Classic Values, Innovative Advice

Consolidated Police and Firemen's Pension Fund of New Jersey

Actuarial Valuation Report as of July 1, 2023

Produced by Cheiron

February 2024

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Letter Of Transmittal

February 13, 2024

Board of Trustees
Consolidated Police and Firemen's Pension Fund of New Jersey
State of New Jersey
Department of the Treasury
Division of Pension and Benefits, CN 295
Trenton, New Jersey 08625-0295

Dear Board Members:

At your request, we have performed the July 1, 2023 Actuarial Valuation of the Consolidated Police and Firemen's Pension Fund of New Jersey (CPFPF or Fund).

In preparing our report, we relied on information (some oral and some written) supplied by the Division of Pensions and Benefits. This information includes, but is not limited to, plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23, Data Quality.

The results of this report are only applicable to the Fund's contribution for Fiscal Year Ending 2025. Future results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the assumptions; changes in assumptions; and changes in plan provisions or applicable law.

The actuarial assumptions are based on the 2022 Experience Study dated November 9, 2022, and approved by the Division of Pensions and Benefits (DPB). The assumptions reflect our understanding of the likely future experience of the Fund and each of the assumptions represents the best estimate of future experience.

This report has been prepared in accordance with generally recognized and accepted actuarial principles and practices and our understanding of the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board as well as applicable laws and regulations. Furthermore, as credentialed actuaries we meet the Qualification Standards, as defined by the American Academy of Actuaries, to render the opinion contained in this report. This report does not address any contractual or legal issues. We are not attorneys, and our firm does not provide any legal services or advice.

This actuarial valuation report was prepared exclusively for the Consolidated Police and Firemen's Pension Fund of New Jersey for the purposes described herein and for the plan auditor in completing an audit related to the matters herein. Other users of this report are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to such other users.

Sincerely,
Cheiron

Janet Cranna, FSA, FCA, MAAA, EA
Principal Consulting Actuary

Jonathan B. Chipko, FSA, MAAA, EA
Consulting Actuary

Justin Runkel, ASA, MAAA, EA
Consulting Actuary

SECTION I – BOARD SUMMARY

The primary purpose of the actuarial valuation and this report is to disclose the following as of the valuation date:

- The financial condition of the Consolidated Police and Firemen's Pension Fund of New Jersey,
- Past trends and risks to the Fund's financial condition, and
- The State's Pension Contribution for Fiscal Year Ending (FYE) 2025.

In this Section we present a summary of the principal valuation results. This includes the basis upon which the July 1, 2023 valuation was completed and an examination of the current financial condition of the Fund. In addition, we present a review of the key historical trends.

This report does not include information required under GASB Statement No. 67 which was provided in a separate report.

Results shown in this report for years prior to July 1, 2018 are based on the prior actuary's valuation reports.

Valuation Basis

The July 1, 2023 valuation results are based on the same actuarial methods and assumptions as used in the July 1, 2022 valuation. The assumptions are based on the 2022 Experience Study dated November 9, 2022 and approved by the Division of Pensions and Benefits. The assumptions reflect our understanding of the likely future experience of the Fund and each of the assumptions represents the best estimate of future experience.

This report was prepared using census data and financial information as of the valuation date, July 1, 2023. Events following that date are not, and should not be, reflected in this report.

The valuation reflects a plan closed to new entrants since 1944 and at this time only covers beneficiaries. All risks and assumptions are a reflection of the nature of a wasting trust to meet the obligation to these remaining beneficiaries.

SECTION I – BOARD SUMMARY

Key Results

Table I-1 below summarizes the key results of the valuation with respect to the Fund's membership, assets and liabilities, and contributions. The results are presented and compared for both the current and prior year.

Table I-1
Summary of Key Valuation Results

Valuation Date Fiscal Year Ending (FYE)		July 1, 2023 2025		July 1, 2022 2024	% Change
Member Data					
Actives		0		0	N/A
Deferred Vested Members		0		0	N/A
Retirees and Beneficiaries		19		24	-20.8%
Total Members		19		24	-20.8%
Annual Retirement Allowances in Pay	$	300,480	$	407,282	-26.2%
Assets and Liabilities					
Actuarial Liability	$	1,563,812	$	1,916,246	-18.4%
Actuarial Value of Assets (AVA)[1]		2,172,278		2,748,796	-21.0%
Unfunded Actuarial Liability/(Surplus)	$	(608,466)	$	(832,550)	-26.9%
Funded Ratio		138.9%		143.4%	-4.5%
Contribution Amounts					
Total Statutory Contribution for FYE	$	0	$	0	N/A

[1] Includes discounted State appropriations receivable;
Actuarial Value of Assets is equal to Market Value of Assets.

The key results of the July 1, 2023 actuarial valuation are as follows:

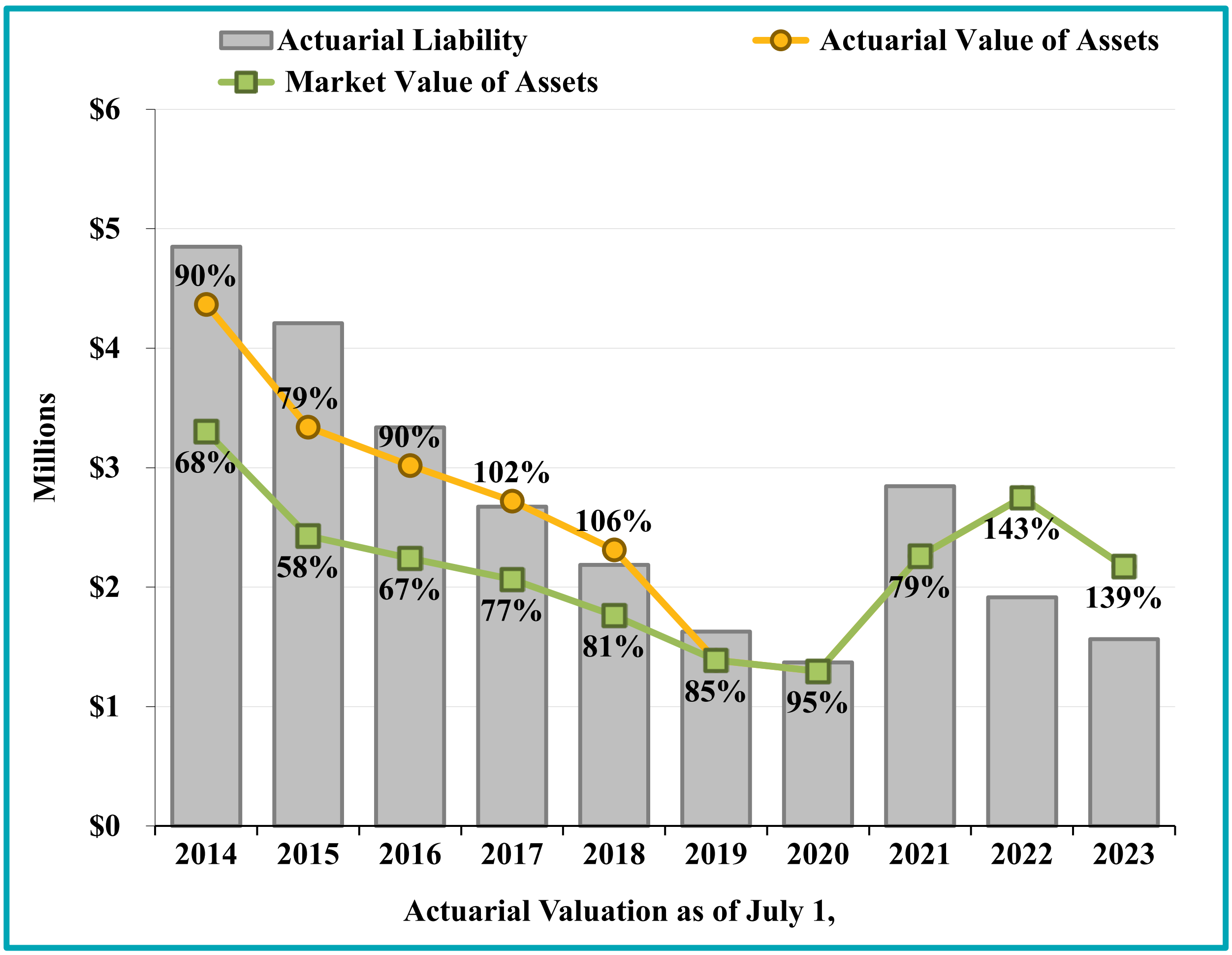
- There is no contribution due for the Fiscal Year Ending 2025.
- The funded ratio, the ratio of the actuarial value of assets over liabilities, decreased from 143.4% as of July 1, 2022 to 138.9% as of July 1, 2023.
- The surplus decreased from $833 thousand as of July 1, 2022 to $608 thousand as of July 1, 2023.
- There was a total actuarial experience gain of $79 thousand, consisting of a liability gain of $59 thousand and an asset gain of $20 thousand.

Recent Trends

It is important to take a step back from these latest results and view them in the context of the Fund's recent history. Below, we present a series of graphs which display key factors in the valuations of the last 10 years. Additionally, in Appendix D we provide the numerical values of the historical unfunded actuarial liability, funded ratio, and contribution amounts.

Assets and Liabilities

The gray bars represent the Actuarial Liability (AL). The green line is the Market Value of Assets (MVA) and the gold line is the Actuarial Value of Assets (AVA). The Fund's funded ratio (ratio of assets to liabilities) is shown next to the lines. Effective with the July 1, 2019 valuation, the AVA was set equal to the MVA. The assets and liabilities have been decreasing every year except for 2021. This is to be expected because the Fund only has beneficiaries. The increase in both assets and liabilities in 2021 is due to the method change of reflecting the assets and liabilities associated with the cost-of-living adjustments in the valuation.

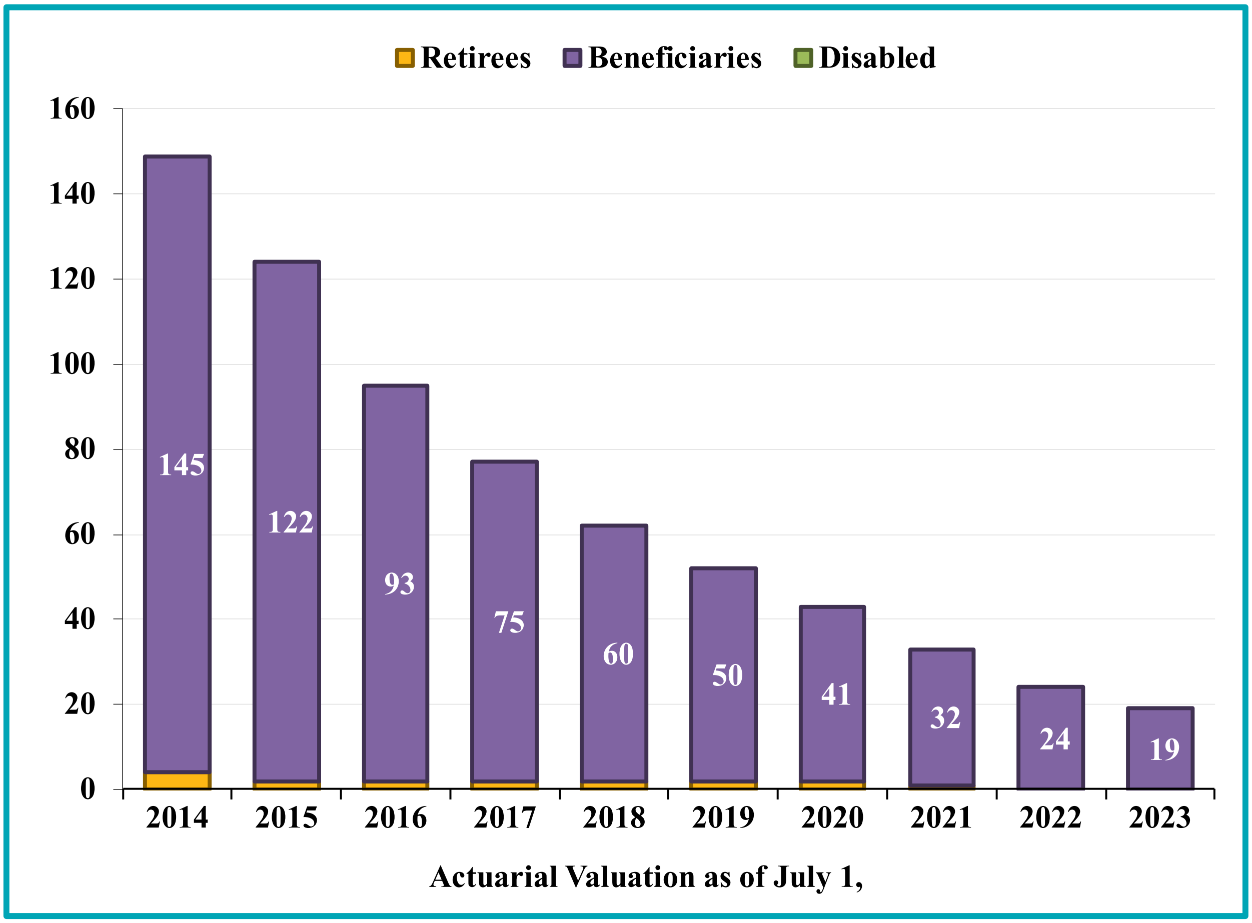


The information above is based on the final actuarial valuation reports for the given years. The amounts do not reflect differences between the discounted State appropriations receivable and the actual State contribution amounts that became known after the issuance of the reports.

SECTION I – BOARD SUMMARY

Membership Trends

The graph below shows the membership counts of the Fund for the last ten valuations. The numbers that are shown in the middle of the bars represent the number of beneficiaries. As of 2023, there are no retirees and 19 beneficiaries remaining.

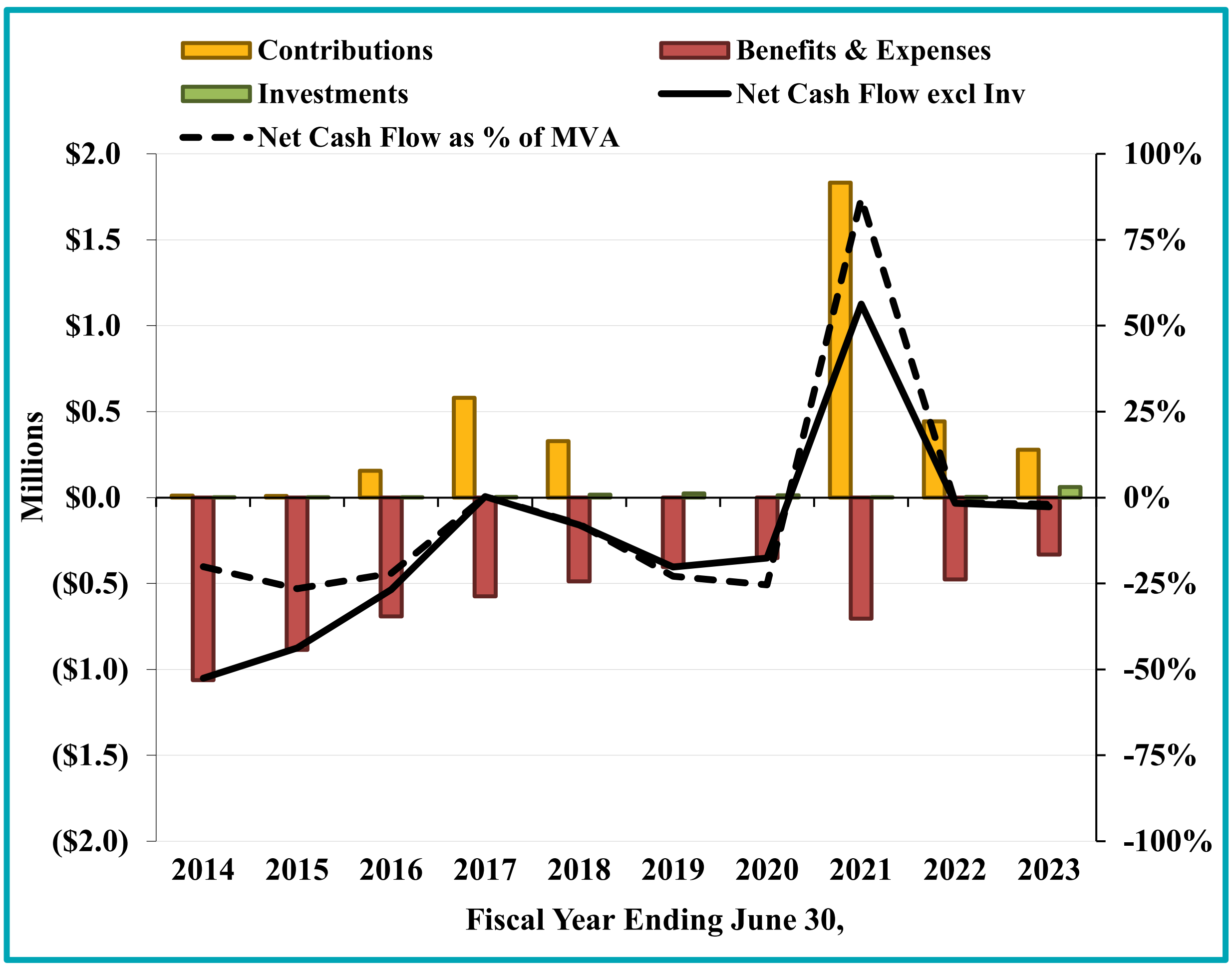


SECTION I – BOARD SUMMARY

Cash Flows

The following graph shows the Fund net cash flow (contributions less benefit payments and expenses) at the end of each valuation year. The net cash flow excluding investments has been negative every year except for 2021. This is an expected result of a wasting trust dedicated to pay out benefits the remaining annuitants. The black dotted line shows the net cash flow as a percent of the market value of assets and corresponds with the right-hand axis. An implication of negative cash flow is that the difference each year must be paid out of the principal assets, meaning there will be less to invest during periods of favorable investment experience. Given the Fund's conservative asset allocation, this is not the typical risk.

As expected, the benefits and expenses have decreased during this period as the membership declines. The fluctuation in the net cash flow is a result of the varying contributions. The Fund is currently in a surplus position, but the unfunded actuarial liability in recent years has been amortized over one year which results in cost volatility. In FYE 2021, the Pension Adjustment Fund was transferred into CPFPF and cost-of-living adjustments were paid directly out of the CPFPF, instead of through annual contributions from the Pension Adjustment Fund. This resulted in a large positive net cash flow for FYE 2021.



SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK

Actuarial valuations are based on a set of assumptions about future economic and demographic experience. These assumptions represent a reasonable estimate of future experience, but actual future experience will undoubtedly be different and may be significantly different. This section of the report is intended to identify the primary risks (if any) to the plan, provide some background information about those risks, and provide an assessment of those risks.

Identification of Risks

The fundamental risk to a pension fund is that the contributions needed to pay the benefits become unaffordable. Due to the size of the Fund relative to the State, we do not believe there is a material risk that the benefits become unaffordable.

Low-Default-Risk Obligation Measure (LDROM)

Pension plans typically invest in a diversified portfolio to achieve the best possible return at an acceptable level of risk. The lowest investment risk portfolio for a pension plan would be composed entirely of low-default-risk fixed income securities whose cash flows match the cash flows needs of the plan. Such a portfolio would have a lower expected rate of return than the diversified portfolio. Low-Default-Risk Obligation Measure (LDROM) represents what the Actuarial Liability would be if the plan's assets were invested in such a portfolio.

The Fund currently invests in a low-risk portfolio to preserve its surplus position and achieve benefit security for the remaining beneficiaries in the Fund. With this conservative asset allocation, the Low-Default-Risk Obligation Measure (LDROM) as of July 1, 2023 is best represented by the Actuarial Liability of $1,563,812.

SECTION III – ASSETS

The Fund uses the market value of assets for funding. The market value represents the value of the assets if they were liquidated on the valuation date.

On the following pages, we present detailed information on the Fund's assets:

- Disclosure of assets at June 30, 2022 and June 30, 2023,
- Statement of cash flows during the year, and
- Disclosure of investment performance for the year.

Disclosure

The market value of assets represents a "snap-shot" value as of the last day of the fiscal year that provides the principal basis for measuring financial performance from one year to the next. Table III-1 on the following page presents the market value as of June 30, 2022 and June 30, 2023. Table III-2 presents the Fund's net cash flows from June 30, 2022 to June 30, 2023. Table III-3 shows the historical asset returns for the Fund for the past ten years.

For this Fund, the actuarial value of assets is equal to the market value of assets.

SECTION III – ASSETS

Table III-1
Statement of Assets at Market Value

	June 30, 2023	June 30, 2022
Assets		
Cash	$ 412,746	$ 197,388
Cash Management Fund	1,655,833	1,855,804
Accrued Interest on Investments	44	3
Administrative Expenses Receivable	7,406	5,955
Employers' Contributions Receivable - Pension Adjustment and Local	140,102	155,413
Other Accounts Receivable	1,371	0
Total Assets	$ 2,217,502	$ 2,214,563
Liabilities		
Pension Payroll Payable	$ (15,493)	$ (17,950)
Pension Adjustment Payroll Payable	(26,133)	(32,787)
Withholdings Payable	(517)	(904)
Adminstrative Expense Payable	(3,081)	(3,394)
Other Accounts Payable	0	0
Total Liabilities	$ (45,224)	$ (55,035)
Preliminary Market Value of Assets	**$ 2,172,278**	**$ 2,159,528**
Discounted State Appropriations Receivable	0	589,268
Market Value of Assets	**$ 2,172,278**	**$ 2,748,796**

SECTION III – ASSETS

Fund Cash Flows from June 30, 2022 to June 30, 2023

Table III-2 Changes in Market Values for FYE June 30, 2023		
Additions		
Contributions		
State Appropriations	$	76,000
Employer Contribution - Local		202,530
Administrative Revenue - Local		3,226
Net Investment Income		62,186
Total Additions	$	343,942
Deductions		
Retirement Allowances	$	117,921
Benefit Expense - Pension Adjustment		210,452
Miscelleanous Expense		0
Administrative Expense		2,819
Total Deductions	$	331,192
Net Increase/(Decrease)	**$**	**12,750**
Preliminary Market Value of Assets Beginning of Year	**$**	**2,159,528**
Preliminary Market Value of Assets End of Year	**$**	**2,172,278**
Discounted State Appropriations Receivable		0
Market Value of Assets End of Year	**$**	**2,172,278**
Approximate Return		**2.91%**

Actuarial Value of Assets

For this Fund, the actuarial value of assets equals the market value of assets.

Investment Performance

The market value of assets rate of return was 2.91% for the year ending June 30, 2023. This is compared to an assumed return of 2.00% for the same period. Table III-3 shows the historical asset returns and the investment return assumption for the last ten years.

The prior actuary did not calculate a market value return prior to 2017.

Table III-3
Annual Rates of Return

Year Ended June 30	Investment Return Assumption	Market Value	Actuarial Value
2014	2.00%		-3.25%
2015	2.00%		-3.81%
2016	2.00%		-4.36%
2017	2.00%	0.34%	-4.35%
2018	2.00%	0.97%	-3.64%
2019	2.00%	1.57%	1.57%
2020	2.00%	1.16%	N/A
2021	2.00%	0.16%	N/A
2022	2.00%	0.19%	N/A
2023	2.00%	2.91%	N/A
5-Year Compound Average		**1.20%**	**N/A**

SECTION IV – LIABILITIES

In this section, we present detailed information on the liabilities of the Fund, including:

- Disclosure of the liabilities at July 1, 2022 and July 1, 2023, and
- The development of the actuarial gain and loss.

Disclosure

The actuarial liability is used for determining employer contributions. For CPFPF, the funding method employed is the Projected Unit Credit (PUC) Actuarial Cost Method. Under this funding method, the actuarial liability is calculated as the actuarial present value of the projected benefits allocated to periods prior to the valuation year.

This liability is determined for funding purposes and is not appropriate for measuring the cost of settling plan liabilities by purchasing annuities or paying lump sums.

SECTION IV – LIABILITIES

Table IV-1 shows the actuarial liability, funded ratio, and unfunded actuarial liability as of July 1, 2023, and July 1, 2022 for the Fund.

Table IV-1
Actuarial Liabilities

	July 1, 2023	July 1, 2022
Actuarial Liability		
Actives	$ 0	$ 0
Deferred Vested	0	0
Retirees	0	0
Disabled	0	0
Beneficiaries	1,563,812	1,916,246
Total Actuarial Liability	**$ 1,563,812**	**$ 1,916,246**
Actuarial Value of Assets	$ 2,172,278	$ 2,748,796
Unfunded Actuarial Liability/(Surplus)	$ (608,466)	$ (832,550)
Funded Ratio	138.9%	143.4%

SECTION IV – LIABILITIES

Table IV-2 presents the change in the actuarial liability, actuarial assets, and unfunded actuarial liability during the plan year. In general, the unfunded actuarial liability (UAL) of any retirement system is expected to change at each subsequent valuation for a variety of reasons. In each valuation, we report on those elements of change in the UAL which are of particular significance, potentially affecting the long-term financial outlook of the Fund.

Table IV-2
Development of 2023 Experience (Gain)/Loss

	Actuarial Liability	Actuarial Value of Assets	Unfunded Actuarial Liability
1. Value as of July 1, 2022	$ 1,916,246	$ (2,748,796)	$ (832,550)
2. Additions			
Normal Cost	$ 0	$ 0	$ 0
Employer Contributions	0	0	0
Expected Member Contributions	0	0	0
Total Additions	$ 0	$ 0	$ 0
3. Deductions			
Benefit Payments	$ (328,373)	$ 328,373	$ 0
Expected Administrative Expenses	0	0	0
Total Deductions	$ (328,373)	$ 328,373	$ 0
4. Expected Interest	$ 35,057	$ (51,708)	$ (16,651)
5. Expected Value as of July 1, 2023: [1 + 2 + 3 + 4]	$ 1,622,930	$ (2,472,131)	$ (849,201)
6. Other Changes			
Appropriation Adjustment[1]	$ 0	$ 319,940	$ 319,940
Contribution Timing	0	0	0
Actual Member Contributions	0	0	0
Change in Methods/Assumptions	0	0	0
Change in Benefits	0	0	0
Total Other Changes	$ 0	$ 319,940	$ 319,940
7. Expected Value after Changes: [5 + 6]	$ 1,622,930	$ (2,152,191)	$ (529,261)
8. Actual Value as of July 1, 2023	$ 1,563,812	$ (2,172,278)	$ (608,466)
9. Actuarial (Gain)/Loss: [8 - 7]	$ (59,118)	$ (20,087)	$ (79,205)

[1] Includes impact of Employer Contribution - Local

SECTION IV – LIABILITIES

Table IV-3 shows the components of the actuarial (gain)/loss for the Fund as of July 1, 2023 and July 1, 2022.

Table IV-3
Actuarial (Gain)/Loss Analysis

Components	July 1, 2023		July 1, 2022	
Actuarial Value of Assets				
Investment Return	$	(19,676)	$	39,018
Administrative Expenses		(411)		782
Total	$	(20,087)	$	39,800
Actuarial Liability				
Inactive Demographic Experience	$	(59,118)	$	(474,624)
Actuarial (Gain)/Loss	**$**	**(79,205)**	**$**	**(434,824)**

SECTION V – CONTRIBUTIONS

In the process of evaluating the financial condition of any pension plan, the actuary analyzes the assets and liabilities to determine what level (if any) of contributions is needed to properly maintain the funded status of the Plan. Typically, the actuarial process will use a funding technique that will result in a pattern of contributions that are both stable and predictable.

Under the current funding policy, the State funding requirement contains two components: the employer normal cost and an amortization of the unfunded actuarial liability. Since CPFPF does not have any active members, there is no normal cost component. The funding methodology prescribed by NJ State Statute does not include a cost component for administrative expenses, and therefore administrative expenses are implicitly covered by the investment rate of return assumption.

For CPFPF, the funding method employed is the Projected Unit Credit (PUC) Actuarial Cost Method. Under this funding method, the actuarial liability is calculated as the actuarial present value of the projected benefits allocated to periods prior to the valuation year. The unfunded actuarial liability is the actuarial liability on the valuation date less the actuarial value of assets.

The unfunded actuarial liability as of June 30, 1990 was amortized over a closed period of nine years. We have assumed that any future unfunded actuarial liability will be amortized over one year as all members are inactive and receiving benefits.

Table V-1 shows the development of the Statutory Pension Contribution for the current and prior year.

Table V-1
Development of Statutory Pension Contribution

Valuation Date Fiscal Year Ending	July 1, 2023 2025	July 1, 2022 2024
1. Actuarial Liability	$ 1,563,812	$ 1,916,246
2. Actuarial Value of Assets	2,172,278	2,748,796
3. Unfunded Actuarial Liability: [1 - 2]	$ (608,466)	$ (832,550)
4. Amortization Period (years)	1	1
5. Total Statutory Pension Contribution as of Beginning of Fiscal Year: [3 x 1.02]	$ 0	$ 0

The Statutory Pension Contribution in Table V-1 above is a reasonable actuarially determined contribution in accordance with Actuarial Standard of Practice (ASOP) No. 4.

APPENDIX A – MEMBERSHIP INFORMATION

The data for this valuation was provided by the New Jersey Division of Pensions and Benefits as of July 1, 2023. Cheiron did not audit any of the data. However, we did perform an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23, Data Quality. The following is a list of data charts contained in this section:

- A-1 and A-2: Inactive Member Data by Age
- A-3: Reconciliation of Plan Membership

APPENDIX A – MEMBERSHIP INFORMATION

Table A-1
Counts by Age of Inactive Members

Attained Age	**Status** Beneficiary	Total
Under 45	0	0
45-49	0	0
50-54	0	0
55-59	0	0
60-64	0	0
65-69	1	1
70-74	0	0
75-79	4	4
80-84	1	1
85 & Over	13	13
Total	19	19

Table A-2
Annual Retirement Allowances by Age of Inactive Members

Attained Age	**Status** Beneficiary	Total
Under 45	$ 0	$ 0
45-49	0	0
50-54	0	0
55-59	0	0
60-64	0	0
65-69	7,678	7,678
70-74	0	0
75-79	31,544	31,544
80-84	15,526	15,526
85 & Over	245,733	245,733
Total	$ 300,480	$ 300,480

APPENDIX A – MEMBERSHIP INFORMATION

Table A-3
Reconciliation of Plan Membership from July 1, 2022 to July 1, 2023

	Retired	Beneficiaries	Total
1. July 1, 2022	**0**	**24**	**24**
2. Reductions			
a. Died without beneficiary	0	(5)	(5)
3. Changes in Status			
a. Died with beneficiary			0
4. July 1, 2023	**0**	**19**	**19**

APPENDIX B – SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

A. Actuarial Assumptions

1. **Investment Rate of Return**

   2.00% compounded annually.

2. **Administrative Expenses**

   No explicit assumption is made for administrative expenses for funding purposes per the funding methodology prescribed by NJ State Statute.

3. **Mortality**

   Healthy retirees: The Pub-2010 Public Safety Healthy Retiree mortality table [*PubS-2010 Healthy Retiree*] as published by the Society of Actuaries (SOA), unadjusted, and with future improvement from the base year of 2010 on a generational basis using the SOA's Scale MP-2021.

   Beneficiaries: The Pub-2010 General Healthy Retiree mortality table [*PubG-2010 Healthy Retiree*] as published by the SOA, unadjusted, and with future improvement from the base year of 2010 on a generational basis using the SOA's Scale MP-2021.

4. **Family Composition Assumptions**

   For those participants with listed beneficiaries, the beneficiary allowance was assumed to be the greater of twice the amount contained in the record or the minimum of $4,500/yr. (The information contained in the record has not been updated for the change from 25% to 50% payment to the survivor.)

   For those participants without listed beneficiaries, 65% were assumed to be married and the beneficiary amount was assumed to be the minimum benefit payable ($4,500/yr.).

   Males are assumed to be four years older than females.

   No assumption was made for children.

5. **Rationale for Assumptions**

   The assumptions are based on the 2022 Experience Study dated November 9, 2022, and approved by the Division of Pensions and Benefits.

   The combined effect of the assumptions in aggregate is expected to have no significant bias.

6. **Changes in Actuarial Assumptions since Last Valuation**

   None.

APPENDIX B – SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

B. Actuarial Methods

The actuarial methods used for determining State contributions are described below.

1. Actuarial Cost Method

The actuarial cost method for funding calculations is the Projected Unit Credit Cost Method.

The actuarial liability is calculated as the actuarial present value of the projected benefits allocated to periods prior to the valuation year. The unfunded actuarial liability is the actuarial liability on the valuation date less the actuarial value of assets.

The unfunded actuarial liability as of June 30, 1990 was amortized over a closed period of nine years. Without additional guidance, we assumed that if there is an unfunded actuarial liability in the future it will be amortized over one year.

Beginning with the July 1, 2021 valuation, liabilities associated with cost-of-living adjustments are included in the valuation based on the amounts provided in the census data by the DPB. Previously, the cost-of-living adjustments were separately funded on a pay-as-you-go basis through the Pension Adjustment Fund and the associated liabilities were excluded from the valuation.

2. Asset Valuation Method

The actuarial value of assets is equal to the market value of assets.

In FYE 2021, the Pension Adjustment Fund was transferred into the CPFPF and cost-of-living adjustments are now paid directly from the CPFPF.

3. State Contribution Payable Dates

Chapter 83, P.L. 2016 requires the State to make the required pension contributions on a quarterly basis in each fiscal year according to the following schedule: at least 25% by September 30, at least 50% by December 31, at least 75% by March 31, and at least 100% by June 30. As such, contributions are assumed to be made on a quarterly basis.

4. Valuation Software

Cheiron utilizes ProVal, an actuarial valuation software leased from Winklevoss Technologies (WinTech) to calculate liabilities and project benefit payments. We have relied on WinTech as the developer of ProVal. We have reviewed ProVal and have a basic understanding of it and have used ProVal in accordance with its original intended purpose. We have not identified any material inconsistencies in ProVal assumptions or output that would affect this actuarial valuation.

5. Changes in Actuarial Methods since Last Valuation

None.

APPENDIX C – SUMMARY OF PLAN PROVISIONS

This summary of Plan provisions provides an overview of the major provisions of the CPFPF used in the actuarial valuation. It is not intended to replace the more precise language of the NJ State Statutes, Title 43, Chapter 16, and if there is any difference between the description of the plan herein and the actual language in the NJ State Statutes, the NJ State Statutes will govern. This valuation is prepared based on the plan provisions in effect as of July 1, 2023 and does not reflect the impact of any changes in the benefits that may have been approved after the valuation date.

1. **Eligibility of Membership**

   Member of a municipal police department, a municipal paid or part-paid fire department, a county police department, or a paid or part-paid fire department of a fire district located in a township who has contributed to this pension fund and who is not covered by the Police and Firemen's Retirement System, which became effective on July 1, 1944.

2. **Active Member**

   Any member who is a policeman, fireman, detective, lineman, driver of police van, fire alarm operator, or inspector of combustibles, and who is subject to call for active service as such.

3. **Employee Member**

   Any member who is not subject to active service or duty.

4. **Plan Year**

   The 12-month period beginning on July 1 and ending on June 30.

5. **Service Credit**

   Service rendered while a member as described above.

6. **Compensation**

   Base salary, not including individual salary adjustments which are granted primarily in anticipation of retirement or additional remuneration for performing temporary duties beyond the regular workday. (Effective June 30, 1996, Chapter 113, P.L. 1997 provided that the amount of compensation used for employer and member contributions and benefits under the program cannot exceed the compensation limitation of Section 401(a)(17) of the Internal Revenue Code.)

7. **Final Compensation**

   Compensation received during the last 12 months of service preceding retirement or other termination of service.

APPENDIX C – SUMMARY OF PLAN PROVISIONS

8. Average Salary

Salary averaged over the last three years prior to retirement or other termination of service.

9. Contributions

Each active member contributes 7% of his salary to the pension fund.

10. Benefits

a) Service Retirements

Mandatory retirement at age 65 with 25 years of service (a municipality may retain the Chief of Police until age 70). Voluntary retirement after 25 years of service for an active member and after age 60 with 25 years of experience for an employee member. Benefit is life annuity equal to 60% of final compensation, plus 1% of final compensation for years of service in excess of 25.

b) Death Benefits

(1) While on Duty

Immediate life annuity equal to 70% of average salary payable to the spouse. If there is no spouse, or if the spouse dies or remarries, 20% of final compensation will be payable to one surviving child, 35% to two surviving children, or 50% to three surviving children. If is no surviving spouse or child, 25% of the member's average salary will be payable to one dependent parent or 40% to two dependent parents. The minimum spousal benefit is $4,500 per annum.

(2) While not on duty after retirement

Life annuity equal to 50% of the member's average salary payable to the spouse, plus 15% to one surviving child or 25% to two or more surviving children. If there is no surviving spouse or if the surviving spouse dies or remarries, 20% of the member's average salary to one child, 35% to two surviving children, or 50% to three or more surviving children. If is no surviving spouse or child, 25% of the member's average salary will be payable to one dependent parent or 40% to two dependent parents. The minimum spousal benefit is $4,500 per annum.

c) Ordinary Disability Retirement

Totally and permanently incapacitated from service for any cause other than as a direct result of a traumatic event occurring during the performance of a duty. Benefit is an immediate life annuity equal to ½ of average salary.

APPENDIX C – SUMMARY OF PLAN PROVISIONS

d) Accidental Disability Retirement

Totally and permanently incapacitated as a direct result of a traumatic event occurring while performing regular or assigned duties. Benefit is an immediate life annuity equal to ⅔ of average salary.

e) Cost-of Living Adjustments

Cost-of-living increases are granted to retired members and their eligible survivors in accordance with the Pension Adjustment Act. The additional liability due to the pension adjustment was previously paid by the Pension Adjustment Fund, which was established pursuant to Chapter 143, P.L. 1958. Chapter 78, P.L. 2011 suspended the cost-of-living adjustments for current and future retirees and beneficiaries until reactivated as permitted by law. In FYE 2021, the Pension Adjustment Fund was transferred into the CPFPF and cost-of-living adjustments were paid directly from the CPFPF, instead of through annual contributions from the Pension Adjustment Fund.

11. Changes in Plan Provisions since Last Valuation

None.

APPENDIX D – HISTORICAL DATA AND REQUIRED EXHIBITS

Table D-1
Historical Summary of Assets and Liabilities[1]

Valuation Date July 1,	Market Value of Assets	Actuarial Value of Assets	Actuarial Liability	Funded Ratio Market Value	Funded Ratio Actuarial Value
2023	$ 2,172,278	$ 2,172,278	$ 1,563,812	138.91%	138.91%
2022	2,748,796	2,748,796	1,916,246	143.45%	143.45%
2021	2,260,738	2,260,738	2,845,637	79.45%	79.45%
2020	1,295,217	1,295,217	1,369,932	94.55%	94.55%
2019	1,387,550	1,387,550	1,628,242	85.22%	85.22%
2018	1,763,463	2,313,665	2,186,581	80.65%	105.81%
2017	2,065,094	2,721,368	2,674,728	77.21%	101.74%
2016	2,241,861	3,017,928	3,336,743	67.19%	90.45%
2015	2,427,950	3,340,908	4,208,241	57.70%	79.39%
2014	3,303,631	4,366,457	4,848,499	68.14%	90.06%

[1] Values prior to July 1, 2021 valuation do not include assets and liabilities associated with cost-of-living adjustments

Table D-2
Historical Summary of State Appropriations[1]

Fiscal Year Ending June 30,	Actuarially Determined Contribution	Actual Pension Contributions	Contribution Deficiency (Excess)	Percentage of Contribution Covered
2024[2]	$ 0	$ 0	$ 0	100.00%
2023	596,597	278,530	318,067	46.69%
2022	76,209	444,072	(367,863)	582.70%
2021	245,506	248,000	(2,494)	101.02%
2020	0	0	0	100.00%
2019	0	0	0	100.00%
2018	325,191	325,000	191	99.94%
2017	884,680	575,000	309,680	65.00%
2016	491,683	148,000	343,683	30.10%
2015	0	0	0	100.00%

[1] Pension contributions prior to Fiscal Year Ending June 30, 2022 exclude the Pension Adjustment. Contributions starting Fiscal Year Ending June 30, 2022 include Employer Contribution - Local.
[2] Reflects the State's planned appropriation of 100% of the Statutory contribution

The information above is based on the final actuarial valuation reports for the given years. The amounts do not reflect differences between the discounted State appropriations receivable and the actual State contribution amounts that became known after the issuance of the reports.

APPENDIX D – HISTORICAL DATA AND REQUIRED EXHIBITS

In accordance with the Government Finance Officers Association (GFOA) and their recommended checklist for Annual Comprehensive Financial Reports, we prepared the following schedules for the Fund. The GFOA checklist uses the term Actuarial Accrued Liability, which is the same as the Actuarial Liability used elsewhere in this report.

Table D-3
Schedule Retirees and Beneficiaries Added to and Removed from Rolls[1]

Valuation	Added to Rolls		Removed from Rolls		Rolls at End of Year		Average	% Increase/ (Decrease) in
Date July 1,	Number	Annual Allowance	Number	Annual Allowance	Number	Annual Allowance	Annual Allowance	Average Annual Allowance
2023	0	$ 0	5	$ 106,802	19	$ 300,480	$ 15,815	(6.81%)
2022	0	0	9	216,861	24	407,282	16,970	(10.27%)
2021	0	0	10	79,329	33	624,143	18,913	151.34%
2020	0	0	9	63,449	43	323,589	7,525	1.10%
2019	0	0	10	57,040	52	387,038	7,443	3.91%
2018	0	0	15	96,452	62	444,078	7,163	2.04%
2017	0	0	18	117,408	77	540,530	7,020	1.36%
2016	0	0	29	164,935	95	657,938	6,926	4.37%
2015	0	0	25	210,952	124	822,873	6,636	(4.35%)
2014	0	0	36	268,424	149	1,033,825	6,938	(1.43%)

[1] Annual allowances do not include cost-of-living adjustments prior to July 1, 2021 valuation

Table D-4
Schedule of Funding Progress

Valuation Date July 1,	Actuarial Value of Assets[1] (a)	Actuarial Accrued Liability[2] (b)	(Surplus)/Unfunded Actuarial Accrued Liability (c) = (b) - (a)	Funded Ratio (a) / (b)	Covered Payroll (d)	(Surplus)/Unfunded Actuarial Accrued Liability as % of Covered Payroll (c) / (d)
2023	$ 2,172,278	$ 1,563,812	$ (608,466)	138.91%	$ 0	N/A
2022	2,748,796	1,916,246	(832,550)	143.45%	0	N/A
2021	2,260,738	2,845,637	584,899	79.45%	0	N/A
2020	1,295,217	1,369,932	74,715	94.55%	0	N/A
2019	1,387,550	1,628,242	240,692	85.22%	0	N/A
2018	2,313,665	2,186,581	(127,084)	105.81%	0	N/A
2017	2,721,368	2,674,728	(46,640)	101.74%	0	N/A
2016	3,017,928	3,336,743	318,815	90.45%	0	N/A
2015	3,340,908	4,208,241	867,333	79.39%	0	N/A
2014	4,366,457	4,848,499	482,042	90.06%	0	N/A

[1] Includes receivable amounts. Values from valuations prior to July 1, 2021 do not include assets associated with cost-of-living adjustments
[2] Values from valuations prior to July 1, 2021 do not include liabilities associated with cost-of-living adjustments

APPENDIX D – HISTORICAL DATA AND REQUIRED EXHIBITS

Table D-5
Schedule of Funded Liabilities by Type (Solvency Test)

Valuation Date July 1,	Actuarial Accrued Liability for: Contributing & Non-Contributing Active Member Contributions (1)	Retirees, Beneficiaries & Deferred Vesteds[1] (2)	Contributing & Non-Contributing Active Member Benefits Financed by Employer (3)	Actuarial Value of Assets[2]	Portion of Actuarial Accrued Liabilities Covered by Actuarial Value of Assets (1)	(2)	(3)
2023	$ 0	$ 1,563,812	$ 0	$ 2,172,278	N/A	100.00%	N/A
2022	0	1,916,246	0	2,748,796	N/A	100.00%	N/A
2021	0	2,845,637	0	2,260,738	N/A	79.45%	N/A
2020	0	1,369,932	0	1,295,217	N/A	94.55%	N/A
2019	0	1,628,242	0	1,387,550	N/A	85.22%	N/A
2018	0	2,186,581	0	2,313,665	N/A	100.00%	N/A
2017	0	2,674,728	0	2,721,368	N/A	100.00%	N/A
2016	0	3,336,743	0	3,017,928	N/A	90.45%	N/A
2015	0	4,208,241	0	3,340,908	N/A	79.39%	N/A
2014	0	4,848,499	0	4,366,457	N/A	90.06%	N/A

[1]Values from valuations prior to July 1, 2021 do not include liabilities associated with cost-of-living adjustments
[2]Includes receivable amounts. Values from valuations prior to July 1, 2021 do not include assets associated with cost-of-living adjustments

Table D-6
Analysis of Financial Experience
Change in Unfunded Actuarial Accrued Liability

Valuation Date July 1,	Actuarial Value Of Assets Investment (Gain)/Loss	Actuarial Accrued Liability (Gain)/Loss	Assumption & Method Changes	Plan Changes	Contributions[1]	Change in Unfunded Actuarial Accrued Liability
2023	$ (19,676)	$ (59,118)	$ 0	$ 0	$ 302,878	$ 224,084
2022	39,018	(474,624)	(33,532)	0	(948,311)	(1,417,449)
2021	40,512	(121,005)	667,664	0	(76,987)	510,184
2020	10,163	61,238	0	0	(237,378)	(165,977)
2019	113,583	(31,761)	289,436	0	(3,482)	367,776
2018	137,551	(63,930)	10,670	0	(164,735)	(80,444)
2017	164,069	(154,174)	0	0	(375,350)	(365,455)
2016	194,017	(264,949)	0	0	(477,586)	(548,518)
2015	228,240	(201,179)	348,589	0	9,641	385,291
2014	265,707	(314,561)	0	0	874,451	825,597

[1]Change due to contributions (greater)/less than normal cost plus interest on the Unfunded Actuarial Accrued Liability.

APPENDIX E – GLOSSARY OF TERMS

1. **Actuarial Assumptions**

   Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disability, and retirement; changes in compensation; inflation; rates of investment earnings, and asset appreciation or depreciation; and other relevant items.

2. **Actuarial Cost Method**

   A procedure for determining the Actuarial Present Value of pension plan benefits and expenses and for developing an allocation of such value to each year of service, usually in the form of a Normal Cost and an Actuarial Liability.

3. **Actuarial Gain/(Loss)**

   A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions during the period between two Actuarial Valuation dates, as determined in accordance with a particular Actuarial Cost Method.

4. **Actuarial Liability**

   The portion of the Actuarial Present Value of Projected Benefits which will not be paid by future Normal Costs. It represents the value of the past Normal Costs with interest to the valuation date.

5. **Actuarial Present Value (Present Value)**

   The value as of a given date of a future amount or series of payments. The Actuarial Present Value discounts the payments to the given date at the assumed investment return and includes the probability of the payment being made. As a simple example: assume you owe $100 to a friend one year from now. Also, assume there is a 1% probability of your friend dying over the next year, in which case you won't be obligated to pay him. If the assumed investment return is 10%, the actuarial present value is:

Amount		Probability of Payment		1/(1+Investment Return)		
$100	x	(1 - .01)	x	1/(1+.1)	=	$90

6. **Actuarial Valuation**

   The determination, as of a specified date, of the Normal Cost, Actuarial Liability, Actuarial Value of Assets, and related Actuarial Present Values for a pension plan.

7. **Actuarial Value of Assets**

   The value of cash, investments and other property belonging to a pension plan as used by the actuary for the purpose of an Actuarial Valuation. The purpose of an Actuarial Value of Assets is to smooth out fluctuations in market values. This way long-term costs are not distorted by short-term fluctuations in the market.

APPENDIX E – GLOSSARY OF TERMS

8. Actuarially Equivalent

Of equal Actuarial Present Value, determined as of a given date with each value based on the same set of Actuarial Assumptions.

9. Amortization Payment

The portion of the pension plan contribution which is designed to pay interest and principal on the Unfunded Actuarial Liability in order to pay for that liability in a given number of years.

10. Funded Ratio

The ratio of the Actuarial Value of Assets to the Actuarial Liabilities.

11. Investment Return Assumption

The assumed interest rate used for projecting dollar related values in the future.

12. Mortality Table

A set of percentages which estimate the probability of death at a particular point in time. Typically, the rates are annual and based on age and sex.

13. Normal 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.

14. Projected Benefits

Those pension plan benefit amounts which are expected to be paid in the future under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age and increases in future compensation and service credits.

15. Projected Unit Credit Cost Method

A method under which the Actuarial Liability is calculated as the Actuarial Present Value of the Projected Benefits allocated to periods prior to the valuation year.

16. Unfunded Actuarial Liability

The excess of the Actuarial Liability over the Actuarial Value of Assets.