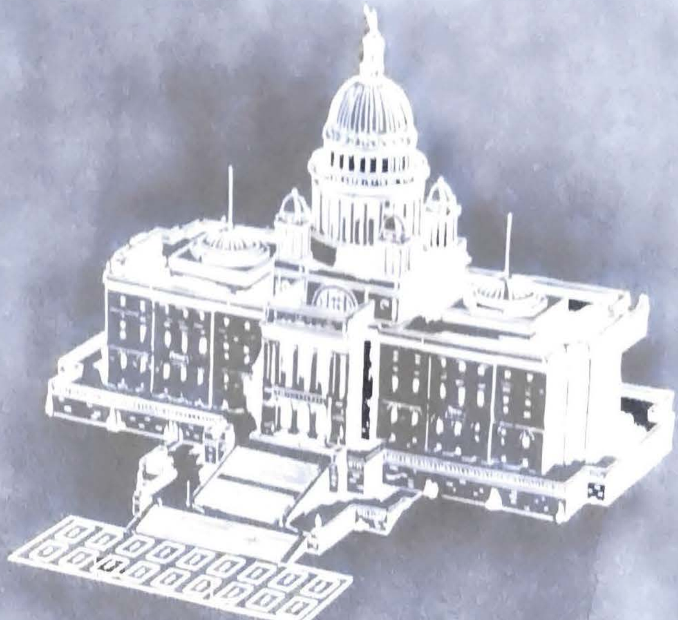
State of Rhode Island and Providence Plantations



ANNUAL REPORT

OF THE

RETIREMENT BOARD

JUNE 30, 1990

HON. ANTHONY J. SOLOMON
General Treasurer

EMPLOYEES' RETIREMENT SYSTEM OF THE STATE OF RHODE ISLAND
Annual Report

RETIREMENT BOARD

JUNE 30, 1990

ANTHONY J. SOLOMON, *Chairman*
General Treasurer

MARCIA REBACK, *Vice Chairperson*
Teacher Representative

TOM BRADY
Public Representative

KATHLEEN BELLO
Designee of House Fiscal Advisor

MICHAEL R. BOYCE
Municipal Employees Representative

J. THOMAS CHELLEL
State Employee Representative

LOUIS CIARAMELLO, C.L.U.
Public Representative

J. MICHAEL DOWNEY
State Emplyee Representative

DAN BEARDSLEY, Designee of President
R.I. League of Cities and Towns

STEPHANIE OKOLOWICZ
State Budget Director

JOSEPH G. IANNELLI
Retired Member Representative

SENATOR PETER BOUCHARD
Designee of Senate Finance Chairman

EDNA M. SNOW
Teacher Representative

REPRESENTATIVE ROBERT S. TUCKER
House Finance Chairman

RICHARD M. WESSELS
Designee of Director of Administration

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State of Rhode Island and Providence Plantations

OFFICE OF THE GENERAL TREASURER
STATE HOUSE
PROVIDENCE, RHODE ISLAND 02903
(401) 277-2397

The Honorable Bruce Sundlun
Governor, State of Rhode Island
and Providence Plantations
State House
Providence, R.I. 02903

Dear Governor Sundlun:

It is with great pleasure that I submit the Fifty-Fourth Annual Report of the Retirement Board of the Employees' Retirement System of the State of Rhode Island for transmittal to the General Assembly. This report covers the fiscal year ending June 30, 1990.

Respectfully submitted,

Anthony J. Solomon

ANTHONY J. SOLOMON
General Treasurer

Report of the Board

REPORT OF THE RETIREMENT BOARD

The Fifty-Fourth Annual Report of the Retirement Board for the fiscal year ending June 30, 1990 covers in detail through the exhibits, schedules and statistics, the operations for the year valuation and recommendations.

FINANCIAL FACTS

Total reserves at the end of the year were 10.3 percent or $174,985,362 higher than the previous year, for a total of $1,879,891,535.

Revenues from all sources for the year amounted to $134,588,708 for State employees and $192,597,925 for Public School Teachers. Expenditures for the year amounted to $74,179,989 and $71,241,630 for State employees and Teachers, respectively.

Chart (A) on Page 12 depicts the sources of Revenue and Expenditures.

Income from investments for the year amounted to $128,908,813 including a capital gain of $16,043,927. This represents 39.40 percent of the total revenues. This income is equal to a return of 6.70 percent and is compared to the return of previous years in Chart (B), Page 13.

Pension benefits, which represent the major expenditure item, amounted to $59,917,504 for State employees and Legislators, and $53,591,790 for Teachers and Teachers' Survivors. Added to this was the Cost-of-Living Adjustment, which amounted to $8,845,552 for State employees, and $10,698,407 for Teachers. A comparative chart of the Cost-of-Living Adjustment graphically depicts the facts in this regard and the trend therof in Chart (C), Page 13, which covers the last twelve years.

UNFUNDED ACCRUED LIABILITY

This item is thoroughly covered in the actuary's report section. However, it is pointed out that the rate of funding, otherwise referred to as the 'Security Ratio' at June 30, 1990 was 60.31 percent for State Employees and 54.50 percent for Teachers. The unfunded (accrued) liability for the State employees was $445,731,800 and $711,780,500 for Teachers.

CONCLUDING COMMENT

Consistent with prior years, a normal increase in reserves was recorded. In keeping with established procedures, an acturial valuation was made which illustrates current operational results and the financial condition of the System at the end of the fiscal year. The results of operations were satisfactory.

Service to participating members is always paramount in the operation and conduct of our staff. To this end, we have held numerous pre-retirement educational courses in the past year. Evaluations made by the attendees indicate that valuable insights regarding retirement were made. We shall continue to conduct pre-retirement seminars to make our members aware of the benefits available for retirement purposes.

A sincere thanks is extended to the officials of our State government and membrrs of the administrative staff for their cooperation and dedicated service rendered during the year.

Retirement Board of the
Employees' Retirement System of the
State of Rhode Island

Financial Statements

COMPARATIVE FINANCIAL BALANCE SHEET

	JUNE 30, 1990	JUNE 30, 1989
ASSETS		
Cash	6,394,791	(270,709)
Accrued Interest Receivable	14,515,074	18,727,418
Investments (At amortized book value for bonds and cost for stocks)	1,858,981,669	1,686,449,463
	1,879,891,534	1,704,906,172
LIABILITIES & RESERVES		
Current Liabilities		
Unclaimed Benefits	225,929	220,383
Members' Contribution Reserves		
State Employees	178,270,045	169,100,631
Teachers	270,899,404	243,955,066
Teachers' Survivors	9,520,071	9,122,818
TOTAL MEMBER RESERVES	458,689,520	422,178,515
General Reserves		
State Employees	652,774,851	604,607,342
Teachers	722,997,705	635,475,948
Teachers' Survivors	45,198,506	42,416,484
Certain State Employees	5,023	7,500
Certain Teachers	---	---
TOTAL GENERAL RESERVES	1,420,976,085	1,282,507,274
TOTAL LIABILITIES AND RESERVES	1,879,891,534	1,704,906,172

STATEMENT OF REVENUES AND EXPENDITURES

YEAR ENDED - JUNE 30, 1990

REVENUES

Member Contributions		
State Employees	29,455,840	
Legislators	3,159	
Teachers	37,159,861	
Teachers' Survivors	535,806	
Ins. Premiums-Legislators	1,290	67,155,955
State Contributions		
State Employees	45,820,058	
Teachers	38,700,529	
Certain State Employees' & Teachers	10,023	
Supplemental Pay - State	335,199	84,865,809
Municipal Contributions		
Teachers	43,735,411	
Teachers' Survivors	535,801	
Supplemental Pay - Teachers	312,778	44,583,990
Investment Income		
Interest	86,349,770	
Dividends	29,723,590	
Capital Gain or (Loss)	16,043,926	
Net Transfers	426,471	
Less Fund. Bal.	-55,705	
Less: Administrative Expense	-3,579,240	128,908,812
Miscellaneous		
Med. Ins. Cont.	824,751	
Miscellaneous Receipts	5,449	
Employees' Trans.- Municipal	81,445	
Unclaimed Benefits	8,131	
Interest-Service Purchase	752,291	1,672,066
TOTAL REVENUES --		327,186,632

EXPENDITURES

Pension Benefits		
State Employees	66,275,165	
Legislators	2,140,192	
Teachers	62,670,060	
Teachers' Survivors	1,301,173	
Certain State Employees & Teachers	12,500	
Supplemental Pay - State	335,199	
Supplemental Pay - Teachers	318,964	133,053,253
Death Benefits		
State Employees	17,754,565	
Legislators	101,600	
Teachers	713,278	2,569,443
Refund of Contributions		
State Employees	2,650,747	
Teachers	869,293	
Teachers' Survivors	124,295	
Interest on Refunds-Survivors	73,275	
Municipalities	32,266	3,749,876
Miscellaneous		
Miscellaneous	5,103,127	
Employee Transfers-Municipal	68,965	
Unclaimed Benefits	2,585	6,057,047
Med. Ins.	882,370	
Total Expenditures		145,429,619
Adj. for Fixed Income for 7/1/89		6,771,650
Excess Revenues Over Expenditures		174,985,363

ANALYSIS OF REVENUES AND EXPENDITURES
FISCAL YEAR ENDED - JUNE 30, 1990

REVENUES	STATE EMPLOYEES AMOUNT	%	TEACHERS AMOUNT	%	TEACHERS' SURVIVORS AMOUNT	%	TOTAL
Member Contributions	$29,460,289	21.89	37,159,860	19.80	535,806	10.96	67,155,955
State Contributions	46,165,280	34.30	38,700,528	20.61	--- ---	-- --	84,865,808
Municipal Contributions	-- --- ---	-- --	44,048,189	23.46	535,801	10.96	44,583,990
Investment Earnings	57,612,475	42.88	67,380,636	35.90	3,815,701	78.08	128,908,812
Miscellaneous	1,250,663	00.93	421,403	.23	--- ---	-- --	1,672,066
TOTAL REVENUES	134,588,707	100.00	187,710,616	100.00	4,887,308	100.00	327,186,631
EXPENDITURES							
Pensions	59,917,504	44.52	52,290,617	27.85	1,301,173	26.63	113,509,294
Cost-of-Living Adjust.	8,845,552	06.57	10,698,407	05.70	--- ---	-- --	19,543,959
Death Benefits	1,856,165	01.38	713,278	00.37	--- ---	-- --	2,569,443
Refunds-Conttibutions	2,650,747	01.97	901,513	00.49	197,616	4.04	3,749,876
Miscellaneous	910,022	00.68	5,147,026	02.75	--- ---	- --	6,057,048
TOTAL EXPENDITURES	74,179,990	55.12	69,750,841	37.16	1,498,789	30.67	145,429,620
EXCESS REVENUES OVER *	3,094,644	02.30	3,677,006	01.96	--- ---	-- --	6,771,650 *
EXPENDITURES- TO RESERVES	$ 57,314,074	42.58	114,282,769	60.84	3,388,519	69.33	174,985,362

* Adj. of 7/1/89 Fixed Income

DISTRIBUTION OF EXCESS REVENUE

Unclaimed Benefits	5,546
Members' Reserves	
State	26,866,595
Teachers	36,265,756
Survivors	411,512
General Reserves	
State	30,447,297
Teachers	78,223,369
Survivors	2,767,764
Certain Employees	(2,477)
TOTAL --	174,985,362

ANALYSIS OF INVESTMENT INCOME
FISCAL YEAR ENDED JUNE 30, 1990

INVESTMENT INCOME - INTEREST		90,562,113
ADD:		
Accrued Interest - June 30, 1990	14,515,074	
LESS:		
Accrued Interest - July 1, 1989	-18,727,418	
Discounts Amortized	4,212,344	
Total Additions --		(4,212,344)
TOTAL --		86,349,769
LESS:		
Accrued Interest Purchased	-0-	-0-
Premiums Amortized	-0-	
Total Deductions --		-0-
NET INTEREST EARNED		86,349,769
DIVIDENDS		29,723,591
Adj. of Fund-Transfer		370,764
TOTAL EARNED ON INVESTMENTS --		116,444,124
CAPITAL GAIN		16,043,927
INVESTMENT INCOME		132,488,051
LESS: ADMINISTRATIVE EXPENSE		3,579,239
NET INVESTMENT INCOME		128,908,812

DISTRIBUTION OF INVESTMENT INCOME
FISCAL YEAR ENDED - JUNE 30, 1990

	EMPLOYEES	TEACHERS	TEACHERS' SURVIVORS	TOTAL
MEMBER RESERVES				
Balance July 1, 1989	169,100,631	243,955,066	9,122,818	422,178,515
Balance June 30, 1990	178,270,045	270,899,404	9,520,071	458,689,520
GENERAL RESERVES				
Balance July 1, 1989	601,520,197	632,008,186	42,207,240	1,275,735,623
Balance June 30, 1990	595,067,398	655,617,068	41,382,805	1,292,067,271
TOTAL --	1,543,958,271	1,802,479,724	102,232,934	3,448,670,929
AVERAGE --	771,979,136	901,239,862	51,116,467	1,724,335,465
PERCENT --	44.77	52.27	2.96	100.00
DISTRIBUTION	57,712,476	67,380,636	3,815,701	128,908,813

Highlights

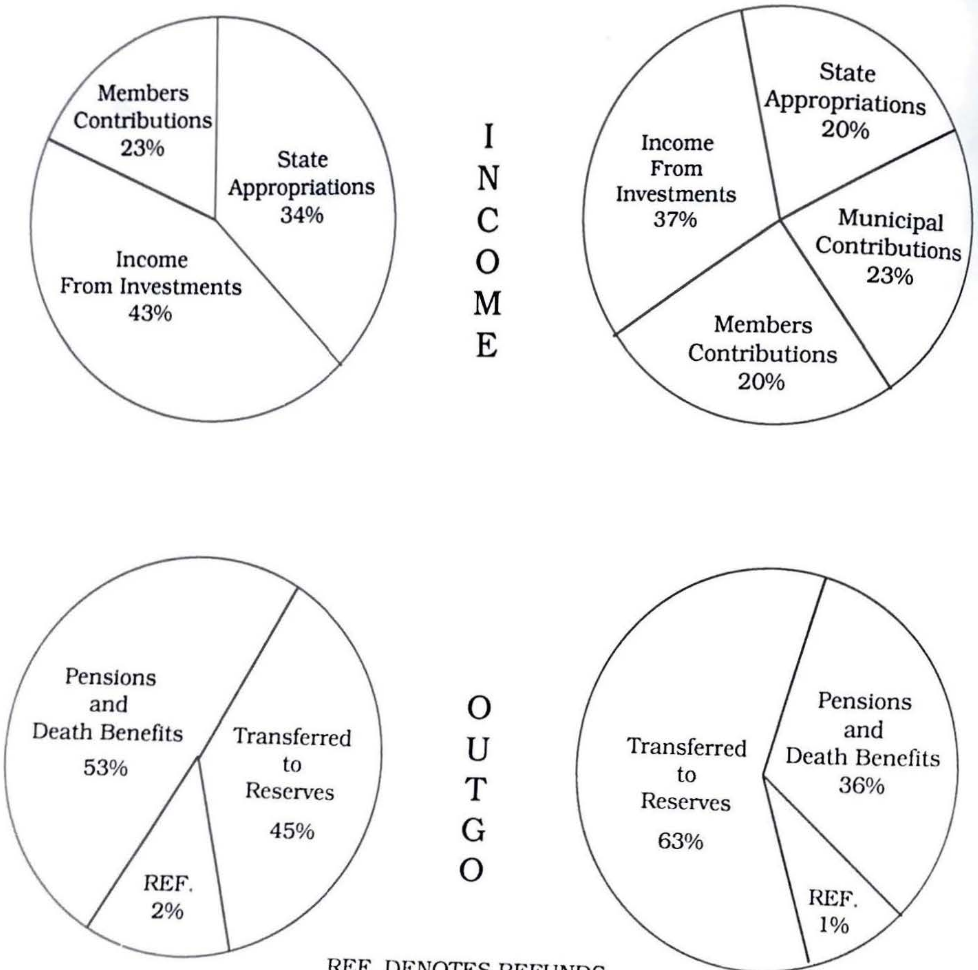
CHART A

SOURCES OF REVENUE AND HOW EXPENDED

JUNE 30, 1990

State Employees

Public School Teachers



REF. DENOTES REFUNDS

CHART 'B'

INVESTMENT RATE OF RETURN

1980	8.50
1981	9.30
1982	10.20
1983	9.40
1984	9.30
1985	9.25
1986	8.97
1987	8.13
1988	8.60
1989	8.50
1990	6.70

CHART 'C'

	STATE EMPLOYEES		TEACHERS	
YEAR	PENSION BENEFITS	COST OF LIVING ADJUSTMENT	PENSION BENEFITS	COST OF LIVING ADJUSTMENT
79-80	15,743,067	1,563,271	20,653,181	3,128,123
80-81	16,738,846	2,049,888	20,962,025	4,036,193
81-82	18,718,665	2,575,727	22,409,596	5,005,960
82-83	21,105,380	2,941,778	23,767,139	5,457,932
83-84	26,662,536	3,360,702	24,760,600	5,907,761
84-85	28,161,866	3,844,578	26,590,686	6,366,817
85-86	30,881,152	4,439,144	29,271,627	6,810,574
86-87	38,189,187	5,795,385	36,250,736	8,506,795
87-88	41,854,822	6,575,530	41,179,024	9,155,646
88-89	43,828,710	7,495,723	46,559,574	9,964,341
89-90	58,115,453	8,494,912	52,290,616	10,698,407

CHART 'D'

COMPARATIVE PERTINENT FINANCIAL FACTS FOR
STATE EMPLOYEES AND TEACHER MEMBERS

Fiscal Yr. Ended June 30	EXCESS REVENUES OVER EXPENDITURES					
	STATE EMP.	%	TEACHERS	%	STATE EMP.	TEACHERS
1976	13,679,596	52	11,404,410	39	8,361,655	7,102,844
1977	15,604,153	52	16,654,090	46	9,370,122	8,056,179
1978	18,913,113	54	20,608,794	49	10,596,621	9,364,238
1979	16,192,484	46	16,004,751	41	13,001,764	11,694,352
1980	26,252,892	57	23,016,169	47	16,866,504	15,206,410
1981	31,480,978	59	31,151,555	53	20,782,136	18,833,067
1982	40,162,709	61	39,532,861	57	25,290,552	23,195,936
1983	44,380,976	62	49,687,094	61	28,172,059	26,372,102
1984	50,424,302	60	56,165,279	63	34,600,836	33,230,640
1985	55,749,619	60	74,606,628	68	35,584,080	35,442,736
1986	72,703,911	64	99,664,271	72	49,391,943	51,634,735
1987	63,099,538	56	98,755,445	68	51,471,884	56,503,538
1988	77,285,688	58	117,219,412	69	64,556,274	74,155,102
1989	127,419,285	69	174,525,803	75	108,331,521	128,717,759
1990	57,314,074	42	117,671,289	61	57,712,475	71,196,337

Report of the Actuary

EMPLOYEES' RETIREMENT SYSTEM
OF THE STATE OF RHODE ISLAND

Actuarial Valuation as of
June 30, 1990

MARTIN E. SEGAL COMPANY
CONSULTANTS AND ACTUARIES

116 HUNTINGTON AVENUE
BOSTON, MASSACHUSETTS 02116-5712
(617) 424-7300
FAX (617) 262-0097

December 20, 1991

Retirement Board of Employees'
Retirement System
State of Rhode Island
40 Fountain Street - 1st Floor
Providence, RI 02903

Dear Members of the Board:

We are pleased to submit herewith our Actuarial Valuation of the Employees' Retirement System of the State of Rhode Island as of June 30, 1990.

This report was delayed as a result of the late receipt of the final financial information for the year ended June 30, 1990. We understand this was primarily attributable to a substantial increase in the number of transactions for fiscal 1991 when compared to earlier years.

Our report analyzes the actuarial status of the System, and projects the cost requirements for the Board to certify to the Legislature.

In a letter dated December 13, 1990, we provided preliminary employer contribution rates based on preliminary financial information and census data. These preliminary rates were 11.2% for the State Employees' Retirement Plan and 16.0% for the Teachers' Retirement Plan. The final rates, as fully described in this report, are 11.7% for the State Employees' Retirement Plan and 15.1% for the Teachers' Retirement Plan. These changes result primarily from an overstatement in the preliminary value of assets with respect to the State Employees' Retirement Plan and an understatement in the preliminary value of assets with respect to the Teachers' Retirement Plan.

We received a great deal of help from State employees in obtaining the information which forms the basis of this report. Most important, Mr. James Reilly, Acting Director, and Mr. Louis Capizano, Supervisory Accountant, were available whenever needed to answer any questions and provide any information requested. Indeed, the material they provided on their own initiative anticipated many of our needs.

ATLANTA BOSTON CHICAGO CLEVELAND DENVER EDMONTON HARTFORD HOUSTON LOS ANGELES NEW ORLEANS
NEW YORK PHOENIX SAN FRANCISCO SEATTLE TORONTO WASHINGTON, D.C. WEST PALM BEACH

For convenience, this report is divided into the following sections:

	Page
I. SUMMARY	1
II. EMPLOYEE DATA	5
III. RETIREE DATA	10
IV. RETIREMENT FUND	19
V. ACTUARIAL ASSUMPTIONS AND COST METHOD	24
VI. RESULTS OF VALUATION	31
APPENDIX	38
CERTIFICATE OF ACTUARIAL VALUATION	41

Appended to this report is our actuarial certificate detailing the cost factors, assumptions, and plan of benefits used for the valuation.

We will be pleased to meet with you to discuss this report at your convenience.

Sincerely,

MARTIN E. SEGAL COMPANY, INCORPORATED

By

Sherman G. Sass
Senior Vice President

By

James R. Laws, E.A., F.S.A., M.A.A.A.
Senior Vice President and Actuary

SGS/JRL/hva
R17

I. SUMMARY

Benefit Provisions

The Employees' Retirement System of the State of Rhode Island covers most State employees. Legislators and elected officials may become members on an optional basis. State college teachers may elect coverage under the T.I.A.A. program. State employees contribute 7-3/4* percent of their annual earnings and Teachers contribute 8-1/2 percent.

The System provides unreduced benefits of 1.7 percent of earnings for each of the first ten years of service; 1.9 percent for each of the next ten years; 3.0 percent per year for each of the next fourteen years; and 2 percent for the 35th year. The maximum benefit is 80 percent of final average earnings after 35 years of service. Such benefits are available to members at least age 60 with 10 years of service, or after 28 years at any age. State correctional officers may retire at age 50 if they have 20 years of service, at 2 percent for each of the first 30 years of service; 6 percent for the 31st year; 5 percent for the 32nd year; 4 percent for the 33rd year; 3 percent for the 34th year; and 2 percent for the 35th year. Benefits are based on the average of the highest three consecutive years' earnings. After the third anniversary of retirement, "cost-of-living increases" amounting to 3 percent per year are provided, independent of actual changes in the Consumer Price Index. Beginning January 1, 1981, the cost-of-living increases are computed at the rate of 3 percent compounded annually; prior to 1981, the cost-of-living benefits equalled 3 percent of the original award.

The Plan also provides non-service-connected disability after five years of service; service-connected disability pensions with no minimum service requirement; vested benefits after ten years of service; widow's benefits for service-connected death; and certain lump sum death benefits.

More detail regarding the benefit provisions can be found in the actuarial certificate following this report.

*Of the 7-3/4 percent contribution by State employees, 1/4 percent reflects the amount required to provide for post-retirement health benefits.

Early Retirement Window of 1989

During 1989, approximately 750 State employees took the early retirement incentive which was offered. The provision allowed employees with 25 or more years of service or, if over age 60, 10 or more years of service to retire and receive a 10% increase in their benefit service. Employees electing the incentive were required to retire before July 29, 1989. The cost for this window is 0.9% of payroll.

Early Retirement Window of 1990

During 1990, 727 State employees and 1,050 Teachers took the early retirement incentive which was offered. The provision allowed members with 25 or more years of service to retire and receive a 10% increase in their benefit service. In addition, their pension was based on the highest salary of their last three years rather than the average of their last three years of compensation. Since the window period for electing the incentive took place after the current valuation date (June 30, 1990), the cost impact is not reflected in this valuation. However, for informational purposes, please note that the cost is approximately 0.85% of payroll for State employees and 2.07% of payroll for Teachers. This will first be reflected in the June 30, 1991 actuarial valuation.

Employee Data

We received data on 15,158 active State Employees and 10,778 Teachers as of June 30, 1990 who were participating in the System. On the average, the State Employees were age 43 1/2 and had 10 1/2 years of service; Teachers were age 44 with 14 years of service.

Retiree Data

We received data on 7,217 State Employee pensioners and 617 beneficiaries as of June 30, 1990. The pensioners' average monthly benefit was $773, which is approximately 3% greater than the average benefit on June 30, 1989. There were 5,699 retired Teachers and 175 beneficiaries. The average monthly benefit was $ 927 for the pensioners, which is approximately 7% greater than the average benefit a year earlier. The benefit amounts include an adjustment for the cost of living provision. Of all the pensioners on the rolls, 11 percent had retired in the year ended June 30, 1990.

Retirement Fund

Effective June 30, 1985, the Board adopted an asset valuation method which recognizes the market value of assets but smoothes the fluctuations in the market value of assets. The asset value on this basis is referred to as the actuarial value of assets. On this basis, the assets amounted to $1.961 billion as of June 30, 1990, including Teachers Survivors Reserves. These assets are available as an offset to the actuarial liabilities for future benefits. At market value, assets totalled $2.??? billion on June 30, 1990. At book value, assets amount to $1.880 billion.

Actuarial Valuation

The actuarial valuation was prepared as of June 30, 1990. Our calculations were based on reasonable assumptions as to expected future experience. This valuation reflects the increase in the interest rate assumption from 7 1/2% to 8% which became effective with the June 30, 1989 actuarial valuation (as revised in June, 1990). All of the assumptions and methods are detailed in the attached Certificate of Actuarial Valuation.

The employer normal cost* for State Employees is $27.? million. This represents 5.3 percent of the reported payroll of participating State Employees as of June 30, 1990. The employer normal cost for Teachers is $23.? million or 5.6 percent of reported participating payroll.

For State Employees, the unfunded actuarial accrued liability* as of June 30, 1990 is $665 million. For Teachers, the unfunded actuarial accrued liability as of June 30, 1990 is $712 million. The unfunded actuarial accrued liabilities as of June 30, 1985 have been "frozen" and are being amortized over 30 years. In addition, the change in liabilities due to the change in actuarial assumptions which became effective with the June 30, 1989 actuarial valuation and the change due to the 1989 early retirement window have also been "frozen" and are being amortized over separate 30-year schedules.

*Please refer to Section V, "Actuarial Assumptions and Cost Method," for definitions of these terms.

The combined value of the System's vested benefits is $2.409 billion. The assets at actuarial value (excluding assets of the Teachers Survivors program) are short of this amount by approximately $504 million.

For the 1991-92 fiscal year, the State's statutory funding schedule, as amended, calls for a contribution equal to the employer normal cost and a payment on the unfunded actuarial accrued liability calculated to remain level as a percent of payroll and to fully fund the liability over a period of 25 years from July 1, 1991. For State Employees, these total to $50.7 million, or 11.7 percent of the projected 1991-92 payroll of $433.0 million and, for Teachers, the total employer costs are $69.5 million, or 15.1 percent of projected payroll of $459.7 million. (Sixty-eight percent of the cost for Teachers is paid for by the municipalities.) In accordance with the statute as amended, the percentages of normal cost and interest on the unfunded liability required to be contributed have gradually increased to the 100 percent level starting in fiscal 1985-86. Beginning in fiscal 1986-87, amortization of the frozen unfunded liabilities was also required and has been recognized in the recommendations made in this valuation and the preceding five valuations.

II. EMPLOYEE DATA

We received data on 15,158 State Employees and 10,778 Teachers participating in the System on June 30, 1990. The data included age, service, sex, and salary for each participant. The average salary as of June 30, 1990 of the participants was $26,300 for State Employees and $38,700 for Teachers. The data included 846 Correctional Officers and 144 Legislators.

Tables 1A and 1B give detailed age, service and average salary data on State Employees and Teachers, respectively. In preparing these tables, we assumed an annual salary of $20,000 for the State Employees for whom earnings were missing, and a $25,000 annual salary for Teachers with unknown earnings.

Tables 2A and 2B summarize certain basic statistics on active State Employees and Teachers and compare them to those of the previous year. During the year, the average salary for State Employees increased by 6.9 percent while Teachers' average salary also increased by 6.9 percent. Aggregate payroll increased by 6.5 percent for State Employees and by 4.8 percent for Teachers.

Table 1A

Number and Average Salaries of Employees in Active Service
as of June 30, 1990 by Age and by Years of Service

STATE EMPLOYEES

Age	Total	Years of service: 0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 and over	Unknown
Total	15,158	4,926	2,730	3,114	2,566	1,190	417	147	50	13	3
	$26,300	$22,800	$24,900	$27,100	$29,200	$30,700	$34,000	$37,600	$39,500	$34,200	$35,500
Under 20	25	25	--	--	--	--	--	--	--	--	
	$19,300	$19,300	--	--	--	--	--	--	--	--	
20 - 24	571	551	20	--	--	--	--	--	--	--	
	20,000	20,000	$19,200	--	--	--	--	--	--	--	
25 - 29	1,428	1,013	359	56	--	--	--	--	--	--	
	22,300	21,900	23,000	$23,800	--	--	--	--	--	--	
30 - 34	1,946	843	529	485	89	--	--	--	--	--	
	24,500	23,800	25,200	24,700	$25,700	--	--	--	--	--	
35 - 39	2,295	667	395	633	543	55	--	--	--	--	2
	26,800	24,700	26,300	28,500	27,800	$26,400	--	--	--	--	$28,900
40 - 44	2,426	607	385	528	606	279	21	--	--	--	
	28,900	23,500	26,700	29,600	33,100	33,100	$28,800	--	--	--	
45 - 49	1,876	455	348	365	332	262	100	13	--	--	1
	28,000	23,200	24,900	28,700	30,500	34,600	32,200	$29,200	--	--	20,000
50 - 54	1,544	329	270	330	302	173	103	33	4	--	--
	27,600	23,700	24,600	27,400	28,800	30,600	37,300	37,100	$34,600	--	--
55 - 59	1,483	218	209	319	354	216	102	50	14	1	--
	26,800	22,400	24,500	24,900	27,900	27,500	34,100	41,200	34,400	$30,400	--
60 - 64	1,085	123	165	278	247	149	63	35	19	8	--
	26,900	25,200	22,900	25,800	26,600	27,700	32,900	39,100	41,800	26,700	--
65 - 69	338	[illegible]	37	89	69	47	23	12	12	8	--
	25,900	19,400	23,800	25,500	23,300	26,500	37,300	30,300	43,300	39,100	--
70 and over	116	41	7	27	22	6	5	4	1	1	1
	21,100	13,500	12,000	23,100	25,900	26,300	41,300	32,500	52,400	53,900	64,100
Unknown	27	12	6	4	2	3	--	--	--	--	--
	9,500	18,500	3,400	300	300	4,400	--	--	--	--	--

RHODE ISLAND ERS

Table 1B

Number and Average Salaries of Employees in Active Service
as of June 30, 1990 by Age and by Years of Service

TEACHERS

Age	Total	Years of service: 0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 and over
Total	10,778	2,120	697	1,427	2,741	2,249	963	487	95	19
	$38,700	$29,700	$36,300	$38,700	$41,000	$42,100	$43,000	$43,800	$45,000	$43,800
20 - 24	114	114	--	--	--	--	--	--	--	--
	$22,100	$22,100	--	--	--	--	--	--	--	--
25 - 29	476	429	47	--	--	--	--	--	--	--
	25,400	24,800	$30,800	--	--	--	--	--	--	--
30 - 34	698	346	177	174	1	--	--	--	--	--
	32,900	29,100	35,000	$38,300	$38,700	--	--	--	--	--
35 - 39	1,836	482	171	550	631	2	--	--	--	--
	37,200	29,800	36,500	39,700	40,900	$39,900	--	--	--	--
40 - 44	3,449	430	164	409	1,520	925	1	--	--	--
	39,400	32,700	37,400	36,100	40,900	41,900	$39,900	--	--	--
45 - 49	1,921	206	70	150	300	833	360	2	--	--
	41,100	34,400	35,900	39,600	41,700	42,600	42,400	$42,400	--	--
50 - 54	1,114	72	42	76	130	224	382	187	1	--
	42,700	37,500	40,500	41,200	41,900	42,400	44,000	43,900	$39,400	--
55 - 59	644	26	17	32	81	129	122	184	53	--
	42,200	35,900	41,300	41,500	41,300	40,900	42,800	44,100	45,400	--
60 - 64	411	12	7	29	58	110	81	65	35	14
	42,100	34,000	38,200	42,000	41,000	42,100	42,100	43,400	44,100	$43,100
65 - 69	97	3	2	8	17	22	18	22	4	5
	41,900	32,900	34,600	37,300	41,600	40,400	42,100	43,000	52,000	45,800
70 and over	17	--	--	1	2	2	3	7	2	--
	42,100	--	--	38,700	41,000	40,200	42,000	43,500	43,100	--

RHODE ISLAND ERS

Table 2A

Statistical Data on Active State Employees
on June 30, 1990 and 1989

	June 30, 1990	June 30, 1989
Number of covered employees	15,158	15,241
Total annual salary	$ 398,492,200	$ 374,238,300
Average annual salary	$26,300	$24,600
Average age	43 1/2	44
Average years of service	10 1/2	11
Number eligible for service retirement	1,367	1,658
Number vested but not eligible to retire	6,133	6,017

RHODE ISLAND ERS

Table 2B

Statistical Data on Active Teachers
on June 30, 1990 and 1989

	June 30, 1990	June 30, 1989
Number of covered employees	10,778	10,995
Total annual salary	$ 417,404,700	$ 398,363,600
Average annual salary	$38,700	$36,200
Average age	44	43 1/2
Average years of service	16	15 1/2
Number eligible for service retirement	1,276	1,209
Number vested but not eligible to retire	6,687	6,889

RHODE ISLAND ERS

III. RETIREE DATA

The data on retired members and beneficiaries included age, sex, monthly benefit, retirement date, option, and type of pension.

The following are significant statistics on the retired group:

	State Employees	Teachers
Pensioners:		
Number	7,217	3,699
Average age	70 1/2	72
Average monthly benefit	$773	$1,422
Beneficiaries:		
Number	612	170
Average age	72	70
Average monthly benefit	$617	$827

Table 3A shows a distribution of the 909 State Employee pensions which became effective during the 1989-90 fiscal year by type and amount of pension. Table 4A shows a distribution of these same new awards by type of pension and age at retirement. Tables 3B and 4B are the corresponding distributions for the 277 Teacher pensions which became effective during the 1989-90 fiscal year.

Tables 5A and 5B show distributions for all pensions in force as of June 30, 1990 by type and amount of pension. Tables 6A and 6B show distributions of these same retirees by type of pension and age as of June 30, 1990.

Table 3A

Pensions Awarded in the Year Ended June 30, 1990
by Type and by Monthly Amount

STATE EMPLOYEES

		Type of pension				
Monthly amount	Total	Service	Ordinary disability	Accidental disability	Legislator	Beneficiary
Total	909	859	16	6	1	27
$ 50 - 99	2	2	--	--	--	--
100 - 149	9	5	--	--	--	4
150 - 199	18	12	2	1	--	3
200 - 249	13	9	3	--	--	1
250 - 299	29	24	3	1	--	1
300 - 349	19	18	1	--	--	--
350 - 399	25	21	1	1	--	2
400 - 449	30	26	2	--	--	2
450 - 499	25	25	--	--	--	--
500 - 599	58	53	2	--	--	3
600 - 699	28	24	1	--	--	3
700 - 799	25	23	--	--	--	2
800 - 899	38	33	1	1	1	2
900 - 999	38	36	--	1	--	1
1,000 - 1,099	30	28	--	1	--	1
1,100 - 1,199	37	37	--	--	--	--
1,200 - 1,299	22	22	--	--	--	--
1,300 - 1,399	38	38	--	--	--	--
1,400 - 1,499	31	31	--	--	--	--
1,500 - 1,999	188	187	--	--	--	1
2,000 - 2,499	101	100	--	--	--	1
2,500 - 2,999	54	54	--	--	--	--
3,000 - 3,499	28	28	--	--	--	--
3,500 - 3,999	12	12	--	--	--	--
4,000 - 4,499	6	6	--	--	--	--
4,500 - 4,999	3	3	--	--	--	--
5,500 - 5,999	2	2	--	--	--	--

RHODE ISLAND ERS

Table 38

Pensions Awarded in the Year Ended June 30, 1990
by Type and by Monthly Amount

TEACHERS

Monthly amount	Total	Type of pension: Service	Ordinary disability	Accidental disability	Beneficiary
Total	277	269	4	2	2
$ 150 - 199	1	1	--	--	--
200 - 249	2	2	--	--	--
250 - 299	1	1	--	--	--
300 - 349	1	1	--	--	--
400 - 449	1	1	--	--	--
450 - 499	2	1	1	--	--
500 - 599	4	3	--	--	1
600 - 699	1	1	--	--	--
700 - 799	2	2	--	--	--
800 - 899	4	3	1	--	--
900 - 999	4	4	--	--	--
1,000 - 1,099	3	3	--	--	--
1,100 - 1,199	5	5	--	--	--
1,200 - 1,299	7	7	--	--	--
1,300 - 1,399	4	3	1	--	--
1,400 - 1,499	10	10	--	--	--
1,500 - 1,599	45	43	1	--	1
2,000 - 2,499	88	86	--	2	--
2,500 - 2,999	75	75	--	--	--
3,000 - 3,499	11	11	--	--	--
3,500 - 3,999	4	4	--	--	--
4,000 - 4,499	1	1	--	--	--
4,500 - 4,999	1	1	--	--	--

RHODE ISLAND ERS

Table 44

Pensions Awarded in the Year Ended June 30, 1990
by Type and by Age on Effective Date

STATE EMPLOYEES

Age on effective date		Total	Type of pension: Service	Ordinary disability	Accidental disability	Legislator	Beneficiary
Total		909	859	16	6	1	27
20 - 24		1	--	--	1	--	--
30 - 34		1	--	--	1	--	--
35 - 39		2	--	1	--	--	1
40 - 44		10	3	4	1	--	2
45 - 49		50	46	2	--	--	2
50		20	18	1	--	--	1
51		24	24	--	--	--	--
52	123	34	31	1	--	--	2
53		20	20	--	--	--	--
54		25	25	--	--	--	--
55		36	31	--	--	1	4
56		24	20	--	1	--	3
57	154	33	28	3	--	--	2
58		29	28	--	--	--	1
59		32	31	1	--	--	--
60		96	95	--	--	--	1
61		107	102	--	1	--	4
62	414	79	77	1	--	--	1
63		70	68	--	--	--	2
64		62	61	--	1	--	--
65		41	41	--	--	--	--
66		27	26	--	--	--	1
67	133	31	30	--	--	--	1
68		22	21	--	--	--	1
69		12	11	1	--	--	--
70 - 74		21	21	--	--	--	--

RHODE ISLAND ERS

Table 4B

Pensions Awarded in the Year Ended June 30, 1990
by Type and by Age on Effective Date

TEACHERS

Age on effective date		Total	Type of pension: Service	Ordinary disability	Accidental disability	Beneficiary
Total		277	269	4	2	2
35 - 39		1	--	1	--	--
40 - 44		1	--	--	1	--
45 - 49		6	4	1	--	1
50		4	4	--	--	--
51		8	8	--	--	--
52	46	10	10	--	--	--
53		15	15	--	--	--
54		9	9	--	--	--
55		17	16	1	--	--
56		22	22	--	--	--
57	88	16	16	--	--	--
58		17	15	1	--	1
59		16	16	--	--	--
60		40	40	--	--	--
61		20	19	--	1	--
62	104	15	15	--	--	--
63		19	19	--	--	--
64		10	10	--	--	--
65		15	15	--	--	--
66		2	2	--	--	--
67	29	4	4	--	--	--
68		4	4	--	--	--
69		4	4	--	--	--
70 - 74		2	2	--	--	--

RHODE ISLAND ERS

Table 5A

Pensions in Payment Status on June 30,1990
by Type and by Monthly Amount
STATE EMPLOYEES

Monthly amount	Total	Type of pension: Service	Ordinary disability	Accidental disability	Legislator	Beneficiary
Total	7,829	6,464	496	100	157	612
Under $ 50	7	5	--	2	--	--
$ 50 - 99	158	122	11	9	--	16
100 - 149	265	202	22	9	--	32
150 - 199	537	432	49	5	--	51
200 - 249	648	505	87	4	--	52
250 - 299	551	440	71	3	--	37
300 - 349	467	361	61	6	--	39
350 - 399	454	382	29	3	--	40
400 - 449	398	332	26	2	4	34
450 - 499	322	270	26	1	3	22
500 - 599	631	528	33	5	17	48
600 - 699	432	342	20	9	24	37
700 - 799	339	254	24	11	10	40
800 - 899	339	254	12	9	28	36
900 - 999	293	246	12	5	9	21
1,000 - 1,099	254	204	5	6	20	19
1,100 - 1,199	230	186	4	7	18	15
1,200 - 1,299	151	128	2	--	3	18
1,300 - 1,399	153	118	--	--	21	14
1,400 - 1,499	114	107	--	1	--	6
1,500 - 1,999	578	553	2	2	--	21
2,000 - 2,499	268	259	--	1	--	8
2,500 - 2,999	141	137	--	--	--	4
3,000 - 3,499	58	57	--	--	--	1
3,500 - 3,999	25	24	--	--	--	1
4,000 - 4,499	8	8	--	--	--	--
4,500 - 4,999	4	4	--	--	--	--
5,000 - 5,499	2	2	--	--	--	--
5,500 - 5,999	2	2	--	--	--	--

RHODE ISLAND ERS

Table 5B

Pensions in Payment Status on June 30, 1990
by Type and by Monthly Amount

TEACHERS

Monthly amount	Total	Type of pension: Service	Ordinary disability	Accidental disability	Beneficiary
Total	3,869	3,550	127	22	170
$ 50 - $ 99	4	3	--	1	--
100 - 149	8	7	--	--	1
150 - 199	10	10	--	--	--
200 - 249	29	23	1	--	5
250 - 299	36	28	2	--	6
300 - 349	48	41	1	1	5
350 - 399	50	41	4	--	5
400 - 449	56	40	7	1	8
450 - 499	56	35	9	1	11
500 - 599	145	121	7	1	16
600 - 699	161	124	13	--	24
700 - 799	183	154	15	--	14
800 - 899	196	166	16	1	13
900 - 999	215	190	14	--	11
1,000 - 1,099	241	213	11	1	16
1,100 - 1,199	245	231	4	--	10
1,200 - 1,299	224	210	7	1	6
1,300 - 1,399	247	238	7	--	2
1,400 - 1,499	209	202	1	4	2
1,500 - 1,999	779	752	8	7	12
2,000 - 2,499	432	428	--	2	2
2,500 - 2,999	224	223	--	1	--
3,000 - 3,499	49	48	--	--	1
3,500 - 3,999	17	17	--	--	--
4,000 - 4,499	4	4	--	--	--
4,500 - 4,999	1	1	--	--	--

RHODE ISLAND ERS

Table 6A

Pensions in Payment Status on June 30, 1990
by Type and by Age

STATE EMPLOYEES

Age on June 30, 1990	Total	Type of pension: Service	Ordinary disability	Accidental disability	Legislator	Beneficiary
Total	7,829	6,464	496	100	157	612
20 - 29	1	--	--	1	--	--
30 - 34	4	--	1	1	--	2
35 - 39	20	--	11	4	--	5
40 - 44	30	3	17	2	--	8
45 - 49	71	34	20	6	3	8
50 - 54	180	129	27	4	5	15
55 - 59	368	235	68	12	22	31
60 - 64	1,205	974	111	22	30	68
65 - 69	1,956	1,710	93	22	27	104
70 - 74	1,736	1,484	94	10	32	116
75 - 79	1,203	1,031	39	11	21	101
80 - 84	693	580	14	3	10	86
85 - 89	262	214	1	2	3	42
90 - 94	80	58	--	--	4	18
95 - 99	17	10	--	--	--	7
100 - 104	2	2	--	--	--	--
105 - 109	1	--	--	--	--	1

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Table 6B

Pensions in Payment Status on June 30, 1990
by Type and by Age

TEACHERS

Age on June 30, 1990	Total	Type of pension			
		Service	Ordinary disability	Accidental disability	Beneficiary
Total	3,869	3,550	127	22	170
30 - 34	2	--	--	--	2
35 - 39	3	--	2	--	1
40 - 44	14	--	8	3	3
45 - 49	14	2	7	2	3
50 - 54	79	60	10	2	7
55 - 59	315	272	23	2	18
60 - 64	611	562	24	6	19
65 - 69	706	652	28	4	22
70 - 74	661	621	11	2	27
75 - 79	572	541	6	1	24
80 - 84	530	503	4	--	23
85 - 89	262	248	2	--	12
90 - 94	81	70	2	--	9
95 - 99	19	19	--	--	--

RHODE ISLAND ERS

IV. RETIREMENT FUND

The State maintains the Employees' Retirement Fund. The Retirement System provided us with financial statements as of June 30, 1990.

The Fund receives all member and employer contributions. The assets are invested by the State Investment Commission, with the income being added to the Fund and available for reinvestment.

Payments from the Fund are primarily for refunds of employee contributions, lump sum death benefits, and pension payments. Contribution refunds occur when an employee terminates employment and elects to take a refund, or when he dies after retirement without having received payments from the Fund equal to his total contributions.

Table 7 provides a summary of income and expenditures for the years ended June 30, 1990 and 1989.

On June 30, 1990, assets as reported by the State totalled approximately $1.880 billion. Table 8 shows the composition of the assets and compares them to those of the previous year. About 51 percent of the Fund was invested in fixed income securities such as bonds and notes. A year earlier, on June 30, 1989, the corresponding fixed income percent was 54 percent.

The financial statements indicate that 44 percent of the assets relate to State Employees, 53 percent are for Teachers, and 3 percent relate to Teachers Survivors benefits. There is also a small unallocated reserve for unclaimed benefits. Table 9 shows the allocation of assets in detail as of June 30, 1990 and 1989.

Assets prior to June 30, 1985 were carried at values as reported by the State. Bonds were carried at amortized cost value and stocks were carried at cost value. Beginning with the June 30, 1985 actuarial valuation, the Board adopted an asset valuation method for actuarial cost purposes which takes fair market value into account without subjecting the system to abnormal cost fluctuations from year to year as a result of short term changes in market value.

On the "actuarial value" basis, the assets on June 30, 1990 amounted to $1,962,802,645. The development of this amount is shown in the following chart:

Determination of Actuarial Value of Assets

1.	Actuarial value of assets at beginning of year	$1,732,248,515
2.	Net new money (including dividends and interest)	165,713,086
3.	Preliminary value of assets at end of year: (1) + (2)	1,897,961,661
4.	Market value of assets at end of year	2,222,116,580
5.	Minimum actuarial value: 80% of (4)	1,777,733,264
6.	Maximum actuarial value: 120% of (4)	2,666,599,896
7.	Trial write-up: 20% of [(4) - (3)]	64,840,984
8.	Trial actuarial value: (3) + (7)	1,962,802,645
9.	Final actuarial value of assets at end of year: (8), but not less than (5) or more than (6)	1,962,802,645
10.	Final write-up: (9) - (3)	64,840,984

This determination is used for two purposes:

First, the actuarial value is applied in determining the value of assets used in the actuarial calculations to determine the annual costs.

Second, the amount of write-up or write-down is considered part of the investment yield for the year.

This procedure treats realized and unrealized capital gains equally. In other words, the sale of a security -- either at a gain or loss -- will have no effect on the actuarial value. This should remove from the area of investment decisions any consideration of the impact of security sales on the actuarial cost of the plan.

Table 7

Summary Statement of Income and Expenses
For the Years Ended June 30, 1990 and 1989

	1990			1989		
Employer contributions	$129,449,799			$122,340,282		
Member contributions	67,155,955			59,840,261		
Total contributions		$196,605,754			$182,180,543	
Net miscellaneous items		(4,384,981)			926,724	
Investment income:						
Dividends	$ 29,723,591			$ 25,595,811		
Interest	86,349,770			94,228,285		
Capital gains (and losses)	16,043,927			119,551,790		
Writedown	(6,771,650)			0		
Other	370,765			0		
Expenses	3,579,240			2,326,606		
Net investment income		122,137,163			237,049,280	
Total income available for benefit payments			$314,357,935			$420,156,548
Benefit payments:						
Pension benefits		$133,053,253			$111,231,382	
Death benefits		2,569,443			2,609,098	
Contribution refunds		3,749,876			4,370,980	
Total benefit payments			139,372,573			118,211,460
Excess of income over expenses			$174,985,363			$301,945,088

Note: Detail figures may not add to totals shown because of rounding

Table 8

Assets as of June 30, 1990 and 1989

	1990		1989	
Cash		$ 6,394,791		$ (270,709)
Accrued interest receivable		14,515,075		18,727,418
Investments				
Fixed Income - Bonds	$658,141,080		$559,956,433	
Stiff Account	107,269,000		141,054,000	
Short-term paper	191,752,147		228,150,000	
Equities	901,819,442	1,858,981,669	757,289,030	1,686,449,463
Total assets		$1,879,891,535		$1,704,906,172

Note: For fiscal year 1989 bonds are shown at amortized book value and stocks are shown at cost. Investments are shown at average cost for fiscal year 1990.

RHODE ISLAND ERS

Table 9

Allocation of Assets by Plan
as of June 30, 1990 and 1989

	1990		1989	
State Employees:				
Employer reserves	$652,779,874		$604,614,842	
Member reserves	178,270,045		169,100,631	
Total State Employees reserves		$ 831,049,919		$ 773,715,473
Teachers:				
Employer reserves	$722,997,705		$635,475,948	
Member reserves	270,899,404		243,955,066	
Total Teacher reserves		993,897,109		879,431,014
Teachers Survivors:				
Employer reserves	$ 45,198,506		$ 42,416,484	
Member reserves	9,520,071		9,122,818	
Total Teachers Survivors reserves		54,718,578		51,539,302
Unallocated:				
Unclaimed benefit reserve		225,929		220,383
Total assets		$1,879,891,535		$1,704,906,172

Note: Detail figures may not add to totals shown because of rounding.

RHODE ISLAND ERS

V. ACTUARIAL ASSUMPTIONS AND COST METHOD

The actual cost of a pension plan consists of the benefit payments and administrative expenses less any investment earnings. An actuarial cost method aims to budget this cost so as to establish a reasonable relationship between employer pension contributions and the employee service that gives rise to the pension obligation. The result is a series of employer contributions over a long period of years. A fund accumulates which earns investment income, thus reducing the ultimate cost. Beginning with the June 30, 1985 actuarial valuation, the actuarial cost method was changed as stipulated in Section 36-10-2 of the General Laws of Rhode Island. In addition, effective July 1, 1989, the method utilized to fund the unfunded frozen initial liability was changed. The actuarial cost method is reviewed at the end of this Section.

Calculating the appropriate contribution requires that projections, and therefore assumptions, be made as to future experience. Some items, such as mortality rates, can be predicted fairly accurately. Others, such as future salary increases are, of course, subject to considerable variation. It will be useful to identify the assumptions used, particularly since broad questions of fiscal policy are implicit in certain of the assumptions. The assumptions applied in this valuation are the same as those used in the June 30, 1989 study (as revised in June, 1990). Each assumption is reviewed in the following sub-sections.

Mortality Rates

We continue to apply mortality rates taken from the Male and Female 1971 Group Annuity Mortality Tables. These are commonly used tables of pension plan mortality, and we believe they continue to be reasonable for estimating experience under the System. Table 10 gives some life expectancies determined from these tables.

Salary Projections

The System provides benefits that are based on the three highest consecutive years' salary for each employee. To assume that each employee's

salary will be the same in the three years before retirement as it is today would seriously understate the System's cost. Accordingly, we use a salary projection to anticipate future increases in earnings.

Additionally, it is appropriate to compute pension costs which are level as a percentage of payroll rather than level as a dollar amount, and a salary projection is also used for this purpose. If the cost were calculated as a level dollar amount for an individual, the cost might be a high percent of his pay when he is young and a lower percent of his higher salary at a later age. Establishing pension costs which remain a level percentage of salary means that pension costs will be incurred at the same rate as salary is paid to an employee.

The projection of future salaries must anticipate, among other items, future general salary increases. Over the long term, it can be expected that these will parallel or slightly exceed the level of inflation. If the salary increase assumption exceeds actual future salary increases, then pension contributions will exceed the actual cost requirement and actuarial gains will develop. Alternatively, if future salary increases exceed the assumption, then pension contributions will be less than the actual cost requirement and actuarial losses will develop.

For purposes of our cost determination, we have made a reasonable allowance for general salary increases in the future. We also reflect salary increases as the result of merit, promotion, and longevity. The scale has relatively greater increases at the younger ages to correspond with the State's salary schedules. Salary scale factors at sample ages are shown on the following page.

Age	Present Salary as a % of Age 65 Salary	Annual Increases (Rate %)
20	9.11	6.36
25	12.38	6.27
30	16.73	6.11
35	22.43	5.91
40	29.73	5.59
45	38.76	5.23
50	49.73	4.96
55	63.15	4.84
60	80.07	4.67

As noted below, both projection of salary and an assumption as to future investment yield must consider future inflation, and the two are therefore related.

Investment Return

Investment return has a major effect on the ultimate cost of a retirement system. To demonstrate, consider an actuarially funded retirement system with investment earnings of 6-1/2% annually. If investment earnings were to increase from 6-1/2% to 8%, then the long term costs of the retirement system would be reduced by 15% to 20%.

An assumption must be made concerning future investment yields. It must be a rate that will be valid for the long-run, that is, not only for funds invested today or next year, but also for funds invested 40 or more years from now.

Effective with the June 30, 1989 actuarial valuation, the investment return assumption was increased from 7 1/2% to 8%. This assumption allows for a moderate long term inflation rate and considers the higher rates on currently invested assets. It is also consistent with the salary scale factors discussed above.

During fiscal 1989-90, the actuarially determined investment yield was 10.1 percent, or 2.1 percent greater than the assumed yield of 8.0 percent.

Termination Rates

In any employee group, many employees will terminate and receive less than full benefits. Employees terminating with less than ten years of active service, for example, receive only a refund of their contributions. The termination assumption anticipates the release of State and Town funds that may have been accumulated for such people, thus resulting in a reduced ongoing cost.

The following chart provides termination rates for each cause at illustrative ages:

State Employees (Rate %)

Age	Death*	Disability	Withdrawal	Total*
20	.05	.06	21.20	21.31
25	.06	.09	15.80	15.95
30	.08	.11	11.60	11.79
35	.11	.15	8.40	8.66
40	.16	.22	6.20	6.58
45	.29	.36	4.20	4.85
50	.53	.61	2.60	3.73
55	.85	1.01	--	1.86
60	1.31	--	--	1.31

15% of the above disability rates are assumed service-connected disabilities.

Teachers (Rate %)

Age	Death*	Disability	Withdrawal	Total*
20	.05	.06	12.39	12.50
25	.06	.09	9.70	9.85
30	.08	.11	7.50	7.69
35	.11	.15	5.66	5.92
40	.16	.22	4.14	4.52
45	.29	.36	2.75	3.41
50	.53	.61	1.35	2.49
55	.85	1.01	--	1.86
60	1.31	--	--	1.31

15% of the above disability rates are assumed service-connected disabilities.

*Rates shown are for men; rates for women are slightly lower.

Note: Detail figures may not add to totals shown because of rounding.

Retirement Ages

The System provides unreduced benefits upon completion of 28 years of service for general employees and age 50 for State Correctional Officers. We assume State Employees will retire at age 62 1/2, or upon the completion of ten years of service if later. Teacher retirements are assumed to occur when the teacher has attained age 61 and completed ten or more years of service. In any case where the employee already meets these assumed conditions of age and service, it is assumed that he or she will retire immediately.

Post-Retirement Increases

Following the third anniversary of retirement, cost-of-living increases are regularly provided to pensioners. Our calculations recognize the 3 per-cent annual benefit increase provided by Statute. Cost-of-living increases are now "compounded" from year to year. With this valuation we took into account the adjustment effective January 1, 1991 and all subsequent 3% increases.

Actuarial Cost Method

This valuation is performed using the Entry Age Normal Cost Method with Frozen Initial Liability, hereafter referred to as the Frozen Initial Liability Method. The change from Entry Age Normal Cost Method was legislated effective with the July 1, 1985 actuarial valuation.

Under the Frozen Initial Liability Method, the Actuarial Present Value of Benefits for all participants (including both past and future benefit accruals) is divided into three components, as follows:

(a) Assets on hand (i.e., benefits already funded);

(b) Unfunded Frozen Initial Liability, which equals the unfunded actuarial accrued liability as of June 30, 1985 based on the Entry Age Normal Cost Method, adjusted each year for expected reductions, the effect of plan amendments, and the effect of changes in actuarial assumptions, and

(c) Actuarial Present Value of Future Normal Costs, which is the balance, and which effectively includes all variations from expected experience.

The annual cost requirement consists of two items -- (1) the amount (including interest) which will amortize the remaining Unfunded Frozen Initial Liability as of June 30, 1990 over 25 years from July 1, 1991 plus (2) the Normal Cost, which is the current annual amount which will fund that portion of future benefit obligations not met by future unfunded liability payments or current assets over the future working lifetime of the active employees. Both the Normal Cost and the payment on the unfunded liability are calculated as a level percent of pay.

Overall Actuarial Basis

We believe that the individual actuarial assumptions are reasonable. To the extent that actual experience is better or worse than assumed, actuarial gains or losses will develop, with corresponding decreases or increases in future costs.

Missing Data

It was necessary to make certain "non-actuarial" assumptions where data was missing or incomplete with respect to some individual participants. In all cases, we assumed such individuals had the same average characteristics as other participants within the same category (e.g. male members age 37 with unknown service were assumed to have the same service distribution as male members age 37 with known service).

Table 10

Expected Number of Years of Life Remaining at Specified Ages

Age	Male	Female
55	22.7	28.0
56	21.9	27.1
57	21.1	26.2
58	20.3	25.3
59	19.5	24.4
60	18.8	23.5
61	18.0	22.6
62	17.3	21.8
63	16.5	20.9
64	15.8	20.1
65	15.1	19.2
66	14.4	18.4
67	13.8	17.6
68	13.1	16.8
69	12.5	16.0
70	11.9	15.3
71	11.3	14.5
72	10.8	13.8
73	10.3	13.1
74	9.7	12.4
75	9.2	11.7

1971 Group Annuity Mortality Table.

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VI. RESULTS OF VALUATION

State Employees

The costs for State Employees as of June 30, 1990, including all benefit changes through that date, is developed in this sub-section. The funding statute calls for the State to contribute 100 percent of the projected normal cost plus a total amortization payment (interest plus principal) which will amortize the remaining unfunded liability over 26 years from July 1, 1990 on a basis where each successive year's amortization payment increases at the assumed rate of inflation over the prior year's payment. Based on this requirement and a projected participating payroll of $433,000,000, the 1991-92 employer contribution "rate percent" for State Employees is 11.7 percent of payroll as developed below.

	Item	Amount	% of Payroll
(1)	Participating payroll	$416,224,600	--
(2)	Employer normal cost	22,216,000	5.3375%
(3)	Frozen unfunded actuarial liability as of July 1, 1990	445,473,100	--
(4)	Amortization payment (based on level percent of payroll)	25,678,600	6.2

	Item	Amount	% of Projected Payroll
(5)	Projected 1991-92 participating payroll	$433,000,000	--
(6)	1991-92 employer normal cost = 5.3375% x (5)	23,111,400	5.3%
(7)	Required contribution payable July 1, 1991 = 1.00 x (6) + 1.00 x (4)	48,790,000	11.3
(8)	Required contribution payable monthly = (7) plus interest adjustment	50,741,600	11.7

The calculations, as completed through Line 7 on the previous page, determine the employer contribution to be paid into the retirement fund at the beginning of each year with interest earnings starting from that date. However, contributions to the Fund are made monthly. Thus, about half a year's interest is lost, and the contribution must be increased to reflect this. Line 8 on the previous page reflects this adjustment.

The preceding chart includes the effect of a quarter of one percent increase in the employee contribution (for post-retirement health benefits) to the State Employees' Retirement System. The effect of this was to reduce the State's rate percent by 0.23 percent, reflecting the additional contribution by employees (0.25 percent) but reduced by the additional cost associated with paying contribution refunds with respect to the additional contributions (.02 percent). Consistent with this, it has been assumed that the State's contribution to the separate retiree health fund is 0.23 percent.

As shown on line (8) of the preceding chart, the rate percent on behalf of the State Employees' Retirement Plan is 11.7 percent. In addition, as reviewed in the preceding paragraph, the State's assumed cost to the retiree health fund is 0.23 percent. The total State rate percent is therefore 11.93 percent.

The June 30, 1989 actuarial valuation report showed a percent of payroll cost of 11.83 percent. This rate percent was reduced to 10.63 percent as a result of the revised actuarial valuation in June, 1990 when the interest rate assumption was increased from 7 1/2% to 8%. The following chart shows the effect of the various items which caused the rate percent to increase from 10.63 percent to 11.93 percent between the June 30, 1989 and June 30, 1990 actuarial valuations:

Employer "rate percent" from June 30, 1989 actuarial valuation	10.63%
Investment gain during fiscal 1989-90	(0.36)
Effect of 1989 early retirement window	0.90
Effect of buyback of service	0.14
Effect of salary increases greater than assumed	.33
Miscellaneous net loss	0.29
Employer "rate percent" from June 30, 1990 actuarial valuation	11.93%

Teachers

The costs for Teachers as of June 30, 1990, including all benefit changes through that date, is developed in this sub-section. Applying the funding statute to the Teachers' costs and a projected participating payroll of $459,700,000 results in a contribution "rate percent" requirement for fiscal 1991-92 of 15.1 percent. Thirty-two percent of this rate (4.83% of payroll) is payable by the State and sixty-eight percent (10.27% of payroll) by the municipalities. The "rate percent" is developed as follows:

	Item	Amount	% of Payroll
(1)	Participating payroll	$417,404,700	--
(2)	Employer normal cost	23,390,900	5.6039%
(3)	Frozen unfunded actuarial liability as of June 30, 1990	711,780,500	--
(4)	Amortization payment	41,109,400	9.9

	Item	Amount	% of Projected Payroll
(5)	Projected 1991-92 participating payroll	$459,700,000	--
(6)	1991-92 employer normal cost = 5.6039% x (5)	25,761,100	5.6%

(Continued...)

Item	Amount	% of Projected Payroll
(7) Required contribution payable July 1, 1991 - 1.00 x (6) + 1.00 x (4)	$ 66,870,500	14.6%
(8) Required contribution payable monthly - (7) plus interest adjustment	69,545,300	15.1

The calculations, as completed through line 7 above, assume that the employer contributions will be paid into the retirement fund at the beginning of each fiscal year and will start to earn interest from that date. However, contributions will be deposited monthly so that approximately half a year's interest is lost, and the contribution must be increased to reflect this. Line 8 above reflects this adjustment.

The June 30, 1989 actuarial valuation report showed a percent of payroll cost of 17.1 percent. As a result of the revised actuarial valuation in June, 1990 when the interest rate assumption was increased from 7 1/2% to 8%, this rate percent was reduced to 15.4 percent. The following chart shows the effect of the various items which affected the Teachers' rate percent between the June 30, 1989 and June 30, 1990 actuarial valuations:

Employer "rate percent" from June 30, 1989 actuarial valuation	15.4%
Effect of buyback of service	0.2
Effect of salary increases greater than assumed	0.3
Investment gain during fiscal 1989-90	(0.4)
Miscellaneous net gain	(0.4)
Employer "rate percent" from June 30, 1990 actuarial valuation	15.1%

Teacher Survivors

Because data on dependents of teachers is not available, it is not possible to do a thorough analysis of the Teachers Survivor program. However, through the use of assumed ages for members and their spouses and children, we were able to determine that the current assets of $54.7 million together with

the future income will be sufficient to cover the actuarial liabilities of this program. Currently the employee and the employer each contribute one percent of salary up to $9,600 for a maximum contribution of $192 annually. Contributions in recent years on behalf of the approximate 5,500 members and benefit payments have both been approximately $1 million. For the 1989-90 year, contributions totalled $1,071,600 and benefit payments were $1,301,200.

Value of Vested Benefits

The "value of vested benefits" represents the single sum value, based on the Plan's investment return, mortality, and retirement age assumptions, of all benefits to present and former employees which do not have future employment by the employee as a required condition for their receipt. Thus, it includes the present value of an immediate or deferred pension for all pensioners, beneficiaries, and active participants with at least ten years of service. For active employees with less than ten years of service and inactive vested employees, only the accumulated employee contributions are included.

For the Employees' Retirement System, the value of vested benefits as of June 30, 1990 is as follows:

	State Employees	Teachers
Active members	$ 409,846,700	$ 641,517,600
Inactive members	14,373,000	35,887,300
Retired members	699,870,000	607,505,700
Total value of vested benefits	$1,124,089,700	$1,284,910,600
Assets at actuarial value	867,707,100	1,037,737,400
Unfunded value of vested benefits	$ 256,382,600	$ 247,173,200

Disclosure Information Required by G.A.S.B. Statement #5

For plan years beginning after December 15, 1986, the Plan is subject to the disclosure requirements of Statement No. 5 of the Governmental Accounting Standards Board (G.A.S.B.).

The Statement requires the calculation of a standardized measure called the "pension benefit obligation" which is independent of the actuarial funding method. This amount is the actuarial present value of credited projected benefits prorated on service. It differs from the previously reported "value of vested benefits" because the value of non-vested benefits is included, future salary increases are taken into account and because of the proration of benefits uniformly over an employee's total projected service.

The pension benefit obligation as of June 30, 1990 for State Employees has been determined to be $1,326,893,200. Approximately 46% of this amount is attributable to benefits on behalf of active employees with the balance (54%) attributable to the benefits of retirees and inactive employees. For Teachers the pension benefit obligation as of June 30, 1990 is $1,695,942,200. Of this amount approximately 62% is attributable to active employees and the remaining 38% is attributable to benefits on behalf of pensioners, beneficiaries and inactive employees.

Exhibit II of the attached actuarial valuation certificate provides additional detail regarding this new disclosure amount.

<u>Overall Status of System</u>

As the funding law existed prior to its amendment in 1989, beginning with the fiscal year starting July 1, 1986, the statutory contribution comprises the normal cost, amortization of the June 30, 1985 unfunded liability and certain changes in that liability based on the sum-of-the-digits method over 30 years, and interest on the outstanding balance of the unfunded liability.

Currently, the statutory contribution comprises the normal cost and amortization of the remaining unfunded liability and certain changes in that liability over 27 years from July 1, 1989. In addition, for the State employees a new 30-year schedule was set up as of July 1, 1989 for the adopted change of assumptions and benefit improvements (28-year service pension). Furthermore, a new 30-year schedule was established as of July 1, 1990 for the 1989 early retirement window. These amortization payments are calculated to remain level as a percent of salary.

We believe that the funding program as set forth in the state statute is a reasonable basis for funding the Rhode Island Retirement System. If the statutory funding program is followed without change, the System will be fully funded--that is, the assets will equal the actuarial accrued liability on June 30, 2020. In the interim, the assets are projected to be sufficient at all times to meet the cash requirements for projected benefit payments.

APPENDIX

MODEL FORM SUMMARY STATEMENT RE CITY AND TOWN PARTICIPATION IN TEACHERS' RETIREMENT SYSTEM FOR PURPOSES OF FINANCIAL STATEMENTS AND REPORTS, MUNICIPAL BOND REGISTRATION STATEMENTS, ETC.

The (city) (town) of ______________ provides retirement benefits to its public school teachers through its participation in the Rhode Island Retirement System, a statutory, mandatory, state-wide, multi-employer retirement system, which first covered Rhode Island teachers on July 1, 1949. This System is administered as a unified state-wide system by the State Retirement Board, the composition of which is set forth in the pertinent state statute. The assets are held in the custody of the State Treasurer as an undivided single fund.

The actuarial costs of the retirement benefits are partially funded by employee contributions of 8 1/2 percent of pay effective July 1, 1986. The net employer actuarial costs are determined annually by the actuary and as provided by statute are certified by the Retirement Board to the Department of Administration as a rate percent of payroll, payable in part by the State of Rhode Island and in part by the (city) (town). The split between State and Municipality is specified in the statute. For fiscal year 1991-92, the State will pay 32% and the Municipality will pay 68%. The statute provided for increasing graduated percentages of the annual normal cost and interest on the unfunded liability until the year beginning July 1, 1986 when the full normal cost and amortization payments on a 30-year schedule are required.

Actuarial valuations prepared by Martin E. Segal Company, applying the entry age normal cost method with the frozen initial liability, assuming 8 percent interest return (7 1/2 percent for 1988) on invested assets and applying assumed rates of salary progression, allowance for post-retirement increases and other actuarial assumptions--all as set forth in the published annual reports of the Retirement Board--reveal the following comparative highlights of the last three years for the Teachers' System as a whole:

	Year Beginning July 1,		
	1988	1989	1990
Active participants	10,753	10,995	10,778
Pensioners and beneficiaries	3,577	3,744	3,869
Inactive participants	2,121	2,386	3,069
Liability for accrued vested benefits	$1,070,703,600	$1,233,408,700	$1,284,910,600
Net assets at actuarial value	759,982,500	893,536,700	1,037,737,400

As shown in State's financial statements:

	Year Ended June 30,		
	1988	1989	1990
Employer contributions	$ 58,958,711	$ 72,217,030	$ 82,435,940
Member contributions	34,895,982	31,348,826	37,159,860
Total contributions	$ 93,854,693	$103,565,856	$119,595,800
Net miscellaneous income	1,331,824	766,545	(4,440,352)
Investment income	69,646,982	121,392,937	63,912,874
Total income available for benefit payments	$164,833,499	$225,725,338	$179,068,323
Benefit payments	51,883,396	58,199,115	64,603,816
Excess of income over expenses	$112,950,103	$167,526,222	$114,464,507

Note: Detail figures may not add to totals shown because of rounding.

Actuarial costs and liabilities, as shown in the summary presentation, are determined in the aggregate for the Teachers System. Accordingly, employer contributions are first determined in the aggregate for all participating employers in this multi-employer system; are then expressed as a rate percent of the aggregate participating payroll; and for fiscal year 1991-92, sixty-eight percent of this rate percent is then promulgated to each

MARTIN E. SEGAL COMPANY
CONSULTANTS AND ACTUARIES

116 Huntington Avenue
Boston, Massachusetts

December 20, 1991

EMPLOYEES' RETIREMENT SYSTEM OF THE STATE OF RHODE ISLAND

CERTIFICATE OF ACTUARIAL VALUATION

This is to certify that we have prepared an actuarial valuation of the plan as of June 30, 1990.

This certificate contains the following attached exhibits:

EXHIBIT I - Actuarial Cost Development of Fiscal Year 1991-92 Contribution Percentage

A. State Employees

B. Teachers

EXHIBIT II - Pension Benefit Obligation

EXHIBIT III - Actuarial Assumptions and Cost Method

EXHIBIT IV - Summary of Plan Provisions

To the best of my knowledge, the information supplied in this actuarial valuation is complete and accurate (except as noted in Exhibit I) and in my opinion each individual assumption used (a) is reasonably related to the experience of the plan and to reasonable expectations and (b) represents my best estimate of anticipated experience under the plan.

MARTIN E. SEGAL COMPANY, INCORPORATED

By: James [illegible] Lee, F.S.A., M.A.A.A.
Senior Vice President and Actuary

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EXHIBIT I

ACTUARIAL COST FOR DEVELOPMENT OF
FISCAL YEAR 1991-92 CONTRIBUTION PERCENTAGE

A. STATE EMPLOYEES

The valuation was made with respect to the following data supplied to us by the Retirement Board:

a. 15,158 active participants (including 7,500 fully vested) with total annual salaries of $416,226,600

b. 1,916 inactive participants

c. 7,823 pensioners (including 612 beneficiaries of deceased pensioners and active employees)

The actuarial factors as of the valuation date are as follows:

1.	Actuarial present value of benefits - total		$1,791,834,900
	Active employees	$1,078,191,900	
	Inactive employees	14,273,000	
	Pensioners and beneficiaries	699,371,100	
2.	Actuarial value of assets		867,717,100
3.	Present value of future employee contributions		278,366,600
4a.	Initial unfunded frozen actuarial liability		445,731,800
4b.	Change in unfunded frozen actuarial liability due to plan amendment and change in assumption		(45,395,400)
4c.	Change in unfunded frozen actuarial liability due to 1989 early retirement window		45,136,700
4d.	Total unfunded frozen actuarial liability (Item 4a plus Item 4b plus Item 4c)		445,473,100
5.	Actuarial present value of future normal costs (Item 1 - Item 2 - Item 3 - Item 4d)		202,291,100
6.	Actuarial present value of future compensation		3,581,801,800
7.	Normal cost percentage (Item 5 ÷ Item 6)		5.65%

(Continued)

EXHIBIT I

A. STATE EMPLOYEES (Continued)

8.	Total compensation of employees below the assumed retirement age	$394,599,900
9.	Normal cost (item 7 x item 8)	22,216,000
10.	Payment required to amortize unfunded frozen actuarial liability over 30 years with 25 years remaining from July 1, 1991 for the initial unfunded frozen actuarial liability, 29 years remaining on the change in unfunded frozen actuarial liability due to plan amendment and change in assumptions and 30 years remaining on the change due to the 1989 early retirement window) calculated as a level percent of pay	25,678,600
11.	Total annual cost if paid on July 1, 1990 (item 9 plus item 10)	47,894,600
12.	Total annual cost if paid in uniform installments throughout the year (item 11 plus one-half year's interest)	$49,810,400
13.	Total annual cost based on 1991-92 projected participating payroll of $433,000,000 if paid in uniform installments throughout the year	50,741,600
14.	Item 13 amount as a percent of payroll	11.7%

Ratio of actuarial value of assets (line 2) to actuarial accrued liability ($1,438,809,100): 60.31%

Note: Included are 31 active employees unknown as to age, service, or both.

EXHIBIT I

ACTUARIAL COST FOR DEVELOPMENT OF FISCAL YEAR 1991-92 CONTRIBUTION PERCENTAGE

B. TEACHERS

The valuation was made with respect to the following data supplied to us by the Retirement Board:

a. 10,778 active participants (including 7,961 fully vested) with total annual salaries of $417,404,700

b. 3,069 inactive participants

c. 3,869 pensioners (including 170 beneficiaries of deceased pensioners and active employees)

The actuarial factors as of the valuation date are as follows:

1.	Actuarial present value of benefits - total		$2,347,878,400
	Active employees	$1,704,485,400	
	Inactive employees	35,887,300	
	Pensioners and beneficiaries	607,505,700	
2.	Actuarial value of assets		1,037,737,400
3.	Present value of future employee contributions		353,860,500
4.	Unfunded frozen actuarial liability		711,780,500
5.	Actuarial present value of future normal costs (item 1 - item 2 - item 3 - item 4)		244,500,000
6.	Actuarial present value of future compensation		4,163,064,300
7.	Normal cost percentage (item 5 ÷ item 6)		5.87%
8.	Total compensation of employees below the assumed retirement age		$398,481,510
9.	Normal cost (item 7 x item 8)		23,390,900
10.	Payment required to amortize unfunded frozen actuarial liability over 30 years (25 years remaining from July 1, 1991) calculated as a level percent of pay		41,109,400

(Continued...)

EXHIBIT I

B. TEACHERS (Continued)

11.	Total annual cost if paid on July 1, 1990 (item 9 plus item 10)	$64,500,300
12.	Total annual cost if paid in uniform installments throughout the year (item 11 plus one-half year's interest)	67,080,300
13.	Total annual cost based on 1991-92 projected participating payroll of $459,700,000 if paid in uniform installments throughout the year	69,541,300
14.	Item 13 as a percent of payroll	15.1%

Ratio of actuarial value of assets (line 2)
to actuarial accrued liability ($1,906,148,200): 54.55%

EXHIBIT II

PENSION BENEFIT OBLIGATION

The value of the pension benefit obligation required for disclosure by Statement No. 5 of the Governmental Accounting Standards Board is shown below as of June 30, 1990.

	Pension Benefit Obligation State Employees	Teachers
1) Participants currently receiving benefits and terminated employees not yet receiving benefits	$ [illegible]	$ [illegible]
2) Current employees		
Accumulated employee contributions	[illegible]	[illegible]
Employer-financed vested	[illegible]	[illegible]
Employer-financed nonvested	[illegible]	[illegible]
3) Total pension benefit obligation	$[illegible]	$[illegible]

EXHIBIT III

ACTUARIAL ASSUMPTIONS AND COST METHOD

Mortality rates -- 1971 Group Annuity Mortality Table

Disability mortality before age 65 -- Age 65 mortality under stipulated table

Termination rates before retirement:

State Employees (Rate %)

Age	Death*	Disability	Withdrawal	Total*
20	.05	.06	21.20	21.31
25	.06	.09	15.80	15.95
30	.08	.11	11.60	11.79
35	.11	.15	8.40	8.66
40	.16	.22	6.20	6.58
45	.29	.36	4.20	4.85
50	.53	.61	2.60	3.73
55	.85	1.01	--	1.86
60	1.31	--	--	1.31

15% of the above disability rates are assumed service-connected.

Teachers (Rate %)

Age	Death*	Disability	Withdrawal	Total*
20	.05	.06	12.39	12.50
25	.06	.09	9.70	9.85
30	.08	.11	7.50	7.69
35	.11	.15	5.66	5.92
40	.16	.22	4.14	4.52
45	.29	.36	2.75	3.41
50	.53	.61	1.35	2.49
55	.85	1.01	--	1.86
60	1.31	--	--	1.31

15% of the above disability rates are assumed service-connected.

*Rates shown for men; rates for women are slightly lower.

Note: Detail rates may not add to totals shown due to rounding.

EXHIBIT III (Continued)

Salary scale:

Age	Present salary as a % of salary at 65	Annual Increase (Rate %)
20	9.11	6.96
25	12.98	6.77
30	16.73	6.33
35	22.63	5.91
40	29.73	5.56
45	38.76	5.23
50	49.73	4.96
55	63.35	4.84
60	80.97	4.67

Includes allowance for inflation of 4-1/2% per year

Unknown characteristics of employees: Same as those exhibited by employees with known characteristics. Unknown salary is assumed to be $20,000 for State Employees and $25,000 for Teachers.

Retirement age -- State Employees: 62-1/2 or completion of service requirement, if later
Teachers: 61 or completion of service requirement, if later

Post-retirement increases -- 3% compounded annually

Percent married -- Social Security awards during 1977

Net investment return -- 8%

Actuarial value of assets --

Sum of Preliminary Value and write-up, but no more than 120% of market value or less than 80% of market value. Preliminary Value is actuarial value of assets at beginning of the year plus increase in cost value during the year, excluding realized capital gains or losses. Write-up is 20% of market value at end of year in excess of preliminary value.

If Preliminary Value exceeds market value, there is a write-down of assets determined in a similar manner.

Actuarial cost method -- Frozen initial liability method. The method is also referred to as the entry age normal cost method with frozen initial liability.

Entry age is the employee's age at the time he or she would have commenced employment if the plan had always been in existence.

Frozen actuarial liability calculated on an individual basis and the outstanding balance of the unfunded amount is based on expected value regardless of actual contributions. It is funded over the 30-year period ended June 30, 2016. Payment on outstanding balance of unfunded frozen initial liability originally was based on sum of (1) interest on outstanding balance, and (2) a payment is based on the sum-of-the-digits amortization method. In 1989, the Legislature amended the Sections 36-10-2 and 36-10-2.1 of the General Laws to adopt level percent of salary funding.

EXHIBIT IV

SUMMARY OF PLAN PROVISIONS

Service pension

	General Employees			Correctional Officers	Legislators		
Age requirement:	60	or	None	50	55	or	None
Service requirement:	10 yrs.		28 yrs.	20 yrs.	8 yrs.		20 yrs.

Amount: 1.7% of final average salary up to 10 years of service plus 1.9% per year for the next 10 years of service plus 3% for the next 14 years of service plus 2% for the 35th year. The maximum benefit is 80% of final average salary after 35 years of service. Final average salary is defined as the average of compensation earned during the highest 3 consecutive years prior to termination. Correctional officers receive 2% of final average salary for each of the first 30 years of service plus 6% for the 31st year plus 5% for the 32nd year plus 4% for the 33rd year plus 3% for the 34th year plus 2% for the 35th year. Legislators receive $600 per year of service to a maximum of $12,000.

Disability

Non-occupational:

Age requirement: None
Service requirement: 5 years
Amount: Regular pension based on service accrued and final average salary at disability, payable immediately. The minimum retirement percentage is 17% regardless of service.

Occupational:

Age requirement: None
Service requirement: None
Amount: 66 2/3% of final salary, payable immediately.

Vesting

Age requirement: None
Service requirement: 10 years
Amount: Regular pension accrued, payable at age 60.

Investments

We are pleased to submit herewith the total investments for the Employees' Retirement System for the 1989-90 Fiscal year.

The summary of investments schedule shows that the Invested Assets of the Retirement System are maintained in four (4) major areas. At least half the Assets are invested in Equities and Fixed Income-Bonds.

A detailed list of all Assets for each Investment Account is available for review at the Retirement Division.

SUMMARY OF INVESTMENTS

OPERATIONS: (July 1, 1989 - June 30, 1990)	
TOTAL INVESTMENTS - JULY 1, 1989	$1,679,871,171
ADD:	
PURCHASES DURING YEAR	3,618,936,382
TOTAL --	5,298,807,553
DEDUCT:	
REDEMPTIONS & SALES DURING THE YEAR	3,439,825,884
TOTAL INVESTMENTS - JUNE 30, 1990	1,858,981,669

INVESTMENT ACCOUNT: (By Type of Security)

Fixed Income-Bonds	$ 658,141,080	35.40 %
State Street Stiff Acct.	107,269,000	5.77
Short Term Paper	191,752,147	10.32
Equities	901,819,442	48.51
Totals	1,858,981,669	100.00 %