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February 20, 2019

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

Members of the Commission:

Presented in this report is information to assist the Connecticut Judges, Family Support Magistrates and Compensation Commissioners Retirement System in meeting the requirements of the Governmental Accounting Standards Board (GASB) Statement No. 68 and to identify the information to be provided by the actuary, Cavanaugh Macdonald Consulting (CMC). The information is presented for the period ending June 30, 2018 (the Measurement Date).

GASB Statement No. 68 establishes accounting and financial reporting requirements for governmental employers who provide pension benefits to their employees through a trust.

The annual actuarial valuation used as a basis for much of the information presented in this report was performed as of June 30, 2018. The valuation was based on data, provided by the Retirement System staff, for active, inactive and retired members along with pertinent financial information.

The actuarial calculations were performed by qualified actuaries according to generally accepted actuarial procedures and methods. The calculations are based on the current provisions of the System, and on actuarial assumptions that are, individually and in the aggregate, internally consistent and reasonably based on the actual experience of the System. In addition, the calculations were completed in compliance with the laws governing the System and, in our opinion, meet the requirements of GASB 68. The undersigned are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

These results are only for financial reporting and may not be appropriate for funding purposes or other types of analysis. Calculations for purposes other than satisfying the requirements of GASB 67 and GASB 68 may produce significantly different results. Future actuarial results may differ significantly from the current results presented in the report due to such factors as changes in plan experience or changes in economic or demographic assumptions.

Sincerely yours,

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

Edward J. Koebel, EA, FCA, MAAA
Principal and Consulting Actuary

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REPORT OF THE ANNUAL GASB STATEMENT NO. 68
REQUIRED INFORMATION FOR THE
CONNECTICUT JUDGES, FAMILY SUPPORT MAGISTRATES
AND COMPENSATION COMMISSIONERS RETIREMENT SYSTEM

PREPARED AS OF JUNE 30, 2018

SECTION I – INTRODUCTION

The Governmental Accounting Standards Board issued Statement No. 68 (GASB 68), *"Accounting and Financial Reporting For Pensions"* in June 2012. This report, prepared as of June 30, 2018 (the Measurement Date), presents information to assist the Connecticut Judges, Family Support Magistrates and Compensation Commissioners Retirement System in meeting the requirements of GASB 68 for the fiscal year ending June 30, 2019 (Reporting Date). Much of the material provided in this report is based on the data, assumptions, and results of the annual actuarial valuation of the Connecticut Judges, Family Support Magistrates and Compensation Commissioners Retirement System as of June 30, 2018. The results of that valuation were detailed in a report dated December 20, 2018. Connecticut Judges, Family Support Magistrates and Compensation Commissioners Retirement System is a single-employer defined benefit pension plan.

GASB 68 replaced GASB 27 and represents a significant departure from the requirements of that prior statement. GASB 68 created disclosure and reporting requirements that may or may not be consistent with the basis used for funding the Plan.

Two major changes in GASB 68 are the requirements to include Net Pension Liability (NPL) and to recognize a Pension Expense (PE) in the employer's financial reporting.

The NPL shown in the GASB Statement No. 67 Report for the Connecticut Judges, Family Support Magistrates and Compensation Commissioners Retirement System Prepared as of June 30, 2018 and submitted February 20, 2019 is the NPL used for purposes of GASB 68. Please refer to that report for the derivation of the NPL.

Pension Expense includes amounts for service cost (the Normal Cost under the Entry Age Normal actuarial cost method for the year), interest on the Total Pension Liability (TPL), changes in benefit structure, amortization of increases/decreases in liability due to actuarial experience and actuarial assumption changes, and amortization of investment gains/losses. The actuarial experience and assumption change impacts are amortized over the average expected remaining service life of the Plan membership as of the Measurement Date, and investment gains/losses are amortized over five years. The development of the PE is shown in Section IV.

The unamortized portions of each year's experience, assumption changes and investment gains/losses are used to develop deferred inflows and outflows, which also must be included in the employer's financial reporting. The development of the collective deferred inflows and outflows is shown in Section III.

Section II of this report is a summary of the principal results of the amounts under GASB 68. Section III provides the results of all the necessary calculations, presented in the order laid out in GASB 68 for note disclosure and Required Supplementary Information (RSI).

SECTION II – SUMMARY OF PRINCIPAL RESULTS
($ IN THOUSANDS)

Valuation Date (VD):	June 30, 2018
Measurement Date (MD):	June 30, 2018
Reporting Date (RD):	June 30, 2019
Membership Data:	
Retirees and Survivors	284
Inactive Members	3
Active Members	209
Total	496
Single Equivalent Interest Rate (SEIR):	
Long-Term Expected Rate of Return	6.90%
Municipal Bond Index Rate at Measurement Date	3.89%
Fiscal Year in which Plan's Fiduciary Net Position is projected to be depleted from future benefit payments for current members	N/A
Single Equivalent Interest Rate	6.90%
Net Pension Liability:	
Total Pension Liability (TPL)	$ 443,087
Fiduciary Net Position (FNP)	222,808
Net Pension Liability (NPL = TPL – FNP)	$ 220,279
FNP as a percentage of TPL	50.29%
Pension Expense:	$ 34,485
Deferred Outflows of Resources:	$ 18,147
Deferred Inflows of Resources:	$ 15,792

SECTION III – NOTES TO FINANCIAL STATEMENTS

The material presented herein will follow the order presented in GASB 68. Paragraph numbers are provided for ease of reference.

Paragraph 40 (c): The data required regarding the membership of the Connecticut Judges, Family Support Magistrates and Compensation Commissioners Retirement System were furnished by the Retirement System. The following table summarizes the membership of the system as of June 30, 2018, the Measurement Date.

Membership

Group	Count
Retired participants and beneficiaries currently receiving benefits	284
Terminated participants and beneficiaries entitled to benefits but not yet receiving benefits	3
Active Participants	209
Total	496

Paragraph 41: This paragraph requires information regarding the actuarial assumptions used to measure the TPL. The TPL was determined based on the annual actuarial funding valuation report prepared as of June 30, 2018. The TPL was based on assumptions resulting from an actuarial experience study for the period July 1, 2011 – June 30, 2015. The complete set of actuarial assumptions utilized in developing the TPL is outlined in Schedule C. The key actuarial assumptions are summarized below:

Inflation	2.50 percent
Salary increases	4.50 percent, including inflation
Investment rate of return	6.90 percent, net of pension plan investment expense, including inflation

The RP-2014 White Collar Mortality Table projected to 2020 by scale BB at 100% for males and 95% for females is used for the period after service retirement and for dependent beneficiaries. The RP-2014 Disabled Retiree Mortality Table at 65% for males and 85% for females is used for the period after disability. In our opinion, the projection of the mortality rates with Scale BB provide a sufficient margin in the assumed rates of mortality to allow for additional improvement in mortality experience.

Paragraph 42 (a)-(f): The discount rate used to measure the TPL at June 30, 2018 was the long term rate of return, 6.90 percent. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rates and that Employer contributions will be made equal to the difference between the projected actuarially determined contribution and member contributions. Projected future benefit payments for all current plan members were projected through the year 2138.

Based on those assumptions, the System's FNP was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the TPL and a municipal bond rate was not used in determining the discount rate.

The long-term expected rate of return on pension plan investments was determined using a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

The target asset allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Large Cap U.S. Equities	21.0%	5.8%
Developed Non-U.S. Equities	18.0	6.6
Emerging Markets (Non-U.S.)	9.0	8.3
Real Estate	7.0	5.1
Private Equity	11.0	7.6
Alternative Investment	8.0	4.1
Fixed Income (Core)	8.0	1.3
High Yield Bonds	5.0	3.9
Emerging Market Bond	4.0	3.7
Inflation Linked Bonds	5.0	1.0
Cash	4.0	0.4

Paragraph 42 (g): This paragraph requires disclosure of the sensitivity of the NPL to changes in the discount rate. The following presents NPL of the System, calculated using the discount rate of 6.90 percent, as well as what the System's NPL would be if it were calculated using a discount rate that is 1-percentage-point lower (5.90 percent) or 1-percentage-point higher (7.90 percent) than the current rate: ($ thousands)

	1% Decrease (5.90%)	Current Discount Rate (6.90%)	1% Increase (7.90%)
Net Pension Liability	$265,996	$220,279	$180,952

Paragraph 44: This paragraph requires a schedule of changes in the NPL. The needed information is provided in the table below.

CHANGES IN THE NET PENSION LIABILITY
($ in Thousands)

	Total Pension Liability (TPL) (a)	Fiduciary Net Position (FNP) (b)	Net Pension Liability (NPL) (a) – (b)
Balances at June 30, 2017	$ 447,925	$ 210,125	$ 237,800
Changes for the year:			
Service cost	11,352		11,352
Interest	29,954		29,954
Difference between expected and actual experience	(18,528)		(18,528)
Changes of assumptions	0		0
Contributions - employer		25,458	(25,458)
Contributions - employee		1,663	(1,663)
Net investment income		13,178	(13,178)
Benefit payments, including refunds of employee contributions	(27,616)	(27,616)	0
Administrative expense			
Other changes		0	0
Net changes	$ (4,838)	$ 12,683	$ (17,521)
Balances at June 30, 2018	$ 443,087	$ 222,808	$ 220,279

Paragraph 45 (a): June 30, 2018 is the actuarial valuation date upon which the TPL is based. An expected TPL is determined as of June 30, 2018 using standard roll forward techniques. The procedure used to determine the TPL as of June 30, 2018 is shown on page 5 of the GASB 67 report for the Connecticut Judges, Family Support Magistrates and Compensation Commissioners Retirement System submitted on February 20, 2019.

Paragraph 45 (c): There were no changes in the assumptions that affected the measurement of the TPL since the prior measurement date.

Paragraph 45 (d): There was no change in the benefit terms that affected the measurement of the TPL since the prior measurement date.

Paragraph 45 (g): See Section IV for the annual Pension Expense.

Paragraph 45 (h): Since certain expense items are amortized over closed periods each year, the deferred portions of these items must be tracked annually. If the amounts serve to reduce Pension Expense they are labeled deferred inflows. If they will increase Pension Expense they are labeled deferred outflows. The amortization of these amounts is accomplished on a level dollar basis, with no interest included in the deferred amounts. Experience gains/losses and the impact of changes in actuarial assumptions, if any, are amortized over the average expected remaining service life of the active and inactive System members at the beginning of the fiscal year. Investment gains and losses are amortized over a fixed five year period.

The table below provides the calculation of the annual investment gain or loss.

Investment Earnings (Gain)/Loss as of June 30, 2018 ($000)		
a.	Expected investment rate of return	6.90%
b.	Beginning of year market value assets (BOY)	210,125
c.	End of year market value assets (EOY)	222,808
d.	Expected return on BOY for plan year (a x b)	14,499
e.	External Cash Flow	
	Contributions - employer	25,458
	Contributions - member	1,663
	Benefits paid	(27,616)
	Admin expenses	0
	Other changes	0
	Net cash flow	(495)
f.	Expected return on net cash flow (a. x 0.5 x e.)	(17)
g.	Projected earnings for plan year (d. + f.)	14,482
h.	Net investment income (c. – b. – e.)	13,178
i.	**Investment earnings (gain)/loss (g. –h.)**	**1,304**
j.	Expensed portion included in Pension Expense (i. x 0.20)	261

The table below provides a summary of the deferred inflows and outflows as of June 30, 2018 with dollar amounts in thousands.

Source	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$0	$15,792
Changes of assumptions	16,511	0
Net difference between projected and actual earnings on Plan investments	1,636	0
Employer contributions subsequent to the measurement date	See note	0
Total	$18,147	$15,792

Note: The deferred outflow of resources reported by an employer should include contributions made by the employer during its fiscal year that will be reflected in the net pension liability in the next measurement period.

Paragraph 45 (i): Amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in Pension Expense as follows:

Deferred Amounts to be recognized in Fiscal Years Following the Reporting Date

Year:	Amount
1	11,291
2	(4,025)
3	(5,171)
4	260
5	0
Thereafter	0

Amounts reported as deferred outflows of resources related to pensions resulting from employer contributions subsequent to the measurement date will be recognized as a reduction of the net pension liability in the year ended June 30, 2019 (Reporting Date). Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense.

Deferred Outflows and Inflows for Differences between Expected and Actual Experience ($ in thousands)

				Balances as of June 30, 2019 (Reporting Date)	
Year	Experience Losses (a)	Experience Gains (b)	Amounts Recognized in Pension Expense through 2018 (c)	Deferred Outflows (a) – (c)	Deferred Inflows (b) – (c)
2018	$0	$18,528	$5,132	$0	$13,396
2017	0	0	0	0	0
2016	0	9,380	6,984	0	2,396
2015	0	0	0	0	0
2014	0	0	0	0	0
Total				$0	$15,792

Deferred Outflows and Inflows for Differences from Assumption Changes
($ in thousands)

Year	Assumption Losses (a)	Assumption Gains (b)	Amounts Recognized in Pension Expense through 2018 (c)	Balances as of June 30, 2019 (Reporting Date) Deferred Outflows (a) – (c)	Deferred Inflows (b) – (c)
2018	$0	$0	$0	$0	$0
2017	0	0	0	0	0
2016	64,604	0	48,093	16,511	0
2015	0	0	0	0	0
2014	0	0	0	0	0
Total				$16,511	$0

Deferred Outflows and Inflows for Differences in Investment Experience
($ in thousands)

Year	Investment Losses (a)	Investment Gains (b)	Amounts Recognized in Pension Expense through 2018 (c)	Balances as of June 30, 2019 (Reporting Date) Deferred Outflows (a) – (c)	Deferred Inflows (b) – (c)
2018	$1,304	$0	$261	$1,043	$0
2017	0	11,500	4,600	0	6,900
2016	13,674	0	8,205	5,469	0
2015	10,120	0	8,096	2,024	0
2014	0	9,837	9,837	0	0
Total				$8,536	$6,900
Net difference between projected and actual earnings on investments				$1,636	

EXPERIENCE Amortization of Deferrals ($ in thousands)										
	2015 (Gain)/Loss		2016 (Gain)/Loss		2017 (Gain)/Loss		2018 (Gain)/Loss		Total Deferrals	
Fiscal Year End	Amount Recognized	EOY Balance	Amount Recognized	EOY Balance	Amount Recognized	EOY Balance	Amount Recognized	EOY Balance	Amount Recognized	EOY Balance
6/30/2017	$0	$0	$(2,328)	$(7,052)	$0	$0	$0	$0	$(2,328)	$(7,052)
6/30/2018	0	0	(2,328)	(4,724)	0	0	0	0	(2,328)	(4,724)
6/30/2019	0	0	(2,328)	(2,396)	0	0	(5,132)	(13,396)	(7,460)	(15,792)
6/30/2020	0	0	(2,328)	(68)	0	0	(5,132)	(8,264)	(7,460)	(8,332)
6/30/2021	0	0	(68)	0	0	0	(5,132)	(3,132)	(5,200)	(3,132)
6/30/2022	0	0	0	0	0	0	(3,132)	0	(3,132)	0
6/30/2023	0	0	0	0	0	0	0	0	0	0

ASSUMPTION Amortization of Deferrals ($ in thousands)										
	2015 (Gain)/Loss		2016 (Gain)/Loss		2017 (Gain)/Loss		2018 (Gain)/Loss		Total Deferrals	
Fiscal Year End	Amount Recognized	EOY Balance	Amount Recognized	EOY Balance	Amount Recognized	EOY Balance	Amount Recognized	EOY Balance	Amount Recognized	EOY Balance
6/30/2017	$0	$0	$16,031	$48,573	$0	$0	$0	$0	$16,031	$48,573
6/30/2018	0	0	16,031	32,542	0	0	0	0	16,031	32,542
6/30/2019	0	0	16,031	16,511	0	0	0	0	16,031	16,511
6/30/2020	0	0	16,031	480	0	0	0	0	16,031	480
6/30/2021	0	0	480	0	0	0	0	0	480	0
6/30/2022	0	0	0	0	0	0	0	0	0	0
6/30/2023	0	0	0	0	0	0	0	0	0	0

INVESTMENT Amortization of Deferrals ($ in thousands)												
	2014 (Gain)/Loss		2015 (Gain)/Loss		2016 (Gain)/Loss		2017 (Gain)/Loss		2018 (Gain)/Loss		Total Deferrals	
Fiscal Year End	**Amount Recognized**	**EOY Balance**	**Amount Recognized**	**EOY Balance**	**Amount Recognized**	**EOY Balance**	**Amount Recognized**	**EOY Balance**	**Amount Recognized**	**EOY Balance**	**Amount Recognized**	**EOY Balance**
6/30/2017	$(1,967)	$(3,936)	$2,024	$6,072	$2,735	$10,939	$0	$0	$0	$0	$2,792	$13,075
6/30/2018	(1,967)	(1,969)	2,024	4,048	2,735	8,204	(2,300)	(9,200)	0	0	492	1,083
6/30/2019	(1,969)	0	2,024	2,024	2,735	5,469	(2,300)	(6,900)	261	1,043	751	1,636
6/30/2020	0	0	2,024	0	2,735	2,734	(2,300)	(4,600)	261	782	2,720	(1,084)
6/30/2021	0	0	0	0	2,734	0	(2,300)	(2,300)	261	521	695	(1,779)
6/30/2022	0	0	0	0	0	0	(2,300)	0	261	260	(2,039)	260
6/30/2023	0	0	0	0	0	0	0	0	260	0	260	0

SECTION IV – PENSION EXPENSE

As noted earlier, the Pension Expense (PE) consists of a number of different items. GASB 68 refers to the first as Service Cost which is the Normal Cost using the Entry Age Normal (EAN) actuarial funding method. The second item is interest on the beginning of year TPL and the cash flows during the year at the SEIR in effect as of the previous measurement date.

The next three items refer to any changes that occurred in the TPL due to:

- benefit changes,
- actual versus expected experience or
- changes in actuarial assumptions.

Benefit changes, which are reflected immediately in PE, can be positive, if there is a benefit improvement for existing Plan members, or negative if there is a benefit reduction. For the year ended June 30, 2018, there were no benefit changes to be recognized.

The next item to be recognized is the portion of current year changes in TPL due to actual versus expected experience for the year. The portion to recognize in the current year is determined by spreading the total change over the average expected remaining service life of the entire Plan membership as of the beginning of the measurement year. The remaining service life of active members is the average number of years they are expected to remain active. For the year ended June 30, 2018, this number is 8.09. The remaining service life of the inactive members is, of course, zero. Therefore, the figure to use for the amortization is the weighted average of these two amounts, or 3.61. The table below provides the calculation of the average remaining future service life.

Category	Number (1)	Average Years of Future Service Life (2)
a. Active Members	204	8.09
b. Inactive Members	253	0.00
c. Total	457	
Weighted Average Years of Future Service Life [(a1 x a2) + (b1 x b2)]/c1		3.61

The last item under changes in TPL are changes in actuarial assumptions. There were no changes in the assumptions that affected the measurement of the TPL since the prior measurement date.

Member contributions for the year and projected earnings on the FNP, again at the rate used to calculate the liabilities, are subtracted from the amount determined thus far. The current year portions of previously determined experience, assumption, and investment earnings amounts, recognized as deferred inflows and outflows (see Section IV) are included next. Deferred inflows are subtracted from the PE while deferred outflows are added to the PE. Finally, administrative expenses and other miscellaneous items are included.

The calculation of the Pension Expense is shown in the following table along with the Pension Expense for the previous measurement date.

Pension Expense
Determined as of the Measurement Date
($ thousands)

Service Cost	$11,352
Interest	29,954
Current-period benefit changes	0
Expensed portion of current-period difference between expected and actual experience in the total pension liability	(5,132)
Expensed portion of current-period changes of assumptions	0
Member contributions	(1,663)
Projected earnings on plan investments	(14,482)
Expensed portion of current-period differences between actual and projected earnings on plan investments	261
Administrative expense	0
Other	0
Recognition of beginning deferred outflows of resources as pension expense	16,523
Recognition of beginning deferred inflows of resources as pension expense	(2,328)
Pension Expense	$34,485

SECTION V – REQUIRED SUPPLEMENTARY INFORMATION

There are several tables of Required Supplementary Information (RSI) that need to be included in the System's financial statements.

Paragraph 46: The required tables are provided in Schedule A.

Paragraph 47: In addition the following should be noted regarding the RSI:

Changes of benefit terms:

- 2014
    - A one-time decision was granted to members not eligible to retire by July 1, 2022 to elect to maintain the same normal retirement eligibility applicable to members eligible to retire before July 1, 2022. Employees who elected by July 1, 2013 to maintain the eligibility are required to make additional employee contributions for the length of their remaining active service with JFSMCCRS.

Changes of assumptions:

- 2016
    - The mortality tables and salary scale were changed based on the Experience Investigation for the five-year period ending June 30, 2015.
    - Economic assumptions (assumed rates of inflation and investment return), the actuarial cost method, and the UAAL amortization methodology were changed in accordance with Memorandum of Agreement (MOU) between the State and SEBAC effective December 8, 2016.

Method and assumptions used in calculations of actuarially determined contributions. The actuarially determined contributions in the schedule of employer contributions are calculated as of June 30 each biennium for the fiscal years ending two and three years after the valuation date (June 30, 2018 contributions are based on June 30, 2016 valuation). The following actuarial methods and assumptions were used to determine the most recent contributions reported in that schedule:

Actuarial cost method	Entry Age Normal
Amortization method	Level percent of pay, closed
Single equivalent amortization period	15 years
Asset valuation method	5-year smoothed market
Inflation	2.50 percent
Salary increase	4.50 percent, including inflation
Investment rate of return	6.90 percent, net of investment related expense

SCHEDULE A

REQUIRED SUPPLEMENTARY INFORMATION

SCHEDULE OF CHANGES IN THE NET PENSION LIABILITY
($ in Thousands)

Fiscal Year Ending June 30	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Total pension liability											
Service Cost	$ 7,539	$ 8,142	$ 8,508	$ 10,159	$ 11,352						
Interest	26,301	27,240	28,251	29,062	29,954						
Benefit changes	0	0	0	0	0						
Difference between expected and actual experience	0	0	(9,380)	0	(18,528)						
Changes of assumptions	0	0	64,604	0	0						
Benefit payments	(21,668)	(22,541)	(22,994)	(24,899)	(27,616)						
Refunds of contributions	0	0	0	0	0						
Net change in total pension liability	12,172	12,841	68,989	14,322	(4,838)						
Total pension liability - beginning	339,601	351,773	364,614	433,603	447,925						
Total pension liability - ending (a)	$ 351,773	$ 364,614	$ 433,603	$ 447,925	$ 443,087						
Plan net position											
Contributions - employer	$ 16,298	$ 17,731	$ 18,259	$ 19,164	$ 25,458						
Contributions - member	1,641	1,791	1,831	1,689	1,663						
Net investment income	23,156	4,781	1,440	24,452	13,178						
Benefit payments	(21,668)	(22,541)	22,994	(24,899)	(27,616)						
Administrative expense	0	0	0	0	0						
Refunds of contributions	0	0	0	0	0						
Other	0	0	1680*	(39)	0						
Net change in plan net position	19,427	1,762	216	20,367	12,683						
Plan net position - beginning	168,353	187,780	189,542	189,758	210,125						
Plan net position - ending (b)	$ 187,780	$ 189,542	$ 189,758	$ 210,125	$ 222,808						
Net pension liability - ending (a) - (b)	$ 163,993	$ 175,072	$ 243,845	$ 237,800	$ 220,279						

* Includes $1,614,000 audit adjustment to the beginning of year plan net position.

SCHEDULE OF THE NET PENSION LIABILITY
($ in Thousands)

Fiscal Year Ending June 30	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Total pension liability	$ 351,773	$ 364,614	$ 433,603	$ 447,925	$ 443,087						
Plan net position	187,780	189,542	189,758	210,125	222,808						
Net pension liability	$ 163,993	$ 175,072	$ 243,845	$ 237,800	$ 220,279						
Ratio of plan net position to total pension liability	53.38%	51.98%	43.76%	46.91%	50.29%						
Covered payroll*	$ 33,386	$ 34,972	$ 34,897	$ 36,467	$ 34,970						
Net pension liability as a percentage of covered payroll	491.20%	500.61%	698.76%	652.10%	629.91%						

* Covered payroll equals the total active annual compensation from each year's valuation report.

SCHEDULE OF EMPLOYER CONTRIBUTIONS
($ in Thousands)

Fiscal Year Ending June 30	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Actuarially determined employer contribution	$ 25,458	$ 19,164	$ 18,259	$ 17,731	$ 16,298	$ 16,006	$ 15,095	$ 16,208	$ 15,399	
Actual employer contributions	25,458	19,164	18,259	17,731	16,298	16,006	15,095	0	0	
Annual contribution deficiency (excess)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 16,208	$ 15,399	
Covered payroll*	$ 34,970	$ 36,467	$ 34,897	$ 34,972	$ 33,386	$ 31,748	$ 30,308	$ 33,102	$ 31,602	
Actual contributions as a percentage of covered payroll	72.80%	52.55%	52.32%	50.70%	48.82%	50.42%	49.81%	0.00%	0.00%	

* Covered payroll equals the total active annual compensation from each year's valuation report.

SCHEDULE B

SUMMARY OF BENEFIT PROVISIONS EVALUATED

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	0.0%
10-14	1.5%
15-19	3.0%
20-24	4.5%
25 or more	6.0%

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.
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).

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 contribute 5% of annual compensation. Upon withdrawal prior to benefit eligibility, contributions are refunded without interest.

SCHEDULE C

STATEMENT OF ACTUARIAL ASSUMPTIONS AND METHODS

Adopted or reaffirmed by the Commission for the June 30, 2016 and later valuations.

VALUATION INTEREST RATE: 6.90% per annum, compounded annually, net of expenses.

SALARY INCREASES: 4.50% at all ages.

COST OF LIVING ADJUSTMENTS:

Group	Rate
Hired prior to January 1, 1981 and retired prior to October 2, 2011	4.50%
Hired on or after January 1, 1981 and retired prior to October 2, 2011	2.60%
Retired on or after October 2, 2011	2.30%
All surviving spouses of active or retired members	2.30%

PAYROLL GROWTH ASSUMPTION: 4.50% per annum.

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

WITHDRAWAL: None.

DISABILITY: 30% of 1975 Social Security Table

RETIREMENT: 50% are assumed to retire at later of age 65 and 10 years of service. The remaining actives are assumed to retire at age 70.

DEATHS AFTER RETIREMENT: The RP-2014 White Collar Mortality Table projected with Scale BB to 2020 at 100% for males and 95% for females is used for the period after retirement and for dependent beneficiaries. Representative values of the assumed annual rates of mortality are as follows:

Age	Men	Women	Age	Men	Women
40	.043%	.031%	65	0.705%	0.579%
45	.067	.052	70	1.133	0.933
50	.272	.194	75	1.943	1.553
55	.384	.250	80	3.407	2.688
60	.501	.348	85	6.247	4.826

In our opinion, the projection of the mortality rates with Scale BB continues to provide a sufficient margin in the assumed rates of mortality to allow for additional improvement in mortality experience.

The RP-2014 Disability Retiree Mortality Table at 65% (males) and 85% (female) is used for the period after disability.

ASSET METHOD: Market Value of Assets.

VALUATION METHOD: Entry Age Normal cost 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.