



District of Columbia Retirement Board Teachers' Retirement Plan and Police Officers and Firefighters' Retirement Plan

Actuarial Valuations as of October 1, 2021 to Determine
the District's Contribution for the Fiscal Year Ending
September 30, 2023

Bolton

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Employee Benefits, Actuarial & Investment Consulting

December 7, 2021

The Board of Trustees
District of Columbia Retirement Board
900 7th Street, NW, 2nd Floor
Washington, DC 20001

Re: District of Columbia Teachers' Retirement Plan and District of Columbia Police Officers and Firefighters' Retirement Plan Actuarial Valuations

Dear Trustees:

The following sets forth the actuarial valuations of the District of Columbia Teachers' Retirement Plan and the District of Columbia Police Officers and Firefighters' Retirement Plan (collectively referred to as the Plans) as of October 1, 2021. Section I of the report provides a summary, while Sections II through VI contain the development of the District's contribution for the 2023 fiscal year, along with a summary of the census and asset data, plan provisions, assumptions and actuarial methods. Section VII provides a glossary of many of the terms used in this report. The appendices of the report provide information on plan funding, solvency, a discussion of risk, adjustments to the actuarially determined contribution, gain and loss from experience, and valuation balance sheets for the DCRB Annual Comprehensive Financial Report (ACFR).

The October 1, 2021 actuarial valuations reflect the revised valuation methods and assumptions presented in the experience study dated October 12, 2021 and approved by the Board.

We are available to answer any questions on the material in this report or to provide explanations or further details, as appropriate. The undersigned credentialed actuaries meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained in this report. We are not aware of any direct or materially indirect financial interest or relationship, including investments or other services that could create a conflict of interest, which would impair the objectivity of our work.

Respectfully submitted,

Thomas Vicente, FSA, EA

Colin Slovenkay, FSA, EA

Ann M. Sturner, FSA, EA



Section I. Executive Summary

Background

Bolton Partners, Inc. has prepared the following report that sets forth the actuarial valuation of the District of Columbia Teachers' Retirement Plan (Teachers) and District of Columbia Police Officers and Firefighters' Retirement Plan (Police and Fire), collectively referred to as the Plans, as of October 1, 2021. Unless stated otherwise, the calculations reflected in this report are solely for the District-provided benefit and do not include the Federal portion of the benefit. Some demographic information includes a breakdown of District only, Federal only, and split annuitants.

Actuarially Determined Contributions (ADC)

The actuarially determined contribution (ADC) amount for all Plans decreased as a dollar amount and as a percentage of payroll this year.

(\$ in Thousands)

Teachers, Police, and Fire	FY2021	FY2022	FY2023
ADC (before §1-907.02(c) adjustment)	\$ 172,338	\$ 181,490	\$ 132,222
Total Payroll	1,055,446	1,104,198	1,136,998
Percent of Total Payroll	16.33%	16.44%	11.63%
ADC (after §1-907.02(c) adjustment)	\$ 180,411	\$ 184,025	\$ 125,343

Teachers	FY2021	FY2022	FY2023
ADC (before §1-907.02(c) adjustment)	\$ 66,327	\$ 70,524	\$ 43,913
Total Payroll	538,565	575,288	624,500
Percent of Total Payroll	12.32%	12.26%	7.03%
ADC (after §1-907.02(c) adjustment)	\$ 70,478	\$ 75,060	\$ 47,835

Police and Fire Combined	FY2021	FY2022	FY2023
ADC (before §1-907.02(c) adjustment)	\$ 106,011	\$ 110,966	\$ 88,309
Total Payroll	516,881	528,910	512,498
Percent of Total Payroll	20.51%	20.98%	17.23%
ADC (after §1-907.02(c) adjustment)	\$ 109,933	\$ 108,965	\$ 77,508

Police	FY2021	FY2022	FY2023
ADC (before §1-907.02(c) adjustment)	\$ 64,066	\$ 68,786	\$ 61,338
Total Payroll	341,662	350,779	333,307
Percent of Total Payroll	18.75%	19.61%	18.40%
ADC (after §1-907.02(c) adjustment)	\$ 61,796	\$ 68,035	\$ 53,909

Fire	FY2021	FY2022	FY2023
ADC (before §1-907.02(c) adjustment)	\$ 41,945	\$ 42,180	\$ 26,971
Total Payroll	175,219	178,131	179,191
Percent of Total Payroll	23.94%	23.68%	15.05%
ADC (after §1-907.02(c) adjustment)	\$ 48,137	\$ 40,931	\$ 23,599

Section I. Executive Summary

The tables below compare the actuarial accrued liabilities of the plans and the assets of the plans for the current and prior valuation dates. In addition the liabilities are compared to the assets to determine the funded ratios of the plans.

Funding Measures – Teachers

Teachers	10/1/2020	10/1/2021	Percent Change
1. Actuarial Accrued Liability			
a. Active	\$ 1,335,898	\$ 1,362,322	1.98%
b. Retirees and Beneficiaries	1,121,326	1,132,341	0.98%
c. Inactive with Deferred Benefits	183,579	203,955	11.10%
d. Total	\$ 2,640,803	\$ 2,698,618	2.19%
2. Actuarial Value of Assets	\$ 2,431,075	\$ 2,684,368	10.42%
3. Plan Funded Ratio (2. / 1.d.)	92.06%	99.47%	
4. Market Value of Assets	\$ 2,411,390	\$ 2,934,307	21.69%
5. Funded Ratio based on Market Value of Assets (4. / 1.d.)	91.31%	108.73%	

(\$ in Thousands)

Funding Measures – Police and Fire

Police and Fire	10/1/2020	10/1/2021	Percent Change
1. Actuarial Accrued Liability			
a. Active	\$ 3,119,862	\$ 3,075,255	(1.43%)
b. Retirees and Beneficiaries	2,830,585	3,021,846	6.76%
c. Inactive with Deferred Benefits	73,396	84,513	15.15%
d. Total	\$ 6,023,843	\$ 6,181,614	2.62%
2. Actuarial Value of Assets	\$ 6,676,013	\$ 7,290,173	9.20%
3. Plan Funded Ratio (2. / 1.d.)	110.83%	117.93%	
4. Market Value of Assets	\$ 6,620,190	\$ 7,963,277	20.29%
5. Funded Ratio based on Market Value of Assets (4. / 1.d.)	109.90%	128.82%	

(\$ in Thousands)

Section I. Executive Summary

Funding Measures – Police

Police	10/1/2020	10/1/2021	Percent Change
1. Actuarial Accrued Liability			
a. Active	\$ 1,997,978	\$ 1,993,751	(0.21%)
b. Retirees and Beneficiaries	2,121,866	2,272,411	7.09%
c. Inactive with Deferred Benefits	59,270	66,095	11.52%
d. Total	\$ 4,179,114	\$ 4,332,257	3.66%
2. Actuarial Value of Assets	\$ 4,615,243	\$ 5,015,377	8.67%
3. Plan Funded Ratio (2. / 1.d.)	110.44%	115.77%	
4. Market Value of Assets	\$ 4,576,808	\$ 5,478,977	19.71%
5. Funded Ratio based on Market Value of Assets (4. / 1.d.)	109.52%	126.47%	

(\$ in Thousands)

Funding Measures – Fire

Fire	10/1/2020	10/1/2021	Percent Change
1. Actuarial Accrued Liability			
a. Active	\$ 1,121,885	\$ 1,081,504	(3.60%)
b. Retirees and Beneficiaries	708,718	749,435	5.75%
c. Inactive with Deferred Benefits	14,126	18,418	30.38%
d. Total	\$ 1,844,730	\$ 1,849,357	0.25%
2. Actuarial Value of Assets	\$ 2,060,770	\$ 2,274,795	10.39%
3. Plan Funded Ratio (2. / 1.d.)	111.71%	123.00%	
4. Market Value of Assets	\$ 2,043,382	\$ 2,484,300	21.58%
5. Funded Ratio based on Market Value of Assets (4. / 1.d.)	110.77%	134.33%	

(\$ in Thousands)

Section I. Executive Summary

Risk Measures

Actuarial Standard of Practice No. 51 concerning pension plan risk is now in effect. Appendix 3 contains important information about various risks common to most public pension plans. Because the information is too lengthy to include in this summary, we strongly recommend reviewing the Appendix and considering whether further risk assessments are necessary.

Generally, the risk that a plan sponsor incurs from a defined benefit plan is primarily the risk of substantial increases in annual contributions. These increases occur most frequently due to variation in the investment returns. This valuation reflects the smoothing of asset returns, which reduces the risk of wide year-by-year contribution changes but does not ultimately reduce the risk inherent in a defined benefit plan. The following table shows four commonly used measures of the relative riskiness of a pension plan that are related to the plan sponsor and the employee group covered by the plan.

Teachers				Conservative
Risk Measure	10/1/2019	10/1/2020	10/1/2021	Measures
Retiree Liability as a Percent of Total Liability	44%	42%	42%	<50%
Assets to Payroll (Asset Volatility Ratio)	4.4	4.4	4.9	<5
Liabilities to Payroll (Liability Volatility Ratio)	4.8	4.8	4.5	<5
Benefit Payments to Contributions	0.9	0.9	0.8	<3

Police and Fire				Conservative
Risk Measure	10/1/2019	10/1/2020	10/1/2021	Measures
Retiree Liability as a Percent of Total Liability	45%	47%	49%	<50%
Assets to Payroll (Asset Volatility Ratio)	12.6	13.0	16.2	<5
Liabilities to Payroll (Liability Volatility Ratio)	11.3	11.9	12.5	<5
Benefit Payments to Contributions	0.8	1.1	1.1	<3

Section I. Executive Summary

Experience Analysis

The following factors affected the District's contribution, as a percentage of payroll:

- Investment returns during FY2021 were about \$346.3 million greater than expected for Teachers and \$936.2 million greater than expected for Police and Fire. A portion of that gain is reflected in this valuation, with the remaining portions to be reflected in future valuations. The gain was offset by the continued recognition of prior investment gains and losses. There is a total of \$249.9 million in net deferred investment gains for Teachers and \$673.1 million in net deferred investments gains for Police and Fire as of October 1, 2021 that will be reflected in future valuations. These deferrals produce an overall experience gain on investment income.
- Retiree COLAs in FY2021 were less than the assumed annual increases.
- The average participant pay increased/decreased by (0.5%) for Teachers, 0.3% for Police, and (1.5%) for Fire.
- Total participant payroll amount changed by 8.8% for Teachers and (2.9%) for Police and Fire over the prior year; the assumption is 4.0% growth per year.
- Police had a significantly less amount of new hires than in previous years, producing a liability gain.
- Teachers had significantly less terminations than in previous years, producing a liability loss.

Changes in Method, Assumptions, and Plan Amendments

As a result of the experience study conducted on October 12, 2021, many of the valuation methods and assumptions were updated since the prior valuation. There were no plan provision changes, other than an update to the child survivor benefits which are annually adjusted for inflation. Method and assumption changes are further explained in Section VI.

Impact of COVID-19

Because the long-term net impact of COVID-19 on mortality, salary increases, and changes in turnover and retirement behavior is not possible to estimate at this time, we have made no adjustments to any of the assumptions.

Sources of Information

Membership data as of July 1, 2021, and market value of assets as of October 1, 2021 were provided by or at the direction of the District of Columbia Retirement Board. While we have reviewed this data for consistency and completeness, we have not audited this data. For valuation purposes, members were treated as remaining in the Plans as of October 1, 2021.

Actuarial Certification

This actuarial valuation sets forth our calculation of an estimate of the liabilities of the District of Columbia Teachers' Retirement Plan and the District of Columbia Police Officers and Firefighters' Retirement Plan, together with a comparison of these liabilities with the value of the plan assets, as submitted by the District of Columbia Retirement Board (the Board). These calculations, and comparisons with assets, are applicable for the valuation date only. The future is uncertain, and the Plans may become better funded or more poorly funded in the future. This valuation does not provide any guarantee that the Plans will be able to provide the promised benefits in the future.

Section I. Executive Summary

Actuarial Certification

These are deterministic valuations in that they are based on a single set of assumptions. This set of assumptions is one possible basis for our calculations. Other assumptions may be equally valid. The future is uncertain, and the Plans' actual experience will differ from those assumptions; these differences may be significant or material because these results are very sensitive to the assumptions made and, in some cases, to the interaction between the assumptions. We may consider that some factors are not material to the valuation of the Plans and may not provide a specific assumption for those factors. We may have used other assumptions in the past. We will likely consider changes in assumptions at a future date.

Different assumptions or scenarios within the range of possibilities may also be reasonable and results based on those assumptions would be different. As a result of the uncertainty inherent in a forward-looking projection over a very long period of time, no one projection is uniquely "correct" and many alternative projections of the future could also be regarded as reasonable. Two different actuaries could, quite reasonably, arrive at different results based on the same data and different views of the future. A "sensitivity analysis" shows the degree to which results would be different if alternative assumptions are substituted within the range of possibilities for those utilized in this report. We have not been engaged to perform such a sensitivity analysis, and thus, the results of such an analysis are not included in this report. At the Board's request, Bolton Partners, Inc. is available to perform such a sensitivity analysis.

The Board is responsible for selecting the Plans' funding policy, actuarial valuation methods, asset valuation methods, and assumptions. The policies, methods and assumptions used in these valuations are those that have been so prescribed and are described in this report. The Board is solely responsible for communicating to Bolton Partners, Inc. any changes required thereto.

The Board could reasonably ask how the valuations would change if we used a different assumption set or if Plan experience exhibited variations from our assumptions. This report does not contain such an analysis. That type of analysis would be a separate assignment.

In addition, decisions regarding benefit improvements, benefit changes, the underlying trust's investment policy, and similar issues should not be based on these valuations. These are complex issues and other factors should be considered when making such decisions. These other factors might include the anticipated vitality of the local economy and future growth expectations, as well as other economic and financial factors.

The costs of these Plans are determined by the benefits promised by them, the Plans' participant population, the investment experience of the Plans, and many other factors. An actuarial valuation is a budgeting tool for the Board and the District of Columbia (the Plan Sponsor). It does not affect the cost of the Plans. Different funding methods provide for different timing of contributions to the Plans. As the experience of the Plans evolves, it is normal for the level of contributions to the Plans to change. If a contribution is not made for a particular year, either by deliberate choice or because of an error in a calculation, that contribution can be made in later years. We will not be responsible for contributions that are made at a future time rather than an earlier time. The Plan Sponsor is responsible for funding the cost of the Plans.



Section I. Executive Summary

Actuarial Certification

We make every effort to ensure that our calculations are accurately performed. We reserve the right to correct any potential errors by amending the results of this report or by including the corrections in a future valuation report. If a mistake is discovered, we will notify the Board of any impact to the results.

Because modeling all aspects of a situation is not possible or practical, we may use summary information, estimates, or simplifications of calculations to facilitate the modeling of future events in an efficient and cost-effective manner. We may also exclude factors or data that are immaterial in our judgment. Use of such simplifying techniques does not, in our judgment, affect the reasonableness of valuation results for the Plans.

The valuation was completed using both proprietary and third-party models (including software and other tools). We have tested these models to ensure they are used for the proper purposes, within their known limitations, and without any known material inconsistencies, unless otherwise stated.

This report is based on Plan provisions, census data, and asset data submitted by, or at the direction of, the Board. We have relied on this information for purposes of preparing this report, but have not performed an audit. The accuracy of the results presented in this report is dependent upon the accuracy and completeness of the underlying information. The Board is solely responsible for the validity and completeness of this information.

The Board is also solely responsible for selecting the Plans' investment policies, asset allocations and individual investments. Bolton Partners, Inc. has not provided any investment advice to the Board, the Plans or the District.

The information in this report was prepared for the internal use of the Board and its auditors in connection with our actuarial valuations of the pension Plans. It is neither intended nor necessarily suitable for other purposes. Bolton Partners, Inc. is not responsible for the consequences of any other use or the reliance upon this report by any other party.

The only purpose of this report is to provide the recommended employer contribution for the 2023 fiscal year. This report may not be used for any other purpose; Bolton Partners, Inc. is not responsible for the consequences of any unauthorized use.

The calculation of actuarial liabilities for valuation purposes is based on a current estimate of future benefit payments. The calculation includes a computation of the "present value" of those estimated future benefit payments using an assumed discount rate; the higher the discount rate assumption, the lower the estimated liability will be. For purposes of estimating the liabilities (future and accrued) in this report, the Board selected an assumption based on the expected long-term rate of return on Plan investments. Using a lower discount rate assumption, such as a rate based on long-term bond yields, could substantially increase the estimated present value of future and accrued liabilities.

Because valuations are a snapshot in time, and are based on estimates and assumptions that are not precise and will differ from actual experience, contribution calculations are inherently imprecise. There is no uniquely "correct" level of contributions for the coming fiscal year.

Section I. Executive Summary

Actuarial Certification

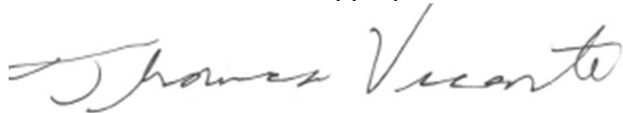
This report provides certain financial calculations for use by the auditor. These values have been computed in accordance with our understanding of generally accepted actuarial principles and practices, and fairly reflect the actuarial position of the Plans. The various actuarial assumptions and methods which have been used are, in our opinion, appropriate for the purposes of this report.

The report is conditioned on the assumption of ongoing plans and is not meant to present the actuarial position of the Plans in the case of plan termination. Future actuarial measurements may differ significantly from the current measurements presented in this report, due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions, changes in economic or demographic assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status), and changes in plan provisions or applicable law.

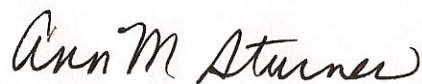
The Board should notify Bolton Partners, Inc. promptly after receipt of this report if the Board disagrees with anything contained in the report or is aware of any information that would affect the results of the report that has not been communicated to Bolton Partners, Inc. or incorporated therein. The report will be deemed final and acceptable to the Board unless the Board promptly provides such notice to Bolton Partners, Inc.

The undersigned credentialed actuaries meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. We are currently compliant with the Continuing Professional Development Requirement of the Society of Actuaries. We are not aware of any direct or materially indirect financial interest or relationship, including investments or other services, which could create a conflict of interest that would impair the objectivity of our work.

We are available to answer any questions on the material in this report, or to provide explanations or further details, as appropriate.



Thomas Vicente, FSA, EA



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Section II. Determination of District Contributions

Derivation of Liabilities – Teachers

Below is a summary of the actuarial accrued liability of the future benefits expected to be paid from the Plan.

Teachers	10/1/2020	10/1/2021
1. Participants		
a. Active	5,531	6,050
b. Retirees and Beneficiaries	4,071	4,072
i. Service Retirements	3,775	3,775
ii. Disability Retirements	111	107
iii. Survivors	185	190
c. Inactive with Deferred Benefits	1,510	1,514
d. Total	11,112	11,636
2. Active Payroll	\$ 551,835	\$ 600,481
3. Actuarial Accrued Liability		
a. Active Participants	\$ 1,335,898	\$ 1,362,322
b. Retirees and Beneficiaries	1,121,326	1,132,341
i. Service Retirements	1,071,761	1,078,876
ii. Disability Retirements	30,366	33,557
iii. Survivors	19,198	19,909
c. Inactive with Deferred Benefits	183,579	203,955
d. Total	2,640,803	2,698,618
4. Actuarial Value of Assets	\$ 2,431,075	\$ 2,684,368
5. Unfunded Actuarial Liability (3.d.- 4.)	209,728	14,250
6. Funded Ratio (4. ÷ 3.d.)	92.06%	99.47%

(\$ in Thousands)

Section II. Determination of District Contributions

Derivation of Liabilities – Police and Fire

Below is a summary of the actuarial accrued liability of the future benefits expected to be paid from the Plan.

Police and Fire	10/1/2020	10/1/2021
1. Participants		
a. Active	5,377	5,242
b. Retirees and Beneficiaries	3,929	4,115
i. Service Retirements	2,947	3,119
ii. Disability Retirements	428	430
iii. Survivors	554	566
c. Inactive with Deferred Benefits	303	342
d. Total	9,609	9,699
2. Active Payroll	\$ 507,348	\$ 492,787
3. Actuarial Accrued Liability		
a. Active Participants	\$ 3,119,862	\$ 3,075,255
b. Retirees and Beneficiaries	2,830,585	3,021,846
i. Service Retirements	2,459,810	2,589,147
ii. Disability Retirements	198,508	247,985
iii. Survivors	172,267	184,714
c. Inactive with Deferred Benefits	73,396	84,513
d. Total	6,023,843	6,181,614
4. Actuarial Value of Assets	\$ 6,676,013	\$ 7,290,173
5. Unfunded Actuarial Liability (3.d.- 4.)	(652,169)	(1,108,559)
6. Funded Ratio (4. ÷ 3.d.)	110.83%	117.93%

(\$ in Thousands)

Section II. Determination of District Contributions

Derivation of Liabilities – Police

Below is a summary of the actuarial accrued liability of the future benefits expected to be paid from the Plan.

Police	10/1/2020	10/1/2021
1. Participants		
a. Active	3,544	3,366
b. Retirees and Beneficiaries	2,952	3,095
i. Service Retirements	2,214	2,348
ii. Disability Retirements	331	332
iii. Survivors	407	415
c. Inactive with Deferred Benefits	219	252
d. Total	6,715	6,713
2. Active Payroll	\$ 336,479	\$ 320,487
3. Actuarial Accrued Liability		
a. Active Participants	\$ 1,997,978	\$ 1,993,751
b. Retirees and Beneficiaries	2,121,866	2,272,411
i. Service Retirements	1,853,125	1,958,280
ii. Disability Retirements	152,994	190,161
iii. Survivors	115,747	123,970
c. Inactive with Deferred Benefits	59,270	66,095
d. Total	4,179,114	4,332,257
4. Actuarial Value of Assets	\$ 4,615,243	\$ 5,015,377
5. Unfunded Actuarial Liability (3.d.- 4.)	(436,129)	(683,120)
6. Funded Ratio (4. ÷ 3.d.)	110.44%	115.77%

(\$ in Thousands)

Section II. Determination of District Contributions

Derivation of Liabilities – Fire

Below is a summary of the actuarial accrued liability of the future benefits expected to be paid from the Plan.

Fire	10/1/2020	10/1/2021
1. Participants		
a. Active	1,833	1,876
b. Retirees and Beneficiaries	977	1,020
i. Service Retirements	733	771
ii. Disability Retirements	97	98
iii. Survivors	147	151
c. Inactive with Deferred Benefits	84	90
d. Total	2,894	2,986
2. Active Payroll	\$ 170,869	\$ 172,299
3. Actuarial Accrued Liability		
a. Active Participants	\$ 1,121,885	\$ 1,081,504
b. Retirees and Beneficiaries	708,718	749,435
i. Service Retirements	606,685	630,867
ii. Disability Retirements	45,514	57,824
iii. Survivors	56,519	60,744
c. Inactive with Deferred Benefits	14,126	18,418
d. Total	1,844,730	1,849,357
4. Actuarial Value of Assets	\$ 2,060,770	\$ 2,274,795
5. Unfunded Actuarial Liability (3.d.- 4.)	(216,040)	(425,438)
6. Funded Ratio (4. ÷ 3.d.)	111.71%	123.00%

(\$ in Thousands)

Section II. Determination of District Contributions

Experience Gain/(Loss) and Projection of Unfunded Liability – Teachers

The experience gain/(loss) from October 1, 2020 to October 1, 2021 and projection of the unfunded actuarial liability from October 1, 2021 to October 1, 2022, the beginning of the fiscal year, is shown below. Please see Appendix 5 for a detailed breakdown of gain/(loss) sources.

Experience Gain/(Loss) - Teachers		10/1/2021
1. Unfunded Liability as of 10/01/2020	\$	209,728
2. Total FY2021 Normal Cost		82,614
3. Actual FY2021 Expenses		4,127
4. Total FY2021 Actual Contributions		116,167
5. Interest		15,418
6. Expected Unfunded Liability as of 10/01/2021		195,720
7. Change due to Plan Amendments		0
8. Change due to Assumptions and/or Methods		(89,404)
9. Expected Unfunded Liability as of 10/01/2021		106,316
10. Actual Unfunded Liability as of 10/01/2021		14,250
11. Gain/(Loss)		92,066
12. Actuarial Accrued Liability at 10/01/2020	\$	2,640,803
13. Gain/(Loss) as a percent of Actuarial Accrued Liability		3.49%

Projected Unfunded Liability - Teachers		
1. Actual Unfunded Liability as of 10/01/2021	\$	14,250
2. Total Normal Cost FY2022		83,451
3. Expected District and Employee Contributions FY2022		121,908
4. Expected Expenses FY2022		7,116
5. Interest		2,573
6. Projected Unfunded Liability as of 10/1/2022	\$	(14,518)

(\$ in Thousands)

Section II. Determination of District Contributions

Experience Gain/(Loss) and Projection of Unfunded Liability – Police

The experience gain/(loss) from October 1, 2020 to October 1, 2021 and projection of the unfunded actuarial liability from October 1, 2021 to October 1, 2022, the beginning of the fiscal year, is shown below. Please see Appendix 5 for a detailed breakdown of gain/(loss) sources.

Experience Gain/(Loss) - Police		10/1/2021
1. Unfunded Liability as of 10/01/2020	\$	(436,129)
2. Total FY2021 Normal Cost		132,655
3. Actual FY2021 Expenses		7,712
4. Total FY2021 Actual Contributions		86,206
5. Interest		(22,237)
6. Expected Unfunded Liability as of 10/01/2021		(404,205)
7. Change due to Plan Amendments		0
8. Change due to Assumptions and/or Methods		(14,253)
9. Expected Unfunded Liability as of 10/01/2021		(418,458)
10. Actual Unfunded Liability as of 10/01/2021		(683,120)
11. Gain/(Loss)		264,662
12. Actuarial Accrued Liability at 10/01/2020	\$	4,179,114
13. Gain/(Loss) as a percent of Actuarial Accrued Liability		6.33%

Projected Unfunded Liability - Police		
1. Actual Unfunded Liability as of 10/01/2021	\$	(683,120)
2. Total Normal Cost FY2022		125,010
3. Expected District and Employee Contributions FY2022		92,852
4. Expected Expenses FY2022		6,597
5. Interest		(37,536)
6. Projected Unfunded Liability as of 10/1/2022	\$	(681,901)

(\$ in Thousands)

Section II. Determination of District Contributions

Experience Gain/(Loss) and Projection of Unfunded Liability – Fire

The experience gain/(loss) from October 1, 2020 to October 1, 2021 and projection of the unfunded actuarial liability from October 1, 2021 to October 1, 2022, the beginning of the fiscal year, is shown below. Please see Appendix 5 for a detailed breakdown of gain/(loss) sources.

Experience Gain/(Loss) - Fire		10/1/2021
1. Unfunded Liability as of 10/01/2020	\$	(216,040)
2. Total FY2021 Normal Cost		71,566
3. Actual FY2021 Expenses		3,496
4. Total FY2021 Actual Contributions		61,160
5. Interest		(11,235)
6. Expected Unfunded Liability as of 10/01/2021		(213,373)
7. Change due to Plan Amendments		0
8. Change due to Assumptions and/or Methods		(83,242)
9. Expected Unfunded Liability as of 10/01/2021		(296,615)
10. Actual Unfunded Liability as of 10/01/2021		(425,438)
11. Gain/(Loss)		128,823
12. Actuarial Accrued Liability at 10/01/2020	\$	1,844,730
13. Gain/(Loss) as a percent of Actuarial Accrued Liability		6.98%

Projected Unfunded Liability - Fire		
1. Actual Unfunded Liability as of 10/01/2021	\$	(425,438)
2. Total Normal Cost FY2022		66,123
3. Expected District and Employee Contributions FY2022		54,169
4. Expected Expenses FY2022		3,519
5. Interest		(24,016)
6. Projected Unfunded Liability as of 10/1/2022	\$	(433,981)

(\$ in Thousands)

Section II. Determination of District Contributions

Development of District Contributions – Teachers

The breakdown of the Actuarially Determined Contribution into normal cost, amortization payment, expected administrative expenses, and D.C. Code §1-907.02(c) Adjustment is illustrated below. The calculation of the D.C. Code §1-907.02(c) Adjustment is detailed in Appendix 4.

Teachers Actuarially Determined Contribution (ADC)		FY2023	Percentage of FY2023 Payroll
1.	Total Normal Cost as of October 1, 2021	\$ 83,451	N/A
2.	Projected Total Normal Cost as of October 1, 2022 (1. x 1.04)	86,805	13.90%
3.	Expected Member Contributions	49,335	7.90%
4.	Employer Normal Cost (2. - 3.)	37,470	6.00%
5.	Expenses	7,494	1.20%
6.	Amortization Payment	(1,051)	(0.17%)
7.	Actuarially Determined Contribution (ADC) (4. + 5. + 6.)	43,913	7.03%
8.	D.C. Code §1-907.02(c) Adjustment to FY2023 Payment	3,922	N/A
9.	Fiscal Year District Payment	\$ 47,835	N/A

Projected Payroll		
1.	Active Member June 30, 2021 Payroll	\$ 566,765
2.	Expected FY2022 Payroll (1. increased with one year of salary scale)	600,481
3.	Projected FY2023 Payroll (2. x 1.04)	\$ 624,500

(\$ in Thousands)

Section II. Determination of District Contributions

Development of District Contributions – Police and Fire

The breakdown of the Actuarially Determined Contribution into normal cost, amortization payment, expected administrative expenses, and D.C. Code §1-907.02(c) Adjustment is illustrated below. The calculation of the D.C. Code §1-907.02(c) Adjustment is detailed in Appendix 4.

Police and Fire Actuarially Determined Contribution (ADC)		FY2023	Percentage of FY2023 Payroll
1.	Total Normal Cost as of October 1, 2021	\$ 191,134	N/A
2.	Projected Total Normal Cost as of October 1, 2022 (1. x 1.04)	198,797	38.79%
3.	Expected Member Contributions	40,487	7.90%
4.	Employer Normal Cost (2. - 3.)	158,310	30.89%
5.	Expenses	10,762	2.10%
6.	Amortization Payment	(80,763)	(15.76%)
7.	Actuarially Determined Contribution (ADC) (4. + 5. + 6.)	88,309	17.23%
8.	D.C. Code §1-907.02(c) Adjustment to FY2023 Payment	(10,801)	N/A
9.	Fiscal Year District Payment	\$ 77,508	N/A

Projected Payroll		
1.	Active Member June 30, 2021 Payroll	\$ 463,839
2.	Expected FY2022 Payroll (1. increased with one year of salary scale)	492,787
3.	Projected FY2023 Payroll (2. x 1.04)	\$ 512,498

(\$ in Thousands)

Section II. Determination of District Contributions

Development of District Contributions – Police

The breakdown of the Actuarially Determined Contribution into normal cost, amortization payment, expected administrative expenses, and D.C. Code §1-907.02(c) Adjustment is illustrated below. The calculation of the D.C. Code §1-907.02(c) Adjustment is detailed in Appendix 4.

Police Actuarially Determined Contribution (ADC)	FY2023	Percentage of FY2023 Payroll
1. Total Normal Cost as of October 1, 2021	\$ 125,010	N/A
2. Projected Total Normal Cost as of October 1, 2022 (1. x 1.04)	130,023	39.01%
3. Expected Member Contributions	26,331	7.90%
4. Employer Normal Cost (2. - 3.)	103,692	31.11%
5. Expenses	6,999	2.10%
6. Amortization Payment	(49,353)	(14.81%)
7. Actuarially Determined Contribution (ADC) (4. + 5. + 6.)	61,338	18.40%
8. D.C. Code §1-907.02(c) Adjustment to FY2023 Payment	(7,429)	N/A
9. Fiscal Year District Payment	\$ 53,909	N/A

Projected Payroll	
1. Active Member June 30, 2021 Payroll	\$ 300,755
2. Expected FY2022 Payroll (1. increased with one year of salary scale)	320,487
3. Projected FY2023 Payroll (2. x 1.04)	\$ 333,307

(\$ in Thousands)

Section II. Determination of District Contributions

Development of District Contributions – Fire

The breakdown of the Actuarially Determined Contribution into normal cost, amortization payment, expected administrative expenses, and D.C. Code §1-907.02(c) Adjustment is illustrated below. The calculation of the D.C. Code §1-907.02(c) Adjustment is detailed in Appendix 4.

Fire Actuarially Determined Contribution (ADC)	FY2023	Percentage of FY2023 Payroll
1. Total Normal Cost as of October 1, 2021	\$ 66,123	N/A
2. Projected Total Normal Cost as of October 1, 2022 (1. x 1.04)	68,774	38.38%
3. Expected Member Contributions	14,156	7.90%
4. Employer Normal Cost (2. - 3.)	54,618	30.48%
5. Expenses	3,763	2.10%
6. Amortization Payment	(31,410)	(17.53%)
7. Actuarially Determined Contribution (ADC) (4. + 5. + 6.)	26,971	15.05%
8. D.C. Code §1-907.02(c) Adjustment to FY2023 Payment	(3,372)	N/A
9. Fiscal Year District Payment	\$ 23,599	N/A

Projected Payroll	
1. Active Member June 30, 2021 Payroll	\$ 163,084
2. Expected FY2022 Payroll (1. increased with one year of salary scale)	172,299
3. Projected FY2023 Payroll (2. x 1.04)	\$ 179,191

(\$ in Thousands)

Section II. Determination of District Contributions

Schedule of Amortization Bases

Below is a schedule of the amortization bases as of October 1, 2022.

Teachers Description	Date Established	Remaining Years	Amount to be Amortized	Payment / (Credit)
Surplus	10/1/2022	30	(14,518)	(1,051)
Totals			\$ (14,518)	\$ (1,051)

Police Description	Date Established	Remaining Years	Amount to be Amortized	Payment / (Credit)
Surplus	10/1/2022	30	(681,901)	(49,353)
Totals			\$ (681,901)	\$ (49,353)

Fire Description	Date Established	Remaining Years	Amount to be Amortized	Payment / (Credit)
Surplus	10/1/2022	30	(433,981)	(31,410)
Totals			\$ (433,981)	\$ (31,410)

(\$ in Thousands)

Bases are amortized on a level dollar basis.

The unfunded liability at 10/1/2021 is projected to 10/1/2022 for the amortization of the surplus.

Section III. Valuation of Assets

Reconciliation of Assets – Teachers

Below is a reconciliation of assets from October 1, 2019 through September 30, 2021. An adjustment has been included to account for the difference in market value of assets between the prior year's valuation report and the audited value.

Teachers	FY2020	FY2021
1. Beginning of Year Assets	\$ 2,264,428,000	\$ 2,411,390,000
2. Adjustments	(28,000)	-
3. Beginning of Year Assets after Adjustments	2,264,400,000	2,411,390,000
4. Receipts		
a. Employer Contributions	58,888,000	70,478,000
b. Employee Contributions	42,356,000	45,689,000
c. Net Investment Income	139,809,000	503,698,000
d. Total Receipts	\$ 241,053,000	\$ 619,865,000
5. Deductions		
a. Benefit Payments	\$ (85,679,000)	\$ (89,404,000)
b. Refunds	(4,873,000)	(3,417,000)
c. Administrative Expenses	(3,511,000)	(4,127,000)
d. Total Deductions	\$ (94,063,000)	\$ (96,948,000)
6. Net Increase	146,990,000	522,917,000
7. End of Year Assets	\$ 2,411,390,000	\$ 2,934,307,000
8. Rate of Return (2 x 4.c.) / (1. + 7. – 4.c.)	6.16%	20.81%

Section III. Valuation of Assets

Reconciliation of Assets – Police and Fire

Below is a reconciliation of assets from October 1, 2019 through September 30, 2021. An adjustment has been included to account for the difference in market value of assets between the prior year's valuation report and the audited value.

Police and Fire	FY2020	FY2021
1. Beginning of Year Assets	\$ 6,256,213,000	\$ 6,620,190,000
2. Adjustments	232,000	-
3. Beginning of Year Assets after Adjustments	6,256,445,000	6,620,190,000
4. Receipts		
a. Employer Contributions	\$ 93,061,000	\$ 109,933,000
b. Employee Contributions	37,880,000	37,433,000
c. Net Investment Income	383,732,000	1,365,804,000
d. Total Receipts	\$ 514,673,000	\$ 1,513,170,000
5. Deductions		
a. Benefit Payments	\$ (140,044,000)	\$ (156,455,000)
b. Refunds	(1,236,000)	(2,420,000)
c. Administrative Expenses	(9,648,000)	(11,208,000)
d. Total Deductions	\$ (150,928,000)	\$ (170,083,000)
6. Net Increase	363,745,000	1,343,087,000
7. End of Year Assets	\$ 6,620,190,000	\$ 7,963,277,000
8. Rate of Return (2 x 4.c.) / (1. + 7. – 4.c.)	6.14%	20.67%

Section III. Valuation of Assets

Reconciliation of Assets – Police

Below is a reconciliation of assets from October 1, 2019 through September 30, 2021. An adjustment has been included to account for the difference in market value of assets between the prior year's valuation report and the audited value.

Police	FY2020	FY2021
1. Beginning of Year Assets	\$ 4,350,404,858	\$ 4,576,807,674
2. Adjustments	161,327	-
3. Beginning of Year Assets after Adjustments	4,350,566,185	4,576,807,674
4. Receipts		
a. Employer Contributions	\$ 45,421,000	\$ 61,796,000
b. Employee Contributions	24,792,460	24,410,059
c. Net Investment Income	266,041,479	941,767,242
d. Total Receipts	\$ 336,254,939	\$ 1,027,973,301
5. Deductions		
a. Benefit Payments	\$ (102,582,230)	\$ (116,293,002)
b. Refunds	(761,129)	(1,798,786)
c. Administrative Expenses	(6,670,091)	(7,711,772)
d. Total Deductions	\$ (110,013,450)	\$ (125,803,560)
6. Net Increase	226,241,490	902,169,741
7. End of Year Assets	\$ 4,576,807,674	\$ 5,478,977,416
8. Rate of Return (2 x 4.c.) / (1. + 7. – 4.c.)	6.14%	20.67%

Section III. Valuation of Assets

Reconciliation of Assets – Fire

Below is a reconciliation of assets from October 1, 2019 through September 30, 2021. An adjustment has been included to account for the difference in market value of assets between the prior year's valuation report and the audited value.

Fire	FY2020	FY2021
1. Beginning of Year Assets	\$ 1,905,808,142	\$ 2,043,382,326
2. Adjustments	70,673	-
3. Beginning of Year Assets after Adjustments	1,905,878,815	2,043,382,326
4. Receipts		
a. Employer Contributions	\$ 47,640,000	\$ 48,137,000
b. Employee Contributions	13,087,540	13,022,941
c. Net Investment Income	117,690,521	424,036,758
d. Total Receipts	\$ 178,418,061	\$ 485,196,699
5. Deductions		
a. Benefit Payments	\$ (37,461,770)	\$ (40,161,999)
b. Refunds	(474,871)	(621,214)
c. Administrative Expenses	(2,977,909)	(3,496,228)
d. Total Deductions	\$ (40,914,550)	\$ (44,279,441)
6. Net Increase	137,503,510	440,917,258
7. End of Year Assets	\$ 2,043,382,326	\$ 2,484,299,584
8. Rate of Return (2 x 4.c.) / (1. + 7. – 4.c.)	6.14%	20.67%

Section III. Valuation of Assets

Calculation of Actuarial Asset Value – Teachers

The actuarial asset value as of October 1, 2021 is determined by spreading the asset gain or loss for each year over a five-year period. The asset gain or loss is the amount by which the actual asset return differs from the expected asset return.

Teachers			10/1/2021	
1.	Market Value of Assets at End of Year	\$		2,934,307,000
2.	Net investment income			503,698,000
3.	Expected Return Rate as of 09/30/2021			6.50%
4.	Expected investment income			157,364,968
5.	Gain/(Loss)			346,333,032
Spreading of investment gain/(loss)				
Year	Original or restructured base	% Deferred	Deferred	
FY2021	\$ 346,333,032	80%	\$	277,066,426
FY2020	(7,610,383)	60%		(4,566,230)
FY2019	(55,652,385)	40%		(22,260,954)
FY2018	(1,502,690)	20%		(300,538)
FY2017	101,977,795	0%		-
Total deferred			249,938,704	
6.	Preliminary Actuarial Value of Assets	\$		2,684,368,296
7.	Lower Corridor			2,347,445,600
8.	Upper Corridor			3,521,168,400
9.	Final Actuarial Value of Assets			2,684,368,296
Rate of Return				9.59%

Section III. Valuation of Assets

Calculation of Actuarial Asset Value – Police and Fire

The actuarial asset value as of October 1, 2021 is determined by spreading the asset gain or loss for each year over a five-year period. The asset gain or loss is the amount by which the actual asset return differs from the expected asset return.

Police and Fire			10/1/2021
1.	Market Value of Assets at End of Year	\$	7,963,277,000
2.	Net investment income		1,365,804,000
3.	Expected Return Rate as of 09/30/2021		6.50%
4.	Expected investment income		429,574,048
5.	Gain/(Loss)		936,229,952
Spreading of investment gain/(loss)			
Year	Original or restructured base	% Deferred	Deferred
FY2021	\$ 936,229,952	80%	\$ 748,983,962
FY2020	(22,287,348)	60%	(13,372,409)
FY2019	(156,151,165)	40%	(62,460,466)
FY2018	(234,205)	20%	(46,841)
FY2017	278,958,425	0%	-
Total deferred			673,104,246
6.	Preliminary Actuarial Value of Assets	\$	7,290,172,754
7.	Lower Corridor		6,370,621,600
8.	Upper Corridor		9,555,932,400
9.	Final Actuarial Value of Assets		7,290,172,754
Rate of Return			9.56%

Section III. Valuation of Assets

Calculation of Actuarial Asset Value – Police

The actuarial asset value as of October 1, 2021 is determined by spreading the asset gain or loss for each year over a five-year period. The asset gain or loss is the amount by which the actual asset return differs from the expected asset return.

Police		10/1/2021
1.	Market Value of Assets at End of Year	\$ 5,478,977,416
2.	Net investment income	941,767,242
3.	Expected Return Rate as of 09/30/2021	6.50%
4.	Expected investment income	296,205,580
5.	Gain/(Loss)	645,561,662

Spreading of investment gain/(loss)

Year	Original or restructured base	% Deferred	Deferred
FY2021	\$ 645,561,662	80%	\$ 516,449,330
FY2020	(15,451,823)	60%	(9,271,094)
FY2019	(108,792,993)	40%	(43,517,197)
FY2018	(304,943)	20%	(60,989)
FY2017	196,620,900	0%	-
Total deferred			463,600,050

6.	Preliminary Actuarial Value of Assets	\$ 5,015,377,366
7.	Lower Corridor	4,383,181,932
8.	Upper Corridor	6,574,772,899
9.	Final Actuarial Value of Assets	5,015,377,366

Rate of Return	9.57%
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Section III. Valuation of Assets

Calculation of Actuarial Asset Value – Fire

The actuarial asset value as of October 1, 2021 is determined by spreading the asset gain or loss for each year over a five-year period. The asset gain or loss is the amount by which the actual asset return differs from the expected asset return.

Fire		10/1/2021
1.	Market Value of Assets at End of Year	\$ 2,484,299,584
2.	Net investment income	424,036,758
3.	Expected Return Rate as of 09/30/2021	6.50%
4.	Expected investment income	133,368,467
5.	Gain/(Loss)	290,668,291

Spreading of investment gain/(loss)

Year	Original or restructured base	% Deferred	Deferred
FY2021	\$ 290,668,291	80%	\$ 232,534,633
FY2020	(6,835,525)	60%	(4,101,315)
FY2019	(47,358,172)	40%	(18,943,269)
FY2018	70,738	20%	14,148
FY2017	82,337,530	0%	-
Total deferred			209,504,197

6.	Preliminary Actuarial Value of Assets	\$ 2,274,795,387
7.	Lower Corridor	1,987,439,667
8.	Upper Corridor	2,981,159,500
9.	Final Actuarial Value of Assets	2,274,795,387

Rate of Return	9.53%
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Section IV. Participant Information

Participant Summary

The following table summarizes the counts, ages and benefit information for Plan participants used in this valuation.

	Teachers	Police Officers	Firefighters	Total
1. Active				
a. Number	6,050	3,366	1,876	11,292
b. Average Age	41.2	39.9	40.0	40.6
c. Average Service	8.5	12.7	13.8	10.6
d. Average Salary	\$ 99,253	\$ 95,213	\$ 91,844	\$ 96,818
2. Vested Terminations				
a. Number	1,514	252	90	1,856
b. Average Age	49.4	44.0	43.2	48.4
c. Total Annual Benefits	\$ 20,970,238	\$ 4,940,980	\$ 1,476,047	\$ 27,387,265
3. Service Retired, Disabled and Beneficiaries (Receiving District Benefits)				
a. Number	4,072	3,095	1,020	8,187
b. Average Age	73.9	60.3	61.8	67.3
c. Total Annual Benefits	\$ 88,610,097	\$ 120,571,245	\$ 41,611,433	\$ 250,792,775

The following table summarizes all retiree member data and is provided for informational purposes only. The benefits are the total benefits for all members who were employed by the District and include both those that are the District's responsibility and those that are the responsibility of the U.S. Department of the Treasury. The liabilities for benefits that are the responsibility of the U.S. Department of the Treasury are not included in this actuarial valuation.

	Teachers	Police Officers	Firefighters	Total
Service Retired, Disabled and Beneficiaries (Receiving District and/or Federal Benefits)				
a. Number	5,603	6,461	2,041	14,105
b. Average Age	77.2	69.0	71.0	72.5
c. Total Annual Benefits	\$ 270,536,616	\$ 371,867,152	\$ 131,433,806	\$ 773,837,573



Section IV. Participant Information

Active Age/Service Distribution Including Compensation – Teachers

Shown below is the distribution of active participants based on age and service. The compensation shown is the average of estimated FY2022 pay (pay rate provided as of June 30, 2021 increased with salary scale for one year).

Age	Years of Service as of 10/01/2021										Total
	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Up	
Under 25	2	98	0	0	0	0	0	0	0	0	100
	59,343	61,703	0	0	0	0	0	0	0	0	61,655
25 - 29	8	481	119	2	0	0	0	0	0	0	610
	64,099	69,887	77,491	69,065	0	0	0	0	0	0	71,292
30 - 34	11	572	546	119	1	0	0	0	0	0	1,249
	75,244	82,171	92,971	106,335	99,350	0	0	0	0	0	89,147
35 - 39	9	410	491	263	43	1	0	0	0	0	1,217
	82,562	91,981	104,521	108,509	107,818	88,944	0	0	0	0	101,100
40 - 44	5	260	322	187	120	23	0	0	0	0	917
	77,363	95,892	111,427	113,745	115,895	130,908	0	0	0	0	108,383
45 - 49	2	139	222	153	75	115	12	0	0	0	718
	81,544	93,820	111,292	114,691	116,322	119,130	119,896	0	0	0	110,476
50 - 54	3	105	124	91	53	89	58	12	1	0	536
	86,468	95,919	107,032	110,439	112,056	117,766	120,059	128,992	121,065	0	109,525
55 - 59	3	57	57	67	32	49	25	50	3	0	343
	90,911	96,230	114,203	111,221	116,145	115,904	114,202	120,006	115,741	0	111,713
60 - 64	0	25	29	31	28	35	18	37	9	2	214
	0	98,771	111,856	108,270	110,840	116,845	118,726	115,393	124,461	117,825	112,266
65 - 69	0	14	17	14	14	14	8	21	9	1	112
	0	91,828	114,105	115,062	119,348	118,113	130,558	119,365	120,967	114,586	115,314
70 & Up	0	5	4	1	1	7	2	9	4	1	34
	0	90,019	98,642	121,821	92,866	113,609	121,065	110,750	139,461	121,064	110,953
Totals	43	2,166	1,931	928	367	333	123	129	26	4	6,050
	76,378	84,077	102,149	110,710	114,142	118,615	119,357	118,769	124,423	117,825	99,253

Averages	
Age	41.2
Service	8.5



Section IV. Participant Information

Active Age/Service Distribution Including Compensation – Police

Shown below is the distribution of active participants based on age and service. The compensation shown is the average of estimated FY2022 pay (pay rate provided as of June 30, 2021 increased with salary scale for one year).

Age	Years of Service as of 10/01/2021										Total
	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Up	
Under 25	0	124	7	0	0	0	0	0	0	0	131
	0	70,259	72,246	0	0	0	0	0	0	0	70,365
25 - 29	0	369	120	1	0	0	0	0	0	0	490
	0	74,646	80,713	80,209	0	0	0	0	0	0	76,143
30 - 34	0	201	338	35	3	0	0	0	0	0	577
	0	74,720	84,095	91,943	77,942	0	0	0	0	0	81,273
35 - 39	0	66	195	228	94	0	0	0	0	0	583
	0	74,885	84,516	94,936	104,283	0	0	0	0	0	90,688
40 - 44	0	18	67	111	240	47	0	0	0	0	483
	0	75,510	85,502	95,137	107,034	118,982	0	0	0	0	101,301
45 - 49	0	21	17	39	135	230	47	15	0	0	504
	0	75,894	83,713	96,392	105,125	119,587	123,947	138,457	0	0	111,856
50 - 54	0	8	5	35	89	162	54	42	0	0	395
	0	77,319	92,580	95,974	105,303	118,147	134,795	126,601	0	0	115,312
55 - 59	0	2	5	15	34	56	11	43	5	0	171
	0	76,126	86,998	93,356	108,182	115,387	121,824	127,950	135,483	0	114,894
60 - 64	0	0	0	1	5	14	2	6	3	1	32
	0	0	0	88,429	99,908	114,155	106,724	122,719	139,099	141,630	115,463
65 - 69	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
70 & Up	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
Totals	0	809	754	465	600	509	114	106	8	1	3,366
	0	74,093	83,747	94,862	105,777	118,461	128,578	128,606	136,839	141,630	95,213

Averages	
Age	39.9
Service	12.7



Section IV. Participant Information

Active Age/Service Distribution Including Compensation – Fire

Shown below is the distribution of active participants based on age and service. The compensation shown is the average of estimated FY2022 pay (pay rate provided as of June 30, 2021 increased with salary scale for one year).

Age	Years of Service as of 10/01/2021										Total
	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Up	
Under 25	16	50	7	0	0	0	0	0	0	0	73
	61,867	61,516	66,363	0	0	0	0	0	0	0	62,058
25 - 29	26	103	130	4	0	0	0	0	0	0	263
	62,747	65,415	73,676	62,591	0	0	0	0	0	0	69,191
30 - 34	16	108	84	43	7	0	0	0	0	0	258
	62,956	66,609	74,729	86,205	81,938	0	0	0	0	0	72,708
35 - 39	13	49	46	208	85	4	0	0	0	0	405
	60,737	67,614	78,212	92,725	101,523	95,088	0	0	0	0	88,881
40 - 44	2	12	11	121	106	40	1	0	0	0	293
	58,057	68,449	76,473	90,754	103,109	115,706	153,562	0	0	0	97,172
45 - 49	0	4	4	19	79	76	41	10	0	0	233
	0	72,216	74,265	89,422	98,185	117,782	119,319	123,847	0	0	107,826
50 - 54	0	1	4	1	36	93	61	38	0	0	234
	0	59,801	76,746	122,941	101,527	108,350	123,540	137,688	0	0	115,339
55 - 59	0	0	1	0	2	24	39	21	4	0	91
	0	0	70,035	0	129,251	97,182	116,337	148,683	198,905	0	122,154
60 - 64	0	0	0	0	0	10	3	8	5	0	26
	0	0	0	0	0	101,850	126,525	135,171	127,311	0	119,846
65 - 69	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
70 & Up	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
Totals	73	327	287	396	315	247	145	77	9	0	1,876
	62,113	65,720	74,678	91,028	100,961	110,880	120,678	138,628	159,131	0	91,844

Averages	
Age	40.0
Service	13.8

Section IV. Participant Information

Participant Reconciliation – Teachers

Shown below is the reconciliation of participants between the prior and current valuation date.

Teachers	Active Participants	Inactive Participants				Total
		Retirees	Disabled Retirees	Beneficiaries	Vested Terms	
Participants in Last Valuation	5,531	3,775	111	185	1,510	11,112
Death	(6)	(84)	(5)	(6)	0	(101)
Disabled	(1)	0	1	0	0	0
Retired	(53)	80	0	0	(27)	0
Vested Termination	(92)	0	0	0	92	0
Nonvested Termination	(115)	0	0	0	0	(115)
Return of Contributions/Benefits Ended	(25)	0	0	0	(28)	(53)
New Actives	778	0	0	0	0	778
Rehire from Vested Term	30	0	0	0	(30)	0
Rehire from Nonvested Term	0	0	0	0	0	0
New Beneficiaries	0	0	0	11	0	11
Data Adjustment	3	4	0	0	(3)	4
Participants in This Valuation	6,050	3,775	107	190	1,514	11,636

In addition, there are 663 participants who are non-vested and due a refund of employee contributions.

Section IV. Participant Information

Participant Reconciliation – Police

Shown below is the reconciliation of participants between the prior and current valuation date.

Police	Active Participants	Inactive Participants				Total
		Retirees	Disabled Retirees	Beneficiaries	Vested Terms	
Participants in Last Valuation	3,544	2,214	331	407	219	6,715
Death	(6)	(26)	(4)	0	(2)	(38)
Disabled	(5)	0	5	0	0	0
Retired	(139)	158	0	0	(19)	0
Vested Termination	(66)	0	0	0	66	0
Nonvested Termination	(42)	0	0	0	0	(42)
Return of Contributions/Benefits Ended	(31)	0	0	(28)	(6)	(65)
New Actives	105	0	0	0	0	105
Rehire from Vested Term	6	0	0	0	(6)	0
Rehire from Nonvested Term	0	0	0	0	0	0
New Beneficiaries	0	0	0	36	0	36
Data Adjustment	0	2	0	0	0	2
Participants in This Valuation	3,366	2,348	332	415	252	6,713

In addition, there are 93 participants who are non-vested and due a refund of employee contributions.



Section IV. Participant Information

Participant Reconciliation – Fire

Shown below is the reconciliation of participants between the prior and current valuation date.

Fire	Active Participants	Inactive Participants				Total
		Retirees	Disabled Retirees	Beneficiaries	Vested Terms	
Participants in Last Valuation	1,833	733	97	147	84	2,894
Death	0	(12)	(2)	0	0	(14)
Disabled	(3)	0	3	0	0	0
Retired	(47)	50	0	0	(3)	0
Vested Termination	(10)	0	0	0	10	0
Nonvested Termination	(13)	0	0	0	0	(13)
Return of Contributions/Benefits Ended	(3)	0	0	(6)	(1)	(10)
New Actives	119	0	0	0	0	119
Rehire from Vested Term	0	0	0	0	0	0
Rehire from Nonvested Term	0	0	0	0	0	0
New Beneficiaries	0	0	0	10	0	10
Data Adjustment	0	0	0	0	0	0
Participants in This Valuation	1,876	771	98	151	90	2,986

In addition, there are 37 participants who are non-vested and due a refund of employee contributions.

Section IV. Participant Information

Schedule of Retiree Member Data – Total Counts

The following table summarizes the total number of Service Retired, Disabled, and Beneficiary members included in the retiree member data. Only the retiree members receiving a benefit from the District are included in this valuation.

	(1) Receiving Only District Benefits	(2) Receiving Only Federal Benefits	(3) Receiving Both District and Federal Benefits	(4) = (1) + (3) Total Receiving District Benefits	(5) = (2) + (3) Total Receiving Federal Benefits	(6) = (1) + (2) + (3) Total Receiving Benefits
Teachers	538	1,531	3,534	4,072	5,065	5,603
Police	486	3,366	2,609	3,095	5,975	6,461
Fire	172	1,021	848	1,020	1,869	2,041
Total	1,196	5,918	6,991	8,187	12,909	14,105



Section IV. Participant Information

Schedule of Retiree Member Data – Teachers – Receiving District Benefits

Shown below is the schedule of retiree member data. The benefits are only those member benefits that are the District's responsibility.

Attained Age	Service Retirement		Disability Retirement		Survivors and Beneficiaries		Total	
	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 20	-	\$ -	-	\$ -	6	\$ 37,245	6	\$ 37,245
20 to 24	-	-	-	-	1	7,044	1	7,044
25 to 29	-	-	-	-	-	-	-	-
30 to 34	-	-	-	-	-	-	-	-
35 to 39	-	-	-	-	2	18,204	2	18,204
40 to 44	-	-	-	-	2	37,601	2	37,601
45 to 49	-	-	2	80,568	4	58,781	6	139,349
50 to 54	2	83,698	6	220,380	2	25,237	10	329,314
55 to 59	72	3,272,856	10	396,936	5	80,468	87	3,750,260
60 to 64	299	11,342,186	20	603,060	22	205,186	341	12,150,433
65 to 69	669	20,615,109	15	385,372	30	279,085	714	21,279,566
70 to 74	1,240	27,120,250	44	837,853	47	306,858	1,331	28,264,961
75 to 79	1,023	15,813,795	9	110,612	40	278,837	1,072	16,203,244
80 to 84	375	5,021,483	1	3,238	18	96,930	394	5,121,652
85 to 89	78	954,569	-	-	10	58,855	88	1,013,424
90 to 94	15	230,576	-	-	1	2,263	16	232,840
95 and over	2	24,960	-	-	-	-	2	24,960
Total	3,775	\$ 84,479,482	107	\$ 2,638,020	190	\$ 1,492,595	4,072	\$ 88,610,097

Section IV. Participant Information

Schedule of Retiree Member Data – Teachers – Receiving District and/or Federal Benefits

Shown below is the schedule of all retiree member data. The benefits are the total member benefits and include both those that are the District's responsibility and those that are the responsibility of the U.S. Department of the Treasury.

Attained Age	Service Retirement		Disability Retirement		Survivors and Beneficiaries		Total	
	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 20	-	\$ -	-	\$ -	6	\$ 42,384	6	\$ 42,384
20 to 24	-	-	-	-	1	7,044	1	7,044
25 to 29	-	-	-	-	-	-	-	-
30 to 34	-	-	-	-	-	-	-	-
35 to 39	-	-	-	-	2	18,204	2	18,204
40 to 44	-	-	-	-	2	46,044	2	46,044
45 to 49	-	-	2	80,568	6	82,776	8	163,344
50 to 54	2	99,984	6	220,380	4	54,384	12	374,748
55 to 59	72	4,310,652	13	471,960	7	127,068	92	4,909,680
60 to 64	300	15,635,496	23	818,724	27	464,988	350	16,919,208
65 to 69	674	34,204,824	18	656,412	35	765,336	727	35,626,572
70 to 74	1,285	65,421,192	70	2,331,816	68	1,345,680	1,423	69,098,688
75 to 79	1,175	60,888,804	39	1,286,772	88	1,889,028	1,302	64,064,604
80 to 84	710	36,731,688	24	793,332	65	1,575,744	799	39,100,764
85 to 89	446	22,564,764	23	728,484	61	1,350,744	530	24,643,992
90 to 94	195	9,307,284	10	313,020	33	828,708	238	10,449,012
95 and over	84	4,150,896	10	468,324	17	453,108	111	5,072,328
Total	4,943	\$ 253,315,584	238	\$ 8,169,792	422	\$ 9,051,240	5,603	\$ 270,536,616



Section IV. Participant Information

Schedule of Retiree Member Data – Teachers – Receiving Federal Benefits

Shown below is the schedule of retiree member data. The benefits are only those member benefits that are the responsibility of the U.S. Department of the Treasury.

Attained Age	Service Retirement		Disability Retirement		Survivors and Beneficiaries		Total	
	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 20	-	\$ -	-	\$ -	1	\$ 5,139	1	\$ 5,139
20 to 24	-	-	-	-	-	-	-	-
25 to 29	-	-	-	-	-	-	-	-
30 to 34	-	-	-	-	-	-	-	-
35 to 39	-	-	-	-	-	-	-	-
40 to 44	-	-	-	-	1	8,443	1	8,443
45 to 49	-	-	-	-	3	23,995	3	23,995
50 to 54	2	16,286	-	-	3	29,147	5	45,434
55 to 59	68	1,037,796	3	75,024	6	46,600	77	1,159,420
60 to 64	239	4,293,310	17	215,664	21	259,802	277	4,768,775
65 to 69	540	13,589,715	14	271,040	30	486,251	584	14,347,006
70 to 74	1,119	38,300,942	66	1,493,963	56	1,038,822	1,241	40,833,727
75 to 79	1,110	45,075,009	39	1,176,160	81	1,610,191	1,230	47,861,360
80 to 84	689	31,710,205	24	790,094	61	1,478,814	774	33,979,112
85 to 89	440	21,610,195	23	728,484	60	1,291,889	523	23,630,568
90 to 94	195	9,076,708	10	313,020	33	826,445	238	10,216,172
95 and over	84	4,125,936	10	468,324	17	453,108	111	5,047,368
Total	4,486	\$ 168,836,102	206	\$ 5,531,772	373	\$ 7,558,645	5,065	\$ 181,926,519



Section IV. Participant Information

Schedule of Retiree Member Data – Police – Receiving District Benefits

Shown below is the schedule of retiree member data. The benefits are only those member benefits that are the District's responsibility.

Attained Age	Service Retirement		Disability Retirement		Survivors and Beneficiaries		Total	
	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 20	-	\$ -	-	\$ -	38	\$ 336,786	38	\$ 336,786
20 to 24	-	-	-	-	3	41,977	3	41,977
25 to 29	-	-	3	105,300	-	-	3	105,300
30 to 34	-	-	2	82,224	-	-	2	82,224
35 to 39	-	-	9	351,588	4	97,082	13	448,670
40 to 44	-	-	14	483,780	5	154,791	19	638,571
45 to 49	23	1,568,146	36	1,418,664	25	580,080	84	3,566,890
50 to 54	564	34,344,726	96	3,676,920	52	1,168,781	712	39,190,427
55 to 59	727	37,338,402	76	2,047,546	64	1,248,510	867	40,634,457
60 to 64	457	19,165,155	50	1,336,801	73	1,170,712	580	21,672,669
65 to 69	355	8,155,848	36	570,303	69	1,154,578	460	9,880,730
70 to 74	181	2,254,115	7	124,757	55	800,762	243	3,179,634
75 to 79	39	341,139	3	26,242	22	318,436	64	685,817
80 to 84	2	25,338	-	-	2	27,671	4	53,009
85 to 89	-	-	-	-	3	54,084	3	54,084
90 to 94	-	-	-	-	-	-	-	-
95 and over	-	-	-	-	-	-	-	-
Total	2,348	\$ 103,192,868	332	\$ 10,224,126	415	\$ 7,154,251	3,095	\$ 120,571,245

Section IV. Participant Information

Schedule of Retiree Member Data – Police – Receiving District and/or Federal Benefits

Shown below is the schedule of all retiree member data. The benefits are the total member benefits and include both those that are the District's responsibility and those that are the responsibility of the U.S. Department of the Treasury.

Attained Age	Service Retirement		Disability Retirement		Survivors and Beneficiaries		Total	
	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 20	-	\$ -	-	\$ -	40	\$ 421,500	40	\$ 421,500
20 to 24	-	-	-	-	4	127,392	4	127,392
25 to 29	-	-	3	105,300	1	51,336	4	156,636
30 to 34	-	-	2	82,224	-	-	2	82,224
35 to 39	-	-	9	351,588	4	98,760	13	450,348
40 to 44	-	-	14	483,780	6	201,768	20	685,548
45 to 49	23	1,852,296	36	1,418,664	26	751,944	85	4,022,904
50 to 54	564	45,063,492	101	3,970,140	61	1,809,036	726	50,842,668
55 to 59	727	54,969,840	87	3,264,684	84	2,482,620	898	60,717,144
60 to 64	461	35,477,916	81	3,308,340	131	4,142,133	673	42,928,389
65 to 69	559	37,729,875	124	5,987,628	205	6,700,425	888	50,417,928
70 to 74	882	53,350,920	145	6,931,836	303	9,961,987	1,330	70,244,743
75 to 79	496	30,464,532	114	5,854,812	262	8,827,584	872	45,146,928
80 to 84	254	15,820,452	71	4,011,696	218	7,660,212	543	27,492,360
85 to 89	83	5,549,916	33	2,014,728	116	4,191,984	232	11,756,628
90 to 94	14	1,352,268	21	1,420,788	66	2,300,040	101	5,073,096
95 and	2	178,644	4	258,288	24	863,784	30	1,300,716
Total	4,065	\$ 281,810,151	845	\$ 39,464,496	1,551	\$ 50,592,505	6,461	\$ 371,867,152

Note that the Disability Retirement group counts reflect a change from the prior report. Survivors of disabled retirees are now reflected under 'Survivors and Beneficiaries' instead of 'Disability Retirement'.

Section IV. Participant Information

Schedule of Retiree Member Data – Police – Receiving Federal Benefits

Shown below is the schedule of retiree member data. The benefits are only those member benefits that are the responsibility of the U.S. Department of the Treasury.

Attained Age	Service Retirement		Disability Retirement		Survivors and Beneficiaries		Total	
	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 20	-	\$ -	-	\$ -	22	\$ 84,714	22	\$ 84,714
20 to 24	-	-	-	-	3	85,415	3	85,415
25 to 29	-	-	-	-	1	51,336	1	51,336
30 to 34	-	-	-	-	-	-	-	-
35 to 39	-	-	-	-	1	1,678	1	1,678
40 to 44	-	-	-	-	2	46,977	2	46,977
45 to 49	19	284,150	-	-	12	171,864	31	456,014
50 to 54	544	10,718,766	21	293,220	32	640,255	597	11,652,241
55 to 59	699	17,631,438	80	1,217,138	40	1,234,110	819	20,082,687
60 to 64	444	16,312,761	77	1,971,539	94	2,971,421	615	21,255,720
65 to 69	549	29,574,027	122	5,417,325	164	5,545,847	835	40,537,198
70 to 74	880	51,096,805	143	6,807,079	266	9,161,225	1,289	67,065,109
75 to 79	495	30,123,393	114	5,828,570	249	8,509,148	858	44,461,111
80 to 84	254	15,795,114	71	4,011,696	217	7,632,541	542	27,439,351
85 to 89	83	5,549,916	33	2,014,728	113	4,137,900	229	11,702,544
90 to 94	14	1,352,268	21	1,420,788	66	2,300,040	101	5,073,096
95 and over	2	178,644	4	258,288	24	863,784	30	1,300,716
Total	3,983	\$ 178,617,282	686	\$ 29,240,370	1,306	\$ 43,438,254	5,975	\$ 251,295,907

Note that the Disability Retirement group counts reflect a change from the prior report. Survivors of disabled retirees are now reflected under 'Survivors and Beneficiaries' instead of 'Disability Retirement'.

Section IV. Participant Information

Schedule of Retiree Member Data – Fire – Receiving District Benefits

Shown below is the schedule of retiree member data. The benefits are only those member benefits that are the District's responsibility.

Attained Age	Service Retirement		Disability Retirement		Survivors and Beneficiaries		Total	
	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 20	-	\$ -	-	\$ -	18	\$ 365,557	18	\$ 365,557
20 to 24	-	-	-	-	1	4,272	1	4,272
25 to 29	-	-	-	-	-	-	-	-
30 to 34	-	-	3	110,760	2	66,019	5	176,779
35 to 39	-	-	8	316,356	2	4,922	10	321,278
40 to 44	-	-	8	354,612	2	42,888	10	397,500
45 to 49	3	248,354	10	502,548	6	120,079	19	870,982
50 to 54	98	6,329,950	21	716,520	13	367,512	132	7,413,981
55 to 59	187	10,439,466	12	380,997	28	742,866	227	11,563,329
60 to 64	236	11,331,973	11	289,087	21	584,058	268	12,205,117
65 to 69	157	5,345,887	19	350,660	25	557,513	201	6,254,060
70 to 74	69	1,201,747	6	23,714	20	349,211	95	1,574,673
75 to 79	20	199,205	-	-	7	146,785	27	345,990
80 to 84	1	17,676	-	-	4	68,656	5	86,332
85 to 89	-	-	-	-	2	31,584	2	31,584
90 to 94	-	-	-	-	-	-	-	-
95 and over	-	-	-	-	-	-	-	-
Total	771	\$ 35,114,259	98	\$ 3,045,254	151	\$ 3,451,920	1,020	\$ 41,611,433

Section IV. Participant Information

Schedule of Retiree Member Data – Fire – Receiving District and/or Federal Benefits

Shown below is the schedule of all retiree member data. The benefits are the total member benefits and include both those that are the District's responsibility and those that are the responsibility of the U.S. Department of the Treasury.

Attained Age	Service Retirement		Disability Retirement		Survivors and Beneficiaries		Total	
	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 20	-	\$ -	-	\$ -	18	\$ 463,092	18	\$ 463,092
20 to 24	-	-	-	-	1	4,272	1	4,272
25 to 29	-	-	-	-	-	-	-	-
30 to 34	-	-	3	110,760	2	88,776	5	199,536
35 to 39	-	-	8	316,356	2	8,796	10	325,152
40 to 44	-	-	8	354,612	3	73,572	11	428,184
45 to 49	3	316,380	10	502,548	6	136,272	19	955,200
50 to 54	98	8,181,684	21	747,432	15	487,932	134	9,417,048
55 to 59	187	15,188,724	12	531,036	33	1,017,348	232	16,737,108
60 to 64	236	20,427,180	17	715,440	32	1,086,168	285	22,228,788
65 to 69	174	14,335,956	44	2,378,220	51	1,780,104	269	18,494,280
70 to 74	146	11,644,560	40	2,258,016	82	2,816,046	268	16,718,622
75 to 79	189	13,503,480	44	2,607,888	95	3,226,636	328	19,338,004
80 to 84	121	9,053,436	47	2,946,648	90	3,044,248	258	15,044,332
85 to 89	52	3,877,716	20	1,158,036	49	1,785,276	121	6,821,028
90 to 94	11	927,792	11	775,488	36	1,377,444	58	3,080,724
95 and over	3	219,972	4	277,188	17	681,276	24	1,178,436
Total	1,220	\$ 97,676,880	289	\$ 15,679,668	532	\$ 18,077,258	2,041	\$ 131,433,806

Note that the Disability Retirement group counts reflect a change from the prior report. Survivors of disabled retirees are now reflected under 'Survivors and Beneficiaries' instead of 'Disability Retirement'.

Section IV. Participant Information

Schedule of Retiree Member Data – Fire – Receiving Federal Benefits

Shown below is the schedule of retiree member data. The benefits are only those member benefits that are the responsibility of the U.S. Department of the Treasury.

Attained Age	Service Retirement		Disability Retirement		Survivors and Beneficiaries		Total	
	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 20	-	\$ -	-	\$ -	5	\$ 97,535	5	\$ 97,535
20 to 24	-	-	-	-	-	-	-	-
25 to 29	-	-	-	-	-	-	-	-
30 to 34	-	-	-	-	1	22,757	1	22,757
35 to 39	-	-	-	-	2	3,874	2	3,874
40 to 44	-	-	-	-	1	30,684	1	30,684
45 to 49	3	68,026	-	-	2	16,193	5	84,218
50 to 54	98	1,851,734	4	30,912	6	120,420	108	2,003,067
55 to 59	182	4,749,258	12	150,039	14	274,482	208	5,173,779
60 to 64	226	9,095,207	16	426,353	18	502,110	260	10,023,671
65 to 69	164	8,990,069	43	2,027,560	37	1,222,591	244	12,240,220
70 to 74	146	10,442,813	40	2,234,302	71	2,466,835	257	15,143,949
75 to 79	189	13,304,275	44	2,607,888	90	3,079,851	323	18,992,014
80 to 84	121	9,035,760	47	2,946,648	86	2,975,592	254	14,958,000
85 to 89	52	3,877,716	20	1,158,036	47	1,753,692	119	6,789,444
90 to 94	11	927,792	11	775,488	36	1,377,444	58	3,080,724
95 and over	3	219,972	4	277,188	17	681,276	24	1,178,436
Total	1,195	\$ 62,562,621	241	\$ 12,634,414	433	\$ 14,625,337	1,869	\$ 89,822,372

Note that the Disability Retirement group counts reflect a change from the prior report. Survivors of disabled retirees are now reflected under 'Survivors and Beneficiaries' instead of 'Disability Retirement'.

Section IV. Participant Information

Schedule of Retiree Member Data – Added and Removed from Rolls – Receiving District Benefit

Shown below is the schedule of District retiree members added and removed.

District Benefit (\$ in Thousands)										
Fiscal Year Ended	Plan	Added		Removed		Increase due to Plan Amendments	Rolls at End of Year		Percentage Increase in Annual Allowances	Average Annual Allowances
		Number	Annual Allowances	Number	Annual Allowances		Number	Annual Allowances		
September 30, 2017	Teachers	96	\$ 2,599	79	\$ 1,211	\$ 1,023	3,899	\$ 71,201	3.5%	\$ 18
	Police	189	8,485	35	537	928	2,419	72,463	14.0%	30
	Fire	63	2,802	5	141	411	796	25,223	13.9%	32
September 30, 2018	Teachers	160	\$ 4,892	69	\$ 977	\$ 1,419	3,990	\$ 76,535	7.5%	\$ 19
	Police	208	10,269	34	683	1,427	2,593	83,476	15.2%	32
	Fire	63	2,910	11	226	441	848	28,348	12.4%	33
September 30, 2019	Teachers	141	\$ 4,693	72	\$ 1,278	\$ 1,890	4,059	\$ 81,840	6.9%	\$ 20
	Police	233	12,244	27	569	1,492	2,799	96,643	15.8%	35
	Fire	68	3,673	16	252	501	900	32,270	13.8%	36
September 30, 2020	Teachers	98	\$ 3,471	86	\$ 1,767	\$ 1,824	4,071	\$ 85,368	4.3%	\$ 21
	Police	188	10,010	35	757	2,835	2,952	108,731	12.5%	37
	Fire	86	5,258	9	551	884	977	37,861	17.3%	39
September 30, 2021	Teachers	96	\$ 3,642	95	\$ 1,524	\$ 1,124	4,072	\$ 88,610	8.3%	\$ 22
	Police	201	11,821	58	1,173	1,192	3,095	120,571	24.8%	39
	Fire	63	3,829	20	519	440	1,020	41,611	28.9%	41

Information for October 1, 2018 and earlier was taken from the valuation report prepared by Cavanaugh Macdonald Consulting, LLC, dated December 17, 2018.

Section IV. Participant Information

Schedule of Retiree Member Data – Added and Removed from Rolls – Receiving Federal and/or District Benefit

Shown below is the schedule of Federal and/or District retiree members added and removed.

Federal Plus District Benefit (\$ in Thousands)											
		Added		Removed		Increase due to Plan Amendments	Rolls at End of Year		Percentage Increase in Annual Allowances	Average Annual Allowances	
		Number	Annual Allowances	Number	Annual Allowances		Number	Annual Allowances			
Fiscal Year Ended	Plan	Number	Annual Allowances	Number	Annual Allowances		Number	Annual Allowances			
September 30, 2017	Teachers	107	\$ 3,937	229	\$ 8,829	\$ 5,495	6,061	\$ 270,807	0.2%	\$ 45	
	Police	261	14,438	214	9,061	5,772	6,157	316,418	3.7%	51	
	Fire	84	4,919	58	2,727	2,233	2,034	116,660	3.9%	57	
September 30, 2018	Teachers	226	\$ 8,601	281	\$ 9,897	\$ 4,195	6,006	\$ 273,706	1.1%	\$ 46	
	Police	300	17,322	228	9,611	5,322	6,229	329,451	4.1%	53	
	Fire	81	4,649	78	3,786	2,310	2,037	119,833	2.7%	59	
September 30, 2019	Teachers	165	\$ 6,648	248	\$ 8,644	\$ 5,088	5,923	\$ 275,295	0.6%	\$ 46	
	Police	314	18,580	184	8,464	7,848	6,359	347,414	5.5%	55	
	Fire	98	5,985	90	4,425	3,306	2,045	124,700	4.1%	61	
September 30, 2020	Teachers	124	\$ 4,710	271	\$ 9,937	\$ 5,880	5,776	\$ 274,265	-0.4%	\$ 47	
	Police	272	15,538	211	9,937	8,123	6,420	361,138	4.0%	56	
	Fire	119	7,848	102	4,935	2,182	2,062	129,795	4.1%	63	
September 30, 2021	Teachers	108	\$ 4,944	281	\$ 11,413	\$ 3,670	5,603	\$ 270,537	-1.4%	\$ 48	
	Police	287	17,484	246	11,413	4,658	6,461	371,867	3.0%	58	
	Fire	92	5,733	113	5,751	1,657	2,041	131,434	1.3%	64	

Information for October 1, 2018 and earlier was taken from the valuation report prepared by Cavanaugh Macdonald Consulting, LLC, dated December 17, 2018.

Section V. Summary of Plan Provisions

Teachers' Retirement Plan

Effective Date

Established on September 18, 1998, the Plan applies to benefit payments based on service accrued after June 30, 1997. The U.S. Department of the Treasury is responsible for paying all benefits accrued before this date.

Definitions

Affiliated Employers

District of Columbia Public Schools

Covered Members

Teachers and other educational employees in a salary class position ET 1-15 under the District of Columbia Public Schools (DCPS) system become members automatically on their date of employment. Covered members who leave the DCPS system to work for a D.C. public charter school may elect to remain in the Plan. Such members who are on a leave of absence to teach in a D.C. public charter school must remain in the Plan. Substitute teachers and rehired retirees are not covered.

Service Credit

One year of teaching service is given for each year of employment with DCPS. Service credit may also include purchased prior civilian government service and outside teaching service. For purposes of retirement eligibility and benefit accrual, creditable Federal and District service is aggregated in determining total creditable service.

Average Salary

Highest 36 consecutive months of pay, divided by three.

Vested

Members who accrue five or more years of creditable DCPS teaching service are vested for benefits. If a vested member leaves service, they may leave their Member Contributions with the Plan for a future deferred vested benefit when reaching eligibility for retirement (deferred vested in this report).

Contributions

Member Contributions

Members hired before November 1, 1996 are required to contribute 7% of annual pay. Members hired on or after November 1, 1996 contribute 8% of annual pay. Interest is not credited to each Member's accumulated contributions.

Refund of Member Contributions

In the event a member leaves service prior to retirement, vested members may leave their contributions in the Plan or request a refund. Nonvested members must take a refund. No interest is accrued on contributions.

Section V. Summary of Plan Provisions

Service Retirement

Eligibility

The Age and Service Credit requirements to be eligible for a full Service Retirement are listed below:

Members hired before November 1, 1996

Age	Service Credit
55	30, including 5 years DCPS service
60	20, including 5 years DCPS service
62	5 years DCPS service

Members hired on and after November 1, 1996

Age	Service Credit
Any Age	30, including 5 years DCPS service
60	20, including 5 years DCPS service
62	5 years DCPS service

Benefit

For members hired before November 1, 1996:

- 1.5% of Average Salary times service through 5 years, plus
- 1.75% of Average Salary times service from 6 through 10 years, plus
- 2.0% of Average Salary times service over 10 years.

For members hired on or after November 1, 1996:

- 2.0% of Average Salary times service.

All members receive a minimum benefit of 1.0% of Average Salary plus \$25 for each year of service.

Involuntary Service Retirement

Eligibility

The Age and Service Credit requirements to be eligible for a Reduced Service Retirement are listed below:

All Members, regardless of date of hire

Age	Service Credit
Any Age	25, including 5 years DCPS service
50	20, including 5 years DCPS service

Benefit

Service Retirement Benefit reduced by 1/6% per month (or 2% per year) that date of retirement precedes age 55.

Section V. Summary of Plan Provisions

Disability Retirement

Eligibility

Active members with five or more years of DCPS service credit are covered (vested) for disability retirement. To be eligible, the member must be found to be incapable of satisfactorily performing the duties of his/her position as determined by DCPS.

Benefit

Equal to Service Retirement benefit. Minimum benefit is the lesser of a) or b):

- a. 40% of Average Salary
- b. Calculated benefit amount by projecting service to age 60.

Survivor Benefits

Lump Sum

Eligibility

Death before completion of 18 months of school service or death without an eligible spouse/domestic partner, child or parent.

Benefit

Refund of member contributions.

Spouse/Domestic Partner Only

Eligibility

Death before retirement and married/registered domestic partnership for at least two years, or have a child by the marriage or registered domestic partnership.

Benefit

55% of Service Retirement benefit. Minimum benefit is the lesser of a) or b):

- a. 55% of 40% of Average Salary
- b. 55% of the calculated benefit amount by projecting service to age 60.

Spouse/Domestic Partner & Dependent Children

Eligibility

Death before retirement and married/registered domestic partnership for at least two years, or have a child by the marriage or registered domestic partnership. Children must be unmarried and not in a domestic partnership and under age 18, 22 if full-time student, or any dependent child incapable of self-support due to a disability incurred before age 18. Death does not have to occur before retirement for the children's benefit.

Spouse/Domestic Partner Benefit

55% of Service Retirement benefit. Minimum benefit is the lesser of a) or b):

- 55% of 40% of Average Salary
- 55% of the calculated benefit amount by projecting service to age 60.

Section V. Summary of Plan Provisions

Survivor Benefits

Spouse/Domestic Partner & Dependent Children (continued)

Child Benefit

A benefit per child equal to the smallest of a) or b) or c):

- a. 60% of Average Salary divided by the number of eligible children
- b. \$7,488¹ (if hired before 1/1/1980), \$7,212¹ (if hired between 1/1/1980 and 10/31/1996), or \$7,044¹ (if hired on or after 11/1/1996) per child
- c. \$22,464¹ (if hired before 1/1/1980), \$21,636¹ (if hired between 1/1/1980 and 10/31/1996), or \$21,132¹ (if hired on or after 11/1/1996) divided by the number of children.

Dependent Children Only

Eligibility

Children must be unmarried and not in a domestic partnership and under age 18, 22 if full-time student, or any dependent child incapable of self-support due to a disability incurred before age 18. Death does not have to occur before retirement for the children's benefit.

Benefit

A benefit per child equal to the smallest of a) or b) or c):

- a. 60% of Average Salary divided by the number of eligible children
- b. \$9,156¹ (if hired before 1/1/1980), \$8,808¹ (if hired between 1/1/1980 and 10/31/1996), or \$8,532¹ (if hired on or after 11/1/1996) per child
- c. \$27,468¹ (if hired before 1/1/1980), \$26,424¹ (if hired between 1/1/1980 and 10/31/1996), or \$25,596¹ (if hired on or after 11/1/1996) divided by the number of children.

Parents Only

Eligibility

Death before retirement and no eligible spouse/domestic partner or children, and parents must have received at least one-half of their total income from the member immediately before the member's death.

Benefit

55% of Service Retirement benefit. Minimum benefit is the lesser of a) or b):

- a. 55% of 40% of Average Salary
- b. 55% of the calculated benefit amount by projecting service to age 60.

¹ Survivor benefit amounts are as of March 1, 2021 and are subject to annual inflation adjustments.

Section V. Summary of Plan Provisions

Deferred Vested Retirement

Eligibility

Active members with five or more years of DCPS service credit.

Benefit

Benefit is calculated in the same manner as Service Retirement benefit and may be collected starting at age 62.

Retirement Options

Retirement and disability benefits are payable for the life of the retired member. Optional reduced retirement benefits may be elected at the time of retirement to provide for continuation of a reduced survivor benefit amount to a designated beneficiary. Optional forms include:

- a. **Reduced Annuity with a Maximum Survivor Annuity (to Spouse/Domestic Partner):**
Reduced benefit paid to the member so that upon the member's death, the spouse/domestic partner will receive 55% of the unreduced (normal life) annuity. Member's benefit is reduced by 2.5% of retirement benefit, up to \$3,600, plus 10% of any retirement benefit over \$3,600.
- b. **Reduced Annuity with a Partial Survivor Annuity (to Spouse/Domestic Partner)**
Reduced benefit paid to the member so that upon the member's death, the spouse/domestic partner will receive a partial annuity that can range from \$1 up to any amount less than 55% of the unreduced (normal life) annuity amount. Member's benefit is reduced by the same amount as option a) above, multiplied by the ratio of the chosen benefit percent to the maximum benefit percent (55%).
- c. **Reduced Annuity with a Life Insurance Benefit**
Member elects a life insurance amount, payable in a lump sum to a designated beneficiary upon the member's death.
- d. **Reduced Annuity with a Survivor Annuity to a Person with an Insurable Interest**
A 55% joint and survivor annuity where the original benefit is reduced by 10% plus an additional 5% for each full 5 years, up to 25 years, that the designated beneficiary is younger than the member. Maximum reduction is 40% for any beneficiary who is 25 or more years younger than the member.

Section V. Summary of Plan Provisions

Cost-of-Living Adjustments (COLA)

Each year on March 1, benefits which have been paid for at least twelve months preceding March 1 may be increased. The increase is equal to the annual Consumer Price Index (CPI-W Washington/Baltimore area). COLA's are included in benefit payments on and after April 1. If a member's retirement is effective after March 1 of the preceding year, the COLA amount is prorated.

For members hired on or after November 1, 1996, the cost-of-living increase is limited to no more than 3% per year.

Changes since Prior Valuation

The child death benefit amounts were increased with inflation effective March 1, 2021.

Section V. Summary of Plan Provisions

Police Officers and Firefighters' Retirement Plan

Effective Date

Established on September 18, 1998, the Plan applies to benefit payments based on service accrued after June 30, 1997. The U.S. Department of the Treasury is responsible for paying all benefits accrued before this date.

Definitions

Affiliated Employers

The District of Columbia Metropolitan Police Department (MPD) and the District of Columbia Department of Fire and Emergency Medical Services (FEMS).

Covered Members

Sworn Police Officers and Firefighters become members on their first day of active duty (cadets are not eligible). Membership is not automatic for uniformed EMT Firefighters. EMTs must be cross-trained in fire suppression, go through the fire academy, and considered sworn Firefighters.

Service Credit

One year of service is given for each year of employment with MPD or FEMS. Service Credit may also include approved purchased lateral transferred service, prior civilian government service and prior military service. For purposes of retirement eligibility and benefit accrual, creditable Federal and District service is aggregated in determining total creditable service.

Average Salary

For members hired before February 15, 1980, the highest 12 consecutive months of pay. For members hired on or after February 15, 1980, the highest 36 consecutive months of pay, divided by 3. Base pay does not include overtime, holiday or military pay. Longevity pay is included in Firefighters' base pay and in Police Officers' base pay once the member has completed 25 years of service.

Vested

Members who accrue five or more years of Service Credit are vested for benefits. If these members leave service, they may leave their Member Contribution Accounts with the Plan for a future benefit when reaching eligibility for retirement (deferred vested in this report).

Section V. Summary of Plan Provisions

Contributions

Member Contributions

Members hired before November 10, 1996 contribute 7.0% of salary. Members hired on or after November 10, 1996 contribute 8.0% of salary. Member contributions, together with any purchased service credit payments, are credited to individual Member Contribution Accounts. No interest is accrued on contributions.

Refund of Member Contributions

In the event a vested member leaves service prior to retirement, member contributions may be left in the Plan or refunded upon request. Nonvested members must take a refund. No interest is accrued on contributions.

Service Retirement

Eligibility

The Age and Service Credit requirements to be eligible for a full Service Retirement are listed below:

Members hired before November 10, 1996

Age	Service Credit
Any age	20 years departmental service (only if hired before 2/15/1980)
50	25 years departmental service
60	5 years departmental service

Members hired on and after November 10, 1996

Age	Service Credit
Any age	25 years departmental service
60	

Benefit

For members hired before November 10, 1996:

- 2.5% of Average Salary times departmental service up to 25 years (20 years if hired before 2/15/1980), plus
- 3.0% of Average Salary times departmental service over 25 years (or 20 years if hired before 2/15/1980), plus
- 2.5% of Average Salary times purchased or credited service.

For members hired on or after November 10, 1996:

- 2.5% of Average Salary times total service.

All members are subject to a maximum benefit of 80% of Average Salary.

Section V. Summary of Plan Provisions

Service-Related Disability Retirement

Eligibility

Disabled as a result of an injury or disease that permanently disables him/her for the performance of duty.

Benefit

For members hired before February 15, 1980:

2.5% of Average Salary times total years of service, subject to a minimum of 66-2/3% of Average Salary and a maximum of 70% of Average Salary.

For members hired on or after February 15, 1980:

70% of final pay times percentage of disability, subject to a minimum of 40% of final pay.

Nonservice-Related Disability Retirement

Eligibility

Active members with five or more years of departmental service are covered (vested) for disability retirement. The member is eligible if found that the disability precludes further service with his/her department.

Benefit

For members hired before February 15, 1980:

2.0% of Average Salary times total years of service, subject to a minimum of 40% of Average Salary and a maximum of 70% of Average Salary.

For members hired on or after February 15, 1980:

70% of final pay times percentage of disability, subject to a minimum of 30% of final pay.

Survivor Benefits

Lump Sum

Eligibility

Death before retirement without an eligible spouse/domestic partner or child.

Benefit

Refund of member contributions according to Plan's order of precedence.

Lump Sum – Death In Line Of Duty

Eligibility

Death occurring in the line of duty, not resulting from willful misconduct.

Benefit

\$50,000

Section V. Summary of Plan Provisions

Survivor Benefits

Spouse Only – Death In Line Of Duty

Eligibility

Member killed in line of duty, after December 29, 1993.

Benefit

100% of final pay.

Spouse Only – Death Not In Line Of Duty

Eligibility

Member death, not in line of duty, after December 29, 1993. If retired, must be married for at least one year or have a child by the marriage/domestic partnership.

Benefit

40% of the greater of a) or b):

- a. Average Salary
- b. Salary for step 6 salary class 1 of the DC Police and Firemen's Salary Act in effect, adjusted for cost-of-living increases if death occurs after retirement.

Benefit cannot be higher than rate of pay at death (or retirement if death occurs after retirement).

Spouse/Domestic Partner & Dependent Children

Eligibility

Member death, not in line of duty, after December 29, 1993. If retired, must be married/in a domestic partnership for at least one year or have a child by the marriage/domestic partnership. Children must be unmarried, not in a domestic partnership and under age 18, 22 if full-time student, or any dependent child incapable of self-support due to having a disability incurred before age 18. Death does not have to occur before retirement for the children's benefit.

Spouse Benefit

40% of the greater of a) or b):

- a. Average Salary
- b. Salary for step 6 salary class 1 of the DC Police and Firemen's Salary Act in effect, adjusted for cost-of-living increases if death occurs after retirement.

Benefit cannot be higher than rate of pay at death (or retirement if death occurs after retirement).

Section V. Summary of Plan Provisions

Survivor Benefits

Spouse/Domestic Partner & Dependent Children (continued)

Child Benefit

A benefit per child equal to the smallest of a) or b) or c):

- a. 60% of Average Salary divided by the number of eligible children
- b. \$4,404² (if hired before 11/10/1996) or \$4,308² (if hired on or after 11/10/1996) per child
- c. \$13,212² (if hired before 11/10/1996) or \$12,924² (if hired on or after 11/10/1996) divided by the number of children.

Dependent Children Only

Eligibility

Children must be unmarried and not in a domestic partnership and under age 18, 22 if full-time student, or any dependent child incapable of self-support due to a disability incurred before age 18. Death does not have to occur before retirement for the children's benefit.

Benefit

75% of Average Salary divided by the number of eligible children, adjusted for cost-of-living increases.

Deferred Vested Retirement

Eligibility

Active members with five or more years of departmental service.

Benefit

Benefit is calculated in the same manner as Service Retirement benefit and may be collected starting at age 55.

Retirement Options

Retirement and disability benefits are payable for the life of the retired member. This includes an unreduced joint and survivor annuity as defined above in the "Survivor Benefits – Spouse/Domestic Partnership and Dependent Children" sections.

An optional reduced benefit may be elected at the time of retirement to provide for an additional survivor benefit to a designated beneficiary. Member's original annuity is reduced by 10% and that amount is added to the survivor's benefit. If the designated beneficiary is more than five years younger than the member, the additional amount will be reduced by 5% for each full five years that the beneficiary is younger than the member, subject to a maximum of 40%.

² Survivor benefit amounts are as of March 1, 2021 and are subject to annual inflation adjustments.

Section V. Summary of Plan Provisions

Cost-of-Living Adjustments (COLA)

Each year on March 1, benefits which have been paid for at least twelve months preceding March 1 may be increased. The increase is equal to the annual Consumer Price Index (CPI-W Washington/Baltimore area). COLA's are included in benefit payments on and after April 1. If member's retirement is effective after March 1 of the preceding year, the COLA amount is prorated.

For members hired on or after November 10, 1996, the cost-of-living increase is limited to no more than 3% per year. Members hired before February 15, 1980, receive equalization pay, which is defined as the percentage increase of active employees' salary increases. Equalization increases are not paid to survivors.

Changes since Prior Valuation

The child death benefit amounts were increased with inflation effective March 1, 2021.

Section VI. Actuarial Methods and Assumptions

Valuation Date

All assets and liabilities are computed as of October 1, 2021. Demographic information was collected as of June 30, 2021. For valuation purposes (e.g., age, service), all members are treated as if remaining in the Plans as of October 1, 2021.

Investment Rate of Return

6.25% per annum, compounded annually (net of investment expenses).

Inflation Assumption

3.00% per annum.

Payroll Growth Assumption

4.00% per annum.

Percent Married

65% of Teachers, Police Officers, and Firefighters are assumed to be married, with the wife 3 years younger than the husband. Active members are assumed to have one dependent child aged 10.

Actuarial Method

The valuation is completed on the basis of the entry age normal cost method calculated on an individual basis with level percentage of pay normal cost.

Amortization of Unfunded Actuarial Accrued Liability

The unfunded actuarial accrued liability (UAAL) is amortized on a level dollar basis based on the following funding policy adopted by the Board in 2012 and amended in 2017:

- Amortize the legacy UAAL as of October 1, 2017 over a closed 15-year period.
- Amortize the assumption and method changes and experience gains for the October 1, 2017 valuation over a closed 20-year period from the valuation date.
- Amortize all subsequent benefit changes, assumption and method changes and experience gains or losses over a closed 20-year period from the date established.
- If a surplus exists (assets exceed liabilities), amortize over 30 years and eliminate all prior amortization bases.

Assets

The method of valuing assets is intended to recognize a “smoothed” market value of assets. Under this method, the difference between actual return on market value from investment experience and the expected return on market value is recognized over a five-year period. The actuarial value of assets is constrained to an 80% to 120% corridor around market value of assets.

Contribution Withdrawal Assumption

For Teachers, Police, and Firefighters, 20% of the vested members who terminate are assumed to elect a withdrawal of their contributions while the remaining 80% are assumed to leave their contributions in the Plan in order to be eligible for a benefit at their deferred retirement date.

Section VI. Actuarial Methods and Assumptions

Other Assumptions

To value the post-retirement death benefit for Police Officers and Firefighters, the benefit form for all retirements (normal or disabled) is assumed to be a 50% Joint and Survivor annuity for all participants. One-fifth of all Police Officer and Firefighter active deaths are assumed to occur in the line of duty.

Post Retirement Cost-of-Living Adjustment

The cost of living, as measured by the CPI, will increase at the rate of 3.0% per year for all members.

Credited Service and Date of Entry

Service is credited as elapsed time from date of hire. The entry date for participation is date of service.

Military Service and Unused Sick Leave Service

Teachers are assumed to have 0.25 years of combined unused sick leave and military service credit at retirement. All Police and Fire members are assumed to have 1 year of combined unused sick leave and military service credit at retirement.

Administrative Expenses

For Teachers, budgeted administrative expenses of 1.20% of payroll are added to the normal cost rate. For Police Officers and Firefighters, budgeted administrative expenses of 2.10% of payroll are added to the normal cost rate.

Mortality Assumptions

Healthy Retiree and Actives

- Teachers: Pub-2010 General Employee and Healthy Retiree Mortality Table
- Police and Fire: Pub-2010 Safety Employees and Healthy Retiree Mortality Table with male ages set forward 1 year

Disabled Retirees

- Teachers: Pub-2010 General Disabled Retiree Mortality Table
- Police and Fire: Pub-2010 Safety Disabled Retiree Mortality Table

Contingent Beneficiaries

- Teachers: Pub-2010 General Contingent Survivor Mortality Table
- Police and Fire: Pub-2010 Safety Contingent Survivor Mortality Table

Mortality Improvement Scale

Improvement scale MP-2020 is applied on a generational basis. The improvement scale will be updated annually with any subsequent updates available on the valuation date.

Liability for Terminated Non-Vested Participants

The Inactive with Deferred Benefits liability includes a liability for terminated non-vested participants who are due a refund of their contributions. The liability is equal to the refund amount as of the valuation date.

Section VI. Actuarial Methods and Assumptions

Teachers

Salary Increase Assumption

Representative values of the assumed annual rates of future salary increases are as follows:

Years of Service	Total Increase (Next Year)
5	7.10%
10	4.65
15	4.00
>=20	4.00

Termination Assumption

The assumed annual termination rates are shown in the following table:

Service	Rate of Termination	
	Male	Female
0	25.0%	23.0%
1	26.0%	22.0%
2	22.0%	22.0%
3	20.0%	19.0%
4	14.7%	13.4%
5	14.7%	13.4%
6	13.0%	11.2%
7	13.0%	11.2%
8	13.0%	11.2%
9	13.0%	11.2%
>=10	9.4%	5.8%

Section VI. Actuarial Methods and Assumptions

Retirement Assumption

The assumed annual retirement rates are shown in the following table:

Age	Years of Service						
	5	6 - 19	20	21 - 24	25-29	30	31+
<=50	0%	0%	0%	0%	5%	20%	15%
50 - 59	0%	0%	5%	5%	5%	20%	15%
60 - 61	0%	0%	20%	15%	15%	20%	15%
62	20%	20%	20%	15%	15%	20%	15%
63 - 74	20%	15%	15%	15%	15%	20%	15%
75+	100%	100%	100%	100%	100%	100%	100%

Disability Assumption

Representative values of the assumed disability rates are shown in the following table:

Rate of Disability	
Age	Proposed Rates
30	0.010%
40	0.035%
50	0.010%
60	0.015%

Section VI. Actuarial Methods and Assumptions

Police Officers

Salary Increases

Police Officers are assumed to receive longevity increases applied to individual base pay at certain years of service. Representative values of the assumed annual rates of future salary increases are as follows:

Years of Service	Total Increase (Next Year)
5	6.25%
10	5.20
15	6.15
19	8.15
20	6.00
24	7.80
25	5.15
29	7.65
30+	7.25

Termination Assumption

The assumed annual termination rates are shown in the following table:

Service	Rate of Termination	
	Male	Female
0	9.0%	10.0%
1	9.0%	7.0%
2	8.0%	7.0%
3	8.0%	5.0%
4	8.0%	3.8%
5	6.2%	3.8%
6	4.1%	2.7%
7	4.1%	2.7%
8	2.7%	2.7%
9	2.7%	2.7%
>=10	2.0%	2.0%

Section VI. Actuarial Methods and Assumptions

Retirement Assumption

The assumed annual retirement rates are shown in the following table:

Age	Years of Service						
	<=24	25	26	27	28	29	>=30
<62	0%	50%	25%	25%	30%	35%	30%
>=62	100%	100%	100%	100%	100%	100%	100%

Shown rates are for Tier 3 police officers. Tier 2 rates are limited to no earlier than age 50.

Disability Assumption

Representative values of the assumed annual disability rates are shown in the following table:

Age	Disability Retirement Rates
30	0.083%
40	0.173%
50	0.315%
60	0.383%

60% of Police disabilities are assumed to qualify as line of duty.

Section VI. Actuarial Methods and Assumptions

Firefighters

Salary Increases

Firefighters are assumed to receive longevity increases applied to individual base pay at certain years of service. Representative values of the assumed annual rates of future salary increases are as follows:

Years of Service	Total Increase (Next Year)
5	6.05%
10	6.05
14	7.30
15	4.85
19	6.30
20	4.25
24	5.20
25	4.80
29	6.00
30+	4.50

Termination Assumption

The assumed annual termination rates are shown in the following table:

Service	Percent Separating in the Next Year	
	Male	Female
0	9.0%	16.0%
1	7.0%	12.0%
2	4.2%	2.1%
3	4.2%	2.1%
4	3.4%	2.1%
5	3.4%	1.8%
6	3.4%	2.3%
7	1.7%	2.3%
8	1.7%	2.3%
9	1.7%	2.3%
>=10	1.0%	0.5%

Section VI. Actuarial Methods and Assumptions

Retirement Assumption

The assumed annual retirement rates are shown in the following table:

Age	Years of Service						
	<=24	25	26	27	28	29	>=30
<62	0%	15%	15%	15%	25%	25%	40%
>=62	100%	100%	100%	100%	100%	100%	100%

Shown retirements rates are for Tier 3 firefighters. Tier 2 rates are limited to no earlier than age 50.

Disability Assumption

Representative values of the assumed annual disability rates are shown in the following table:

Age	Disability Retirement Rates
30	0.135%
40	0.225%
50	0.300%
60	0.375%

60% of Fire disabilities are assumed to qualify as line of duty.

Section VI. Actuarial Methods and Assumptions

Rationale for Assumptions

The economic and demographic assumptions are based on the experience study for the period ending September 30, 2020, and were adopted by the Board on October 19, 2021.

Changes Since Prior Valuation

The following assumptions were changed:

- Inflation and post retirement COLA assumption was changed to 3.00%
- The investment return assumption was changed to 6.25%
- The pay increase assumption was updated for all groups
- The payroll growth assumption was changed to 4.00%
- The mortality tables were updated to use the Pub-2010 tables
- The mortality improvement scale was updated to use the MP-2020 scale for the 2021 valuation and will be updated annually
- The service and disability retirement rates were updated
- The withdrawal rates were updated
- Line of duty disability and death rates were updated
- Marriage rates were updated
- Unused sick leave credit and military service credit amounts were updated
- Amortization approach was amended to use a 30-year amortization when a plan is in surplus

Section VII. Glossary

Actuarial Accrued Liability (AAL)

The difference between the Actuarial Present Value of Future Benefits and the Actuarial Present Value of Future Normal Costs or the portion of the present value of future benefits allocated to service before the valuation date in accordance with the actuarial cost method. Represents the present value of benefits expected to be paid from the plan in the future allocated to service prior to the date of the measurement.

Actuarial Asset Valuation Method

The method of determining the value of the assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets or a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the actuarially determined contribution (ADC).

Actuarial Cost Method

A procedure for allocating the Actuarial Present Value of Future Benefits and the actuarial Present Value of Future Normal costs and the Actuarial Accrued Liability. Also known as the “funding method”. Examples of actuarial cost methods include Aggregate, Entry Age Normal, Projected Unit Credit, and Pay-as-you-go.

Actuarial Present Value of Future Benefits (APVFB)

The Actuarial Present Value of amounts which are expected to be paid at various future times to active members, retired members, beneficiaries receiving benefits, and inactive, nonretired members entitled to either a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested, plus investment earnings, would provide sufficient assets to pay all projected benefits and expenses when due.

Aggregate Cost Method

An actuarial cost method that spreads the cost of all future benefits in excess of plan assets as a level percentage of future salary or service. The actuarial accrued liability is set to the value of assets in this method.

Annual Determined Contributions of the Employer(s) (ADC)

The employer’s periodic determined contributions to a pension plan, calculated in accordance with the assumptions and methods used by the plan actuary. The ADC replaced the actuarially required contribution (ARC), with the replacement of GASB 27 with GASB 68.

Cost-of-Living Adjustment (COLA)

An annual increase in the amount of a retired member’s or survivor’s benefit intended to adjust the benefit for inflation.

Covered Group

Plan members included in the actuarial valuation.

Section VII. Glossary

Deferred Retirement Option Program (DROP)

A program allowing participants eligible to retire to continue working for a fixed period of time, while accumulating the benefit payments they would have received if they had retired on their entry to DROP.

Demographic Assumption

Assumptions regarding the future population of pension participants, including retirement, termination, disability and mortality assumptions.

Economic Assumption

Assumptions regarding future economic factors, including COLA, salary improvement, change in average wages, changes in Social Security benefits and investment returns.

Employer's Contributions

Contributions made in relation to the actuarially determined contributions of the employer (ADC). An employer has made a contribution in relation to the ADC if the employer has (a) made payments of benefits directly to or on behalf of a retiree or beneficiary, (b) made premium payments to an insurer, or (c) irrevocably transferred assets to a trust, or an equivalent arrangement, in which plan assets are dedicated to providing benefits to retirees and their beneficiaries in accordance with the terms of the plan and are legally protected from creditors of the employer(s) or plan administrator.

Entry Age Normal (EAN) Cost Method

An actuarial cost method that spreads the cost for each individual's expected benefits over their career, either as a level percentage of pay or service. The actuarial accrued liability is the accumulated value of all past normal cost, and the unfunded accrued liability (surplus) is the excess of the AAL over the value of assets.

Expenses

Plan expenses paid by the plan are divided into administrative and investment related expenses.

Funded Ratio

The actuarial value of assets expressed as a percentage of the plan's actuarial accrued liability.

GASB

Government Accounting Standards Board.

Section VII. Glossary

GASB No. 67 and GASB No. 68

These are the government standards that replace GASB 25 and 27. They are effective for plan years beginning after June 14, 2013 and employer fiscal years beginning after June 14, 2014.

Investment Return Assumption or Investment Rate of Return (Discount Rate)

The rate used to adjust a series of future payments to reflect the time value of money.

Level Percentage of Projected Payroll Amortization Method

Amortization payments are calculated so that they are a constant percentage of the projected payroll of active plan members over a given number of years. The dollar amount of the payments generally will increase over time as payroll increases due to inflation; in dollars adjusted for inflation, the payments can be expected to remain level.

Normal Cost or Normal Actuarial Cost

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

Pay-As-You-Go (PAYG)

A method of financing a benefits plan under which the contributions to the plan are generally made at about the same time and in about the same amount as benefit payments and expenses becoming due.

Payroll Growth Rate

An actuarial assumption with respect to future increases in total covered payroll attributable to inflation; used in applying the level percentage of projected payroll amortization method.

Plan Liabilities

Obligations payable by the plan at the reporting date, including primarily, benefits and refunds due and payable to plan members and beneficiaries, and accrued investment and administrative expenses. Plan liabilities do not include actuarial accrued liabilities for benefits that are not due and payable at the reporting date.

Plan Members

The individuals covered by the terms of a Pension or Other Post-Employment Benefits (OPEB) plan. The plan membership generally includes employees in active service, terminated employees who have accumulated benefits but are not yet receiving them, and retired employees and beneficiaries currently receiving benefits.

Post-Employment

The period between termination of employment and retirement, as well as the period after retirement.

Section VII. Glossary

Projected Unit Credit (PUC) Funding Method

An actuarial cost method that spreads the employee's benefit over their career as a level percentage of service. The normal cost is the present value of the portion of the benefit assigned to the current year. The actuarial accrued liability is the accumulated value of all past normal cost, and the unfunded accrued liability (surplus) is the excess of the AAL over the value of assets.

Salary Improvement

An actuarial assumption regarding the increase in employees' salaries, reflecting cost-of-living, merit and longevity increases.

Select and Ultimate Rates

Actuarial assumptions that contemplate different rates for successive years. Instead of a single assumed rate with respect to, for example, the investment return assumption, the actuary may apply different rates for the early years of a projection and a single rate for all subsequent years. For example, if an actuary applies an assumed investment return of 8 percent for year 2020, 7.5 percent for 2021, and 7 percent for 2022 and thereafter, then 8 percent and 7.5 percent are select rates, and 7 percent is the ultimate rate.

Unfunded Actuarial Accrued Liabilities

The excess of the present value of prospective pension benefits, as of the date of a pension plan valuation, over the sum of (1) the actuarial value of the assets of the plan and (2) the present value of future normal costs determined by any of several actuarial cost methods. For plans that define an accrued liability, this amount equals the excess of the accrued liability over plan assets.

Vested Plan Benefits

All benefits to which current participants have a vested right based on pay and service through the valuation date. A participant has a vested right to a benefit if he/she would still be eligible to receive that benefit if employment terminated on the valuation date.

Appendix 1

Summary of Funding Progress

	(1)	(2)	(3)	(4)	(5)	(6)
Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liability	Percentage Funded (1) / (2)	Unfunded Actuarial Accrued Liability (2) - (1)	Annual Covered Payroll	Unfunded Actuarial Accrued Liability as a Percentage of Covered Payroll (4) / (5)
Teachers' Retirement Plan						
10/1/2017	\$ 1,982,019	2,142,491	92.5%	\$ 160,472	447,762	35.8%
10/1/2018	2,139,911	2,301,314	93.0%	161,403	470,749	34.3%
10/1/2019	2,271,160	2,494,291	91.1%	223,131	516,609	43.2%
10/1/2020	2,431,075	2,640,803	92.1%	209,728	551,835	38.0%
10/1/2021	2,684,368	2,698,618	99.5%	14,250	600,481	2.4%
Police Officers and Firefighters' Retirement Plan						
10/1/2017	\$ 5,406,366	4,878,260	110.8%	\$ (528,106)	441,905	(119.5%)
10/1/2018	5,848,576	5,223,760	112.0%	(624,816)	454,209	(137.6%)
10/1/2019	6,269,628	5,604,573	111.9%	(665,055)	495,809	(134.1%)
10/1/2020	6,676,013	6,023,843	110.8%	(652,169)	507,348	(128.5%)
10/1/2021	7,290,173	6,181,614	117.9%	(1,108,559)	492,787	(225.0%)
Total						
10/1/2017	\$ 7,388,385	7,020,751	105.2%	\$ (367,634)	889,667	(41.3%)
10/1/2018	7,988,487	7,525,074	106.2%	(463,413)	924,958	(50.1%)
10/1/2019	8,540,788	8,098,864	105.5%	(441,924)	1,012,418	(43.7%)
10/1/2020	9,107,088	8,664,646	105.1%	(442,442)	1,059,182	(41.8%)
10/1/2021	9,974,541	8,880,232	112.3%	(1,094,309)	1,093,267	(100.1%)

(\$ in Thousands)

Information for October 1, 2018 and earlier was taken from the valuation report prepared by Cavanaugh Macdonald Consulting, LLC, dated December 17, 2018.

Analysis of the dollar amounts of net assets available for benefits, actuarial accrued liability, and unfunded actuarial accrued liability in isolation can be misleading. Expressing the net assets available for benefits as a percentage of the actuarial accrued liability provides one indication of funding status on a going-concern basis. Analysis of this percentage over time indicates whether the plan is becoming financially stronger or weaker. Generally, the greater this percentage, the stronger the plan. Trends in unfunded actuarial accrued liability and annual covered payroll are both affected by inflation. Expressing the unfunded actuarial accrued liability as a percentage of annual covered payroll approximately adjusts for the effects of inflation and aids analysis of the District's progress made in accumulating sufficient assets to pay benefits when due. Generally, the smaller this percentage, the stronger the plan.

Appendix 2

Valuation Solvency Test

The following table shows the accrued liabilities and the portion of accrued liabilities covered by reported assets.

Valuation Date	Aggregate Accrued Liabilities For			Portion of Accrued Liabilities Covered by Reported Asset			
	(1) Active Member Contributions	(2) Retirees, Survivors and Inactive Members	(3) Active Members (Employer Financed Portion)	Reported Assets	(1)	(2)	(3)
TEACHERS' RETIREMENT PLAN							
10/1/2017	156,263	1,154,696	831,532	2,051,006	100.0%	100.0%	89.0%
10/1/2018	165,629	1,234,796	900,889	2,193,598	100.0%	100.0%	88.0%
10/1/2019	228,893	1,263,613	1,001,785	2,264,428	100.0%	100.0%	77.1%
10/1/2020	302,072	1,304,905	1,033,826	2,411,390	100.0%	100.0%	77.8%
10/1/2021	333,512	1,336,297	1,028,810	2,934,307	100.0%	100.0%	100.0%
POLICE OFFICERS AND FIREFIGHTERS' RETIREMENT PLAN							
10/1/2017	261,428	1,990,699	2,626,133	5,629,911	100.0%	100.0%	100.0%
10/1/2018	267,845	2,258,695	2,697,220	6,015,953	100.0%	100.0%	100.0%
10/1/2019	338,775	2,547,138	2,828,542	6,256,213	100.0%	100.0%	100.0%
10/1/2020	352,281	2,903,981	2,817,790	6,620,190	100.0%	100.0%	100.0%
10/1/2021	357,729	3,106,359	2,741,743	7,963,277	100.0%	100.0%	100.0%

(\$ in Thousands)

Information for October 1, 2018 and earlier was taken from the valuation report prepared by Cavanaugh Macdonald Consulting, LLC, dated December 17, 2018.

Appendix 3

ASOP 51 Disclosure

Actuarial Standard of Practice No. 51 *Assessment and Disclosure of Risk Associated with Measuring Pension Obligations and Determining Pension Plan Contributions* is effective for actuarial valuations after November 2018. The standard requires actuaries to provide information so that users of the report can better understand the potential for future results to vary from the results presented in this report and identify risks on the plan's future financial condition. This standard does not require the assessment to be based on numerical calculations.

Examples of risk common to most public plans include the following (generally listed from greatest to least risk):

- Investment risk: The potential that investment returns will be different than expected. The Trustees are well aware of this risk.
- Contribution risk: Most commonly this is associated with the potential that actual future contributions are not made in accordance with the plan's actuarially based funding policy. When this occurs, it can create negative long-term problems.
- Longevity and other demographic risks: The potential that mortality or other demographic experience will be different than expected.
- Asset/liability mismatch risk: The potential that changes in asset values are not matched by changes in the value of liabilities.
- Cash flow risks: The potential that contributions coming into the plan will not cover benefit payments. While common in well-funded plans, this still requires the use of interest, dividends or principal to cover benefit payments. When assets need to be sold (or more cash held) it can be an issue. Poorly funded plans with DROP lump sum payments can be a particular issue.

One item left off this list is "interest rate risk" (i.e., the potential that interest rates will be different than expected). This risk is common in corporate ERISA plans where funding is based on bond rates. Interest rates on bonds are still an important consideration when setting an expected return assumption and can change over time.

There are some plan maturity measures that are significant to understanding the risks associated with the plan. The following table shows four commonly used measures of the relative riskiness of a pension plan, relative to the plan sponsor and the employee group covered by the plan.

Appendix 3

ASOP 51 Disclosure

Teachers				Conservative
Risk Measure	10/1/2019	10/1/2020	10/1/2021	Measures
Retiree Liability as a Percent of Total Liability	44%	42%	42%	<50%
Assets to Payroll (Asset Volatility Ratio)	4.4	4.4	4.9	<5
Liabilities to Payroll (Liability Volatility Ratio)	4.8	4.8	4.5	<5
Benefit Payments to Contributions	0.9	0.9	0.8	<3

Police and Fire				Conservative
Risk Measure	10/1/2019	10/1/2020	10/1/2021	Measures
Retiree Liability as a Percent of Total Liability	45%	47%	49%	<50%
Assets to Payroll (Asset Volatility Ratio)	12.6	13.0	16.2	<5
Liabilities to Payroll (Liability Volatility Ratio)	11.3	11.9	12.5	<5
Benefit Payments to Contributions	0.8	1.1	1.1	<3

The Asset Volatility Ratio (AVR) is equal to the market value of assets (MVA) divided by payroll. A higher AVR implies that the Plan is exposed to greater contribution volatility. The current Teachers AVR of 4.9 indicates that a 1% asset gain/loss can be related to about 4.9% of the annual payroll. The current Police and Fire AVR of 16.2 indicates that a 1% asset gain/loss can be related to about 16.2% of the annual payroll. The Plan amortizes asset gains/losses over a period of 30 years since both plans currently have a surplus. This would result in a change in the District's contribution of about 0.4% of payroll for Teachers and 1.2% of payroll for Police and Fire for each 1.0% change in market assets in each Plan.

The Liability Volatility Ratio (LVR) is equal to the Actuarial Accrued Liability (AAL) divided by payroll. A higher LVR implies that the Plan is exposed to greater contribution volatility due to changes in liability measurements. The current Teachers LVR of 4.5 indicates that a 1% liability gain/loss can be related to about 4.5% of the annual payroll. The current Police and Fire LVR of 12.5 indicates that a 1% liability gain/loss can be related to about 12.5% of the annual payroll. The Plans amortize current surpluses over a period of 30 years. This would result in a change in the District's contribution of about 0.3% of payroll for Teachers and about 0.9% of payroll for Police and Fire for each 1.0% change in each Plan.

Appendix 3

ASOP 51 Disclosure

The use of payroll in these risk measures is an easily available substitute for the employer's revenue and often reflects the employer's ability to afford the plan. Each of these measures is a measure of plan maturity. Some ratios are approaching or outside of the "conservative" range because the plans are becoming more mature. Mature plans present more risk to plan sponsors because changes to the liability or assets will result in large changes in the unfunded liability as compared to the overall size of the employer as measured by payroll.

If the plan or employer were interested in doing more quantitative assessment of risks, the following are examples of tests that could be performed:

Scenario Test—A process for assessing the impact of one possible event, or several simultaneously or sequentially occurring possible events, on a plan's financial condition.

Sensitivity Test—A process for assessing the impact of a change in an actuarial assumption on an actuarial measurement.

Stochastic Modeling—A process for generating numerous potential outcomes by allowing for random variations in one or more inputs over time for the purpose of assessing the distribution of those outcomes.

Stress Test—A process for assessing the impact of adverse changes in one or relatively few factors affecting a plan's financial condition.

Appendix 4

D.C. Code §1-907.02(c) Adjustment to FY2023 Payment

Beginning in fiscal year 2001, the District payment was adjusted pursuant to D.C. Code §1-907.02(c). This section stipulates that "...the enrolled actuary shall determine whether the amount appropriated for the applicable fiscal year resulted in an overpayment or a shortfall based upon the actual covered payroll."

The D.C. Code §1-907.02(c) adjustment to the fiscal year 2023 District payment is calculated by taking the actual fiscal year 2021 covered payroll for each employee class and multiplying by the corresponding fiscal year 2021 contribution rates, which were determined as of October 1, 2019. This result is the fiscal year 2021 contribution that was required to be made by the District, based on actual payroll. The required contribution is then compared to the actual contribution that was paid by the District based on projected payroll. The difference between the required and actual contributions is the D.C. Code §1-907.02(c) adjustment. Any adjustment amount that cannot be used in a given year is carried forward to the next fiscal year.

The following table shows the D.C. Code §1-907.02(c) Adjustment to FY2023 Payment.

	Teachers	Police	Fire
1. Actual FY2021 Covered Payroll	\$ 570,205	\$ 302,063	\$ 161,124
2. FY2021 Contribution Rate	12.32%	18.75%	23.94%
3. Actual FY2021 Contribution Required	70,249	56,637	38,573
4. Actual FY2021 Contribution Paid without Adjustment	66,327	64,066	41,945
5. Preliminary D.C. Code §1-907.02(c) Adjustment to FY2023 Payment (3. - 4.)	3,922	(7,429)	(3,372)
6. FY2021 Unrecognized Amount	0	0	0
7. Final D.C. Code §1-907.02(c) Adjustment to FY2023 Payment (5. + 6.)	3,922	(7,429)	(3,372)
8. Adjustment Applied to FY2023 Payment	\$ 3,922	\$ (7,429)	\$ (3,372)
9. Carryover Adjustment (7. - 8.)	0	0	0

(\$ in Thousands)

Appendix 5

Experience Gain/(Loss)

The following table shows the gain/(loss), or change in unfunded accrued liability, due to experience other than expected.

Experience Gain/(Loss)	Teachers	Police	Fire	Police and Fire	Total
Age & Service Retirements					
If members retire at older ages, there is a gain; if younger ages, a loss.	\$ (0.5)	\$ (20.7)	\$ 0.8	\$ (19.9)	\$ (20.4)
Disability Retirements					
If disability claims are less than assumed, there is a gain; if more claims, a loss.	1.0	3.8	0.9	4.7	5.6
Death-in Service Benefits					
If survivor claims are less than assumed, there is a gain; if more claims, there is a loss.	2.9	5.8	0.4	6.2	9.1
Withdrawal from Employment					
If more liabilities are released by withdrawals than assumed, there is a gain; if smaller releases, a loss.	(59.0)	0.5	(6.2)	(5.8)	(64.8)
Pay Increases					
If there are smaller pay increases than assumed, there is a gain; if greater increases, a loss.	67.0	87.4	47.4	134.8	201.8
New Members					
Additional unfunded actuarial accrued liability will produce a loss.	(34.5)	(10.6)	(1.9)	(12.6)	(47.1)
Investment Income					
If there is greater investment income than assumed, there is a gain; if less income, a loss.	75.4	141.0	62.7	203.7	279.1
Death after Retirement					
If retirees live longer than assumed, there is a loss; if not as long, a gain.	(3.7)	(6.6)	(1.7)	(8.3)	(12.0)
COLA/CPI					
If inflation is different than expected, gains or losses can occur.	22.4	47.5	15.3	62.8	85.1
Other					
Miscellaneous gains and losses resulting from data adjustments, timing of financial transactions, etc.	21.1	16.6	11.3	27.9	49.0
Gain/(Loss) During Year from Experience	92.0	264.7	128.8	393.5	485.5
Non-Recurring Items					
Adjustments for plan amendments, assumption changes, method changes or audit changes.	89.4	14.3	83.2	97.5	186.9
Composite Gain/(Loss) During Year	\$ 181.4	\$ 278.9	\$ 212.1	\$ 491.0	\$ 672.4

(\$ in Millions)

Appendix 6

Valuation Balance Sheet – Teachers

The following table shows the Teachers valuation balance sheet (present and prospective assets and the actuarial liabilities) as of October 1, 2021 which is presented in the DCRB ACFR.

Teachers Present and Prospective Assets		
Actuarial Value of Present Assets		\$ 2,684,368,296
Present Value of Future Members' Contributions		412,883,699
Present Value of Future Employer Contributions		
Normal contributions	\$ 312,486,102	
Unfunded accrued liability contributions	14,249,771	
Total Prospective Employer Contributions		326,735,873
Total Present and Prospective Assets		\$ 3,423,987,868
Teachers Actuarial Liabilities		
Present Value of benefits payable on account of retired members and survivors of deceased members now drawing retirement benefits		\$ 1,132,341,194
Present Value of prospective benefits payable on account of inactive members		203,955,369
Present Value of prospective benefits payable on account of present active members		
Service retirement benefits	\$ 1,664,715,374	
Disability retirement benefits	29,740,190	
Survivor benefits	17,060,184	
Separation benefits	376,175,557	
Total		2,087,691,305
Total Actuarial Liabilities		\$ 3,423,987,868

Appendix 7

Valuation Balance Sheet – Police and Fire

The following table shows the Police and Fire valuation balance sheet (present and prospective assets and the actuarial liabilities) as of October 1, 2021 which is presented in the DCRB ACFR.

Police and Fire Combined Present and Prospective Assets		
Actuarial Value of Present Assets		\$ 7,290,172,754
Present Value of Future Members' Contributions		426,696,859
Present Value of Future Employer Contributions		
Normal contributions	\$ 1,719,757,512	
Unfunded accrued liability contributions	(1,108,558,558)	
Total Prospective Employer Contributions		611,198,954
Total Present and Prospective Assets		\$ 8,328,068,567

Police and Fire Combined Actuarial Liabilities		
Present Value of benefits payable on account of retired members and survivors of deceased members now drawing retirement benefits		\$ 3,021,846,087
Present Value of prospective benefits payable on account of inactive members		84,513,065
Present Value of prospective benefits payable on account of present active members		
Service retirement benefits	\$ 4,679,130,276	
Disability retirement benefits	205,278,711	
Survivor benefits	49,261,465	
Separation benefits	288,038,963	
Total		5,221,709,415
Total Actuarial Liabilities		\$ 8,328,068,567