.25%	5.25%
6	1.50%	3.25%	4.75%
7	1.50%	3.25%	4.75%
8	1.50%	3.25%	4.75%
9	1.00%	3.25%	4.25%
10	1.00%	3.25%	4.25%
11	0.50%	3.25%	3.75%
12	0.50%	3.25%	3.75%
13	0.50%	3.25%	3.75%
14	0.50%	3.25%	3.75%
15	0.50%	3.25%	3.75%
16	0.50%	3.25%	3.75%
17	0.50%	3.25%	3.75%
18	0.50%	3.25%	3.75%
19	0.50%	3.25%	3.75%
20+	0.50%	3.25%	3.75%

SECTION G

CALCULATION OF THE SINGLE DISCOUNT RATE

Calculation of the Single Discount Rate

GASB Statement No. 67 includes a specific requirement for the discount rate that is used for the purpose of the measurement of the Total Pension Liability. This rate considers the ability of the fund to meet benefit obligations in the future. To make this determination, employer contributions, employee contributions, benefit payments, expenses and investment returns are projected into the future. The Plan Net Position (assets) in future years can then be determined and compared to its obligation to make benefit payments in those years. As long as assets are projected to be on hand in a future year, the assumed valuation discount rate is used. In years where assets are not projected to be sufficient to meet benefit payments, the use of a “risk-free” rate is required, as described in the following paragraph.

The Single Discount Rate (SDR) is equivalent to applying these two rates to the benefits that are projected to be paid during the different time periods. The SDR reflects: (1) the long-term expected rate of return on pension plan investments (during the period in which the fiduciary net position is projected to be sufficient to pay benefits); and (2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating as of the measurement date (to the extent that the plan’s projected fiduciary net position is not sufficient to pay benefits).

For the purpose of this valuation, the expected rate of return on pension plan investments is 7.00%; the municipal bond rate is 2.00%; and the resulting SDR is 7.00%.

The tables in this section provide background for the development of the Single Discount Rate.

The **Projection of Contributions** table shows the development of expected contributions in future years. Normal Cost contributions for future hires are not included (nor are their liabilities).

The **Projection of Plan Fiduciary Net Position** table shows the development of expected asset levels in future years.

The **Present Values of Projected Benefit Payments** table shows the development of the Single Discount Rate. It breaks down the benefit payments into present values for funded and unfunded portions and shows the equivalent total at the SDR.

Paid Service
Single Discount Rate Development
Projection of Contributions Beginning January 1, 2021
(Years 1-50)

Year	Projected Payroll for Current Employees	Projected Contributions from Current Employees	Projected Service Cost and Expense Contributions	Projected UAL Contributions	Projected Total Contributions
0	\$ 386,909,993				
1	372,244,111	\$ 25,056,945	\$ 39,407,164	\$ 57,845,365	\$ 122,309,475
2	343,457,882	23,039,603	38,429,591	60,591,522	122,060,716
3	321,163,747	21,488,944	37,493,233	63,764,476	122,746,653
4	302,436,023	20,191,622	36,480,561	66,300,899	122,973,083
5	284,724,480	18,964,464	35,554,855	68,788,150	123,307,470
6	270,093,933	17,954,283	34,499,625	71,118,077	123,571,985
7	255,480,582	16,947,136	33,419,186	73,473,124	123,839,447
8	240,557,615	15,924,892	32,274,653	75,863,267	124,062,812
9	225,634,399	14,900,333	31,097,083	78,329,678	124,327,094
10	211,327,909	13,915,984	29,947,237	80,876,001	124,739,223
11	198,064,390	13,006,137	28,875,678	83,505,100	125,386,916
12	185,064,632	12,112,539	27,815,972	86,219,555	126,148,067
13	172,363,205	11,244,215	26,772,387	89,021,691	127,038,293
14	160,470,935	10,440,120	25,789,255	91,914,896	128,144,271
15	149,144,392	9,679,050	24,852,017	94,902,130	129,433,197
16	138,199,234	8,946,493	23,936,515	-	32,883,008
17	127,663,921	8,241,110	22,883,977	-	31,125,087
18	117,586,660	7,565,397	21,857,727	-	29,423,124
19	107,671,938	6,903,653	20,826,588	-	27,730,241
20	97,760,118	6,247,280	19,762,979	-	26,010,259
21	88,122,569	5,618,876	18,701,332	-	24,320,208
22	79,067,611	5,039,538	17,678,169	-	22,717,706
23	70,371,334	4,483,224	16,680,712	-	21,163,936
24	61,850,787	3,936,816	15,689,530	-	19,626,345
25	53,583,433	3,406,361	14,704,736	-	18,111,097
26	45,482,406	2,883,459	13,718,287	-	16,601,746
27	37,612,376	2,377,519	12,743,841	-	15,121,360
28	30,188,032	1,903,931	11,802,627	-	13,706,558
29	23,666,118	1,492,837	10,938,892	-	12,431,729
30	17,922,289	1,132,183	10,134,853	-	11,267,036
31	12,710,351	801,506	9,369,916	-	10,171,422
32	8,162,194	512,930	8,660,680	-	9,173,610
33	4,341,843	270,446	8,016,782	-	8,287,228
34	1,330,584	82,480	7,449,296	-	7,531,777
35	-	-	7,057,545	-	7,057,545
36	-	-	6,807,378	-	6,807,378
37	-	-	6,550,545	-	6,550,545
38	-	-	6,288,742	-	6,288,742
39	-	-	6,023,273	-	6,023,273
40	-	-	5,755,399	-	5,755,399
41	-	-	5,486,623	-	5,486,623
42	-	-	5,218,156	-	5,218,156
43	-	-	4,950,843	-	4,950,843
44	-	-	4,685,455	-	4,685,455
45	-	-	4,422,812	-	4,422,812
46	-	-	4,163,655	-	4,163,655
47	-	-	3,908,585	-	3,908,585
48	-	-	3,658,112	-	3,658,112
49	-	-	3,412,843	-	3,412,843
50	-	-	3,173,429	-	3,173,429



Paid Service
Single Discount Rate Development
Projection of Contributions Beginning January 1, 2021
(Years 51-100)

Year	Projected Payroll for Current Employees	Projected Contributions from Current Employees	Projected Service Cost and Expense Contributions	Projected UAL Contributions	Projected Total Contributions
51	\$ -	\$ -	\$ 2,940,475	\$ -	\$ 2,940,475
52	-	-	2,714,545	-	2,714,545
53	-	-	2,496,161	-	2,496,161
54	-	-	2,285,808	-	2,285,808
55	-	-	2,083,930	-	2,083,930
56	-	-	1,890,933	-	1,890,933
57	-	-	1,707,191	-	1,707,191
58	-	-	1,533,037	-	1,533,037
59	-	-	1,368,769	-	1,368,769
60	-	-	1,214,637	-	1,214,637
61	-	-	1,070,836	-	1,070,836
62	-	-	937,500	-	937,500
63	-	-	814,691	-	814,691
64	-	-	702,388	-	702,388
65	-	-	600,486	-	600,486
66	-	-	508,787	-	508,787
67	-	-	427,004	-	427,004
68	-	-	354,763	-	354,763
69	-	-	291,604	-	291,604
70	-	-	236,994	-	236,994
71	-	-	190,331	-	190,331
72	-	-	150,963	-	150,963
73	-	-	118,197	-	118,197
74	-	-	91,321	-	91,321
75	-	-	69,617	-	69,617
76	-	-	52,379	-	52,379
77	-	-	38,928	-	38,928
78	-	-	28,624	-	28,624
79	-	-	20,879	-	20,879
80	-	-	15,168	-	15,168
81	-	-	11,034	-	11,034
82	-	-	8,090	-	8,090
83	-	-	6,022	-	6,022
84	-	-	4,580	-	4,580
85	-	-	3,573	-	3,573
86	-	-	2,859	-	2,859
87	-	-	2,340	-	2,340
88	-	-	1,946	-	1,946
89	-	-	1,634	-	1,634
90	-	-	1,376	-	1,376
91	-	-	1,155	-	1,155
92	-	-	962	-	962
93	-	-	791	-	791
94	-	-	639	-	639
95	-	-	504	-	504
96	-	-	385	-	385
97	-	-	282	-	282
98	-	-	193	-	193
99	-	-	117	-	117
100	-	-	53	-	53

Paid Service
Single Discount Rate Development
Projection of Plan Fiduciary Net Position Beginning January 1, 2021
(Years 1-50)

Year	Projected Beginning Plan Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Administrative Expenses	Projected Investment Earnings at 7.00%	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(e)	(f)=(a)+(b)-(c)-(d)+(e)
1	\$ 2,407,334,337	\$ 122,309,475	\$ 117,340,937	\$ 3,851,735	\$ 168,551,831	\$ 2,577,002,971
2	2,577,002,971	122,060,716	123,588,244	4,123,205	180,195,777	2,751,548,015
3	2,751,548,015	122,746,653	135,096,177	4,402,477	192,031,958	2,926,827,972
4	2,926,827,972	122,973,083	147,310,748	4,682,925	203,879,416	3,101,686,799
5	3,101,686,799	123,307,470	145,482,975	4,962,699	216,184,303	3,290,732,899
6	3,290,732,899	123,571,985	157,785,670	5,265,173	228,992,913	3,480,246,953
7	3,480,246,953	123,839,447	170,972,562	5,568,395	241,803,931	3,669,349,373
8	3,669,349,373	124,062,812	184,778,305	5,870,959	254,563,347	3,857,326,268
9	3,857,326,268	124,327,094	199,326,374	6,171,722	267,219,903	4,043,375,170
10	4,043,375,170	124,739,223	213,475,861	6,469,400	279,760,408	4,227,929,539
11	4,227,929,539	125,386,916	227,684,488	6,764,687	292,202,449	4,411,069,729
12	4,411,069,729	126,148,067	242,285,145	7,057,712	304,535,989	4,592,410,928
13	4,592,410,928	127,038,293	257,194,719	7,347,857	316,737,512	4,771,644,157
14	4,771,644,157	128,144,271	271,082,900	7,634,631	328,834,160	4,949,905,056
15	4,949,905,056	129,433,197	285,050,109	7,919,848	340,866,374	5,127,234,670
16	5,127,234,670	32,883,008	298,781,350	8,203,575	349,475,116	5,202,607,869
17	5,202,607,869	31,125,087	311,796,983	8,324,173	354,238,762	5,267,850,562
18	5,267,850,562	29,423,124	324,538,509	8,428,561	358,305,186	5,322,611,802
19	5,322,611,802	27,730,241	337,773,636	8,516,179	361,621,815	5,365,674,044
20	5,365,674,044	26,010,259	350,605,989	8,585,078	364,133,083	5,396,626,320
21	5,396,626,320	24,320,208	363,746,644	8,634,602	365,787,743	5,414,353,025
22	5,414,353,025	22,717,706	375,327,818	8,662,965	366,574,012	5,419,653,960
23	5,419,653,960	21,163,936	386,465,890	8,671,446	366,508,084	5,412,188,645
24	5,412,188,645	19,626,345	397,862,650	8,659,502	365,540,877	5,390,833,715
25	5,390,833,715	18,111,097	409,020,986	8,625,334	363,611,135	5,354,909,627
26	5,354,909,627	16,601,746	418,952,949	8,567,855	360,704,753	5,304,695,323
27	5,304,695,323	15,121,360	428,817,756	8,487,513	356,802,150	5,239,313,564
28	5,239,313,564	13,706,558	437,102,193	8,382,902	351,895,295	5,159,430,322
29	5,159,430,322	12,431,729	444,403,683	8,255,089	346,012,771	5,065,216,050
30	5,065,216,050	11,267,036	450,208,194	8,104,346	339,183,162	4,957,353,708
31	4,957,353,708	10,171,422	454,212,379	7,931,766	331,463,263	4,836,844,247
32	4,836,844,247	9,173,610	456,790,759	7,738,951	322,911,185	4,704,399,331
33	4,704,399,331	8,287,228	456,728,023	7,527,039	313,618,992	4,562,050,489
34	4,562,050,489	7,531,777	455,013,080	7,299,281	303,695,424	4,410,965,329
35	4,410,965,329	7,057,545	449,650,123	7,057,545	293,295,992	4,254,611,197
36	4,254,611,197	6,807,378	443,097,427	6,807,378	282,576,668	4,094,090,439
37	4,094,090,439	6,550,545	435,237,391	6,550,545	271,610,664	3,930,463,712
38	3,930,463,712	6,288,742	426,379,594	6,288,742	260,461,572	3,764,545,690
39	3,764,545,690	6,023,273	416,604,927	6,023,273	249,183,638	3,597,124,401
40	3,597,124,401	5,755,399	405,820,324	5,755,399	237,835,225	3,429,139,302
41	3,429,139,302	5,486,623	394,265,457	5,486,623	226,473,848	3,261,347,693
42	3,261,347,693	5,218,156	382,214,193	5,218,156	215,143,096	3,094,276,596
43	3,094,276,596	4,950,843	369,744,542	4,950,843	203,877,176	2,928,409,230
44	2,928,409,230	4,685,455	356,861,249	4,685,455	192,709,749	2,764,257,730
45	2,764,257,730	4,422,812	343,647,388	4,422,812	181,673,807	2,602,284,149
46	2,602,284,149	4,163,655	330,216,259	4,163,655	170,797,795	2,442,865,685
47	2,442,865,685	3,908,585	316,650,740	3,908,585	160,105,266	2,286,320,211
48	2,286,320,211	3,658,112	302,913,322	3,658,112	149,619,760	2,133,026,649
49	2,133,026,649	3,412,843	289,001,565	3,412,843	139,367,887	1,983,392,972
50	1,983,392,972	3,173,429	274,972,071	3,173,429	129,376,257	1,837,797,158



Paid Service
Single Discount Rate Development
Projection of Plan Fiduciary Net Position Beginning January 1, 2021
(Years 51-100)

Year	Projected Beginning Plan Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Administrative Expenses	Projected Investment Earnings at 7.00%	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(e)	(f)=(a)+(b)-(c)-(d)+(e)
51	\$ 1,837,797,158	\$ 2,940,475	\$ 260,876,015	\$ 2,940,475	\$ 119,669,568	\$ 1,696,590,711
52	1,696,590,711	2,714,545	246,760,794	2,714,545	110,270,794	1,560,100,711
53	1,560,100,711	2,496,161	232,672,068	2,496,161	101,201,259	1,428,629,902
54	1,428,629,902	2,285,808	218,654,461	2,285,808	92,480,621	1,302,456,061
55	1,302,456,061	2,083,930	204,749,608	2,083,930	84,126,891	1,181,833,344
56	1,181,833,344	1,890,933	190,995,730	1,890,933	76,156,545	1,066,994,159
57	1,066,994,159	1,707,191	177,430,318	1,707,191	68,584,561	958,148,402
58	958,148,402	1,533,037	164,091,785	1,533,037	61,424,311	855,480,928
59	855,480,928	1,368,769	151,020,266	1,368,769	54,687,353	759,148,015
60	759,148,015	1,214,637	138,258,630	1,214,637	48,383,152	669,272,537
61	669,272,537	1,070,836	125,853,451	1,070,836	42,518,707	585,937,793
62	585,937,793	937,500	113,854,098	937,500	37,098,149	509,181,844
63	509,181,844	814,691	102,311,531	814,691	32,122,389	438,992,702
64	438,992,702	702,388	91,277,811	702,388	27,588,798	375,303,689
65	375,303,689	600,486	80,802,936	600,486	23,490,987	317,991,740
66	317,991,740	508,787	70,932,951	508,787	19,818,758	266,877,546
67	266,877,546	427,004	61,709,045	427,004	16,558,141	221,726,642
68	221,726,642	354,763	53,165,686	354,763	13,691,538	182,252,494
69	182,252,494	291,604	45,329,389	291,604	11,197,979	148,121,084
70	148,121,084	236,994	38,217,515	236,994	9,053,486	118,957,055
71	118,957,055	190,331	31,836,776	190,331	7,231,553	94,351,832
72	94,351,832	150,963	26,182,359	150,963	5,703,744	73,873,217
73	73,873,217	118,197	21,238,027	118,197	4,440,366	57,075,556
74	57,075,556	91,321	16,976,358	91,321	3,411,166	43,510,364
75	43,510,364	69,617	13,359,785	69,617	2,586,041	32,736,620
76	32,736,620	52,379	10,342,534	52,379	1,935,697	24,329,783
77	24,329,783	38,928	7,872,077	38,928	1,432,222	17,889,928
78	17,889,928	28,624	5,889,980	28,624	1,049,632	13,049,581
79	13,049,581	20,879	4,333,787	20,879	764,354	9,480,148
80	9,480,148	15,168	3,139,658	15,168	555,581	6,896,071
81	6,896,071	11,034	2,245,113	11,034	405,475	5,056,433
82	5,056,433	8,090	1,591,567	8,090	299,188	3,764,053
83	3,764,053	6,022	1,126,067	6,022	224,738	2,862,724
84	2,862,724	4,580	802,469	4,580	172,779	2,233,034
85	2,233,034	3,573	582,313	3,573	136,276	1,786,997
86	1,786,997	2,859	434,924	2,859	110,125	1,462,198
87	1,462,198	2,340	336,826	2,340	90,764	1,216,137
88	1,216,137	1,946	270,847	1,946	75,810	1,021,100
89	1,021,100	1,634	225,046	1,634	63,734	859,788
90	859,788	1,376	191,575	1,376	53,593	721,806
91	721,806	1,155	165,558	1,155	44,830	601,078
92	601,078	962	144,052	962	37,119	494,145
93	494,145	791	125,320	791	30,278	399,103
94	399,103	639	108,445	639	24,206	314,864
95	314,864	504	92,990	504	18,841	240,715
96	240,715	385	78,784	385	14,139	176,070
97	176,070	282	65,787	282	10,061	120,344
98	120,344	193	54,000	193	6,566	72,910
99	72,910	117	43,455	117	3,609	33,064
100	33,064	53	34,201	53	1,138	-



Paid Service

Single Discount Rate Development

Present Values of Projected Benefits Beginning January 1, 2021 (Years 1-50)

Year	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Projected Benefit Payments	Unfunded Portion of Projected Benefit Payments	Present Value of Funded Benefit Payments using Expected Return Rate (v)	Present Value of Unfunded Benefit Payments using Municipal Bond Rate (vf)	Present Value of All Benefit Payments using Single Discount Rate (SDR)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v ^{(a)-.5}	(g)=(e)*vf ^{(a)-.5}	(h)=(c)/(1+SDR) ^{(a)-.5}
1	\$ 2,407,334,337	\$ 117,340,937	\$ 117,340,937	\$ -	\$ 113,437,765	\$ -	\$ 113,437,765
2	2,577,002,971	123,588,244	123,588,244	-	111,660,995	-	111,660,995
3	2,751,548,015	135,096,177	135,096,177	-	114,073,197	-	114,073,197
4	2,926,827,972	147,310,748	147,310,748	-	116,249,532	-	116,249,532
5	3,101,686,799	145,482,975	145,482,975	-	107,296,405	-	107,296,405
6	3,290,732,899	157,785,670	157,785,670	-	108,756,890	-	108,756,890
7	3,480,246,953	170,972,562	170,972,562	-	110,136,650	-	110,136,650
8	3,669,349,373	184,778,305	184,778,305	-	111,242,988	-	111,242,988
9	3,857,326,268	199,326,374	199,326,374	-	112,150,872	-	112,150,872
10	4,043,375,170	213,475,861	213,475,861	-	112,254,274	-	112,254,274
11	4,227,929,539	227,684,488	227,684,488	-	111,893,221	-	111,893,221
12	4,411,069,729	242,285,145	242,285,145	-	111,279,033	-	111,279,033
13	4,592,410,928	257,194,719	257,194,719	-	110,398,920	-	110,398,920
14	4,771,644,157	271,082,900	271,082,900	-	108,747,961	-	108,747,961
15	4,949,905,056	285,050,109	285,050,109	-	106,870,154	-	106,870,154
16	5,127,234,670	298,781,350	298,781,350	-	104,689,935	-	104,689,935
17	5,202,607,869	311,796,983	311,796,983	-	102,103,253	-	102,103,253
18	5,267,850,562	324,538,509	324,538,509	-	99,323,068	-	99,323,068
19	5,322,611,802	337,773,636	337,773,636	-	96,610,841	-	96,610,841
20	5,365,674,044	350,605,989	350,605,989	-	93,720,731	-	93,720,731
21	5,396,626,320	363,746,644	363,746,644	-	90,872,307	-	90,872,307
22	5,414,353,025	375,327,818	375,327,818	-	87,631,356	-	87,631,356
23	5,419,653,960	386,465,890	386,465,890	-	84,328,849	-	84,328,849
24	5,412,188,645	397,862,650	397,862,650	-	81,136,150	-	81,136,150
25	5,390,833,715	409,020,986	409,020,986	-	77,954,832	-	77,954,832
26	5,354,909,627	418,952,949	418,952,949	-	74,624,068	-	74,624,068
27	5,304,695,323	428,817,756	428,817,756	-	71,384,291	-	71,384,291
28	5,239,313,564	437,102,193	437,102,193	-	68,003,161	-	68,003,161
29	5,159,430,322	444,403,683	444,403,683	-	64,615,988	-	64,615,988
30	5,065,216,050	450,208,194	450,208,194	-	61,177,532	-	61,177,532
31	4,957,353,708	454,212,379	454,212,379	-	57,683,785	-	57,683,785
32	4,836,844,247	456,790,759	456,790,759	-	54,216,105	-	54,216,105
33	4,704,399,331	456,728,023	456,728,023	-	50,662,298	-	50,662,298
34	4,562,050,489	455,013,080	455,013,080	-	47,170,158	-	47,170,158
35	4,410,965,329	449,650,123	449,650,123	-	43,564,666	-	43,564,666
36	4,254,611,197	443,097,427	443,097,427	-	40,121,311	-	40,121,311
37	4,094,090,439	435,237,391	435,237,391	-	36,831,407	-	36,831,407
38	3,930,463,712	426,379,594	426,379,594	-	33,721,334	-	33,721,334
39	3,764,545,690	416,604,927	416,604,927	-	30,792,784	-	30,792,784
40	3,597,124,401	405,820,324	405,820,324	-	28,033,323	-	28,033,323
41	3,429,139,302	394,265,457	394,265,457	-	25,453,396	-	25,453,396
42	3,261,347,693	382,214,193	382,214,193	-	23,061,101	-	23,061,101
43	3,094,276,596	369,744,542	369,744,542	-	20,849,288	-	20,849,288
44	2,928,409,230	356,861,249	356,861,249	-	18,806,374	-	18,806,374
45	2,764,257,730	343,647,388	343,647,388	-	16,925,244	-	16,925,244
46	2,602,284,149	330,216,259	330,216,259	-	15,199,754	-	15,199,754
47	2,442,865,685	316,650,740	316,650,740	-	13,621,811	-	13,621,811
48	2,286,320,211	302,913,322	302,913,322	-	12,178,364	-	12,178,364
49	2,133,026,649	289,001,565	289,001,565	-	10,858,929	-	10,858,929
50	1,983,392,972	274,972,071	274,972,071	-	9,655,874	-	9,655,874

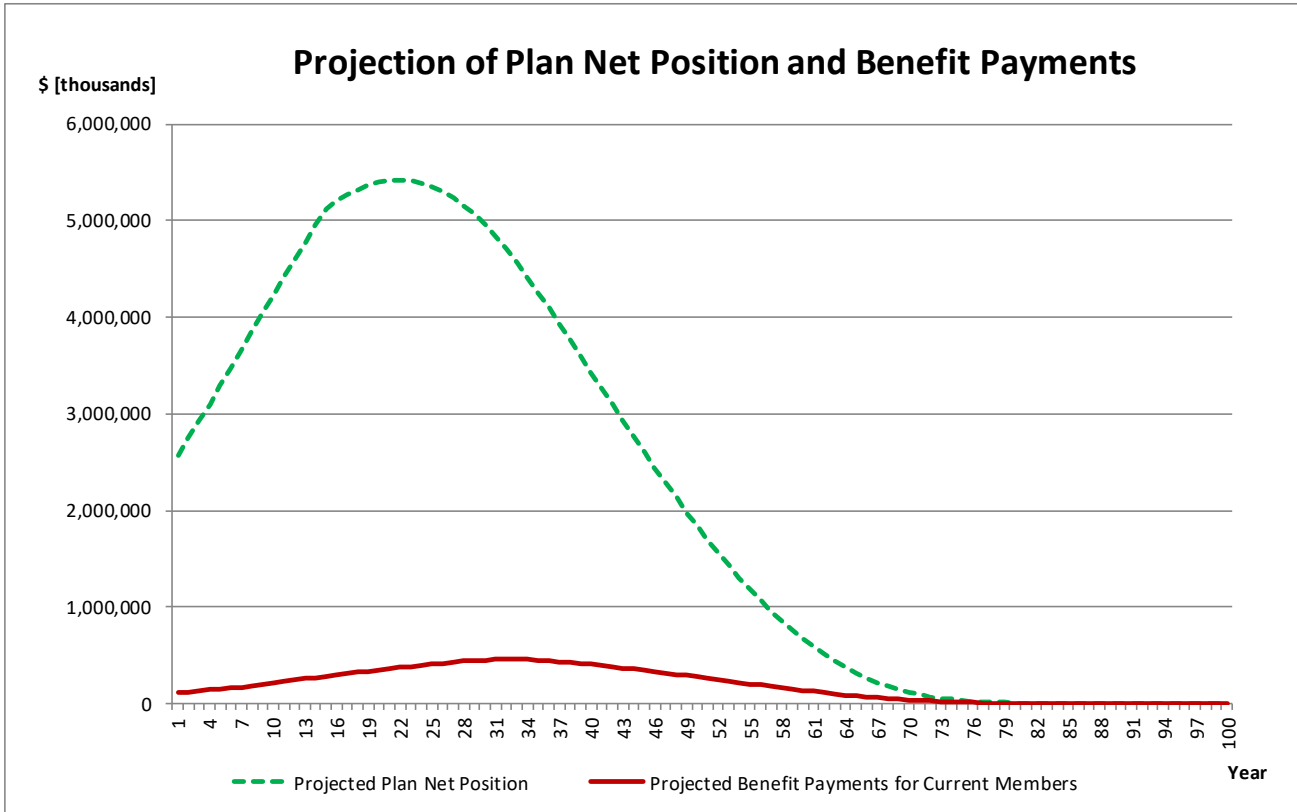


Paid Service
Single Discount Rate Development
Present Values of Projected Benefits Beginning January 1, 2021
(Years 51-100)

Year	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Projected Benefit Payments	Unfunded Portion of Projected Benefit Payments	Present Value of Funded Benefit Payments using Expected Return Rate (v)	Present Value of Unfunded Benefit Payments using Municipal Bond Rate (vf)	Present Value of All Benefit Payments using Single Discount Rate (SDR)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v^((a)-.5)	(g)=(e)*vf ^((a)-.5)	(h)=(c)/(1+SDR)^(a-.5)
51	\$ 1,837,797,158	\$ 260,876,015	\$ 260,876,015	\$ -	\$ 8,561,569	\$ -	\$ 8,561,569
52	1,696,590,711	246,760,794	246,760,794	-	7,568,531	-	7,568,531
53	1,560,100,711	232,672,068	232,672,068	-	6,669,541	-	6,669,541
54	1,428,629,902	218,654,461	218,654,461	-	5,857,688	-	5,857,688
55	1,302,456,061	204,749,608	204,749,608	-	5,126,338	-	5,126,338
56	1,181,833,344	190,995,730	190,995,730	-	4,469,140	-	4,469,140
57	1,066,994,159	177,430,318	177,430,318	-	3,880,113	-	3,880,113
58	958,148,402	164,091,785	164,091,785	-	3,353,665	-	3,353,665
59	855,480,928	151,020,266	151,020,266	-	2,884,591	-	2,884,591
60	759,148,015	138,258,630	138,258,630	-	2,468,070	-	2,468,070
61	669,272,537	125,853,451	125,853,451	-	2,099,648	-	2,099,648
62	585,937,793	113,854,098	113,854,098	-	1,775,196	-	1,775,196
63	509,181,844	102,311,531	102,311,531	-	1,490,866	-	1,490,866
64	438,992,702	91,277,811	91,277,811	-	1,243,069	-	1,243,069
65	375,303,689	80,802,936	80,802,936	-	1,028,427	-	1,028,427
66	317,991,740	70,932,951	70,932,951	-	843,744	-	843,744
67	266,877,546	61,709,045	61,709,045	-	686,006	-	686,006
68	221,726,642	53,165,686	53,165,686	-	552,365	-	552,365
69	182,252,494	45,329,389	45,329,389	-	440,140	-	440,140
70	148,121,084	38,217,515	38,217,515	-	346,809	-	346,809
71	118,957,055	31,836,776	31,836,776	-	270,006	-	270,006
72	94,351,832	26,182,359	26,182,359	-	207,524	-	207,524
73	73,873,217	21,238,027	21,238,027	-	157,322	-	157,322
74	57,075,556	16,976,358	16,976,358	-	117,527	-	117,527
75	43,510,364	13,359,785	13,359,785	-	86,439	-	86,439
76	32,736,620	10,342,534	10,342,534	-	62,539	-	62,539
77	24,329,783	7,872,077	7,872,077	-	44,487	-	44,487
78	17,889,928	5,889,980	5,889,980	-	31,108	-	31,108
79	13,049,581	4,333,787	4,333,787	-	21,391	-	21,391
80	9,480,148	3,139,658	3,139,658	-	14,483	-	14,483
81	6,896,071	2,245,113	2,245,113	-	9,679	-	9,679
82	5,056,433	1,591,567	1,591,567	-	6,413	-	6,413
83	3,764,053	1,126,067	1,126,067	-	4,240	-	4,240
84	2,862,724	802,469	802,469	-	2,824	-	2,824
85	2,233,034	582,313	582,313	-	1,915	-	1,915
86	1,786,997	434,924	434,924	-	1,337	-	1,337
87	1,462,198	336,826	336,826	-	968	-	968
88	1,216,137	270,847	270,847	-	727	-	727
89	1,021,100	225,046	225,046	-	565	-	565
90	859,788	191,575	191,575	-	449	-	449
91	721,806	165,558	165,558	-	363	-	363
92	601,078	144,052	144,052	-	295	-	295
93	494,145	125,320	125,320	-	240	-	240
94	399,103	108,445	108,445	-	194	-	194
95	314,864	92,990	92,990	-	155	-	155
96	240,715	78,784	78,784	-	123	-	123
97	176,070	65,787	65,787	-	96	-	96
98	120,344	54,000	54,000	-	74	-	74
99	72,910	43,455	43,455	-	55	-	55
100	33,064	34,201	34,201	-	41	-	41
Totals	\$	\$	\$	\$	\$ 3,576,421,621	\$ -	\$ 3,576,421,621



Paid Service



Volunteer Service
Single Discount Rate Development
Projection of Contributions Beginning January 1, 2021
(Years 1-50)

Year	Projected Number of Current Employees	Projected Contributions from Current Employees	Projected Service Cost and Expense Contributions	Projected UAL Contributions	Projected Total Contributions
0	7,508				
1	6,636	\$ -	\$ 2,628,714	\$ 4,094,301	\$ 6,723,015
2	5,960	-	2,367,656	4,196,659	6,564,314
3	5,388	-	2,161,709	2,241,054	4,402,763
4	4,894	-	1,983,924	2,204,357	4,188,281
5	4,462	-	1,831,514	2,160,252	3,991,765
6	4,070	-	1,698,322	2,108,099	3,806,421
7	3,705	-	1,575,351	4,748,134	6,323,485
8	3,365	-	1,467,353	4,866,837	6,334,191
9	3,056	-	1,367,539	4,988,508	6,356,047
10	2,770	-	1,275,003	5,113,221	6,388,224
11	2,508	-	1,193,996	5,241,051	6,435,047
12	2,268	-	1,119,822	5,372,078	6,491,900
13	2,049	-	1,056,462	5,506,380	6,562,842
14	1,850	-	999,082	5,644,039	6,643,121
15	1,662	-	947,011	-	947,011
16	1,494	-	890,167	-	890,167
17	1,339	-	838,802	-	838,802
18	1,198	-	791,507	-	791,507
19	1,068	-	750,762	-	750,762
20	952	-	710,521	-	710,521
21	845	-	676,281	-	676,281
22	748	-	639,723	-	639,723
23	658	-	607,679	-	607,679
24	576	-	579,132	-	579,132
25	500	-	551,941	-	551,941
26	432	-	526,415	-	526,415
27	370	-	499,812	-	499,812
28	315	-	476,482	-	476,482
29	269	-	454,320	-	454,320
30	228	-	436,690	-	436,690
31	194	-	415,309	-	415,309
32	165	-	401,794	-	401,794
33	140	-	382,379	-	382,379
34	118	-	366,700	-	366,700
35	99	-	352,862	-	352,862
36	83	-	337,646	-	337,646
37	69	-	322,309	-	322,309
38	57	-	306,703	-	306,703
39	47	-	292,117	-	292,117
40	38	-	278,149	-	278,149
41	31	-	264,759	-	264,759
42	25	-	251,989	-	251,989
43	19	-	238,192	-	238,192
44	15	-	225,047	-	225,047
45	11	-	213,329	-	213,329
46	8	-	199,819	-	199,819
47	6	-	187,226	-	187,226
48	4	-	176,329	-	176,329
49	3	-	165,130	-	165,130
50	2	-	153,363	-	153,363



Volunteer Service
Single Discount Rate Development
Projection of Contributions Beginning January 1, 2021
(Years 51-100)

Year	Projected Number of Current Employees	Projected Contributions from Current Employees	Projected Service Cost and Expense Contributions	Projected UAL Contributions	Projected Total Contributions
51	1	\$ -	\$ 142,295	\$ -	\$ 142,295
52	1	-	131,966	-	131,966
53	1	-	121,960	-	121,960
54	-	-	112,290	-	112,290
55	-	-	102,975	-	102,975
56	-	-	94,037	-	94,037
57	-	-	85,494	-	85,494
58	-	-	77,365	-	77,365
59	-	-	69,663	-	69,663
60	-	-	62,401	-	62,401
61	-	-	55,587	-	55,587
62	-	-	49,228	-	49,228
63	-	-	43,328	-	43,328
64	-	-	37,884	-	37,884
65	-	-	32,894	-	32,894
66	-	-	28,350	-	28,350
67	-	-	24,241	-	24,241
68	-	-	20,554	-	20,554
69	-	-	17,272	-	17,272
70	-	-	14,377	-	14,377
71	-	-	11,846	-	11,846
72	-	-	9,655	-	9,655
73	-	-	7,778	-	7,778
74	-	-	6,189	-	6,189
75	-	-	4,858	-	4,858
76	-	-	3,760	-	3,760
77	-	-	2,865	-	2,865
78	-	-	2,148	-	2,148
79	-	-	1,582	-	1,582
80	-	-	1,145	-	1,145
81	-	-	813	-	813
82	-	-	567	-	567
83	-	-	389	-	389
84	-	-	263	-	263
85	-	-	176	-	176
86	-	-	117	-	117
87	-	-	78	-	78
88	-	-	53	-	53
89	-	-	37	-	37
90	-	-	27	-	27
91	-	-	20	-	20
92	-	-	15	-	15
93	-	-	12	-	12
94	-	-	10	-	10
95	-	-	8	-	8
96	-	-	6	-	6
97	-	-	4	-	4
98	-	-	3	-	3
99	-	-	2	-	2
100	-	-	1	-	1



Volunteer Service Single Discount Rate Development Projection of Plan Fiduciary Net Position Beginning January 1, 2021 (Years 1-50)

Year	Projected Beginning Plan Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Administrative Expenses	Projected Investment Earnings at 7.00%	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(e)	(f)=(a)+(b)-(c)-(d)+(e)
1	\$ 108,456,488	\$ 6,723,015	\$ 4,477,864	\$ 173,530	\$ 7,663,235	\$ 118,191,343
2	118,191,343	6,564,314	4,999,871	189,106	8,320,717	127,887,397
3	127,887,397	4,402,763	5,511,966	204,620	8,906,912	135,480,485
4	135,480,485	4,188,281	6,075,100	216,769	9,411,254	142,788,150
5	142,788,150	3,991,765	6,640,686	228,461	9,896,165	149,806,933
6	149,806,933	3,806,421	7,194,163	239,691	10,361,672	156,541,173
7	156,541,173	6,323,485	7,765,282	250,466	10,899,655	165,748,565
8	165,748,565	6,334,191	8,352,788	265,198	11,523,819	174,988,588
9	174,988,588	6,356,047	8,983,788	279,982	12,149,152	184,230,018
10	184,230,018	6,388,224	9,607,952	294,768	12,775,174	193,490,696
11	193,490,696	6,435,047	10,253,821	309,585	13,402,300	202,764,637
12	202,764,637	6,491,900	10,924,105	324,423	14,029,858	212,037,867
13	212,037,867	6,562,842	11,578,129	339,261	14,658,411	221,341,730
14	221,341,730	6,643,121	12,218,700	354,147	15,289,891	230,701,895
15	230,701,895	947,011	12,841,199	369,123	15,727,176	234,165,760
16	234,165,760	890,167	13,457,427	374,665	15,946,297	237,170,132
17	237,170,132	838,802	14,089,192	379,472	16,132,932	239,673,203
18	239,673,203	791,507	14,714,527	383,477	16,284,866	241,651,571
19	241,651,571	750,762	15,333,645	386,643	16,400,538	243,082,584
20	243,082,584	710,521	15,905,429	388,932	16,479,571	243,978,315
21	243,978,315	676,281	16,459,458	390,365	16,521,982	244,326,755
22	244,326,755	639,723	16,960,352	390,923	16,527,861	244,143,064
23	244,143,064	607,679	17,448,695	390,629	16,497,107	243,408,526
24	243,408,526	579,132	17,928,847	389,454	16,428,227	242,097,584
25	242,097,584	551,941	18,352,635	387,356	16,321,016	240,230,550
26	240,230,550	526,415	18,724,157	384,369	16,176,764	237,825,203
27	237,825,203	499,812	19,043,064	380,520	15,996,634	234,898,066
28	234,898,066	476,482	19,319,325	375,837	15,781,587	231,460,973
29	231,460,973	454,320	19,564,551	370,338	15,531,980	227,512,385
30	227,512,385	436,690	19,753,817	364,020	15,248,677	223,079,916
31	223,079,916	415,309	19,876,702	356,928	14,933,684	218,195,279
32	218,195,279	401,794	19,927,710	349,112	14,589,809	212,910,059
33	212,910,059	382,379	19,928,537	340,656	14,219,438	207,242,683
34	207,242,683	366,700	19,879,784	331,588	13,824,172	201,222,183
35	201,222,183	352,862	19,763,322	321,955	13,406,599	194,896,366
36	194,896,366	337,646	19,588,234	311,834	12,969,641	188,303,585
37	188,303,585	322,309	19,356,695	301,286	12,515,948	181,483,862
38	181,483,862	306,703	19,070,027	290,374	12,048,270	174,478,435
39	174,478,435	292,117	18,737,587	279,165	11,569,212	167,323,013
40	167,323,013	278,149	18,362,853	267,717	11,081,140	160,051,732
41	160,051,732	264,759	17,938,202	256,083	10,586,701	152,708,907
42	152,708,907	251,989	17,463,055	244,334	10,089,017	145,342,524
43	145,342,524	238,192	16,946,953	232,548	9,591,059	137,992,274
44	137,992,274	225,047	16,405,020	220,788	9,095,141	130,686,654
45	130,686,654	213,329	15,845,471	209,099	8,603,000	123,448,413
46	123,448,413	199,819	15,270,909	197,517	8,116,026	116,295,832
47	116,295,832	187,226	14,684,255	186,073	7,635,491	109,248,221
48	109,248,221	176,329	14,087,285	174,797	7,162,712	102,325,181
49	102,325,181	165,130	13,481,163	163,720	6,698,951	95,544,379
50	95,544,379	153,363	12,867,535	152,871	6,245,377	88,922,714



Volunteer Service
Single Discount Rate Development
Projection of Plan Fiduciary Net Position Beginning January 1, 2021
(Years 51-100)

Year	Projected Beginning Plan Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Administrative Expenses	Projected Investment Earnings at 7.00%	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(e)	(f)=(a)+(b)-(c)-(d)+(e)
51	\$ 88,922,714	\$ 142,295	\$ 12,248,442	\$ 142,276	\$ 5,803,146	\$ 82,477,436
52	82,477,436	131,966	11,625,730	131,964	5,373,402	76,225,110
53	76,225,110	121,960	11,001,341	121,960	4,957,223	70,180,992
54	70,180,992	112,290	10,377,359	112,290	4,555,605	64,359,237
55	64,359,237	102,975	9,755,801	102,975	4,169,469	58,772,905
56	58,772,905	94,037	9,138,610	94,037	3,799,662	53,433,956
57	53,433,956	85,494	8,527,842	85,494	3,446,951	48,353,065
58	48,353,065	77,365	7,925,681	77,365	3,112,007	43,539,391
59	43,539,391	69,663	7,334,362	69,663	2,795,396	39,000,425
60	39,000,425	62,401	6,756,063	62,401	2,497,567	34,741,929
61	34,741,929	55,587	6,192,989	55,587	2,218,846	30,767,786
62	30,767,786	49,228	5,647,399	49,228	1,959,429	27,079,816
63	27,079,816	43,328	5,121,516	43,328	1,719,366	23,677,666
64	23,677,666	37,884	4,617,429	37,884	1,498,560	20,558,797
65	20,558,797	32,894	4,136,957	32,894	1,296,771	17,718,611
66	17,718,611	28,350	3,681,667	28,350	1,113,624	15,150,568
67	15,150,568	24,241	3,252,945	24,241	948,612	12,846,236
68	12,846,236	20,554	2,852,039	20,554	801,103	10,795,300
69	10,795,300	17,272	2,479,977	17,272	670,340	8,985,662
70	8,985,662	14,377	2,137,459	14,377	555,451	7,403,654
71	7,403,654	11,846	1,824,871	11,846	455,466	6,034,248
72	6,034,248	9,655	1,542,277	9,655	369,331	4,861,302
73	4,861,302	7,778	1,289,366	7,778	295,927	3,867,862
74	3,867,862	6,189	1,065,428	6,189	234,091	3,036,525
75	3,036,525	4,858	869,346	4,858	182,644	2,349,824
76	2,349,824	3,760	699,649	3,760	140,414	1,790,589
77	1,790,589	2,865	554,636	2,865	106,257	1,342,210
78	1,342,210	2,148	432,459	2,148	79,075	988,826
79	988,826	1,582	331,174	1,582	57,823	715,475
80	715,475	1,145	248,736	1,145	41,525	508,264
81	508,264	813	182,998	813	29,282	354,548
82	354,548	567	131,732	567	20,286	243,102
83	243,102	389	92,708	389	13,827	164,221
84	164,221	263	63,775	263	9,301	109,747
85	109,747	176	42,923	176	6,205	73,030
86	73,030	117	28,335	117	4,137	48,831
87	48,831	78	18,439	78	2,784	33,176
88	33,176	53	11,930	53	1,912	23,159
89	23,159	37	7,776	37	1,354	16,736
90	16,736	27	5,193	27	993	12,536
91	12,536	20	3,616	20	753	9,673
92	9,673	15	2,654	15	586	7,605
93	7,605	12	2,055	12	462	6,011
94	6,011	10	1,661	10	364	4,714
95	4,714	8	1,379	8	282	3,617
96	3,617	6	1,159	6	213	2,671
97	2,671	4	975	4	153	1,849
98	1,849	3	814	3	101	1,137
99	1,137	2	670	2	57	524
100	524	1	542	1	18	-



Volunteer Service

Single Discount Rate Development

Present Values of Projected Benefits Beginning January 1, 2021 (Years 1-50)

Year	Projected Plan Net Position	Projected Benefit Payments	Funded Portion of Projected Benefit Payments	Unfunded Portion of Projected Benefit Payments	Present Value of Funded Benefit Payments using Expected Return Rate (v)	Present Value of Unfunded Benefit Payments using Municipal Bond Rate (vf)	Present Value of All Benefit Payments using Single Discount Rate (SDR)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v^((a)-.5)	(g)=(e)*vf^((a)-.5)	(h)=(c)/(1+SDR)^((a)-.5)
1	\$ 108,456,488	\$ 4,477,864	\$ 4,477,864	\$ -	\$ 4,328,915	\$ -	\$ 4,328,915
2	118,191,343	4,999,871	4,999,871	-	4,517,343	-	4,517,343
3	127,887,397	5,511,966	5,511,966	-	4,654,222	-	4,654,222
4	135,480,485	6,075,100	6,075,100	-	4,794,135	-	4,794,135
5	142,788,150	6,640,686	6,640,686	-	4,897,630	-	4,897,630
6	149,806,933	7,194,163	7,194,163	-	4,958,719	-	4,958,719
7	156,541,173	7,765,282	7,765,282	-	5,002,219	-	5,002,219
8	165,748,565	8,352,788	8,352,788	-	5,028,670	-	5,028,670
9	174,988,588	8,983,788	8,983,788	-	5,054,723	-	5,054,723
10	184,230,018	9,607,952	9,607,952	-	5,052,251	-	5,052,251
11	193,490,696	10,253,821	10,253,821	-	5,039,136	-	5,039,136
12	202,764,637	10,924,105	10,924,105	-	5,017,327	-	5,017,327
13	212,037,867	11,578,129	11,578,129	-	4,969,826	-	4,969,826
14	221,341,730	12,218,700	12,218,700	-	4,901,669	-	4,901,669
15	230,701,895	12,841,199	12,841,199	-	4,814,385	-	4,814,385
16	234,165,760	13,457,427	13,457,427	-	4,715,345	-	4,715,345
17	237,170,132	14,089,192	14,089,192	-	4,613,747	-	4,613,747
18	239,673,203	14,714,527	14,714,527	-	4,503,293	-	4,503,293
19	241,651,571	15,333,645	15,333,645	-	4,385,766	-	4,385,766
20	243,082,584	15,905,429	15,905,429	-	4,251,691	-	4,251,691
21	243,978,315	16,459,458	16,459,458	-	4,111,952	-	4,111,952
22	244,326,755	16,960,352	16,960,352	-	3,959,895	-	3,959,895
23	244,143,064	17,448,695	17,448,695	-	3,807,395	-	3,807,395
24	243,408,526	17,928,847	17,928,847	-	3,656,231	-	3,656,231
25	242,097,584	18,352,635	18,352,635	-	3,497,807	-	3,497,807
26	240,230,550	18,724,157	18,724,157	-	3,335,154	-	3,335,154
27	237,825,203	19,043,064	19,043,064	-	3,170,054	-	3,170,054
28	234,898,066	19,319,325	19,319,325	-	3,005,648	-	3,005,648
29	231,460,973	19,564,551	19,564,551	-	2,844,672	-	2,844,672
30	227,512,385	19,753,817	19,753,817	-	2,684,291	-	2,684,291
31	223,079,916	19,876,702	19,876,702	-	2,524,289	-	2,524,289
32	218,195,279	19,927,710	19,927,710	-	2,365,203	-	2,365,203
33	212,910,059	19,928,537	19,928,537	-	2,210,562	-	2,210,562
34	207,242,683	19,879,784	19,879,784	-	2,060,891	-	2,060,891
35	201,222,183	19,763,322	19,763,322	-	1,914,783	-	1,914,783
36	194,896,366	19,588,234	19,588,234	-	1,773,663	-	1,773,663
37	188,303,585	19,356,695	19,356,695	-	1,638,036	-	1,638,036
38	181,483,862	19,070,027	19,070,027	-	1,508,202	-	1,508,202
39	174,478,435	18,737,587	18,737,587	-	1,384,963	-	1,384,963
40	167,323,013	18,362,853	18,362,853	-	1,268,472	-	1,268,472
41	160,051,732	17,938,202	17,938,202	-	1,158,073	-	1,158,073
42	152,708,907	17,463,055	17,463,055	-	1,053,643	-	1,053,643
43	145,342,524	16,946,953	16,946,953	-	955,611	-	955,611
44	137,992,274	16,405,020	16,405,020	-	864,535	-	864,535
45	130,686,654	15,845,471	15,845,471	-	780,418	-	780,418
46	123,448,413	15,270,909	15,270,909	-	702,915	-	702,915
47	116,295,832	14,684,255	14,684,255	-	631,693	-	631,693
48	109,248,221	14,087,285	14,087,285	-	566,367	-	566,367
49	102,325,181	13,481,163	13,481,163	-	506,540	-	506,540
50	95,544,379	12,867,535	12,867,535	-	451,854	-	451,854



Volunteer Service

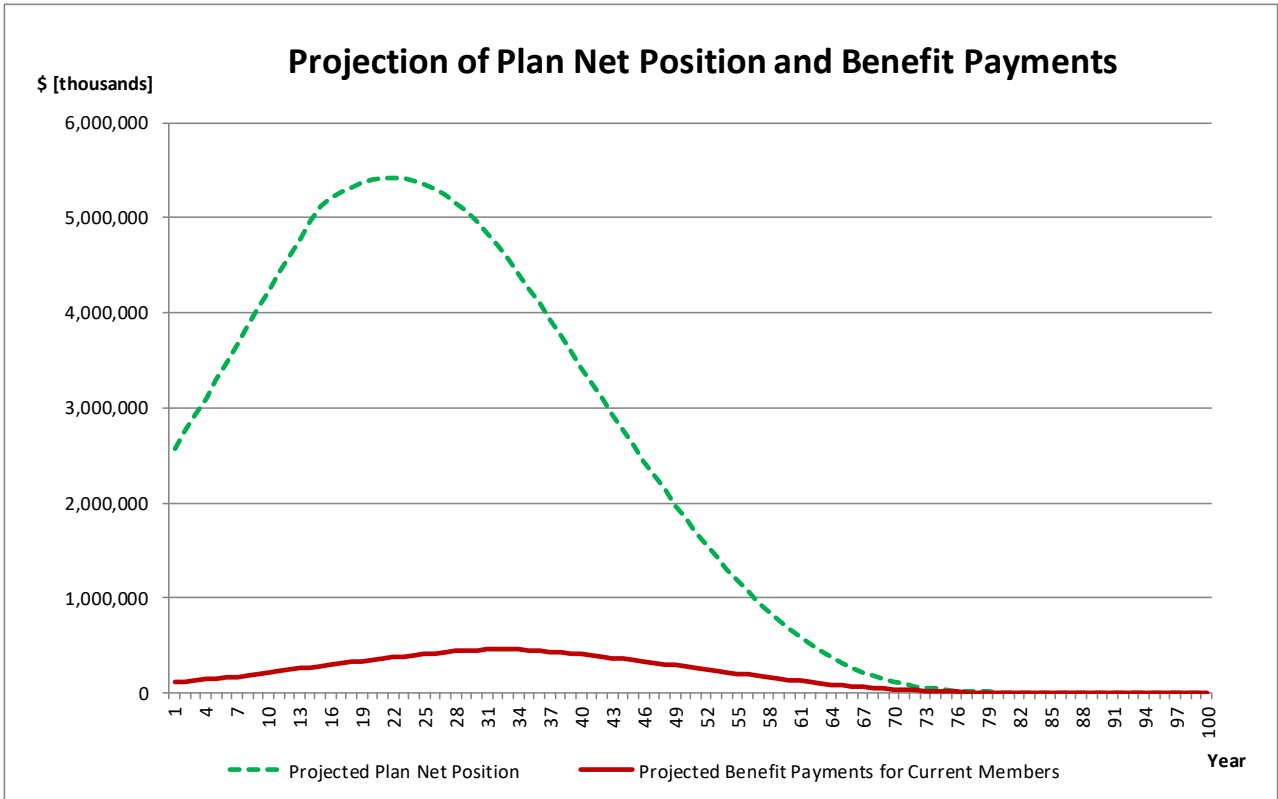
Single Discount Rate Development

Present Values of Projected Benefits Beginning January 1, 2021 (Years 51-100)

Year	Projected Plan Net Position	Projected Benefit Payments	Funded Portion of Projected Benefit Payments	Unfunded Portion of Projected Benefit Payments	Present Value of Funded Benefit Payments using Expected Return Rate (v)	Present Value of Unfunded Benefit Payments using Municipal Bond Rate (vf)	Present Value of All Benefit Payments using Single Discount Rate (SDR)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v ^a ((a)-.5)	(g)=(e)*vf ^a ((a)-.5)	(h)=(c)/(1+SDR) ^a ((a)-.5)
51	\$ 88,922,714	\$ 12,248,442	\$ 12,248,442	\$ -	\$ 401,976	\$ -	\$ 401,976
52	82,477,436	11,625,730	11,625,730	-	356,579	-	356,579
53	76,225,110	11,001,341	11,001,341	-	315,353	-	315,353
54	70,180,992	10,377,359	10,377,359	-	278,006	-	278,006
55	64,359,237	9,755,801	9,755,801	-	244,257	-	244,257
56	58,772,905	9,138,610	9,138,610	-	213,836	-	213,836
57	53,433,956	8,527,842	8,527,842	-	186,490	-	186,490
58	48,353,065	7,925,681	7,925,681	-	161,983	-	161,983
59	43,539,391	7,334,362	7,334,362	-	140,091	-	140,091
60	39,000,425	6,756,063	6,756,063	-	120,603	-	120,603
61	34,741,929	6,192,989	6,192,989	-	103,319	-	103,319
62	30,767,786	5,647,399	5,647,399	-	88,053	-	88,053
63	27,079,816	5,121,516	5,121,516	-	74,630	-	74,630
64	23,677,666	4,617,429	4,617,429	-	62,883	-	62,883
65	20,558,797	4,136,957	4,136,957	-	52,654	-	52,654
66	17,718,611	3,681,667	3,681,667	-	43,793	-	43,793
67	15,150,568	3,252,945	3,252,945	-	36,162	-	36,162
68	12,846,236	2,852,039	2,852,039	-	29,631	-	29,631
69	10,795,300	2,479,977	2,479,977	-	24,080	-	24,080
70	8,985,662	2,137,459	2,137,459	-	19,397	-	19,397
71	7,403,654	1,824,871	1,824,871	-	15,477	-	15,477
72	6,034,248	1,542,277	1,542,277	-	12,224	-	12,224
73	4,861,302	1,289,366	1,289,366	-	9,551	-	9,551
74	3,867,862	1,065,428	1,065,428	-	7,376	-	7,376
75	3,036,525	869,346	869,346	-	5,625	-	5,625
76	2,349,824	699,649	699,649	-	4,231	-	4,231
77	1,790,589	554,636	554,636	-	3,134	-	3,134
78	1,342,210	432,459	432,459	-	2,284	-	2,284
79	988,826	331,174	331,174	-	1,635	-	1,635
80	715,475	248,736	248,736	-	1,147	-	1,147
81	508,264	182,998	182,998	-	789	-	789
82	354,548	131,732	131,732	-	531	-	531
83	243,102	92,708	92,708	-	349	-	349
84	164,221	63,775	63,775	-	224	-	224
85	109,747	42,923	42,923	-	141	-	141
86	73,030	28,335	28,335	-	87	-	87
87	48,831	18,439	18,439	-	53	-	53
88	33,176	11,930	11,930	-	32	-	32
89	23,159	7,776	7,776	-	20	-	20
90	16,736	5,193	5,193	-	12	-	12
91	12,536	3,616	3,616	-	8	-	8
92	9,673	2,654	2,654	-	5	-	5
93	7,605	2,055	2,055	-	4	-	4
94	6,011	1,661	1,661	-	3	-	3
95	4,714	1,379	1,379	-	2	-	2
96	3,617	1,159	1,159	-	2	-	2
97	2,671	975	975	-	1	-	1
98	1,849	814	814	-	1	-	1
99	1,137	670	670	-	1	-	1
100	524	542	542	-	1	-	1
Totals					\$ 158,913,554	\$ -	\$ 158,913,554



Volunteer Service



SECTION H

GLOSSARY OF TERMS

Glossary of Terms

<i>Accrued Service</i>	Service credited under the system which was rendered before the date of the actuarial valuation.
<i>Actuarial Accrued Liability (AAL)</i>	The AAL is the difference between the actuarial present value of all benefits and the actuarial value of future normal costs. The definition comes from the fundamental equation of funding which states that the present value of all benefits is the sum of the Actuarial Accrued Liability and the present value of future normal costs. The AAL may also be referred to as "accrued liability" or "actuarial liability."
<i>Actuarial Assumptions</i>	These assumptions are estimates of future experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and compensation increases. Actuarial assumptions are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (compensation increases, payroll growth, inflation and investment return) consist of an underlying real rate of return plus an assumption for a long-term average rate of inflation.
<i>Actuarial Equivalent</i>	A single amount or series of amounts of equal actuarial value to another single amount or series of amounts, computed on the basis of appropriate actuarial assumptions.
<i>Actuarial Cost Method</i>	A mathematical budgeting procedure for allocating the dollar amount of the actuarial present value of the pension trust benefits between future normal cost and actuarial accrued liability. The actuarial cost method may also be referred to as the actuarial funding method.
<i>Actuarial Gain (Loss)</i>	The difference in liabilities between actual experience and expected experience during the period between two actuarial valuations is the gain (loss) on the accrued liabilities.
<i>Actuarial Present Value (APV)</i>	The amount of funds currently required to provide a payment or series of payments in the future. The present value is determined by discounting future payments at predetermined rates of interest and probabilities of payment.
<i>Actuarial Valuation</i>	The actuarial valuation report determines, as of the actuarial valuation date, the service cost, total pension liability, and related actuarial present value of projected benefit payments for pensions.
<i>Actuarial Valuation Date</i>	The date as of which an actuarial valuation is performed.
<i>Actuarially Determined Contribution (ADC) or Annual Required Contribution (ARC)</i>	A calculated contribution into a defined benefit pension plan for the reporting period, most often determined based on the funding policy of the plan. Typically, the Actuarially Determined Contribution has a normal cost payment and an amortization payment.

Glossary of Terms

<i>Amortization Method</i>	The method used to determine the periodic amortization payment may be a level dollar amount, or a level percent of pay amount. The period will typically be expressed in years, and the method will either be “open” (meaning, reset each year) or “closed” (the number of years remaining will decline each year).
<i>Amortization Payment</i>	The amortization payment is the periodic payment required to pay off an interest-discounted amount with payments of interest and principal.
<i>Cost-of-Living Adjustments</i>	Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.
<i>Cost-Sharing Multiple-Employer Defined Benefit Pension Plan (cost-sharing pension plan)</i>	A multiple-employer defined benefit pension plan in which the pension obligations to the employees of more than one employer are pooled and pension plan assets can be used to pay the benefits of the employees of any employer that provides pensions through the pension plan.
<i>Covered-Employee Payroll</i>	The payroll of covered employees, which is typically only the pensionable pay and does not include pay above any pay cap.
<i>Deferred Inflows and Outflows</i>	The deferred inflows and outflows of pension resources are amounts used under GASB Statement No. 68 in developing the annual pension expense. Deferred inflows and outflows arise with differences between expected and actual experiences; changes of assumptions. The portion of these amounts not included in pension expense should be included in the deferred inflows or outflows of resources.
<i>Deferred Retirement Option Program (DROP)</i>	A program that permits a plan member to elect a calculation of benefit payments based on service credits and salary, as applicable, as of the DROP entry date. The plan member continues to provide service to the employer and is paid for the service by the employer after the DROP entry date; however, the pensions that would have been paid to the plan member are credited to an individual member account within the defined benefit pension plan until the end of the DROP period. Other variations for DROP exist and will be more fully detailed in the plan provision section of the valuation report.
<i>Discount Rate</i>	For GASB purposes, the discount rate is the single rate of return that results in the present value of all projected benefit payments to be equal to the sum of the funded and unfunded projected benefit payments, specifically: <ol style="list-style-type: none">1. The benefit payments to be made while the pension plans’ fiduciary net position is projected to be greater than the benefit payments that are projected to be made in the period; and2. The present value of the benefit payments not in (1) above, discounted using the municipal bond rate.

Glossary of Terms

Entry Age Actuarial Cost Method (EAN)

The EAN is a funding method for allocating the costs of the plan between the normal cost and the accrued liability. The actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis (either level dollar or level percent of pay) over the earnings or service of the individual between entry age and assumed exit age(s). The portion of the actuarial present value allocated to a valuation year is the normal cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future normal costs is the actuarial accrued liability. The sum of the accrued liability plus the present value of all future normal costs is the present value of all benefits.

Fiduciary Net Position

The fiduciary net position is the market value of the assets of the trust dedicated to the defined benefit provisions.

GASB

The Governmental Accounting Standards Board is an organization that exists in order to promulgate accounting standards for governmental entities.

Long-Term Expected Rate of Return

The long-term rate of return is the expected return to be earned over the entire trust portfolio based on the asset allocation of the portfolio.

Money-Weighted Rate of Return

The money-weighted rate of return is a method of calculating the returns that adjusts for the changing amounts actually invested. For purposes of GASB Statement No. 67, money-weighted rate of return is calculated as the internal rate of return on pension plan investments, net of pension plan investment expense.

Multiple-Employer Defined Benefit Pension Plan

A multiple-employer plan is a defined benefit pension plan that is used to provide pensions to the employees of more than one employer.

Municipal Bond Rate

The Municipal Bond Rate is the discount rate to be used for those benefit payments that occur after the assets of the trust have been depleted.

Net Pension Liability (NPL)

The NPL is the liability of employers and non-employer contribution entities to plan members for benefits provided through a defined benefit pension plan.

Non-Employer Contribution Entities

Non-employer contribution entities are entities that make contributions to a pension plan that is used to provide pensions to the employees of other entities. For purposes of the GASB accounting statements, plan members are not considered non-employer contribution entities.

Normal Cost

The actuarial present value of the pension trust benefits allocated to the current year by the actuarial cost method.

Glossary of Terms

Other Postemployment Benefits (OPEB)

All postemployment benefits other than retirement income (such as death benefits, life insurance, disability, and long-term care) that are provided separately from a pension plan, as well as postemployment health care benefits regardless of the manner in which they are provided. Other post-employment benefits do not include termination benefits.

Real Rate of Return

The real rate of return is the rate of return on an investment after adjustment to eliminate inflation.

Service Cost

The service cost is the portion of the actuarial present value of projected benefit payments that is attributed to a valuation year.

Total Pension Expense

The total pension expense is the sum of the following items that are recognized at the end of the employer's fiscal year:

1. Service Cost
2. Interest on the Total Pension Liability
3. Current-Period Benefit Changes
4. Employee Contributions (made negative for addition here)
5. Projected Earnings on Plan Investments (made negative for addition here)
6. Pension Plan Administrative Expense
7. Other Changes in Plan Fiduciary Net Position
8. Recognition of Outflow (Inflow) of Resources due to Liabilities
9. Recognition of Outflow (Inflow) of Resources due to Assets

Total Pension Liability (TPL)

The TPL is the portion of the actuarial present value of projected benefit payments that is attributed to past periods of member service.

Unfunded Actuarial Accrued Liability (UAAL)

The UAAL is the difference between actuarial accrued liability and valuation assets.

Valuation Assets

The valuation assets are the assets used in determining the unfunded liability of the plan. For purposes of GASB Statement Nos. 67 and 68, the valuation assets are equal to the market value of assets.



April 2, 2021

Mr. David B. Clark, Executive Director
Arkansas Local Police and Fire Retirement System
620 West 3rd, Suite 200
Little Rock, Arkansas 72201

Dear Mr. Clark:

Please find enclosed copies of the GASB Statement Nos. 67 and 68 Accounting and Financial Reporting for Pensions report of the Arkansas Local Police and Fire Retirement System.

Sincerely yours,

A handwritten signature in black ink that reads "David L. Hoffman". The signature is written in a cursive, flowing style.

David L. Hoffman

DLH:dj
Enclosures