



**Cavanaugh Macdonald**  
CONSULTING, LLC

*The experience and dedication you deserve*



**CONNECTICUT JUDGES, FAMILY SUPPORT MAGISTRATES, AND  
COMPENSATION COMMISSIONERS RETIREMENT SYSTEM**

**REPORT OF THE ACTUARY ON THE VALUATION  
PREPARED AS OF JUNE 30, 2023**





# Cavanaugh Macdonald

CONSULTING, LLC

*The experience and dedication you deserve*

December 18, 2023

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

Members of the Commission:

Connecticut General Statutes Section 5-155a governs the operation of the Connecticut Judges, Family Support Magistrates, and Compensation Commissioners Retirement System (JFSMCCRS). 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 June 30, 2023.

The purpose of the report is to provide a summary of the funded status of JFSMCCRS as of June 30, 2023 and to recommend actuarially determined contributions rates for the fiscal year ending June 30, 2025. The report indicates that annual employer contributions at the rate of 114.49% of compensation, or \$44,767,241, 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.

The information needed for this System under the new Governmental Accounting Standards Board Statement No. 67 will be provided in a separate report. However, for informational purposes only, we have also provided some accounting information in Section VI of the report.

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 rates 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 accrued liability which is being amortized as a level percent of payroll within a 8-year period. This period is based on the funding policy of JFSMCCRS that amortizes the unfunded accrued liability over a declining period of years, starting with 40 years as of July 1, 1991.



Members of the Commission  
December 18, 2023  
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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.

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 actuarial computations presented in this report are for purposes of determining the recommended funding amounts for the System. Use of these computations for purposes other than meeting these requirements may not be appropriate.

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

Sincerely yours,

A handwritten signature in blue ink, appearing to read 'John J. Garrett'.

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

A handwritten signature in blue ink, appearing to read 'Edward J. Koebel'.

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



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## Section I: Summary of Principal Results

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

Valuation Date	June 30, 2023	June 30, 2022
Active members:		
Number	203	195
Annual compensation	\$39,102,345	\$35,871,544
Retired members and beneficiaries:		
Number	318	319
Annual allowances	\$36,835,555	\$32,694,624
Deferred Vested Members:		
Number	5	7
Annual allowances	\$561,966	\$768,729
Assets:		
Market Value	\$298,216,135	\$276,381,725
Actuarial Value	\$313,464,387	\$297,957,039
Unfunded actuarial accrued liability	\$244,078,748	\$205,296,337
Amortization period (years)	8	9
Funded Ratio based on Actuarial Value of Assets	56.2%	59.2%
Funded Ratio based on Market Value of Assets	53.5%	54.9%
For Fiscal Year Ending	June 30, 2025	June 30, 2024
Actuarially Determined Employer Contribution (ADEC):		
Normal	\$8,833,810	\$7,908,954
Accrued liability	<u>35,933,431</u>	<u>27,342,829</u>
Total	\$44,767,241	\$35,251,783
Actuarially Determined Employer Contribution Rates:		
Normal	22.59%	22.05%
Accrued liability	<u>91.90%</u>	<u>76.22%</u>
Total	114.49%	98.27%





## Section I: Summary of Principal Results

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2. Comments on the valuation results are given in Section IV, comments on the experience and actuarial gains and losses during the valuation year are given in Section VII and the rates of contribution payable by employers are given in Section V.
3. The results of the valuation are given in Schedule A.
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. Since the previous valuation, there have been no changes.
6. Schedule F gives a summary of the benefit and contribution provisions of the plan. Since the previous valuation, there have been no changes.
7. As shown in the Summary of Principal Results, the funded ratio of 56.2% is the ratio of the actuarial value of assets to the accrued liability. The funded ratio is an indication of progress in funding the promised benefits using a long-term, stable funding approach. Since the ratio is less than 100%, there is a need for contributions in addition to the plan's normal cost. The funded ratio based on the market value of assets is also provided for informational purposes.
8. The table on the following page provides a history of some pertinent figures.





## Section I: Summary of Principal Results

### Comparative Schedule

Valuation Date June 30	Active Members				Retired Lives				Valuation Results (\$ thousands)		
	Number	Payroll (\$ thousands)	Average Salary (\$ thousands)	% increase from previous year	Number	Active/Retired Ratio	Annual Benefits (\$ thousands)	Benefits as % of Payroll	Accrued Liability	Valuation Assets	UAAL
2014	212	\$33,386	\$157.5	6.0%	250	0.848	\$22,506	67.4%	\$343,868	\$190,150	\$153,718
2016	204	34,897	171.1	8.6	250	0.816	23,173	66.4	433,603	209,860	223,743
2018	209	34,970	167.3	(2.2)	284	0.736	27,631	79.0	443,087	231,881	211,206
2019	193	34,643	179.5	7.3	301	0.641	28,483	82.2	476,188	245,270	230,918
2020	180	31,495	175.0	(2.5)	304	0.592	30,905	98.1	490,091	256,374	233,717
2021	184	31,438	170.9	(2.3)	303	0.607	31,712	100.9	490,710	281,588	209,122
2022	195	35,872	184.0	7.7	319	0.611	32,695	91.1	503,253	297,957	205,296
2023	203	39,102	192.6	4.7	318	0.638	36,836	94.2	557,543	313,464	244,079





## 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 June 30, 2023 upon which the valuation was based. Detailed tabulations of the data are given in Schedule G.

### Active Members

Group	Number	Payroll	Group Averages			
			Salary	Age*	Benefit Service*	Eligibility Service*
Judges	178	\$34,649,681	\$194,661	57.8	7.7	17.2
Compensation Commissioners	16	\$3,020,755	\$188,797	54.7	7.7	17.4
Family Support Magistrates	9	\$1,431,909	\$159,101	58.3	6.9	21.3
<b>Total</b>	<b>203</b>	<b>\$39,102,345</b>	<b>\$192,622</b>	<b>57.6</b>	<b>7.7</b>	<b>17.4</b>

\*Years

Of the 203 active members, 127 are vested and 76 are non-vested.

### Retired Lives

Type of Benefit Payment	No.	Annual Benefits	Group Averages	
			Benefit	Age*
Retirement and Disability	239	\$31,697,155	\$132,624	76.5
Survivor	79	\$5,138,400	\$65,043	83.0
<b>Total</b>	<b>318</b>	<b>\$36,835,555</b>	<b>\$115,835</b>	<b>78.1</b>

\*Years

This valuation also includes 5 deferred vested members with estimated annual benefits of \$561,966.







## Section III: Assets

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1. As of June 30, 2023, the total market value of assets amounted to \$298,216,135 as reported by the Comptroller's Office. The estimated investment return for the plan year since the last valuation was 8.35%. 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.
2. The actuarial value of assets used for the current valuation was \$313,464,387. The estimated investment return for the plan year on an actuarial value of assets basis was 5.62%, which can be compared to the assumed investment return of 6.90%. Schedule B shows the development of the actuarial value of assets as of June 30, 2023.





## Section IV: Comments on Valuation

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1. Schedule A of this report outlines the results of the valuation of the Retirement System as of June 30, 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 \$557,543,135, of which \$384,084,682 is for the benefits payable on account of present retired members, beneficiaries of deceased members, and inactive members entitled to deferred vested benefits, and \$173,458,453 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 \$313,464,387 as of June 30, 2023. When this amount is deducted from the actuarial accrued liability of \$557,543,135, there remains \$244,078,748 as the unfunded actuarial accrued liability.
3. There was a loss on the unfunded actuarial accrued liability for the fiscal year ending June 30, 2023 of approximately \$14.5 million, which was primarily due to more retirements than expected, higher salary and Cost-of-Living Adjustments higher than expected, and investment experience that was less than expected; offset by a mortality gain due to more deaths than expected. There was also a one-time programming change implemented in this valuation for those judges that receive two retirement checks in one month.
4. The employer's contributions to the System consist of normal cost contributions and accrued liability contributions. The normal cost represents the ultimate cost of the benefits, and the accrued liability contribution is an addition (reduction in case of a surplus) due to the amortization of the unfunded accrued liability. The valuation indicates that annual employer normal contributions at the rate of 22.59% of active members' compensation are required to provide the currently accruing benefits of the System.





## Section IV: Comments on Valuation

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5. Accrued liability contributions of 91.90% of member's compensation are required to be made to amortize the unfunded accrued liability within 8 years from the valuation date as a level percentage of projected payroll. See Schedule I of this report for a projection of the Unfunded Accrued Liability.
  
6. Therefore, the total actuarially determined employer contribution rate is 114.49% of member's compensation for the fiscal year ending June 30, 2025.





## Section V: Contributions Payable by Employer

The following table shows the amount and rate of contribution payable by the employer as determined from the present valuation for the 2024/2025 fiscal year.

Contribution for	Contribution Amount	Contribution Rate
Normal Cost:		
Service retirement benefits	\$9,946,112	25.43%
Disability benefits	749,508	1.92
Survivor benefits	<u>218,435</u>	<u>0.56</u>
Total	\$10,914,055	27.91%
Less Member Contributions:	\$2,080,245	5.32%
Employer Normal Cost	\$8,833,810	22.59%
Unfunded Actuarial Accrued Liabilities (8 year level percent of payroll amortization)	\$35,933,431	91.90%
Total	\$44,767,241	114.49%

Contribution for Fiscal Year 2024-2025	Judges	Compensation Commissioner	Family Support Magistrates	Total
Employer Normal Cost	\$8,081,457	\$576,180	\$176,173	\$8,833,810
Amortization Payment	\$31,903,489	\$2,921,964	\$1,107,978	\$35,933,431
Total	\$39,984,946	\$3,498,144	\$1,284,151	\$44,767,241





## Section V: Contributions Payable by Employer

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The official contribution requirement for the fiscal year ending June 30, 2026 will be determined in the June 30, 2024 valuation. However, we have estimated the contribution requirement for the fiscal year ending June 30, 2026 using standard roll forward techniques from this valuation. These results assume a 6.90% investment return on actuarial value of assets and a 4.00% annual growth in the compensation of active members.

Contribution for	2025/2026	
	As % of Pay	\$
Employer Normal Cost	22.54%	\$9,166,829
Unfunded Actuarial Accrued Liabilities	96.30%	39,160,478
Total	118.84%	\$48,327,307





## Section VI: Accounting Information

The information required under Governmental Accounting Standards Board (GASB) will be issued in separate reports. The following information is provided for informational purposes only.

1. The following is a distribution of the number of employees by type of membership:

### NUMBER OF ACTIVE AND RETIRED MEMBERS AS OF JUNE 30, 2023

GROUP	NUMBER
Retirees and beneficiaries currently receiving benefits	318
Terminated employees entitled to benefits but not yet receiving benefits	5
Active plan members	<u>203</u>
Total	526

2. The schedule of funding progress is 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)
6/30/2018	\$231,881	\$443,087	\$ 211,206	52.3%	\$34,970	604.0%
6/30/2019	245,270	476,189	230,918	51.5	34,643	666.6
6/30/2020	256,374	490,091	233,717	52.3	31,495	742.1
6/30/2021	281,588	490,710	209,122	57.4	31,438	665.2
6/30/2022	297,957	503,253	205,296	59.2	35,872	572.3
6/30/2023	313,464	557,543	244,079	56.2	39,102	624.2





## Section VI: Accounting Information

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

<u>Fiscal Year Ending June 30</u>	<u>Valuation Date Ending June 30</u>	<u>Actuarially Determined Contribution</u>	<u>Actual Contribution</u>	<u>Percentage Contributed</u>
2018	2016	\$25,457,910	\$25,457,910	100%
2019	2016	27,427,480	27,427,480	100%
2020	2018	27,010,989	27,010,985	100%
2021	2019	31,893,463	31,893,464	100%
2022	2020	33,170,039	33,170,039	100%
2023	2021	32,532,792	32,532,792	100%
2024	2022	35,251,783	N/A	N/A
2025	2023	44,767,241	N/A	N/A

4. The information presented in the supplementary schedules was determined as part of the actuarial valuation at June 30, 2023. Additional information as of the latest actuarial valuation follows.

Valuation date	06/30/2023
Actuarial cost method	Entry Age Normal
Amortization method	Level percent of payroll, closed
Remaining amortization period	8 years
Asset Method	Smoothed market with 20% recognition of investment gains and losses
Actuarial assumptions:	
Investment rate of return	6.90%
Projected salary Increases	4.00%
Cost-of-living adjustments	2.25% - 4.00%





## 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 period ended June 30, 2023 is shown below.

	<u>\$ Thousands</u>
(1) UAAL* as of June 30, 2022	205,296.3
(2) Normal cost for 2023 fiscal year	9,810.1
(3) Actual contributions during 2023 fiscal year	34,552.5
(4) Interest accrual: $[(1) + (2)] \times .069 - [(3) \times .0345]$	<u>13,650.3</u>
(5) Expected UAAL as of June 30, 2023: $(1) + (2) - (3) + (4)$	194,204.3
(6) Assumption Changes	0.0
(7) Programming Changes	<u>35,391.2</u>
(8) Expected UAAL as of June 30, 2023: $(5) + (6) + (7)$	229,595.5
(9) Actual UAAL as of June 30, 2023	244,078.7
(10) Gain/(loss): $(8) - (9)$ (See Schedule H)	(14,483.2)
(11) Gain/(loss) as percent of actuarial accrued liabilities as of June 30, 2022 (\$503,253.4)	(2.9)%

\*Unfunded actuarial accrued liability.

Valuation Date June 30	Actuarial Gain/(Loss) as a % of Beginning Accrued Liabilities
2021	3.0%
2022	(1.7)%
2023	(2.9)%







## Section VIII: Risk Assessment

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### **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.





## Section VIII: Risk Assessment

### 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.

Valuation Date June 30	Market Value of Assets	Covered Payroll	Asset Volatility Ratio
2021	\$301,995,049	\$31,438,411	9.61
2022	276,381,725	35,871,544	7.70
2023	298,216,135	39,102,345	7.63

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 8.00, 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 2.36% 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 11.78%. A higher AVR would produce more volatility in the Required Contribution Rate.

AVR	Unsmoothed Amortization Increase due to 10% market loss	Smoothed Amortization Increase
6.0	8.83%	1.77%
7.0	10.31%	2.06%
8.0	11.78%	2.36%
9.0	13.25%	2.65%





## 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.

<b>As of June 30, 2023</b>	<b>-1% Discount Rate (5.90%)</b>	<b>Current Discount Rate (6.90%)</b>	<b>+1 Discount Rate (7.90%)</b>
Accrued Liability	\$ 614,716,624	\$ 557,543,135	\$ 508,590,190
Unfunded Liability	\$ 301,252,237	\$ 244,078,748	\$ 195,125,803
Funded Ratio (AVA)	51.0%	56.2%	61.6%
ADEC Amount	\$ 53,851,524	\$ 44,767,241	\$ 36,812,250





## Section VIII: Risk Assessment

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### ***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 emerging 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. Since the Employer is obligated to make 100% of the Required Contribution Rate by statute and has historically made the full contribution, there is little contribution risk.





## Section VIII: Risk Assessment

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### *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 June 30, 2023 and with the 30-year spot rate used for all durations beyond 30. Using these assumptions, we calculate a low-default-risk obligation measure liability of approximately \$594,876,000.

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

	JUNE 30, 2023
<b>ACTUARIAL ACCRUED LIABILITY</b>	
Present value of prospective benefits payable in respect of:	
Present active members	
- Service retirement benefits	\$170,803,225
- Disability retirement benefits	1,781,499
- Death and survivor benefits	<u>873,729</u>
- Total	\$173,458,453
Present inactive members and members entitled to deferred vested benefits:	\$5,801,198
Present annuitants and beneficiaries	<u>\$378,283,484</u>
Total actuarial accrued liability [1(a) + 1(b) + 1(c)]	\$557,543,135
<b>ACTUARIAL VALUE OF ASSETS</b>	<u>\$313,464,387</u>
<b>UNFUNDED ACTUARIAL ACCRUED LIABILITY [1(d) – 2]</b>	\$244,078,748





## Schedule B: Development of Actuarial Value of Assets

	June 30, 2023
(1) Actuarial Value Beginning of Year*	\$297,957,039
(2) Market Value End of Year	298,216,135
(3) Market Value Beginning of Year	276,381,725
(4) Cash Flow	
(a) Contributions	34,552,489
(b) Disbursements	<u>(35,750,773)</u>
(c) Net: (4)(a) + (4)(b)	(1,198,284)
(5) Investment Income	
(a) Market Total: (2) – (3) – (4)(c)	23,032,694
(b) Assumed Rate	6.90%
(c) Amount for Immediate Recognition: [(1) x (5)(b)] + [(4)(c) x (5)(b) x 0.5]	20,517,695
(6) Expected Actuarial Value at End of Year: (1) + (4)(c) + (5)(c)	317,276,450
(7) Phased-In Recognition of Investment Income	
(a) Difference between Market & Expected Actuarial Value: (2) – (6)	(19,060,315)
(b) 20% of Difference: 0.2 x (7)(a)	(3,812,063)
(8) Preliminary Actuarial Value End of Year: (6) + (7)(b)	313,464,387
(9) Final Actuarial Value End of Year Using 20% Corridor: Greater of [(7) and .8 x (2)], but no more than 1.2 x (2)	313,464,387
(10) Difference Between Market & Actuarial Values: (2) – (9)	(15,248,252)
(11) Rate of Return on Actuarial Value	5.62%

\* Before corridor constraints, if applicable.





## Schedule C: Summary of Receipts & Disbursements

MARKET VALUE OF ASSETS	Year Ending June 30, 2023	Year Ending June 30, 2022
Receipts for the Year		
Contributions:		
Members	\$ 2,019,697	\$ 1,642,375
Employer	<u>32,532,792</u>	<u>33,170,039</u>
Subtotal	\$ 34,552,489	\$ 34,812,414
Investment Earnings (net of expenses)	23,032,694	(27,869,220)
Other	<u>0</u>	<u>477,273</u>
TOTAL	\$ 57,585,183	\$ 7,420,467
<u>Disbursements for the Year</u>		
Benefit Payments	\$ 35,739,773	\$ 32,926,700
Refunds to Members	0	91,091
Administrative Expenses	0	0
Other	<u>11,000</u>	<u>16,000</u>
TOTAL	\$ 35,750,773	\$ 33,033,791
<u>Excess of Receipts over Disbursements</u>	\$ 21,834,410	\$ (25,613,324)
<u>Reconciliation of Asset Balances</u>		
Asset Balance as of the Beginning of Year	\$ 276,381,725	\$ 301,995,049
Excess of Receipts over Disbursements	<u>21,834,410</u>	<u>(25,613,324)</u>
Asset Balance as of the End of Year	\$ 298,216,135	\$ 276,381,725
Rate of Return	8.35%	(9.19)%







## Schedule D: Outline of Actuarial Assumptions & Methods

Adopted or reaffirmed by the Commission on September 16, 2021 for the June 30, 2021 and later valuations based on the experience investigation report for the five-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:** 4.00% at all ages.

### COST OF LIVING ADJUSTMENTS:

Group	Rate
Hired prior to January 1, 1981 and retired prior to October 2, 2011	4.00%
Hired on or after January 1, 1981 and retired prior to October 2, 2011	2.60%
Retired on or after October 2, 2011	2.25%
All surviving spouses of active or retired members	2.25%

**PAYROLL GROWTH ASSUMPTION:** 3.00% per annum.

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

**WITHDRAWAL:** 1% for all ages

**DISABILITY:** 20% of 1975 Social Security Table

**RETIREMENT:** 15% are assumed to retire at 30 years of service or 63 years of age.  
15% are assumed to retire at 25 years of service at age 63.  
25% are assumed to retire at age 65 and 10 years of service.  
10% are assumed to retire after age 65 and 10 years of service.  
The remaining actives are assumed to retire at age 70.





## Schedule D: Outline of Actuarial Assumptions & Methods

**PRE-RETIREMENT MORTALITY:** The Pub-2010 General Above-Median Employee Mortality Table projected generationally with scale MP-2020. Representative values of the assumed annual rates of mortality while in active service are as follows:

Annual Rates of Death*		
Age	Male	Female
30	0.031%	0.013%
35	0.041%	0.021%
40	0.057%	0.033%
45	0.085%	0.051%
50	0.129%	0.076%
55	0.190%	0.112%
60	0.276%	0.169%
65	0.405%	0.270%

\* Rates shown are for 2010, the base year of the table.

**POST-RETIREMENT MORTALITY:** The Pub-2010 Mortality Tables projected generationally with scale MP-2020:

- Service Retirees: General, Above-Median, Healthy Retiree Mortality Table.
- Disabled Retirees: General, Disabled Retiree Mortality Table.
- Beneficiaries: General, Above-Median Contingent Annuitant Mortality Table.

Annual Rates of Death*						
Age	Healthy		Disabled		Survivor	
	Male	Female	Male	Female	Male	Female
50	0.267%	0.212%	1.605%	1.483%	0.701%	0.320%
55	0.387%	0.275%	2.114%	1.742%	0.824%	0.439%
60	0.552%	0.371%	2.503%	1.956%	1.012%	0.596%
65	0.820%	0.595%	3.044%	2.256%	1.337%	0.839%
70	1.381%	1.032%	3.901%	2.862%	2.058%	1.272%
75	2.437%	1.827%	5.192%	4.003%	3.272%	2.037%
80	4.391%	3.260%	7.348%	6.007%	5.190%	3.410%
85	7.965%	6.019%	10.815%	9.331%	8.473%	6.075%
90	13.712%	11.139%	16.253%	13.665%	13.984%	10.979%

\* Rates are shown for 2010, the base year of the tables.

In our opinion, the generational projection of the mortality rates with scale MP-2020 provide a sufficient margin in the assumed rates of mortality to allow for additional improvement in mortality experience.





## **Schedule D: Outline of Actuarial Assumptions & Methods**

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**ASSET METHOD:** Actuarial Value, as developed in Schedule B. The actuarial value of assets recognizes a portion of the difference between the market value of assets and the expected value of assets, based on the assumed valuation rate of return. The amount recognized each year is 1/5 of the difference between market value and expected actuarial value. 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.

**PERCENT MARRIED:** 80% of active members are assumed to be married.





## Schedule E: Actuarial Cost Method

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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 the System are determined following a level funding approach and consist of a normal contribution and an accrued liability contribution.

Under the entry age normal cost method, the actuarial present value of each member's projected benefits is allocated on a level basis over the member's compensation between the entry age of the member and the assumed exit ages. The portion of the actuarial present value allocated to the valuation year is called the normal cost. The actuarial present value of benefits allocated to prior years of service is called the actuarial accrued liability. The unfunded actuarial accrued liability represents the difference between the actuarial accrued liability and the actuarial value of assets as of the valuation date. The unfunded actuarial accrued liability is calculated each year and reflects experience gains/losses. The accrued liability contribution amortizes the balance of the unfunded actuarial 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 Judges, Family Support Magistrates, and Compensation Commissioners Retirement System (CT JFSMCCRS) is a defined benefit pension plan established by the Connecticut General Assembly for the purpose of providing retirement allowances and other benefits for Judges, Family Support Magistrates, and Compensation Commissioners in Connecticut, and their survivors and other beneficiaries.

**Eligibility Requirements** Any appointed Judge, Family Support Magistrate, or Compensation Commissioner of the State of Connecticut.

**Final Average Compensation** For members hired prior to July 1, 2011, salary of office;  
For members hired on or after July 1, 2011, Average annual salary for 5 years preceding retirement;

plus longevity payments based on service as follows:

Completed Years of Service	Annual Longevity as % of Compensation
0-9	0.00%
10-14	0.75%
15-19	1.50%
20-24	2.25%
25 or more	3.00%

### Normal Retirement Benefit

**Eligibility** For those who retire before July 1, 2022, the earliest of age 65 or 20 years of service or 30 years of total state service with at least 10 years as a Judge, Family Support Magistrate or Compensation Commissioner.

For those who retire on or after July 1, 2022, the earliest of age 65 with 10 years of vesting service, age 63 with 25 years of vesting service, or 30 years of vesting service.

Retirement is mandatory at age 70.

**Benefit** 66.67% of Final Average Compensation reduced for less than 10 years of service by a ratio of the number of years of completed service to the number of years of service which would have been completed at age 70, or 10 years, whichever is less.





## Schedule F: Summary of Main System Provisions

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### Disability Retirement Benefit

Any member becoming permanently disabled is entitled to 66.67% of Final Average Compensation commencing upon determination of disability.

### Death Benefit

The spouse of any member who was hired before January 1, 1981 and dies in active service or after retirement is entitled to 33.33% of the final compensation of the member at time of death commencing the first of the month after death.

The spouse of any member who was hired on or after January 1, 1981 and dies in active service is entitled to 33.33% of the final compensation of the member at time of death commencing the first of the month after death.

The spouse of any member who was hired on or after January 1, 1981 and who dies after retirement is entitled to 50% of the monthly benefit of the member at the time of death.

The spouse of any member who dies after leaving active service and before retirement is entitled to 50% of the benefit the member would have received upon retirement commencing when the member would have been eligible.

### Deferred Vested Retirement Benefit

#### Eligibility

10 years of service.

#### Benefit

Members hired before 1981 who resign on or before October 1, 2011 – 50% of the retirement benefit at 10 years increasing to 100% after 15 years.

Members hired before 1981 who resign on or after October 2, 2011 – 100% of the retirement benefit multiplied by the ratio of service at termination to projected service at the earliest retirement age (the earlier of age 65 or 20 years of service).

Members hired on or after January 1, 1981 – 100% of the retirement benefit multiplied by the ratio of service at termination to projected service at the earliest retirement age (the earlier of age 65 or 20 years of service).

#### Commencement

For members who resign on or before October 1, 2011 - Benefits shall commence upon the attainment of the earlier of age 65 or the attainment of 20 years of service (assuming the member had remained in service).





## Schedule F: Summary of Main System Provisions

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For members hired before 1981 who resign on or after October 2, 2011 – Benefits shall commence no earlier than at age 62.

For members hired on or after January 1, 1981 who resign on or after October 2, 2011 – Benefits shall commence no earlier than at age 65.

### Cost of Living Adjustments

For members hired prior to 1981 and retire prior to October 2, 2011, benefits are increased in line with current compensation of an active member in the same position.

For members hired on or after January 1, 1981 and retire prior to October 2, 2011, benefits are increased in line with a cost of living index, not to exceed 3% per year.

For members retiring on or after October 2, 2011 and all surviving spouses, the annual adjustment will be 60% of the increase in CPI up to 6% and 75% of the increase in the CPI over 6%. The minimum COLA shall be 2.0% and the maximum COLA shall be 7.5%.

### Member Contributions

Members hired before January 1, 2018, contribute 5% of annual compensation. Members hired on or after January 1, 2018, contribute 6% of annual compensation. Upon withdrawal prior to benefit eligibility, contributions are refunded without interest.





## Schedule G: Tables of Membership Data

### STATUS RECONCILIATION OF ACTIVE AND INACTIVE MEMBERS

	<u>Actives</u>	<u>Retirees</u>	<u>Disabled</u>	<u>Beneficiaries</u>	<u>Vested Terms</u>	<u>Total</u>
1. Headcounts as of June 30, 2022	195	235	1	83	7	521
2. Change in status during period:						
a. Death	(1)	(6)		(9)		(16)
b. Disabled						
c. Retired	(14)	15			(1)	
d. Terminated Vested	(1)				1	
e. Terminated Not Vested						
f. Benefits Expired/Refund	(1)				(2)	(3)
3. New member due to:						
a. New Hires	25					25
b. Rehires						
c. Death of Participant				4		4
d. Adjustments		(6)		1		(5)
4. Headcounts as of June 30, 2023	203	238	1	79	5	526







## Schedule G: Tables of Membership Data

The Number and Average Annual Compensation of Active Employees  
By Age and Benefit Service as of June 30, 2023

Age	Years of Benefit Service							Total	
	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 30	30 & Up	No.	Payroll
Under 25									\$0
25 to 29									0
30 to 34									0
35 to 39	6	1						7	1,256,275
40 to 44	6	4						10	1,872,108
45 to 49	11	2		1				14	2,927,933
50 to 54	14	7	7	2				30	5,748,758
55 to 59	20	14	5	3	1	2		45	8,642,627
60 to 64	12	14	12	8	8	2		56	10,844,507
65 to 69	6	10	7	6	6	2		37	7,073,145
70 & Up			2	1		1		4	736,992
<b>Total</b>	<b>75</b>	<b>52</b>	<b>33</b>	<b>21</b>	<b>15</b>	<b>7</b>	<b>0</b>	<b>203</b>	<b>\$39,102,345</b>

Average Age: 57.6  
 Average Benefit Service: 7.7  
 Average Eligibility Service: 17.4





## Schedule G: Tables of Membership Data

### NUMBER OF RETIRED AND DISABLED MEMBERS AND THEIR BENEFITS BY AGE

Age	Number	Total Annual Benefits	Average Annual Benefits
Under 60	3	\$ 407,118	\$ 135,706
60 – 64	4	520,866	130,217
65 – 69	29	3,724,617	128,435
70 – 74	76	10,115,905	133,104
75 – 79	52	7,097,581	136,492
80 – 84	32	4,225,364	132,043
85 – 89	27	3,547,390	131,385
90 & Over	16	2,058,314	128,645
Total	239	\$ 31,697,155	\$ 132,624

### NUMBER OF BENEFICIARIES AND THEIR BENEFITS BY AGE

Age	Number	Total Annual Benefits	Average Annual Benefits
Under 60	0	\$ 0	\$ 0
60 – 64	2	130,203	65,101
65 – 69	0	0	0
70 – 74	10	670,917	67,092
75 – 79	12	786,714	65,559
80 – 84	23	1,543,139	67,093
85 – 89	15	960,354	64,024
90 & Over	17	1,047,073	61,593
Total	79	\$ 5,138,400	\$ 65,043

In addition, there are 5 deferred vested employees entitled to deferred annual benefits totaling \$561,966.





## 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 One Year Period Ending 6/30/2023	\$ Gain (or Loss) For One Year Period Ending 6/30/2022
<b>Age &amp; Service Retirements.</b> If members retire at older ages, there is a gain. If younger ages, a loss.	\$ (1,676.0)	\$ 4,981.3
<b>Disability Retirements.</b> If disability claims are less than assumed, there is a gain. If more claims, a loss.	482.9	133.0
<b>Death-in Service Benefits.</b> If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	(403.0)	(185.5)
<b>Withdrawal From Employment.</b> If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	48.0	200.3
<b>Pay Increases.</b> If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	(1,974.2)	(3,107.6)
<b>New Members.</b> Additional unfunded accrued liability will produce a loss.	(9,156.7)	(3,655.0)
<b>Investment Income.</b> If there is a greater investment income than assumed, there is a gain. If less income, a loss.	(3,812.8)	(5,392.5)
<b>Death After Retirement.</b> If retirants live longer than assumed, there is a loss. If not as long, a gain.	8,410.4	(2,494.7)
<b>Cost of Living Adjustments.</b> If COLA increase is more than expected there is a loss.	(4,162.2)	N/A
<b>Other.</b> Miscellaneous gains and losses resulting from changes in valuation software, data adjustments, timing of financial transactions, etc.	<u>(2,239.7)</u>	<u>1,072.9</u>
<b>Gain (or Loss) During Year From Experience</b>	<u>\$ (14,483.3)</u>	<u>\$ (8,447.8)</u>
<b>Non-Recurring Items.</b> Adjustments for plan amendments, assumption changes, or method changes.	<u>(35,391.2)</u>	0.0
<b>Composite Gain (or Loss) During Year</b>	<u>\$ (49,874.5)</u>	<u>\$ (8,447.8)</u>





## Schedule I: Projection of Unfunded Accrued Liability

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Valuation Year	Unfunded Accrued Liability	Amortization Period	Amortization Payment
2023	\$244,078,748	8	\$35,933,431
2024	223,908,747	7	37,011,434
2025	201,236,674	6	38,121,777
2026	175,856,574	5	39,265,430
2027	147,547,285	4	40,443,393
2028	116,071,353	3	41,656,695
2029	81,173,881	2	42,906,396
2030	42,581,291	1	44,193,588
2031	0	0	0

