



*ACTUARIAL VALUATION*  
*CONNECTICUT STATE EMPLOYEES*  
*RETIREMENT SYSTEM*  
*AT JUNE 30, 2008*



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November 19, 2008

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

Re: Connecticut State Employees Retirement System  
June 30, 2008 Actuarial Valuation

Members of the Commission:

At your request, we have made a full actuarial valuation of the Connecticut State Employees Retirement System (SERS) as of June 30, 2008. 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, liabilities, and costs are found in Sections II, III, and IV, respectively. Section V contains the disclosure information required by GASB #25. The Appendices contain information regarding SERS membership, an outline of the benefit provisions, a description of the actuarial methods and assumptions employed in this valuation, and details on the Actuarial Surplus as of June 30, 2008.

As developed in Section IV, the actuarially determined contribution for the fiscal year beginning July 1, 2009 is \$897,428,085. For the fiscal year beginning July 1, 2010, the actuarially determined contribution is \$944,076,932.

Respectfully submitted,

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

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

aas/ras 10 CSE2008MainVal&Report

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**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM**  
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**SECTION I**

***EXECUTIVE SUMMARY***

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**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM**  
**EXECUTIVE SUMMARY**

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We have performed a full actuarial valuation of the Connecticut State Employees Retirement System as of June 30, 2008 to determine the contributions for the Fiscal Years beginning July 1, 2009 and July 1, 2010. 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. Future actuarial measurements may differ significantly from the current measurements presented in this report due to actual plan experience deviating from the actuarial assumptions, the natural operation of the plan's actuarial cost method (such as the expiration of an amortization period or additional cost or contribution requirements based on the plan's funded status), and changes in plan provisions, actuarial assumptions, and applicable law. An assessment of the potential range and cost effect of such differences is beyond the scope of this report.

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**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM**  
**EXECUTIVE SUMMARY**

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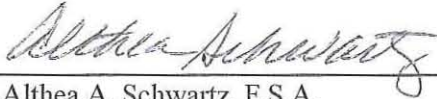
On the basis of the foregoing, we hereby certify that, to the best of our knowledge, this report is complete and accurate and all costs and liabilities were determined in conformance with generally accepted actuarial principles and practices based on the actuarial methods and assumptions adopted by the System.

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.

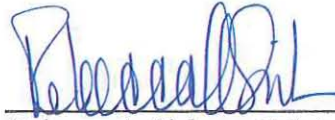
MILLIMAN INC.

November 19, 2008



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**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM  
EXECUTIVE SUMMARY**

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***PURPOSE OF REPORT***

This report presents the results of the June 30, 2008 actuarial valuation of the Connecticut State Employees Retirement System (SERS). The primary purposes for performing the valuation are:

- to determine the Employer contribution for the Fiscal Year beginning July 1, 2009;
- to determine the Employer contribution for the Fiscal Year beginning July 1, 2010;
- to disclose asset and liability measures as of June 30, 2008; and
- to analyze and report on trends in SERS contributions, assets and liabilities over the past several years.

***ORGANIZATION OF THE EXECUTIVE SUMMARY***

Starting with the June 30, 1998 valuation, complete actuarial valuations are performed only every other year. Membership and asset information was collected as of July 1, 2007 and has been shown where appropriate in this report for informational purposes.

The executive summary contains the following information:

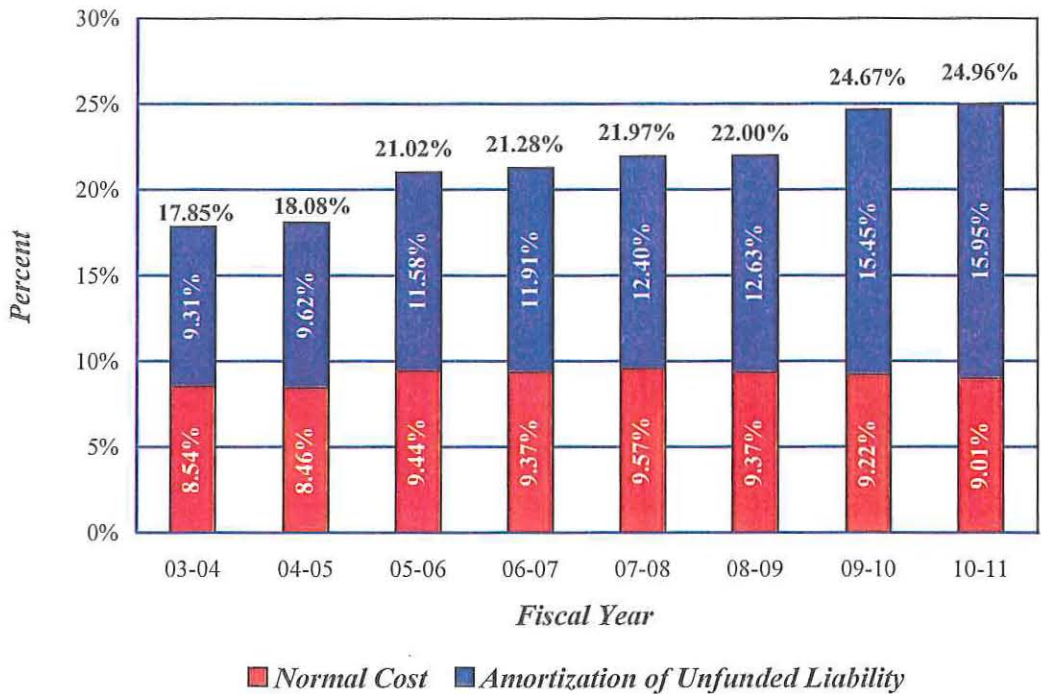
- ***Major Findings...*** shows graphically, key results for several years.
- ***Discussion of Results...*** highlights the major events influencing this valuation.
- ***Principal Results...*** Contains a summary of comparative statistics for the current and prior valuations.

**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM  
EXECUTIVE SUMMARY**

**MAJOR FINDINGS**

The major findings of this valuation are summarized and compared in the following charts:

*Employer Contribution Rate*



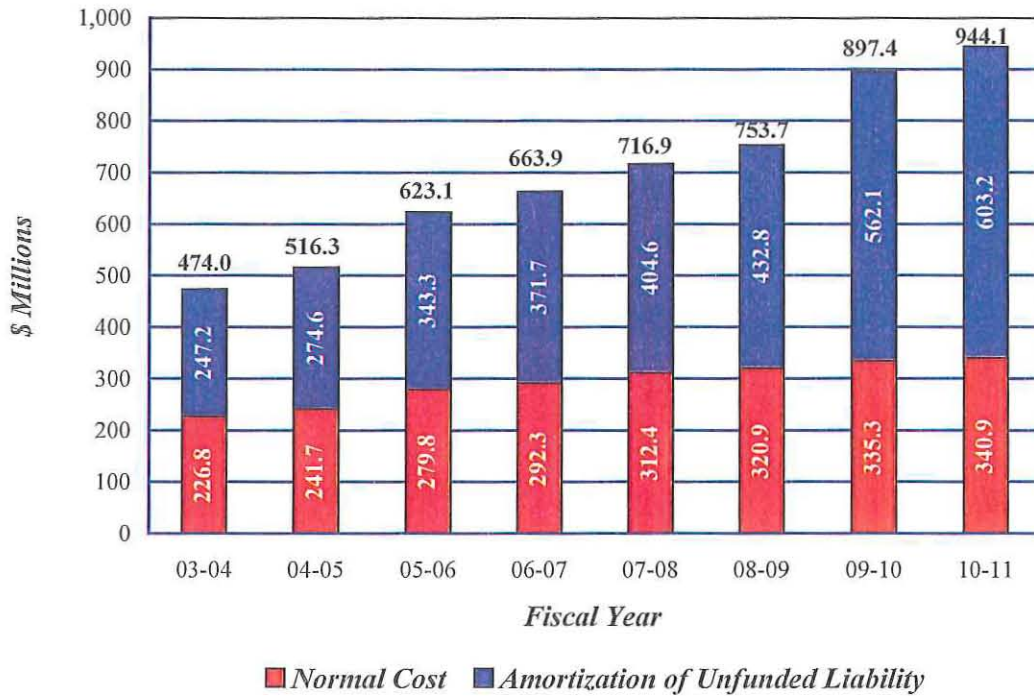
*The bar graph depicts the Employer's contribution rates. The normal cost rates are starting to decline as a growing portion of the active membership is covered by Tier II and Tier IIA. The amortization payment continues to grow due to the growth in the Unfunded Actuarial Liability.*



**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM  
EXECUTIVE SUMMARY**

**MAJOR FINDINGS**

*Employer Contribution*



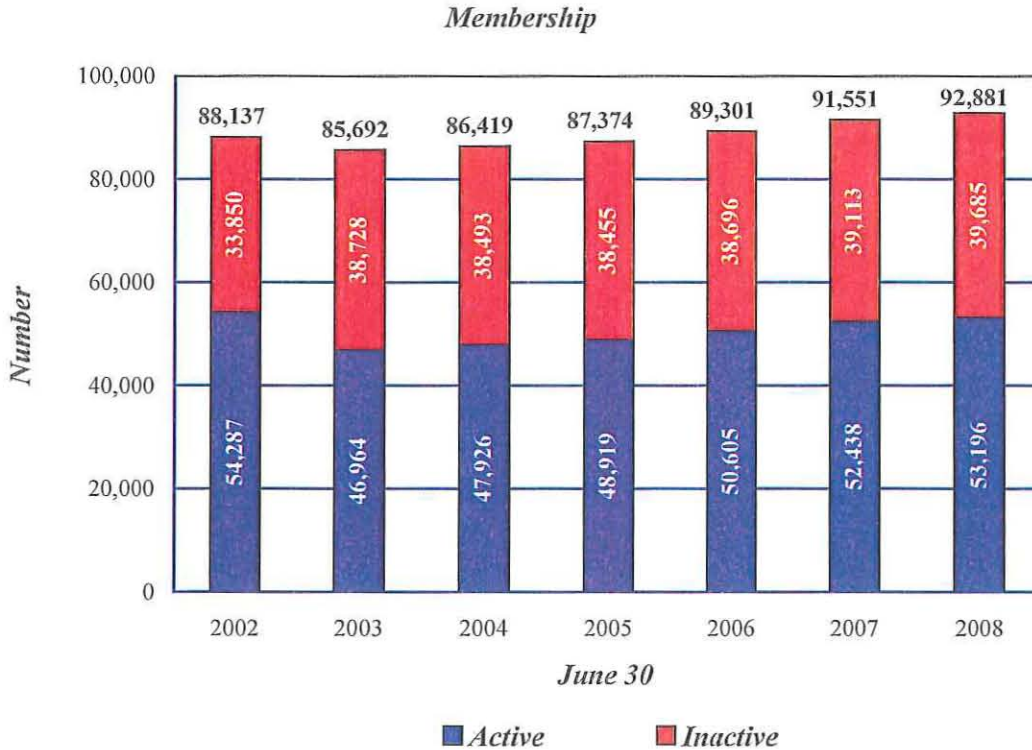
*The dollar amount of the Employer's contribution equals the contribution rate shown on the prior table multiplied by the projected payroll. The Normal Cost contribution has remained relatively steady with increases reflecting payroll growth. The amortization component has grown considerably reflecting the growth in the System's Unfunded Actuarial Liability.*

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**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM  
EXECUTIVE SUMMARY**

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**MAJOR FINDINGS**



*The total number of members has grown steadily since 2003. The number of active members is approaching the pre-2003 ERIP level, an increase of 13.3% over five years. Over the same time frame, the number of inactive members has increased by only 2.5%.*

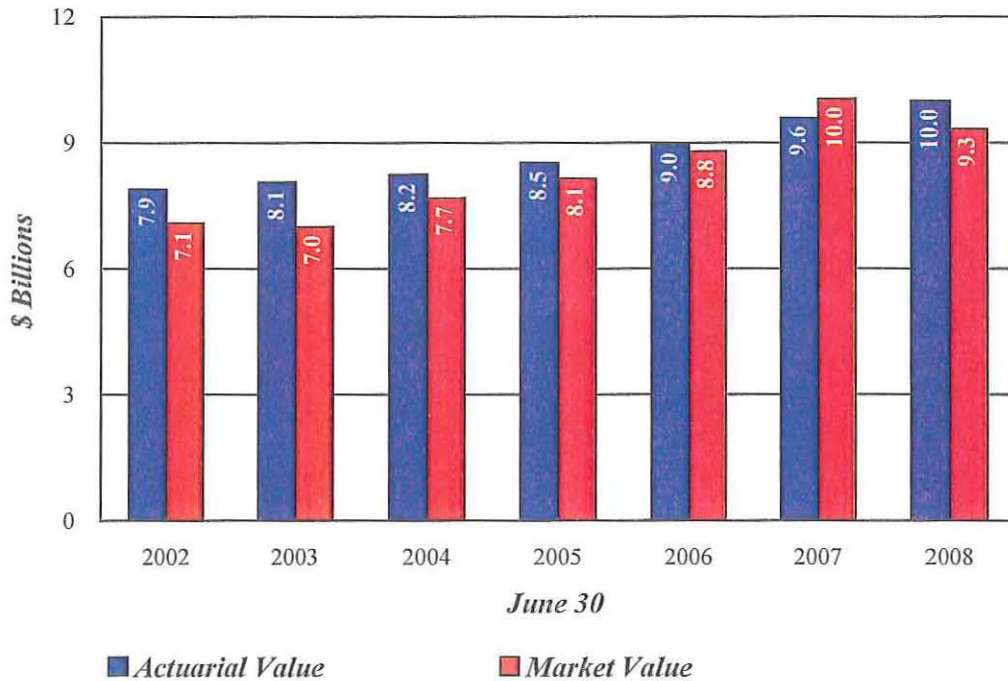
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**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM  
EXECUTIVE SUMMARY**

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**MAJOR FINDINGS**

*SERS Assets*

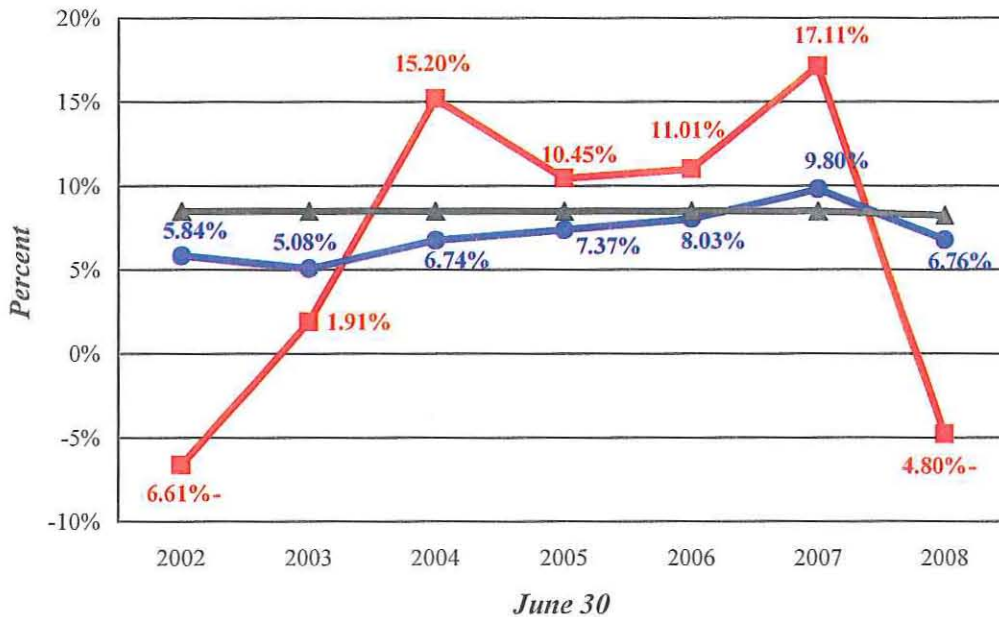


*FY08 saw significant market losses, following four years of investment gains. The market value declined from \$10.0 billion to \$9.3 billion. Contributions during the past year were \$779 million; benefit payments totaled \$1,014 million. The actuarial value grew from \$9.6 billion to \$10.0 billion, reflecting the deferred recognition of both the FY08 market loss and the prior years' market gains.*

**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM  
EXECUTIVE SUMMARY**

**MAJOR FINDINGS**

*Historical Rates of Return*



■ Market Value   
 ● Actuarial Value   
 ▲ Assumed Rate of Return

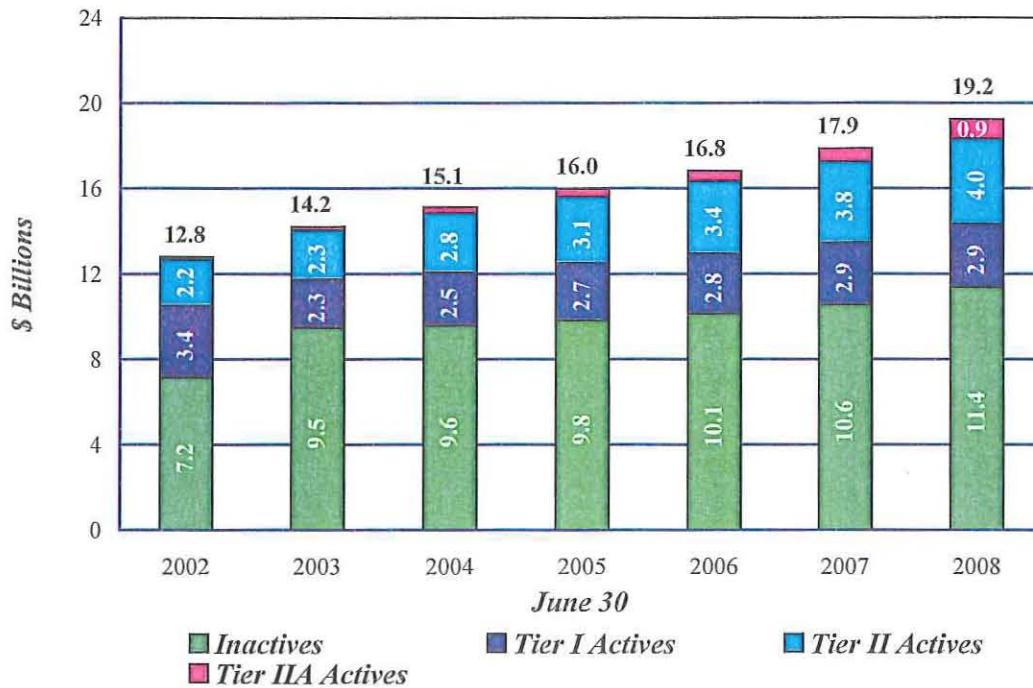
*This graph shows the historical rates of return on a market value basis, the impact of 'smoothing' (the rates shown on an actuarial value basis), and the 'benchmark' (our 8.50% assumed rate of return). During FY08, the rate of return on a Market Value basis was -4.80%. The corresponding rate of return on an Actuarial Value basis was 6.76%, reflecting the gradual recognition of gains and 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 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. The assumption changes made with this valuation (see page 14) increased the Actuarial Liability by \$212 million.*

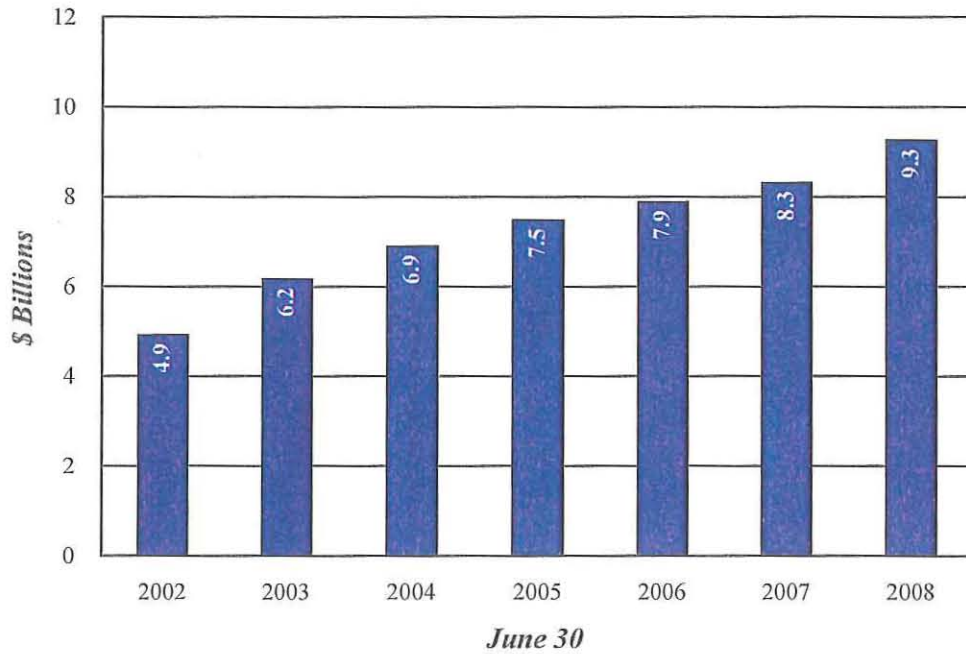
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**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM  
EXECUTIVE SUMMARY**

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**MAJOR FINDINGS**

*Unfunded Liabilities*



*The Unfunded Actuarial Liability has increased by \$950 million since the last 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. See page 16 for a more detailed discussion of the sources of this year's increase.*

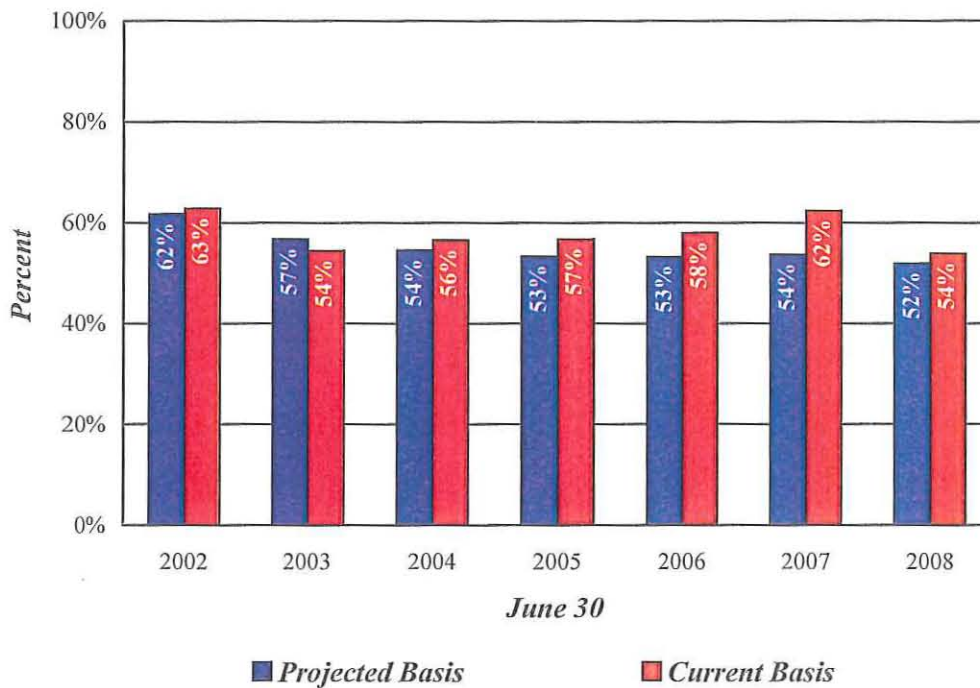
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**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM**  
**EXECUTIVE SUMMARY**

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**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**

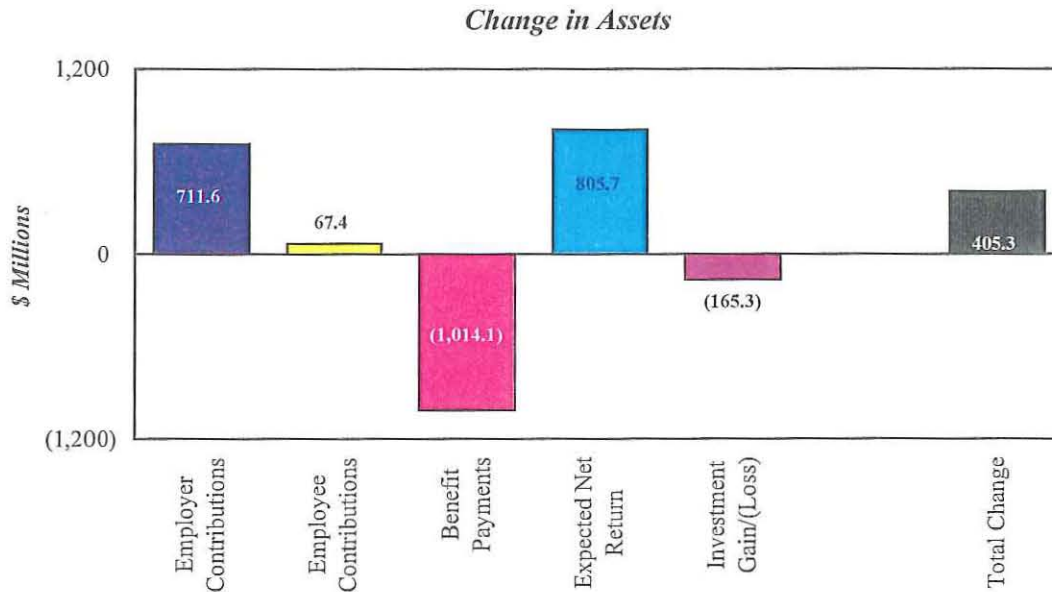
***DISCUSSION OF RESULTS***

In this section of the Executive Summary, we will discuss the significant events impacting the June 30, 2008 actuarial valuation.

***I. Investment Experience***

Due to general market conditions, the actual return was -4.80% on a market value basis compared to 17.11% for the prior fiscal year. On a smoothed actuarial basis, the rate was 6.76% compared to 9.80% for the prior valuation, reflecting delayed recognition of the FY08 market loss along with the prior years' market gains and losses. The assumed rate was 8.50%.

Between July 1, 2007 and June 30, 2008, the actuarial value of assets increased by \$405.3 million. This change was attributable to the following:



The expected net return on investments of \$805.7 million shown above is based on an assumed rate of return of 8.50%. However, the recognized investment earnings of \$640.4 million over the year was lower than this target, resulting in an actuarial loss of \$165.3 million. More details on SERS assets are presented in Section II of this report.



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**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM  
EXECUTIVE SUMMARY**

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**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>
<b>Count on June 30, 2007</b>	52,438	39,113	91,551
Left System	(2,444)	(1,064)	(3,508)
Terminated Vested	(43)	43	0
Retired	(1,109)	1,109	0
Disabled	(252)	252	0
Died with Beneficiary	(30)	(220)	(250)
New Beneficiaries	0	250	250
Rehired	31	(31)	0
New to System	4,605	233	4,838
<b>Count on June 30, 2008</b>	53,196	39,685	92,881

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>
<b>Count on June 30, 2006</b>	7,930	23,918	18,757	50,605
<i>percentage of total</i>	16%	47%	37%	
<b>Count on June 30, 2007</b>	7,465	23,314	21,659	52,438
<i>percentage of total</i>	14%	44%	41%	
<b>Count on June 30, 2008</b>	6,865	22,324	24,007	53,196
<i>percentage of total</i>	13%	42%	45%	

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

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**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM  
EXECUTIVE SUMMARY**

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***DISCUSSION OF RESULTS***

***III. Assumption Changes***

Connecticut General Statutes mandate that the System's experience be studied every five years to examine the continued appropriateness of the actuarial assumptions. In 2008 we performed such a study of the System's experience covering the period 2003 – 2007. As a result of this study, the Actuarial Subcommittee of the Retirement Commission adopted a number of changes to the actuarial assumptions. Please see Appendix C of this report for a detailed summary of the changes. In brief, the changes are:

***Economic Assumptions***

Interest Rate - lowered from 8.50% to 8.25%

Payroll Growth Rate - lowered from 5.00% to 4.00%

COLA - lowered from 3.75% to 3.60% for pre-1980 retirees and lowered from 2.75% to 2.70% for post-1997 retirees

Salary Scale - generally lowered by 25 to 50 basis points at each point in a member's working lifetime

***Demographic Assumptions***

Healthy Mortality - updated from 1994 GAM table to RP-2000 table with margin for future mortality improvements

Disabled Mortality - updated from PBGC table to RP-2000 table

Turnover - slight modifications only

Retirement - slightly lower rates of early retirement; lower rates of retirement for members working beyond their Normal Retirement Dates.

Disability - increased rates of disability

These changes increased the Actuarial Liability by \$212 million and increased the Employer Contribution for FY 2009-10 by \$39.8 million.

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**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM  
EXECUTIVE SUMMARY**

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***DISCUSSION OF RESULTS***

***IV. Plan Changes***

The *Longley* decision changed the manner in which the final longevity payment received prior to retirement is included in the calculation of final average earnings. Not all members' benefits are impacted by *Longley*: some members do not receive longevity payments, some members have had level longevity payments in the salary averaging period, and terminated vested members do not have longevity payments included in final average earnings. Members whose benefits are impacted by *Longley* have varying amounts of longevity payments relative to their other pay figures and therefore have varying benefit increases as a result of *Longley*.

The extent to which *Longley* will be applied to members already in pay status has not yet been determined. For purposes of this valuation, we have reflected the impact of *Longley* on a prospective basis only. If *Longley* is applied retroactively, the Unfunded Actuarial Liability and therefore the Employer Contribution will increase.

Please see Appendix C of this report for details of how the *Longley* impact has been determined.

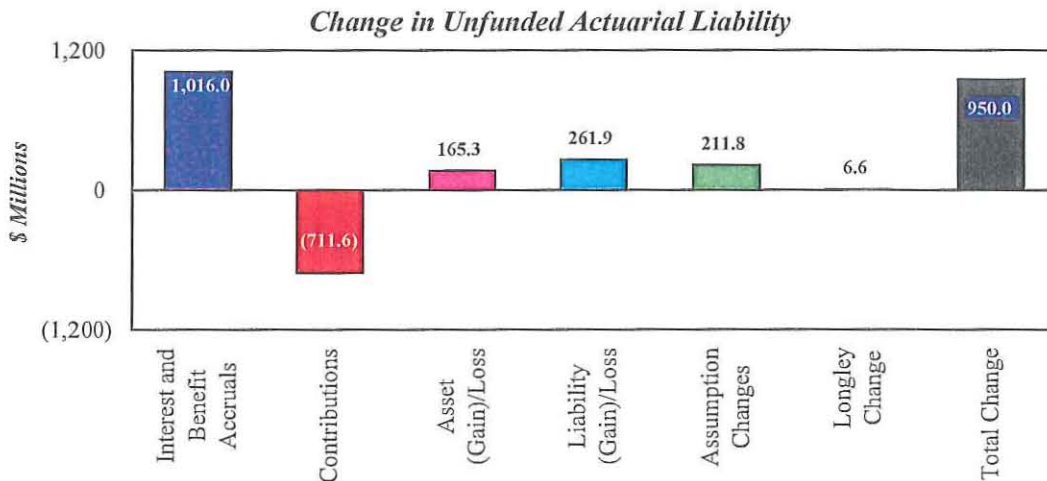
This change increased the Actuarial Liability by \$6.6 million and increased the Employer Contribution for FY 2009-10 by \$0.9 million.

**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM  
EXECUTIVE SUMMARY**

**DISCUSSION OF RESULTS**

**V. Unfunded Actuarial Liability**

The unfunded actuarial liability is the shortfall between SERS projected liabilities and assets. Since July 1, 2007, the unfunded actuarial liability increased from \$8.3 billion to \$9.3 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 2007 to 2008:



The liability loss of \$261.9 million over the past year is very small (1.4%) when compared to the total SERS liability of \$19,243.4 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 FY08, the liability loss was a combination of several factors, including higher than expected salary growth and fewer than expected retirements from the active membership.

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**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM  
EXECUTIVE SUMMARY**

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***DISCUSSION OF RESULTS***

***VI. SERS Contributions***

The primary purpose of our actuarial valuation is to take the asset and membership information discussed on the previous pages, apply our actuarial methods and assumptions, and determine a contribution amount that will continue the System on a sound funding basis. The resulting contributions for the two fiscal years in the coming biennial budget cycle are:

<i>(\$ millions)</i>	<i>Fiscal Year</i>	
	<i>July 1, 2009</i>	<i>July 1, 2010</i>
	<i>to</i>	<i>to</i>
	<i>June 30, 2010</i>	<i>June 30, 2011</i>
Employer Normal Cost	\$335.3	\$340.9
Net Amortization Payment Towards Unfunded Actuarial Liability	562.1	603.2
Total Employer Cost	897.4	944.1
Total Employer Cost as a Percent of Payroll	24.67%	24.96%

More details on the development of the contributions can be found in Section IV.

**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM  
EXECUTIVE SUMMARY**

**PRINCIPAL RESULTS**

	<i>Interim</i>		
	<i>June 30, 2006</i>	<i>June 30, 2007</i>	<i>June 30, 2008</i>

**SERS Membership**

Active Membership

Number of Active Members	50,605	52,438	53,196
Payroll (\$ millions)	\$3,107.9	\$3,310.4	\$3,497.4
Average Pay	61,415	63,129	65,746

Inactive Membership

Number of Inactive Members	38,696	39,113	39,685
Annual Retired Members' Benefits (\$ millions)	\$942.1	\$988.9	\$1,047.5
Average Annual Retired Members' Benefits	25,486	26,427	27,498

**Assets and Liabilities (\$ millions)**

Assets

Market Value	\$8,789.6	\$10,041.0	\$9,329.2
Actuarial Value	8,951.4	9,585.0	9,990.2

Liabilities

Active Members	6,692.3	7,327.2	7,850.7
Inactive Members	10,138.1	10,560.9	11,392.7
Total Actuarial Liability	16,830.3	17,888.1	19,243.4
Unfunded Actuarial Liability	7,879.0	8,303.1	9,253.1

**Employer Contributions**

First fiscal year in budget cycle

	<i>FY 2007-08</i>	<i>FY 2009-10</i>
Normal Cost	\$312,360,768	\$335,323,144
Amortization Payment of Unfunded Liability	<u>404,583,496</u>	<u>562,104,941</u>
Total Employer Contribution	716,944,264	897,428,085
Total Contribution as a Percent of Payroll	21.97%	24.67%

Second fiscal year in budget cycle

	<i>FY 2008-09</i>	<i>FY 2010-11</i>
Normal Cost	\$320,915,187	\$340,926,657
Amortization Payment of Unfunded Liability	<u>432,782,852</u>	<u>603,150,275</u>
Total Employer Contribution	753,698,039	944,076,932
Total Contribution as a Percent of Payroll	22.00%	24.96%

**SECTION II**

***SERS ASSETS***

**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM  
SERS ASSETS**

**TABLE II-1**

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

	<b><i>July 1, 2006 to June 30, 2007</i></b>	<b><i>July 1, 2007 to June 30, 2008</i></b>
<b><i>Market Value as of July 1</i></b>	\$8,789,643,845	\$10,041,047,120
<b><i>Contributions</i></b>		
State	541,038,351	548,936,589
Federal	122,892,384	162,618,685
Employee	61,794,719	67,389,585
Total	<u>725,725,454</u>	<u>778,944,859</u>
<b><i>Investment Income Net of Expenses</i></b>		
Interest & Dividends	352,709,896	372,298,861
Realized Gains	301,765,414	323,533,565
Change in Unrealized Gains	829,827,360	(1,171,995,115)
Expenses	(509,520)	(558,107)
Total	<u>1,483,793,150</u>	<u>(476,720,796)</u>
<b><i>Disbursements</i></b>		
Benefit Payments	951,353,124	1,008,131,838
Employee Refunds	6,762,205	5,964,307
Total	<u>958,115,329</u>	<u>1,014,096,145</u>
<b><i>Market Value as of June 30</i></b>	10,041,047,120	9,329,175,038
<b><i>Approximate Net Rate of Return</i></b>	17.11%	-4.80%



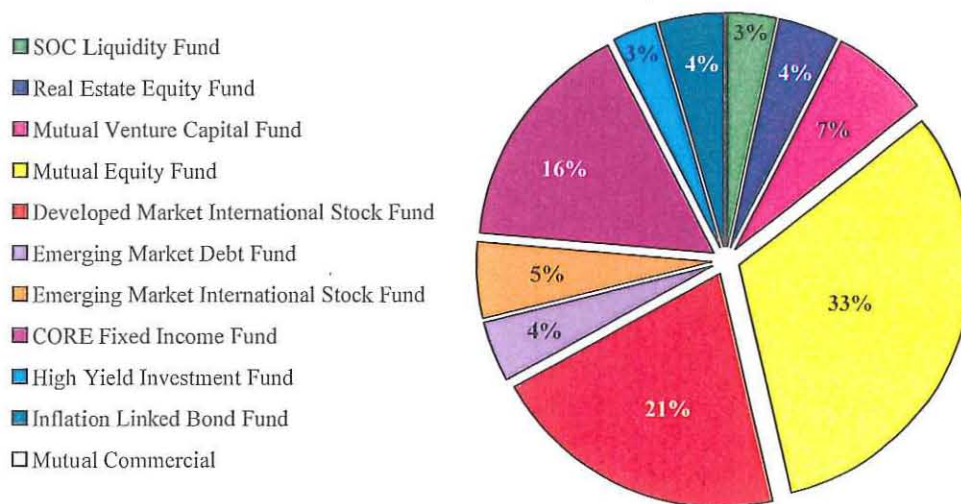
**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM  
SERS ASSETS**

**TABLE II-2**

***Market Value of Assets  
Breakdown on June 30, 2008***

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	(\$563,584)	-0.01%
Accrued Interest	0	0.00%
Investments:		
SOC Liquidity Fund	310,813,243	3.33%
Real Estate Equity Fund	381,084,876	4.08%
Mutual Venture Capital Fund	665,072,691	7.14%
Mutual Equity Fund	2,980,807,234	31.95%
Developed Market International Stock Fund	1,912,555,528	20.50%
Emerging Market Debt Fund	374,543,559	4.01%
Emerging Market International Stock Fund	506,507,095	5.43%
CORE Fixed Income Fund	1,494,557,290	16.02%
High Yield Investment Fund	299,453,134	3.21%
Inflation Linked Bond Fund	401,689,103	4.31%
Mutual Commercial	2,654,869	0.03%
 Total Market Value as of June 30, 2008	 9,329,175,038	 100.00%



**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM  
SERS ASSETS**

**TABLE II-3**

***2007-2008 Development of Actuarial Value of Assets***

	<i>Market Value</i>	<i>Actuarial Value</i>
1. Value on July 1, 2007	\$10,041,047,120	\$9,584,970,345
2. Contributions during 2007-08	778,944,859	778,944,859
3. Benefit Payments during 2007-08	1,014,096,145	1,014,096,145
4. Expected Income on (1) through (3)*	844,462,723	805,696,197
5. Expected Value on June 30, 2008: (1) + (2) - (3) + (4)	10,650,358,557	10,155,515,256
6. Market Value on June 30, 2008	9,329,175,038	N/A
7. Market - Actuarial Value on June 30, 2008	N/A	(826,340,218)
8. Preliminary Actuarial Value: (5) + 20% of (7)	N/A	9,990,247,212
9. Final Value on June 30, 2008: (8) within +/- 20% of Market Value	N/A	9,990,247,212

\* 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)***

	<u>Market Value</u>	<u>Actuarial Value</u>
1. Value on July 1, 2007	\$10,041,047,120	\$9,584,970,345
2. Contributions during 2007-08	778,944,859	778,944,859
3. Benefit Payments during 2007-08	1,014,096,145	1,014,096,145
4. Expected Income on (1) through (3)*	844,462,723	805,696,197
5. Expected Value on June 30, 2008: (1) + (2) - (3) + (4)	10,650,358,557	10,155,515,256
6. Actual Value on June 30, 2008	9,329,175,038	9,990,247,212
7. Actual Income	(476,720,796)	640,428,153
8. Asset Gain/(Loss): (7) - (4)	(1,321,183,519)	(165,268,044)
9. Approximate Rate of Return as of June 30, 2008	-4.80%	6.76%
10. Approximate Rate of Return as of June 30, 2007	17.11%	9.80%
11. Change	-21.91%	-3.04%

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

**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM**  
**SERS ASSETS**

**TABLE II-5**

*Projection of Assets to Next Two Fiscal Years*

	<i>Market Value</i>	<i>Actuarial Value</i>
1. Value on June 30, 2008	\$9,329,175,038	\$9,990,247,212
2. Expected Contributions during 2008-09	820,067,845	820,067,845
3. Expected Benefit Payments during 2008-09	1,076,100,375	1,076,100,375
4. Expected Income on (1) through (3)*	760,114,353	814,652,807
5. Expected Value on June 30, 2009: (1) + (2) - (3) + (4)	9,833,256,861	10,548,867,489
6. Market - Actuarial Value on June 30, 2009	N/A	(715,610,628)
7. Preliminary Actuarial Value: (5) + 20% of (6)	N/A	10,405,745,363
8. Final Value on June 30, 2009: (7) within +/- 20% of Market Value	9,833,256,861	10,405,745,363
9. Expected Contributions during 2009-10	967,837,222	967,837,222
10. Expected Benefit Payments during 2009-10	1,145,725,159	1,145,725,159
11. Expected Income on (8) through (10)*	804,613,630	851,843,931
12. Expected Value on June 30, 2010: (8)+(9)-(10)+(11)	10,459,982,554	11,079,701,357
13. Market - Actuarial Value on June 30, 2010	N/A	(619,718,803)
14. Preliminary Actuarial Value: (12) + 20% of (13)	N/A	10,955,757,596
15. Final Value on June 30, 2010: (14) within +/- 20% of Market Value	10,459,982,554	10,955,757,596

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

**SECTION III**

***SERS LIABILITIES***

This work product was prepared solely for the Connecticut State Employees Retirement 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  
SERS LIABILITIES**

**TABLE III-1**

***SERS Liabilities on Valuation Date***

	<i>June 30, 2006</i>	<i>June 30, 2007</i>	<i>June 30, 2008</i>
<b><i>Tier I Actives</i></b>			
Hazardous Duty	\$236,048,803	\$255,390,907	\$201,793,572
Plan B	2,473,717,978	2,544,362,455	2,629,166,685
Plan C	109,499,519	108,677,554	108,136,839
<b><i>Total</i></b>	<b>2,819,266,300</b>	<b>2,908,430,916</b>	<b>2,939,097,096</b>
<b><i>Tier II Actives</i></b>			
Hazardous Duty	1,459,958,342	1,652,466,848	1,580,560,891
All Others	1,937,755,972	2,138,355,029	2,418,383,981
<b><i>Total</i></b>	<b>3,397,714,314</b>	<b>3,790,821,877</b>	<b>3,998,944,872</b>
<b><i>Tier IIA Actives</i></b>			
Hazardous Duty	203,091,947	273,280,315	387,266,298
All Others	272,209,082	354,673,846	525,347,666
<b><i>Total</i></b>	<b>475,301,029</b>	<b>627,954,161</b>	<b>912,613,964</b>
<b><i>Total Actives</i></b>	<b>6,692,281,643</b>	<b>7,327,206,954</b>	<b>7,850,655,932</b>
<b><i>Retirees</i></b>			
Pre-1980	296,591,435	273,508,893	251,596,021
1980-1997 Fixed COLA	5,305,933,086	5,216,605,018	5,230,764,729
1997+ Variable COLA	4,328,861,181	4,860,768,855	5,695,482,543
<b><i>Total</i></b>	<b>9,931,385,702</b>	<b>10,350,882,766</b>	<b>11,177,843,293</b>
<b><i>Deferred Vesteds</i></b>	<b>206,681,823</b>	<b>209,975,396</b>	<b>214,873,529</b>
<b><i>Total Actuarial Liability</i></b>	<b>16,830,349,168</b>	<b>17,888,065,116</b>	<b>19,243,372,754</b>

**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM  
SERS LIABILITIES**

**TABLE III-2**

*Projection of Liabilities to Next Two Fiscal Years*

	<i>June 30, 2009</i>	<i>June 30, 2010</i>
<i>Tier I Actives</i>		
Hazardous Duty	\$190,847,279	\$179,206,028
Plan B	2,569,105,613	2,485,326,958
Plan C	103,426,958	98,561,484
<b>Total</b>	<b>2,863,379,850</b>	<b>2,763,094,470</b>
<i>Tier II Actives</i>		
Hazardous Duty	1,680,570,334	1,745,998,659
All Others	2,497,264,443	2,566,113,513
<b>Total</b>	<b>4,177,834,777</b>	<b>4,312,112,172</b>
<i>Tier IIA Actives</i>		
Hazardous Duty	462,152,985	550,548,703
All Others	623,848,491	736,442,589
<b>Total</b>	<b>1,086,001,476</b>	<b>1,286,991,292</b>
<b>Total Actives</b>	<b>8,127,216,103</b>	<b>8,362,197,934</b>
<i>Retirees</i>		
Pre-1980	228,985,459	207,372,321
1980-1997 Fixed COLA	5,093,213,109	4,945,286,389
1997+ Variable COLA	6,475,444,186	7,328,195,973
<b>Total</b>	<b>11,797,642,754</b>	<b>12,480,854,683</b>
<i>Deferred Vesteds</i>	229,198,746	242,323,604
<b>Total Actuarial Liability</b>	<b>20,154,057,603</b>	<b>21,085,376,221</b>

**SECTION IV**

***SERS CONTRIBUTIONS***



**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM  
SERS CONTRIBUTIONS**

**TABLE IV-1**

*Projected Unit Credit Normal Cost on Valuation Date  
(Net of Employee Contributions)*

<i>Normal Cost in Dollars</i>	<i>June 30, 2007</i>	<i>June 30, 2008</i>
Tier I Hazardous Duty	\$6,015,460	\$4,527,368
Tier I Plan B	71,742,136	73,515,761
Tier I Plan C	2,263,815	2,361,430
Tier II Hazardous Duty	76,540,216	64,162,508
Tier II All Others	110,560,853	118,272,287
Tier IIA Hazardous Duty	24,690,666	23,557,207
Tier IIA All Others	33,267,151	43,617,982
<b><i>Total</i></b>	<b>325,080,297</b>	<b>330,014,543</b>

***Normal Cost as a Percent of Payroll***

Tier I Hazardous Duty	15.80%	13.08%
Tier I Plan B	13.18%	13.90%
Tier I Plan C	10.08%	10.90%
Tier II Hazardous Duty	17.64%	14.80%
Tier II All Others	9.27%	9.75%
Tier IIA Hazardous Duty	8.56%	6.95%
Tier IIA All Others	4.21%	4.70%
<b><i>Total</i></b>	<b>9.82%</b>	<b>9.44%</b>

**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM  
SERS CONTRIBUTIONS**

**TABLE IV-2**

*Projection of Normal Cost to Next Two Fiscal Years  
(Net of Employee Contributions)*

<b><u>Normal Cost in Dollars</u></b>	<b><u>June 30, 2009</u></b>	<b><u>June 30, 2010</u></b>
Tier I Hazardous Duty	\$4,126,309	\$3,755,677
Tier I Plan B	70,133,723	66,258,511
Tier I Plan C	2,239,517	2,096,026
Tier II Hazardous Duty	64,360,987	63,230,931
Tier II All Others	116,914,919	115,253,394
Tier IIA Hazardous Duty	27,236,544	31,702,741
Tier IIA All Others	50,311,145	58,629,377
<b><i>Total</i></b>	<b>335,323,144</b>	<b>340,926,657</b>

**Normal Cost as a Percent of Payroll**

Tier I Hazardous Duty	12.81%	12.59%
Tier I Plan B	14.14%	14.34%
Tier I Plan C	11.28%	11.48%
Tier II Hazardous Duty	14.87%	14.82%
Tier II All Others	9.93%	10.10%
Tier IIA Hazardous Duty	7.28%	7.62%
Tier IIA All Others	4.56%	4.55%
<b><i>Total</i></b>	<b>9.22%</b>	<b>9.01%</b>

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**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM  
SERS CONTRIBUTIONS**

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**TABLE IV-3**

***Projected Unit Credit Total Costs For Fiscal Year 2009-10***

1.	Actuarial Liability as of June 30, 2009	\$20,154,057,603
2.	Actuarial Value of Assets as of June 30, 2009	10,405,745,363
3.	Unfunded Actuarial Liability as of June 30, 2009: (1) - (2)	9,748,312,240
4.	Amortization Period	23 Years
5.	Amortization Payment Towards Unfunded Actuarial Liability	663,525,189
6.	SEBAC IV Asset Adjustment Amortization Payment	(42,040,683)
7.	SEBAC V Asset Adjustment Amortization Payment	(59,379,565)
8.	Net Amortization Payment: (5) + (6) + (7)	562,104,941
9.	Employer Normal Cost (Net of Employee Contributions)	335,323,144
10.	Total Employer Cost for Fiscal Year 2009-10: (8) + (9)	897,428,085
11.	Projected Payroll	3,637,100,386
12.	Total Employer Cost Percent: (10) / (11)	24.67%

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**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM  
SERS CONTRIBUTIONS**

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**TABLE IV-4**

***Projected Unit Credit Total Costs For Fiscal Year 2010-11***

1. Actuarial Liability as of June 30, 2010	\$21,085,376,221
2. Actuarial Value of Assets as of June 30, 2010	10,955,757,596
3. Unfunded Actuarial Liability as of June 30, 2010: (1) - (2)	10,129,618,625
4. Amortization Period	22 Years
5. Amortization Payment Towards Unfunded Actuarial Liability	708,627,332
6. SEBAC IV Asset Adjustment Amortization Payment	(43,722,310)
7. SEBAC V Asset Adjustment Amortization Payment	(61,754,747)
8. Net Amortization Payment: (5) + (6) + (7)	603,150,275
9. Employer Normal Cost	340,926,657
10. Total Employer Cost for Fiscal Year 2010-11: (8) + (9)	944,076,932
11. Projected Payroll	3,782,258,138
12. Total Employer Cost Percent: (10) / (11)	24.96%

**SECTION V**

***GASB INFORMATION***

This work product was prepared solely for the Connecticut State Employees Retirement 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**  
**GASB INFORMATION**

**TABLE V-1**

*Statement of Plan Net Assets*

	<u>June 30, 2007</u>	<u>June 30, 2008</u>
Cash	\$ 3,351,553.12	\$ (563,584.14)
Accrued Interest	0.00	0.00
SOC Liquidity Fund	52,384,145.33	310,813,243.47
Real Estate Equity Fund	265,967,010.43	381,084,876.26
Mutual Venture Capital Fund	607,918,920.99	665,072,691.06
Mutual Equity Fund	3,810,234,733.33	2,980,807,232.57
Developed Market International Stock Fund	0.00	1,912,555,528.12
Emerging Market Debt Fund	0.00	374,543,558.61
Emerging Market International Stock Fund	2,339,668,986.65	506,507,095.36
CORE Fixed Income Fund	2,958,537,927.89	1,494,557,290.44
High Yield Investment Fund	0.00	299,453,133.73
Inflation Linked Bond Fund	0.00	401,689,103.44
Mutual Commercial	2,983,842.28	2,654,869.33
Total Assets	10,041,047,120.02	9,329,175,038.25
Liabilities	0.00	0.00
Net assets held in trust for pension benefits	10,041,047,120.02	9,329,175,038.25

**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM  
GASB INFORMATION**

**TABLE V-2**

*Statement of Changes in Plan Net Assets*

	<i>July 1, 2006 to June 30, 2007</i>	<i>July 1, 2007 to June 30, 2008</i>
<i>Additions</i>		
<i>Contributions</i>		
State	\$541,038,351	\$548,936,589
Federal	122,892,384	162,618,685
Employee	61,794,719	67,389,585
Total Net Contributions	<u>725,725,454</u>	<u>778,944,859</u>
<i>Net Investment Income</i>		
Interest & Dividends	352,709,896	372,298,861
Net Appreciation/(Depreciation)	1,131,592,774	(848,461,550)
Expenses	(509,520)	(558,107)
Total Investment Income	<u>1,483,793,150</u>	<u>(476,720,796)</u>
Total Additions	2,209,518,604	302,224,063
<i>Deductions</i>		
Benefit Payments	951,353,124	1,008,131,838
Employee Refunds	6,762,205	5,964,307
Total Deductions	<u>958,115,329</u>	<u>1,014,096,145</u>
<i>Net Increase</i>	1,251,403,275	(711,872,082)
<i>Net assets held in trust for pension benefits</i>		
Beginning of year	8,789,643,845	10,041,047,120
End of year	10,041,047,120	9,329,175,038

**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM  
GASB INFORMATION**

**TABLE V-3**

***Schedule of Funding Progress***

	(1)	(2)	(3)	(4)	(5)	(6)
						<i>UAAL as a</i>
<i>Actuarial Valuation Date</i>	<i>Actuarial Value of Assets</i>	<i>Actuarial Accrued Liability (AAL)</i>	<i>Unfunded AAL (UAAL) (2) - (1)</i>	<i>Funded Ratio (1) / (2)</i>	<i>Covered Payroll</i>	<i>Percentage of Covered Payroll [(2) - (1)] / (5)</i>
June 30, 1992	\$3,425,886,181	\$6,668,685,334	\$3,242,799,153	51.37%	\$1,931,381,254	167.90%
June 30, 1993	3,696,176,885	7,189,740,494	3,493,563,609	51.41%	2,144,793,466	162.89%
June 30, 1994	3,944,521,448	7,329,181,184	3,384,659,736	53.82%	2,155,860,555	157.00%
June 30, 1995	4,209,235,826	7,838,210,805	3,628,974,979	53.70%	2,325,787,000	156.03%
June 30, 1996	4,604,227,717	8,138,610,053	3,534,382,336	56.57%	2,385,532,750	148.16%
June 30, 1997	5,130,967,057	8,833,202,804	3,702,235,747	58.09%	2,225,185,096	166.38%
June 30, 1998	5,669,865,527	9,592,407,736	3,922,542,209	59.11%	2,338,957,445	167.70%
June 30, 2000	7,196,039,538	11,512,154,892	4,316,115,354	62.51%	2,651,892,121	162.76%
June 30, 2001	7,638,853,783	12,105,366,407	4,466,512,624	63.10%	2,784,495,788	160.41%
June 30, 2002	7,893,683,977	12,806,115,474	4,912,431,497	61.64%	2,852,165,564	172.24%
June 30, 2003	8,058,586,633	14,223,786,404	6,165,199,771	56.66%	2,654,252,370	232.28%
June 30, 2004	8,238,417,808	15,128,502,117	6,890,084,309	54.46%	2,816,729,277	244.61%
June 30, 2005	8,517,677,447	15,987,546,661	7,469,869,214	53.28%	2,980,104,277	250.66%
June 30, 2006	8,951,392,914	16,830,349,168	7,878,956,254	53.19%	3,107,928,232	253.51%
June 30, 2007	9,584,970,345	17,888,065,116	8,303,094,771	53.58%	3,310,351,311	250.82%
June 30, 2008	9,990,247,212	19,243,372,754	9,253,125,542	51.92%	3,497,444,647	264.57%

*No values are shown above for June 30, 1999 since an actuarial valuation was not performed as of that date.*



**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM  
GASB INFORMATION**

**TABLE V-4**

*Schedule of Employer Contributions*

<i>Fiscal Year Ending June 30</i>	<i>Annual Required Contribution</i>	<i>Actual Contribution</i>	<i>Percent Funded</i>
1992	431,236,846	250,324,285	58.05%
1993	444,243,379	290,827,685	65.47%
1994	310,206,351	310,206,351	100.00%
1995	351,773,796	290,801,000	82.67%
1996	335,111,972	335,111,971	100.00%
1997	349,230,712	348,920,134	99.91%
1998	334,846,361	334,513,820	99.90%
1999	315,561,785	315,561,785	100.00%
2000	342,760,331	342,760,330	100.00%
2001	354,208,031	375,623,183	106.05%
2002	415,492,599	415,492,599	100.00%
2003	425,902,474	421,451,731	98.95%
2004	473,998,112	470,332,944	99.23%
2005	516,298,168	518,768,821	100.48%
2006	623,062,748	623,062,732	100.00%
2007	663,926,351	663,930,735	100.00%
2008	716,944,264	711,555,274	99.25%

**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM  
GASB INFORMATION**

**TABLE V-5**

***Summary of Membership***

	<b><i>June 30, 2006</i></b>	<b><i>June 30, 2007</i></b>	<b><i>June 30, 2008</i></b>
<b><i>Current Employees with Vested Benefits</i></b>			
Tier I, Hazardous Duty	399	399	342
Tier I, Plan B	6,948	6,543	6,072
Tier I, Plan C	331	302	279
Tier II, Hazardous Duty	5,763	5,600	5,354
Tier II, Other	17,320	16,936	16,508
Tier IIA, Hazardous Duty	2,272	2,645	2,909
Tier IIA, Other	5,791	6,903	7,369
<b><i>Total</i></b>	<b>38,824</b>	<b>39,328</b>	<b>38,833</b>
<b><i>Current Employees Not Yet Vested</i></b>			
Tier I, Hazardous Duty	13	15	11
Tier I, Plan B	223	193	150
Tier I, Plan C	16	13	11
Tier II, Hazardous Duty	81	83	46
Tier II, Other	754	695	416
Tier IIA, Hazardous Duty	2,144	2,444	2,783
Tier IIA, Other	8,550	9,667	10,946
<b><i>Total</i></b>	<b>11,781</b>	<b>13,110</b>	<b>14,363</b>
<b><i>Total Current Employees</i></b>	<b>50,605</b>	<b>52,438</b>	<b>53,196</b>
<b><i>Former Employees Currently Receiving Benefits</i></b>			
Retired Pre-1980	3,338	3,018	2,750
Retired 1980-1997, Fixed COLA	21,681	21,137	20,480
Retired 1997+, Variable COLA	11,945	13,265	14,863
<b><i>Total</i></b>	<b>36,964</b>	<b>37,420</b>	<b>38,093</b>
<b><i>Former Employees Entitled to Future Benefits</i></b>	<b>1,732</b>	<b>1,693</b>	<b>1,592</b>
<b><i>Total Former Employees</i></b>	<b>38,696</b>	<b>39,113</b>	<b>39,685</b>
<b><i>Total Members</i></b>	<b>89,301</b>	<b>91,551</b>	<b>92,881</b>

*APPENDIX A*

*SUMMARY STATISTICS ON SERS MEMBERSHIP*

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

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**TABLE A-1**

***Summary of Active Membership Data***

We received data on a total of 53,622 eligible active members for our June 30, 2008 valuation. Of the active records submitted to us, 426 (0.8%) 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, 2006</u>	<u>June 30, 2007</u>	<u>June 30, 2008</u>
Total Employees	50,605	52,438	53,196
Total Earnings (\$ millions)	\$3,107.9	\$3,310.4	\$3,497.4
Average Earnings	61,415	63,129	65,746

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*

	<u>June 30, 2006</u>	<u>June 30, 2007</u>	<u>June 30, 2008</u>
<b><i>Number of Members</i></b>			
Tier I Hazardous Duty	412	414	353
Tier I Plan B	7,171	6,736	6,222
Tier I Plan C	347	315	290
Tier II Hazardous Duty	5,844	5,683	5,400
Tier II Others	18,074	17,631	16,924
Tier IIA Hazardous Duty	4,416	5,089	5,692
Tier IIA Others	14,341	16,570	18,315
Total	<u>50,605</u>	<u>52,438</u>	<u>53,196</u>
<b><i>Total Annual Compensation (\$ Millions)</i></b>			
Tier I Hazardous Duty	\$36.4	\$38.1	\$34.6
Tier I Plan B	556.3	544.5	528.8
Tier I Plan C	23.7	22.5	21.7
Tier II Hazardous Duty	416.2	433.9	433.5
Tier II Others	1,169.9	1,192.8	1,212.9
Tier IIA Hazardous Duty	234.3	288.3	338.8
Tier IIA Others	671.0	790.2	927.2
Total	<u>3,107.9</u>	<u>3,310.4</u>	<u>3,497.4</u>
<b><i>Average Compensation</i></b>			
Tier I Hazardous Duty	\$88,322	\$91,982	\$98,028
Tier I Plan B	77,581	80,839	84,987
Tier I Plan C	68,327	71,327	74,715
Tier II Hazardous Duty	71,214	76,349	80,282
Tier II Others	64,730	67,655	71,670
Tier IIA Hazardous Duty	53,068	56,655	59,516
Tier IIA Others	46,792	47,691	50,623
Total	61,415	63,129	65,746

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

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**TABLE A-2b**

*Detail of Active Membership Data by Plan*

	<i>June 30, 2006</i>	<i>June 30, 2007</i>	<i>June 30, 2008</i>
<i>Average Age</i>			
Tier I Hazardous Duty	51.6	52.3	53.1
Tier I Plan B	53.0	53.8	54.6
Tier I Plan C	55.1	55.8	56.5
Tier II Hazardous Duty	44.4	45.3	46.1
Tier II Others	48.5	49.4	50.1
Tier IIA Hazardous Duty	38.3	38.2	38.3
Tier IIA Others	41.1	41.6	41.8
Total	45.7	46.0	46.2
<i>Average Service</i>			
Tier I Hazardous Duty	24.6	25.4	26.3
Tier I Plan B	26.4	27.3	28.2
Tier I Plan C	27.0	27.7	28.4
Tier II Hazardous Duty	14.7	15.5	16.4
Tier II Others	15.6	16.6	17.6
Tier IIA Hazardous Duty	4.7	5.1	5.4
Tier IIA Others	4.0	4.3	4.5
Total	12.9	13.0	13.0

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

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**TABLE A-3**

*Summary of Inactive Membership Data*

	<i>June 30, 2006</i>	<i>June 30, 2007</i>	<i>June 30, 2008</i>
<b><i>Retired Pre-1980</i></b>			
Number	3,338	3,018	2,750
Total Annual Benefits (\$ 000s)	\$48,543	\$45,802	\$43,202
Average Annual Benefit	14,543	15,176	15,710
<b><i>Retired 1980-1997, Fixed COLA</i></b>			
Number	21,681	21,137	20,480
Total Annual Benefits (\$ 000s)	\$545,358	\$548,354	\$549,998
Average Annual Benefit	25,154	25,943	26,855
<b><i>Retired 1997+, Variable COLA</i></b>			
Number	11,945	13,265	14,863
Total Annual Benefits (\$ 000s)	\$348,152	\$394,758	\$454,278
Average Annual Benefit	29,146	29,759	30,564
<b><i>Total Retired Members</i></b>			
Number	36,964	37,420	38,093
Total Annual Benefits (\$ 000s)	\$942,054	\$988,914	\$1,047,479
Average Annual Benefit	25,486	26,427	27,498
<b><i>Terminated Vested Members</i></b>			
Number	1,732	1,693	1,592
Total Annual Benefits (\$ 000s)	\$25,079	\$24,993	\$24,232
Average Annual Benefit	14,480	14,762	15,221

**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, 2007</i>	52,438	1,693	30,071	3,501	3,848	91,551
<i>Changed status within System</i>						
to active status	31	(25)	(6)	0	0	0
to deferred vested status	(43)	43	0	0	0	0
to retired status	(1,109)	(139)	1,257	(5)	(4)	0
to disabled status	(252)	0	(1)	255	(2)	0
to beneficiary status	(30)	0	(193)	(27)	250	0
<i>Left System</i>	(2,444)	(36)	(743)	(78)	(207)	(3,508)
<i>Entered System</i>	<u>4,605</u>	<u>56</u>	<u>99</u>	<u>44</u>	<u>34</u>	<u>4,838</u>
<i>Count as of June 30, 2008</i>	53,196	1,592	30,484	3,690	3,919	92,881



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

**TABLE A-5**

*Analysis of Active Members by Age and Service - Tier I Hazardous Duty*

<i>Age / Service</i>	<i>Number of Members</i>									
	<i>0 to 5</i>	<i>5 to 10</i>	<i>10 to 15</i>	<i>15 to 20</i>	<i>20 to 25</i>	<i>25 to 30</i>	<i>30 to 35</i>	<i>35 to 40</i>	<i>40 &amp; Up</i>	<i>All Years</i>
Under 20	0	0	0	0	0	0	0	0	0	0
20 to 24	0	0	0	0	0	0	0	0	0	0
25 to 29	0	0	0	0	0	0	0	0	0	0
30 to 34	0	0	0	0	0	0	0	0	0	0
35 to 39	0	0	0	0	0	0	0	0	0	0
40 to 44	1	0	0	2	0	1	0	0	0	4
45 to 49	4	0	1	4	25	48	0	0	0	82
50 to 54	3	1	2	8	23	87	22	0	0	146
55 to 59	1	1	3	5	10	24	40	3	0	87
60 to 64	0	0	1	2	1	5	9	7	1	26
65 & Up	0	0	2	0	1	3	0	0	2	8
Totals	9	2	9	21	60	168	71	10	3	353

<i>Age / Service</i>	<i>Average Salaries</i>									
	<i>0 to 5</i>	<i>5 to 10</i>	<i>10 to 15</i>	<i>15 to 20</i>	<i>20 to 25</i>	<i>25 to 30</i>	<i>30 to 35</i>	<i>35 to 40</i>	<i>40 &amp; Up</i>	<i>All Years</i>
Under 20	0	0	0	0	0	0	0	0	0	0
20 to 24	0	0	0	0	0	0	0	0	0	0
25 to 29	0	0	0	0	0	0	0	0	0	0
30 to 34	0	0	0	0	0	0	0	0	0	0
35 to 39	0	0	0	0	0	0	0	0	0	0
40 to 44	93,381	0	0	102,363	0	71,943	0	0	0	92,513
45 to 49	57,820	0	57,380	77,370	98,007	100,193	0	0	0	95,824
50 to 54	82,687	104,460	58,167	115,638	106,537	99,927	100,775	0	0	101,062
55 to 59	75,902	61,142	80,575	86,816	92,861	92,513	99,040	106,394	0	94,742
60 to 64	0	0	67,766	86,322	81,828	73,332	117,231	123,457	92,441	103,870
65 & Up	0	0	91,146	0	78,496	78,405	0	0	91,045	84,762
Totals	72,069	82,801	73,944	97,430	99,825	97,601	101,883	118,338	91,510	98,028

This work product was prepared solely for the Connecticut State Employees Retirement 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.

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

**TABLE A-6**

*Analysis of Active Members by Age and Service - Tier I Plan B*

<i>Age / Service</i>	<i>Number of Members</i>									
	<i>0 to 5</i>	<i>5 to 10</i>	<i>10 to 15</i>	<i>15 to 20</i>	<i>20 to 25</i>	<i>25 to 30</i>	<i>30 to 35</i>	<i>35 to 40</i>	<i>40 &amp; Up</i>	<i>All Years</i>
Under 20	0	0	0	0	0	0	0	0	0	0
20 to 24	0	0	0	0	0	0	0	0	0	0
25 to 29	0	0	0	0	0	0	0	0	0	0
30 to 34	0	0	0	0	0	0	0	0	0	0
35 to 39	0	0	0	0	0	0	0	0	0	0
40 to 44	3	1	0	2	29	25	0	0	0	60
45 to 49	12	14	22	22	199	623	44	0	0	936
50 to 54	30	44	46	70	188	1,241	706	24	0	2,349
55 to 59	13	23	51	55	141	631	827	132	6	1,879
60 to 64	5	3	12	19	47	221	223	141	18	689
65 & Up	1	1	4	3	16	82	73	69	60	309
Totals	64	86	135	171	620	2,823	1,873	366	84	6,222

<i>Age / Service</i>	<i>Average Salaries</i>									
	<i>0 to 5</i>	<i>5 to 10</i>	<i>10 to 15</i>	<i>15 to 20</i>	<i>20 to 25</i>	<i>25 to 30</i>	<i>30 to 35</i>	<i>35 to 40</i>	<i>40 &amp; Up</i>	<i>All Years</i>
Under 20	0	0	0	0	0	0	0	0	0	0
20 to 24	0	0	0	0	0	0	0	0	0	0
25 to 29	0	0	0	0	0	0	0	0	0	0
30 to 34	0	0	0	0	0	0	0	0	0	0
35 to 39	0	0	0	0	0	0	0	0	0	0
40 to 44	35,180	54,314	0	59,476	68,671	75,153	0	0	0	69,151
45 to 49	54,555	70,649	72,786	63,715	80,309	71,344	69,780	0	0	72,806
50 to 54	59,736	67,099	80,191	75,243	80,899	81,988	79,761	84,297	0	80,456
55 to 59	79,937	78,207	85,364	76,404	83,374	91,241	92,738	79,839	91,736	89,679
60 to 64	127,556	103,324	92,780	91,640	84,402	90,757	99,140	106,245	91,506	96,607
65 & Up	71,459	154,467	105,804	91,317	83,249	85,127	100,385	118,625	128,079	104,962
Totals	67,199	72,778	82,817	76,053	81,027	82,424	88,368	97,616	117,646	84,987

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

**TABLE A-7**

*Analysis of Active Members by Age and Service - Tier I Plan C*

<i>Age / Service</i>	<i>Number of Members</i>									
	<i>0 to 5</i>	<i>5 to 10</i>	<i>10 to 15</i>	<i>15 to 20</i>	<i>20 to 25</i>	<i>25 to 30</i>	<i>30 to 35</i>	<i>35 to 40</i>	<i>40 &amp; Up</i>	<i>All Years</i>
Under 20	0	0	0	0	0	0	0	0	0	0
20 to 24	0	0	0	0	0	0	0	0	0	0
25 to 29	0	0	0	0	0	0	0	0	0	0
30 to 34	0	0	0	0	0	0	0	0	0	0
35 to 39	0	0	0	0	0	0	0	0	0	0
40 to 44	0	0	0	0	3	3	0	0	0	6
45 to 49	0	0	3	0	4	14	1	0	0	22
50 to 54	1	3	1	1	9	55	32	2	0	104
55 to 59	5	0	1	1	7	26	33	9	0	82
60 to 64	0	2	1	0	4	12	10	9	0	38
65 & Up	0	0	2	1	4	8	13	6	4	38
Totals	6	5	8	3	31	118	89	26	4	290

<i>Age / Service</i>	<i>Average Salaries</i>									
	<i>0 to 5</i>	<i>5 to 10</i>	<i>10 to 15</i>	<i>15 to 20</i>	<i>20 to 25</i>	<i>25 to 30</i>	<i>30 to 35</i>	<i>35 to 40</i>	<i>40 &amp; Up</i>	<i>All Years</i>
Under 20	0	0	0	0	0	0	0	0	0	0
20 to 24	0	0	0	0	0	0	0	0	0	0
25 to 29	0	0	0	0	0	0	0	0	0	0
30 to 34	0	0	0	0	0	0	0	0	0	0
35 to 39	0	0	0	0	0	0	0	0	0	0
40 to 44	0	0	0	0	98,196	69,210	0	0	0	83,703
45 to 49	0	0	79,520	0	58,831	67,345	56,255	0	0	66,953
50 to 54	66,305	72,557	82,326	51,847	90,683	72,749	70,412	80,529	0	73,555
55 to 59	73,322	0	61,947	80,682	69,715	71,247	75,816	66,026	0	72,510
60 to 64	0	47,197	53,417	0	63,616	71,613	81,118	75,136	0	72,343
65 & Up	0	0	120,570	99,809	122,055	61,768	78,498	99,162	102,162	88,090
Totals	72,152	62,413	84,674	77,446	83,121	70,827	74,641	77,942	102,162	74,715

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

**TABLE A-8**

*Analysis of Active Members by Age and Service - Tier II Hazardous Duty*

<i>Age / Service</i>	<i>Number of Members</i>									
	<i>0 to 5</i>	<i>5 to 10</i>	<i>10 to 15</i>	<i>15 to 20</i>	<i>20 to 25</i>	<i>25 to 30</i>	<i>30 to 35</i>	<i>35 to 40</i>	<i>40 &amp; Up</i>	<i>All Years</i>
Under 20	0	0	0	0	0	0	0	0	0	0
20 to 24	0	0	0	0	0	0	0	0	0	0
25 to 29	1	2	0	0	0	0	0	0	0	3
30 to 34	1	11	53	0	0	0	0	0	0	65
35 to 39	9	46	617	267	3	0	0	0	0	942
40 to 44	12	32	519	895	182	0	0	0	0	1,640
45 to 49	13	18	329	519	327	10	0	0	0	1,216
50 to 54	3	15	203	328	198	11	2	0	0	760
55 to 59	4	10	125	205	88	10	1	0	0	443
60 to 64	2	2	69	128	54	3	0	3	0	261
65 & Up	1	6	18	30	14	1	0	0	0	70
Totals	46	142	1,933	2,372	866	35	3	3	0	5,400

<i>Age / Service</i>	<i>Average Salaries</i>									
	<i>0 to 5</i>	<i>5 to 10</i>	<i>10 to 15</i>	<i>15 to 20</i>	<i>20 to 25</i>	<i>25 to 30</i>	<i>30 to 35</i>	<i>35 to 40</i>	<i>40 &amp; Up</i>	<i>All Years</i>
Under 20	0	0	0	0	0	0	0	0	0	0
20 to 24	0	0	0	0	0	0	0	0	0	0
25 to 29	55,142	44,326	0	0	0	0	0	0	0	47,931
30 to 34	19,450	62,671	63,823	0	0	0	0	0	0	62,946
35 to 39	74,945	69,521	77,685	80,898	88,869	0	0	0	0	78,207
40 to 44	64,192	70,424	77,023	81,115	94,483	0	0	0	0	80,971
45 to 49	66,703	71,065	76,438	78,113	94,016	88,560	0	0	0	81,796
50 to 54	58,768	82,556	75,098	78,399	91,376	88,654	108,219	0	0	81,130
55 to 59	61,843	78,726	75,568	79,755	87,629	97,175	88,017	0	0	80,364
60 to 64	50,819	47,314	76,443	77,922	86,322	95,933	0	109,701	0	79,399
65 & Up	99,685	28,623	79,729	82,716	80,700	60,702	0	0	0	76,836
Totals	65,468	69,019	76,481	79,789	92,149	90,887	101,485	109,701	0	80,282

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

**TABLE A-9**

*Analysis of Active Members by Age and Service - Tier II All Others*

<i>Age / Service</i>	<i>Number of Members</i>									
	<i>0 to 5</i>	<i>5 to 10</i>	<i>10 to 15</i>	<i>15 to 20</i>	<i>20 to 25</i>	<i>25 to 30</i>	<i>30 to 35</i>	<i>35 to 40</i>	<i>40 &amp; Up</i>	<i>All Years</i>
Under 20	0	0	0	0	0	0	0	0	0	0
20 to 24	0	0	0	0	0	0	0	0	0	0
25 to 29	2	4	2	0	0	0	0	0	0	8
30 to 34	13	24	81	1	0	0	0	0	0	119
35 to 39	53	88	737	329	55	0	0	0	0	1,262
40 to 44	77	119	818	1,163	1,106	11	0	0	0	3,294
45 to 49	107	105	746	1,084	1,763	103	1	0	0	3,909
50 to 54	68	105	615	891	1,441	111	5	0	0	3,236
55 to 59	70	94	566	756	1,081	110	15	17	2	2,711
60 to 64	24	58	354	543	645	68	8	24	1	1,725
65 & Up	27	25	165	204	216	15	2	6	0	660
Totals	441	622	4,084	4,971	6,307	418	31	47	3	16,924

<i>Age / Service</i>	<i>Average Salaries</i>									
	<i>0 to 5</i>	<i>5 to 10</i>	<i>10 to 15</i>	<i>15 to 20</i>	<i>20 to 25</i>	<i>25 to 30</i>	<i>30 to 35</i>	<i>35 to 40</i>	<i>40 &amp; Up</i>	<i>All Years</i>
Under 20	0	0	0	0	0	0	0	0	0	0
20 to 24	0	0	0	0	0	0	0	0	0	0
25 to 29	34,930	50,693	55,837	0	0	0	0	0	0	48,038
30 to 34	45,147	62,375	61,043	4,304	0	0	0	0	0	59,099
35 to 39	54,575	64,338	70,771	64,099	62,649	0	0	0	0	67,549
40 to 44	59,161	66,121	72,174	70,697	69,549	59,760	0	0	0	70,207
45 to 49	49,714	64,303	71,570	71,322	76,038	74,449	52,597	0	0	72,794
50 to 54	44,766	62,482	70,610	72,536	76,610	78,791	98,680	0	0	73,329
55 to 59	38,867	55,293	70,720	73,054	77,120	78,981	102,889	74,998	70,846	73,106
60 to 64	44,212	48,981	68,549	73,631	75,865	89,132	77,973	94,953	119,292	73,140
65 & Up	17,267	48,904	61,858	66,556	71,164	87,161	96,980	77,410	0	64,864
Totals	46,975	60,777	70,414	71,222	74,915	79,253	93,777	85,496	86,994	71,670

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

**TABLE A-10**

*Analysis of Active Members by Age and Service - Tier IIA Hazardous Duty*

<i>Age / Service</i>	<i>Number of Members</i>									
	<i>0 to 5</i>	<i>5 to 10</i>	<i>10 to 15</i>	<i>15 to 20</i>	<i>20 to 25</i>	<i>25 to 30</i>	<i>30 to 35</i>	<i>35 to 40</i>	<i>40 &amp; Up</i>	<i>All Years</i>
Under 20	1	0	0	0	0	0	0	0	0	1
20 to 24	182	0	0	0	0	0	0	0	0	182
25 to 29	755	85	0	0	0	0	0	0	0	840
30 to 34	621	618	60	0	0	0	0	0	0	1,299
35 to 39	462	635	156	4	0	0	0	0	0	1,257
40 to 44	320	404	94	3	1	0	0	0	0	822
45 to 49	200	259	48	4	0	0	0	0	0	511
50 to 54	148	176	26	2	1	0	1	0	0	354
55 to 59	66	112	20	0	0	0	1	0	0	199
60 to 64	28	74	21	0	0	0	0	0	0	123
65 & Up	9	80	15	0	0	0	0	0	0	104
Totals	2,792	2,443	440	13	2	0	2	0	0	5,692

<i>Age / Service</i>	<i>Average Salaries</i>									
	<i>0 to 5</i>	<i>5 to 10</i>	<i>10 to 15</i>	<i>15 to 20</i>	<i>20 to 25</i>	<i>25 to 30</i>	<i>30 to 35</i>	<i>35 to 40</i>	<i>40 &amp; Up</i>	<i>All Years</i>
Under 20	53,881	0	0	0	0	0	0	0	0	53,881
20 to 24	40,753	0	0	0	0	0	0	0	0	40,753
25 to 29	49,651	56,506	0	0	0	0	0	0	0	50,345
30 to 34	53,680	63,526	69,370	0	0	0	0	0	0	59,089
35 to 39	55,654	65,456	72,963	84,602	0	0	0	0	0	62,846
40 to 44	55,126	62,893	74,058	85,802	47,325	0	0	0	0	61,210
45 to 49	58,458	67,312	75,127	86,047	0	0	0	0	0	64,728
50 to 54	61,304	67,013	73,414	57,317	79,245	0	82,068	0	0	65,119
55 to 59	68,822	68,488	69,980	0	0	0	77,125	0	0	68,792
60 to 64	58,292	60,170	56,278	0	0	0	0	0	0	59,078
65 & Up	86,102	51,633	62,872	0	0	0	0	0	0	56,237
Totals	53,495	64,068	71,694	81,126	63,285	0	79,597	0	0	59,516

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

**TABLE A-11**

*Analysis of Active Members by Age and Service - Tier IIA All Others*

<i>Age / Service</i>	<i>Number of Members</i>									
	<i>0 to 5</i>	<i>5 to 10</i>	<i>10 to 15</i>	<i>15 to 20</i>	<i>20 to 25</i>	<i>25 to 30</i>	<i>30 to 35</i>	<i>35 to 40</i>	<i>40 &amp; Up</i>	<i>All Years</i>
Under 20	164	0	0	0	0	0	0	0	0	164
20 to 24	875	3	0	0	0	0	0	0	0	878
25 to 29	1,704	168	11	0	0	0	0	0	0	1,883
30 to 34	1,624	811	137	0	0	0	0	0	0	2,572
35 to 39	1,524	977	240	4	2	0	0	0	0	2,747
40 to 44	1,357	909	223	8	8	0	0	0	0	2,505
45 to 49	1,365	934	238	7	10	0	0	0	0	2,554
50 to 54	1,111	783	205	4	6	2	1	0	0	2,112
55 to 59	797	620	172	4	1	0	0	0	0	1,594
60 to 64	402	382	121	4	2	0	0	0	0	911
65 & Up	174	177	41	2	0	1	0	0	0	395
Totals	11,097	5,764	1,388	33	29	3	1	0	0	18,315

<i>Age / Service</i>	<i>Average Salaries</i>									
	<i>0 to 5</i>	<i>5 to 10</i>	<i>10 to 15</i>	<i>15 to 20</i>	<i>20 to 25</i>	<i>25 to 30</i>	<i>30 to 35</i>	<i>35 to 40</i>	<i>40 &amp; Up</i>	<i>All Years</i>
Under 20	7,756	0	0	0	0	0	0	0	0	7,756
20 to 24	21,857	11,289	0	0	0	0	0	0	0	21,821
25 to 29	41,318	45,440	45,298	0	0	0	0	0	0	41,709
30 to 34	47,140	59,102	62,948	0	0	0	0	0	0	51,754
35 to 39	47,614	61,002	65,791	59,287	55,155	0	0	0	0	53,987
40 to 44	47,674	60,245	64,385	65,403	42,902	0	0	0	0	53,765
45 to 49	47,152	61,490	65,202	68,890	44,684	0	0	0	0	54,127
50 to 54	49,201	65,211	65,636	48,253	48,672	26,318	44,524	0	0	56,705
55 to 59	48,920	63,062	65,713	68,175	5,001	0	0	0	0	56,253
60 to 64	40,979	60,783	61,975	61,622	60,374	0	0	0	0	52,205
65 & Up	31,967	49,364	56,689	77,647	0	93,966	0	0	0	42,717
Totals	43,676	60,636	64,387	63,942	45,453	48,867	44,524	0	0	50,623

This work product was prepared solely for the Connecticut State Employees Retirement 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.

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

**TABLE A-12**

*Analysis of Retired Members and Beneficiaries by Current Age*

<i>Current Age</i>	<i>Number of Members</i>					<i>Average Benefit Paid in FY08</i>				
	<i>Service Retirement</i>	<i>Service Connected Disability</i>	<i>Non-Service Connected Disability</i>	<i>Hazardous Duty Retirement</i>	<i>Other</i>	<i>Service Retirement</i>	<i>Service Connected Disability</i>	<i>Non-Service Connected Disability</i>	<i>Hazardous Duty Retirement</i>	<i>Other</i>
Under 40	0	78	9	1	138	0	25,719	20,469	25,320	16,518
40 to 44	0	145	70	104	58	0	27,373	26,074	41,387	15,958
45 to 49	1	249	159	332	94	27,282	26,459	25,184	42,082	16,836
50 to 54	2	261	238	535	148	24,428	27,086	27,211	44,364	21,402
55 to 59	1,721	254	342	598	922	37,739	25,111	29,040	47,050	15,309
60 to 64	3,671	259	346	621	1,078	36,467	23,419	27,165	47,273	15,025
65 to 69	4,415	189	218	436	1,133	30,911	21,953	23,914	46,096	14,011
70 to 74	4,024	139	164	311	933	29,459	18,776	20,905	40,610	13,018
75 to 79	3,737	99	116	199	910	26,253	15,464	17,839	38,549	13,525
80 to 84	3,386	56	59	119	806	22,380	12,529	12,959	33,643	14,101
85 to 89	2,051	22	38	43	594	19,503	10,729	12,213	28,219	13,539
90 to 94	857	5	12	5	255	16,742	15,432	14,121	19,911	12,043
95 and up	252	1	6	2	67	14,890	10,527	14,339	14,708	13,872
Totals	24,117	1,757	1,777	3,306	7,136	28,440	23,558	24,770	43,942	14,294



**APPENDIX B**

***SUMMARY OF PLAN PROVISIONS***

This work product was prepared solely for the Connecticut State Employees Retirement 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**

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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.

***I. 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.

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

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**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 60 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 time 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.

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

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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 60 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.

Tier II [Sec. 5-192l] and Tier IIA: May be deferred. 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.

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

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**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 IIA - 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.

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

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[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.

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

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**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**

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**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 contribution is adjusted for interest to reflect monthly payments.

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. One-fifth of the difference between this expected actuarial value and the actual market value is added to the expected actuarial value to arrive at the Actuarial Value of Assets. The Actuarial Value is constrained to remain within +/- 20% of the Market Value.

The *Unfunded Actuarial Liability* is the Actuarial Liability less the Actuarial Value of Assets. The Unfunded Actuarial Liability is amortized as a level percent of payroll over a declining period of years, starting with 40 years as of July 1, 1991 for the contribution for the fiscal year beginning July 1, 1992.

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 8.25% per year (prior year - 8.50%).
- 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 grow by 4.00% per year (prior year - 5.00%).
- 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 active 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.

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

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**B. Actuarial Assumptions**

**Interest Rate**                    8.25% (prior year - 8.50%)

**Payroll Growth Rate**        4.00% (prior year - 5.00%)

<b><i>Salary Scale</i></b>	<u><i>Years of Service</i></u>	<u><i>Rate</i></u>	<u><i>Prior Year</i></u>
	0	10.00	15.00
	1	20.00	15.00
	2	10.00	10.00
	3	6.25	7.00
	4	6.00	6.50
	5	5.75	6.00
	6	5.50	6.00
	7	5.50	6.00
	8	5.50	6.00
	9	5.50	5.50
	10	5.00	5.50
	11	5.00	5.00
	12	5.00	5.00
	13	5.00	4.50
	14	5.00	4.50
	15+	4.00	4.25

<b><i>COLA</i></b>	<u><i>Group</i></u>	<u><i>Rate</i></u>	<u><i>Prior Year</i></u>
	Pre July 1, 1980 Retirees	3.60	3.75
	1980 – 1997 Retirees	3.00	3.00
	Post July 1, 1997 Retirees	2.70	2.75

**Taxable Wage Base Growth**        3.50%

**Impact of Longley Decision**        Benefits for members retiring from service on or after the *Longley* decision date are assumed to increase by 0.084% as a result of the revised treatment of longevity pay. No retroactive application of *Longley* has been reflected in this valuation.

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

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**Healthy Mortality**      RP2000 Mortality Table for Annuitants and Non-annuitants projected with Scale AA 15 years for Males and 25 years for Females (prior year - 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**      75% of Male and 115% of Female RP2000 Mortality Table for Disabled Annuitants (prior year - 80% of Male and 60% of Female PBGC Disabled Mortality with Social Security).

**Disability**                      *In-service*      Hazardous - 0.45% at all ages (prior year – 0.11%)  
All Others - 0.14% at all ages (prior year – 0.03%)

*Non-service*      30% of 1975 Social Security Table (prior year - 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%

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

**Turnover**

Rates below for non-hazardous male employees; multiplied by 35% for hazardous male employees.

<u>Age</u>	<u>Years of Service</u>							
	<u>0</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6-9</u>	<u>10+</u>
20	30	60	60	20	20	15	5	5.0
25	30	30	20	10	10	8	4	5.0
30	25	25	18	10	10	8	4	4.0
35	25	25	16	10	10	8	4	3.0
40	25	25	14	10	10	6	4	2.5
45	25	25	12	10	10	6	4	2.2
50	25	25	12	10	10	6	4	1.5
55+	25	25	12	10	10	6	4	0.0

Rates below for non-hazardous female employees; multiplied by 55% for hazardous female employees.

<u>Age</u>	<u>Years of Service</u>							
	<u>0</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6-9</u>	<u>10+</u>
20	30	50	30	20	20	15	5	5.0
25	25	30	20	16	11	10	5	5.0
30	20	20	16	12	11	9	5	4.0
35	20	20	12	9	10	8	4	3.0
40	15	18	10	9	7	5	4	2.5
45	15	18	10	9	7	5	3	2.0
50	15	18	10	9	7	5	3	1.5
55+	15	18	10	9	7	5	3	0.0

(Prior year - rates below for non-hazardous employees; multiplied by 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

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

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**Retirement**

Hazardous employees:

<u>Age</u>	<u>First Year Eligible</u>	<u>All Other Ages</u>
< 44	18	10
45-48	25	10
49-59	10	10
60-69	25	15
70-79	100	20
80	100	100

Non-hazardous employees:

<u>Age</u>	<u>First Year Eligible For</u>		<u>All Other Ages</u>
	<u>Reduced Benefits</u>	<u>Unreduced Benefits *</u>	
55	15.0	15.0	12.5
56-59	10.0	15.0	12.5
60	10.0	25.0	12.5
61	20.0	25.0	15.0
62	20.0	10.0	30.0
63	20.0	35.0	25.0
64	20.0	45.0	25.0
65-69	50.0	65.0	25.0
70-79	50.0	100.0	20.0
80	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.

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

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*Retirement* (prior year)

Hazardous employees:

<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

Non-hazardous employees:

<u>Age</u>	<u>First Year Eligible For</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.

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

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***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. Starting with the 2004 valuation, for members who leave the System and then are reported to us as active members in a subsequent valuation, the earlier date of hire reported to us is used to determine service. 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.

*APPENDIX D*

*ACTUARIAL SURPLUS TEST*

This work product was prepared solely for the Connecticut State Employees Retirement 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**



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**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM**  
**ACTUARIAL SURPLUS TEST AS OF JUNE 30, 2008**

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**APPENDIX D**

***Actuarial Surplus Test as of June 30, 2008***

Section 5-162(h) of the General Statutes of Connecticut provides that the Retirement Commission may grant additional cost of living adjustments for retired employees if an actuarial surplus exists. An actuarial surplus is deemed to exist if three criteria are met:

- I. *Investment Income:*** The actual rate of return for the Fiscal Year ending on the determination date must exceed the actuarial interest rate assumption.

Market Value of Assets on June 30, 2007 (A)	\$10,041,047,120
Market Value of Assets on June 30, 2008 (B)	9,329,175,038
Investment Income for FY 2007-08 (I)	(476,720,796)
Actual Rate of Return for FY 2007-08: $2I / (A + B - I)$	-4.80%
Actuarial Interest Rate Assumption	8.50%

*Actual return of -4.80% is less than assumed 8.50%, so the first criterion is not met and there is no actuarial surplus.*

- II. *Assets Versus Liabilities:*** Market value of assets must exceed 50% of specified liabilities.

Market Value of Assets on June 30, 2008	\$9,329,175,038
Specified Liabilities on June 30, 2008	
Liability for Retired Members	11,177,843,293
Liability for Terminated Vested Members	214,873,529
Active Member Contributions with Interest	729,095,425
Total	<u>12,121,812,247</u>
50% of Specified Liabilities	6,060,906,124

*Market Value exceeds 50% of specified liabilities, so the second criterion is met.*

- III. *Unfunded Liability:*** Actual unfunded liability must be less than the projected unfunded liability five years from the determination date.

Actual Unfunded Liability on June 30, 2008	\$9,253,125,542
Projected Unfunded Liability on June 30, 2013 (see page D-2)	2,963,333,000

*Actual Unfunded Liability is not less than Projected Unfunded Liability so the third criterion is not met and there is no actuarial surplus.*

**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM**  
**ACTUARIAL SURPLUS TEST AS OF JUNE 30, 2008**

**APPENDIX D**

***Actuarial Surplus Test as of June 30, 2008 - Projection of Unfunded Liability***

Section 5-162-h(b)(2) of the General Statutes of Connecticut specifies the means of calculating the Projected Unfunded Liability used in the third criterion of the Actuarial Surplus Test. The projection reflects the actual unfunded liability as of December 31, 1983 adjusted for changes in actuarial assumptions and cost methods through the determination date. No provision is made in the Statute for reflecting the impact of plan changes. The projection below reflects the following changes: data correction (June 30, 1987); change in actuarial assumptions (June 30, 1987); change in actuarial cost method (June 30, 1988); change in actuarial assumptions - interest rate only (June 30, 1989); change in actuarial cost method - amortization period only (June 30, 1992); change in actuarial assumptions (June 30, 1993); change in actuarial cost method - level percent amortization (June 30, 1997); change in actuarial methods and assumptions (June 30, 2000); change in actuarial assumptions (June 30, 2004); change in actuarial assumptions (June 30, 2008).

<i>Year</i>	<i>(\$000)</i> <i>June 30</i> <i>Unfunded</i> <i>Liability</i>	<i>Year</i>	<i>(\$000)</i> <i>June 30</i> <i>Unfunded</i> <i>Liability</i>	<i>Year</i>	<i>(\$000)</i> <i>June 30</i> <i>Unfunded</i> <i>Liability</i>
1987	\$2,524,556	2002	\$2,360,589	2017	\$2,938,483
1988	1,954,257	2003	2,429,273	2018	2,904,380
1989	1,432,333	2004	2,502,591	2019	2,856,402
1990	1,939,758	2005	2,569,504	2020	2,792,963
1991	1,930,524	2006	2,634,814	2021	2,712,326
1992	1,920,505	2007	2,698,021	2022	2,612,594
1993	1,794,192	2008	2,823,251	2023	2,491,695
1994	1,787,586	2009	2,861,884	2024	2,347,364
1995	1,780,419	2010	2,895,933	2025	2,177,129
1996	1,772,643	2011	2,924,709	2026	1,978,295
1997	1,764,205	2012	2,947,454	2027	1,747,919
1998	1,835,087	2013	2,963,333	2028	1,482,794
1999	1,907,249	2014	2,971,431	2029	1,179,423
2000	2,222,296	2015	2,970,742	2030	833,996
2001	2,291,494	2016	2,960,162	2031	442,361
				2032	0