

ACTUARIAL VALUATION
CONNECTICUT STATE EMPLOYEES
RETIREMENT SYSTEM
AT JUNE 30, 1996

**CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM
ACTUARIAL VALUATION**

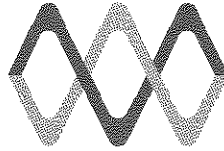
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MILLIMAN & ROBERTSON, INC.

Actuaries & Consultants

Internationally WOODROW MILLIMAN

Three Barnard Lane, Bloomfield, Connecticut 06002-2413

Telephone: 860/243-1138

Fax: 860/286-0564

November 20, 1996

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

Re: Connecticut State Employees Retirement System

Members of the Commission:

At your request, we have made an actuarial valuation of the Connecticut State Employees Retirement System (SERS) as of June 30, 1996. 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. 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, details on the Actuarial Surplus as of June 30, 1996, and Entry Age Normal Results.

As developed in Section IV, the actuarially determined contribution for the fiscal year beginning July 1, 1997, including Federal reimbursements, is \$567,634,923. In accordance with the provisions of collectively negotiated agreements, \$193,989,293 of this amount will not be paid. The negotiated contribution is \$373,645,630.

November 20, 1996
Connecticut State Employees Retirement System
Page 2

In our opinion, this report fairly presents the financial and actuarial position of the Connecticut State Employees Retirement System at June 30, 1996. On the basis of the foregoing, we hereby certify that, to the best of our knowledge, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices set forth by the American Academy of Actuaries.

Respectfully submitted,

MILLIMAN & ROBERTSON, INC.



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

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Enclosures

SECTION I

EXECUTIVE SUMMARY

SECTION I

EXECUTIVE SUMMARY

PURPOSE OF REPORT

This report presents the results of the June 30, 1996 actuarial valuation of the Connecticut State Employees Retirement System (SERS). The primary purposes for performing the valuation are:

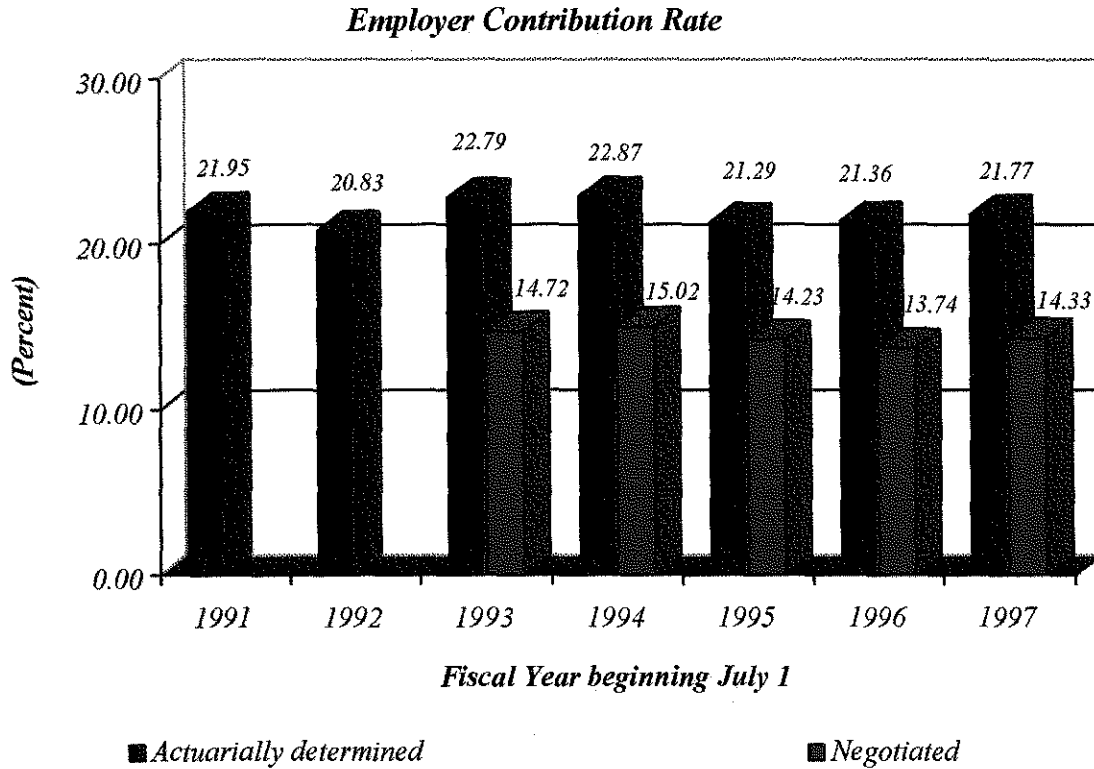
- ✓ to determine the contributions to be paid by the Employer for the Fiscal Year beginning July 1, 1997
- ✓ to disclose asset and liability measures as of June 30, 1996, and
- ✓ to analyze and report on trends in SERS contributions, assets, and liabilities over the past several years.

ORGANIZATION OF THE EXECUTIVE SUMMARY

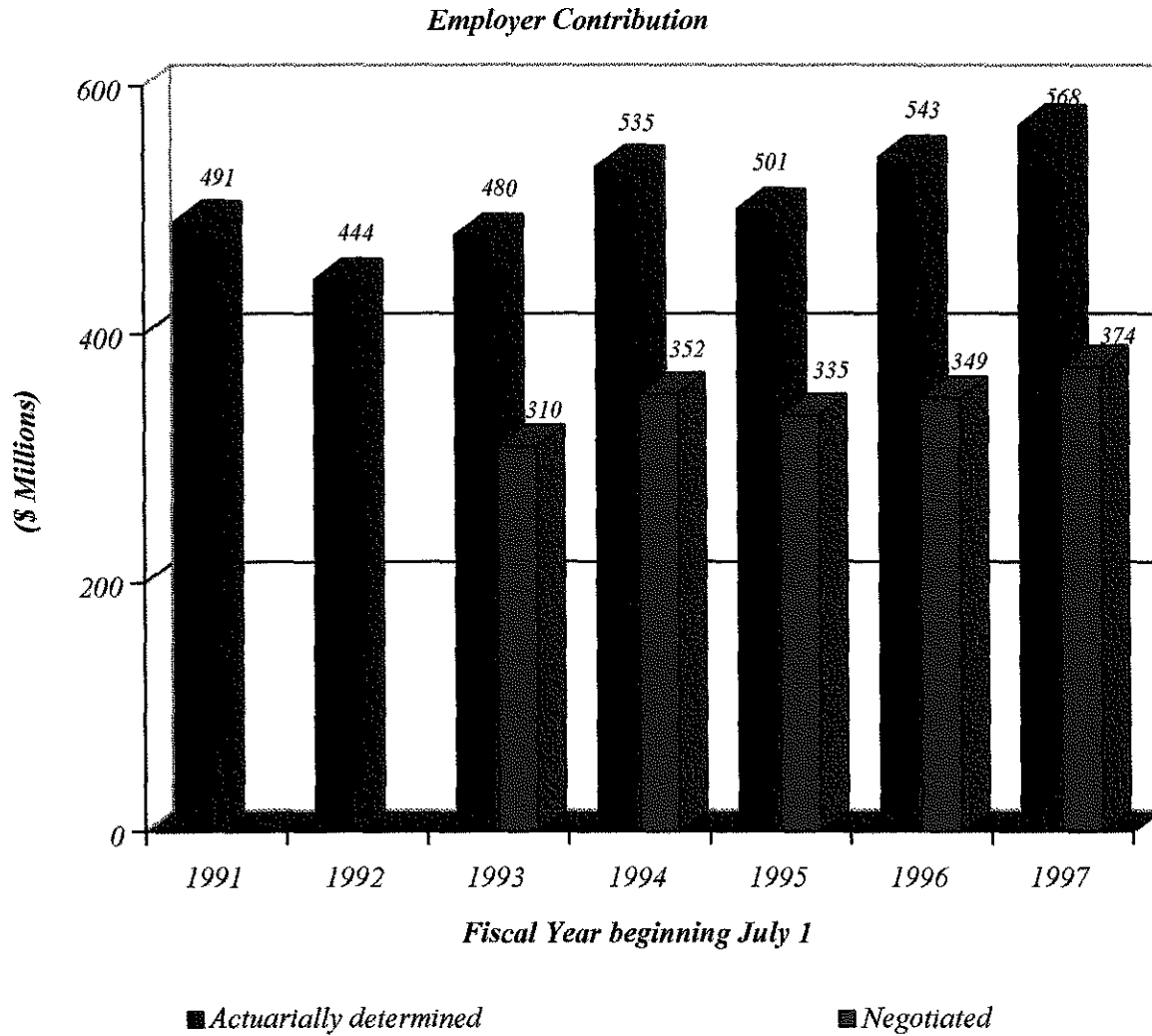
- ***Major Findings...*** shows graphically, key results for each of the last seven actuarial valuations.
- ***SERS Experience July 1, 1995 to June 30, 1996...*** highlights the major events influencing this valuation.
- ***SERS Contribution...*** compares this year's contribution to last year's and analyzes the change.
- ***Principal Results...*** contains a summary of comparative statistics for the June 30, 1995 and the June 30, 1996 valuations.

MAJOR FINDINGS

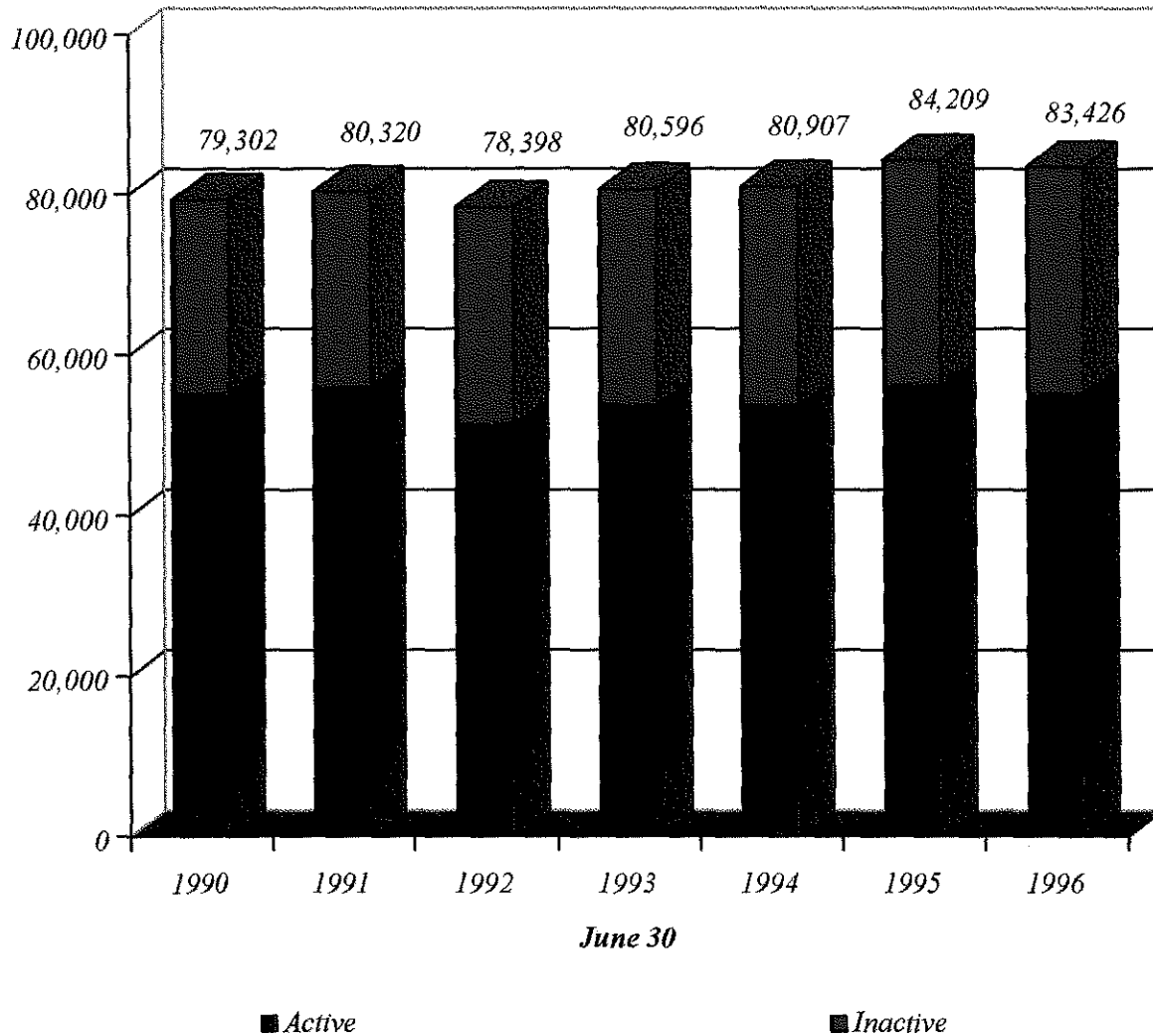
The major findings of the 1996 valuation are summarized and compared in the following charts:



The bar graph depicts the actuarially determined Employer's contribution rate and, since 1993, the rate reflecting negotiated changes. Both the actuarially determined and the negotiated contribution rates have been relatively level. Starting with 1996, the negotiated rate also reflects a further reduction in the unfunded liability payment.

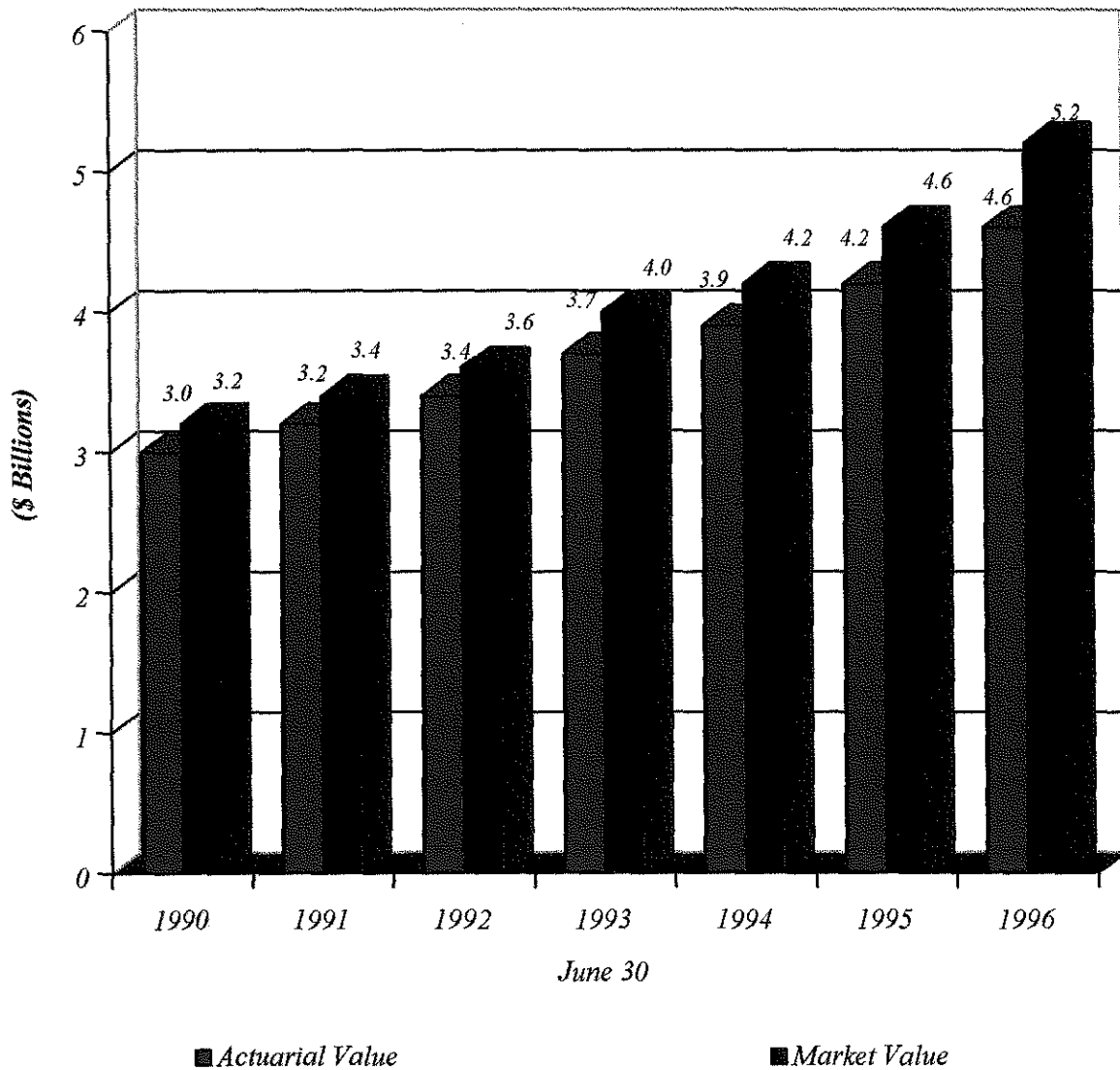


The dollar amount of the Employer's contribution equals the contribution rate shown on the prior table times the projected payroll. For 1997, the actuarially determined dollar amount went up primarily due to the aging of the membership. The negotiated contribution amount represents the normal cost payment plus a specified past service payment.

Membership

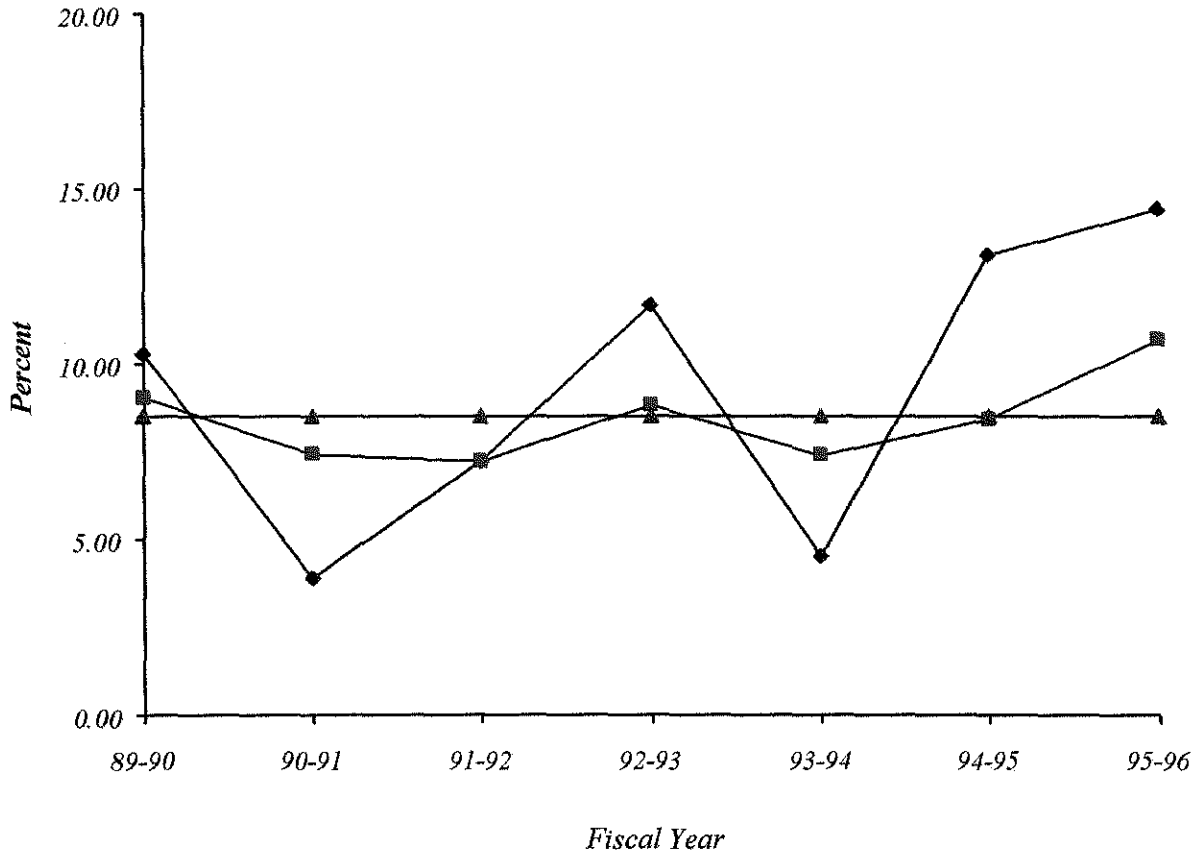
SERS membership has decreased slightly over last year. The active membership shows a decrease in membership for all groups, with 1,044 less members than last year. The inactive membership is 1% higher than last year, with 261 net new members.

SERS Assets



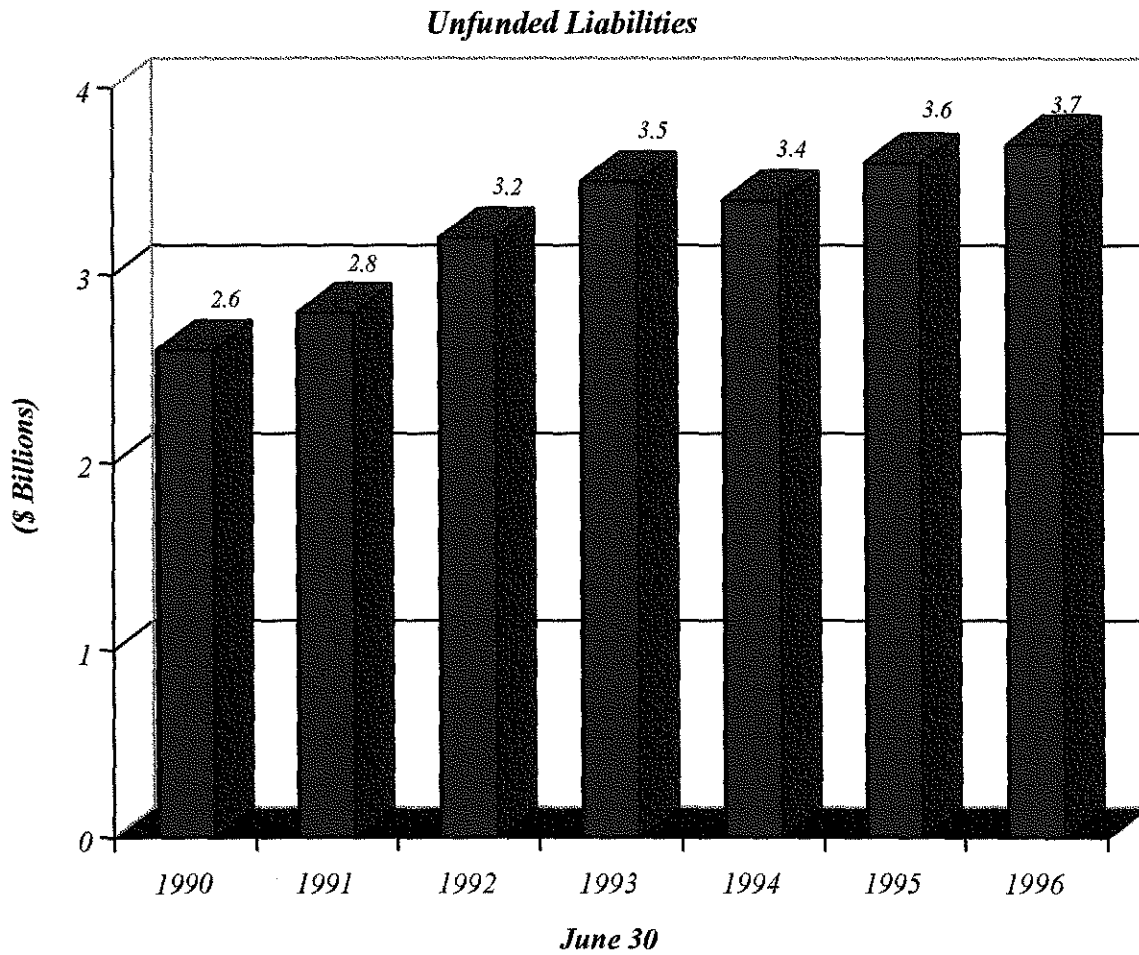
The SERS's assets have grown as expected in recent years due to investment results and positive cashflow. The rate of return on a Market Value basis for the past year exceeded 14%.

Historical Rates of Return



◆ Market Value of Assets ■ Actuarial Value of Assets ▲ Assumed Rate of Return

This graph shows the historical rates of return on a market value basis, the impact of "smoothing" (the rates of return on an actuarial value basis), and the "benchmark" (assumed 8.5% rate of return).



Unfunded actuarial liabilities have increased again this valuation. The negotiated contribution was not large enough to offset the growth in the liabilities due to interest and benefit accruals.

SERS EXPERIENCE JULY 1, 1995 TO JUNE 30, 1996

Overall, SERS experience was favorable during the valuation period, primarily due to strong asset performance.

The following are the major factors having an impact on the FY 97-98 contribution:

- Agreements negotiated between the State of Connecticut and the State Employees Bargaining Agent Coalition included provisions with funding implications:
 - ◆ The past service contribution for FY 97-98 is set at \$164.2 million instead of the actuarially determined amount of \$339.5 million.
 - ◆ This negotiated past service payment is further reduced, as follows: the difference of \$415,486,702 between the market value of assets and the actuarial value as of June 30, 1995 is amortized on a level percent of pay basis over 36 years (starting in 1995). The resulting amount for FY 97-98, \$18.7 million, reduces the negotiated past service payment from \$164.2 million to \$145.5 million.
- The investment performance was strong during the past year. The actual return was 14.4% on a market value basis compared to 13.1% for the prior valuation. On a smoothed actuarial basis, the rate was 10.7% compared to 8.4% for the prior valuation. The assumed rate is 8.5%.
- System membership has decreased slightly over the past year. The total membership is 83,426 versus 84,209 last year. A slight increase in inactive members (261 net new members) was offset by a decrease of 1,044 active members. More information on SERS membership can be found in Appendix A.
- The normal cost as a percent of pay increased from 8.45% to 8.75% due to the aging of the workforce. The pay base is slightly larger than last year, bringing the normal cost up 6%, from \$215 million for FY 96-97 to \$228 million for FY 97-98.
- The unfunded actuarial liability, the shortfall between SERS assets and liabilities, increased this year from \$3.6 billion to \$3.7 billion. The reasons are discussed on page 10 of this report.

Comparison of Results

The following pages detail the impact of the factors discussed above on SERS Assets and Unfunded Liabilities.

Assets

Between June 30, 1995 and June 30, 1996, the actuarial value of assets (measured on a five year smoothing basis) increased by \$395 million. This change was attributable to the following:

		<i>(\$ million)</i>
Actuarial Value of Assets, 7/1/95		\$4,209.2
Change in Assets		
• Employer and Member Contributions	371.0	
• Benefits Paid	(423.3)	
• Expected Total Net Return on Investments	355.8	
• Investment Gain/(Loss)	91.5	
Total Changes	395.0	
Actuarial Value of Assets, 7/1/96		\$4,604.2

The expected total return on investments shown above is based on an assumed rate of return of 8.5%. However, the actual investment earnings of \$447.3 million (an effective rate of 10.69% on the actuarial value of assets), results in a significant actuarial gain of \$91.5 million. More details on SERS assets are presented in Section II of this report.

Unfunded Liabilities

During the past year, the unfunded actuarial liability increased from \$3.6 billion to \$3.7 billion. Each year the unfunded liability is increased because of interest and expected benefit accruals and is decreased by contributions made to the fund. Asset and liability gains and losses also impact the unfunded liability.

The following table shows the development of the unfunded actuarial liability from 1995 to 1996:

	<i>(\$ million)</i>
Unfunded Actuarial Liability, 7/1/95	\$3,629.0
Source of Change in Unfunded Liability	
· Interest and Expected Benefit Accruals	515.7
· Expected Contribution with Interest for FY 95-96	(520.3)
· Negotiated Contribution Shortfall with Interest for FY 95-96	172.4
· Asset Gain	(91.5)
· Liability Loss	<u>25.6</u>
Total Changes	101.9
Unfunded Actuarial Liability, 7/1/96	\$3,730.9

The liability loss of \$25.6 million is small (0.3%) when compared to the total SERS liability of \$8,335.1 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. We have made a detailed analysis of the experience to determine the particular amount each component contributed to the total liability loss. The results are discussed on the following page.

Actuarial Liabilities - Components of the Liability Gain/(Loss)**Active Decrements****\$2.2 million**

The System experienced a net gain of \$2.2 million from active decrements. The gains and losses that fall under this heading represent the impact on the liability of members who were active employees last year but are not this year. Members leaving the System fall into four categories - terminations, retirements, deaths, and disabilities. This gain is primarily attributable to almost 1,500 more members leaving the System than predicted by the actuarial assumptions.

Other Active Sources of Gain/(Loss)**\$(50.3 million)**

The loss from other active sources was \$50.3 million. The breakdown of the liability gain/(loss) included in this category are:

	<u>Gain/(Loss)</u>
• Changes in the data, purchases and movement between the plans	(13.7) million
• Salary increases greater than expected	(12.6) million
• Liability for new members who have credit for prior service	(23.7) million
• Active members who have returned from inactive service	(0.3) million

Inactive Sources of Gain/(Loss)**\$22.5 million**

The net gain to the System from inactive sources was \$22.5 million. This inactive gain is a result of offsetting events:

- Gains occurred because the cost of living adjustment was less than expected and there were data changes that had a favorable impact on the System.
- Losses occurred because of mortality patterns that differed from our assumed mortality table.
- Losses occurred due to new retirees or beneficiaries who could not be identified in our data for the prior valuation as either actives or inactives. These members were either out on Workers Compensation last year and have now retired from state service or are beneficiaries who could not be matched with a deceased participant due to inadequate identification numbers.

SERS CONTRIBUTIONS

SERS contributions projected to the Fiscal Year beginning July 1, 1997 are \$373.6 million. The table below compares the prior year's contribution to this year's and identifies the components of change.

	<i>(\$ Million)</i>
Contribution Actuarially Determined for FY 1996-97	\$542.8
· 1996-97 Negotiated Contribution Shortfall	17.5
· Increase due to Payroll Growth and Changes in Membership Profile	13.5
· Asset Gains for 1995-96	(8.6)
· Liability Losses for 1995-96	2.4
Contribution before Negotiated Adjustments for FY 1997-98	567.6
· Negotiated Adjustment to Past Service Cost	(175.3)
· Negotiated Further Adjustment to Past Service Cost	(18.7)
Contribution for FY 1997-98	\$373.6

Actuarial Surplus

There is no actuarial surplus as defined in Section 5-162h(b) of the Statute. The details of the test are shown in Appendix D.

In concluding this executive summary, we present on the following page comparative statistics and actuarial information on both the June 30, 1995 and June 30, 1996 valuations.

CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM
PRINCIPAL RESULTS

	<i>June 30, 1995</i>	<i>June 30, 1996</i>	<i>% Chg</i>
<i>SERS Membership</i>			
1. Active Membership			
- Number of Participants	55,973	54,929	(1.87)
- Payroll	\$2,325,786,999	\$2,385,532,750	2.57
- Average Pay	\$41,552	\$43,429	4.52
2. Inactive Membership			
- Number of Vested			
Deferred Members	666	662	(0.60)
- Number of Retired Members	27,570	27,835	0.96
- Annual Retired Members			
Benefits	\$395,878,744	\$418,069,300	5.61
- Average Annual Retired			
Member Benefit	\$14,359	\$15,020	4.60
<i>Assets and Liabilities</i>			
1. Assets			
- Market Value	4,624,722,528	5,235,618,717	13.21
- Actuarial Value	4,209,235,826	4,604,227,717	9.38
2. Liabilities			
- Retired and Deferred Vested	4,299,645,231	4,429,670,607	3.02
- Active Members	3,538,565,574	3,905,421,705	10.37
- Total Liability	7,838,210,805	8,335,092,312	6.34
- Unfunded Liability	3,628,974,979	3,730,864,595	2.81
<i>Employer Contributions</i>			
1. Contributions as a Percent of Projected Payroll			
- Normal Cost	8.45%	8.75%	3.55
- Unfunded Liability	5.29% ^(a)	5.58% ^(b)	5.48
- Total Contribution %	13.74%	14.33%	4.29
2. Contribution Dollars Projected to the following FY			
- Normal Cost	\$214,843,727	\$228,165,426	6.20
- Unfunded Liability	134,386,985 ^(a)	145,480,204 ^(b)	8.25
- Total Employer Contribution	349,230,712	373,645,630	6.99

(a) Reflects negotiated agreement to fund \$152,000,000 in Past Service Cost, including ERIP, less \$17,613,015.

(b) Reflects negotiated agreement to fund \$164,150,000 in Past Service Cost, including ERIP, less \$18,669,796.

SECTION II

SERS ASSETS

SECTION II

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 are 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

For certain accounting statement purposes, SERS assets are valued at current market rates. These values represent 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, 1996.

<u><i>Table</i></u>	<u><i>Contents</i></u>
II-1	Market Value - Summary of Fund Transactions
II-2	Market Value - Breakdown on June 30, 1996
II-3	Actuarial Value of Assets
II-4	Development of Asset Gain/Loss
II-5	Historical Summary (Actuarial and Market)

SECTION II**SERS ASSETS****TABLE II-1*****Market Value of Assets
Summary of Fund Transactions***

Market Value as of July 1, 1995		4,624,722,528
<u>Contributions</u>		
State	254,415,971	
Federal	80,696,000	
Employee	<u>35,919,817</u>	
Total		371,031,788
<u>Investment Income</u>		
Interest & Dividends	208,650,737	
Realized Gains	84,290,358	
Change in Unrealized Gains	<u>370,384,456</u>	
Total		663,325,551
<u>Disbursements</u>		
Benefit Payments	420,089,993	
Employee Refunds	3,208,829	
Expenses	<u>162,328</u>	
Total		423,461,150
Market Value as of June 30, 1996		5,235,618,717
Rate of Return as of June 30, 1996		14.42%
Rate of Return as of June 30, 1995		13.10%
Change		1.32%

*be this amount
the \$500*

*14.42
13.10*

TABLE II-2

*Market Value of Assets
Breakdown on June 30, 1996*

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

	<u>Amount</u>	<u>% of Total</u>
Cash	\$ (2,465,590)	-0.05%
Accrued Interest	0	0.00%
Investments:		
Cash Reserve Account	118,899,880	2.27%
Mutual Fixed Income Fund	1,390,517,986	26.56%
Mutual Equity Fund	2,170,464,102	41.46%
Residential Mortgage Fund	0*	0.00%
Real Estate Fund	384,538,836	7.34%
International Stock Fund	822,041,408	15.70%
International Bond Fund	0*	0.00%
Commercial Mortgage Fund	174,131,758	3.33%
Venture Capital Fund	114,255,665	2.18%
Connecticut Programs Fund	63,234,672	1.21%
Total Market Value of Assets as of June 30, 1996	5,235,618,717	100.00%

* The Office of the State Treasurer initiated an asset reallocation during FY95-96.

TABLE II-3

Actuarial Value of Assets

<u>Ending</u>	<u>Realized Gains/Losses</u>	<u>Change in Unrealized Gains/Losses</u>	<u>Total Gains/Losses</u>
6/30/96	\$84,290,358	\$370,384,456	\$454,674,814
6/30/95	4,672,238	346,880,314	351,552,552
6/30/94	10,676,524	620,866	11,297,390
6/30/93	24,188,054	236,815,252	261,003,306

Actuarial Value of Assets as of June 30, 1996 is derived as follows:

1. Market Value of Assets as of June 30, 1996:		\$5,235,618,717
2. Five-Year Gains and Losses Not Yet Recognized:		
80% of FY 96	363,739,852	
60% of FY 95	210,931,531	
40% of FY 94	4,518,956	
20% of FY 93	<u>52,200,661</u>	
		\$631,391,000
3. 20% of (1)		1,047,123,743
4. Actuarial Value of Assets as of June 30, 1996: (1)-(2), within (1) +/- (3)		\$4,604,227,717
5. Rate of Return as of June 30, 1996		10.69%
6. Rate of Return as of June 30, 1995		8.42%
7. Change		Up 2.27%

TABLE II-4*Development of Asset Gain/Loss*

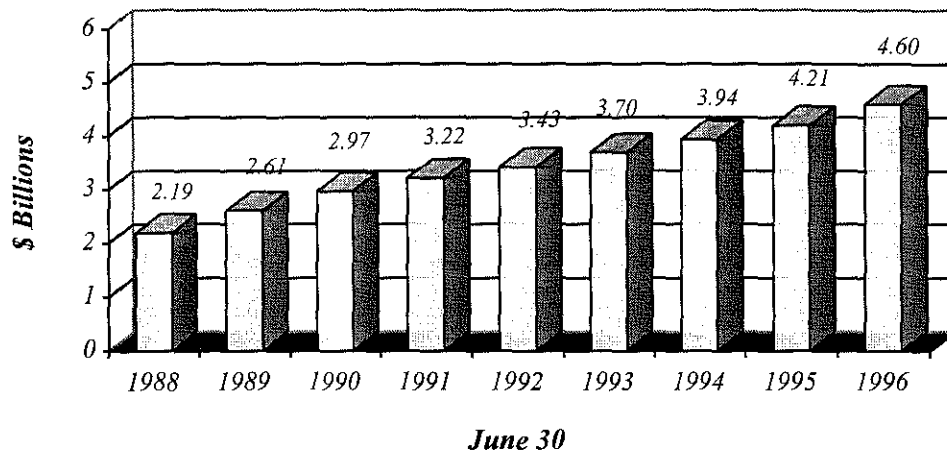
	<i>Market Value of Assets</i>	<i>Actuarial Value of Assets</i>
1. Value of Assets as of July 1, 1995	\$4,624,722,528	\$4,209,235,826
2. Contributions	371,031,788	371,031,788
3. Benefit Payments and Refunds paid during 1995-96	423,298,822	423,298,822
4. Expected Net Investment Income at 8½% on (1) through (3)	391,095,145	355,778,775
5. Actual Investment Income Net of Expenses	663,163,223	447,258,925
6. Expected Value of Assets as of June 30, 1996: (1)+(2)-(3)+(4)	4,963,550,639	4,512,747,567
7. Actual Value of Assets as of June 30, 1996: (1)+(2)-(3)+(5)	5,235,618,717	4,604,227,717
8. Asset Gain/(Loss): (7)-(6)	272,068,078	91,480,150
9. Approximate Effective Yield Represented by Actual Investment Income	14.42%	10.69%

Note: *The rate shown here is a rough estimate of the return on plan assets used in the valuation. It assumes all transactions occur in the middle of the period. This rate may therefore not be the same as the yield earned on the plan's invested assets.*

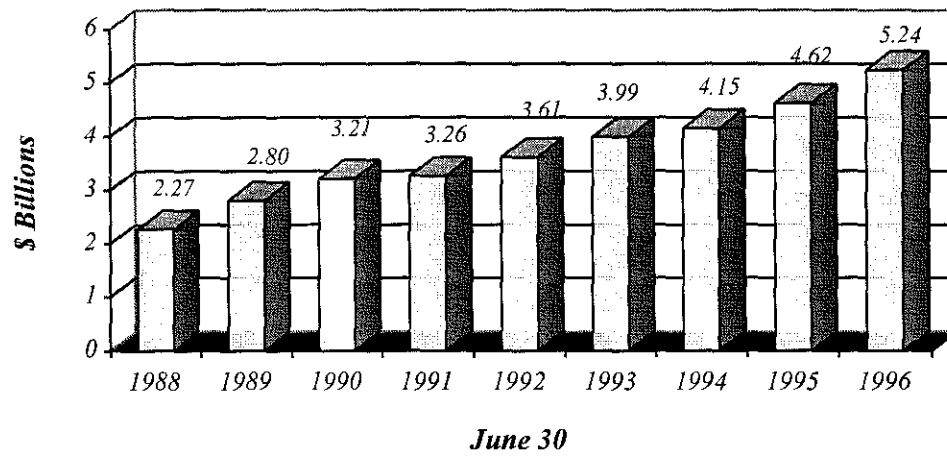
TABLE II-5

Historical Summary of System Assets

Actuarial Value



Market Value



SECTION III

SERS LIABILITIES

SECTION III

SERS LIABILITIES

In this section we present values assigned to the liabilities of SERS and then compare these liabilities to SERS assets.

The actuarial funding method used to determine SERS costs is based on the Projected Unit Credit method. This method is also used to determine the Projected Benefit Obligation (PBO) required by the Government Accounting Standards Board (GASB). A more detailed description of this method can be found in Appendix C.

The tables in this section present SERS liabilities as follows:

<i>Table</i>	<i>Contents</i>
III-1	SERS Liabilities
III-2	Active Liabilities by Tier and Plan
III-3	Historical Summary of Unfunded Actuarial Liabilities

TABLE III-1

SERS Liabilities

	<u>June 30, 1995</u>	<u>June 30, 1996</u>
1. Liability for Retired Members	\$4,259,436,367	\$4,387,226,413
2. Liability for Deferred Vested Members	<u>40,208,864</u>	<u>42,444,194</u>
3. Total Inactive Liability	\$4,299,645,231	\$4,429,670,607
4. Active Members Actuarial Liability	<u>3,538,565,574</u>	<u>3,905,421,705</u>
5. Total SERS Actuarial Liability	<u>\$7,838,210,805</u>	<u>\$8,335,092,312</u>
6. Actuarial Value of Assets	4,209,235,826	4,604,227,717
7. Total SERS Unfunded Actuarial Liability	<u>\$3,628,974,979</u>	<u>\$3,730,864,595</u>

3,947,865,899

-7

TABLE III-2

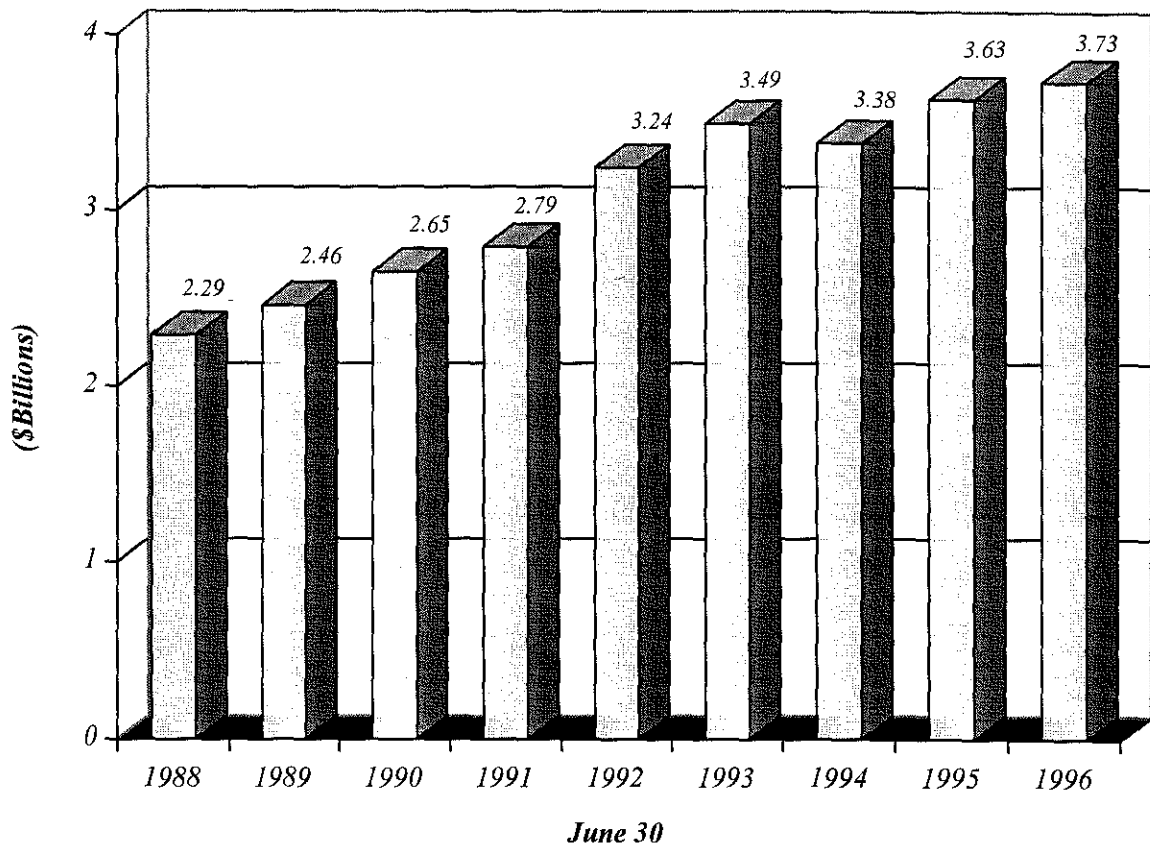
Active Liabilities by Tier and Plan

	ACTUARIAL LIABILITY	
	June 30, 1995	June 30, 1996
TIER I		
Hazardous Duty	\$ 416,460,701	\$ 455,400,759
Plan B	2,225,891,582	2,419,432,593
Plan C	<u>164,221,428</u>	<u>167,599,957</u>
Total	\$2,806,573,711	\$3,042,433,309
TIER II		
Hazardous Duty	\$ 260,974,143	\$ 310,271,003
All Others	<u>471,017,720</u>	<u>552,717,393</u>
Total	\$ 731,991,863	\$ 862,988,396
GRAND TOTAL	\$3,538,565,574	\$3,905,421,705

TABLE III-3

Historical Summary of
Unfunded Actuarial Liabilities

Unfunded Actuarial Liability



SECTION IV

SERS CONTRIBUTIONS

SECTION IV

SERS CONTRIBUTIONS

In this section we present the contributions required of the Employer in the upcoming fiscal year. Due to the timing of both the actuarial valuation process and the Employer's budget cycle, valuation results each June 30 must be projected to the following fiscal year in order to determine the Employer's required contribution.

In the following pages we present information on SERS contributions as follows:

<u>Table</u>	<u>Contents</u>
IV-1	Projected Unit Credit Normal Cost Projections
IV-2	Projected Unit Credit Unfunded Liability
IV-3	Projected Unit Credit Total Costs
IV-4	Comparison of Normal Cost Rates

SECTION IV

SERS CONTRIBUTIONS

TABLE IV-1

Projected Unit Credit Normal Cost Projections

	07-01-96 NORMAL COST	07-01-96 EARNINGS	NORMAL COST %	07-01-97 PROJECTED EARNINGS	07-01-97 PROJECTED NORMAL COST
<i>TIER I</i>					
Hazardous Duty	18,961,922	107,925,566	17.5694%	111,595,035	\$ 19,606,578
Plan B	92,979,535	882,811,684	10.5322%	912,827,281	96,140,795
Plan C	<u>5,389,152</u>	<u>53,912,779</u>	9.9961%	<u>55,745,813</u>	<u>5,572,407</u>
Total	117,330,609	1,044,650,029		1,080,168,129	121,319,780
<i>TIER II</i>					
Hazardous Duty	30,705,843	305,866,971	10.0390%	341,795,984	34,312,899
All Others	<u>63,358,031</u>	<u>1,035,015,750</u>	6.1215%	<u>1,184,885,186</u>	<u>72,532,747</u>
Total	94,063,874	1,340,882,721		1,526,681,170	106,845,646

SERS Normal Cost Projected to July 1, 1997: \$228,165,426
SERS Projected Earnings at July 1, 1997: \$2,606,849,299
SERS Projected Normal Cost % at July 1, 1997: 8.75%

TABLE IV-2*Projected Unit Credit Unfunded Liability*

1.	Unfunded Actuarial Liability as of July 1, 1996	3,730,864,595
2.	One Year's Interest at 8½%	317,123,491
3.	Employer Normal Cost (FY 1996-97)	214,843,727
4.	Employee Normal Cost (Expected Employee Contributions)	41,554,348
5.	Interest on Total Normal Cost [(3)+(4)]	9,841,840
6.	State Payments	(268,534,712)
7.	Expected Federal Payments	(80,696,000)
8.	Expected Employee Contributions	(41,554,348)
9.	Interest on Total Contributions [(6)+(7)+(8)]	(15,000,285)
10.	Unfunded Actuarial Liability as of July 1, 1997	3,908,442,656

TABLE IV-3

Projected Unit Credit Total Costs

1.	Unfunded Actuarial Liability as of July 1, 1997	\$3,908,442,656
2.	Amortization Period	35 Years
3.	Amortization Payment	339,469,497
4.	Employer Normal Cost	228,165,426
5.	Total Employer Cost for Fiscal Year beginning July 1, 1997: (3)+(4)	\$ 567,634,923
6.	Projected Payroll	2,606,849,299
7.	Total Employer Cost %: (5)/(6)	21.77%
8.	Negotiated Amortization Payment	164,150,000
9.	Negotiated Further Adjustment	18,669,796
10.	Total Negotiated Contribution: (4)+(8)-(9)	\$373,645,630
11.	Negotiated Employer Cost %: (10)/(6)	14.33%

TABLE IV-4**Comparison of Normal Cost Rates**

	VALUATION DATE	
	JULY 1, 1995	JULY 1, 1996
TIER I		
Hazardous Duty	17.06%	17.57%
Plan B	10.11%	10.53%
Plan C	9.57%	10.00%
Total	10.80%	11.23%
TIER II		
Hazardous Duty	9.62%	10.04%
All Others	5.90%	6.12%
Total	6.75%	7.00%
GRAND TOTAL	8.45%	8.75%

SECTION V

GASB ACCOUNTING INFORMATION

SECTION V

GASB INFORMATION

Government Accounting Standards Board Statement No. 5 and Statement No. 25 require that SERS disclose certain information on an annual basis regarding the funding of SERS. In this section we present this information. Additional information regarding SERS Assets, a Summary of Plan Provisions and the Actuarial Method and Assumptions can be found in Section II and Appendices B and C, respectively.

The following tables present the information required for compliance with GASB #5:

<i><u>Table</u></i>	<i><u>Contents</u></i>
V-1	Summary of Membership
V-2	Standardized Measures
V-3	Historical Contribution Information
V-4	Historical Analysis of Funding Progress

The following tables present the information required by GASB #25:

<i><u>Table</u></i>	<i><u>Contents</u></i>
V-5	Statement of Plan Net Assets
V-6	Statement of Changes in Plan Net Assets
V-7	Schedule of Funding Progress
V-8	Schedule of Employer Contributions

Background Information

The Connecticut State Employee Retirement System was created by the State of Connecticut to provide defined benefit pensions to its employees. SERS is described in Chapter 66, State Employees Retirement Act, in Sections 5-152 to 5-192 to Title 5 of the General Statutes of Connecticut.

The Employer's funding policy has been to contribute each year an amount equal to the normal cost plus an amount representing amortization of the unfunded actuarial liability over thirty years (ending June 30, 2022), less amounts reimbursed by the Federal Government. Pursuant to a collectively bargained agreement, as of June 30, 1992, the unfunded actuarial liability will be amortized over forty years (ending June 30, 2032). Per negotiations the past service payment is at a specified amount for fiscal year starting in 1993 instead of the amortized amount discussed above. The actuarial assumptions used to calculate the figures reported herein are the same as those used to calculate the contribution level.

TABLE V-1*Summary Of Membership*

	<u>June 30, 1995</u>	<u>June 30, 1996</u>
Current employees:		
<u>Vested:</u>		
Hazardous Duty	2,557	2,910
Plan B	16,531	15,865
Plan C	1,214	1,111
Tier II	<u>5,837</u>	<u>8,206</u>
Total	26,139	28,092
<u>Not yet vested:</u>		
Hazardous Duty	6,540	6,136
Plan B	572	488
Plan C	35	28
Tier II	<u>22,687</u>	<u>20,185</u>
Total	29,834	26,837
Total current employees	55,973	54,929
Retirees and beneficiaries currently receiving benefits:	27,570	27,835
Terminated employees entitled to benefits but not yet receiving them:	666	662
Total Members	<u>84,209</u>	<u>83,426</u>

TABLE V-2

Standardized Measures

	<u>June 30, 1995</u>	<u>June 30, 1996</u>
<i>Pension Benefit Obligation</i>		
Retired Members	\$4,259,436,367	\$4,387,226,413
Terminated Vested Members	40,208,864	42,444,194
Active Members		
Accumulated employee contributions with interest	363,656,581	396,093,019
Employer-financed vested portion	2,701,057,842	3,048,825,285
Employer-financed non-vested portion	<u>473,851,151</u>	<u>460,503,401</u>
Total	\$3,538,565,574	\$3,905,421,705
<i>Total SERS Obligation</i>	<u>\$7,838,210,805</u>	<u>\$8,335,092,312</u>
<i>Market Value of Assets</i>	<u>4,624,722,528</u>	<u>5,235,618,717</u>
<i>Unfunded Pension Benefit Obligation</i>	\$3,213,488,277	\$3,099,473,595

TABLE V-3

Historical Contribution Information

	<u>FISCAL YEAR</u> <u>1989-1990</u>	<u>FISCAL YEAR</u> <u>1990-1991</u>	<u>FISCAL YEAR</u> <u>1991-1992</u>	<u>FISCAL YEAR</u> <u>1992-1993</u>	<u>FISCAL YEAR</u> <u>1993-1994</u>	<u>FISCAL YEAR</u> <u>1994-1995</u>	<u>FISCAL YEAR</u> <u>1995-1996</u>	<u>FISCAL YEAR</u> <u>1996-1997</u>	<u>FISCAL YEAR</u> <u>1997-1998</u>
Employer Normal Cost	\$137,531,541	\$ 179,549,626	\$180,005,022	\$189,127,218	\$188,906,351	\$221,273,796	\$196,711,972	\$214,843,727	\$228,165,426
Past Service Cost	<u>258,836,930</u>	<u>218,467,282</u>	<u>251,231,824^(b)</u>	<u>255,116,161</u>	<u>121,300,000^(d)</u>	<u>130,500,000^(d)</u>	<u>138,400,000^(d)</u>	<u>134,386,985^(d)</u>	<u>145,480,204^(d)</u>
Total Employer Cost	\$396,368,471	\$398,016,908 ^(a)	\$431,236,846	\$444,243,379 ^(c)	\$310,206,351	\$351,773,796	\$335,111,972	\$349,230,712	\$373,645,630
Total Employer Cost as a percent of payroll	23.07%	20.77%	21.95%	20.82%	14.72%	15.02%	14.23%	13.74%	14.33%
Employee Contributions	\$ 29,198,019	\$ 33,809,953	\$ 33,169,806	\$ 32,916,991	\$ 35,753,968	\$ 35,522,628	\$ 35,919,817	N/A	N/A
Employer Contributions	<u>288,368,471</u>	<u>263,818,607</u>	<u>250,324,285</u>	<u>290,827,685</u>	<u>310,206,351</u>	<u>290,801,000</u>	<u>335,111,971</u>	N/A	N/A
Total Contributions	\$317,566,490	\$297,628,560	\$283,494,091	\$323,744,676	\$345,960,319	\$326,323,628	\$371,031,788	N/A	N/A

+ 53,003,216
federal contributions

- (a) Includes an additional contribution of \$10,241,000 (\$3,381,000 Normal Cost + \$6,860,000 Past Service Cost) needed to fund benefit improvements resulting from collectively bargained negotiations.
- (b) Includes \$11,858,652 payment of Retirement Incentive Bonus.
- (c) Revised after issuance of valuation report to reflect inclusion of Newington Children's Hospital participants per Public Act 92-26.
- (d) Negotiated Past Service Cost.

TABLE V-4

*Historical Analysis of Funding Progress
(millions)*

<i>FISCAL YEAR</i>	<i>(1) NET ASSETS AVAILABLE FOR BENEFITS*</i>	<i>(2) PENSION BENEFIT OBLIGATION</i>	<i>(3) PERCENTAGE FUNDED (1)/(2)</i>	<i>(4) UNFUNDED OBLIGATION (2)-(1)</i>	<i>(5) ANNUAL COVERED PAYROLL</i>	<i>(6) UNFUNDED OBLIGATION % OF PAY (4)/(5)</i>
1988 - 1989	\$2,273.2	\$4,550.7	50.0%	\$2,277.5	\$1,583.0	143.9%
1989 - 1990	2,798.9	5,071.5	55.2%	2,272.6	1,759.5	129.2%
1990 - 1991	3,212.8	5,624.7	57.1%	2,411.9	1,802.8	133.8%
1991 - 1992	3,351.7	5,982.7	56.0%	2,631.0	1,956.6	134.5%
1992 - 1993	3,606.0	6,668.7	54.1%	3,062.7	1,931.4	158.6%
1993 - 1994	3,995.0	7,189.7	55.6%	3,194.8	2,144.8	149.0%
1994 - 1995	4,150.4	7,329.2	56.6%	3,178.8	2,155.9	147.4%
1995 - 1996	4,624.7	7,838.2	59.0%	3,213.5	2,325.8	138.2%
1996 - 1997	5,235.6	8,335.1	62.8%	3,099.5	2,385.5	129.9%

* *Market Value*

TABLE V-5

*Statement of Plan Net Assets
as of June 30, 1996 and June 30, 1995*

	<u>June 30, 1995</u>	<u>June 30, 1996</u>
Cash	\$ (6,173,129)	\$ (2,465,590)
Accrued Interest	0	0
Cash Reserve Account	227,717,986	118,899,880
Mutual Fixed Income Fund	881,438,390	1,390,517,986
Mutual Equity Fund	1,773,008,987	2,170,464,102
Residential Mortgage Fund	18,987,018	0*
Real Estate Fund	407,930,535	384,538,836
International Stock Fund	727,284,571	822,041,408
International Bond Fund	291,595,671	0*
Commercial Mortgage Fund	177,218,563	174,131,758
Venture Capital Fund	85,512,738	114,255,665
Connecticut Programs Fund	<u>40,201,198</u>	<u>63,234,672</u>
Total Assets	\$4,624,722,528	\$5,235,618,717
Liabilities	<u>0</u>	<u>0</u>
Net assets held in trust for pension benefits	\$4,624,722,528	\$5,235,618,717

* The Office of the State Treasurer initiated an asset reallocation during FY95-96.

TABLE V-6*Statement of Changes in Plan Net Assets*ADDITIONS*Contributions*

State	\$254,415,971	
Federal	80,696,000	
Employee	<u>35,919,817</u>	
Total Contributions		\$371,031,788

Investment Income

Interest & Dividends	208,650,737	
Net Appreciation/(Depreciation)	<u>454,674,814</u>	
Total Investment Income		663,325,551
Total Additions		1,034,357,339

DEDUCTIONS

Benefit Payments	420,089,993	
Employee Refunds	3,208,829	
Expenses - Banking Services	39,354	
Expenses - Administrative	<u>122,974</u>	
Total Deductions		<u>423,461,150</u>
Net Increase		\$ 610,896,189

Net assets held in trust for pension benefits

Beginning of year		<u>4,624,722,528</u>
End of year		\$5,235,618,717

TABLE V-7

Schedule of Funding Progress

<i>Actuarial Valuation Date</i>	<i>Actuarial Value of Assets</i>	<i>Actuarial Accrued Liability - PUC</i>	<i>Unfunded AAL (UAAL)</i>	<i>Funded Ratio</i>	<i>Covered Payroll</i>	<i>UAAL as a Percentage of Covered Payroll</i>
	(a)	(b)	(b - a)	(a/b)	(c)	[(b-a)/c]
June 30, 1991	3,207,958,056	5,982,687,195	2,774,729,139	53.62%	1,956,585,318	141.81%
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%	2,325,786,999	156.03%
June 30, 1996	4,604,227,717	8,335,092,312	3,730,864,595	55.24%	2,385,532,750	156.40%

TABLE V-8

Schedule of Employer Contributions

<i>Fiscal Year Ending June 30</i>	<i>Annual Required Contribution</i>	<i>Actual Contribution</i>	<i>% Funded</i>
1991	\$398,016,908	\$263,818,607	66.28%
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	---	---
1998	373,645,630	---	---

Note: Starting with FY '94, the ARC equals the Normal Cost plus a fixed negotiated past service cost.

APPENDIX A

SUMMARY STATISTICS ON SERS MEMBERSHIP

APPENDIX A

SUMMARY STATISTICS ON SERS MEMBERSHIP

<i><u>Table</u></i>	<i><u>Contents</u></i>
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	Analysis by Age and Service - Tier I - Hazardous Duty
A-5	Analysis by Age and Service - Tier I - Plan B
A-6	Analysis by Age and Service - Tier I - Plan C
A-7	Analysis by Age and Service - Tier II - Hazardous Duty
A-8	Analysis by Age and Service - Tier II - All Others
A-9	Analysis of Retired Members by Retirement Year
A-10	Analysis of Retired Members by Current Age

TABLE A-1*Summary of Active Membership Data*

We received data on a total of 55,167 eligible active members, including employees of State Aided Institutions. Of the active records submitted to us, 238 (.43%) were rejected due to missing or invalid dates of birth and/or hire. Cost calculations were not revised to reflect these records. The following analysis compares this data with the July 1, 1995 data (see Table A-4 for distribution by age and service).

	<i>7/1/95</i>	<i>7/1/96</i>	<i>Change</i>	<i>Percent Change</i>
Total Employees	55,973	54,929	(1,044)	(1.9)%
Total Earnings (millions)	\$2,325.8	\$2,385.5	\$59.7	2.6%
Average Earnings	\$41,552	\$43,429	\$1,877	4.5%

Earnings figures as of July 1 are actual amounts paid during the previous July 1 to June 30 period, adjusted for anticipated increases and merit adjustments through the end of FY 96-97; new entrant earnings are annualized.

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

TABLE A-2

Detail of Active Membership Data by Plan

	7/1/95	7/1/96	Percent Change
<i>Number of Members</i>			
Tier I Hazardous Duty	1,891	1,845	-2.4%
Tier I Plan B	17,103	16,353	-4.4%
Tier I Plan C	1,249	1,139	-8.8%
Tier II Hazardous Duty	7,206	7,201	-0.1%
Tier II Others	<u>28,524</u>	<u>28,391</u>	-0.5%
Total	55,973	54,929	-1.9%
<i>Total Annual Compensation (Millions)</i>			
Tier I Hazardous Duty	106.3	107.9	+1.5%
Tier I Plan B	873.5	882.8	+1.1%
Tier I Plan C	56.1	53.9	-3.9%
Tier II Hazardous Duty	300.2	305.9	+1.9%
Tier II Others	<u>989.7</u>	<u>1,035.0</u>	+4.6%
Total	2,325.8	2,385.5	+2.6%
<i>Average Compensation</i>			
Tier I Hazardous Duty	56,204	58,496	4.1%
Tier I Plan B	51,074	53,985	5.7%
Tier I Plan C	44,903	47,333	5.4%
Tier II Hazardous Duty	41,663	42,476	2.0%
Tier II Others	34,696	36,456	5.1%
Total	41,552	43,429	4.5%
<i>Average Age</i>			
Tier I Hazardous Duty	44.0	44.9	
Tier I Plan B	47.6	48.3	
Tier I Plan C	52.2	52.7	
Tier II Hazardous Duty	35.3	36.1	
Tier II Others	40.0	40.7	
Total	42.1	42.7	
<i>Average Service</i>			
Tier I Hazardous Duty	16.5	17.3	
Tier I Plan B	18.8	19.7	
Tier I Plan C	19.1	20.0	
Tier II Hazardous Duty	4.8	5.7	
Tier II Others	6.2	6.9	
Total	10.5	11.1	

TABLE A-3*Summary of Inactive Membership Data*

	7/1/95	7/1/96	Percent Change
<u>Retirees</u>			
Number	27,570	27,835	1.0%
Total Annual Benefit (000s)	\$395,879	\$418,069	5.6%
Average Annual Benefit	14,359	15,020	4.6%
<u>Terminated Vested</u>			
Number	666	662	(0.6)%

TABLE A-4

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

Age	Years of Service											All Years	
	Under 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 to 45	45 to 50	50 & Up		
Under 20	0	0	0	0	0	0	0	0	0	0	0	0	0
20 to 24	0	0	0	0	0	0	0	0	0	0	0	0	0
25 to 29	0	0	0	0	0	0	0	0	0	0	0	0	0
30 to 34	1	4	31	5	0	0	0	0	0	0	0	0	41
35 to 39	10	11	197	119	6	0	0	0	0	0	0	0	343
40 to 44	15	13	152	278	137	1	0	0	0	0	0	0	596
45 to 49	9	9	77	143	169	64	3	0	0	0	0	0	474
50 to 54	5	8	36	62	71	56	15	0	0	0	0	0	253
55 to 59	0	1	21	25	16	8	10	3	1	0	0	0	85
60 to 64	2	2	6	20	10	2	0	1	0	0	0	0	43
65 & Up	0	0	1	6	3	0	0	0	0	0	0	0	10
Totals	42	48	521	658	412	131	28	4	1	0	0	0	1,845

Age	Average Salaries											All Years	
	Under 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 to 45	45 to 50	50 & Up		
Under 20	0	0	0	0	0	0	0	0	0	0	0	0	0
20 to 24	0	0	0	0	0	0	0	0	0	0	0	0	0
25 to 29	0	0	0	0	0	0	0	0	0	0	0	0	0
30 to 34	57,428	52,321	52,529	52,098	0	0	0	0	0	0	0	0	52,576
35 to 39	49,797	49,680	54,695	55,061	54,123	0	0	0	0	0	0	0	54,508
40 to 44	73,564	51,694	54,995	59,918	64,538	56,824	0	0	0	0	0	0	59,883
45 to 49	49,982	55,050	55,602	56,849	62,152	68,162	50,418	0	0	0	0	0	59,860
50 to 54	39,273	41,124	49,765	59,186	60,030	63,528	70,062	0	0	0	0	0	58,723
55 to 59	0	46,105	56,282	52,927	55,234	63,104	80,757	80,219	65,043	0	0	0	59,447
60 to 64	40,303	47,605	59,944	55,078	63,238	73,191	0	42,903	0	0	0	0	57,179
65 & Up	0	0	70,780	60,677	68,683	0	0	0	0	0	0	0	64,089
Totals	56,801	49,866	54,602	57,838	62,268	65,862	71,777	70,890	65,043	0	0	0	58,496

TABLE A-5

Analysis by Age and Service - Plan B - Active Members

Age	Years of Service											All Years	
	Under 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 to 45	45 to 50	50 & Up		
Under 20	0	0	0	0	0	0	0	0	0	0	0	0	0
20 to 24	0	0	0	0	0	0	0	0	0	0	0	0	0
25 to 29	0	0	0	0	0	0	0	0	0	0	0	0	0
30 to 34	11	3	219	68	0	0	0	0	0	0	0	0	301
35 to 39	27	43	693	1,098	68	0	0	0	0	0	0	0	1,929
40 to 44	58	80	552	1,717	844	44	0	0	0	0	0	0	3,295
45 to 49	49	69	440	1,252	1,286	637	50	0	0	0	0	0	3,783
50 to 54	37	60	345	902	851	882	513	51	0	0	0	0	3,641
55 to 59	10	20	224	562	408	394	316	84	1	0	0	0	2,019
60 to 64	6	12	118	306	199	169	119	66	13	2	0	0	1,010
65 & Up	1	3	41	104	69	65	47	28	14	2	1	1	375
Totals	199	290	2,632	6,009	3,725	2,191	1,045	229	28	4	1	1	16,353

Age	Average Salaries											All Years	
	Under 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 to 45	45 to 50	50 & Up		
Under 20	0	0	0	0	0	0	0	0	0	0	0	0	0
20 to 24	0	0	0	0	0	0	0	0	0	0	0	0	0
25 to 29	0	0	0	0	0	0	0	0	0	0	0	0	0
30 to 34	34,751	46,171	38,306	37,467	0	0	0	0	0	0	0	0	38,065
35 to 39	40,370	40,646	46,334	43,021	42,988	0	0	0	0	0	0	0	44,120
40 to 44	37,738	44,235	48,961	50,940	51,320	48,820	0	0	0	0	0	0	50,282
45 to 49	46,553	47,991	49,504	53,956	58,820	55,948	50,892	0	0	0	0	0	55,182
50 to 54	44,711	54,915	50,129	52,049	58,380	65,519	60,156	53,744	0	0	0	0	57,748
55 to 59	65,716	45,406	46,746	50,339	53,496	69,828	70,966	66,912	63,981	0	0	0	58,333
60 to 64	82,882	41,042	49,526	48,625	57,328	65,757	75,889	83,962	60,494	62,547	0	0	59,127
65 & Up	107,755	64,166	46,165	51,699	63,833	74,315	73,497	86,767	80,627	53,557	133,283	133,283	64,154
Totals	44,516	46,981	47,420	49,974	56,161	63,455	65,373	71,321	70,685	58,052	133,283	133,283	53,985

TABLE A-6

Analysis by Age and Service - Plan C - Active Members

Age	Years of Service											All Years	
	Under 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 to 45	45 to 50	50 & Up		
Under 20	0	0	0	0	0	0	0	0	0	0	0	0	0
20 to 24	0	0	0	0	0	0	0	0	0	0	0	0	0
25 to 29	0	0	0	0	0	0	0	0	0	0	0	0	0
30 to 34	0	0	7	2	0	0	0	0	0	0	0	0	9
35 to 39	2	2	17	42	3	0	0	0	0	0	0	0	66
40 to 44	0	2	24	86	38	3	0	0	0	0	0	0	153
45 to 49	3	5	26	62	63	42	3	0	0	0	0	0	204
50 to 54	3	1	21	72	69	55	9	1	0	0	0	0	231
55 to 59	4	2	23	74	49	26	13	6	0	0	0	0	197
60 to 64	1	1	22	72	38	24	11	6	3	0	0	0	178
65 & Up	1	1	7	28	28	20	8	4	2	2	0	0	101
Totals	14	14	147	438	288	170	44	17	5	2	0	0	1,139

Age	Average Salaries											All Years	
	Under 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 to 45	45 to 50	50 & Up		
Under 20	0	0	0	0	0	0	0	0	0	0	0	0	0
20 to 24	0	0	0	0	0	0	0	0	0	0	0	0	0
25 to 29	0	0	0	0	0	0	0	0	0	0	0	0	0
30 to 34	0	0	43,807	43,090	0	0	0	0	0	0	0	0	43,648
35 to 39	31,042	26,879	40,173	42,465	43,966	0	0	0	0	0	0	0	41,124
40 to 44	0	41,765	42,569	43,809	43,826	42,292	0	0	0	0	0	0	43,562
45 to 49	34,674	43,485	47,929	48,475	45,638	44,885	30,137	0	0	0	0	0	46,195
50 to 54	31,232	44,751	52,812	45,813	51,163	52,202	50,220	32,018	0	0	0	0	49,487
55 to 59	31,983	30,192	32,598	42,671	51,747	53,156	58,783	52,656	0	0	0	0	46,160
60 to 64	29,310	28,460	47,659	42,712	51,787	64,648	56,767	70,764	67,771	0	0	0	50,300
65 & Up	140,136	36,898	33,367	46,781	48,694	62,613	62,237	47,676	41,580	65,387	0	0	51,868
Totals	39,799	37,515	43,526	44,484	48,853	53,347	55,202	56,661	57,294	65,387	0	0	47,333

TABLE A-7

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

Age	Years of Service											All Years	
	Under 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 to 45	45 to 50	50 & Up		
Under 20	0	0	0	0	0	0	0	0	0	0	0	0	0
20 to 24	184	3	0	0	0	0	0	0	0	0	0	0	187
25 to 29	1,038	430	22	0	0	0	0	0	0	0	0	0	1,490
30 to 34	793	993	299	1	0	0	0	0	0	0	0	0	2,086
35 to 39	480	563	304	12	1	0	0	0	0	0	0	0	1,360
40 to 44	322	312	180	20	2	0	0	0	0	0	0	0	836
45 to 49	216	245	124	7	3	0	0	0	0	0	0	0	595
50 to 54	137	130	86	3	0	4	2	0	0	0	0	0	362
55 to 59	58	66	44	4	0	0	1	0	0	0	0	0	173
60 to 64	19	43	19	2	0	0	0	0	0	0	0	0	83
65 & Up	6	10	10	3	0	0	0	0	0	0	0	0	29
Totals	3,253	2,795	1,088	52	6	4	3	0	0	0	0	0	7,201

Age	Average Salaries											All Years	
	Under 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 to 45	45 to 50	50 & Up		
Under 20	0	0	0	0	0	0	0	0	0	0	0	0	0
20 to 24	33,648	28,740	0	0	0	0	0	0	0	0	0	0	33,569
25 to 29	37,576	41,346	42,195	0	0	0	0	0	0	0	0	0	38,732
30 to 34	38,322	44,375	49,354	35,581	0	0	0	0	0	0	0	0	42,784
35 to 39	39,130	44,696	48,532	42,618	41,710	0	0	0	0	0	0	0	43,569
40 to 44	39,727	44,866	49,071	50,841	68,947	0	0	0	0	0	0	0	43,992
45 to 49	43,468	45,286	49,408	50,739	52,567	0	0	0	0	0	0	0	45,586
50 to 54	41,983	44,437	46,982	50,270	0	64,017	66,675	0	0	0	0	0	44,501
55 to 59	40,470	45,610	50,239	46,595	0	0	60,622	0	0	0	0	0	45,174
60 to 64	43,121	50,795	52,973	58,584	0	0	0	0	0	0	0	0	49,724
65 & Up	39,144	52,851	51,425	49,293	0	0	0	0	0	0	0	0	49,155
Totals	38,642	44,253	48,870	48,485	56,217	64,017	64,657	0	0	0	0	0	42,476

TABLE A-8

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

Age	Years of Service											All Years	
	Under 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 to 45	45 to 50	50 & Up		
Under 20	111	0	0	0	0	0	0	0	0	0	0	0	111
20 to 24	676	18	0	0	0	0	0	0	0	0	0	0	694
25 to 29	2,097	1,072	147	0	0	0	0	0	0	0	0	0	3,316
30 to 34	1,635	2,324	1,371	9	0	0	0	0	0	0	0	0	5,339
35 to 39	1,357	1,929	1,579	59	2	0	0	0	0	0	0	0	4,926
40 to 44	1,222	1,567	1,313	67	25	1	0	0	0	0	0	0	4,195
45 to 49	1,064	1,376	1,195	55	39	43	0	0	0	0	0	0	3,772
50 to 54	746	1,112	882	53	27	28	1	1	0	0	0	0	2,850
55 to 59	416	625	566	32	12	14	1	0	0	0	0	0	1,666
60 to 64	218	397	354	28	11	5	2	0	0	0	0	0	1,015
65 & Up	101	191	193	16	1	3	1	0	1	0	0	0	507
Totals	9,643	10,611	7,600	319	117	94	5	1	1	0	0	0	28,391

Age	Average Salaries											All Years	
	Under 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 to 45	45 to 50	50 & Up		
Under 20	4,161	0	0	0	0	0	0	0	0	0	0	0	4,161
20 to 24	17,064	20,208	0	0	0	0	0	0	0	0	0	0	17,146
25 to 29	29,503	32,339	35,197	0	0	0	0	0	0	0	0	0	30,672
30 to 34	31,702	37,862	39,239	27,143	0	0	0	0	0	0	0	0	36,311
35 to 39	30,601	38,344	43,967	34,538	38,784	0	0	0	0	0	0	0	37,968
40 to 44	31,886	39,600	44,639	45,319	40,894	30,966	0	0	0	0	0	0	39,027
45 to 49	31,896	39,317	44,917	45,157	56,302	54,265	0	0	0	0	0	0	39,429
50 to 54	32,388	38,438	42,310	60,857	49,850	51,306	85,142	47,812	0	0	0	0	38,724
55 to 59	30,012	37,697	40,258	52,993	52,027	52,775	15,593	0	0	0	0	0	37,159
60 to 64	33,742	36,961	40,335	45,510	34,967	37,116	58,286	0	0	0	0	0	37,703
65 & Up	26,797	34,394	35,925	38,977	72,961	36,314	13,733	0	40,977	0	0	0	33,667
Totals	29,745	37,761	42,368	45,834	48,920	51,429	46,208	47,812	40,977	0	0	0	36,456

TABLE A-9
Analysis of Retired Members and Beneficiaries by Retirement Year

Retirement Year	NUMBER					AVERAGE BENEFITS				
	Service Retirement	Service Connected Disability	Non-Service Connected Disability	Hazardous Duty Retirement	Other	Service Retirement	Service Connected Disability	Non-Service Connected Disability	Hazardous Duty Retirement	Other
pre 1967	280	36	51	10	148	8,760.24	6,082.54	6,322.91	9,502.93	6,962.95
1967	63	3	10	0	20	7,518.83	4,967.44	8,136.35	0.00	7,087.43
1968	103	10	5	0	19	8,841.85	7,645.13	5,831.14	0.00	6,666.51
1969	146	10	13	1	38	9,181.62	8,146.20	8,648.84	14,713.68	8,464.03
1970	163	8	29	2	39	10,462.63	8,591.21	8,736.12	12,306.24	8,200.21
1971	231	12	38	6	56	12,363.78	9,555.39	8,504.38	14,721.96	8,789.09
1972	319	19	42	15	76	12,122.75	9,817.52	9,732.16	15,445.93	9,257.87
1973	369	23	42	19	79	11,976.60	11,634.71	9,879.41	17,371.23	9,291.29
1974	315	18	22	17	110	10,884.91	10,412.78	9,678.90	20,624.13	9,257.09
1975	551	40	39	17	111	11,752.92	11,050.49	9,012.58	20,122.86	8,565.86
1976	606	11	33	18	96	10,657.35	9,423.08	9,460.51	18,883.54	7,740.52
1977	486	9	18	11	88	10,148.34	8,452.24	9,318.54	18,303.08	7,626.89
1978	578	7	29	20	84	9,718.11	8,899.94	7,624.94	20,018.71	6,866.73
1979	1117	10	32	40	102	10,366.37	10,949.98	7,902.57	20,027.12	6,759.69
1980	715	16	28	25	109	9,017.10	7,376.44	6,620.19	19,163.46	7,057.58
1981	573	23	21	47	66	10,004.14	9,175.02	7,358.47	18,075.41	8,703.53
1982	502	15	19	32	62	10,206.29	10,737.02	9,463.77	19,820.04	8,464.06
1983	539	13	30	39	91	12,064.40	11,454.23	10,383.97	20,938.19	8,547.63
1984	682	33	28	54	119	12,324.91	11,297.50	10,659.00	21,206.34	9,309.93
1985	776	31	31	64	143	13,332.88	11,256.51	12,857.16	23,014.25	9,944.04
1986	876	42	33	49	173	15,233.14	11,034.40	13,527.34	26,934.19	8,186.78
1987	870	33	41	75	213	15,796.03	13,767.47	11,442.79	26,108.11	9,342.07
1988	1025	46	35	94	198	16,789.05	14,681.86	10,876.65	26,738.22	10,109.17
1989	2950	51	28	252	399	17,309.74	15,393.07	13,449.97	31,051.84	12,264.73
1990	239	8	11	88	186	15,895.75	15,249.20	12,865.35	29,354.19	11,238.64
1991	548	13	36	84	236	19,978.12	15,574.94	18,070.84	31,530.01	13,574.36
1992	2567	19	27	249	235	24,095.10	13,878.95	19,569.77	35,187.15	13,040.42
1993	296	19	34	78	193	11,486.60	18,575.44	15,100.35	28,964.06	11,881.87
1994	718	25	44	146	209	17,116.31	20,040.37	17,410.93	30,183.43	12,111.86
1995	992	6	62	120	232	16,865.25	22,046.20	18,041.46	31,212.64	12,825.44
1996	361	0	9	38	110	19,748.48	0.00	22,053.33	30,195.79	14,903.00
Totals	20556	609	920	1710	4040	15,109.09	12,025.67	11,502.25	27,944.97	10,345.36

TABLE A-10

Analysis of Retired Members and Beneficiaries by Current Age

Current Age	NUMBER					AVERAGE BENEFIT				
	Service Retirement	Service Connected Disability	Non-Service Connected Disability	Hazardous Duty Retirement	Other	Service Retirement	Service Connected Disability	Non-Service Connected Disability	Hazardous Duty Retirement	Other
Less than 40	58	15	12	0	160	6,292.01	13,072.63	9,660.10	0.00	11,553.76
40 to 44	0	27	26	29	113	0.00	14,757.77	12,876.00	26,592.10	15,935.49
45 to 49	1	53	60	208	149	19,790.52	15,863.80	17,684.46	30,292.44	17,683.02
50 to 54	5	92	89	342	228	25,462.68	15,659.32	17,259.80	32,766.08	17,189.72
55 to 59	1240	88	99	329	573	23,493.14	14,567.48	15,160.25	30,352.26	11,540.46
60 to 64	2652	97	140	306	672	21,088.40	11,579.02	13,342.12	27,838.17	9,924.18
65 to 69	4333	91	144	233	612	16,882.64	9,305.33	8,762.66	23,859.79	8,579.53
70 to 74	4546	63	116	160	527	14,119.53	7,713.63	8,498.14	22,138.60	8,877.90
75 to 79	3666	42	110	75	448	12,242.50	7,909.94	7,870.11	18,841.39	8,122.43
80 to 84	2381	24	60	18	286	10,682.21	9,464.56	9,135.79	18,208.17	8,328.67
85 to 89	1198	10	48	9	181	10,458.90	8,969.95	8,363.35	17,099.28	8,550.28
90 to 94	425	6	13	0	82	10,448.89	8,682.56	6,364.90	0.00	8,979.14
95 to 99	51	1	3	1	9	7,582.64	8,638.68	6,589.08	7,281.12	8,459.13
100 and over	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00
Final Totals	20556	609	920	1710	4040	15,109.09	12,025.67	11,502.25	27,944.97	10,345.36

APPENDIX B

SUMMARY OF PLAN PROVISIONS

APPENDIX B

SUMMARY OF PLAN PROVISIONS

**CONNECTICUT STATE EMPLOYEES
RETIREMENT SYSTEM**

Established September 1, 1939

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 January 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 January 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.

2. Normal Retirement Eligibility

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

Tier I - Plans B and C [Sec. 5-162]: Age 55 and 25 years of service, age 60 and 10 years of service, or age 70.

Tier II [Sec. 5-192l]: Age 62 and 10 years of service (effective July 1, 1992) or age 60 and 25 years of service or age 70 and 5 years of service, except hazardous duty members may retire after 20 years.

3. Normal Retirement Benefit

Tier I - Hazardous Duty [Sec. 5-173]: 50% of Final Average Earnings plus 2% for each year 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, reduced for retirement prior to age 65 with less than 25 years. Minimum benefit with 25 years, \$300 per month.

Tier I Plan C [Sec. 5-162]: 2% of Final Average Earnings times years of service, reduced for retirement prior to age 65 with less than 25 years. Minimum with 25 years, \$300 per month.

Tier II Hazardous Duty Members [Sec. 5-192n]: 2½% 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 with 25 years, \$300 per month (or less if retirement before July 1, 1987).

Tier II All Other [Sec. 5-192l]: 1½% of Final Average Earnings plus ½% of Final Average Earnings in excess of the year's breakpoint*, times up to 35 years of service from October 1, 1982 plus 1⅝% of Final Average Earnings times years of service in excess of 35 years, if any. Minimum with 25 years, \$300 per month (or less if retirement before July 1, 1987).

* \$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 and 10 years of service; Normal Retirement Benefit reduced actuarially for retirement prior to age 60.

Tier II [Sec. 5-192m]: Age 55 and 10 years of service; Normal Retirement Benefit reduced ¼% (effective July 1, 1991) for each month prior to age 65; Minimum benefit with 25 years, \$300 per month (or less if retirement prior to July 1, 1987).

5. Deferred Retirement

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

Tier II [Sec. 5-192l]: 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; actuarially reduced benefit 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]: Ten years of service or age 70 and 5 years; benefit payable at Normal Retirement Age or early retirement benefit payable at age 55; minimum benefit with 25 years, payable after age 55, \$300 per month (or less if retirement before July 1, 1987).

7. Member Contributions

Tier I - Hazardous Duty [Sec. 5-161]: 4% of earnings up to Social Security Taxable Wage Base plus 5% above that level.

Tier I - Plan B [Sec. 5-161]: 2% of earnings up to Social Security Taxable Wage Base plus 5% above that level.

Tier I - Plan C [Sec. 5-161]: 5% of earnings.

Tier II - All Other [Sec. 5-192u]: None.

Tier II - Hazardous Duty [Sec. 5-192u]: 4% 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.

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 equal to 50% of average of Life Benefit and 50% J&S benefit member would have received. If not eligible to retire but 25 years, same benefit calculated as though age 55 using service and earnings at death.

[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]: If eligible for early or normal retirement, spouse benefit equal to 50% of member's benefit under a 50% J&S. If not eligible to retire but 25 years, same benefit calculated as though age 55 using service and earnings at death.

[Sec. 5-192t]: If death is due to employment, a spouse with dependent children under 18 will be paid \$7,500 in not less than 60 installments while living and not remarried; also \$20 per month per child under 18. If no children under 18, spouse [or dependent parent(s), if no spouse] will be paid \$4,000 in not less than 60 installments.

10. Disability Benefits

Tier I [Sec. 5-142, 5-169, 5-173]: For non-service disabilities occurring prior to age 60 and after 5 years of service, benefit equals 3% times base salary times years of service (Maximum $1\frac{2}{3}\%$ times service to 65). If disability occurs prior to age 60 and is due to service, benefit equals $1\frac{2}{3}\%$ of salary times service projected to 65 (maximum 30 years) and is payable regardless of length of service. Exception: State Police benefit is accrued 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).

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

Tier II [5-192p]: Prior to age 65 and due to service or after 10 years of service, benefit is $1\frac{1}{3}\%$ of final average earnings, plus $\frac{1}{2}\%$ of excess earnings times service projected to 65 (maximum 30 years of service to Date of Disability if greater than 30 years). Same maximum as Tier I.

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

11. Optional Forms of Payment

Tier I [Sec. 5-165]: 50% Qualified Joint and Survivor (Normal Form if married at least 12 months).

Tier II [Sec. 5-192q]: 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 treated as if full-time for eligibility. If consistent part-time for all periods, treat as full-time. If varying schedule or some part-time, some full-time, service and salary proportionately adjusted.

APPENDIX C

ACTUARIAL METHOD AND ASSUMPTIONS

APPENDIX C

ACTUARIAL METHOD AND ASSUMPTIONS

A. Funding Method

1. The actuarial valuation method used is the Projected Unit Credit Cost Method. Recommended annual contributions until the accrued liability is completely funded will consist of two pieces: Normal Cost plus a payment towards the Unfunded Accrued Liability.
 - a. The Accrued 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.
 - b. The Normal Cost is then similarly determined as the present value of the portion of the projected benefit attributable to the current year.
2. The Unfunded Accrued Liability is the Accrued Liability less Actuarial Value of Assets.
3. Since the valuation was done as of June 30, 1996, costs have been projected to July 1, 1997 in order to correspond to the fiscal year as follows:
 - a. Normal Costs were determined as a percentage of earnings, by Tier, as of July 1, 1996. Earnings were projected to July 1, 1997, separately for each Tier because of the shifting Tier populations, and the projected earnings were then multiplied by each Tier's normal cost factor.
 - b. The Unfunded Accrued Liability was determined as of June 30, 1996, and brought forward to June 30, 1997 by adding the Normal Cost plus interest and subtracting expected State and Federal contributions, also with interest. This amount was amortized over the 35 years specified in the SEBAC Agreement.
 - c. Normal Cost and Past Service Amortization payments were adjusted to reflect payment in twelve equal installments at the end of each month.

B. Actuarial Assumptions

Mortality: 1983 Group Annuity Mortality Table.

Service connected deaths are assumed to comprise 20% of total Death for Hazardous Duty employees and 0% for all other employees.

Investment Return: 8½%

Salary Scale: Varies by service as follows:

<u>Years</u>	<u>Rate</u>
0	14.00
1	12.00
2	10.00
3	9.00
4	8.20
5	7.50
10	5.45
15	4.45
20	3.75
25	3.25

Disability: *Annual Rate of Disability
(Per 1,000 Lives)*

<u>Age</u>	<u>Hazardous Duty</u>	<u>All Others</u>
20	.90	.38
25	1.02	.43
30	1.16	.49
35	1.45	.61
40	2.04	.85
45	3.35	1.40
50	6.11	2.55
55	11.10	4.63
60	17.30	7.21

Service connected disabilities are assumed to comprise 50% of total Disability for Hazardous Duty employees and 20% for all other employees.

B. Actuarial Assumptions (cont'd)***Social Security Wage******Base Increases:***

6½% compounded annually.

Retirement Ages:***Hazardous Duty Employees***

<i>Age</i>	<i>First Year Eligible</i>	<i>Thereafter</i>
47	40%	30%
50	40	30
55	60	30
60	80	50
62	100	100
65	100	100
70	100	100

Non Hazardous Duty Employees

<i>Age</i>	<i>First Year Eligible</i>	<i>Thereafter</i>
47	0%	0%
50	0	0
55	20	0
60	20	15
62	40	40
65	80	60
70	100	100

B. Actuarial Assumptions (cont'd)**Turnover:**

Three year select and ultimate rates as shown below for non-hazardous duty males; the same table with rates increased by a factor of 10% for females and decreased by a factor of 60% of hazardous duty employees.

<i>Age</i>	<i>Years of Participation</i>			
	<i>0</i>	<i>1</i>	<i>2</i>	<i>3+</i>
20	30	30	20	10
25	17	15	10	8
30	15	11	8	5
35	13	10	8	3
40	10	9	7	3
45	5	8	6	2
50	3	6	4	2
55	2	4	2	0
60	0	0	0	0

**Cost of Living
Increases:**

3% per year for retirees on or after July 1, 1980.
4½% per year for retirees prior to July 1, 1980.

Asset Valuation:

Adjusted market value: assets are written up (or down) by spreading recognition of gains and losses over five years, plus an additional write-up (or write-down) as necessary so that the final adjusted value is within 20% of market value.

APPENDIX D

ACTUARIAL SURPLUS TEST

APPENDIX D

ACTUARIAL SURPLUS TEST AS OF JUNE 30, 1996

Section 5-162h(b) 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:*** actual rate of return for the Fiscal Year ending June 30, 1996 must exceed the actuarial assumption of 8.5%.

A.	Market Value of Assets July 1, 1995	\$4,624,722,528
B.	Market Value of Assets June 30, 1996	5,235,618,717
I.	Investment Income for FY 95-96	663,325,551

$$\text{Actual Rate of Return for FY 95-96} = \frac{2I}{A+B-I} = 14.42\%$$

Actual Rate of Return of 14.42% is MORE than the assumption of 8.5%, so first criteria is met.

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

A.	Market Value of Assets June 30, 1996	\$5,235,618,717
B.	Specified Liabilities June 30, 1996	
	Liability for Retired Members	4,387,226,413
	Liability for Terminated Vested Members	42,444,194
	Active Member Contributions with Interest	<u>396,093,019</u>
	Total	\$4,825,763,626
C.	50% of Specified Liabilities	\$2,412,881,813

Market Value of Assets exceeds 50% of Specified Liabilities, so second criteria is met.

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

A.	Actual Unfunded Liability June 30, 1996	\$3,730,864,595
B.	Projected Unfunded Liability June 30, 2001	1,722,646,000

Actual Unfunded Liability exceeds Projected Unfunded Liability so third criteria is not met and there is no actuarial surplus.

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 criteria 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. The following Projection 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).

Year	(000) June 30 Unfunded Liability	Year	(000) June 30 Unfunded Liability	Year	(000) June 30 Unfunded Liability
1984	2,155,459	2000	1,734,339	2016	1,364,443
1985	2,201,605	2001	1,722,646	2017	1,321,309
1986	2,206,090	2002	1,709,958	2018	1,274,507
1987	2,524,556	2003	1,696,191	2019	1,223,727
1988	1,954,257	2004	1,681,255	2020	1,168,632
1989	1,432,333	2005	1,665,050	2021	1,108,853
1990	1,939,758	2006	1,647,466	2022	1,043,992
1991	1,930,524	2007	1,628,388	2023	973,619
1992	1,920,505	2008	1,607,689	2024	897,265
1993	1,794,192	2009	1,585,229	2025	814,419
1994	1,787,586	2010	1,560,861	2026	724,533
1995	1,780,419	2011	1,534,422	2027	627,005
1996	1,772,643	2012	1,505,736	2028	521,188
1997	1,764,205	2013	1,474,610	2029	406,377
1998	1,755,050	2014	1,440,840	2030	281,377
1999	1,745,116	2015	1,404,198	2031	146,648

APPENDIX E

ENTRY AGE NORMAL VALUATION RESULTS

APPENDIX E

ENTRY AGE NORMAL VALUATION RESULTS

		<i>June 30, 1995</i>	<i>June 30, 1996</i>
A. Current Results			
1	Present Value of Future Benefits		
	- Active Members	6,067,746,725	6,449,409,136
	- Retired and Beneficiaries	4,259,436,367	4,387,226,413
	- Deferred Vested Members	<u>40,208,864</u>	<u>42,444,194</u>
	Total Present Value	10,367,391,956	10,879,079,743
2	Present Value Future Normal Cost Contributions	1,975,246,683	1,953,378,092
3	Total Actuarial Liability: (1)-(2)	8,392,145,273	8,925,701,651
4	Actuarial Value Of Assets	4,209,235,826	4,604,227,717
5	Unfunded Actuarial Liability: (3)-(4)	4,182,909,447	4,321,473,934
6	Total Normal Cost	209,745,370	214,251,702
7	Expected Employee Contributions	37,511,139	37,902,588
8	Employer Normal Cost: (6)-(7)	172,234,231	176,349,114
B. Projections to Following Year			
1	Employer Normal Cost	196,641,210	201,360,860
2	Unfunded Actuarial Liability	4,378,209,904	4,530,352,568
3	Past Service Cost	378,461,221	393,485,754
4	Total Cost: (1)+(3)	575,102,431	594,846,614
5	Total Cost as a Percent of Pay	22.63%	22.82%