



Actuarial Valuation Report

Educational Employees' Supplementary Retirement System of
Fairfax County

For the Fiscal Year Ending June 30, 2022

Based on a June 30, 2022 Measurement Date

Introduction

This report documents the results of the actuarial valuation for the fiscal year ending June 30, 2022 for the Educational Employees' Supplementary Retirement System of Fairfax County ("ERFC"). The plan is a single-employer plan and does not issue a separate financial statement. As a result, all reporting requirements are included in the employer's financial statement. These results are based on a Measurement Date of June 30, 2022. The information provided in this report is intended strictly for documenting information relating to ERFC and plan disclosure and reporting requirements.

Determinations for purposes other than the financial accounting requirements may be significantly different from the results in this report. Thus, the use of this report for purposes other than those expressed here may not be appropriate.

This valuation has been conducted in accordance with generally accepted actuarial principles and practices, including the applicable Actuarial Standards of Practice as issued by the Actuarial Standards Board. In addition, the valuation results are based on our understanding of the financial accounting and reporting requirements under U.S. Generally Accepted Accounting Principles as set forth in Government Accounting Standards Board Statement 68 (GASB 68) including any guidance or interpretations provided by ERFC and/or its audit partners prior to the issuance of this report. The information in this report is not intended to supersede or supplant the advice and interpretations of ERFC's auditors. Additional disclosures have been included as per GASB 67 requirements.

Future actuarial measurements may differ significantly from the current measurements presented in this report due (but not limited to) to such factors as the following:

- Plan experience differing from that anticipated by the economic or demographic assumptions;
- Changes in actuarial methods or 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); and
- Changes in plan provisions or applicable law.

Due to the limited scope of our assignment, we did not perform an analysis of the potential range of such future measurements.

A valuation model was used to develop the liabilities for the June 30, 2022 valuation. The valuation model relies on ProVal software, which was developed by Winklevoss Technologies, LLC. Experts within Aon selected this software and determined it is appropriate for performing valuations. We coded and reviewed the software for the provisions, assumptions, methods, and data of the ERFC plan.

Funded status measurements shown in this report are determined based on various measures of plan assets and liabilities. For entity and plan disclosure and reporting purposes, funded status is determined using plan assets measured at market value. Plan liabilities are measured based on the interest rates and other assumptions summarized in the Actuarial Assumptions and Methods section of this report.

These funded status measurements may not be appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations, and funded status measurements for ERFC and plan disclosure and reporting purposes may not be appropriate for assessing the need for or the amount of future contributions.

In conducting the valuation, we have relied on personnel, plan design, and asset information supplied by ERFC as of the valuation date. While we cannot verify the accuracy of all the information, the supplied information was reviewed for consistency and reasonableness. As a result of this review, we have no reason to doubt the substantial accuracy or completeness of the information and believe that it has produced appropriate results.

The actuarial assumptions and methods used in this valuation are described in the Actuarial Assumptions and Methods section of this report. ERFC selected the economic and demographic assumptions and prescribed them for use for purposes of compliance with GASB 68. Aon provided guidance with respect to these assumptions, and it is our belief that the assumptions represent reasonable expectations of anticipated plan experience.

The undersigned are familiar with the near-term and long-term aspects of pension valuations and collectively meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. The information provided in this report is dependent upon various factors as documented throughout this report, which may be subject to change. Each section of this report is considered to be an integral part of the actuarial opinions.

To our knowledge, no colleague of Aon providing services to ERFC has any material direct or indirect financial interest in ERFC. Thus, we believe there is no relationship existing that might affect our capacity to prepare and certify this actuarial report for ERFC.



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Accounting Requirements

Development of GASB 68 Net Pension Expense

Calculation Details

The following table illustrates the Net Pension Liability under GASB 68.

	Fiscal Year Ending 06/30/2021	Fiscal Year Ending 06/30/2022
(1) Pension Liability	\$ 3,710,207,503	\$ 3,999,987,949
(2) Plan Fiduciary Net Position	<u>3,272,151,084</u>	<u>2,997,909,880</u>
(3) Net Pension Liability	\$ 438,056,419	\$ 1,002,078,069
(4) Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	88.19%	74.95%
(5) Deferred Outflow of Resources for Contributions Made After Measurement Date	\$ 0	\$ 0

Expense

The following table illustrates the pension expense under GASB 68.

	Fiscal Year Ending 06/30/2021	Fiscal Year Ending 06/30/2022
(1) Service Cost	\$ 91,770,647	\$ 92,063,438
(2) Interest Cost	253,330,122	268,463,381
(3) Expected Investment Return	(186,498,840)	(235,708,179)
(4) Employee Contributions	(48,934,340)	(50,017,839)
(5) Administrative Expense	4,423,439	4,481,381
(6) Plan Changes	0	0
(7) Amortization of Unrecognized		
(a) Liability (Gain)/Loss	9,185,495	10,165,352
(b) Asset (Gain)/Loss	(105,210,969)	8,408,111
(c) Assumption Change (Gain)/Loss	<u>7,537,332</u>	<u>27,484,352</u>
(8) Total Expense	\$ 25,602,886	\$ 125,339,997

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Shown below are details regarding the calculation of Service and Interest Cost components of the Expense.

	Fiscal Year Ending 06/30/2021	Fiscal Year Ending 06/30/2022
(1) Development of Service Cost:		
(a) Normal Cost at Beginning of Measurement Period	\$ 91,770,647	\$ 92,063,438
(2) Development of Interest Cost:		
(a) Total Pension Liability at Beginning of Measurement Period	\$ 3,543,956,246	\$ 3,710,207,503
(b) Normal Cost at Beginning of Measurement Period	91,770,647	92,063,438
(c) Actual Benefit Payments	(191,265,982)	(198,655,496)
(d) Discount Rate, Beginning of Measurement Period	7.25%	7.25%
(e) Interest Cost	\$ 253,330,122	\$ 268,463,381
(3) Development of Expected Investment Return:		
(a) Plan Fiduciary Net Position at Beginning of Measurement Period	\$ 2,593,383,175	\$ 3,272,151,084
(b) Prior Period Adjustment	N/A	(4,001)
(c) Actual Contributions—Employer	104,784,310	111,119,456
(d) Actual Contributions—Employee	48,934,340	50,017,839
(e) Actual Benefit Payments	(191,265,982)	(198,655,496)
(f) Administrative Expenses	(4,423,439)	(4,481,381)
(g) Other	0	0
(h) Expected Return on Assets, Beginning of Measurement Period	7.25%	7.25%
(i) Expected Return	\$ 186,498,840	\$ 235,708,179

Reconciliation of Net Pension Liability

Shown below are details regarding the Total Pension Liability, Plan Fiduciary Net Position, and Net Pension Liability for the Measurement Period from June 30, 2021 to June 30, 2022:

	Increase (Decrease)		
	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (c) = (a) – (b)
Balance Recognized at 06/30/2021 (Based on 06/30/2021 Measurement Date)	\$ 3,710,207,503	\$ 3,272,151,084	\$ 438,056,419
Prior Period Adjustment	N/A	(4,001)	4,001
Changes Recognized for the Fiscal Year:			
Service Cost	\$ 92,063,438	N/A	\$ 92,063,438
Interest on the Total Pension Liability	268,463,381	N/A	268,463,381
Changes of Benefit Terms	0	N/A	0
Differences Between Expected and Actual Experience	(5,133,211)	N/A	(5,133,211)
Changes of Assumptions	133,042,334	N/A	133,042,334
Benefit Payments	(198,655,496)	(198,655,496)	0
Contributions From the Employer	N/A	111,119,456	(111,119,456)
Contributions From the Employee	N/A	50,017,839	(50,017,839)
Net Investment Income	N/A	(232,237,621)	232,237,621
Administrative Expense	N/A	(4,481,381)	4,481,381
Net Changes	\$ 289,780,446	\$ (274,237,203)	\$ 564,021,650
Balance Recognized at 06/30/2022 (Based on 06/30/2022 Measurement Date)	\$ 3,999,987,949	\$ 2,997,909,880	\$ 1,002,078,069

Liability (Gain)/Loss

The following table illustrates the liability gain/loss under GASB 68.

	Fiscal Year Ending 06/30/2021	Fiscal Year Ending 06/30/2022
(1) Pension Liability at Beginning of Measurement Period	\$ 3,543,956,246	\$ 3,710,207,503
(2) Service Cost	91,770,647	92,063,438
(3) Interest on the Total Pension Liability	253,330,122	268,463,381
(4) Changes of Benefit Terms	0	0
(5) Changes of Assumptions	(17,342,443)	133,042,334
(6) Benefit Payments	<u>(191,265,982)</u>	<u>(198,655,496)</u>
(7) Expected Pension Liability at End of Measurement Period	\$ 3,680,448,590	\$ 4,005,121,160
(8) Actual Pension Liability at End of Measurement Period	<u>3,710,207,503</u>	<u>3,999,987,949</u>
(9) Pension Liability (Gain)/Loss	\$ 29,758,913	\$ (5,133,211)
(10) Average Future Working Life Expectancy	5.9594	5.8552
(11) Total Pension Liability (Gain)/Loss Amortization	\$ 4,993,609	\$ (876,693)
(12) Pension Overall Liability (Gain)/Loss Amortization	2,083,510	21,845,389
(13) Pension Assumption Change (Gain)/Loss Amortization	(2,910,099)	22,722,082

Liability (Gain)/Loss Impact on Expense

The following table details the allocation of the FY2022 liability gain/loss in the expense calculation under GASB 68

	Fiscal Year Ending 6/30/2021	Fiscal Year Ending 6/30/2022
(1) Total Liability (Gain)/Loss	\$ 29,758,913	\$ (5,133,211)
(2) Recognized in Current Year Expense	<u>4,993,609</u>	<u>(876,693)</u>
(3) Amount to be recognized in Future Years as Deferred Outflow (1. – 2.)	\$ 24,765,304	\$ (4,256,518)

Assumptions Change Impact on Expense

The following table details the allocation of the FY2022 liability assumption change in the expense calculation under GASB 68.

	Fiscal Year Ending 6/30/2021	Fiscal Year Ending 6/30/2022
(1) Total Liability Assumption Change (Gain)/Loss	\$ (17,342,443)	\$ 133,042,334
(2) Recognized in Current Year Expense	<u>(2,910,099)</u>	<u>22,722,082</u>
(3) Amount to be recognized in Future Years as Deferred Inflow (1. – 2.)	\$ (14,432,344)	\$ 110,320,252

Asset (Gain)/Loss

The following table illustrates the asset gain/loss under GASB 68.

	Fiscal Year Ending 06/30/2021	Fiscal Year Ending 06/30/2022
(1) Pension Asset at Beginning of Measurement Period	\$ 2,593,383,175	\$ 3,272,151,084
(2) Prior Period Adjustment	N/A	(4,001)
(3) Contributions—Employer	104,784,310	111,119,456
(4) Contributions—Employee	48,934,340	50,017,839
(5) Expected Investment Income	186,498,840	235,708,179
(6) Benefit Payments	(191,265,982)	(198,655,496)
(7) Administrative Expense	(4,423,439)	(4,481,381)
(8) Other	<u>0</u>	<u>0</u>
(9) Expected Pension Asset at End of Measurement Period	\$ 2,737,911,244	\$ 3,465,855,680
(10) Actual Pension Asset at End of Measurement Period	<u>3,272,151,084</u>	<u>2,997,909,880</u>
(11) Pension Asset (Gain)/Loss	\$ (534,239,840)	\$ 467,945,800
(12) Amortization Factor	5	5
(13) Pension Asset (Gain)/Loss Amortization	\$ (106,847,968)	\$ 93,589,160

Asset (Gain)/Loss Impact on Expense

The following table details the allocation of the FY2021 asset gain/loss in the expense calculation under GASB 68.

	Fiscal Year Ending 6/30/2021	Fiscal Year Ending 6/30/2022
(1) Total Asset (Gain)/Loss	\$ (534,239,840)	\$ 467,945,800
(2) Recognized in Current Year Expense	<u>(106,847,968)</u>	<u>93,589,160</u>
(3) Amount to be recognized in Future Years as Deferred Inflows (1. – 2.)	\$ (427,391,872)	\$ 374,356,640

Deferred Outflows/Inflows

The following table illustrates the Deferred Inflows and Outflows as of June 30, 2022 under GASB 68.

	Deferred Outflows	Deferred Inflows
(1) Difference Between Actual and Expected Experience	\$ 35,875,681	\$ (11,264,782)
(2) Net Difference Between Expected and Actual Earnings on Pension Plan Investments	\$ 415,176,686	\$ (320,543,904)
(3) Assumption Changes	<u>112,564,567</u>	<u>(11,522,245)</u>
(4) Sub Total	\$ 563,616,934	\$ (343,330,931)
(5) Contributions Made in Fiscal Year Ending 2021 After Measurement Date	<u>0</u>	<u>0</u>
(6) Total	\$ 563,616,934	\$ (343,330,931)

Amortization of Deferred Inflows/Outflows

The table below lists the amortization bases included in the deferred inflows/outflows as of June 30, 2021.

Date Established	Type of Base	Period		Balance		Annual Payment
		Original	Remaining	Original	Remaining	
06/30/2016	Liability (Gain)/Loss	6.6385	0.6385	19,857,344	1,909,904	1,909,904
06/30/2016	Assumptions	6.6385	0.6385	23,334,195	2,244,315	2,244,315
06/30/2017	Liability (Gain)/Loss	6.5355	1.5355	12,140,768	2,852,443	1,857,665
06/30/2018	Liability (Gain)/Loss	6.7688	2.7688	27,726,555	11,341,639	4,096,229
06/30/2018	Asset (Gain)/Loss (Net)	5.0000	1.0000	58,084,778	11,616,954	11,616,956
06/30/2019	Liability (Gain)/Loss	6.6962	3.6962	(12,696,483)	(7,008,264)	(1,896,073)
06/30/2019	Asset (Gain)/Loss (Net)	5.0000	2.0000	73,007,730	29,203,092	14,601,546
06/30/2020	Liability (Gain)/Loss	5.9594	3.9594	29,758,913	19,771,695	4,993,609
06/30/2020	Asset (Gain)/Loss (Net)	5.0000	3.0000	(534,239,840)	(320,543,904)	(106,847,968)
06/30/2020	Assumptions	5.9594	3.9594	(17,342,443)	(11,522,245)	(2,910,099)
06/30/2021	Liability (Gain)/Loss	5.8552	4.8552	(5,133,211)	(4,256,518)	(876,693)
06/30/2021	Asset (Gain)/Loss (Net)	5.0000	4.0000	467,945,800	374,356,640	93,589,160
06/30/2021	Assumptions	5.8552	4.8552	<u>133,042,334</u>	<u>110,320,252</u>	22,722,082
	Total Charges			275,486,440	220,286,003	

Amounts Recognized in the deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in the pension expense as follows:

Year End December 31:

2023	\$ 45,101,631
2024	\$ 28,466,571
2025	\$ 11,923,199
2026	\$ 116,113,424
2027	\$ 18,555,231
Total Thereafter	\$ 0

Statement of Fiduciary Net Position

	Fiscal Year Ending June 30, 2021	Fiscal Year Ending June 30, 2022
Assets		
Cash Equivalents	\$ 230,583,131	\$ 159,591,493
Receivables		
Contributions	\$ 0	\$ 0
Investment Income	5,873,379	3,783,713
Accounts Receivable – Sale of Investments	36,302,369	6,778,208
Other receivables	2,589	14,534
Total Receivables	<u>\$ 42,178,337</u>	<u>\$ 10,576,455</u>
Investments		
Equities	\$ 567,415,582	\$ 288,897,994
Bonds and Mortgage Backed Securities	484,650,491	431,068,837
U.S. Government Obligations	134,299,276	140,353,981
Preferred Securities	2,847,981	0
Real Estate	156,132,124	222,855,620
Global Asset Allocation	0	0
Better Beta	0	0
Multi Asset Class Solutions (MACS)	306,184,789	192,343,465
Hedge Fund of Funds	187,556,946	263,871,419
Private Equity	210,360,927	309,762,531
Private Debt	28,307,673	50,349,798
Infrastructure	229,486	29,519,738
Commingled Fixed Income Funds	212,099,908	181,214,664
Commingled Equity Funds	909,819,785	842,946,628
Total Investments	<u>\$ 3,199,904,968</u>	<u>\$ 2,953,184,675</u>
Prepaid Expenses	\$ 0	\$ 0
Other	\$ 40,854	\$ 336,023
Total Assets	<u>\$ 3,472,707,290</u>	<u>\$ 3,123,688,646</u>
Liabilities		
Payables		
Accounts Payable & Securities Purchased	\$ 53,424,681	\$ 25,082,860
Securities lending Collateral	147,105,099	100,361,317
Other	26,426	334,590
Total Liabilities	<u>\$ 200,556,206</u>	<u>\$ 125,778,766</u>
Net Position Restricted for Pensions	\$ 3,272,151,084	\$ 2,997,909,880
Prior Period Adjustment	<u>(4,001)</u>	<u>N/A</u>
Net Position After Adjustment	\$ 3,272,147,083	\$ 2,997,909,880

Statement of Change in Fiduciary Net Position

	Fiscal Year Ending June 30, 2021	Fiscal Year Ending June 30, 2022
Additions		
Contributions:		
Employer	\$ 104,741,255	\$ 111,119,456
Employee	48,934,340	50,017,839
Total Contributions	\$ 153,718,650	\$ 161,137,295
Investment Income:		
Net Increase in Fair value of Investments	\$ 698,406,122	\$ (253,636,057)
Interest and Dividends	31,046,491	30,133,983
Real Estate	0	0
Less Investment Expense	(9,073,810)	(9,117,441)
Net Investment Income	\$ 720,378,803	\$ (232,619,515)
Other	359,877	381,894
Total Additions	\$ 874,457,330	\$ (71,100,326)
Deductions		
Benefit Payments/Refunds	\$ 191,265,982	\$ 198,655,496
Administrative Expenses	4,423,439	4,155,162
Other	0	0
Total Deductions	\$ 195,689,421	\$ 203,136,877
Net Increase in Net Position	\$ 678,767,909	\$ (274,237,203)
Net Position restricted for Postemployment benefits Other than Pensions		
Beginning of year	\$ 2,593,383,175	\$ 3,272,147,083
End of Year	\$ 3,272,151,084	\$ 2,997,909,880
Prior Period Adjustment	(4,001)	N/A
End of Year After Adjustment	\$ 3,272,147,083	\$ 2,997,909,880

Plan Fiduciary Net Position Projection

GASB Statement Number 67 includes specific instructions on how to determine the discount rate that should be used for the purposes of measuring the Total Pension Liability, by factoring in the ability of the plans assets to pay benefit obligations in future years. This is done by projecting employer contributions, employee contributions, benefit payments, expenses and investment return into the future. The Fiduciary Net Position (or fund assets) determined each year is then compared with the benefit obligations that are expected to be paid in those years. If the fund has sufficient assets to pay the projected benefit payments in a future year, the assumed expected return on plan assets is used. In years where assets are not projected to be sufficient to meet benefit payments, the use of a municipal bond 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 contributions for use with the long-term expected rate of return are not met).

For the purpose of this valuation, the expected rate of return on pension plan investments is 7.00%; the municipal bond rate is 3.54%; and the resulting SDR is 7.00%. We have relied on the information provided by ERFC's investment advisors, SegalMarco Advisors, for purposes of determining the expected rate of return on pension plan investments. We believe the analysis reasonably supports the use of a 7.00% expected rate of return.

The tables in this section provide background for the development of the SDR.

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 SDR. It breaks down the benefit payments into present values for funded and unfunded portions and shows the equivalent total at the SDR.

Plan Fiduciary Net Position Projection

Projection of Contributions¹

Fiscal Year	Payroll for Current Employees	Contributions from Current Employees	Service Cost and Expense Contributions	UAL Contributions	Total Contributions
2023	1,735,491,759	52,064,753	42,172,450	68,378,375	162,615,578
2024	1,659,694,107	49,790,823	40,330,567	69,541,183	159,662,573
2025	1,592,272,187	47,768,166	38,692,214	75,417,038	161,877,418
2026	1,530,027,320	45,900,820	37,179,664	80,829,549	163,910,033
2027	1,471,297,648	44,138,929	35,752,533	85,766,708	165,658,170
2028	1,416,706,891	42,501,207	34,425,977	90,325,908	167,253,092
2029	1,366,906,246	41,007,187	33,215,822	94,620,077	168,843,086
2030	1,321,426,762	39,642,803	32,110,670	98,692,716	170,446,189
2031	1,279,408,929	38,382,268	31,089,637	102,545,771	172,017,676
2032	1,240,066,353	37,201,991	30,133,612	106,168,664	173,504,267
2033	1,201,689,658	36,050,690	29,201,059	109,449,560	174,701,309
2034	1,162,721,929	34,881,658	28,254,143	112,253,984	175,389,785
2035	1,123,809,911	33,714,297	27,308,581	114,638,219	175,661,097
2036	1,085,091,793	32,552,754	26,367,731	116,618,030	175,538,515
2037	1,046,120,899	31,383,627	25,420,738	118,146,150	174,950,515
2038	1,006,864,029	30,205,921	24,466,796	119,214,504	173,887,221
2039	967,061,969	29,011,859	23,499,606	119,786,295	172,297,760
2040	926,866,230	27,805,987	22,522,849	119,872,182	170,201,018
2041	885,650,869	26,569,526	21,521,316	119,381,336	167,472,178
2042	841,479,838	25,244,395	20,447,960	118,025,495	163,717,850
2043	791,485,665	23,744,570	19,233,102	0	42,977,672
2044	735,928,676	22,077,860	17,883,067	0	39,960,927
2045	676,916,588	20,307,498	16,449,073	0	36,756,571
2046	616,749,449	18,502,483	14,987,012	0	33,489,495
2047	556,886,437	16,706,593	13,532,340	0	30,238,933
2048	496,845,320	14,905,360	12,073,341	0	26,978,701
2049	439,495,779	13,184,873	10,679,747	0	23,864,620
2050	387,835,545	11,635,066	9,424,404	0	21,059,470
2051	340,023,204	10,200,696	8,262,564	0	18,463,260
2052	290,878,756	8,726,363	7,068,354	0	15,794,717
2053	238,601,884	7,158,057	5,798,026	0	12,956,083
2054	186,902,128	5,607,064	4,541,722	0	10,148,786
2055	138,935,868	4,168,076	3,376,142	0	7,544,218
2056	96,231,328	2,886,940	2,338,421	0	5,225,361
2057	60,742,157	1,822,265	1,476,034	0	3,298,299
2058	34,583,162	1,037,495	840,371	0	1,877,866
2059	19,731,187	591,936	479,468	0	1,071,404
2060	12,663,602	379,908	307,726	0	687,634
2061	8,239,658	247,190	200,224	0	447,414
2062	5,364,819	160,945	130,365	0	291,310
2063	3,512,225	105,367	85,347	0	190,714
2064	2,307,523	69,226	56,073	0	125,299
2065	1,514,223	45,427	36,796	0	82,223
2066	987,697	29,631	24,001	0	53,632
2067	639,736	19,192	15,546	0	34,738
2068	409,457	12,284	9,950	0	22,234
2069	256,595	7,698	6,235	0	13,933
2070	155,727	4,672	3,784	0	8,456

¹ The projections in this report are strictly for the purposes of determining the GASB single discount rate and are different from a funding projection for the ongoing plan.

Educational Employees' Supplementary Retirement System of Fairfax County
Proprietary & Confidential

Fiscal Year	Payroll for Current Employees	Contributions from Current Employees	Service Cost and Expense Contributions	UAL Contributions	Total Contributions
2071	90,273	2,708	2,194	0	4,902
2072	48,593	1,458	1,181	0	2,639
2073	23,741	712	577	0	1,289
2074	9,585	288	233	0	521
2075	2,798	84	68	0	152
2076	686	21	17	0	38
2077	214	6	5	0	11
2078	57	2	1	0	3
2079	14	0	0	0	0

Plan Fiduciary Net Position Projection

Projection of Plan Fiduciary Net Position Ending June 30, 2022¹

Fiscal 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
2023	2,997,898,110	162,615,578	208,831,974	4,129,065	208,216,840	3,155,769,489
2024	3,155,769,489	159,662,573	217,093,377	4,346,504	218,872,741	3,312,864,923
2025	3,312,864,923	161,877,418	225,918,099	4,562,875	229,635,855	3,473,897,221
2026	3,473,897,221	163,910,033	236,183,522	4,784,668	240,618,413	3,637,457,477
2027	3,637,457,477	165,658,170	247,264,514	5,009,943	251,739,789	3,802,580,979
2028	3,802,580,979	167,253,092	258,416,451	5,237,371	262,962,715	3,969,142,964
2029	3,969,142,964	168,843,086	269,245,293	5,466,780	274,297,211	4,137,571,187
2030	4,137,571,187	170,446,189	279,224,436	5,698,760	285,791,950	4,308,886,130
2031	4,308,886,130	172,017,676	288,637,514	5,934,715	297,506,994	4,483,838,571
2032	4,483,838,571	173,504,267	297,868,840	6,175,681	309,479,772	4,662,778,089
2033	4,662,778,089	174,701,309	306,673,252	6,422,138	321,736,012	4,846,120,021
2034	4,846,120,021	175,389,785	315,376,228	6,674,658	334,285,903	5,033,744,823
2035	5,033,744,823	175,661,097	322,923,180	6,933,077	347,160,568	5,226,710,231
2036	5,226,710,231	175,538,515	328,788,209	7,198,853	360,452,907	5,426,714,590
2037	5,426,714,590	174,950,515	334,268,772	7,474,323	374,234,578	5,634,156,589
2038	5,634,156,589	173,887,221	339,633,676	7,760,037	388,523,876	5,849,173,973
2039	5,849,173,973	172,297,760	345,274,120	8,056,184	403,315,195	6,071,456,624
2040	6,071,456,624	170,201,018	352,056,333	8,362,339	418,557,698	6,299,796,668
2041	6,299,796,668	167,472,178	360,471,481	8,676,836	434,145,622	6,532,266,151
2042	6,532,266,151	163,717,850	371,039,250	8,997,021	449,912,451	6,765,860,180
2043	6,765,860,180	42,977,672	383,288,314	9,318,755	461,605,590	6,877,836,374
2044	6,877,836,374	39,960,927	397,290,724	9,472,982	468,851,235	6,979,884,830
2045	6,979,884,830	36,756,571	413,044,882	9,613,535	475,335,569	7,069,318,553
2046	7,069,318,553	33,489,495	429,875,684	9,736,714	480,898,229	7,144,093,879
2047	7,144,093,879	30,238,933	448,347,327	9,839,703	485,379,615	7,201,525,397
2048	7,201,525,397	26,978,701	467,378,075	9,918,805	488,628,181	7,239,835,398
2049	7,239,835,398	23,864,620	485,404,128	9,971,570	490,578,831	7,258,903,151
2050	7,258,903,151	21,059,470	502,100,530	9,997,832	491,239,999	7,259,104,259
2051	7,259,104,259	18,463,260	518,345,170	9,998,109	490,604,254	7,239,828,493
2052	7,239,828,493	15,794,717	534,889,248	9,971,561	488,593,215	7,199,355,617
2053	7,199,355,617	12,956,083	551,154,817	9,915,816	485,103,013	7,136,344,080
2054	7,136,344,080	10,148,786	566,090,606	9,829,029	480,083,025	7,050,656,257
2055	7,050,656,257	7,544,218	578,760,689	9,711,010	473,561,826	6,943,290,602
2056	6,943,290,602	5,225,361	589,250,641	9,563,133	465,609,219	6,815,311,408
2057	6,815,311,408	3,298,299	597,267,066	9,386,865	456,313,464	6,668,269,240
2058	6,668,269,240	1,877,866	601,182,711	9,184,341	445,843,036	6,505,623,091
2059	6,505,623,091	1,071,404	601,751,358	8,960,325	434,417,721	6,330,400,533
2060	6,330,400,533	687,634	600,789,920	8,718,987	422,180,096	6,143,759,356
2061	6,143,759,356	447,414	598,592,159	8,461,923	409,191,271	5,946,343,959
2062	5,946,343,959	291,310	595,255,391	8,190,018	395,490,897	5,738,680,757
2063	5,738,680,757	190,714	590,626,065	7,904,000	381,120,080	5,521,461,486
2064	5,521,461,486	125,299	584,480,555	7,604,819	366,134,190	5,295,635,601
2065	5,295,635,601	82,223	576,790,994	7,293,785	350,600,156	5,062,233,201
2066	5,062,233,201	53,632	567,375,758	6,972,315	334,596,008	4,822,534,767
2067	4,822,534,767	34,738	556,201,625	6,642,174	318,212,296	4,577,938,002
2068	4,577,938,002	22,234	543,544,513	6,305,286	301,537,183	4,329,647,620
2069	4,329,647,620	13,933	529,481,923	5,963,310	284,652,198	4,078,868,518
2070	4,078,868,518	8,456	514,052,227	5,617,907	267,640,260	3,826,847,100

¹ The projections in this report are strictly for the purposes of determining the GASB single discount rate and are different from a funding projection for the ongoing plan.

Educational Employees' Supplementary Retirement System of Fairfax County
Proprietary & Confidential

Fiscal 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
2071	3,826,847,100	4,902	497,372,680	5,270,793	250,584,490	3,574,793,019
2072	3,574,793,019	2,639	479,464,395	4,923,634	233,568,759	3,323,976,388
2073	3,323,976,388	1,289	460,322,035	4,578,179	216,682,086	3,075,759,549
2074	3,075,759,549	521	440,026,292	4,236,305	200,016,980	2,831,514,453
2075	2,831,514,453	152	418,681,165	3,899,901	183,665,829	2,592,599,369
2076	2,592,599,369	38	396,421,141	3,570,839	167,719,016	2,360,326,442
2077	2,360,326,442	11	373,392,823	3,250,925	152,263,277	2,135,945,982
2078	2,135,945,982	3	349,740,946	2,941,881	137,381,093	1,920,644,251
2079	1,920,644,251	0	325,659,245	2,645,342	123,148,779	1,715,488,443
2080	1,715,488,443	0	301,270,193	2,362,777	109,636,775	1,521,492,248
2081	1,521,492,248	0	276,804,657	2,095,582	96,908,046	1,339,500,055
2082	1,339,500,055	0	252,628,202	1,844,920	85,009,082	1,170,036,014
2083	1,170,036,014	0	228,892,286	1,611,514	73,971,336	1,013,503,551
2084	1,013,503,551	0	205,747,509	1,395,919	63,817,849	870,177,971
2085	870,177,971	0	183,317,559	1,198,514	54,563,621	740,225,519
2086	740,225,519	0	161,837,736	1,019,527	46,212,187	623,580,443
2087	623,580,443	0	141,594,205	858,870	38,749,099	519,876,467
2088	519,876,467	0	122,647,209	716,036	32,146,665	428,659,887
2089	428,659,887	0	105,085,998	590,402	26,370,074	349,353,561
2090	349,353,561	0	89,007,998	481,172	21,375,602	281,239,993
2091	281,239,993	0	74,472,506	387,357	17,111,018	223,491,148
2092	223,491,148	0	61,505,711	307,819	13,517,498	175,195,116
2093	175,195,116	0	50,102,752	241,300	10,531,418	135,382,482
2094	135,382,482	0	40,226,067	186,465	8,086,258	103,056,207
2095	103,056,207	0	31,807,420	141,941	6,114,620	77,221,466
2096	77,221,466	0	24,750,956	106,359	4,550,211	56,914,362
2097	56,914,362	0	18,938,551	78,389	3,329,670	41,227,092
2098	41,227,092	0	14,237,247	56,783	2,394,067	29,327,128
2099	29,327,128	0	10,506,358	40,393	1,690,006	20,470,383
2100	20,470,383	0	7,603,909	28,194	1,170,321	14,008,601
2101	14,008,601	0	5,392,405	19,294	794,396	9,391,299
2102	9,391,299	0	3,743,591	12,935	528,136	6,162,909
2103	6,162,909	0	2,541,937	8,488	343,648	3,956,132
2104	3,956,132	0	1,686,723	5,449	218,705	2,482,665
2105	2,482,665	0	1,092,918	3,419	136,064	1,522,392
2106	1,522,392	0	691,041	2,097	82,718	911,972
2107	911,972	0	426,156	1,256	49,132	533,691
2108	533,691	0	256,248	735	28,516	305,224
2109	305,224	0	150,250	420	16,181	170,736
2110	170,736	0	85,961	235	8,986	93,526
2111	93,526	0	48,050	129	4,889	50,236
2112	50,236	0	26,287	69	2,610	26,489
2113	26,489	0	14,093	36	1,368	13,728
2114	13,728	0	7,403	19	706	7,012
2115	7,012	0	3,806	10	360	3,556
2116	3,556	0	1,908	5	183	1,826
2117	1,826	0	923	3	96	996
2118	996	0	420	1	55	630
2119	630	0	173	1	38	494
2120	494	0	65	1	32	460
2121	460	0	24	1	31	466
2122	466	0	8	1	32	490

Plan Fiduciary Net Position Projection

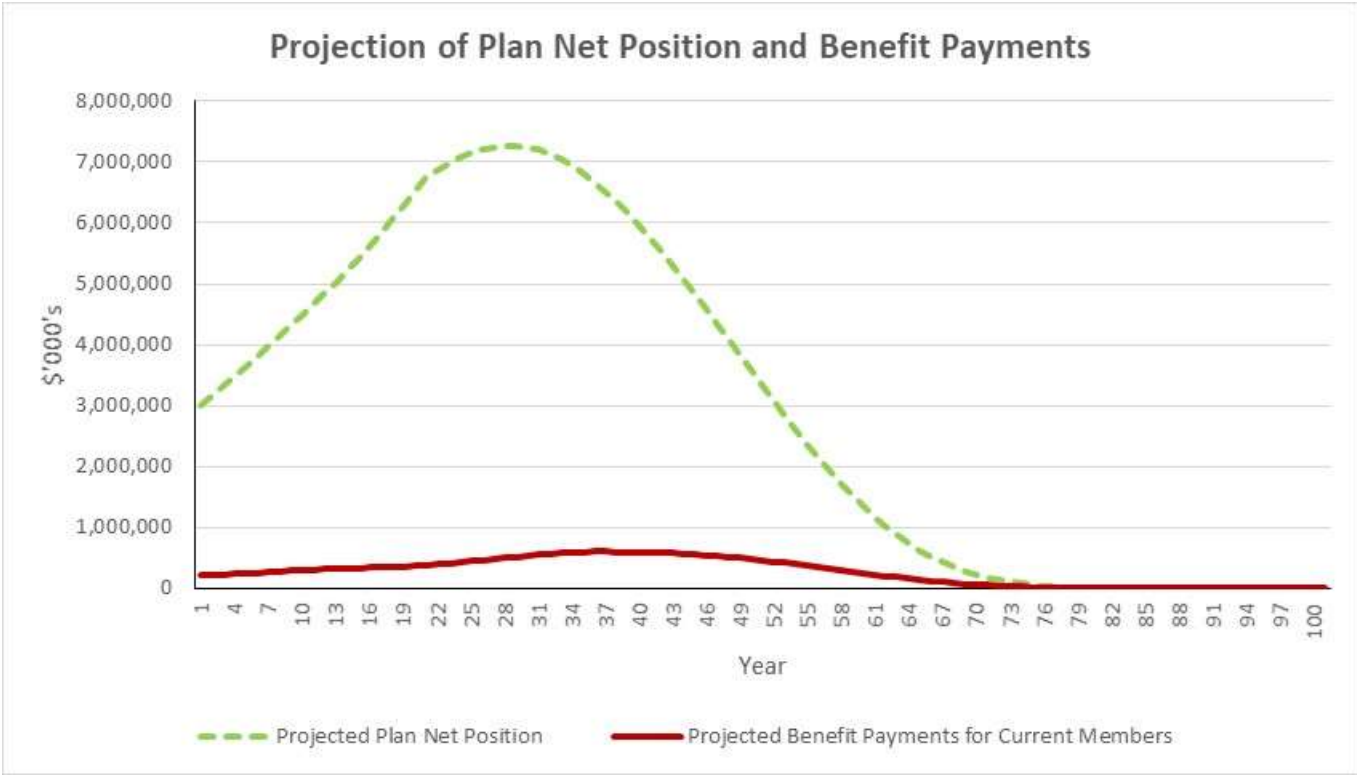
Present Values of Projected Benefits Ending June 30, 2022¹

Fiscal Year	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of Funded Benefit Payments Using Expected Return Rate	Present Value of Unfunded Benefit Payments Using Municipal Bond Rate	Present Value of Benefit Payments Using Single Discount Rate
2023	2,997,898,110	208,831,974	208,831,974	0	201,885,489	0	201,885,489
2024	3,155,769,489	217,093,377	217,093,377	0	196,142,139	0	196,142,139
2025	3,312,864,923	225,918,099	225,918,099	0	190,761,874	0	190,761,874
2026	3,473,897,221	236,183,522	236,183,522	0	186,383,032	0	186,383,032
2027	3,637,457,477	247,264,514	247,264,514	0	182,362,188	0	182,362,188
2028	3,802,580,979	258,416,451	258,416,451	0	178,118,644	0	178,118,644
2029	3,969,142,964	269,245,293	269,245,293	0	173,441,717	0	173,441,717
2030	4,137,571,187	279,224,436	279,224,436	0	168,102,855	0	168,102,855
2031	4,308,886,130	288,637,514	288,637,514	0	162,401,735	0	162,401,735
2032	4,483,838,571	297,868,840	297,868,840	0	156,631,529	0	156,631,529
2033	4,662,778,089	306,673,252	306,673,252	0	150,711,445	0	150,711,445
2034	4,846,120,021	315,376,228	315,376,228	0	144,849,003	0	144,849,003
2035	5,033,744,823	322,923,180	322,923,180	0	138,612,373	0	138,612,373
2036	5,226,710,231	328,788,209	328,788,209	0	131,897,097	0	131,897,097
2037	5,426,714,590	334,268,772	334,268,772	0	125,323,071	0	125,323,071
2038	5,634,156,589	339,633,676	339,633,676	0	119,004,173	0	119,004,173
2039	5,849,173,973	345,274,120	345,274,120	0	113,065,913	0	113,065,913
2040	6,071,456,624	352,056,333	352,056,333	0	107,744,734	0	107,744,734
2041	6,299,796,668	360,471,481	360,471,481	0	103,102,934	0	103,102,934
2042	6,532,266,151	371,039,250	371,039,250	0	99,182,760	0	99,182,760
2043	6,765,860,180	383,288,314	383,288,314	0	95,754,267	0	95,754,267
2044	6,877,836,374	397,290,724	397,290,724	0	92,759,245	0	92,759,245
2045	6,979,884,830	413,044,882	413,044,882	0	90,128,522	0	90,128,522
2046	7,069,318,553	429,875,684	429,875,684	0	87,664,569	0	87,664,569
2047	7,144,093,879	448,347,327	448,347,327	0	85,449,993	0	85,449,993
2048	7,201,525,397	467,378,075	467,378,075	0	83,249,571	0	83,249,571
2049	7,239,835,398	485,404,128	485,404,128	0	80,804,092	0	80,804,092
2050	7,258,903,151	502,100,530	502,100,530	0	78,115,424	0	78,115,424
2051	7,259,104,259	518,345,170	518,345,170	0	75,367,028	0	75,367,028
2052	7,239,828,493	534,889,248	534,889,248	0	72,684,604	0	72,684,604
2053	7,199,355,617	551,154,817	551,154,817	0	69,995,221	0	69,995,221
2054	7,136,344,080	566,090,606	566,090,606	0	67,188,810	0	67,188,810
2055	7,050,656,257	578,760,689	578,760,689	0	64,198,702	0	64,198,702
2056	6,943,290,602	589,250,641	589,250,641	0	61,086,256	0	61,086,256
2057	6,815,311,408	597,267,066	597,267,066	0	57,866,636	0	57,866,636
2058	6,668,269,240	601,182,711	601,182,711	0	54,435,520	0	54,435,520
2059	6,505,623,091	601,751,358	601,751,358	0	50,922,439	0	50,922,439
2060	6,330,400,533	600,789,920	600,789,920	0	47,515,026	0	47,515,026
2061	6,143,759,356	598,592,159	598,592,159	0	44,244,122	0	44,244,122
2062	5,946,343,959	595,255,391	595,255,391	0	41,119,149	0	41,119,149
2063	5,738,680,757	590,626,065	590,626,065	0	38,130,246	0	38,130,246
2064	5,521,461,486	584,480,555	584,480,555	0	35,264,952	0	35,264,952
2065	5,295,635,601	576,790,994	576,790,994	0	32,524,297	0	32,524,297
2066	5,062,233,201	567,375,758	567,375,758	0	29,900,362	0	29,900,362
2067	4,822,534,767	556,201,625	556,201,625	0	27,393,918	0	27,393,918
2068	4,577,938,002	543,544,513	543,544,513	0	25,019,189	0	25,019,189
2069	4,329,647,620	529,481,923	529,481,923	0	22,777,470	0	22,777,470

¹ The projections in this report are strictly for the purposes of determining the GASB single discount rate and are different from a funding projection for the ongoing plan.

Educational Employees' Supplementary Retirement System of Fairfax County
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Fiscal Year	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of Funded Benefit Payments Using Expected Return Rate	Present Value of Unfunded Benefit Payments Using Municipal Bond Rate	Present Value of Benefit Payments Using Single Discount Rate
2070	4,078,868,518	514,052,227	514,052,227	0	20,667,017	0	20,667,017
2071	3,826,847,100	497,372,680	497,372,680	0	18,688,253	0	18,688,253
2072	3,574,793,019	479,464,395	479,464,395	0	16,836,793	0	16,836,793
2073	3,323,976,388	460,322,035	460,322,035	0	15,107,096	0	15,107,096
2074	3,075,759,549	440,026,292	440,026,292	0	13,496,280	0	13,496,280
2075	2,831,514,453	418,681,165	418,681,165	0	12,001,488	0	12,001,488
2076	2,592,599,369	396,421,141	396,421,141	0	10,620,005	0	10,620,005
2077	2,360,326,442	373,392,823	373,392,823	0	9,348,675	0	9,348,675
2078	2,135,945,982	349,740,946	349,740,946	0	8,183,646	0	8,183,646
2079	1,920,644,251	325,659,245	325,659,245	0	7,121,639	0	7,121,639
2080	1,715,488,443	301,270,193	301,270,193	0	6,157,281	0	6,157,281
2081	1,521,492,248	276,804,657	276,804,657	0	5,287,159	0	5,287,159
2082	1,339,500,055	252,628,202	252,628,202	0	4,509,694	0	4,509,694
2083	1,170,036,014	228,892,286	228,892,286	0	3,818,674	0	3,818,674
2084	1,013,503,551	205,747,509	205,747,509	0	3,207,984	0	3,207,984
2085	870,177,971	183,317,559	183,317,559	0	2,671,271	0	2,671,271
2086	740,225,519	161,837,736	161,837,736	0	2,203,991	0	2,203,991
2087	623,580,443	141,594,205	141,594,205	0	1,802,154	0	1,802,154
2088	519,876,467	122,647,209	122,647,209	0	1,458,882	0	1,458,882
2089	428,659,887	105,085,998	105,085,998	0	1,168,217	0	1,168,217
2090	349,353,561	89,007,998	89,007,998	0	924,749	0	924,749
2091	281,239,993	74,472,506	74,472,506	0	723,115	0	723,115
2092	223,491,148	61,505,711	61,505,711	0	558,140	0	558,140
2093	175,195,116	50,102,752	50,102,752	0	424,918	0	424,918
2094	135,382,482	40,226,067	40,226,067	0	318,836	0	318,836
2095	103,056,207	31,807,420	31,807,420	0	235,616	0	235,616
2096	77,221,466	24,750,956	24,750,956	0	171,350	0	171,350
2097	56,914,362	18,938,551	18,938,551	0	122,534	0	122,534
2098	41,227,092	14,237,247	14,237,247	0	86,090	0	86,090
2099	29,327,128	10,506,358	10,506,358	0	59,374	0	59,374
2100	20,470,383	7,603,909	7,603,909	0	40,160	0	40,160
2101	14,008,601	5,392,405	5,392,405	0	26,617	0	26,617
2102	9,391,299	3,743,591	3,743,591	0	17,269	0	17,269
2103	6,162,909	2,541,937	2,541,937	0	10,959	0	10,959
2104	3,956,132	1,686,723	1,686,723	0	6,796	0	6,796
2105	2,482,665	1,092,918	1,092,918	0	4,116	0	4,116
2106	1,522,392	691,041	691,041	0	2,432	0	2,432
2107	911,972	426,156	426,156	0	1,402	0	1,402
2108	533,691	256,248	256,248	0	788	0	788
2109	305,224	150,250	150,250	0	432	0	432
2110	170,736	85,961	85,961	0	231	0	231
2111	93,526	48,050	48,050	0	121	0	121
2112	50,236	26,287	26,287	0	62	0	62
2113	26,489	14,093	14,093	0	31	0	31
2114	13,728	7,403	7,403	0	15	0	15
2115	7,012	3,806	3,806	0	7	0	7
2116	3,556	1,908	1,908	0	3	0	3
2117	1,826	923	923	0	2	0	2
2118	996	420	420	0	1	0	1
2119	630	173	173	0	0	0	0
2120	494	65	65	0	0	0	0
2121	460	24	24	0	0	0	0
2122	466	8	8	0	0	0	0



The projections in this report are strictly for the purposes of determining the GASB single discount rate and are different from a funding projection for the ongoing plan.

Investment Return Schedule

	Fiscal Year Ending June 30						
	2016	2017	2018	2019	2020	2021	2022
Annual money-weighted rate of return, Net of investment expense ¹	(0.63%)	12.14%	8.29%	4.88%	4.49%	27.82%	(7.29%)

¹ Annual money weighted rate or return, net of investment expense as supplied by ERFC Staff.

Sensitivity

The following table illustrates the impact of interest rate sensitivity on the Net Pension Liability for fiscal year ending June 30, 2021:

	1% Decrease (6.25%)	Current Rate (7.25%)	1% Increase (8.25%)
(1) Total Pension Liability	\$ 4,171,962,578	\$ 3,710,207,503	\$ 3,310,149,708
(2) Plan Fiduciary Net Position	<u>\$ 3,272,151,084</u>	<u>\$ 3,272,151,084</u>	<u>\$ 3,272,151,084</u>
(3) Net Pension Liability	\$ 899,811,494	\$ 438,056,419	\$ 37,998,624

The following table illustrates the impact of interest rate sensitivity on the Net Pension Liability for fiscal year ending June 30, 2022:

	1% Decrease (6.00%)	Current Rate (7.00%)	1% Increase (8.00%)
(1) Total Pension Liability	\$ 4,517,550,056	\$ 3,999,987,949	\$ 3,498,738,306
(2) Plan Fiduciary Net Position	<u>\$ 2,997,909,880</u>	<u>\$ 2,997,909,880</u>	<u>\$ 2,997,909,880</u>
(3) Net Pension Liability	\$ 1,519,640,176	\$ 1,002,078,069	\$ 500,747,426

Disclosure—Changes in the Net Pension Liability and Related Ratios

Changes in the Net Pension Liability and Related Ratios¹

	Fiscal Year Ending		
	2020	2021	2022
Total Pension Liability			
Service Cost	\$ 92,719,549	\$ 91,770,647	\$ 92,063,438
Interest Cost	\$ 243,578,788	\$ 253,330,122	\$ 268,463,381
Changes of Benefit Terms	\$ 0	\$ 0	\$ 0
Differences Between Expected and Actual Experiences	\$ (12,696,483)	\$ 29,758,913	\$ (5,133,211)
Changes of Assumptions	\$ 0	\$ (17,342,443)	\$ 133,042,334
Benefit Payments	\$ (185,986,496)	\$ (191,265,982)	\$ (198,655,496)
Net Change in Total Pension Liability	\$ 137,615,358	\$ 166,251,257	\$ 289,780,446
Total Pension Liability (Beginning)	\$ 3,406,340,888	\$ 3,543,956,246	\$ 3,710,207,503
Total Pension Liability (Ending)	\$ 3,543,956,246	\$ 3,710,207,503	\$ 3,999,987,949
Plan Fiduciary Net Position			
Contributions—Employer	\$ 104,741,255	\$ 104,784,310	\$ 111,119,456
Contributions—Member	\$ 49,095,601	\$ 48,934,340	\$ 50,017,839
Net Investment Income	\$ 108,472,534	\$ 720,738,680	\$ (232,237,621)
Benefit Payments	\$ (185,986,496)	\$ (191,265,982)	\$ (198,655,496)
Administrative Expense	\$ (4,381,191)	\$ (4,423,439)	\$ (4,481,381)
Other	\$ 0	\$ 0	\$ 0
Net Change in Plan Fiduciary Net Position	\$ 71,941,703	\$ 678,767,909	\$ (274,237,203)
Plan Fiduciary Net Position (Beginning)	\$ 2,521,441,472	\$ 2,593,383,175	\$ 3,272,151,084
Prior Period Adjustment	N/A	N/A	\$ (4,001)
Plan Fiduciary Net Position (Ending)	\$ 2,593,383,175	\$ 3,272,151,084	\$ 2,997,909,880
Net Pension Liability (Ending)	\$ 950,573,071	\$ 438,056,419	\$ 1,002,078,069
Net Position as a Percentage of Pension Liability	73.18%	88.19%	74.95%
Covered Payroll	\$ 1,626,417,003	\$ 1,627,085,559	\$ 1,658,499,343
Net Pension Liability as a Percentage of Payroll	58.45%	26.93%	60.42%

¹ GASB 68 was effective first the year beginning in 2014 and requires plan sponsors to report changes in Net Pension Liability for a rolling 10 year period

Disclosure—Contribution Schedule

Contributions

	Fiscal Year Ending		
	2020	2021	2022
Actuarially Determined Contribution	\$ 104,741,255	\$ 104,784,310	\$ 111,119,456
Contributions Made in Relation to the Actuarially Determined Contribution	\$ 104,741,255	\$ 104,784,310	\$ 111,119,456
Contribution Deficiency (Excess)	\$ 0	\$ 0	\$ 0
Covered Payroll	\$ 1,626,417,003	\$ 1,627,085,559	\$ 1,658,499,343
Contributions as a Percentage of Payroll ¹	6.44%	6.44%	6.70%

Notes to Schedule:

Valuation Date: Actuarial valuations performed as of odd numbered years typically determine the contribution rate for the two-year period beginning 18 months after the valuation date. The December 31, 2019 valuation was used to determine the funding policy contribution rates for Fiscal 2022. Each actuarial valuation determines an ADEC for the period beginning 18 months after the valuation date.

Methods and assumptions used to determine contribution rates:

Actuarial Cost Method	Entry Age Normal with 19-year closed amortization period for initial unfunded and subsequent actuarial gains/losses from July 1, 2021.
Asset Valuation Method	5-Year smoothed market; 25% corridor.
IRS Limit Increases	2.50%
Salary Increases	2.75% to 7.25% including inflation
Investment Rate of Return	7.25%.
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition.
Mortality	The mortality table used to measure retired life mortality was 90% of the male rates and 79% of the female rates of the RP-2014 mortality Total Data Set Healthy Annuitant Mortality tables, adjusted for mortality improvement back to the base year of 2006. Mortality rates for a particular calendar year are determined by applying the fully generational MP-2016 Mortality Improvement scale to the above- described tables. Tables were extended below age 50 with a cubic spline to the published Juvenile rates. The corresponding Disabled and Employee tables were used for disability and pre-retirement mortality, respectively.

¹ Covered payroll in 2016 and later is reported in accordance with GASB 82. The ratio in the last row cannot always be compared to contributions required by the ERFC Board's funding policy.

Appendix

Participant Data

The actuarial valuation was based on personnel information from ERFC records as of December 31, 2021. Following are some of the pertinent characteristics from the personnel data as of that date. Prior year characteristics are also provided for comparison purposes. Both age and service have been determined using years and months as of the valuation date.

	December 31, 2020	December 31, 2021
Active Participants	22,360	22,329
Inactives With Deferred Benefits	5,415	5,783
Inactives Receiving Payment	12,842	13,338
Total Participants	40,617	41,450

Asset Allocation

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges 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 rates of return for each major asset class included in the pension plan's target asset allocation as of June 30, 2022 are summarized in the following table:

Asset Class¹	Segal and Maketa 20 Year Expected Real Arithmetic Rate of Return	Allocation
Domestic Equity (Large Cap)	6.20%	14.0%
Domestic Equity (Small Cap)	7.20%	10.0%
International Equity	6.80%	5.0%
International Equity (Small Cap)	8.20%	5.0%
Emerging International Equity	8.50%	5.0%
Global Equity	6.40%	5.0%
US Fixed Income	0.40%	21.0%
Emerging Market Debt	2.80%	2.0%
Multi-Asset Class Solutions (MACS)	3.60%	4.0%
Hedge Funds Opportunistic	4.90%	5.0%
Infrastructure	6.50%	4.0%
Real Estate – Core	4.40%	9.0%
Private Equity	10.80%	7.0%
Private Debt	6.10%	4.0%
Total		100.0%

The discount rate used to measure the total pension liability is 7.00%.

¹ These rates of return reflect ERFC's best estimate based on advice from Segal Marco, who also use an inflation assumption of 2.3%.

Actuarial Assumptions and Methods

Discount Rate	7.00%
20-Year Municipal Bond Rate	2.16%, Beginning of Measurement Period 3.54%, End of Measurement Period
Municipal Bond Rate Basis	Bond Buyer GO 20-Bond Municipal Bond Index
Expected Return on Assets	7.00%
Salary Increases	See Table I.
General Inflation	2.75%
Retirement Age	
Active Participants	See Table II.
Terminated Vested Participants	
Members Hired After July 1, 1988 but Before July 1, 2001:	50% at age 55, 25% at age 60 and 25% at age 65.
Members Hired After July 1, 2001:	Age 60.
Mortality Rates	
Healthy and Disabled	The mortality table used to measure retired life mortality was 102% of the male rates and 99% of the female rates of the PUB-2010 Teachers table projected generationally with Scale MP-2020. The corresponding Disabled and Employee tables were used for disability and pre-retirement mortality, respectively.
Withdrawal Rates	See Table III.
Disability Rates	See Table IV.
Decrement Timing	Middle of year decrements, with 100% retirement occurring at beginning of year.
Surviving Spouse Benefit	It is assumed that 80% of males and 80% of females have an eligible spouse for purposes of death-in-service benefits, and that males are 3 years older than their spouse.
Administrative Expenses	Actual administrative expenses during the measurement period are recognized in expense.

COLA Adjustment	Members hired prior to July 1, 2017: 3% (actual COLA). Members hired on/after July 1, 2017: 2.25% (long-term estimate of provision of 100% of CPI-U capped at 4%).
Asset Method	Fair market value.
Actuarial Cost Method	Entry Age Normal cost method.
Measurement Date	June 30, 2022
Measurement Period	June 30, 2021 to June 30, 2022
Valuation Date	December 31, 2021
Census Data	As of December 31, 2021.

Changes in Financial Accounting Methods/Assumptions Since the Prior Year

Method Changes

There have been no method changes in the financial accounting valuation since the prior year.

Assumption Changes

The financial accounting valuation reflects the following assumption changes:

- The municipal bond rate increased from 2.16% to 3.54%
- The discount rate was decreased from 7.25% to 7.00%
- A change in the expected return on assets from 7.25% to 7.00%

Actuarial Assumptions and Methods

Table I

Salary Increase Assumption

Pay Increase Assumption

Service Index	Merit & Seniority	Base (Economy)	Increase Next Year
0-1	4.50%	2.75%	7.25%
1-2	4.00%	2.75%	6.75%
2-3	4.00%	2.75%	6.75%
3-4	4.00%	2.75%	6.75%
4-5	4.00%	2.75%	6.75%
5-6	4.00%	2.75%	6.75%
6-7	4.00%	2.75%	6.75%
7-8	3.50%	2.75%	6.25%
8-9	3.50%	2.75%	6.25%
9-10	3.50%	2.75%	6.25%
10-11	3.00%	2.75%	5.75%
11-12	3.00%	2.75%	5.75%
12-13	2.50%	2.75%	5.25%
13-14	2.50%	2.75%	5.25%
14-15	2.00%	2.75%	4.75%
15-16	2.00%	2.75%	4.75%
16-17	1.50%	2.75%	4.25%
17-18	1.50%	2.75%	4.25%
18-19	1.50%	2.75%	4.25%
19-20	1.00%	2.75%	3.75%
20-21	1.00%	2.75%	3.75%
21-22	0.50%	2.75%	3.25%
22-23	0.50%	2.75%	3.25%
23-24	0.50%	2.75%	3.25%
24-25	0.50%	2.75%	3.25%
25+	0.00%	2.75%	2.75%

Table II

Retirement Rates

Ages	ERFC (Hired Before 7/1/2001) Type of Retirement		ERFC 2001 Tier 1 (Hired 7/1/2001-6/30/2017)			ERFC 2001 Tier 2 (Hired On/After 7/1/2017) Age Based	
	Age Based	25+ years of service	Age Based	Service	Service Based	Rule of 90 Met?	
						Yes	No
45		2.0%					
46		2.0%					
47		2.0%					
48		2.0%					
49		2.0%					
50		2.0%					
51		2.0%					
52		7.0%					
53		7.0%					
54		15.0%					
55	12.5%	40.0%		30	17.5%		
56	12.5%	25.0%		31	17.5%	35.0%	0.0%
57	12.5%	25.0%		32	12.5%	35.0%	0.0%
58	12.5%	15.0%		33	12.5%	35.0%	0.0%
59	12.5%	25.0%		34	12.5%	35.0%	0.0%
60	12.5%	25.0%	10.0%	35	10.0%	35.0%*	0.0%
61	17.5%	20.0%	10.0%	36	10.0%	35.0%	0.0%
62	20.0%	30.0%	10.0%	37	10.0%	35.0%	0.0%
63	20.0%	25.0%	15.0%	38	25.0%	35.0%	0.0%
64	25.0%	25.0%	15.0%	39	40.0%	35.0%	0.0%
65	40.0%	35.0%	25.0%	40 & Up	100.0%	35.0%	0.0%
66	40.0%	45.0%	30.0%			35.0%	0.0%
67	35.0%	35.0%	25.0%			35.0%	30.0%
68	30.0%	35.0%	20.0%			35.0%	15.0%
69	30.0%	35.0%	20.0%			35.0%	15.0%
70	40.0%	35.0%	45.0%			35.0%	15.0%
71	25.0%	35.0%	30.0%			35.0%	15.0%
72	35.0%	35.0%	30.0%			35.0%	15.0%
73	35.0%	35.0%	30.0%			35.0%	15.0%
74	35.0%	35.0%	30.0%			35.0%	15.0%
75 & Over	100.0%	100.0%	100.0%			100.0%	100.0%

* The probability is 60% at age 60 for people who first meet the Rule of 90 at age 60.

The age column index does not apply to the service-based retirements. In ERFC 2001 Tier 1, an individual can retire at 30 years of service regardless of age. In ERFC 2001 Tier 2, an individual would be able to retire at FSSA with 5 years of service or when the sum of age and service is greater than or equal to 90. FSSA is assumed to be age 67 for members hired on/after July 1, 2017

Table III

Withdrawal Rates

Service	% of Active Participants Withdrawing	
	Males	Females
0 - 1	17%	16%
1 - 2	12%	14%
2 - 3	12%	13%
3 - 4	11%	12%
4 - 5	11%	12%
5 - 6	9%	11%
6 - 7	7%	10%
7 - 8	7%	10%
8 - 9	7%	8%
9 - 10	6%	8%
10 - 11	5%	7%
11 - 12	4%	7%
12 - 13	4%	6%
13 - 14	3%	5%
14 - 15	3%	5%
15 - 16	3%	4%
16 - 17	2%	3%
17 - 18	2%	2%
18 - 19	2%	2%
19 - 20	2%	2%
20 - 21	2%	2%
21 - 22	2%	2%
22 - 23	2%	2%
23 - 24	2%	2%
24 - 25	2%	2%

In addition, forfeiture occurs when a vested person separates from service and withdraws contributions thereby forfeiting future rights to an employer financed benefit. The total probability of forfeiture is obtained by multiplying the probability of withdrawal above by 10%. Forfeiture rates do not apply to individuals who are eligible for retirement at time of termination.

Table IV
Sample Rates of Separation From Active Employment

Ages	Disability			
	Ordinary		Duty	
	Men	Women	Men	Women
20	0.0117%	0.0048%	0.0029%	0.0012%
21	0.0117%	0.0048%	0.0029%	0.0012%
22	0.0117%	0.0048%	0.0029%	0.0012%
23	0.0142%	0.0074%	0.0036%	0.0018%
24	0.0149%	0.0081%	0.0037%	0.0020%
25	0.0146%	0.0082%	0.0036%	0.0020%
26	0.0142%	0.0082%	0.0035%	0.0021%
27	0.0140%	0.0086%	0.0035%	0.0022%
28	0.0142%	0.0094%	0.0036%	0.0024%
29	0.0149%	0.0106%	0.0037%	0.0027%
30	0.0158%	0.0122%	0.0040%	0.0031%
31	0.0171%	0.0140%	0.0043%	0.0035%
32	0.0186%	0.0158%	0.0046%	0.0040%
33	0.0202%	0.0178%	0.0050%	0.0044%
34	0.0218%	0.0196%	0.0054%	0.0049%
35	0.0234%	0.0214%	0.0059%	0.0054%
36	0.0252%	0.0232%	0.0063%	0.0058%
37	0.0271%	0.0250%	0.0068%	0.0062%
38	0.0291%	0.0268%	0.0073%	0.0067%
39	0.0314%	0.0287%	0.0078%	0.0072%
40	0.0339%	0.0308%	0.0085%	0.0077%
41	0.0367%	0.0331%	0.0092%	0.0083%
42	0.0399%	0.0357%	0.0100%	0.0089%
43	0.0435%	0.0386%	0.0109%	0.0097%
44	0.0475%	0.0419%	0.0119%	0.0105%
45	0.0520%	0.0456%	0.0130%	0.0114%
46	0.0570%	0.0498%	0.0143%	0.0124%
47	0.0626%	0.0545%	0.0157%	0.0136%
48	0.0689%	0.0598%	0.0172%	0.0149%
49	0.0760%	0.0658%	0.0190%	0.0164%
50	0.0842%	0.0726%	0.0210%	0.0181%
55	0.1469%	0.1228%	0.0367%	0.0307%
60	0.2447%	0.1770%	0.0612%	0.0443%

Actuarial Assumptions and Methods

Discussion of Actuarial Assumptions and Methods

ERFC selected the economic and demographic assumptions and prescribed them for use for purposes of compliance with GASB 68. Aon provided guidance with respect to these assumptions, and it is our belief that the assumptions represent reasonable expectations of anticipated plan experience.

Calculation of Normal Costs and Liabilities

The method used to calculate the service cost and projected benefit obligation for determining pension expense is the entry age normal cost method. Under this cost method, the actuarial accrued liability is based on a prorated portion of the present value of all benefits earned to date over expected future working life time as defined by GASB. The proration is determined so that the cost with respect to service accrued from date of hire is recognized as a level percentage of pay each year. The Normal Cost is equal to the prorated cost for the year of the valuation.

Accounting Information Under GASB 68

Benefit obligations and expense/(income) are calculated under U.S. Generally Accepted Accounting Principles as set forth in Government Accounting Standards Board Statement 68.

The total pension liability represents the actuarial present value of benefits based on the entry age normal cost method as of the measurement date. The service cost represents the actuarial present value of benefits that are attributed to the 2022 fiscal year, reflecting the effect of assumed future pay increases.

The pension expense is the annual amount to be recognized in the income statement as the cost of pension benefits for this plan for the period ending June 30, 2022.

Plan Provisions

Eligibility to Participate

ERFC Members Hired After July 1, 1988 but Before July 1, 2001

Contributions

Effective July 1, 2012, members contribute 3% of their salaries. Interest credits are 5% annually through June 30, 2017, and 4% annually thereafter. If a member leaves covered employment before becoming eligible to retire, accumulated contributions are returned upon request. Members who receive a refund of contributions and are later rehired become members of ERFC 2001 Tier 2.

Eligibility for Retirement

Normal Retirement

A member may retire any time after reaching the service retirement date, which is either (i) age 65 with 5 years of service or (ii) age 55 with 25 years of service

Early Retirement

A member with 25 years of service but younger than age 55 may retire after age 45. A member with less than 25 years of service and younger than age 65 may retire after age 55.

Disability Retirement

An active member with 5 or more years of service who becomes totally and permanently disabled may be retired and receive a disability pension. The 5-year service requirement is waived if the disability is service-connected.

Normal Retirement Benefit

For payment periods during the retired member's lifetime 103% times (i) minus (ii) where:

- (i) means 1.85 percent of the FAC multiplied by years of credited service, and
- (ii) means 1.65 percent of the portion of VRS FAC in excess of \$1,200, multiplied by applicable years of creditable Virginia service; provided if the member is younger than age 65 and if creditable Virginia service is less than 30 years, the result of such multiplication shall be reduced for each month before the earlier of:
 - (1) attainment of age 65; and
 - (2) the date when 30 years of service would have been completed.

The reduction shall be one-half of 1% for each of the first 60 months and four-tenths of one percent for each month beyond 60 months, if any.

For payment periods, if any, before the age the member becomes eligible for full Social Security benefits, an additional temporary benefit equal to 103% times 1.00 percent of the FAC multiplied by years of credited service.

Early Retirement Benefit

Accrued benefit to early retirement date payable at normal retirement date reduced according to the following schedule:

After 25 years of service: Service Retirement amount reduced to reflect retirement age younger than age 55.

After 5 years of service, but before 25 years of service: For payment periods during the retired member's lifetime, the Service Retirement amount payable at age 65 reduced to reflect retirement age younger than age 65. For payment periods before the age the member becomes eligible for full Social Security benefits, an additional temporary benefit equal to the Service Retirement temporary benefit reduced to reflect retirement age younger than age 65.

Disability Benefit

The amount is 103% times a lifetime pension equal to 0.25 percent of the FAC multiplied by years of credited service. Credited service shall be increased by the time period from disability retirement to the date when the member would have reached the service retirement date. The minimum pension payable is 2.5 percent of FAC.

Vested Deferred Benefit
Eligibility

An inactive member with 5 or more years of service will be entitled to a pension with payments beginning at age 55, provided she/he does not withdraw accumulated member contributions.

Amount

Calculated in the same manner as early retirement benefits.

Final Average Compensation (FAC)

A member's final average compensation is the average of the 3 highest consecutive years of salary during eligible employment.

Forms of Payment

Normal Form

The assumed normal form of benefit is the straight life form.

Optional Forms

Option A: 100% Joint and Survivor benefit. Benefit is 85% of the straight life amount adjusted for the difference in age between the retiree and beneficiary. The maximum benefit is 94% of the straight life amount.

Option B: 50% Joint and Survivor benefit. Benefit is 91% of the straight life amount adjusted for the difference in age between the retiree and beneficiary. The maximum benefit is 97% of the straight life amount.

Option C: 10 years Certain and Life. Benefit is 96% of the straight life amount.

Option D: Single sum payment not exceeding member's accumulated contribution balance, plus a single life annuity actuarially reduced from the pension amount otherwise payable.

Post-Retirement Increases

The amount of the monthly benefit is adjusted each March 31st, by 3% compounded annually, beginning with the March 31st which is more than three full months after the member's effective retirement date. Pensions of members that retire in the immediately preceding calendar year are increased by 1.489% (one-half a year's increase).

Spouse's Preretirement Death Benefit

Statutory Death Benefits

Eligibility

An active member with 5 or more years of service who dies will have benefits payable to the surviving spouse or other eligible beneficiary. The 5-year service requirement is waived if the death is service-connected.

Amount

If the member is eligible for a service or reduced service retirement then an eligible named beneficiary will receive such benefits reduced based upon an Option A (in the case of a spouse or an ex-spouse subject to a DRO) or Option B (in case of another eligible beneficiary) election. If not, the eligible named beneficiary will receive an amount equal to 103% times a lifetime pension equal of 0.25% of the FAC multiplied by years of credited service, and also reduced in connection with an Option A or Option B election. Credited service shall be increased by the time period from the date of death to the date when the member would have reached service retirement with a minimum of 10 years of service used, provided the death was service-connected. If a named beneficiary is not eligible for either of these types of benefits, the named beneficiary will receive a refund of the member's accumulated contributions.

Alternative Benefits Available to Members with Some Service Before July 1, 1988

Service Retirement: Alternate Amount
After Full Social Security Age

A member with service before 7/1/1988 may elect, at time of retirement, to receive an alternate benefit amount for payment periods after full Social Security age. The Alternative Guarantee amount is the amount that would have been received after the individual reached eligibility for full Social Security benefits under the Old Plan (pre – July 1, 1988) formulas. The amount is 103% of the total of:

- (i) the amount payable under June 30, 1987 benefit provisions,
- (ii) plus, if the retiring member is younger than full Social Security age and if creditable Virginia service is less than 30 years, 1.65 percent of VRS average final compensation in excess of \$1,200, multiplied by years of creditable Virginia service, and further multiplied by a certain percent based upon the number of months that retirement occurs before reaching the earlier of the above two conditions; such percent is one half of one percent for each of the first 60 such months and four-tenths of one percent for each of the next 60 such months, if any.

Reduced Service Retirement: Alternate
Amount with 25 Years or more Years of
Service

By election at time of retirement, such a member may elect to receive 103% of the following combination of benefits:

- (i) To age 55, 2.85 percent of the 3-year average annual salary multiplied by years of credited service, then actuarially reduced to reflect retirement age younger than age 55;
- (ii) From age 55 to 65, the amount to age 55 reduced by: 1.65 percent of the portion of VRS average final compensation in excess of \$1,200, multiplied by applicable years of creditable Virginia service; provided if creditable Virginia service is less than 30 years, the result of such multiplication shall be actuarially reduced for each month before the earlier of (1) attainment of age 65; and (2) the date when 30 years' service would have been completed; and
- (iii) From age 65 for life, the amount payable at age 65 according to June 30, 1987 provisions or the amount payable at age 65 according to July 1, 1988 provisions.

Plan Changes Since the Prior Year

The financial accounting valuation does not reflect any plan changes.

Eligibility to Participate	Members Hired On/After July 1, 2001 but Before July 1, 2017 (ERFC 2001 Tier 1)
Contributions	Effective July 1, 2012, members contribute 3% of their salaries. Interest credits are 5% annually through June 30, 2017, and 4% annually thereafter. If a member leaves covered employment before becoming eligible to retire, accumulated contributions are returned upon request. Members who receive a refund of contributions and are later rehired become members of ERFC 2001 Tier 2.
Eligibility for Retirement Normal Retirement	A member may retire at age 60 with 5 or more years of credited service, or after 30 years of credited service regardless of age.
Normal Retirement Benefit	The amount is a lifetime pension equal to 0.8% (eight-tenths of one percent) of FAC at retirement multiplied by years of credited service. If necessary, the pension will be increased to make the reserve value of the pension equal to the member's accumulated contributions as of the retirement effective date.
Vested Deferred Benefit Eligibility	Any member with 5 or more years of credited service who terminates employment prior to the service retirement date, will be eligible to receive a deferred vested pension commencing at age 60, provided accumulated contributions are left on deposit with the Plan.
Amount	The amount is a lifetime pension equal to 0.8% (eight-tenths of one percent) of FAC at termination multiplied by years of credited service. If necessary, the pension will be increased to make the reserve value of the pension equal to the member's accumulated contributions as of the effective retirement date
Final Average Compensation (FAC)	A member's Final Average Compensation is the average of the 3 highest years of salary during eligible employment.
Forms of Payment Normal Form	The assumed normal form of benefit is the straight life form.
Optional Forms	Option A: 100% Joint and Survivor benefit. Benefit is 85% of the straight life amount adjusted for the difference in age between the retiree and beneficiary. The maximum benefit is 94% of the straight life amount. Option B: 50% Joint and Survivor benefit. Benefit is 91% of the straight life amount adjusted for the difference in

age between the retiree and beneficiary. The maximum benefit is 97% of the straight life amount.

Option C: 10 years Certain and Life. Benefit is 96% of the straight life amount.

Post-Retirement Increases

The amount of the monthly benefit is adjusted each March 31st, by 3% compounded annually, beginning with the March 31st which is more than three full months after the member's effective retirement date. Pensions of members that retire in the immediately preceding calendar year are increased by 1.489% (one-half a year's increase).

Spouse's Preretirement Death Benefit Statutory Death Benefits Eligibility

Any member with 5 or more years of credited service who dies before beginning to receive a pension will have benefits payable to the named beneficiary..

Amount

The amount is a lifetime pension equal to 0.8% (eight-tenths of one percent) of FAC multiplied by years of credited service at the date of death. If necessary, the pension will be increased to make the reserve value of the pension equal to the member's accumulated contributions as of the date of death. The pension will be adjusted in accordance with an Option A (in the case of a spouse or an ex-spouse subject to a DRO) or Option B (in case of another eligible beneficiary) election payable immediately unless the member did not reach the service retirement eligibility prior to death, in which case the pension is reduced for each month that the member was younger than age 60 on the date of death in the following manner:

- a. One-half of 1% for each of the first 60 months and four-tenths of one percent for each month beyond 60 months (the number of months used for reduction is not to exceed the difference between the member's credited service at death and 30 years).

Plan Changes Since the Prior Year

The financial accounting valuation does not reflect any plan changes.

Eligibility to Participate	Members Hired On/After July 1, 2017 (ERFC 2001 Tier 2)
Contributions	Members contribute 3% of their salaries. Interest credits are 4% annually. If a member leaves covered employment before becoming eligible to retire, accumulated contributions are returned upon request.
Eligibility for Retirement Normal Retirement	A member may retire at Full Social Security Age (FSSA) with 5 or more years of credited service, or when the sum of age plus service is greater than or equal to 90 (i.e., "Rule of 90").
Normal Retirement Benefit	The amount is a lifetime pension equal to 0.8% (eight-tenths of one percent) of FAC at retirement multiplied by years of credited service. If necessary, the pension will be increased to make the reserve value of the pension equal to the member's accumulated contributions as of the retirement effective date.
Vested Deferred Benefit Eligibility	Any member with 5 or more years of credited service who terminates employment prior to the service retirement date, will be eligible to receive a deferred vested pension commencing at FSSA, provided accumulated contributions are left on deposit with the Plan.
Amount	The amount is a lifetime pension equal to 0.8% (eight-tenths of one percent) of FAC at termination multiplied by years of credited service. If necessary, the pension will be increased to make the reserve value of the pension equal to the member's accumulated contributions as of the effective retirement date.
Final Average Compensation (FAC)	A member's Final Average Compensation is the average of the 5 highest years of salary during eligible employment.
Forms of Payment Normal Form	The assumed normal form of benefit is the straight life form.
Optional Forms	Before the effective retirement date, a retiring member may elect one of the following options: Option A: 100% Joint and Survivor benefit. Benefit is 85% of the straight life amount adjusted for the difference in age between the retiree and beneficiary. The maximum benefit is 94% of the straight life amount.

Option B: 50% Joint and Survivor benefit. Benefit is 91% of the straight life amount adjusted for the difference in age between the retiree and beneficiary. The maximum benefit is 97% of the straight life amount.

Option C: 10 years Certain and Life. Benefit is 96% of the straight life amount

Post-Retirement Increases

The amount of the monthly benefit is adjusted each March 31st, by 100% of the Consumer Price Index (CPI-U) (with a cap of 4%) compounded annually, beginning with the March 31st which is more than three full months after the member's effective retirement date. Pensions of members that retire in the immediately preceding calendar year are increased by one-half a year's increase.

Spouse's Preretirement Death Benefit Statutory Death Benefits Eligibility

Any member with 5 or more years of credited service who dies before beginning to receive a pension will have benefits payable to the named beneficiary.

Amount

The amount is a lifetime pension equal to 0.8% (eight-tenths of one percent) of FAC multiplied by years of credited service at the date of death. If necessary, the pension will be increased to make the reserve value of the pension equal to the member's accumulated contributions as of the date of death. The pension will be adjusted in accordance with Option A (in the case of a spouse or an ex-spouse subject to a DRO) or Option B (in case of another eligible beneficiary) election payable immediately unless the member did not reach the service retirement eligibility prior to death, in which case the pension is reduced for each month that the member was younger than service retirement eligibility on the date of death in the following manner:

One-half of 1% for each of the first 60 months and four-tenths of one percent for each month beyond 60 months (the number of months used for reduction is based on the lesser of FSSA or the age the member would have attained "Rule of 90").

Plan Changes Since the Prior Year

The financial accounting valuation does not reflect any plan changes.