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GASB STATEMENT NO. 68 REPORT
FOR THE
CONNECTICUT STATE TEACHERS' RETIREMENT SYSTEM
PREPARED AS OF JUNE 30, 2018



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February 7, 2019

Board of Directors
Connecticut State Teachers' Retirement System
765 Asylum Avenue
Hartford, CT 06105

Members of the Board:

Presented in this report is information to assist the Connecticut State Teachers' 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 Number 68 establishes accounting and financial reporting requirements for governmental employers that 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, including the Net Pension Liability, was performed as of June 30, 2018. The valuation was based upon data, furnished by the Retirement System staff, for active, inactive and retired members along with pertinent financial information. The schedules contained within this report for participating employers are based on the expected contribution effort as measured June 30, 2018, the date of the latest biennial valuation.

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 internally consistent and individually reasonable 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 opinion contained herein.

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Board of Directors
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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 this report due to such factors as changes in plan experience or changes in economic or demographic assumptions.

Sincerely yours,

A handwritten signature in blue ink that reads 'John J. Garrett'.

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

Ben Mobley ASA, FCA, MAAA
Senior Actuary



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**REPORT OF THE ANNUAL GASB STATEMENT NO. 68
REQUIRED INFORMATION FOR THE
EMPLOYERS PARTICIPATING IN THE
CONNECTICUT STATE TEACHERS' 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. GASB 68’s effective date is for an employer’s fiscal year beginning after June 15, 2014. The Connecticut State Teachers’ Retirement System (System) is a cost-sharing multiple employer defined benefit pension plan with a special funding situation.

This report, prepared as of June 30, 2018 (the Measurement Date), presents information to assist the employers participating in 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 System as of June 30, 2018. The results of that valuation were detailed in a report dated November 7, 2018.

The Net Pension Liability (NPL) shown in the GASB Statement No. 67 Report for the Connecticut State Teachers’ Retirement System prepared as of June 30, 2018 and submitted February 4, 2019 is the collective NPL used for purposes of GASB 68. Please refer to that report for the derivation of the collective NPL.

Pension Expense (PE) 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 collective 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 and non-employer contributing entities’ financial statements. The development of the collective deferred inflows and outflows is shown in Section III.



The State makes all contributions to the System on behalf of employees of the participating districts. Therefore, participating employers are considered to be in a special funding situation as defined by GASB 68 and the State is treated as a non-employer contributing entity in the System. Since the districts do not contribute directly to the System, there is no NPL or deferred inflows or outflows to report in the financial statements of the districts. However, the notes to the financial statements must disclose the portion of the non-employer contributing entities' total proportionate share of the collective NPL that is associated with the employer. In addition, each district must recognize the total PE associated with the district as well as revenue in an amount equal to the non-employer contributing entities' total proportionate share of the collective PE associated with the district. The State, as a non-employer contributing entity, would report the entire collective amounts of the NPL, Deferred Inflows and Outflows and PE.

Schedule A of this report shows the total amount of employer contributions from the State as support provided to the districts for the year ending June 30, 2018. Schedule A also shows the proportionate share percentages that have been determined based on these contributions.

Based on these percentages we have determined the proportionate share amounts of the NPL associated with each participating employer and the employer PE and revenue for State support for each participating employer. These amounts are shown in Schedule B.

Section II of this report is a summary of the principal results of the collective 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 Section V shows the Required Supplementary Information (RSI).



SECTION II - SUMMARY OF COLLECTIVE AMOUNTS
(\$ IN THOUSANDS)

Valuation Date (VD):	June 30, 2018
Measurement Date (MD):	June 30, 2018
Reporting Date (RD):	June 30, 2019
Single Equivalent Interest Rate (SEIR):	
Long-Term Expected Rate of Return	8.00%
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	8.00%
Collective Net Pension Liability:	
Total Pension Liability (TPL)	\$ 31,110,898
Fiduciary Net Position (FNP)	<u>17,946,839</u>
Net Pension Liability (NPL = TPL – FNP)	\$ 13,164,059
FNP as a percentage of TPL	57.69%
Collective Pension Expense (PE):	\$1,477,433
Collective Deferred Outflows of Resources:	\$1,481,642
Collective Deferred Inflows of Resources:	\$543,452



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. Amounts are shown in aggregate. Please refer to Schedule B of this report for the proportionate share of certain pension amounts as required by GASB 68.

Paragraphs 77 and 78(a)-(f): These paragraphs require information to be disclosed regarding the actuarial assumptions used to measure the TPL. The actuarial assumptions used in the June 30, 2018 valuation were based on the results of an actuarial experience study for the period July 1, 2010 – June 30, 2015. The complete set of actuarial assumptions utilized in developing the TPL are outlined in Schedule D. The TPL was determined by an actuarial valuation as of June 30, 2018, using the following key actuarial assumptions:

Inflation	2.75 percent
Salary increases	3.25 – 6.50 percent, including inflation
Investment rate of return	8.00 percent, net of pension plan investment expense, including inflation

Mortality rates were based on the RPH-2014 White Collar table with employee and annuitant rates blended from ages 50 to 80, projected to the year 2020 using the BB improvement scale, and further adjusted to grade in increases (5% for females and 8% for males) to rates over age 80 for the period after service retirement and for dependent beneficiaries as well as for active members. The RPH-2014 Disabled Mortality Table projected to 2017 with Scale BB is used for the period after disability retirement.

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)	7.0	1.3
High Yield Bonds	5.0	3.9
Emerging Market Bond	5.0	3.7
Inflation Linked Bonds	3.0	1.0
Cash	6.0	0.4

Discount rate. The discount rate used to measure the total pension liability was 8.00 percent. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that State contributions will be made at the actuarially determined rates in future years. Based on those assumptions, the pension plan’s fiduciary net position 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 total pension liability.

Paragraph 78 (g): This paragraph requires disclosure of the sensitivity of the net pension liability to changes in the discount rate. The following presents the net pension liability of the System, calculated using the discount rate of 8.00 percent, as well as what the System’s net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (7.00 percent) or 1-percentage-point higher (9.00 percent) than the current rate (\$ thousands):

	1% Decrease (7.00%)	Current Discount Rate (8.00%)	1% Increase (9.00%)
Collective net pension liability	\$16,636,976	\$13,164,059	\$10,227,117



Paragraph 80(a): This paragraph requires disclosure of the employer's proportionate share of the collective NPL and if an employer has a special funding situation the portion of the non-employer contributing entities' proportional share of the collective NPL that is associated with the employer. These amounts are shown in Schedule B.

Paragraph 80(b): This paragraph requires disclosure of the employer's proportion (percentage) of the collective NPL and the changes in proportion since the prior measurement date. 100% of the collective NPL is allocated to the State.

Paragraph 80(c): June 30, 2018 is the actuarial valuation date upon which the TPL is based.

Paragraph 80(d) and (e): There were no changes in assumptions or benefits that affected the measurement of the TPL since the prior measurement date.

Paragraph 80(f): Not applicable.

Paragraph 80(g): Please see Section IV of this report for the development of the collective pension expense. The PE for each employer is shown in Schedule B.

Paragraph 80(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 collective pension expense they are labeled deferred inflows. If they will increase collective 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 Plan members at the beginning of the fiscal year. Investment gains and losses are amortized over a fixed five year period.



The table below provides a summary in the difference between projected and actual earnings on plan investments.

Investment Earnings (Gain)/Loss as of June 30, 2018		
(\$ thousands)		
a	Expected asset return rate	8.00%
b	Beginning of year market value assets (BOY)	\$17,134,326
c	End of year market value assets (EOY)	17,946,839
d	Expected return on BOY for plan year (a x b)	1,370,746
	External Cash Flow	
	Contributions - employer	1,272,277
	Contributions - member	312,150
	Refunds of contributions	0
	Benefits paid	(1,994,092)
	Admin expenses	0
	Other changes	<u>(2,753)</u>
e	Net cash flow	(412,418)
f	Expected return on net cash flow (a x 0.5 x e)	(16,497)
g	Projected earnings for plan year (d + f)	1,354,249
h	Net investment income (c - b - e)	1,224,931
	Investment earnings (gain)/loss (g -h)	129,318

*Other changes are comprised of participating employer contributions for Early Retirement Incentive Plans, service purchases, etc.

The table below provides a summary of the determination of the average expected remaining service life for the entire Plan membership determined at the beginning of the year.

Category	Number (1)	Average Years of Working Lifetime (2)
a. Active Members	50,877	12.60
b. Inactive Members	50,817	0.00
c. Total	101,694	
Weighted Average Years of Working Lifetime [(a1 * a2) + (b1 * b2)]/c1		6.30



The table below provides a summary of the collective deferred inflows and outflows as of the Measurement Date. 100% of these amounts are allocated to the State.

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	\$0	\$543,452
Changes of assumptions	1,238,217	0
Net difference between projected and actual earnings on plan investments	243,425	0
Employer contributions subsequent to the Measurement Date	<u>0</u>	<u>0</u>
Total	<u>\$1,481,642</u>	<u>\$543,452</u>

Paragraph 80(i): Collective amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in the collective pension expense as follows. 100% of these amounts are allocated to the State.

Deferred Amounts to be Recognized in Fiscal Years Following the Reporting Date:	
Year 1	\$490,835
Year 2	310,485
Year 3	37,060
Year 4	181,537
Year 5	(62,868)
Year 6	(18,859)
Year 7	0
Thereafter	0

Paragraph 80(j): The amount of revenue recognized for the support provided by non-employer contributing entities for the participating employers is provided in Schedule B.



SECTION IV – COLLECTIVE PENSION EXPENSE

As noted earlier, the collective 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 actuarial funding method. The second item is interest on the beginning Total Pension Liability (TPL) and the cash flow during the year at the 8.00% rate of return 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, or
- 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 was a benefit change to be recognized as member contributions increased from 6% to 7% of salary.

The next item to be recognized is the portion of current year changes in TPL due to actual versus expected Plan 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 determined at the beginning of the year. The average expected remaining service life of active members is the average number of years the active members are expected to remain active. For the year ended June 30, 2016 this number of years for the active members is 12.60. The average expected remaining service life of the inactive members is, of course, zero. Therefore, the number of years to use for the amortization is the weighted average for all active and inactive members, or 6.30 years.

The last item under changes in TPL are changes in actuarial assumptions. There were no changes in assumptions since the last measurement date. If there was a change in TPL due to changes in actuarial assumptions, recognition of the change would also be spread over the average expected remaining service life of the plan membership.

Member contributions for the year and projected earnings on the Fiduciary Net Position (FNP), again at the discount rate used to calculate the liabilities, are subtracted from the amount determined thus far. One-fifth of current period differences between projected and actual investment earnings on the FNP are recognized in the pension expense.



The current year portions of previously determined experience, assumption and earnings amounts, recognized as deferred outflows and inflows (see Section III) are included also. Deferred outflows are added to the PE while deferred inflows are subtracted from the PE. Finally, administrative expenses and other miscellaneous items are included.

The calculation of the Collective Pension Expense determined as of the measurement date is shown in the following table:

Collective Pension Expense Determined as of the Measurement Date (\$ thousands)	
Service Cost at end of year	\$465,207
Interest on the TPL and net cash flow	2,371,168
Current-period benefit changes	28,036
Expensed portion of current-period difference between expected and actual experience in the total pension liability	(62,868)
Expensed portion of current-period changes of assumptions	0
Member contributions	(312,150)
Projected earnings on plan investments	(1,354,249)
Expensed portion of current-period differences between projected and actual earnings on plan investments	25,864
Administrative expense	0
Other	2,753
Recognition of beginning deferred outflows of resources as pension expense	368,856
Recognition of beginning deferred inflows of resources as pension expense	<u>(55,184)</u>
Collective Pension Expense	<u>\$1,477,433</u>



SECTION V – REQUIRED SUPPLEMENTARY INFORMATION

Paragraphs 81(a)-(b): CMC was not required to supply this information.

Paragraph 82:

Changes of benefit terms. Beginning January 1, 2018, member contributions increased from 6% to 7% of salary.

Changes of assumptions. In 2016, rates of withdrawal, disability, retirement, mortality and assumed rates of salary increase were adjusted to more closely reflect actual and anticipated experience. These assumptions were recommended as part of the Experience Study for the System for the five year period ended June 30, 2015.

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. The following actuarial methods and assumptions were used to determine the most recent contributions reported in that schedule:

Actuarial cost method	Entry age
Amortization method	Level percent of pay, closed
Single equivalent amortization period	17.6 years
Asset valuation method	4-year smoothed market
Inflation	2.75 percent
Salary increase	3.25-6.50 percent, including inflation
Investment rate of return	8.00 percent, net of investment related expense



SCHEDULE A

**CONNECTICUT STATE TEACHERS' RETIREMENT SYSTEM
Schedule of Employer Allocations as of June 30, 2018**

Employers	2018 Expected Employer Contribution Effort for Allocation Purposes	Employer Allocation Percentage
Andover	\$ 577,353	0.045380%
Ansonia	4,192,952	0.329563%
Ashford	973,395	0.076508%
Avon	8,674,657	0.681821%
Barkhamsted	512,096	0.040250%
Berlin	6,786,365	0.533403%
Bethany	976,445	0.076748%
Bethel	6,369,195	0.500614%
Highville Chtr	581,735	0.045724%
Bloomfield	4,577,279	0.359771%
Bolton	2,091,284	0.164373%
Bozrah	583,096	0.045831%
Branford	8,154,154	0.640910%
Bridgeport	37,448,953	2.943459%
Bristol	17,502,873	1.375712%
Brookfield	6,205,172	0.487722%
Brooklyn	1,770,313	0.139145%
Cldrn Ctr Com Prog	92,639	0.007281%
Canaan	272,947	0.021453%
Canterbury	1,094,669	0.086040%
Canton	3,692,092	0.290196%
Chaplin	461,643	0.036285%
Cheshire	10,457,552	0.821956%
Chester	469,018	0.036864%
Clinton	4,963,394	0.390119%
Colchester	5,748,688	0.451842%
Amistad Acd	797,600	0.062691%
Colebrook	290,676	0.022847%
Columbia	1,309,168	0.102900%
Cornwall	315,872	0.024827%
Coventry	4,043,816	0.317841%
Cromwell	4,383,311	0.344525%
Danbury	23,601,601	1.855068%
Darien	14,185,844	1.114997%
Deep River	514,182	0.040414%
Derby	2,914,666	0.229091%
Eastford	404,269	0.031775%
East Granby	2,542,968	0.199875%



Employers	2018 Expected Employer Contribution Effort for Allocation Purposes	Employer Allocation Percentage
East Haddam	\$ 2,946,388	0.231584%
East Hampton	4,901,786	0.385277%
East Hartford	16,767,672	1.317926%
East Haven	6,240,414	0.490492%
East Lyme	6,622,254	0.520504%
Easton	2,301,735	0.180915%
East Windsor	3,346,774	0.263054%
Ellington	5,883,405	0.462431%
Enfield	11,677,242	0.917822%
Essex	673,415	0.052930%
Fairfield	26,829,241	2.108758%
Farmington	10,264,851	0.806809%
Franklin	402,484	0.031635%
Glastonbury	14,714,965	1.156585%
Granby	4,353,901	0.342213%
Greenwich	30,301,893	2.381706%
Griswold	3,919,564	0.308075%
Groton	11,425,187	0.898011%
Guilford	8,228,435	0.646749%
Hamden	14,558,428	1.144281%
Hampton	335,549	0.026374%
Hartford	43,070,353	3.385297%
Hartland	495,455	0.038942%
Hebron	1,718,316	0.135058%
Kent	611,226	0.048042%
Killingly	4,985,997	0.391896%
Lebanon	2,539,565	0.199608%
Ledyard	5,552,429	0.436417%
Lisbon	971,012	0.076321%
Litchfield	2,678,921	0.210561%
Madison	7,645,451	0.600927%
Manchester	16,002,900	1.257816%
Mansfield	3,537,005	0.278006%
Marlborough	1,248,424	0.098125%
Meriden	17,382,917	1.366284%
Middletown	11,304,721	0.888542%
Milford	15,945,462	1.253301%
Monroe	8,555,369	0.672445%
Montville	5,784,261	0.454638%
Naugatuck	9,161,951	0.720122%
New Britain	22,698,826	1.784110%
New Canaan	12,944,481	1.017426%
New Fairfield	6,131,469	0.481929%



Employers	2018 Expected Employer Contribution Effort for Allocation Purposes	Employer Allocation Percentage
New Hartford	\$ 1,001,137	0.078689%
New Haven	46,537,839	3.657839%
Newington	10,062,923	0.790938%
New London	7,035,869	0.553014%
New Milford	8,637,676	0.678915%
Newtown	10,753,263	0.845198%
Norfolk	261,240	0.020533%
North Branford	4,234,432	0.332823%
North Canaan	619,300	0.048676%
North Haven	7,929,780	0.623275%
No.Stonington	1,958,420	0.153930%
Norwalk	28,717,306	2.257158%
Norwich	6,112,755	0.480458%
NFA	5,040,281	0.396162%
Old Saybrook	3,775,299	0.296736%
Orange	3,032,878	0.238382%
Oxford	4,020,205	0.315985%
Plainfield	4,501,286	0.353798%
Plainville	5,457,887	0.428986%
Plymouth	3,125,057	0.245627%
Pomfret	875,384	0.068804%
Portland	3,008,170	0.236440%
Preston	1,096,533	0.086187%
Putnam	2,711,780	0.213144%
Redding	3,123,515	0.245506%
RSD 1	2,045,012	0.160736%
RSD 4	2,219,325	0.174437%
RSD 5	6,080,673	0.477936%
RSD 6	2,463,699	0.193645%
RSD 7	2,466,688	0.193880%
RSD 8	3,600,371	0.282986%
Ridgefield	13,455,113	1.057562%
Rocky Hill	6,485,172	0.509730%
Salem	970,664	0.076293%
Salisbury	773,548	0.060800%
Scotland	335,634	0.026381%
Seymour	5,001,684	0.393129%
Sharon	525,687	0.041319%
Shelton	11,539,951	0.907031%
Sherman	1,044,188	0.082072%
Simsbury	10,728,134	0.843223%
Somers	3,514,678	0.276251%
Southington	13,702,615	1.077015%



Employers	2018 Expected Employer Contribution Effort for Allocation Purposes	Employer Allocation Percentage
S. Windsor	\$ 10,586,662	0.832104%
Sprague	603,528	0.047437%
Stafford	3,541,639	0.278370%
Stamford	43,188,379	3.394574%
SDE	10,865,982	0.854058%
DCF Recq Home	479,728	0.037706%
Sterling	705,063	0.055417%
Stonington	5,068,255	0.398361%
Stratford	16,491,399	1.296211%
Suffield	5,607,373	0.440735%
Thomaston	2,052,900	0.161356%
Thompson	2,305,670	0.181224%
Tolland	5,074,397	0.398844%
Torrington	8,991,978	0.706763%
Trumbull	16,902,321	1.328510%
Union	188,001	0.014777%
Vernon	7,765,665	0.610375%
Voluntown	715,002	0.056199%
Wallingford	15,998,528	1.257472%
Waterbury	36,050,885	2.833572%
Waterford	7,229,141	0.568205%
Watertown	5,510,347	0.433109%
Westbrook	2,479,519	0.194888%
W.Hartford	23,556,404	1.851515%
West Haven	13,305,331	1.045789%
Weston	7,081,527	0.556603%
Westport	17,422,366	1.369385%
Wethersfield	8,360,672	0.657142%
Willington	1,159,491	0.091135%
Wilton	11,663,084	0.916709%
Winchester	1,560,725	0.122672%
Windham	7,697,498	0.605017%
Windsor	9,674,179	0.760383%
Windsor Locks	4,932,894	0.387722%
Winsted/Gilbert	1,245,951	0.097931%
Wolcott	5,052,862	0.397151%
Woodbridge	2,038,112	0.160194%
Woodstock	1,514,475	0.119037%
Woodstock Ad	2,411,968	0.189579%
UCONN	458,931	0.036072%
RSD 9	2,875,523	0.226014%
CCI Somers	-	0.000000%
RSD 10	5,507,961	0.432922%



Employers	2018 Expected Employer Contribution Effort for Allocation Purposes	Employer Allocation Percentage
Supervision District	\$ 1,056,753	0.083060%
NWCTC	122,915	0.009661%
MCTC	329,725	0.025916%
Norwalk CTC	190,823	0.014999%
WCSU	377,376	0.029661%
CCSU	928,765	0.073000%
ESCU	269,020	0.021145%
SCSU	818,748	0.064353%
RSD 11	702,643	0.055227%
CCTC	36,811	0.002893%
Hou CTC	338,224	0.026584%
Naug CTC	390,810	0.030717%
MCTC	108,245	0.008508%
Ed Connection	784,976	0.061699%
RSD 12	2,575,197	0.202409%
Gateway CTC	528,553	0.041544%
RSD 13	4,775,327	0.375337%
RSD 14	4,551,519	0.357746%
CCI Cheshire	17,083	0.001343%
Shared Svcs	489,288	0.038458%
CREC	24,533,680	1.928329%
RSD 15	8,899,417	0.699487%
RSD 16	4,884,750	0.383938%
TRCC (Mohegan)	140,700	0.011059%
Tunxis CTC	158,537	0.012461%
QVCC	45,921	0.003609%
Odyssey	572,225	0.044976%
CES	3,623,843	0.284831%
ACES	6,771,094	0.532203%
Project Learn	4,842,521	0.380618%
RSD 17	4,955,759	0.389519%
Asnun CTC	49,880	0.003921%
Project O	-	0.000000%
RSD 18	3,847,461	0.302408%
DCF Mental Health	-	0.000000%
EASTCONN	2,190,141	0.172143%
BSBE	334,147	0.026264%
RSD 19	3,010,002	0.236584%
UConn Health	333,071	0.026179%
CCI Suffield	-	0.000000%
CCI Niantic	21,303	0.001674%
Children's CTR	335,729	0.026388%
Bridges Academy	455,049	0.035767%



Employers	2018 Expected Employer Contribution Effort for Allocation Purposes	Employer Allocation Percentage
Common Ground	\$ 406,821	0.031976%
Explorations	296,843	0.023332%
Intergrated Day	543,022	0.042681%
Isaac	494,548	0.038871%
Jumoke Academy	952,067	0.074832%
Side by Side	351,107	0.027597%
Trailblazers Academy	296,146	0.023277%
New Beginnings	689,843	0.054221%
Elm City CP	490,774	0.038574%
Stamford Academy	189,168	0.014868%
Park City	501,676	0.039431%
AF Bridgeport Academy	466,380	0.036657%
SERC	31,979	0.002514%
AF Hartford Acad	1,054,420	0.082877%
Brass City	196,706	0.015461%
Path Academy	180,625	0.014197%
Great Oaks Charter	200,209	0.015736%
Booker T. Washington(BTW)	311,762	0.024504%
Capitol Prep Harbor	326,426	0.025657%
Stamford Charter Excellance	197,056	0.015488%
Total	\$ 1,272,277,000	100.000000%



SCHEDULE B

CONNECTICUT STATE TEACHERS' RETIREMENT SYSTEM
Schedule of Pension Amounts by Employer as of June 30, 2018

Employers	State's Proportionate Share Of the Net Pension Liability Associated with the District	Pension Expense and Revenue For State Support
Andover	\$ 5,973,789	\$ 670,452
Ansonia	43,383,840	4,869,069
Ashford	10,071,567	1,130,355
Avon	89,755,368	10,073,454
Barkhamsted	5,298,582	594,672
Berlin	70,217,500	7,880,674
Bethany	10,103,131	1,133,898
Bethel	65,901,106	7,396,235
Highville Chtr	6,019,124	675,540
Bloomfield	47,360,415	5,315,370
Bolton	21,638,197	2,428,505
Bozrah	6,033,212	677,121
Branford	84,369,802	9,469,019
Bridgeport	387,478,686	43,487,635
Bristol	181,099,594	20,325,229
Brookfield	64,203,987	7,205,763
Brooklyn	18,317,166	2,055,778
Cldrn Ctr Com Prog	958,518	107,577
Canaan	2,824,146	316,961
Canterbury	11,326,372	1,271,185
Canton	38,201,520	4,287,446
Chaplin	4,776,556	536,084
Cheshire	108,202,716	12,143,843
Chester	4,852,854	544,647
Clinton	51,355,496	5,763,747
Colchester	59,480,808	6,675,670
Amistad Acd	8,252,646	926,214
Colebrook	3,007,579	337,548
Columbia	13,545,762	1,520,272
Cornwall	3,268,285	366,807
Coventry	41,840,756	4,695,886
Cromwell	45,353,455	5,090,124
Danbury	244,202,221	27,407,384
Darien	146,778,802	16,473,327
Deep River	5,320,168	597,095
Derby	30,157,616	3,384,659
Eastford	4,182,906	469,457
East Granby	26,311,704	2,953,024



Employers	State's Proportionate Share Of the Net Pension Liability Associated with the District	Pension Expense and Revenue For State Support
East Haddam	\$ 30,485,833	\$ 3,421,496
East Hampton	50,718,039	5,692,204
East Hartford	173,492,584	19,471,477
East Haven	64,568,622	7,246,687
East Lyme	68,519,467	7,690,099
Easton	23,815,711	2,672,893
East Windsor	34,628,569	3,886,445
Ellington	60,874,706	6,832,110
Enfield	120,822,666	13,560,209
Essex	6,967,728	782,004
Fairfield	277,598,127	31,155,484
Farmington	106,208,867	11,920,068
Franklin	4,164,443	467,385
Glastonbury	152,253,528	17,087,768
Granby	45,049,157	5,055,972
Greenwich	313,529,134	35,188,105
Griswold	40,555,140	4,551,598
Groton	118,214,690	13,267,510
Guilford	85,138,383	9,555,279
Hamden	150,633,871	16,905,990
Hampton	3,471,874	389,657
Hartford	445,642,471	50,015,492
Hartland	5,126,395	575,347
Hebron	17,779,161	1,995,397
Kent	6,324,263	709,787
Killingly	51,589,365	5,789,995
Lebanon	26,276,501	2,949,073
Ledyard	57,450,149	6,447,764
Lisbon	10,046,917	1,127,589
Litchfield	27,718,392	3,110,900
Madison	79,106,330	8,878,288
Manchester	165,579,605	18,583,385
Mansfield	36,596,855	4,107,350
Marlborough	12,917,254	1,449,734
Meriden	179,858,436	20,185,931
Middletown	116,968,248	13,127,619
Milford	164,985,296	18,516,684
Monroe	88,521,118	9,934,931
Montville	59,848,879	6,716,979
Naugatuck	94,797,335	10,639,326
New Britain	234,861,347	26,359,036
New Canaan	133,934,601	15,031,792
New Fairfield	63,441,386	7,120,175



Employers	State's Proportionate Share Of the Net Pension Liability Associated with the District	Pension Expense and Revenue For State Support
New Hartford	\$ 10,358,617	\$ 1,162,572
New Haven	481,520,026	54,042,114
Newington	104,119,553	11,685,580
New London	72,799,078	8,170,410
New Milford	89,372,736	10,030,510
Newtown	111,262,401	12,487,238
Norfolk	2,703,008	303,365
North Branford	43,813,034	4,917,239
North Canaan	6,407,801	719,162
North Haven	82,048,238	9,208,465
No.Stonington	20,263,478	2,274,217
Norwalk	297,133,647	33,348,001
Norwich	63,247,758	7,098,443
NFA	52,151,029	5,853,031
Old Saybrook	39,062,448	4,384,070
Orange	31,380,736	3,521,933
Oxford	41,596,457	4,668,467
Plainfield	46,574,127	5,227,123
Plainville	56,471,932	6,337,976
Plymouth	32,334,497	3,628,976
Pomfret	9,057,464	1,016,540
Portland	31,125,086	3,493,241
Preston	11,345,659	1,273,350
Putnam	28,058,377	3,149,057
Redding	32,318,538	3,627,185
RSD 1	21,159,427	2,374,772
RSD 4	22,963,023	2,577,194
RSD 5	62,915,809	7,061,188
RSD 6	25,491,522	2,860,973
RSD 7	25,522,449	2,864,444
RSD 8	37,252,502	4,180,935
Ridgefield	139,218,030	15,624,764
Rocky Hill	67,101,102	7,530,913
Salem	10,043,313	1,127,184
Salisbury	8,003,784	898,283
Scotland	3,472,756	389,756
Seymour	51,751,673	5,808,211
Sharon	5,439,209	610,455
Shelton	119,402,141	13,400,780
Sherman	10,804,052	1,212,564
Simsbury	111,002,388	12,458,057
Somers	36,365,843	4,081,423
Southington	141,778,900	15,912,176



Employers	State's Proportionate Share Of the Net Pension Liability Associated with the District	Pension Expense and Revenue For State Support
S. Windsor	\$ 109,538,605	\$ 12,293,773
Sprague	6,244,614	700,848
Stafford	36,644,803	4,112,732
Stamford	446,863,667	50,152,550
SDE	112,428,682	12,618,133
DCF Recq Home	4,963,676	557,085
Sterling	7,295,185	818,756
Stonington	52,440,472	5,885,516
Stratford	170,634,027	19,150,654
Suffield	58,018,646	6,511,568
Thomaston	21,241,051	2,383,933
Thompson	23,856,423	2,677,462
Tolland	52,504,028	5,892,649
Torrington	93,038,640	10,441,943
Trumbull	174,885,776	19,627,838
Union	1,945,221	218,317
Vernon	80,350,171	9,017,887
Voluntown	7,398,020	830,297
Wallingford	165,534,364	18,578,307
Waterbury	373,013,095	41,864,128
Waterford	74,798,836	8,394,848
Watertown	57,014,729	6,398,896
Westbrook	25,655,212	2,879,344
W.Hartford	243,734,575	27,354,899
West Haven	137,668,256	15,450,829
Weston	73,271,494	8,223,430
Westport	180,266,606	20,231,741
Wethersfield	86,506,620	9,708,839
Willington	11,997,078	1,346,460
Wilton	120,676,176	13,543,768
Winchester	16,148,584	1,812,393
Windham	79,644,856	8,938,728
Windsor	100,097,275	11,234,150
Windsor Locks	51,039,909	5,728,328
Winsted/Gilbert	12,891,663	1,446,861
Wolcott	52,281,204	5,867,641
Woodbridge	21,088,036	2,366,759
Woodstock	15,670,048	1,758,686
Woodstock Ad	24,956,271	2,800,900
UCONN	4,748,488	532,934
RSD 9	29,752,608	3,339,204
CCI Somers	-	-
RSD 10	56,990,047	6,396,126



Employers	State's Proportionate Share Of the Net Pension Liability Associated with the District		Pension Expense and Revenue For State Support	
Supervision District	\$	10,934,064	\$	1,227,155
NWCTC		1,271,783		142,735
MCTC		3,411,619		382,894
Norwalk CTC		1,974,415		221,593
WCSU		3,904,656		438,229
CCSU		9,609,794		1,078,530
ESCU		2,783,510		312,400
SCSU		8,471,465		950,772
RSD 11		7,270,145		815,945
CCTC		380,879		42,747
Hou CTC		3,499,548		392,762
Naug CTC		4,043,656		453,829
MCTC		1,119,993		125,699
Ed Connection		8,122,034		911,555
RSD 12		26,645,180		2,990,451
Gateway CTC		5,468,854		613,782
RSD 13		49,409,595		5,545,354
RSD 14		47,093,885		5,285,456
CCI Cheshire		176,752		19,837
Shared Svcs		5,062,590		568,186
CREC		253,846,302		28,489,762
RSD 15		92,080,926		10,334,457
RSD 16		50,541,776		5,672,421
TRCC (Mohegan)		1,455,805		163,388
Tunxis CTC		1,640,355		184,101
QVCC		475,142		53,326
Odyssey		5,920,726		664,497
CES		37,495,363		4,208,192
ACES		70,059,492		7,862,940
Project Learn		50,104,836		5,623,382
RSD 17		51,276,498		5,754,881
Asnun CTC		516,103		57,923
Project O		-		-
RSD 18		39,809,105		4,467,869
DCF Mental Health		-		-
EASTCONN		22,661,061		2,543,304
BSBE		3,457,367		388,028
RSD 19		31,144,040		3,495,368
UConn Health		3,446,236		386,779
CCI Suffield		-		-
CCI Niantic		220,423		24,739
Children's CTR		3,473,736		389,865
Bridges Academy		4,708,327		528,426



Employers	State's Proportionate Share Of the Net Pension Liability Associated with the District	Pension Expense and Revenue For State Support
Common Ground	\$ 4,209,316	\$ 472,421
Explorations	3,071,390	344,709
Intergrated Day	5,618,572	630,585
Isaac	5,117,014	574,294
Jumoke Academy	9,850,897	1,105,589
Side by Side	3,632,851	407,723
Trailblazers Academy	3,064,182	343,900
New Beginnings	7,137,703	801,081
Elm City CP	5,077,968	569,912
Stamford Academy	1,957,296	219,672
Park City	5,190,765	582,572
AF Bridgeport Academy	4,825,562	541,584
SERC	330,881	37,136
AF Hartford Acad	10,909,929	1,224,447
Brass City	2,035,283	228,425
Path Academy	1,868,902	209,751
Great Oaks Charter	2,071,531	232,493
Booker T. Washington(BTW)	3,225,753	362,034
Capitol Prep Harbor	3,377,477	379,062
Stamford Charter Excellance	2,038,908	228,831
Total	\$ 13,164,059,000	\$ 1,477,433,000



SCHEDULE C

SUMMARY OF BENEFIT PROVISIONS EVALUATED

Covered Employees

Any teacher, principal, superintendent or supervisor engaged in service of public schools, plus professional employees at State schools of higher education if they choose to be covered.

Annual Salary

Annual Salary rate for service as a Connecticut teacher during a school year excluding amounts paid for extra duty assignments, coaching, unused sick time, unused vacation or terminal pay.

Average Annual Salary

Average of Annual Salary received during three years of highest salary.

Credited Service

One month for each month of service as a teacher in Connecticut public schools, maximum 10 months for each school year. Ten months of credited service constitutes one year of Credited Service. Certain other types of teaching service, State employment, or war-time military service may be purchased prior to retirement, if the Member pays one-half the cost.

Normal Retirement

Eligibility - Age 60 with 20 years of Credited Service in Connecticut, or 35 years of Credited Service including at least 25 years of service in Connecticut.

Benefit - 2% of Average Annual Salary times years of Credited Service (maximum benefit is 75% of Average Annual Salary)

In addition, amounts derived from the accumulation of mandatory contributions made prior to July 1, 1989 and voluntary contributions by the teacher are payable.

Minimum Benefit: Effective January 1, 1999, Public Act 98-251 provides a minimum monthly retirement benefit of \$1,200 to teachers who retire under the Normal Retirement provisions and who have completed at least 25 years of full time Connecticut service at retirement.

Early Retirement

Eligibility - 25 years of Credited Service including 20 years of Connecticut service, or age 55 with 20 years of Credited Service including 15 years of Connecticut service.

Benefit - Reduced normal retirement benefit. The early retirement factors currently in effect are 6% per year for the first five years by which early retirement precedes the minimum normal retirement age and 4% per year for the next five years by which early retirement precedes the minimum normal retirement age. Effective July 1, 1999, the reduction for individuals with 30 or more years of service is 3% for each year by which early retirement precedes the minimum retirement age.



Proratable Retirement

Eligibility - Age 60 with 10 years of Credited Service.

Benefit - 2% less 0.1% for each year less than 20 years of Average Annual Salary times years of Credited Service in Connecticut, plus 1% of Average Annual Salary times years of additional Credited Service time.

Disability Retirement

Eligibility - 5 years of Credited Service in Connecticut if not incurred in the performance of duty and no service requirement if incurred in the performance of duty.

Benefit - 2% of Average Annual Salary times Credited Service to date of disability, but not less than 15% of Average Annual Salary, nor more than 50% of Average Annual Salary. In addition, disability benefit under this plan (without regard to any cost-of-living adjustments) plus any initial award of Social Security benefits and workers' compensation cannot exceed Average Annual Salary.

Termination of Employment

Less than 5 years of Credited Service - Return mandatory contributions with interest.

5 or more years of Credited Service - Return employee mandatory contributions with interest and 1% contributions made prior to July 1, 1989 without interest.

10 or more years of Credited Service - Member is 100% vested in the accrued benefit based on Credited Service and Average Annual Salary as of the date of termination of covered employment. Benefits are payable at age 60 and early retirement reductions are based on the number of years of service the member would have had if they had continued to work until age 60.

Member may elect return of all contributions plus interest on employee mandatory contributions in lieu of vested benefit.

Pre-Retirement Death Benefits

A lump sum plus one of the following: survivor's benefit, return of all contributions with interest, or surviving spouse's benefit.

- Lump Sum: \$1,000 for the first 5 years of Connecticut service plus \$200 per year thereafter. Maximum benefit: \$2,000.
- Survivor's Benefit: For active teachers who die while in service, the family maximum benefit payable to survivors is \$1,500 per month. Each minor child is entitled to \$300 per month. The surviving spouse's benefit is \$300 per month if the member has 12 or less years of service. For each additional year of service, the surviving spouse's monthly benefit is increased \$25, up to a maximum of \$600.
- Accumulated contributions with interest plus dependent children's benefits as described in the "Survivor's Benefit" paragraph.
- Surviving Spouse's Benefit: An active member who is eligible for immediate retirement and who has named his or her spouse as primary beneficiary will be covered by a 100% Plan D co-participant option in the event of his or her death prior to retirement.



Benefit Options

Normal form: Partial Refund Option – 75% of total benefit is paid as a life annuity. If 25% of the benefits paid prior to death do not exceed the Member's mandatory contributions plus interest frozen at the date of the benefit commencement, the difference is paid to the Member's beneficiary.

Optional Forms: 5-, 10-, 20-, or 25-year certain and life and 33-1/3%, 50%, 66-2/3%, 75%, or 100% co-participant annuity (if co-participant dies first, benefit reverts to unreduced amount).

Amounts payable under the optional forms are determined on an actuarially equivalent basis. Actuarial equivalence is determined using mortality as described in Section F of the report, 8.5% interest, and 2% compound COLA. A unisex mortality blend of 60% male was used for certain benefit forms, and a blend of 80% male was used for co-participant annuity forms.

Cost-of-Living Allowance

For teachers who retired prior to September 1, 1992, pension benefit adjustments are made in accordance with increases in the Consumer Price Index, with a minimum of 3% and a maximum of 5% per annum.

For teachers who were members of the Teachers' Retirement System before July 1, 2007, and retire on or after September 1, 1992, pension benefit adjustments are made that are consistent with those provided for Social Security benefits on January 1 of the year granted, with a maximum of 6% per annum. If the return on assets in the previous year was less than 8.5%, the maximum increase is 1.5%.

For teachers who were members of the Teachers' Retirement System after July 1, 2007, pension benefit adjustments are made that are consistent with those provided for Social Security benefits on January 1 of the year granted, with a maximum of 5% per annum. If the return on assets in the previous year was less than 11.5%, the maximum increase is 3%, and if the return on the assets in the previous year was less than 8.5%, the maximum increase is 1.0%.

Teachers' Required Contribution

Effective July 1, 1992, each teacher is required to contribute 6% of annual salary for the pension benefit. Beginning January 1, 2018, each teacher is required to contribute 7% of annual salary.

State Contribution

The State's contribution requirement is determined in accordance with Section 10-183z (which reflects Public Act 79-436 as amended). The additional 1% teachers' required contribution (above) offsets State required contribution only for the biennium ending June 30, 2019.

Early Retirement Incentive

A local or regional board of education may establish a retirement incentive plan. The plan shall provide for purchase of additional credited service by a board of education and a member of the system who chooses to participate in the plan, of additional credited service for such member and for payment by the board of education of not less than fifty per cent of the entire cost of such total cost. Any such plan shall specify a maximum number of years to be purchased, not to exceed five. Members must have attained age 50 and be eligible for retirement with the additional purchased service. The amount of service purchased cannot exceed the lesser of five years and one-fifth of the member's credited service.



SCHEDULE D

STATEMENT OF ACTUARIAL ASSUMPTIONS AND METHODS

Investment Rate of Return

Assumed annual rate of 8.00% net of investment expenses.

Rates of Annual Salary Increase

Rates of Annual Salary Increase Assumption	
Years of Service	
0	6.50%
1	6.50
2	6.25
3	6.25
4	6.25
5	6.25
6	6.25
7	6.25
8	6.25
9	6.25
10	5.50
11	5.50
12	5.00
13	5.00
14	5.00
15	4.75
16	4.50
17	4.25
18	4.00
19	3.75
20	3.50
21+	3.25



Active Member Decrement Rates

a. Table below provides a summary of the assumed rates of service retirement.

Annual Rates of Retirement						
Age	Unreduced		Proratable		Reduced	
	Male	Female	Male	Female	Male	Female
50	27.5%	27.5%			1.00%	1.00%
55	38.5%	27.5%			4.00%	4.75%
60	22.0%	27.5%	6.0%	5.5%		
65	36.3%	32.5%	13.0%	12.5%		
70	100.0%	32.5%	30.0%	14.5%		
75	100.0%	32.5%	30.0%	18.0%		
80	100.0%	100.0%	100.0%	100.0%		

b. Table below provides a summary of the assumed rates of mortality while actively employed and disability.

Annual Rates of Death and Disability				
Age	Pre-Retirement Mortality		Disability	
	Male	Female	Male	Female
20	0.0377%	0.0147%	0.0341%	0.0500%
25	0.0412%	0.0162%	0.0341%	0.0500%
30	0.0404%	0.0205%	0.0341%	0.0410%
35	0.0448%	0.0272%	0.0341%	0.0410%
40	0.0539%	0.0375%	0.0536%	0.0720%
45	0.0818%	0.0622%	0.1219%	0.1200%
50	0.1476%	0.1116%	0.2438%	0.2630%
55	0.2800%	0.1927%	0.5363%	0.4380%
60	0.4557%	0.2914%	0.9604%	0.5000%
64	0.6572%	0.4272%		



- c. Table below provides a summary of the assumed rates of withdrawal for active members prior to eligibility for retirement.

Annual Rates of Withdrawal					
10 or more years of service					
Years of Service	Male	Female	Age	Male	Female
0	14.00%	12.00%	25	1.50%	4.00%
1	11.00	10.50	30	1.50	4.00
2	8.00	8.75	35	1.50	3.50
3	6.50	7.50	40	1.50	2.30
4	4.50	6.75	45	1.59	1.50
5	3.50	6.00	50	2.04	2.00
6	3.00	5.25	55	3.44	2.50
7	2.75	4.75	59	4.00	2.90
8	2.50	4.25			
9	2.50	4.00			

Post-Retirement Mortality

For healthy retirees and beneficiaries, the RPH-2014 White Collar table with employee and annuitant rates blended from ages 50 to 80 projected to the year 2020 using the BB improvement scale and further adjusted to grade in increases (5% for females and 8% for males) to rates over age 80. For disabled retirees, the RPH-2014 Disabled Mortality table projected to 2017 using the BB improvement scale. The following are sample rates for the retirees, beneficiaries, and disabled:

Annual Rates of Death				
Age	<u>Healthy</u>		<u>Disabled</u>	
	Male	Female	Male	Female
50	0.1476%	0.1116%	1.8406%	1.1487%
55	0.2800%	0.1927%	2.2661%	1.3727%
60	0.4557%	0.2914%	2.7070%	1.5886%
65	0.7214%	0.4747%	3.2573%	1.9356%
70	1.1906%	0.8584%	4.0909%	2.6165%
75	2.0499%	1.5897%	5.4230%	3.8159%
80	3.6764%	2.9756%	7.5768%	5.7047%
85	6.9254%	5.4419%	11.1066%	8.5219%

Marriage Assumption

85% of males and 75% of females assumed to be married, with female spouses 3 years younger than males.

Asset Valuation Method

Market value of assets is used for GASB 67 disclosure purposes.



Actuarial Cost Method

The Entry Age Normal actuarial cost method allocates the plan's actuarial present value of future benefits to various periods based upon service. The portion of the present value of future benefits allocated to years of service prior to the valuation date is the actuarial accrued liability, and the portion allocated to years following the valuation date is the present value of future normal costs. The normal cost is determined for each active member as the level percent of payroll necessary to fully fund the expected benefits to be earned over the career of each individual active member. The normal cost is partially funded with active member contributions with the remainder funded by employer contributions.

The unfunded accrued liability is determined by subtracting the actuarial value of assets from the actuarial accrued liability.

Future Cost-of-living Increases

Members who retired prior to September 1, 1992 are assumed to receive an annual Cost-of-Living Adjustment (COLA) of 3.0%. Members who retired on or after September 1, 1992 and were hired prior to July 1, 2007 are assumed to receive an annual Cost-of-Living Adjustment (COLA) of 2.0%. Members who retired on or after September 1, 1992 and were hired on or after July 1, 2007 are assumed to receive an annual Cost-of-Living Adjustment (COLA) of 1.75%.

Administrative and Investment Expenses

The investment return assumption represents the expected return net of all administrative and investment expenses.

Payroll Growth Rate

The total annual payroll of active members is assumed to increase at an annual rate of 3.25%. This rate does not anticipate increases in the number of members.

Changes from Prior Valuation

None