

INTERIM ACTUARIAL VALUATION
CONNECTICUT STATE EMPLOYEES
RETIREMENT SYSTEM
AT JUNE 30, 2007



Milliman
Consultants and Actuaries

80 Lambertson Road
Windsor, CT 06095
Tel +1 860 687.2110
Fax +1 860 687.2111
www.milliman.com

December 5, 2007

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

Re: Connecticut State Employees Retirement System
June 30, 2007 Actuarial Valuation

Members of the Commission:

At your request, we have made an interim actuarial valuation of the Connecticut State Employees Retirement System (SERS) as of June 30, 2007. The results of the valuation are contained in the following report.

Section I contains an Executive Summary in which we present the principal results of this valuation. Details regarding SERS assets and liabilities are found in Sections II and III respectively. The Appendices contain information regarding SERS membership, an outline of the benefit provisions, and a description of the actuarial methods and assumptions employed in this valuation.

The actuarially determined contribution for the fiscal year beginning July 1, 2008 is \$753,698,039. This contribution was developed from the June 30, 2006 actuarial valuation and is not changed as a result of this interim valuation.

Respectfully submitted,

Althea A. Schwartz, F.S.A.
Principal and Consulting Actuary

Rebecca A. Sielman, F.S.A.
Principal and Consulting Actuary

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CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM
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SECTION I

EXECUTIVE SUMMARY

CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM
EXECUTIVE SUMMARY

We have performed an interim actuarial valuation of the Connecticut State Employees Retirement System as of June 30, 2007. The results of this valuation, along with supporting data, are set forth in the following report. Appendix B describes the principal provisions of the System upon which the valuation is based.

Milliman's work product was prepared exclusively for the System for a specific and limited purpose. It is a complex, technical analysis that assumes a high level of knowledge concerning the System's operations, and uses the System's data, which Milliman has not audited. It is not for the use or benefit of any third party for any purpose. Any third party recipient of Milliman's work product who desires professional guidance should not rely upon Milliman's work product, but should engage qualified professionals for advice appropriate to its own specific needs.

In preparing this report, we relied without audit on employee census data and financial information as of the valuation date, furnished by the State of Connecticut. This information includes, but is not limited to, statutory provisions, employee data, and financial information. In our examination of these data, we have found them to be reasonably consistent and comparable with data used for other purposes. Since the valuation results are dependent on the integrity of the data supplied, the results can be expected to differ if the underlying data is incomplete or missing. It should be noted that if any data or other information is inaccurate or incomplete, our calculations may need to be revised. If there are material defects in the data, it is possible that they would be uncovered by a detailed, systematic review and comparison of the data to search for data values that are questionable or for relationships that are materially inconsistent. Such a review was beyond the scope of our assignment.

The calculations reported herein have been made on a basis consistent with our understanding of the Connecticut General Statutes with guidance from the Retirement Commission. Additional determinations may be needed for purposes other than meeting funding requirements, such as judging benefit security at plan termination or meeting employer accounting requirements. On the basis of the foregoing, we hereby certify that, to the best of our knowledge, this report is complete and accurate and all costs and liabilities were determined in conformance with generally accepted actuarial principles and practices based on the actuarial methods and assumptions adopted by the System. Differences between our projections and actual amounts depend on the extent to which future experience conforms to the assumptions made for this analysis. Actual experience will not conform exactly to the assumptions made for this analysis. Actual amounts will differ from projected amounts to the extent that actual experience deviates from expected experience.

CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM
EXECUTIVE SUMMARY

This report may not be used for purposes other than those listed on the following page without Milliman's prior written consent. If this report is distributed to other parties, we request that it be copied in its entirety, including this section.

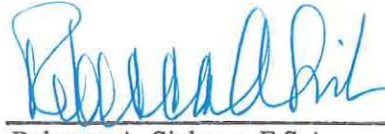
We are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

MILLIMAN INC.

December 5, 2007



Althea A. Schwartz, F.S.A.
Principal and Consulting Actuary



Rebecca A. Sielman, F.S.A.
Principal and Consulting Actuary

CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM
EXECUTIVE SUMMARY

PURPOSE OF REPORT

Starting with the June 30, 1998 valuation, complete actuarial valuations are performed only in even years. This report presents the results of the June 30, 2007 interim actuarial valuation of the Connecticut State Employees Retirement System (SERS). The primary purposes for performing the valuation are:

- to disclose asset and liability measures as of June 30, 2007; and
- to analyze and report on trends in SERS assets and liabilities over the past several years.

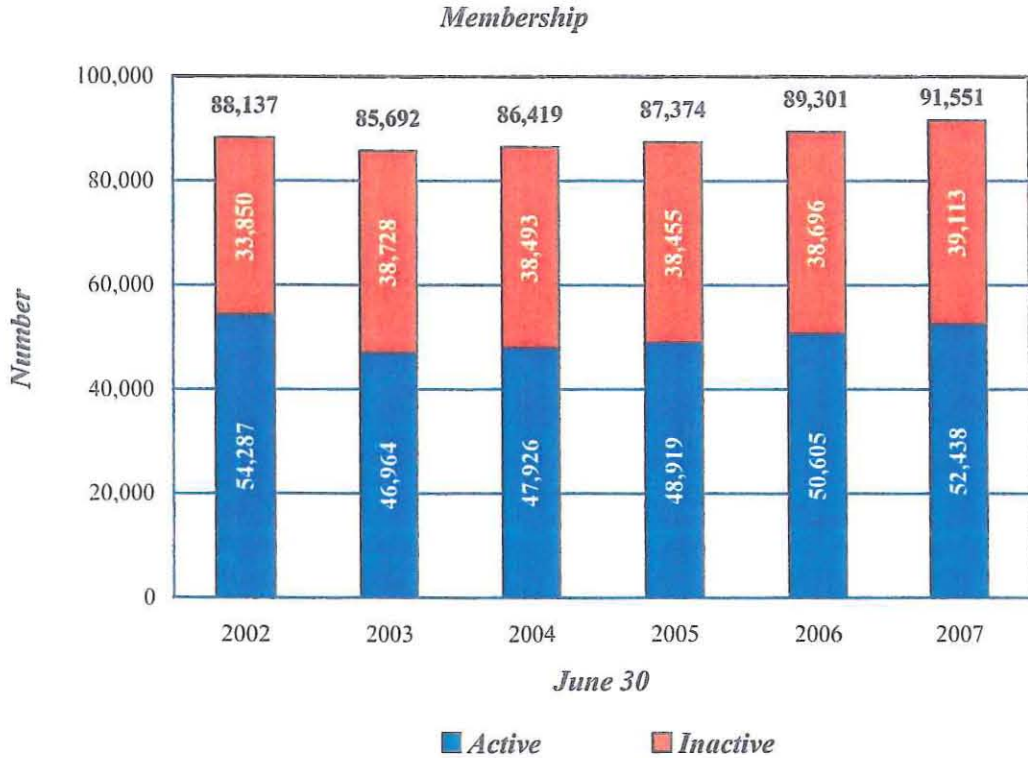
ORGANIZATION OF THE EXECUTIVE SUMMARY

The executive summary contains the following information:

- ***Major Findings...*** shows graphically, key results for several years.
- ***Discussion of Results...*** highlights the major events influencing this valuation.
- ***Principal Results...*** Contains a summary of comparative statistics for the current and prior valuations.

CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM
EXECUTIVE SUMMARY

MAJOR FINDINGS

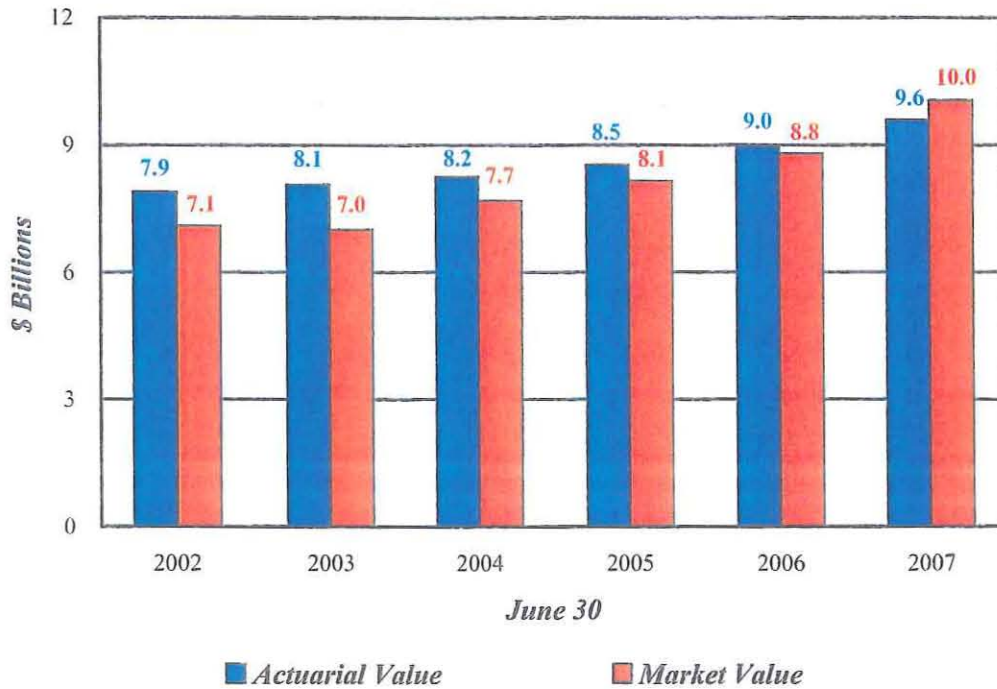


The total number of members has remained relatively steady over the period shown above. However, the composition of the membership has changed significantly. For the years from 2000 through 2002, 62% of the membership was active; now, as a result of the 2003 ERIP, many more members are retired and only 57% of the membership is active. Between 2006 and 2007, the active membership grew by 1,833 members.

CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM
EXECUTIVE SUMMARY

MAJOR FINDINGS

SERS Assets

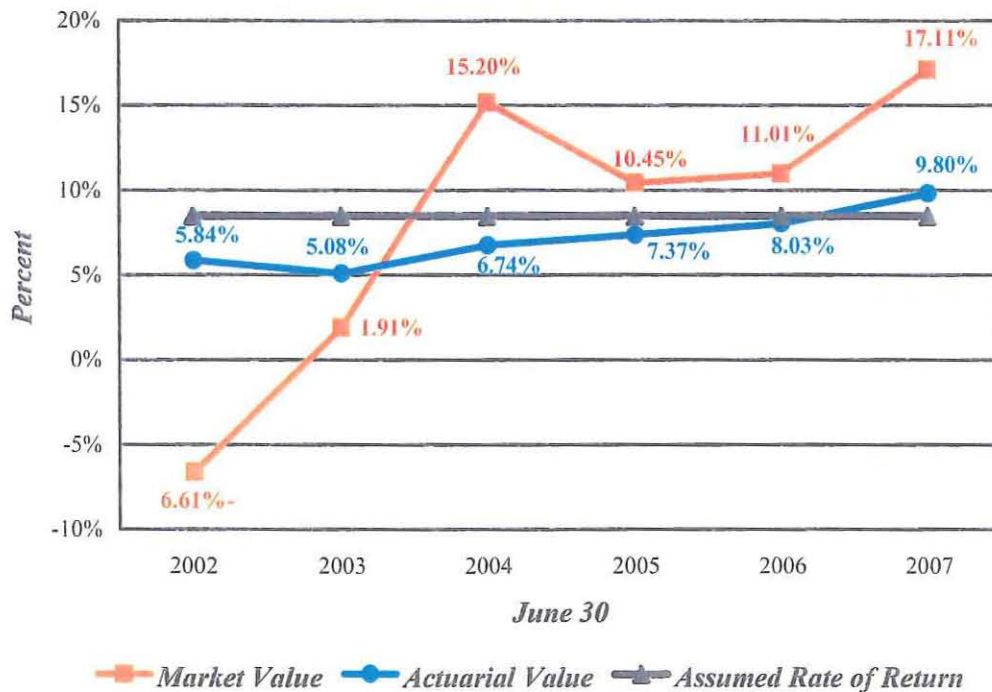


FY07 was the fourth good year in a row. The market value grew from \$8.8 billion to \$10.0 billion. This is continued good news after 3 years of sub-par performance. Contributions during the past year were \$726 million; benefit payments totaled \$958 million. The actuarial value grew from \$9.0 billion to \$9.6 billion.

CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM
EXECUTIVE SUMMARY

MAJOR FINDINGS

Historical Rates of Return

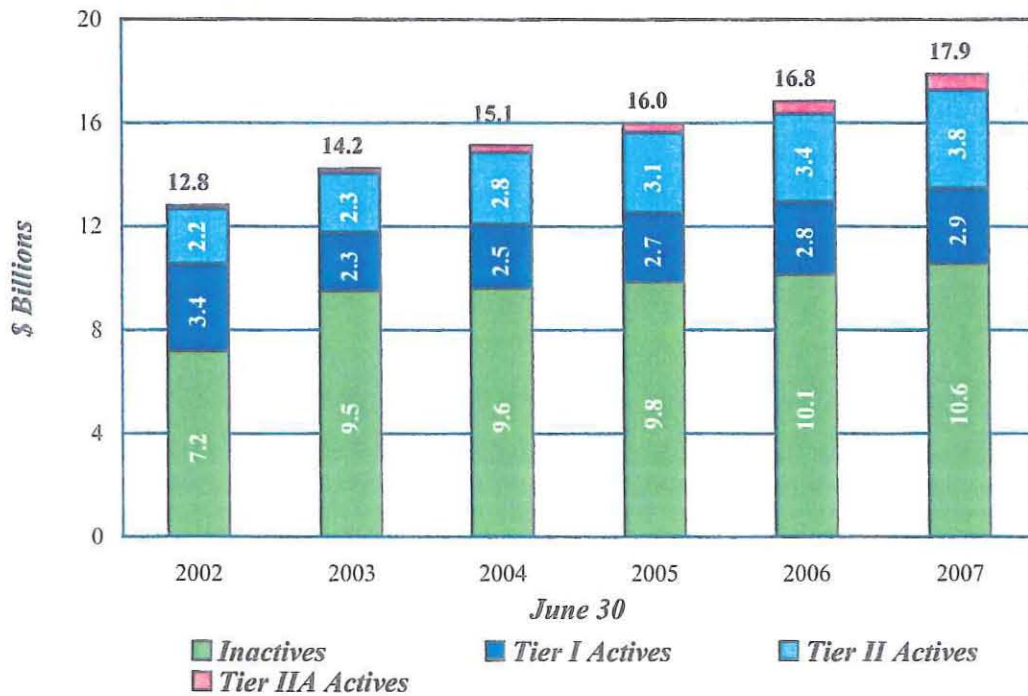


This graph shows the historical rates of return on a market value basis, the impact of 'smoothing' (the rates shown on an actuarial value basis), and the 'benchmark' (our 8.50% assumed rate of return). During FY07, the rate of return on a Market Value basis was 17.11%. The corresponding rate of return on an Actuarial Value basis was 9.80%, reflecting the gradual recognition of losses in prior years. This graph demonstrates that our smoothing technique works well in dampening market volatility.

**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM
EXECUTIVE SUMMARY**

MAJOR FINDINGS

Actuarial Liabilities

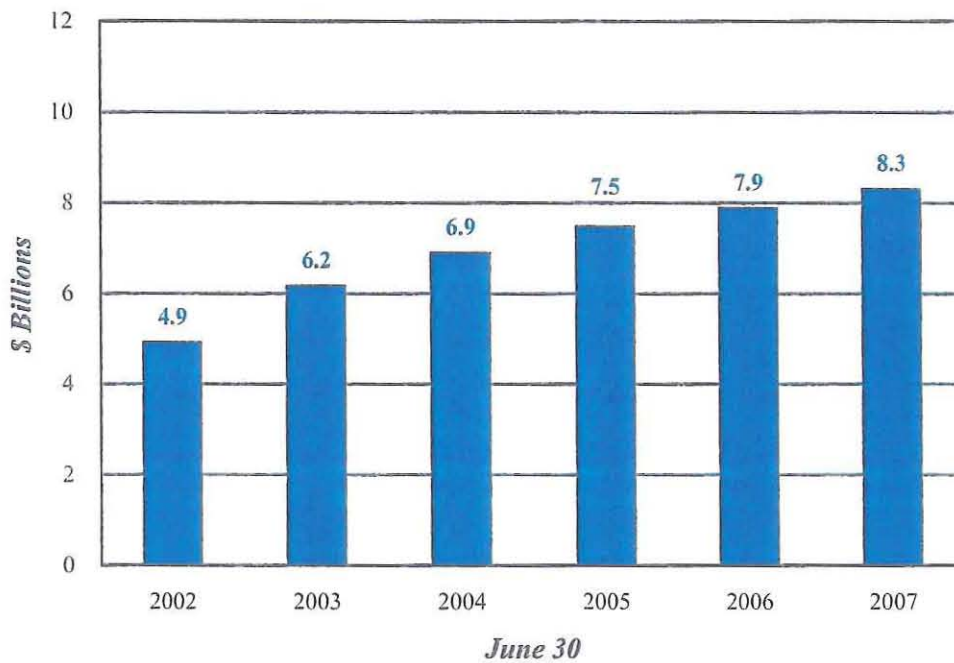


This graph shows the Actuarial Liability by group. The 2003 Early Retirement Incentive Program caused a noticeable shift of Actuarial Liability from Active to Inactive. The inactive liability increased slightly from last year, as did the active liability for all Tiers. During the past year, we observed that more members in Tiers I and II remained employed (instead of retiring) than anticipated by our actuarial assumptions.

**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM
EXECUTIVE SUMMARY**

MAJOR FINDINGS

Unfunded Liabilities

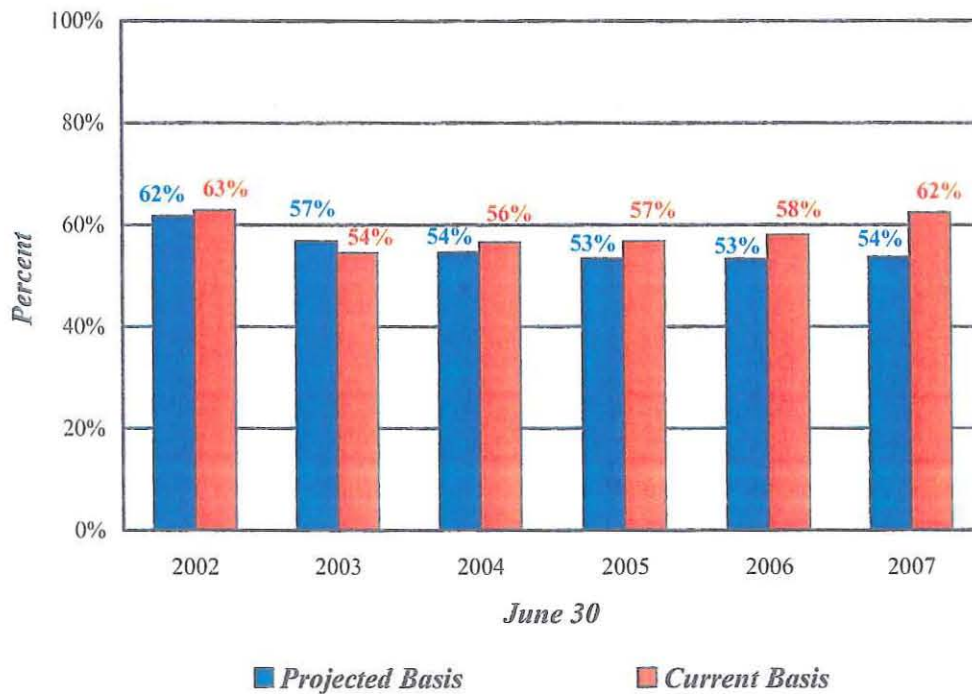


Unfunded actuarial liabilities have increased as expected with this valuation. We expect some increase as a normal outgrowth of the method of paying off this liability: a number of years of increase followed by a gradual decline.

**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM
EXECUTIVE SUMMARY**

MAJOR FINDINGS

Funded Ratios



*The System's Funded Ratio tracks the relationship between the System's assets and liabilities. The Employer's contribution is based on projected liabilities (the Actuarial Liability) and smoothed assets (the Actuarial Value of Assets); the **Funded Ratio - Projected Basis** tracks these amounts.*

*The **Funded Ratio - Current Basis** looks at the SERS liability for benefits already earned (the Present Value of Accrued Benefits) compared to the assets currently available (the Market Value of Assets). This ratio indicates the System's ability to fund current benefits.*

**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM
EXECUTIVE SUMMARY**

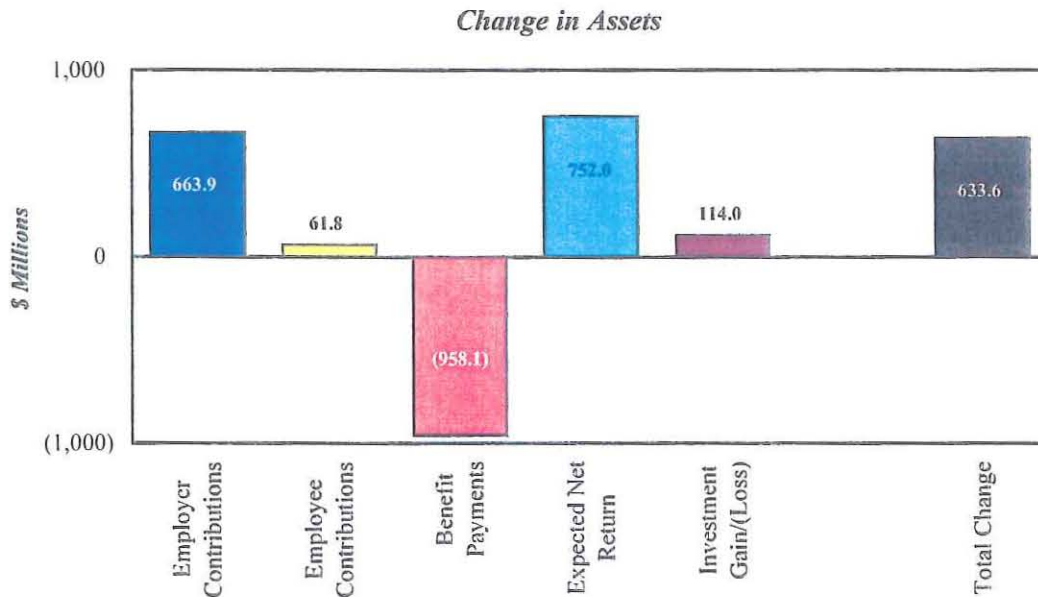
DISCUSSION OF RESULTS

In this section of the Executive Summary, we will discuss the significant events impacting the June 30, 2007 actuarial valuation.

I. Investment Experience

The investment performance was strong during the past year. The actual return was 17.11% on a market value basis compared to 11.01% for the prior fiscal year. On a smoothed actuarial basis, the rate was 9.80% compared to 8.03% for the prior valuation, reflecting delayed recognition of market gains from the last four years and market losses from the three prior years. The assumed rate is 8.50%.

Between July 1, 2006 and June 30, 2007, the actuarial value of assets (measured on a five year smoothing basis) increased by \$633.6 million. This change was attributable to the following:



The expected net return on investments of \$752.0 million shown above is based on an assumed rate of return of 8.50%. However, the recognized investment earnings of \$866.0 million over the year was slightly higher than this target, resulting in an actuarial gain of \$114.0 million. More details on SERS assets are presented in Section II of this report.

CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM
EXECUTIVE SUMMARY

DISCUSSION OF RESULTS

II. Membership

System membership has changed modestly over the past year:

	<i>Active Members</i>	<i>Inactive Members</i>	<i>Total Members</i>
Count on June 30, 2006	50,605	38,696	89,301
Left System	(1,953)	(1,007)	(2,960)
Terminated Vested	(53)	53	0
Retired	(867)	867	0
Disabled	(230)	230	0
Died with Beneficiary	(1)	(248)	(249)
New Beneficiaries	0	260	260
Rehired	28	(28)	0
New to System	4,909	290	5,199
Count on June 30, 2007	52,438	39,113	91,551

As expected, we have seen a shift in the active population from the closed Tier I and Tier II groups, with new employees entering the new Tier IIA group:

	<i>Tier I</i>	<i>Tier II</i>	<i>Tier IIA</i>	<i>Total</i>
Count on June 30, 2005	8,225	24,452	16,242	48,919
<i>percentage of total</i>	17%	50%	33%	
Count on June 30, 2006	7,930	23,918	18,757	50,605
<i>percentage of total</i>	16%	47%	37%	
Count on June 30, 2007	7,465	23,314	21,659	52,438
<i>percentage of total</i>	14%	45%	41%	

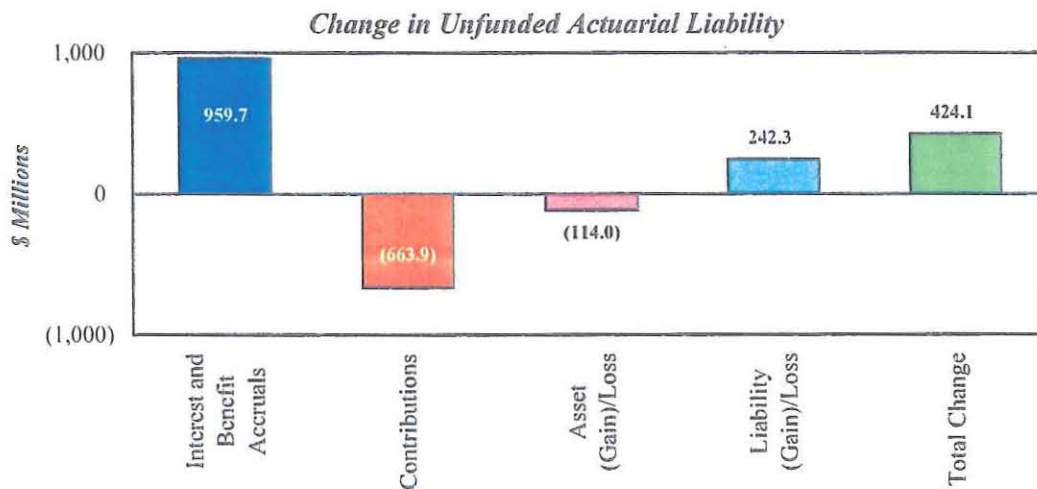
More information on SERS membership can be found in Appendix A.

**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM
EXECUTIVE SUMMARY**

DISCUSSION OF RESULTS

III. Unfunded Actuarial Liability

The unfunded actuarial liability is the shortfall between SERS projected liabilities and assets. Since July 1, 2006, the unfunded actuarial liability increased from \$7.9 billion to \$8.3 billion. Each year the unfunded liability increases because of interest and expected benefit accruals and decreases by contributions made to the fund. Asset and liability gains and losses also impact the unfunded liability, as do plan changes and experience. The following chart shows the development of the unfunded actuarial liability from 2006 to 2007:



The liability gain of \$242.3 million over the past year is very small (1.4%) when compared to the total SERS liability of \$17,888.1 million. It is attributable to the difference between actual and expected experience with respect to the number of retirements, employment terminations, disabilities and deaths. Salary increases and new employees also contribute to experience gains and losses. During FY07, the liability loss was a combination of small factors, including fewer than expected terminations and retirements from the active membership.

SECTION II

SERS ASSETS

CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM
SERS ASSETS

In this section we present the values assigned to the assets held by SERS. These assets are valued on two different bases: the Actuarial Value and the Market Value.

Actuarial Value of Assets

For purposes of determining ongoing costs, the recognition of gains and losses is spread over five years. The resulting value is called the Actuarial Value of Assets and is further adjusted as necessary so that the final actuarial value is within 20% (plus or minus) of the market value of assets.

Market Value of Assets

The Market Value of Assets represents the "snapshot" or "cash-out" value of SERS assets as of the valuation date. In addition, the Market Value of Assets provides a reference point to compare to current accrued liabilities.

The following tables present information regarding the actuarial and market values of SERS assets as of June 30, 2007.

<u>Table</u>	<u>Contents</u>
II-1	Market Value - Summary of Fund Transactions
II-2	Market Value - Breakdown on Valuation Date
II-3	2006-2007 Development of Actuarial Value of Assets
II-4	Development of Asset Gain/(Loss)

**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM
SERS ASSETS**

TABLE II-1

***Market Value of Assets
Summary of Fund Transactions***

	<i>July 1, 2005 to June 30, 2006</i>	<i>July 1, 2006 to June 30, 2007</i>
<i>Market Value as of July 1</i>	\$8,146,304,073	\$8,789,643,845
<i>Contributions</i>		
State	507,264,748	541,038,351
Federal	115,797,984	122,892,384
Employee	55,234,913	61,794,719
Total	678,297,645	725,725,454
<i>Investment Income Net of Expenses</i>		
Interest & Dividends	310,758,041	352,709,896
Realized Gains	14,036,602	301,765,414
Change in Unrealized Gains	559,564,232	829,827,360
Expenses	(403,382)	(509,520)
Total	883,955,493	1,483,793,150
<i>Disbursements</i>		
Benefit Payments	913,030,578	951,353,124
Employee Refunds	5,882,788	6,762,205
Total	918,913,366	958,115,329
<i>Market Value as of June 30</i>	8,789,643,845	10,041,047,120
<i>Approximate Net Rate of Return</i>	11.01%	17.11%

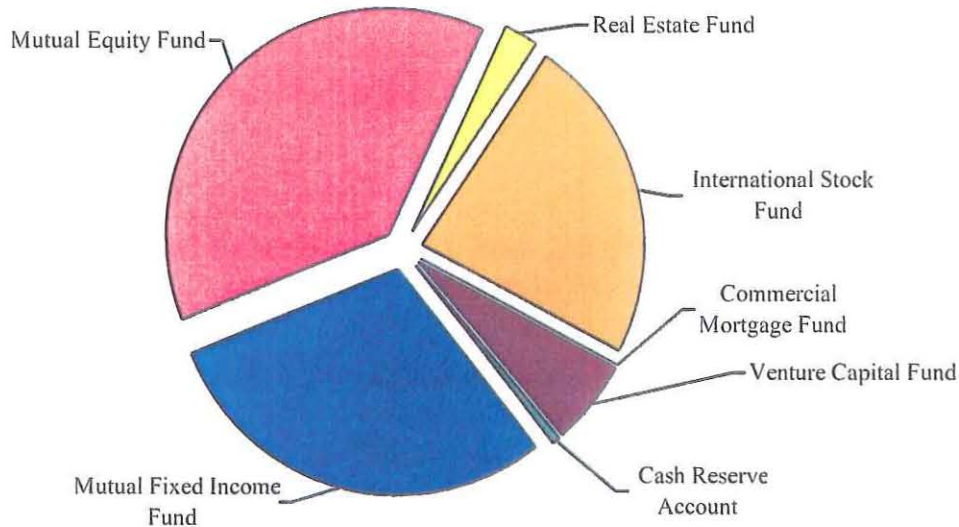
CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM
SERS ASSETS

TABLE II-2

Market Value of Assets
Breakdown on June 30, 2007

The following is the Market Value of the State Employees Retirement Fund assets as reported to us by the Retirement Division:

	<i>Amount</i>	<i>% of Total</i>
Cash	\$3,351,553	0.03%
Accrued Interest	0	0.00%
Investments:		
Cash Reserve Account	52,384,145	0.52%
Mutual Fixed Income Fund	2,958,537,928	29.46%
Mutual Equity Fund	3,810,234,733	37.96%
Real Estate Fund	265,967,011	2.65%
International Stock Fund	2,339,668,987	23.30%
Commercial Mortgage Fund	2,983,842	0.03%
Venture Capital Fund	607,918,921	6.05%
Total Market Value as of June 30, 2007	10,041,047,120	100.00%



**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM
SERS ASSETS**

TABLE II-3

2006-2007 Development of Actuarial Value of Assets

	<i>Market Value</i>	<i>Actuarial Value</i>
1. Value on July 1, 2006	\$8,789,643,845	\$8,951,392,914
2. Contributions during 2006-07	725,725,454	725,725,454
3. Benefit Payments during 2006-07	958,115,329	958,115,329
4. Expected Income on (1) through (3)*	738,199,442	751,948,112
5. Expected Value on June 30, 2007: (1) + (2) - (3) + (4)	9,295,453,412	9,470,951,151
6. Market Value on June 30, 2007	10,041,047,120	N/A
7. Market - Actuarial Value on June 30, 2007	N/A	570,095,969
8. Preliminary Actuarial Value: (5) + 20% of (7)	N/A	9,584,970,345
9. Final Value on June 30, 2007: (8) within +/- 20% of Market Value	N/A	9,584,970,345

* Interest on benefits and contributions is credited on a monthly basis.

**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM
SERS ASSETS**

TABLE II-4

Development of Asset Gain/(Loss)

	<i>Market Value</i>	<i>Actuarial Value</i>
1. Value on July 1, 2006	\$8,789,643,845	\$8,951,392,914
2. Contributions during 2006-07	725,725,454	725,725,454
3. Benefit Payments during 2006-07	958,115,329	958,115,329
4. Expected Income on (1) through (3)*	738,199,442	751,948,112
5. Expected Value on June 30, 2007: (1) + (2) - (3) + (4)	9,295,453,412	9,470,951,151
6. Actual Value on June 30, 2007	10,041,047,120	9,584,970,345
7. Actual Income	1,483,793,150	865,967,306
8. Asset Gain/(Loss): (7) - (4)	745,593,708	114,019,194
9. Approximate Rate of Return as of June 30, 2007	17.11%	9.80%
10. Approximate Rate of Return as of June 30, 2006	11.01%	8.03%
11. Change	6.10%	1.77%

* Interest on benefits and contributions is credited on a monthly basis.

SECTION III

SERS LIABILITIES

CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM
SERS LIABILITIES

In this section we present values assigned to the liabilities of SERS.

The actuarial funding method used to determine SERS costs is based on the Projected Unit Credit method. A more detailed description of this method can be found in Appendix C.

<u><i>Table</i></u>	<u><i>Contents</i></u>
III-1	SERS Liabilities on Valuation Date

CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM
SERS LIABILITIES

TABLE III-1

SERS Liabilities on Valuation Date

	<i>June 30, 2005</i>	<i>June 30, 2006</i>	<i>June 30, 2007</i>
<i>Tier I Actives</i>			
Hazardous Duty	\$245,045,100	\$236,048,803	\$255,390,907
Plan B	2,332,697,761	2,473,717,978	2,544,362,455
Plan C	105,519,280	109,499,519	108,677,554
<i>Total</i>	2,683,262,141	2,819,266,300	2,908,430,916
<i>Tier II Actives</i>			
Hazardous Duty	1,346,710,132	1,459,958,342	1,652,466,848
All Others	1,763,261,178	1,937,755,972	2,138,355,029
<i>Total</i>	3,109,971,310	3,397,714,314	3,790,821,877
<i>Tier IIA Actives</i>			
Hazardous Duty	135,338,680	203,091,947	273,280,315
All Others	221,686,969	272,209,082	354,673,846
<i>Total</i>	357,025,649	475,301,029	627,954,161
<i>Total Actives</i>	6,150,259,100	6,692,281,643	7,327,206,954
<i>Retirees</i>			
Pre-1980	335,059,010	296,591,435	273,508,893
1980-1997 Fixed COLA	5,380,973,170	5,305,933,086	5,216,605,018
1997+ Variable COLA	3,924,728,024	4,328,861,181	4,860,768,855
<i>Total</i>	9,640,760,204	9,931,385,702	10,350,882,766
<i>Deferred Vesteds</i>	196,527,357	206,681,823	209,975,396
<i>Total Actuarial Liability</i>	15,987,546,661	16,830,349,168	17,888,065,116

APPENDIX A

SUMMARY STATISTICS ON SERS MEMBERSHIP

This work product was prepared solely for the System for the purposes described herein and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work.

MILLIMAN

**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM
SUMMARY STATISTICS ON SERS MEMBERSHIP**

<u><i>Table</i></u>	<u><i>Contents</i></u>
A-1	Summary of Active Membership Data
A-2	Detail of Active Membership Data by Plan
A-3	Summary of Inactive Membership Data
A-4	Reconciliation of Changes in Membership

CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM
SUMMARY STATISTICS ON SERS MEMBERSHIP

TABLE A-1

Summary of Active Membership Data

We received data on a total of 52,967 eligible active members for our June 30, 2007 valuation. Of the active records submitted to us, 529 (1.0%) were rejected due to missing or invalid compensation, date of birth, and/or date of hire. Cost calculations were not revised to reflect these records. The following analysis compares this data with prior years' data.

	<u>June 30, 2005</u>	<u>June 30, 2006</u>	<u>June 30, 2007</u>
Total Employees	48,919	50,605	52,438
Total Earnings (\$ millions)	\$2,980.1	\$3,107.9	\$3,310.4
Average Earnings	60,919	61,415	63,129

Earnings figures as of July 1 are actual amounts paid during the previous July 1 to June 30 period; new entrant earnings are annualized.

These figures are broken down by Plan on the following page.

CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM
SUMMARY STATISTICS ON SERS MEMBERSHIP

TABLE A-2a

Detail of Active Membership Data by Plan

	<i>June 30, 2005</i>	<i>June 30, 2006</i>	<i>June 30, 2007</i>
<i>Number of Members</i>			
Tier I Hazardous Duty	462	412	414
Tier I Plan B	7,408	7,171	6,736
Tier I Plan C	355	347	315
Tier II Hazardous Duty	6,080	5,844	5,683
Tier II Others	18,372	18,074	17,631
Tier IIA Hazardous Duty	3,238	4,416	5,089
Tier IIA Others	13,004	14,341	16,570
Total	<u>48,919</u>	<u>50,605</u>	<u>52,438</u>
<i>Total Annual Compensation (\$ Millions)</i>			
Tier I Hazardous Duty	\$38.7	\$36.4	\$38.1
Tier I Plan B	558.4	556.3	544.5
Tier I Plan C	23.8	23.7	22.5
Tier II Hazardous Duty	419.0	416.2	433.9
Tier II Others	1,157.2	1,169.9	1,192.8
Tier IIA Hazardous Duty	177.4	234.3	288.3
Tier IIA Others	605.6	671.0	790.2
Total	<u>2,980.1</u>	<u>3,107.9</u>	<u>3,310.4</u>
<i>Average Compensation</i>			
Tier I Hazardous Duty	\$83,846	\$88,322	\$91,982
Tier I Plan B	75,376	77,581	80,839
Tier I Plan C	66,944	68,327	71,327
Tier II Hazardous Duty	68,911	71,214	76,349
Tier II Others	62,985	64,730	67,655
Tier IIA Hazardous Duty	54,797	53,068	56,655
Tier IIA Others	46,573	46,792	47,691
Total	60,919	61,415	63,129

CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM
SUMMARY STATISTICS ON SERS MEMBERSHIP

TABLE A-2b

Detail of Active Membership Data by Plan

	<u>June 30, 2005</u>	<u>June 30, 2006</u>	<u>June 30, 2007</u>
<i>Average Age</i>			
Tier I Hazardous Duty	50.6	51.6	52.3
Tier I Plan B	52.2	53.0	53.8
Tier I Plan C	54.2	55.1	55.8
Tier II Hazardous Duty	43.7	44.4	45.3
Tier II Others	47.6	48.5	49.4
Tier IIA Hazardous Duty	36.5	38.3	38.2
Tier IIA Others	41.0	41.1	41.6
Total	45.4	45.7	46.0
<i>Average Service</i>			
Tier I Hazardous Duty	23.5	24.6	25.4
Tier I Plan B	25.6	26.4	27.3
Tier I Plan C	26.3	27.0	27.7
Tier II Hazardous Duty	13.9	14.7	15.5
Tier II Others	14.8	15.6	16.6
Tier IIA Hazardous Duty	4.2	4.7	5.1
Tier IIA Others	3.8	4.0	4.3
Total	12.9	12.9	13.0

**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM
SUMMARY STATISTICS ON SERS MEMBERSHIP**

TABLE A-3

Summary of Inactive Membership Data

	<i>June 30, 2005</i>	<i>June 30, 2006</i>	<i>June 30, 2007</i>
<i>Retired Pre-1980</i>			
Number	3,748	3,338	3,018
Total Annual Benefits (\$ 000s)	\$53,088	\$48,543	\$45,802
Average Annual Benefit	14,164	14,543	15,176
<i>Retired 1980-1997, Fixed COLA</i>			
Number	22,140	21,681	21,137
Total Annual Benefits (\$ 000s)	\$540,750	\$545,358	\$548,354
Average Annual Benefit	24,424	25,154	25,943
<i>Retired 1997+, Variable COLA</i>			
Number	10,817	11,945	13,265
Total Annual Benefits (\$ 000s)	\$312,388	\$348,152	\$394,758
Average Annual Benefit	28,879	29,146	29,759
<i>Total Retired Members</i>			
Number	36,705	36,964	37,420
Total Annual Benefits (\$ 000s)	\$906,226	\$942,054	\$988,914
Average Annual Benefit	24,689	25,486	26,427
<i>Terminated Vested Members</i>			
Number	1,750	1,732	1,693
Total Annual Benefits (\$ 000s)	\$24,357	\$25,079	\$24,993
Average Annual Benefit	13,918	14,480	14,762

**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM
SUMMARY STATISTICS ON SERS MEMBERSHIP**

TABLE A-4

Reconciliation of Changes in Membership

	<i>Active Members</i>	<i>Deferred Vested Members</i>	<i>Retired Members</i>	<i>Disabled Members</i>	<i>Beneficiaries</i>	<i>Total Members</i>
<i>Count as of July 1, 2006</i>	50,605	1,732	29,941	3,310	3,713	89,301
<i>Changed status within System</i>						
to active status	28	(25)	(3)	0	0	0
to deferred vested status	(53)	53	0	0	0	0
to retired status	(867)	(115)	984	(2)	0	0
to disabled status	(230)	(1)	0	231	0	0
to beneficiary status	(1)	0	(216)	(32)	260	11
<i>Left System</i>	(1,953)	(31)	(761)	(59)	(156)	(2,960)
<i>Entered System</i>	<u>4,909</u>	<u>80</u>	<u>126</u>	<u>53</u>	<u>31</u>	<u>5,199</u>
<i>Count as of June 30, 2007</i>	52,438	1,693	30,071	3,501	3,848	91,551

APPENDIX B

SUMMARY OF PLAN PROVISIONS

This work product was prepared solely for the System for the purposes described herein and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work.

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**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM
SUMMARY OF PLAN PROVISIONS**

This summary of plan provisions is based on our understanding of the benefits as described by the Connecticut General Statutes, summary plan descriptions, and the Connecticut State Employees Retirement System. It is intended only to describe the essential features of the plan. All eligibility requirements and benefit amounts shall be determined in strict accordance with the plan document itself. To the extent that this summary does not accurately reflect the plan provisions, then the results of this valuation may not be accurate.

1. Membership

Tier I [Sec. 5-160]: Each state employee appointed to classified service shall become a member on the first day of the pay period following permanent appointment.

Each officer elected by the people and each appointee of such officer exempt from classified service may elect to become a member, effective on the first day of the pay period following receipt of such election.

Each other state employee exempt from classified service shall become a member on the first day of the pay period following six months of employment.

Except as noted below, employees hired prior to July 1, 1984 could elect (no later than January 2, 1984) to be covered under either Plan B or Plan C. Employees under contracts with Union Independent and CSEA unions hired prior to October 1, 1982 had until October 1, 1984 to make such election.

Tier II [Sec. 5-192e]: Tier II consists of employees first joining the retirement system on or after July 1, 1984 plus employees hired between July 1, 1982 and January 1, 1984 who elected Tier II. Each state employee becomes a member on the first day of employment.

Tier IIA: Tier IIA consists of employees first joining the retirement system on or after July 1, 1997.

CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM
SUMMARY OF PLAN PROVISIONS

2. Normal Retirement Eligibility

Tier I - Hazardous Duty [Sec. 5-173]: 20 years of credited service.

Tier I - Plans B and C [Sec. 5-162]: The earliest of age 55 with 25 years of service, age 65 with 10 years of service, or age 70 with 5 years of service.

Tier II [Sec. 5-192] and Tier IIA: The earliest of age 62 with 10 years of vesting service (effective July 1, 1992), age 60 with 25 years of vesting service, age 70 with 5 years of vesting service, or age 62 with 5 years of actual state service for terminations on or after July 1, 1997. Hazardous duty members may retire after 20 years.

3. Normal Retirement Benefit

Final Average Earnings: The average salary of the three highest paid years of service. Commencing January 1, 1986, no one year's earnings can be greater than 130% of the average of the preceding two years in calculating the Final Average Earnings.

Tier I - Hazardous Duty [Sec. 5-173]: 50% of Final Average Earnings plus 2% for each year of service in excess of 20.

Tier I Plan B [Sec. 5-162]: Same as Plan C up to age 65; thereafter 1% of Final Average Earnings up to \$4,800 plus 2% of Final Average Earnings in excess of \$4,800 times years of service. At age 70, greater of 1.25% of Final Average Earnings up to \$4,800 plus 2.5% of Final Average Earnings in excess of \$4,800 times years of service (maximum 20 years) or 1.0% of Final Average Earnings up to \$4,800 plus 2% of Final Average Earnings in excess of \$4,800 times years of service. Minimum benefit with 25 years is \$833.34 per month.

Tier I Plan C [Sec. 5-162]: 2% of Final Average Earnings times years of service. At age 70, greater of 2.5% of Final Average Earnings times years of service (maximum 20 years) or 2.0% of Final Average Earnings times years of service. Minimum benefit with 25 years is \$833.34 per month.

Tier II Hazardous Duty Members [Sec. 5-192n] and Tier IIA: 2.5% of Final Average Earnings times up to 20 years of service plus 2% of Final Average Earnings times years of service in excess of 20 years, if any. Minimum benefit with 25 years is \$360 per month.

CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM
SUMMARY OF PLAN PROVISIONS

Tier II All Other [Sec. 5-192l] and Tier IIA: $1\frac{1}{3}\%$ of Final Average Earnings plus $\frac{1}{2}\%$ of Final Average Earnings in excess of the year's breakpoint*, times up to 35 years of service from October 1, 1982 plus $1\frac{5}{8}\%$ of Final Average Earnings times years of service in excess of 35 years, if any. Minimum benefit with 25 years is \$360 per month.

* \$10,700 increased by 6% each year after 1982, rounded to the nearest \$100, but not greater than Social Security Covered Compensation.

4. **Early Retirement**

Tier I - Hazardous Duty: None.

Tier I [Sec. 5-162]: Age 55 with 10 years of service; benefit is Normal Retirement Benefit reduced for retirement prior to age 65 with less than 25 years of service.

Tier II [Sec. 5-192m] and Tier IIA: Age 55 with 10 years of vesting service; benefit is Normal Retirement Benefit reduced $\frac{1}{4}\%$ (effective July 1, 1991) for each month prior to age 60 if at least 25 years of service or age 62 if at least 10 but less than 25 years of service. Minimum benefit with 25 years of service is \$360 per month.

5. **Deferred Retirement**

Tier I [Sec. 5-162]: May be deferred but not beyond age 70.

Tier II [Sec. 5-192l] and Tier IIA: May be deferred but not beyond age 70. Benefit is based on salary and service to actual retirement.

6. **Vesting**

Tier I [Sec. 5-166]: Ten years of service; benefit is payable at Normal Retirement Age or an early retirement benefit is payable at age 55; in addition employees are always fully vested in their own contributions (after January 1, 1983, Tier I contributions with 5% interest from January 1, 1982).

Tier I - Hazardous Duty [Sec. 5-173(f)]: As above.

Tier II [Sec. 5-192o] and Tier IIA: Effective July 1, 1997, 5 years of actual state service, 10 years of vesting service, or age 70 with 5 years of service; benefit is payable at Normal Retirement Age or an early retirement benefit is payable at age 55. In addition employees are always fully vested in their own contributions with 5% interest.

CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM
SUMMARY OF PLAN PROVISIONS

7. Member Contributions

<u>Tier I - Hazardous Duty [Sec. 5-161]</u>	4% of earnings up to the Social Security Taxable Wage Base plus 5% of earnings above that level.
<u>Tier I - Plan B [Sec. 5-161]</u>	2% of earnings up to the Social Security Taxable Wage Base plus 5% of earnings above that level.
<u>Tier I - Plan C [Sec. 5-161]</u>	5% of earnings.
<u>Tier II - All Other [Sec. 5-192u]</u>	None.
<u>Tier II - Hazardous Duty [Sec. 5-192u]</u>	4% of earnings.
<u>Tier I - All other</u>	2% of earnings.
<u>Tier IIA - Hazardous Duty</u>	5% of earnings.

8. Cost of Living

[Sec. 5-162b, 5-162d]: Annual adjustment each July 1 of up to 5% for retirements prior to July 1, 1980; 3% for retirements after July 1, 1980. For members (or beneficiaries) not covered by Social Security and age 62 and over, the maximum increase is 6%. If an actuarial surplus (as defined in the law) exists, the Commission may further increase retired benefits.

For employees retiring after June 30, 1999, the annual adjustment will be 60% of the increase in the CPI up to 6% and 75% of the increase in the CPI over 6%. This adjustment will be no less than 2.5% and no greater than 6%. Employees retiring between July 1, 1997 and June 30, 1999 made an irrevocable choice between this formula and a fixed 3% annual adjustment.

Tier IIA: An employee must have at least ten years of actual state service or directly make the transition into retirement in order to be eligible for annual adjustments.

9. Death Benefits

Tier I - State Police [Sec. 5-146]: Survivor benefits to spouse of \$670 per month plus \$300 to a surviving dependent child (or \$700 to surviving dependent children).

Tier I [Sec. 5-165a]: If eligible for early or normal retirement, spouse benefit is equal to 50% of the average of the Life Benefit and the 50% Joint & Survivor Benefit the member would have received. If not eligible to retire but 25 years of service, the same benefit calculated as though age 55 using service and earnings at death.

CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM
SUMMARY OF PLAN PROVISIONS

[Sec. 5-168]: If not eligible for retirement, return of contributions (after October 1, 1982, Tier I, with interest from January 1, 1982 at 5%).

Tier II [Sec. 5-192r] and Tier IIA: If eligible for early or normal retirement, spouse benefit is equal to 50% of the member's benefit under a 50% Joint & Survivor Annuity. If not eligible to retire but 25 years of service, the same benefit calculated as though age 55 using service and earnings at death. If not eligible for retirement, return of contributions with 5% interest.

Tiers I [Sec. 5-144], II [Sec. 5-192t] and IIA: If death is due to employment, a spouse with dependent children under 18 will be paid \$100,000 in 10 annual installments while living and not remarried; also \$50 per month per child under age 18. If no children under age 18, spouse [or dependent parent(s), if no spouse] will be paid \$50,000 in not less than 10 annual installments.

10. Disability Benefits

Tier I [Sec. 5-142, 5-169, 5-173]: For non-service disabilities occurring prior to age 60 with at least 5 years of service, benefit is 3% of Final Average Earnings times years of service; maximum benefit is 1 $\frac{2}{3}$ % of Final Average Earnings times years of service projected to age 65. If disability occurs prior to age 60 and is due to service, benefit is 1 $\frac{2}{3}$ % of Salary times years of service projected to age 65 (maximum 30 years) and is payable regardless of length of service. Exception: State Police benefit is equal to the normal retirement benefit if more than 20 years of service. State Police receive an additional benefit of \$360 per month plus \$300 to spouse plus \$300 to a surviving dependent child (or \$700 to surviving dependent children).

If in-service disability occurs after the member is eligible for a non-service disability, the member receives the greater of the in-service and non-service disability benefits.

Tier II [5-192p] and Tier IIA: Prior to age 65 and due to service or with at least 10 years of service, benefit is 1 $\frac{1}{3}$ % of Final Average Earnings plus $\frac{1}{2}$ % of Final Average Earnings in excess of the year's breakpoint, times service projected to age 65 (maximum 30 years) or service to Date of Disability if greater.

Tier I, II, and IIA: Maximum disability benefit is the lesser of 100% of salary less Workers Compensation, Social Security and non-rehabilitation earnings, or 80% of salary less Workers Compensation and Social Security. Social Security is primary plus family.

Minimum disability benefit including Workers Compensation and Social Security is 60% of salary.

CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM
SUMMARY OF PLAN PROVISIONS

11. Optional Forms of Payment

50% or 100% Joint and Survivor (Normal Form if married at least 12 months). Ten years certain and life. Twenty years certain and life. Life (Normal Form if not married at least 12 months).

12. Part-Time Employment

[Sec. 5-162g & Sec. 5-192k]: Service is treated as if full-time for eligibility. If member is consistently part-time for all periods, service is treated as if full-time. If member has a varying schedule or some part-time and some full-time service, service and salary are proportionately adjusted.

APPENDIX C

ACTUARIAL METHOD AND ASSUMPTIONS

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CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM
ACTUARIAL METHODS AND ASSUMPTIONS

A. Funding Method

The actuarial valuation method used is the ***Projected Unit Credit Cost Method***. Recommended annual contributions until the actuarial liability is completely funded will consist of two pieces: Normal Cost plus a payment towards the Unfunded Actuarial Liability.

The ***Actuarial Liability*** is determined directly as the present value of benefits accrued to date, where the accrued benefits for each Member is the pro-rata portion (based on service to date) of the ***projected*** benefit payable at death, disability, retirement or termination. The Normal Cost is then similarly determined as the present value of the portion of the ***projected*** benefit attributable to the current year.

The ***Actuarial Value of Assets*** is determined by first projecting the Actuarial Value forward from the beginning of the prior fiscal year based on the actual cash flow during the fiscal year and the assumed interest rate. The difference between this expected actuarial value and the actual market value is recognized over a five year period, subject to the Actuarial Value remaining within +/- 20% of the Market Value.

The ***Unfunded Actuarial Liability*** is the Actuarial Liability less the Actuarial Value of Assets.

The valuation includes a projection from the valuation date to future years. The projection is based on certain key assumptions:

- The investment return on the market value of assets is assumed to be 8.50% per year.
- The active population count for hazardous duty and nonhazardous duty members is assumed to remain constant at the levels from the current valuation.
- Total payroll is assumed to growth by 5.00% per year.
- Age and salary distributions for new entrants in future years are based on that observed for members hired in the year preceding the current valuation. The composition of the new entrant group in each future year is adjusted to maintain the proportion of hazardous duty to nonhazardous duty members in the population.
- Actual plan experience with respect to terminations, retirement, mortality, cost of living increases, etc. is assumed to exactly match the actuarial assumptions utilized in the current valuation.

**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM
ACTUARIAL METHODS AND ASSUMPTIONS**

B.. Actuarial Assumptions

Interest Rate 8.50%

Payroll Growth Rate 5.00%

Salary Scale	<u>Years of Service</u>	<u>Rate</u>
	0	15.00
	1	15.00
	2	10.00
	3	7.00
	4	6.50
	5	6.00
	10	5.50
	15	4.25
	20	4.25
	25	4.25

COLA	<u>Group</u>	<u>Rate</u>
	Pre July 1, 1980 Retirees	3.75
	1980 – 1997 Retirees	3.00
	Post July 1, 1997 Retirees	2.75

Taxable Wage Base Growth 3.50%

Healthy Mortality 1994 Group Annuity Mortality Table.

80% of active members are assumed to be married with an average of two children who are on average age 12; female spouses are assumed to be three years younger than male spouses.

20% of pre-retirement deaths are assumed to be service related.

State Police are assumed to comprise 50% of Tier I Hazardous employees.

Disabled Mortality 80% of PBGC Disabled Mortality with Soc. Security for Males

60% of PBGC Disabled Mortality with Soc. Security for Females

**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM
ACTUARIAL METHODS AND ASSUMPTIONS**

Turnover

Ten year select and ultimate rates as shown below for non-hazardous employees; the same table with rates multiplied by a factor of 40% for hazardous employees.

<u>Age</u>	<u>Years of Service</u>					
	<u>0-1</u>	<u>2</u>	<u>3-4</u>	<u>5</u>	<u>6-9</u>	<u>10+</u>
20	40	30	20	15	5	5.0
25	30	20	10	8	5	5.0
30	25	20	10	8	5	4.2
35	25	20	10	8	5	3.0
40	25	20	10	8	5	2.6
45	25	20	10	8	5	2.0
50	25	20	10	8	5	1.2
55	25	20	10	8	5	0.0
60	25	20	10	8	5	0.0

Retirement

<u>Age</u>	<u>First Year Eligible</u>		<u>All Other Ages</u>
Thru 44	25		15
45-48	25		20
49-53	10		20
54-55	10		25
56-59	10		40
60-69	25		40
70	100		100

<u>Age</u>	<u>First Year Eligible</u>		<u>All Other Ages</u>
	<u>Reduced Benefits</u>	<u>Unreduced Benefits *</u>	
55	17.5	15.0	12.5
56-60	15.0	15.0	12.5
61	25.0	25.0	15.0
62	40.0	30.0	30.0
63	35.0	35.0	25.0
64	45.0	45.0	25.0
65	65.0	65.0	40.0
66-69	60.0	65.0	40.0
70	100.0	100.0	100.0

* These rates also apply for Tier I Plan B and Tier I Plan C members upon attainment of age 60 with at least 10 years of service.

**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM
ACTUARIAL METHODS AND ASSUMPTIONS**

Disability

In-service Hazardous - 0.11% at all ages
 All Others - 0.03% at all ages

Non-service 25% of United Auto Workers Disability Table

To take into account State Police supplemental benefits and the offsets for Workers Compensation, social security, and non-rehabilitation earnings, the following minimum and maximum benefits (as a percent of salary) are valued:

	<u>Minimum</u>	<u>Maximum</u>
Tier I State Police	60%	80%
All other members	40%	60%

***Member Data
Processing***

Service for active members is based on the continuous date of hire reported to us and is adjusted to reflect any periods of purchased service that are reported to us. For purposes of Tier II and IIA vesting and retirement eligibility, we have reflected the five year requirement (which applies to actual state service) rather than the ten year requirement (which applies to vesting service).

Active members who are on a leave of absence or out on Workers Compensation are not reported to us. We have not included an additional liability for such members who may have accrued benefits and may resume employment in the future.

Terminated vested members are reported to us only if they have made an application for benefits to the Retirement Division. We have not included an additional liability for members who have terminated with a vested benefit who may apply for benefits in the future.

For terminated vested members for whom a benefit was not provided, we have estimated benefits based on their date of hire and termination and the average salaries of active members in the prior valuation.

For retired Tier I Plan B members who are not yet age 65, we are supplied with the current benefit amount; we assume that the benefit will be reduced on average by \$750 per year at age 65.

Beneficiaries of retired members receiving contingent annuities are assumed to be the opposite gender of the retired member; females are assumed to be three years younger than males.