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May 15, 2024

Mr. John Herrington, Director
State of Connecticut
Office of the State Comptroller
Retirement Services Division
55 Elm Street
Hartford, CT 06106

Dear John:

Enclosed is the "Connecticut Probate Judges and Employees Retirement System Report of the Actuary on the Valuation Prepared as of December 31, 2023".

The valuation indicates that employer contributions of $3,176,504 for the fiscal year ending June 30, 2025 is sufficient to support the benefits of the System. Please note that the Commission has adopted a funding policy, whereby, the actuarially determined employer contribution cannot be less than the employer normal cost.

Please let us know if there are any questions concerning the report.

Sincerely yours,

John J. Garrett, ASA, FCA, MAAA
Principal and Consulting Actuary

Edward J. Koebel, EA, FCA, MAAA
Chief Executive Officer

JJG/EJK

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CONNECTICUT PROBATE JUDGES AND EMPLOYEES RETIREMENT SYSTEM

REPORT OF THE ACTUARY ON THE VALUATION PREPARED AS OF DECEMBER 31, 2023

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May 15, 2024

State of Connecticut
State Employees Retirement Commission
55 Elm Street
Hartford, CT 06106

Members of the Commission:

Connecticut General Statutes Title 45a, Chapter 801, Part III governs the operation of the Connecticut Probate Judges and Employees Retirement System. The actuary makes periodic valuations of the contingent assets and liabilities of the Retirement System at the direction of the Commission. We have submitted the report giving the results of the actuarial valuation of the Retirement System prepared as of December 31, 2023. The report indicates that an actuarially determined employer contribution of $3,176,504 for the fiscal year ending June 30, 2025 is sufficient to support the benefits of the System.

In preparing the valuation, the actuary relied on data provided by the Comptroller's Office. While not verifying data at the source, the actuary performed tests for consistency and reasonableness. Please note that the Commission has adopted a funding policy, whereby, the actuarially determined employer contribution cannot be less than the employer normal cost.

The System is funded on an actuarial reserve basis. The actuarial assumptions recommended by the actuary and adopted by the Commission are in the aggregate reasonably related to the experience under the System and to reasonable expectations of anticipated experience under the System. The funding objective of the plan is that contribution over time will remain level as a percent of payroll. The valuation method used is the entry age normal method. Gains and losses are reflected in the unfunded actuarial accrued liability which is being amortized as a level dollar amount within a 13-year period as of December 31, 2023.

This is to certify that the valuation was prepared in accordance with principles of practice prescribed by the Actuarial Standards Board, and that the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the retirement system and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the System.

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In order to prepare the results in this report, we have utilized actuarial models that were developed to measure liabilities and develop actuarial costs. These models include tools that we have produced and tested, along with commercially available valuation software that we have reviewed to confirm the appropriateness and accuracy of the output. In utilizing these models, we develop and use input parameters and assumptions about future contingent events along with recognized actuarial approaches to develop the needed results.

Future actuarial 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 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. Since the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not presented herein.

The undersigned meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Sincerely yours,

John J. Garrett, ASA, FCA, MAAA
Principal and Consulting Actuary

Edward J. Koebel, EA, FCA, MAAA
Chief Executive Officer

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Section I – Summary of Principal Results

CONNECTICUT PROBATE JUDGES AND EMPLOYEES RETIREMENT SYSTEM
REPORT OF THE ACTUARY
ON THE VALUATION
PREPARED AS OF DECEMBER 31, 2023

1. For convenience of reference, the principal results of the current and preceding valuations are summarized below:

Valuation Date	December 31, 2023	December 31, 2022
Discount Rate	**6.90%**	**6.90%**
Active members:		
Number	317	320
Annual compensation	$ 21,743,392	$ 21,714,412
Retired members and beneficiaries:		
Number	389	377
Annual allowances	$ 7,334,943	$ 6,654,964
Deferred Vested Members:		
Number	28	24
Annual allowances	$ 429,662	$ 377,815
Assets:		
Market Value	$ 135,902,876	$ 124,829,812
Actuarial Value	140,948,214	136,936,194
Unfunded actuarial accrued liability (UAAL)	$ (1,594,808)	$ (1,083,757)
Amortization period (years)	13	14
Funded Ratio	101.1%	100.8%
For Fiscal Year Ending	**June 30, 2025**	**June 30, 2024**
Actuarially Determined Employer Contribution (ADEC):		
Normal Cost	$ 3,176,504	$ 3,075,943
Accrued liability	(189,740)	(123,180)
Total (not less than normal cost)	$ 3,176,504	$ 3,075,943

Section I – Summary of Principal Results

2. The results of the valuation are given in Schedule A.

3. Comments on the valuation results are given in Section IV, the actuarially determined employer contribution is given in Section V, and comments on the experience and actuarial gains and losses during the valuation year are given in Section VII.

4. Schedule B of this report presents the development of the actuarial value of assets.

5. Schedule D details the actuarial assumptions and methods employed. There have been no changes since the previous valuation.

6. Schedule F gives a summary of the benefit and contribution provisions of the plan. There have been no changes since the previous valuation.

7. The table on the following page provides a history of some pertinent figures.

Connecticut Probate Judges and Employees Retirement System

Comparative Schedule

Valuation Date December 31	Active Members				Retired Lives				Valuation Results ($ thousands)		
	Number	Payroll ($ in thousands)	Average Salary	% increase from previous valuation	Number	Active/ Retired Ratio	Annual Benefits ($ in thousands)	Benefits as % of Payroll	Accrued Liability	Valuation Assets	UAAL
2018	329	$18,211	$55,354	1.5%	379	0.9	$5,940	32.6%	$118,509	$103,163	$15,346
2019	331	18,974	57,323	3.6	377	0.9	5,899	31.1	119,988	114,238	5,750
2020	327	19,967	61,061	6.5	363	0.9	5,789	29.0	123,595	126,160	(2,565)
2021#	323	20,453	63,323	3.7	370	0.9	6,277	30.7	127,849	134,648	(6,799)
2022	320	21,714	67,858	7.2	377	0.8	6,655	30.6	135,852	136,936	(1,084)
2023	317	21,743	68,591	1.1	389	0.8	7,335	33.7	139,353	140,948	(1,595)

Represents assumption change

Section II – Membership

Data regarding the membership of the System for use as a basis for the valuation were furnished by the Comptroller's office. The following tables summarize the membership of the Retirement System as of December 31, 2023 and December 31, 2022 upon which the valuation was based. Detailed tabulations of the data are given in Schedule G.

Active Members as of December 31, 2023

			Group Averages		
Group	**Number**	**Payroll**	**Salary**	**Age**	**Service**
Judges	54	$ 7,067,133	$ 130,873	57.1	10.0
Employees	263	14,676,259	55,803	51.2	11.1
Total	317	$ 21,743,392	$ 68,591	52.2	10.9

Of the 317 active members, 141 are vested and 176 are non-vested.

Active Members as of December 31, 2022

			Group Averages		
Group	**Number**	**Payroll**	**Salary**	**Age**	**Service**
Judges	51	$ 6,615,270	$ 129,711	59.3	13.7
Employees	269	15,099,142	56,131	50.6	10.8
Total	320	$ 21,714,412	$ 67,858	52.0	11.3

Of the 320 active members, 148 are vested and 172 are non-vested.

Section II – Membership

Retired Lives as of December 31, 2023

Type of Benefit Payment	No.	Annual Benefits	Group Averages Benefit	Group Averages Age
Retirement	356	$ 6,926,013	$ 19,455	75.2
Survivor	33	408,930	12,392	80.2
Total	389	$ 7,334,943	$ 18,856	75.6

This valuation also includes 28 deferred vested members with estimated annual benefits of $429,662 and 125 non-vested inactive members with employee contribution account balances totaling $112,255.

Retired Lives as of December 31, 2022

Type of Benefit Payment	No.	Annual Benefits	Group Averages Benefit	Group Averages Age
Retirement	344	$ 6,247,104	$ 18,160	74.9
Survivor	33	407,860	12,359	80.4
Total	377	$ 6,654,964	$ 17,652	75.3

This valuation also includes 24 deferred vested members with estimated annual benefits of $377,815 and 97 non-vested inactive members with employee contribution account balances totaling $98,031.

Section III – Assets

1. As of December 31, 2023, the total market value of assets amounted to $135,902,876 as reported by the Comptroller's Office. The actuarial value of assets used for the current valuation was $140,948,214. Schedule B shows the development of the actuarial value of assets as of December 31, 2023.

2. Schedule C shows receipts and disbursements of the System for the two years preceding the valuation date and a reconciliation of the fund balances at market value.

Section IV – Comments on Valuation

1. Schedule A of this report outlines the results of the valuation of the Retirement System as of December 31, 2023. The valuation was prepared in accordance with the actuarial assumptions and methods set forth in Schedule D and the actuarial cost method which is described in Schedule E.

2. The valuation shows that the System has a total actuarial accrued liability of $139,353,406, of which $82,646,757 is for the benefits payable on account of present retired members, beneficiaries of deceased members, and members entitled to deferred vested benefits, and $56,706,649 is for the benefits expected to be payable on account of present active members, based on service to the valuation date. Against these liabilities, the System has total present assets for valuation purposes of $140,948,214 as of December 31, 2023. When this amount is deducted from the actuarial accrued liability of $139,353,406, there remains $(1,594,808) as the unfunded actuarial accrued liability.

3. The employer's contributions to the System consist of normal contributions and accrued liability contributions. The normal cost represents the ultimate cost of the benefits, and the accrued liability contribution is an addition due to the amortization of the unfunded actuarial accrued liability. The valuation indicates that an annual employer normal contribution of $3,176,504 is required to provide the currently accruing benefits of the System.

4. An accrued liability contribution/(credit) of $(189,740) is to be made toward amortizing the unfunded actuarial accrued liability. Annual accrued liability costs at this amount will amortize the unfunded actuarial accrued liability within 13 years from the valuation date. However, please note that the Commission has adopted a revised funding policy, whereby, the actuarially determined employer contribution cannot be less than the employer normal cost.

Section V – Contributions Payable by Employers

The following table shows the amount of contribution payable by the employer for the 2024/2025 and 2023/2024 fiscal years.

	2024 / 2025	2023 / 2024
Contribution for	**Contribution Amount**	**Contribution Amount**
Normal Cost:		
Service retirement benefits	$3,267,456	$3,166,223
Disability benefits	143,458	150,363
Survivor benefits	7,707	7,783
Total	$3,418,621	$3,324,369
Less Member Contributions:	242,117	248,426
Employer Normal Cost	$3,176,504	$3,075,943
Unfunded Actuarial Accrued Liabilities (13 and 14 year level dollar amortization)	$(189,740)	$(123,180)
Total (not less than employer normal cost)	$3,176,504	$3,075,943

Section V – Contributions Payable by Employers

The following table shows the estimated contribution payable by the employer for the next fiscal year following the valuation date. These results assume a 6.90% investment return on actuarial value of assets for the year following the valuation date, and 3.00% annual growth in the compensation of active members.

Estimated Contribution for	2025 / 2026
Employer Normal Cost	$3,271,800
Unfunded Actuarial Accrued Liabilities	$(22,253)
Total (not less than Employer Normal Cost)	$3,271,800

As can be seen in the table above, the employer contribution is expected to increase slightly in the next fiscal year. However, it is estimated that the funded ratio will remain over 100% for the December 31, 2024 valuation. Of course, demographic changes or higher/lower than expected investment returns could possibly alter this trend.

Section VI – Accounting Information

1. The information required under Governmental Accounting Standards Board (GASB) will be issued in separate reports. The following is a distribution of the number of employees by type of membership:

NUMBER OF ACTIVE AND RETIRED MEMBERS
AS OF DECEMBER 31, 2023 AND DECEMBER 31, 2022

GROUP	2023	2022
Retirees and beneficiaries currently receiving benefits	389	377
Terminated employees entitled to benefits but not yet receiving benefits	153	121
Active plan members	317	320
Total	859	818

2. Another such item is the schedule of funding progress as shown below.

SCHEDULE OF FUNDING PROGRESS
(Dollar amounts in thousands)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b – a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b – a) / c)
12/31/2018	$103,163	$118,509	$15,346	87.1%	$18,211	84.3%
12/31/2019	114,238	119,988	5,750	95.2	18,974	30.3
12/31/2020	126,160	123,595	(2,565)	102.1	19,967	(12.8)
12/31/2021#	134,648	127,849	(6,799)	105.3	20,453	(33.2)
12/31/2022	136,936	135,852	(1,084)	100.8	21,714	(5.0)
12/31/2023	140,948	139,353	(1,595)	101.1	21,743	(7.3)

Reflects a change in actuarial assumptions

Section VI – Accounting Information

3. The following shows the schedule of employer contributions (all dollar amounts are in thousands).

Fiscal Year Ending June 30	Valuation Date Ending December 31	Actuarially Determined Employer Contribution	Percentage Contributed
2021	2019	$3,468,185	100%
2022	2020	$3,011,297	100%
2023	2021	$2,929,187	100%
2024	2022	$3,075,943	TBD
2025	2023	$3,176,504	TBD

4. The information presented in the required supplementary schedules was determined as part of the actuarial valuation at December 31, 2023. Additional information as of the latest actuarial valuation follows.

Valuation date	12/31/2023
Actuarial cost method	Entry Age Normal
Amortization method	Level dollar, closed
Remaining amortization period	13 years
Asset valuation method	Expected actuarial value adjusted 20% toward actual market value
Actuarial assumptions:	
Investment rate of return*	6.90%
Projected salary increases*	3.75%
Cost-of-living adjustments	2.25%
Social Security Wage Base	3.00%
*Includes inflation at	2.50%

Section VII – Experience

Actual experience will never (except by coincidence) coincide exactly with assumed experience. It is assumed that gains and losses will be in balance over a period of years, but sizable year to year fluctuations are common. Detail on the derivation of the experience gain/(loss) for the year ended December 31, 2023 is shown below.

		$ Thousands
(1)	UAAL* as of December 31, 2022	$ (1,083.8)
(2)	Total normal cost from last valuation	3,324.4
(3)	Total actual contributions for 2023	3,262.0
(4)	Interest accrual: {[(1) + (2)] x .0690} - [(3) x .033925]	43.9
(5)	Expected UAAL as of December 31, 2023: (1) + (2) – (3) + (4)	$ (977.5)
(6)	Change due to plan amendments	0.0
(7)	Change due to actuarial assumptions or methods	0.0
(8)	Expected UAAL as of December 31, 2023 after changes: (5) + (6) + (7)	$ (977.5)
(9)	Actual UAAL as of December 31, 2023	$ (1,594.8)
(10)	Gain/(loss): (8) – (9)	$ 617.3
(11)	Gain/(loss) as percent of actuarial accrued liabilities at start of year ($135,852)	0.5%

*Unfunded actuarial accrued liability.

Valuation Date December 31	Actuarial Gain/(Loss) as a % of Beginning Accrued Liabilities
2019	3.3%
2020	2.5
2021	1.7
2022	(4.7)
2023	0.5

Section VIII – Risk Assessment

Overview

Actuarial Standards of Practice (ASOP) No. 51, issued by the Actuarial Standards Board, provides guidance on assessing and disclosing risks related to pension plan funding. This guidance is binding on all credentialed actuaries practicing in the United States. This standard was issued as final in September 2017 with application to measurement dates on or after November 1, 2018.

The term “risk” frequently has a negative connotation, but from an actuarial perspective, it may be thought of as simply the fact that what actually happens in the real world will not always match what was expected, based on actuarial assumptions. Of course, when actual experience is better than expected, the favorable risk is easily absorbed. The risk of unfavorable experience will likely be unpleasant, and so there is an understandable focus on aspects of risk that are negative.

Risk usually can be reduced or eliminated at some cost. Consumers, for example, buy auto and home insurance to reduce the risk of accidents or catastrophes. Another way to express this concept, however, is that there is generally some reward for assuming risk. Thus, retirement plans invest not just in US Treasury bonds which have almost no risk, but also in equities which are considerably riskier – because they have an expected reward of a higher return that justifies the risk.

Under ASOP 51, the actuary is called on to identify the significant risks to the pension plan and provide information to help those sponsoring and administering the plan understand the implications of these risks. In this section, we identify some of the key risks for the System and provide information to help interested parties better understand these risks.

Investment Risk

The investment return on assets is the most obvious risk – and usually the largest risk – to funding a pension plan. To illustrate the magnitude of this risk, please review the following chart showing the Asset Volatility Ratio (AVR), defined as the market value of assets divided by covered payroll.

($ in thousands)

Valuation Date December 31	Market Value of Assets	Covered Payroll	Asset Volatility Ratio
2021	$143,563	$20,453	7.02
2022	124,830	21,714	5.75
2023	135,903	21,743	6.25

The asset volatility ratio is especially useful to compare across plans or through time. It is also frequently useful to consider how the AVR translates into changes in the Required Contribution Rate (actuarially determined employer contribution rate). For example, the following table demonstrates that with an AVR of 6.00, if the market value return is 10% below assumed, or -3.10% for the System, there will be an increase in the Required Contribution Rate of 1.43% payroll in the first year. Without asset smoothing or without returns above the expected return in the next four years, the impact on the Required Contribution Rate would be 7.14% of payroll. A higher AVR would produce more volatility in the Required Contribution Rate.

AVR	Unsmoothed Amortization	Smoothed Amortization
5.00	5.95%	1.19%
6.00	7.14%	1.43%
7.00	8.33%	1.67%

Section VIII – Risk Assessment

Sensitivity Measures

Valuations are generally performed with a single set of assumptions that reflects the best estimate of future conditions, in the opinion of the actuary and typically the governing board. Note that under actuarial standards of practice, the set of economic assumptions used for funding must be consistent. To enhance the understanding of the importance of an assumption, a sensitivity test can be performed where the valuation results are recalculated using a different assumption or set of assumptions.

The following tables contains the key measures for the System using the valuation assumption for investment return of 6.90%, along with the results if the assumption were 5.90% or 7.90%. In this analysis, only the investment return assumption is changed. Consequently, there may be inconsistencies between the investment return and other economic assumptions such as inflation or payroll increases. In addition, simply because the valuation results under alternative assumptions are shown here, it should not be implied that CMC believes that either assumption (5.90% or 7.90%) would comply with actuarial standards of practice.

($ in thousands)

As of December 31, 2023	-1% Discount Rate (5.90%)	Current Discount Rate (6.90%)	+1 Discount Rate (7.90%)
Accrued Liability	$155,182	$139,353	$125,988
Unfunded Liability	$14,233	$(1,595)	$(14,959)
Funded Ratio (AVA)	90.8%	101.1%	111.9%
ADEC Amount*	$5,604	$3,177	$2,534

* The ADEC cannot be less than the employer normal cost.

Section VIII – Risk Assessment

Mortality Risk

The mortality assumption is a significant assumption for valuation results, second only to the investment assumption in most situations. The System's mortality assumption utilizes a mortality table (with separate rates for males and females, as well as different rates by status) and a projection scale for how the mortality table is expected to improve through time.

The future, however, is not known, and actual mortality improvements may occur at a faster rate than expected, or at a slower rate than expected (or even decline). Although changes in mortality will affect the benefits paid, this assumption is carefully studied during the regular experience studies that the System conducts so that incremental changes can be made to smoothly reflect unfolding experience.

Contribution Risk

The System is primarily funded by member and employer contributions to the trust fund, together with the earnings on those accumulated contributions. Each year in the valuation, the Required Contribution Rate is determined, based on the System's funding policy. This rate is the sum of the rates for the normal cost for the plan, the amortization of the UAAL, and the administrative expenses. Since the System is obligated to make 100% of the Required Contribution Rate by statute, there is no contribution risk.

Section VIII – Risk Assessment

Liquidation Risk

Under the revised Actuarial Standards of Practice (ASOP) No. 4 effective for valuations after February 15, 2023, we must now include a low-default-risk obligation measure of the System's liability in our funding valuation report. This is an informational disclosure as described below and would not be appropriate for assessing the funding progress or health of this plan.

This measure uses the unit credit cost method and reflects all the assumptions and provisions of the funding valuation except that the discount rate is derived from considering low-default-risk fixed income securities. We considered the FTSE Pension Discount Curve based on market bond rates published by the Society of Actuaries as of December 31, 2023 and with the 30-year spot rate used for all durations beyond 30. Using these assumptions, we calculate a liability of approximately $157.8 million.

This amount approximates the termination liability if the plan (or all covered employment) ended on the valuation date and all of the accrued benefits had to be paid with cash-flow matched bonds. This assurance of funded status and benefit security is typically more relevant for corporate plans than for governmental plans since governments rarely have the need or option to completely terminate a plan.

Schedule A – Results of Valuation

PREPARED AS OF DECEMBER 31, 2023 AND DECEMBER 31, 2022

	DECEMBER 31, 2023	DECEMBER 31, 2022
1. ACTUARIAL ACCRUED LIABILITY		
Present value of prospective benefits payable in respect of:		
(a) Present active members		
- Service retirement benefits	$55,137,993	$59,643,153
- Disability retirement benefits	1,462,561	1,552,104
- Death and survivor benefits	106,095	115,547
- Total	$56,706,649	$61,310,804
(b) Present inactive members and members entitled to deferred vested benefits:	$4,454,167	$3,902,445
(c) Present annuitants and beneficiaries	$78,192,590	$70,639,188
(d) Total actuarial accrued liability [1(a) + 1(b) + 1(c)]	$139,353,406	$135,852,437
2. ACTUARIAL VALUE OF ASSETS	$140,948,214	$136,936,194
3. UNFUNDED ACTUARIAL ACCRUED LIABILITY [1(d) – 2]	$(1,594,808)	$(1,083,757)

Schedule B – Development of Actuarial Value of Assets

For the Year Ending December 31			2023	2022
(1)	Actuarial Value Beginning of Year*		$ 136,936,194	$ 134,648,276
(2)	Market Value End of Year**		$ 135,902,876	$ 124,829,812
(3)	Market Value Beginning of Year		$ 124,829,812	$ 143,562,870
(4)	Cash Flow			
	(a)	Contributions**	$ 3,261,972	$ 3,144,803
	(b)	Disbursements	(7,297,973)	(6,983,980)
	(c)	Net: (4)(a) + (4)(b)	$ (4,036,001)	$ (3,839,177)
(5)	Investment Income			
	(a)	Market Total: (2) – (3) – (4)(c)	$ 15,109,065	$ (14,893,881)
	(b)	Assumed Rate	6.90%	6.90%
	(c)	Amount for Immediate Recognition: [(1) x (5)(b)] + [(4)(c) less Receivable**] x (5)(b) x 0.5	$ 9,309,355	$ 9,158,126
(6)	Expected Actuarial Value End of Year: (1) + [(4)(c) less Receivable***] + (5)(c)		$ 142,209,548	$ 139,962,790
(7)	Phased-In Recognition of Investment Income			
	(a)	Difference between Market & Expected Actuarial Value: (2) – (6)	$ (6,306,672)	$ (15,132,978)
	(b)	20% of Difference: 0.2 x (7)(a)	$ (1,261,334)	$ (3,026,596)
(8)	Preliminary Actuarial Value End of Year: (6) + (7)(b)		$ 140,948,214	$ 136,936,194
(9)	Final Actuarial Value End of Year Using 20% Corridor: Greater of [(8) and .8 x (2)], but no more than 1.2 x (2)		$ 140,948,214	$ 136,936,194
(10)	Difference Between Market & Actuarial Values: (2) – (9)		$ (5,045,338)	$ (12,106,382)
(11)	Rate of Return on Actuarial Value		5.97%	4.62%

* Before corridor constraints, if applicable and adjusted.
** Includes additional receivables of $4,435 in 2022.
*** Additional receivables of $4,435 in 2022.

Schedule C – Summary of Receipts and Disbursements

MARKET VALUE

	YEAR ENDING	
Receipts for the Year	December 31, 2023 ($1,000's)	December 31, 2022 ($1,000's)
Contributions:		
Members	$ 259	$ 255
Employer	3,003	2,885
Subtotal	$ 3,262	$ 3,140
Investment Earnings	15,109	(14,893)
Other	0	4
TOTAL	$ 18,371	$ (11,749)
Disbursements for the Year		
Benefit Payments	$ 7,226	$ 6,694
Refunds to Members	72	290
Health Services Cost	0	0
Other	0	0
TOTAL	$ 7,298	$ 6,984
Excess of Receipts over Disbursements	$ 11,073	$ (18,733)
Reconciliation of Asset Balances		
Asset Balance as of the Beginning of Year	$ 124,830	$ 143,563
Excess of Receipts over Disbursements	11,073	(18,733)
Asset Balance as of the End of Year	$ 135,903	$ 124,830
Estimated Rate of Return	12.30%	(10.52)%

Schedule D – Outline of Actuarial Assumptions and Methods

Adopted or reaffirmed by the Commission for the December 31, 2021 and later valuation based on the experience investigation report for the four-year period ending June 30, 2020 which can be found at on the Office of the State Comptroller - Retirement Services Division website.

VALUATION INTEREST RATE: 6.90% per annum, compounded annually, net of expenses, comprised of a 2.50% price inflation assumption and a 4.40% real return assumption.

SALARY INCREASES: 3.75% per annum, comprised of a 3.00% wage inflation assumption and a 0.75% seniority and promotion assumption.

COST OF LIVING ADJUSTMENTS: 2.25% per annum.

SOCIAL SECURITY WAGE BASE INCREASES: 3.00% per annum.

SEPARATIONS BEFORE SERVICE RETIREMENT: Representative values of the assumed annual rates of separation before service retirement are as follows:

Age	Annual Rates of		
	Withdrawal		Disability
	Employees	Judges	
		Men	
20	5.00%	5.00%	.03%
25	5.00	5.00	.04
30	5.00	2.50	.06
35	5.00	1.25	.08
40	5.00	0.75	.12
45	5.00	0.38	.19
50	5.00	0.00	.31
55	5.00	0.00	.52
60	5.00	0.00	.73
65	5.00	0.00	.00
		Women	
20	7.50%	7.50%	.03%
25	7.50	7.50	.04
30	5.00	3.75	.06
35	5.00	1.88	.08
40	5.00	1.25	.12
45	5.00	0.63	.19
50	5.00	0.00	.31
55	5.00	0.00	.52
60	5.00	0.00	.73
65	5.00	0.00	.00

The Pub-2010 General, Above-Median, Employee Mortality Table with MP-2020 projection scale is used for active mortality.

Schedule D – Outline of Actuarial Assumptions and Methods

RETIREMENT: The assumed annual rates of retirement are shown below.

Age	Annual Rates of Retirement
50 – 61	5%
62	25
63 – 69	20
70 +	100

DEATHS AFTER RETIREMENT: The Pub-2010 General, Above-Median, Healthy Retiree Mortality Table with projection scale MP-2020 is used for the period after retirement and for dependent beneficiaries. Representative values of the assumed base annual rates of mortality are as follows:

Age	Males	Females	Age	Males	Females
40	0.057%	0.033%	65	0.820%	0.595%
45	0.085	0.051	70	1.381	1.032
50	0.267	0.212	75	2.437	1.827
55	0.387	0.275	80	4.391	3.260
60	0.552	0.371	85	7.965	6.019

In our opinion, the projection of the mortality rates with MP-2020 provide a sufficient margin in the assumed rates of mortality to allow for additional improvement in mortality experience. The Pub-2010 General, Disabled Retiree Mortality Table with projection scale MP-2020 is used for the period after disability.

ASSET METHOD: Actuarial Value, as developed in Schedule B. The actuarial value of assets is 20% of any difference between actual and expected investment income (gain/loss) in the valuation year and 20% of any previous years' unrecognized investment gains/losses. In addition, the actuarial value of assets cannot be less than 80% or more than 120% of the market value of assets.

VALUATION METHOD: Entry Age Normal cost method. See Schedule E for a brief description of this method.

SPOUSES: For members who have elected spouse coverage, husbands are assumed to be three years older than their wives.

NON-VESTED INACTIVE MEMBERS: The employee contribution account balances as of the valuation date is used as a liability for these members.

CENSUS DATA: Census data is provided as of December 31, 2023 where the 2023 salary consists of 26 pay periods.

Schedule E – Actuarial Cost Method

The valuation is prepared on the projected benefit basis, which is used to determine the present value of each member's expected benefit payable at retirement, disability, or death. The calculations are based on the member's age, years of service, sex, compensation, expected future salary increases, and an assumed future interest earnings rate (currently 6.90%). The calculations consider the probability of a member's death or termination of employment prior to becoming eligible for a benefit and the probability of the member terminating with a service, disability, or survivor's benefit. The present value of the expected benefits payable to active members is added to the present value of the expected future payments to current benefit recipients to obtain the present value of all expected benefits payable to the present group of members and survivors.

The employer contributions required to support the benefits of PJERS are determined following a level funding approach and consist of a normal contribution and an accrued liability contribution.

The normal contribution is determined using the "entry age normal" method. Under this method, a calculation is made for pension benefits to determine the uniform and constant percentage rate of employer contribution which, if applied to the compensation of the average new member during the entire period of his anticipated covered service, would be required in addition to the contributions of the member to meet the cost of all benefits payable on his behalf.

The unfunded accrued liability is determined by subtracting the current assets and the present value of prospective employer normal contributions and member contributions from the present value of expected benefits to be paid from the PJERS. The accrued liability contribution amortizes the balance of the unfunded accrued liability over a period of years from the valuation date.

Schedule F – Summary of Main System Provisions

AS INTERPRETED FOR VALUATION PURPOSES

The Connecticut Probate Judges and Employees Retirement System (CT PJERS) is a defined benefit pension plan established by the Connecticut General Assembly for the purpose of providing retirement allowances and other benefits for Probate judges and employees of probate courts in Connecticut, and their survivors and other beneficiaries. Special retirement provisions apply to a judge whose probate district is merged with another district and who has not been elected to a term which begins or is subsequent to such consolidation.

Eligibility Requirements	
Judges	All Judges of Probate commencing service before January 1, 2011 (provided one full term is served by age 70). For Judges commencing service on or after January 1, 2011, the hourly requirement is 1,000 hours per year.
Employees	For Employees hired before January 1, 2011, the hourly requirement is 430 hours per year. For Employees hired on or after January 1, 2011, the hourly requirement is 1,000 hours per year.
Credited Service	All periods as a Judge of Probate, Acting Judge of Probate, Employee of any probate court, plus a period of not more than 3 years of service as a member of the General Assembly or in the military.
Final Average Compensation	*Judges* – average annual compensation for the 3 highest paid years of service in the probate court, provided the compensation for any year does not exceed the maximum net income allowed by law. *Employees* – the average annual rate of pay during the employee's 3 highest paid years of employment.
Normal Retirement Benefit	
Eligibility	*Judges* - Age 62 and 10 years of service (age 70 mandatory retirement provided one full term is served). *Employees* - Age 62 and 10 years of service (no additional pension credit after age 70).
Benefit	*Judges and Employees not covered by Social Security* – 2% of Final Average Compensation times years of Credited Service, minimum $360 annually.

Schedule F – Summary of Main System Provisions

Early Retirement Benefit	
Eligibility	*Judges and Employees* - 10 years of creditable service.
Benefit	Accrued benefit actuarially reduced unless separation occurs after age 60 in which case the reduction is .25% for each month that separation precedes age 62.
Disability Retirement Benefit	
Eligibility	10 years of creditable service.
Benefit	Calculated as a normal retirement benefit
Deferred Vested Retirement Benefit	
Eligibility	10 years of creditable service.
Benefit	Accrued benefit deferred to age 62.
Pre-Retirement Spouse's Benefit	
Eligibility	10 years of service and married for at least one year.
Benefit	Average of 50% of life annuity benefit and 50% of joint and 50% survivor benefit which member would have received had he retired on the date of his death.
Termination Benefit	
Eligibility	Termination with less than 10 years of creditable service.
Benefit	Return of the member's accumulated contributions with interest (no interest paid if the termination is due to death).
Payment Options	Straight life annuity; 50% or 100% joint and last survivor annuity; 10 or 20 year certain and life annuity.
Cost of Living Adjustments	The COLA percentage is based on the average monthly change in the nationwide Consumer Price Index and it is applied annually on July 1 to the previous July 1 benefit amount. The COLA is limited to 3% and no adjustment is made if the change in the CPI is less than 1%.

Schedule F – Summary of Main System Provisions

Contributions

By Members	*Judges and Employees not covered by Social Security* – 3.75% of Compensation *Judges and Employees covered by Social Security* – 1% of Compensation up to the current Social Security Wage Base plus 3.75% of Compensation above the current Social Security Wage Base.
By Employers	Employer contributions are actuarially determined and approved and certified by the Commission. The minimum employer contribution is the employer normal cost.

Schedule G – Tables of Membership Data

The Number and Average Annual Compensation of Active Judges
By Age and Service as of December 31, 2023

Age	Years of Service									Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & Up	
Under 25										0
25 to 29	1									1
30 to 34										0
35 to 39	1		1							2
40 to 44	2	3								5
45 to 49	1	1	3	1						6
50 to 54	3		1	1						5
55 to 59	2	3	2	1		2	1			11
60 to 64	3		2	2	1	4		1		13
65 to 69	1		3	4	1		1		1	11
70 & Up										0
Total	14	7	12	9	2	6	2	1	1	54

Average Age: 57.1
Average Service: 10.0
Average Salary: $130,873

Schedule G – Tables of Membership Data

The Number and Average Annual Compensation of Active Employees
By Age and Service as of December 31, 2023

Age	Years of Service									Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & Up	
Under 25		2								2
25 to 29	6	8	2							16
30 to 34	2	12	4	3						21
35 to 39	2	5	9	3	3					22
40 to 44	4	4	2	5	5	3				23
45 to 49	1	10	3	3	3	1	2			23
50 to 54	4	5	6	5	4	6	3			33
55 to 59	5	12	7	5	4	1	2	2	1	39
60 to 64	2	2	12	6	15	10	1	3	4	55
65 to 69	2	4	6	2	10	2	1	2		29
70 & Up										
Total	28	64	51	32	44	23	9	7	5	263

Average Age: 51.2
Average Service: 11.1
Average Salary: $55,803

Schedule G – Tables of Membership Data

NUMBER OF RETIRED MEMBERS AND THEIR BENEFITS BY AGE

Age	Number	Total Annual Benefits	Average Annual Benefits
Under 50	8	$ 33,679	$ 4,210
50 - 54	2	19,811	9,906
55 - 59	11	86,523	7,866
60 - 64	31	597,470	19,273
65 - 69	46	901,636	19,601
70 - 74	73	1,701,329	23,306
75 - 79	72	1,649,736	22,913
80 - 84	58	1,134,205	19,555
85 - 89	32	509,112	15,910
90 - 94	16	232,572	14,536
95 & Over	7	59,940	8,563
Total	356	$ 6,926,013	$ 19,455

NUMBER OF BENEFICIARIES AND THEIR BENEFITS BY AGE

Age	Number	Total Annual Benefits	Average Annual Benefits
Under 50	1	$ 4,111	$ 4,111
50 - 54	0	0	0
55 - 59	0	0	0
60 - 64	0	0	0
65 - 69	5	81,885	16,377
70 - 74	3	47,150	15,717
75 - 79	5	103,666	20,733
80 - 84	7	69,000	9,857
85 - 89	4	36,959	9,240
90 - 94	5	35,650	7,130
95 & Over	3	30,509	10,170
Total	33	$ 408,930	$ 12,392

Schedule G – Tables of Membership Data

NUMBER OF DEFERRED VESTED MEMBERS
AND THEIR BENEFITS BY AGE

Age	Number	Total Annual Benefits	Average Annual Benefits
Under 50	8	$ 73,749	$ 9,219
50 - 54	4	36,792	9,198
55 - 59	6	128,906	21,484
60 - 64	2	26,941	13,471
65 - 69	0	0	0
70 - 74	5	141,018	28,204
75 - 79	1	14,920	14,920
80 - 84	2	7,336	3,668
85 - 89	0	0	0
90 - 94	0	0	0
95 & Over	0	0	0
Total	28	$ 429,662	$ 15,345

Schedule H – Analysis of Financial Experience

Gains & Losses in Accrued Liabilities
Resulting from Difference Between
Assumed Experience & Actual Experience
($ Thousands)

Type of Activity	$ Gain (or Loss) For the Period Ending 12/31/2023
Age & Service Retirements. If members retire at older ages, there is a gain. If younger ages, a loss.	$ 504.8
Disability Retirements. If disability claims are less than assumed, there is a gain. If more claims, a loss.	21.8
Death-in Service Benefits. If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	(121.6)
Withdrawal From Employment. If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	902.8
Pay Increases. If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	1,492.5
New Members. Additional unfunded accrued liability will produce a loss.	(310.2)
Investment Income. If there is a greater investment income than assumed, there is a gain. If less income, a loss.	(1,261.3)
Death After Retirement. If retirants live longer than assumed, there is a loss. If not as long, a gain.	(539.1)
Other. Miscellaneous gains and losses resulting from changes in valuation software, data adjustments, timing of financial transactions, etc.	(72.4)
Gain (or Loss) During Year from Financial Experience	$ 617.3
Non-Recurring Items. Adjustments for plan amendments, assumption changes, or method changes.	0.0
Composite Gain (or Loss) During Year	$ 617.3