

State of Rhode Island and Providence Plantations



ANNUAL REPORT
OF THE
RETIREMENT BOARD

JUNE 30, 1978

HON. ANTHONY J. SOLOMON
General Treasurer


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

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Louis Ciaramello, C.L.U. <i>Public Representative</i>		
William J. DeNuccio <i>House Fiscal Advisor</i>		
Senator Donald Hickey, Designee of <i>Senate Finance Chairman</i>		
John J. Hudson <i>Public Representative</i>		
James E. Huling, Jr. <i>State Employee Representative</i>		
Paul A. Kerwick <i>Retired Member Representative</i>		
Kenneth Payne, Designee of <i>President — R. I. League of Cities and Towns</i>		
Dr. William P. Robinson, Designee of <i>Director of Administration</i>		
Ronald L. Wrigley, Designee of <i>State Budget Director</i>		


Joseph G. Iannelli, Executive Director



STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
OFFICE OF THE GENERAL TREASURER
PROVIDENCE November 30, 1978

 The Honorable J. Joseph Garrahy
Governor, State of Rhode Island
and Providence Plantations
State House
Providence, Rhode Island 02903

Dear Governor Garrahy:
I take pleasure in submitting herewith for transmittal to the General Assembly, the Forty-Second Annual Report of the Retirement Board of the Employees' Retirement System of the State of Rhode Island covering the fiscal year ended June 30, 1978.

Respectfully submitted,

General Treasurer

*Report
of the
Board*

REPORT OF THE RETIREMENT BOARD

Forty-Second Annual Report of the Retirement Board covering the fiscal year ended June 30, 1978.

The report covers in detail through the exhibits, schedules and statistics, the operations for the year and its condition at June 30th together with the Actuary's valuation and recommendations.

FINANCIAL FACTS

Total Reserves at the end of the year were 14.1% or \$39,521,907 higher than the previous year for a total of \$319,424,522.

Revenues from all sources for the year amounted to \$35,116,106 for State Employees and \$41,865,629 for Public School Teachers. Expenditures for the year amounted to \$16,202,993 and \$21,256,835 for State Employees and Teachers respectively.

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

Income from investments for the year amounted to \$19,961,329 including a capital gain of \$33,527. This represents 25.9% of the total revenues. This income is equal to a yield of 6.7% and is compared to the yield of previous years in Chart (B).

Pension benefits which represent the major expenditure item amounted to \$12,638,930 for State Employees and Legislators and \$17,382,026 for Teachers and Teachers Survivors. Added to this was the Cost of Living Adjustment which amounted to \$1,097,430 for State Employees and \$2,269,569 for Teachers. A comparative chart of the Cost of Living Adjustment graphically depicts the facts in this regard and the trend thereof in Chart (C) which covers the last 5 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, 1978 was 39.24% for State Employees and 26.54% for Teachers. The unfunded (accrued) liability for State Employees was \$260,856,700 and \$374,329,200 for Teachers.

CONCLUDING COMMENT

Consistent with prior years, a normal increase in reserves was recorded. In keeping with established procedures, an actuarial 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.

A sincere thanks, is extended to the officials of our State government and the members 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


Joseph G. Iannelli
Executive Director

Financial Statements

Comparative Financial Balance Sheet

June 30

<u>Assets</u>	<u>1978</u>	<u>1977</u>
Cash	\$ 2,076,218	\$ 1,193,195
Cash	10	10
Accrued Interest Receivable	3,984,800	3,632,935
Investments (At Amortized Book Value for Bonds and Cost for Stock)	<u>313,363,494</u>	<u>275,076,476</u>
Total Assets	<u>\$ 319,424,522</u>	<u>\$ 279,902,616</u>
 <u>Liabilities & Reserves</u>		
<u>Current Liabilities</u>		
Unclaimed Benefits	\$ 39,336	\$ 71,081
<u>Members' Contribution Reserves</u>		
State Employees	53,550,703	48,695,457
Teachers	74,255,436	66,899,231
Teachers Survivors	<u>4,638,361</u>	<u>4,219,680</u>
Total Members Reserves	\$ 132,444,500	\$ 119,814,368
<u>General Reserves</u>		
State Employees	\$ 114,967,382	\$ 100,889,055
Teachers	60,994,394	49,403,817
Teachers Survivors	10,972,310	9,722,545
Certain State Employees	<u>6,600</u>	<u>1,750</u>
Total General Reserves	\$ 186,940,686	\$ 160,017,167
Total Liabilities & Reserves	<u>\$ 319,424,522</u>	<u>\$ 279,902,616</u>

STATEMENT OF REVENUES AND EXPENDITURES
YEAR ENDED - JUNE 30, 1978
REVENUES

<u>Member Contributions</u>			
State Employees		\$ 9,139,248	
Legislators		15,220	
Teachers		10,274,393	
Teachers Survivors		552,119	
Ins. Premiums - Legislators		<u>1,020</u>	\$ 19,982,000
<u>State Contributions</u>			
State Employees		15,248,734	
Teachers		10,482,508	
Certain State Employees		<u>14,400</u>	25,745,642
<u>Municipal Contributions</u>			
Teachers		10,543,272	
Teachers Survivors		<u>563,446</u>	11,106,718
<u>Investment Income</u>			
Interest		15,755,443	
Dividends		3,936,361	
Capital Gain or (Loss)		33,528	
Net Option Sales		<u>235,997</u>	19,961,329
<u>Miscellaneous</u>			
Miscellaneous Receipts		23,904	
Employees Trans. - Municipal		23,817	
Unclaimed Benefits		14,635	
Interest - Service Purchase		<u>124,160</u>	186,516
Total Revenues			\$ 76,982,205
		<u>EXPENDITURES</u>	
<u>Pension Benefits</u>			
State Employees		\$ 13,180,004	
Legislators		546,805	
Teachers		19,372,740	
Teachers Survivors		278,855	
Certain State Employees		<u>9,551</u>	\$ 33,387,955
<u>Death Benefits</u>			
State Employees		727,678	
Legislators		30,400	
Teachers		<u>341,531</u>	1,099,609
<u>Refund of Contributions</u>			
State Employees		1,670,875	
Teachers		999,171	
Teachers Survivors		126,222	
Interest on Refunds - Survivors		23,137	
Municipalities		61,582	
State		<u>20,256</u>	2,901,243
<u>Investment Expense</u>			
Postage & Insurance		470	
<u>Miscellaneous</u>			
Miscellaneous Refunds		23,722	
Employees Transfers - Municipal		919	
Unclaimed Benefits		<u>46,380</u>	71,021
Total Expenditures			\$ 37,460,298
Excess Revenues over Expenditures			<u>\$ 39,521,907</u>

Analysis of Revenue & Expenditures
Fiscal Year Ended - June 30, 1978

REVENUES	State Employees		Teachers		Total
	Amount	%	Amount	%	
Members Contributions	\$ 9,155,488	26.07	\$10,826,512	25.86	\$19,982,000
State Contributions	15,263,134	43.46	10,482,508	25.04	25,745,642
Municipal Contributions			11,106,718	26.53	11,106,718
Investment Earnings	10,596,621	30.18	9,364,238	22.37	19,960,859
Miscellaneous	100,863	00.29	85,653	00.20	186,516
Total Revenues	\$35,116,106	100.00	\$41,865,629	100.00	\$76,981,735
<u>EXPENDITURES</u>					
Pensions	\$12,638,930	35.99	\$17,382,026	41.52	\$30,020,956
Cost of Living Adjust.	1,097,430	03.13	2,269,569	05.42	3,366,999
Death Benefits	758,078	02.16	341,531	00.81	1,099,609
Refunds - Contributions	1,691,131	04.82	1,210,112	02.89	2,901,243
Miscellaneous	17,424	00.04	53,597	00.13	71,021
Total Expenditures	\$16,202,993	46.14	\$21,256,835	50.77	\$37,459,828
Excess Revenues over Expenditures - to Reserves	\$18,913,113	53.86	\$20,608,794	49.23	\$39,521,907

Distribution of Excess Revenue

<u>Unclaimed Benefits</u>	\$ -31,745
<u>Members Reserves</u>	
State	4,855,247
Teachers	7,356,205
Survivors	418,681
<u>General Reserves</u>	
State	14,083,177
Teachers	11,590,577
Survivors	1,249,765
Total	\$39,521,907

ANALYSIS OF INVESTMENT INCOME

FISCAL YEAR ENDED JUNE 30, 1978

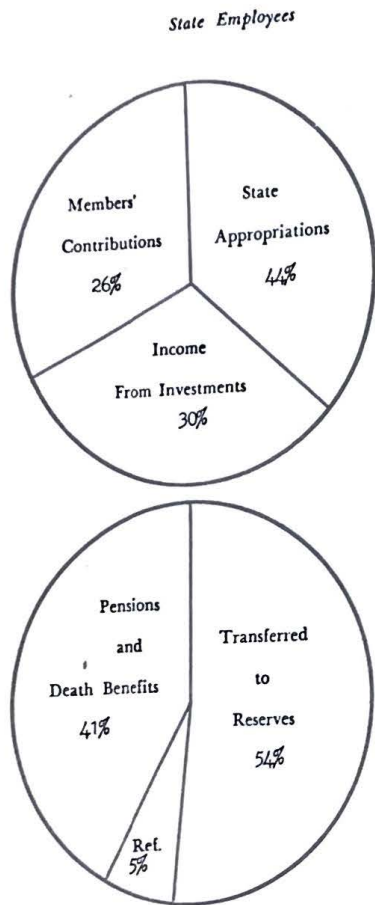
Investment Income - Interest		\$ 15,599,260
Add: Accrued Interest June 30, 1978	\$ 3,984,800	
Accrued Interest July 1, 1977	3,632,935	
	<u>351,865</u>	
Discounts Amortized	162,294	
	<u>514,159</u>	
Total Additions		514,159
Total		\$ 16,113,419
Less: Accrued Interest Purchased	\$ 315,553	
Premiums Amortized	42,422	
	<u>357,975</u>	
Total Deductions		\$ 357,975
Net Interest Earned		15,755,444
Dividends	3,936,361	
Option Sales (Net)	235,997	
	<u>4,172,358</u>	
Total Earned on Investments		\$ 19,927,802
Capital Gain		33,527
Total Investment Income		\$ 19,961,329

Distribution of Investment Income
Fiscal Year Ended - June 30, 1978

	<u>State Employees</u>	<u>Teachers</u>	<u>Teachers Survivors</u>	<u>Total</u>
<u>Members Reserves:</u>				
Balance July 1, 1977	\$ 48,695,456	\$ 66,899,231	\$ 4,219,680	\$119,814,367
" June 30, 1978	53,550,703	74,255,436	4,638,362	132,444,501
 <u>General Reserves:</u>				
Balance July 1, 1977	100,889,055	49,403,817	9,722,545	160,015,417
" June 30, 1978	104,370,761	52,614,626	9,987,840	166,973,227
<hr/>				
Total	\$307,505,975	\$243,173,110	\$28,568,427	\$579,247,512
Average	\$153,752,987	\$121,586,555	\$14,284,214	\$289,623,756
%	53.087	41.981	04.932	100.000
Distribution	\$10,596,621	\$ 8,379,768	\$ 984,470	\$ 19,960,859
<hr/> <hr/>				

Highlights

CHART A
SOURCES OF REVENUE AND HOW EXPENDED



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Public School Teachers

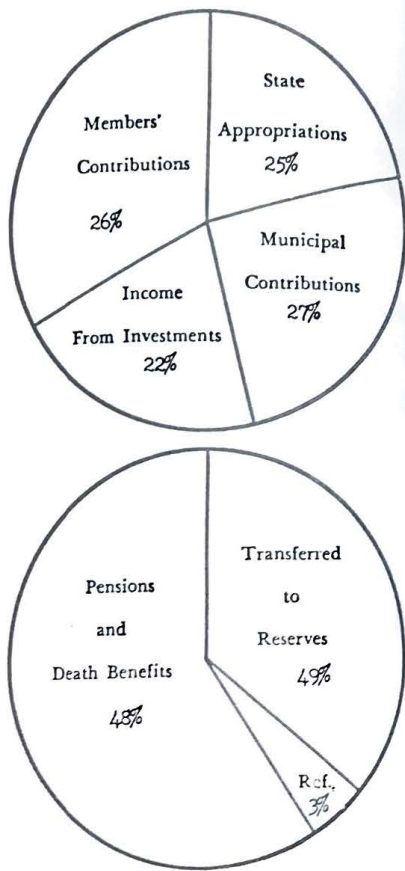


CHART B
INVESTMENT YIELD

<u>YEAR</u>	<u>RATE OF RETURN</u>
1978	6.7
1977	6.6
1976	6.5
1975	6.3
1974	5.8
1973	5.4
1972	5.3
1971	5.3
1970	5.0

CHART C
COST OF LIVING ADJUSTMENT

Year	<u>STATE EMPLOYEES AND LEGISLATORS</u>				<u>TEACHERS AND TEACHER SURVIVORS</u>			
	Pension Benefits	Cost of Living Adjustment	% C.L. Incr.	% to Ben.	Pension Benefits	Cost of Living Adjustment	% C.L. Incr.	% to Ben.
72-73	5,782,110	411,796	23.1	7.12	11,413,852	923,868	22.0	8.09
73-74	6,685,643	502,378	22.0	7.51	12,778,668	1,119,746	21.2	8.26
74-75	8,118,371	612,196	21.9	7.54	14,076,602	1,367,603	22.1	9.88
75-76	9,635,536	748,731	22.3	8.19	15,216,413	1,647,312	20.5	11.00
76-77	11,045,772	906,030	21.0	8.60	16,279,438	1,948,642	18.29	12.17
77-78	12,638,930	1,097,430	21.1	9.08	17,382,026	2,269,569	16.47	13.27

REF. - DENOTES REFUNDS

CHART D

SERVICE PENSIONS GRANTED

From July 1, 1977 - - - To June 30, 1978

<u>State Employees</u>					<u>Public School Teachers</u>			
<u>Pension Range</u>	<u>No. of Pensions</u>	<u>Percent</u>	<u>Yearly Cost</u>	<u>Average Pension</u>	<u>No. of Pensions</u>	<u>Percent</u>	<u>Yearly Cost</u>	<u>Average Pension</u>
Under \$ 2,000.	97	23.6	134,489.	1,386.49	2	1.3	3,026.	1,512.81
2/4,000.	150	36.5	423,534.	2,823.55	16	10.1	52,383.	3,273.92
4,000.	29	7.1	128,908.	4,445.11	8	5.0	35,606.	4,450.83
5,000.	26	6.3	142,881.	5,495.42	18	11.3	98,908.	5,494.89
6,000.	21	5.1	134,138.	6,387.51	11	6.9	71,214.	6,474.02
7,000.	18	4.4	134,011.	7,445.08	19	11.9	141,721.	7,459.02
8,000.	16	3.9	135,711.	8,481.92	14	8.8	119,698.	8,549.87
9,000.	4	1.0	37,309.	9,327.38	17	10.7	163,254.	9,604.19
10/12,000.	15	3.6	165,020.	11,001.33	21	13.2	229,737.	10,939.86
Over 12,000.	35	8.5	558,372.	15,953.46	33	20.8	460,104.	13,942.53
Totals	411	100.0	1,994,373.	4,852.49	159	100.0	1,375,651.	8,651.89

CHART E

COMPARATIVE PERTINENT FINANCIAL
FACTS FOR

STATE EMPLOYEES AND TEACHER MEMBERS

<u>Fiscal Year Ended June 30</u>	<u>Excess Revenues over Expenditures</u>				<u>Investment Earnings</u>	
	<u>State Emp.</u>	<u>%</u>	<u>Teachers</u>	<u>%</u>	<u>State Emp.</u>	<u>Teachers</u>
1968	5,409,979.	57	5,410,877.	47	2,485,590.	1,888,900.
1969	6,112,717.	56	6,455,394.	48	3,533,471.	2,771,795.
1970	7,102,438.	59	7,621,756.	49	3,503,336.	2,840,989.
1971	7,984,606.	58	7,089,543.	40	4,062,592.	3,359,023.
1972	8,782,514.	56	7,479,578.	39	4,463,637.	3,708,529.
1973	8,825,489.	51	8,539,937.	38	5,140,631.	4,309,059.
1974	10,237,173.	52	9,264,517.	37	6,159,198.	5,215,129.
1975	12,210,282.	53	10,587,575.	38	7,065,233.	6,006,428.
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.

MARTIN E. SEGAL COMPANY
INCORPORATED

607 BOYLSTON STREET • BOSTON, MASS. 02116 • (617) 262-0550

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TORONTO

December 18, 1978

Retirement Board of the Employees'
Retirement System
State of Rhode Island
198 Dyer Street
Providence, Rhode Island 02903

Dear Members of the Board:

We are pleased to submit herewith our Actuarial Valuation of the Employee's Retirement System as of June 30, 1978.

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

We received a great deal of help from State employees in obtaining the information which forms the basis of this report. Most important, Mr. Joseph G. Iannelli, Executive Director; Mr. John F. Sullivan, Assistant Director; and Mr. Carlo Mencucci, Principal 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.

*Report
of the
Actuary*

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

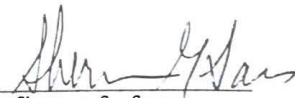
- I. SUMMARY
- II. EMPLOYEE DATA
- III. RETIREE DATA
- IV. RETIREMENT FUND
- V. ACTUARIAL ASSUMPTIONS AND METHODS
- VI. RESULTS OF VALUATION

Following the report, we have attached 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 yours,

MARTIN E. SEGAL COMPANY

By 
 Sherman G. Sass
 Senior Vice President

By 
 Sherman B. Lieberman, F.S.A.

SGS/kmj

I. SUMMARY

Benefit Provisions

The Employees' Retirement System 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 5 per cent of their annual earnings; Teachers contribute 6 per cent.

The System provides unreduced benefits of 1.7 per cent of earnings for the first ten years of service; 1.9 per cent for the next ten years; and 2.4 per cent per year of service over 20 years up to a maximum of 80 per cent of earnings for all years of service. Such benefits are available to members at least age 55 with 30 years of service or age 60 with 10 years of service, or after 35 years at any age. State correctional officers may retire at age 50 if they have 20 years of service, at 2 per cent for each year of service. Benefits are based on the average of the highest 3 consecutive years' earnings. After retirement, "cost-of-living increases" amounting to 3 per cent per year of the original award are provided, independent of actual changes in the Consumer Price Index.

The plan also provides non-service-connected disability and vested benefits after 7 and 10 years of service, respectively; service-connected disability pensions with no minimum service requirement; widow's benefits for service-connected death; and certain lump sum death benefits.

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

Employee Data

We received data on 15,543 active State Employees and 10,850 Teachers as of June 30, 1978 who were participating in the system. The average salary was \$12,300 for State Employees and \$16,200 for Teachers.

On the average, the State Employees were age 43 and had 8½ years of service; Teachers were age 39 with 10½ years of service.

Retiree Data

We received data on 3,858 State Employee pensioners and 159 beneficiaries as of June 30, 1978. The pensioners' average monthly benefit was \$274. There were 2,620 retired Teachers and 64 beneficiaries; the average benefit was \$544 a month for the pensioners. Of all the pensioners on the rolls, 8 per cent had retired in the year ended June 30, 1978.

Retirement Fund

As of June 30, 1978, the Fund had assets of \$319 million available as an offset to the actuarial liabilities for future benefits.

Actuarial Valuation

Our valuation was prepared as of June 30, 1978. Our calculations were based on what we believe are reasonable assumptions as to expected future experience. The assumptions are the same as those used in our previous actuarial valuation. We used the "entry age normal cost" method of funding, which spreads the cost of each employee's pension as a level percentage of his earnings from date of hire to retirement.

The employer normal cost* for State Employees is \$10½ million. This is 5.5 per cent of the payroll of participating State Employees. The employer normal cost for Teachers is \$8 million or 4.7 per cent of payroll.

*Please refer to the "Actuarial Assumptions and Methods" section of the report for definitions of these terms.

For State Employees, the actuarial liability* (for benefits earned before July 1, 1978) is \$429 million of which \$142 million represents the liability to those already receiving pensions. The unfunded actuarial liability at the end of the year is \$261 million. For Teachers, the actuarial liability is \$510 million of which \$184 million is for those receiving pensions. The unfunded actuarial liability stands at \$374 million.

The value of the System's vested benefits is \$761 million. Thus the assets are short of this amount by \$457 million (excluding assets allocable to the Teachers Survivors' program).

Based on the normal cost plus 30-year amortization of the unfunded actuarial liability, the annual employer cost as of June 30, 1978 is \$30 million (15.9 per cent of covered payroll) for State Employees and \$36 million (20.6 per cent of covered payroll) for Teachers. These amounts are in addition to the required employee contributions.

In fiscal 1979-80, the State's revised statutory funding schedule calls for the full normal cost and 70 per cent of the 30-year amortization payment of unfunded actuarial liability to be contributed. This amounts to 12.3 per cent of payroll for State Employees and 15.4 per cent of payroll for Teachers. (Half of this cost for Teachers is paid for by the municipalities.) According to the statute, the portion of the 30-year amortization payment required to be contributed will increase by 10 per cent each year until the full actuarial cost will be required for 1982-83 and later years.

*See note on page 2.

Table 1A
 Number and Average Salaries of Employees in Active Service as of June 30, 1978
 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 and over	Unknown
Total	15,543 \$12,300	6,439 \$11,000	4,377 \$11,700	2,057 \$13,200	1,191 \$14,700	660 \$15,600	383 \$17,000	210 \$17,500	98 \$18,600	128 \$12,600
Under 20	167 \$ 8,600	165 \$ 8,600	-- --	-- --	-- --	-- --	-- --	-- --	-- --	2 \$ 6,600
20 - 24	1,515 9,400	1,364 9,400	145 \$ 9,500	-- --	-- --	-- --	-- --	-- --	-- --	6 9,400
25 - 29	2,049 11,300	1,389 11,400	601 11,300	55 \$10,900	-- --	-- --	-- --	-- --	-- --	4 11,600
30 - 34	1,702 13,200	834 12,600	666 13,900	179 13,400	20 \$12,300	-- --	-- --	-- --	-- --	3 10,400
35 - 39	1,220 13,300	522 12,200	375 12,800	219 15,600	92 15,800	11 \$13,500	-- --	-- --	-- --	1 9,800
40 - 44	1,279 12,900	478 11,500	379 11,900	198 14,300	139 16,800	64 15,900	19 \$15,200	-- --	-- --	2 15,000
45 - 49	1,637 12,700	534 11,100	501 11,400	236 13,800	166 16,100	115 15,900	62 15,500	14 \$13,800	-- --	9 12,600
50 - 54	2,099 12,700	545 10,800	643 11,100	383 12,900	216 15,300	145 17,200	95 17,900	57 17,700	8 \$15,400	7 17,500
55 - 59	2,023 12,600	429 10,700	548 11,000	395 12,400	272 13,300	171 15,000	103 17,800	69 17,500	27 18,500	9 22,800
60 - 64	1,424 12,700	169 10,500	420 10,800	306 12,200	219 13,200	124 14,300	78 17,100	57 18,100	43 18,400	8 25,200
65 and over	341 13,500	3 13,300	96 11,600	84 12,300	67 13,900	30 14,800	26 14,900	13 17,700	20 20,300	2 20,000
Unknown	87 9,800	7 8,800	3 8,200	2 13,000	-- --	-- --	-- --	-- --	-- --	75 9,900

RHODE ISLAND ERS

Table 1B
 Number and Average Salaries of Employees in Active Service as of June 30, 1978
 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 and over	Unknown
Total	10,850 \$16,200	2,071 \$12,700	4,390 \$15,900	1,964 \$17,600	1,147 \$18,400	683 \$19,100	356 \$19,800	95 \$19,000	79 \$19,200	65 \$14,400
Under 20	3 \$20,600	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	3 \$20,600
20 - 24	200 9,900	193 10,000	5 \$ 8,500	-- --	-- --	-- --	-- --	-- --	-- --	2 8,500
25 - 29	2,365 13,200	1,139 12,100	1,212 14,300	5 \$11,900	-- --	-- --	-- --	-- --	-- --	9 12,400
30 - 34	2,541 16,100	306 13,800	1,786 16,200	440 17,600	1 \$17,600	-- --	-- --	-- --	-- --	8 14,700
35 - 39	1,533 17,100	198 14,200	492 16,900	634 17,700	204 18,400	1 \$17,800	-- --	-- --	-- --	4 17,600
40 - 44	1,091 17,700	106 14,600	287 17,000	256 17,800	350 18,900	91 18,700	-- --	-- --	-- --	1 11,500
45 - 49	1,026 18,000	66 14,900	263 16,900	201 17,800	217 18,400	222 20,000	55 \$18,900	-- --	-- --	2 18,300
50 - 54	935 18,100	38 16,300	207 16,900	206 17,400	142 18,000	148 19,200	157 20,200	33 \$19,100	3 \$17,400	1 16,300
55 - 59	684 18,100	19 16,500	100 17,000	141 17,600	142 18,000	128 18,400	86 19,800	41 18,800	27 19,400	-- --
60 - 64	322 18,000	2 12,800	29 16,900	60 17,400	62 17,600	70 18,100	42 19,100	17 19,500	39 18,800	1 16,800
65 and over	105 18,100	-- --	6 17,100	18 16,600	29 17,700	23 17,600	15 19,800	4 17,900	10 21,100	-- --
Unknown	45 14,500	4 13,900	3 16,100	3 17,900	-- --	-- --	1 18,800	-- --	-- --	34 14,000

RHODE ISLAND ERS

II. EMPLOYEE DATA

We received data on 15,543 State Employees and 10,850 Teachers participating in the System on June 30, 1978. The data included age, service, sex, and salary for each participant. The average salary of the participants was \$12,300 for State Employees and \$16,200 for Teachers. The data included 365 Correctional Officers and 112 Legislators. About 55 per cent of the Teachers -- are not covered by Social Security and therefore are eligible for Teachers Survivor benefits.

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 \$10,000 for the State Employees for whom earnings were missing. A \$15,000 annual salary was imputed for Teachers with unknown compensation.

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, average salary for State employees increased by 9.8 per cent while Teacher's average salary increased by 9.5 per cent. Aggregate payroll increased by 7.9 per cent and 6.8 per cent for State employees and Teachers, respectively.

Overall, the data was in excellent condition. There was no problem with missing sex information on State employees as was encountered in the previous valuation. We recommend that the Board continue to pursue its program of storing all basic information on participants on computer files.

Table 2A

Statistical Data on Active State Employees
On June 30, 1978 and 1977

	June 30, 1978	June 30, 1977
Number of covered employees	15,543	15,700
Total annual salary	\$190,451,300	\$176,569,900
Average annual salary	\$ 12,300	\$ 11,200
Average age	43	41½
Average years of service	8½	7½
Number eligible for service retirement	1,242	991
Number vested but not eligible to retire	3,357	3,015

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:

	<u>State Employees</u>	<u>Teachers</u>
Pensioners:		
Number	3,858	2,620
Average age	70	72
Average monthly benefit	\$274	\$544
Beneficiaries:		
Number	159	64
Average age	77	75½
Average monthly benefit	\$204	\$366

Table 3A gives distributions of the 361 new State Employee pensions in the current year by type of pension and amount. Table 4A does the same for age at retirement. Tables 3B and 4B are similar for the 157 new Teacher pensions.

Tables 5A and 5B give distributions for all pensions in force at the end of the fiscal year by type and amount. Tables 6A and 6B do the same by age.

The data on retirees was reasonably good for retired employees. However, it was inadequate to be certain that beneficiaries were classified correctly.

The data on terminated employees with vested rights was not adequate to calculate a cost for them.

We recommend that this information be maintained by this system so that it can be incorporated in the next review.

Table 2B

Statistical Data on Active Teachers
On June 30, 1978 and 1977

	June 30, 1978	June 30, 1977
Number of covered employees	10,850	11,143
Total annual salary	\$176,022,900	\$164,883,600
Average annual salary	\$ 16,200	\$ 14,800
Average age	39	38
Average years of service	10½	9½
Number eligible for service retirement	460	418
Number vested but not eligible to retire	3,864	3,410

RHODE ISLAND ERS

Table 3A

Pensions Awarded in the Year Ended June 30, 1978
By Type and by Monthly Amount

STATE EMPLOYEES

Monthly Amount	Total	Type of pension			
		Service	Ordinary Disability	Accidental Disability	Legislator
Total	361	320	29	8	4
Under \$50	3	2	--	1	--
\$ 50 - \$ 99	22	19	2	1	--
100 - 149	52	51	--	1	--
150 - 199	55	42	12	1	--
200 - 249	43	34	7	--	2
250 - 299	37	31	4	1	1
300 - 349	21	19	1	--	1
350 - 399	11	10	--	1	--
400 - 449	16	15	1	--	--
450 - 499	10	10	--	--	--
500 - 599	22	20	--	2	--
600 - 699	15	13	2	--	--
700 - 799	8	8	--	--	--
800 - 899	9	9	--	--	--
900 - 999	5	5	--	--	--
1,000 - 1,099	8	8	--	--	--
1,100 - 1,199	6	6	--	--	--
1,200 - 1,299	4	4	--	--	--
1,300 - 1,399	7	7	--	--	--
1,400 - 1,499	1	1	--	--	--
1,500 - 1,999	5	5	--	--	--
2,000 - 2,499	1	1	--	--	--

RHODE ISLAND ERS

Table 3B

Pensions Awarded in the Year Ended June 30, 1978
By Type and by Monthly Amount

TEACHERS

Monthly Amount	Total	Type of pension		
		Service	Ordinary Disability	Accidental Disability
Total	157	146	10	1
\$ 50 - \$ 99	1	1	--	--
150 - 199	2	2	--	--
200 - 249	3	3	--	--
250 - 299	6	6	--	--
300 - 349	7	5	2	--
350 - 399	5	5	--	--
400 - 449	8	8	--	--
450 - 499	11	8	3	--
500 - 599	17	16	1	--
600 - 699	16	13	3	--
700 - 799	19	19	--	--
800 - 899	17	16	1	--
900 - 999	11	11	--	--
1,000 - 1,099	18	17	--	1
1,100 - 1,199	5	5	--	--
1,200 - 1,299	5	5	--	--
1,300 - 1,399	3	3	--	--
1,400 - 1,499	2	2	--	--
1,500 - 1,999	1	1	--	--

RHODE ISLAND ERS

Table 4A
Pensions Awarded in the Year Ended June 30, 1978
By Type and by Age on Effective Date
STATE EMPLOYEES

Age on Effective Date	Total	Type of pension			
		Service	Ordinary Disability	Accidental Disability	Legislator
Total	361	320	29	8	4
25 - 29	1	--	1	--	--
30 - 34	2	--	1	1	--
35 - 39	1	--	1	--	--
45 - 49	6	2	3	1	--
50	2	--	--	2	--
51	2	--	2	--	--
52	12 { 4	2	2	--	--
53	2	2	--	--	--
54	2	1	1	--	--
55	12 { 12	6	2	1	3
56	4	3	1	--	--
57	27 { 1	1	--	--	--
58	3	2	1	--	--
59	7	3	4	--	--
60	43	43	--	--	--
61	173 { 24	22	2	--	--
62	57	52	5	--	--
63	33	30	1	2	--
64	16	15	--	1	--
65	52	50	1	--	1
66	21	21	--	--	--
67	121 { 19	18	1	--	--
68	12	12	--	--	--
69	17	17	--	--	--
70 and over	18	18	--	--	--

RHODE ISLAND ERS

Table 4B
Pensions Awarded in the Year Ended June 30, 1978
By Type and by Age on Effective Date

TEACHERS

Age on Effective Date	Total	Type of pension		
		Service	Ordinary Disability	Accidental Disability
Total	157	146	10	1
40 - 44	2	--	2	--
45 - 49	1	--	--	1
50	4 { 1	--	1	--
54	3	--	3	--
55	7	6	1	--
56	21 { 3	1	2	--
57	2	2	--	--
58	4	4	--	--
59	5	4	1	--
60	34	34	--	--
61	87 { 13	13	--	--
62	17	17	--	--
63	9	9	--	--
64	14	14	--	--
65	12	12	--	--
66	39 { 7	7	--	--
67	6	6	--	--
68	6	6	--	--
69	8	8	--	--
70	3	3	--	--

RHODE ISLAND ERS

Table 5A
Pensions in Force on June 30, 1978
By Type and by Monthly Amount
STATE EMPLOYEES

Monthly Amount	Total	Type of pension				
		Service	Ordinary Disability	Accidental Disability	Legislator	Beneficiary
Total	4,017	3,376	291	68	123	159
Under \$50	139	118	6	7	--	8
\$ 50 - \$ 99	730	662	30	6	--	32
100 - 149	764	644	84	9	--	27
150 - 199	537	432	72	6	--	27
200 - 249	393	304	36	4	22	27
250 - 299	278	221	22	5	23	7
300 - 349	212	164	12	6	17	13
350 - 399	156	129	12	8	4	3
400 - 449	146	118	5	2	18	3
450 - 499	99	83	--	3	8	5
500 - 599	183	135	8	8	31	1
600 - 699	93	86	4	--	--	3
700 - 799	77	72	--	3	--	2
800 - 899	60	59	--	1	--	--
900 - 999	41	40	--	--	--	1
1,000 - 1,099	33	33	--	--	--	--
1,100 - 1,199	23	23	--	--	--	--
1,200 - 1,299	21	21	--	--	--	--
1,300 - 1,399	12	12	--	--	--	--
1,400 - 1,499	5	5	--	--	--	--
1,500 - 1,999	13	13	--	--	--	--
2,000 - 2,499	2	2	--	--	--	--

RHODE ISLAND ERS

Table 5B
Pensions in Force on June 30, 1978
By Type and by Monthly Amount
TEACHERS

Monthly Amount	Total	Type of pension			
		Service	Ordinary Disability	Accidental Disability	Beneficiary
Total	2,684	2,538	74	8	64
Under \$50	3	3	--	--	--
\$ 50 - \$ 99	17	16	--	--	1
100 - 149	55	49	2	--	4
150 - 199	124	105	12	--	7
200 - 249	113	91	10	1	11
250 - 299	122	106	9	--	7
300 - 349	151	133	12	--	6
350 - 399	210	199	5	--	6
400 - 449	462	450	7	--	5
450 - 499	162	155	5	--	2
500 - 599	275	264	6	1	4
600 - 699	289	279	4	--	6
700 - 799	275	269	1	1	4
800 - 899	165	161	1	2	1
900 - 999	124	122	--	2	--
1,000 - 1,099	69	68	--	1	--
1,100 - 1,199	28	28	--	--	--
1,200 - 1,299	19	19	--	--	--
1,300 - 1,399	10	10	--	--	--
1,400 - 1,499	4	4	--	--	--
1,500 - 1,999	6	6	--	--	--
2,000 - 2,499	1	1	--	--	--

RHODE ISLAND ERS

Table 6A

Pensions in Force on June 30, 1978
By Type and By Age
STATE EMPLOYEES

Age on June 30, 1978	Total	Type of pension				
		Service	Ordinary Disability	Accidental Disability	Legislator	Beneficiary
Total	4,017	3,376	291	68	123	159
25 - 29	4	--	2	--	--	2
30 - 34	4	--	3	1	--	--
35 - 39	3	--	3	--	--	--
40 - 44	6	--	2	2	1	1
45 - 49	28	2	20	6	--	--
50 - 54	52	7	28	11	3	3
55 - 59	156	48	67	15	19	7
60 - 64	634	523	77	10	21	3
65 - 69	1,146	1,038	54	18	25	11
70 - 74	988	919	24	4	19	22
75 - 79	577	511	9	1	15	41
80 - 84	277	223	--	--	15	39
85 - 89	105	78	--	--	4	23
90 - 94	26	19	1	--	1	5
95 - 99	8	6	1	--	--	1
100 - 104	1	--	--	--	--	1
105 and over	2	2	--	--	--	--

RHODE ISLAND ERS

Table 6B

Pensions in Force on June 30, 1978
By Type and By Age

TEACHERS

Age on June 30, 1978	Total	Type of pension			
		Service	Ordinary Disability	Accidental Disability	Beneficiary
Total	2,684	2,538	74	8	64
20 - 24	1	1	--	--	--
40 - 44	3	--	3	--	--
45 - 49	5	1	4	--	--
50 - 54	12	--	7	1	4
55 - 59	72	54	13	3	2
60 - 64	353	331	16	4	2
65 - 69	673	655	13	--	5
70 - 74	738	715	8	--	15
75 - 79	405	386	4	--	15
80 - 84	268	251	5	--	12
85 - 89	114	107	1	--	6
90 - 94	33	31	--	--	2
95 - 99	5	4	--	--	1
100 - 104	2	2	--	--	--

RHODE ISLAND ERS

IV. RETIREMENT FUND

The State maintains the Employees' Retirement Fund. The Retirement Board provided us with financial statements as of June 30, 1978.

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 out of 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 gives a summary of income and expenditures for the years ended June 30, 1978 and 1977.

At June 30, 1978 assets totalled over \$319 million. Table 8 gives a breakdown of the assets and compares them to those of the previous year. About 75 per cent of the fund was invested in fixed income securities such as bonds and notes.

The financial statements indicate that 53 per cent of the assets relate to State Employees, 42 per cent are for Teachers, and 5 per cent relate to Teachers Survivors' benefits. There is also a small unallocated reserve for unclaimed benefits. Table 9 shows the allocation of assets in detail for 1978 and 1977.

Table 7

Summary Statement of Income and Expenses
For the Years Ended June 30, 1978 and 1977

	<u>1978</u>	<u>1977</u>
Employer contributions	\$36,852,360	\$29,375,698
Member contributions	<u>19,982,000</u>	<u>19,006,191</u>
Total contributions	\$56,834,360	\$48,381,890
Less: Administration expenses	<u>470</u>	<u>162</u>
Net contribution income	\$56,833,890	\$48,381,727
Net miscellaneous items	115,495	151,807
Investment income:		
Dividends	\$ 4,172,358	\$ 4,017,610
Interest	15,755,443	13,220,010
Capital gains and losses	<u>33,528</u>	<u>188,843</u>
Net investment income	<u>19,961,329</u>	<u>17,426,464</u>
Total income available for benefit payments	\$76,910,714	\$65,959,998
Benefit payments:		
Pension benefits	\$33,387,955	\$30,179,882
Death benefits	1,099,609	1,009,086
Contribution refunds	<u>2,901,243</u>	<u>2,512,788</u>
Total benefit payments	<u>37,388,807</u>	<u>33,701,755</u>
Excess of income over expenses	<u>\$39,521,907</u>	<u>\$32,258,243</u>

Note: Detail figures may not add to totals due to rounding.

Table 8
Assets as of June 30, 1978 and 1977

	<u>1978</u>		<u>1977</u>
Cash	\$ 2,076,229		\$ 1,193,205
Accrued interest receivable	3,984,800		3,632,935
Investments			
Government bonds	\$ 65,669,661		\$ 59,172,081
Corporate bonds	125,213,267		121,932,600
Common and preferred stocks	73,558,000		62,077,811
Certificates of deposit	11,337,778		5,100,000
Short-term notes	39,122,263		19,555,263
Repurchase agreements	--		8,000,000
(Less) Unamortized premiums and discounts	<u>(1,537,474)</u>	<u>313,363,494</u>	<u>(761,278)</u>
Total assets		<u>\$319,424,522</u>	<u>\$279,902,616</u>

Note: Detail figures may not add to totals due to rounding.

RHODE ISLAND ERS

Table 9
Allocation of Assets by Plan
as of June 30, 1978 and 1977

	<u>1978</u>		<u>1977</u>
State Employees:			
Employer reserves	\$114,973,981		\$100,890,805
Member reserves	<u>53,550,703</u>		<u>48,695,456</u>
Total State Employees reserves	\$168,524,685		\$149,586,261
Teachers:			
Employer reserves	\$ 60,994,394		\$ 49,403,817
Member reserves	<u>74,255,436</u>		<u>66,899,231</u>
Total Teacher reserves	135,249,831		116,303,048
Teachers Survivors:			
Employer reserves	\$ 10,972,310		\$ 9,722,545
Member reserves	<u>4,638,361</u>		<u>4,219,680</u>
Total Teachers Survivors reserves	15,610,671		13,942,225
Unallocated:			
Unclaimed benefit reserve	<u>39,336</u>		<u>71,081</u>
Total assets		<u>\$319,424,522</u>	<u>\$279,902,616</u>

Note: Detail figures may not add to totals due to rounding.

RHODE ISLAND ERS

V. ACTUARIAL ASSUMPTIONS AND METHODS

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 services that give rise to the pension obligation. The result is an employer contribution which anticipates future payments. A fund accumulates which earns investment income, thus reducing the ultimate cost.

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. These assumptions are the same as those used in the June 30, 1977 study.

Mortality Rates

We assumed that mortality rates would conform with the 1971 Group Annuity Mortality Table. This is a recently published table of pension plan mortality, and we believe it will be a reasonable basis for experience under the System. It is one of the tables in general use in valuing pension plans in the United States. Table 10 gives some life expectancies after retirement.

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 normal 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 per cent of his pay when he was young and a lower per cent of his higher salary at a later age. By use of a salary projection, the contribution for an individual, all other things remaining the same, tends to stay at the same percentage over the years.

How to project future salaries is a major policy question. To what extent should one seek to anticipate, through present contributions, the full impact on pension costs of future salary changes?

For purposes of our cost determination, we have made a moderate allowance for general salary increases in the future. We also reflect salary increases as the result of longevity and promotions. The scale has relatively greater increases at the younger ages to correspond with the State's salary schedules. The salary scale factors are:

<u>Age</u>	<u>Present Salary as a % of Age 65 Salary</u>	<u>Annual Increases (Rate %)</u>
20	17.45	4.84
25	22.07	4.75
30	27.76	4.59
35	34.62	4.39
40	42.68	4.08
45	51.76	3.72
50	61.77	3.45
55	72.98	3.33
60	86.08	3.16

As will appear, the problem of salary projection has a parallel in the question of choosing an assumption as to future investment yield and the two are somewhat interrelated.

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.

We assumed that terminations each year from all causes except retirement would be as follows:

<u>Age</u>	<u>Death*</u>	<u>State Employees (Rate %)</u>			<u>Total*</u>
		<u>Disability</u>	<u>Withdrawal</u>		
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	--	1.13	
55	.85	1.01	--	1.86	
60	1.31	--	--	1.31	

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

<u>Age</u>	<u>Death*</u>	<u>Teachers (Rate %)</u>			<u>Total*</u>
		<u>Disability</u>	<u>Withdrawal</u>		
20	.05	.06	12.30	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	--	1.13	
55	.85	1.01	--	1.86	
60	1.31	--	--	1.31	

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

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

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

Retirement Ages

The System provides unreduced benefits as early as age 55 for general employees and 50 for State Correctional Officers. We have assumed State Employees will retire at age 64, or completion of 10 years of service if later. Teacher retirements are assumed to occur when the teacher is both age 63 and has 10 or more years of service. In any case where the employee already meets these assumed conditions of age and service, it is projected that he or she will retire immediately.

Post-Retirement Increases

Cost-of-living increases are regularly provided to pensioners. Our calculation assumed 3 per cent annual benefit increases as provided by Statute. It should be noted that cost-of-living increases are based on the original pension award; they are not "compounded" from year to year.

Investment Return

Investment return has a major effect on the ultimate cost of a retirement system. In general, if a system is actuarially funded (so that it has a substantial reserve which is earning an investment yield), a yield of 6 per cent - in contrast to a 5 per cent yield - will reduce costs by 16-20 per cent.

An assumption must be made concerning future yields. It must be a rate that will be valid for the long-run, that is, not only for money invested today or next year, but also for money invested 10 and 20 years from now.

We selected an investment return assumption of 6 1/2 per cent per year for our calculation. This assumption takes account of probable moderate long-term inflation but is not tied directly to the higher rates currently available.

Funding Method

We have used the "entry age normal cost" method of funding. This method spreads the cost of the benefits to be provided to an individual as a level percentage of his pay from his date of employment to his assumed date of retirement. The normal cost for the entire system is equal to the sum of the normal costs for all participants. In a rough sense, it can be visualized as the cost of benefits earned during the current year.

The actuarial liability represents the amount by which the future normal costs fall short of meeting the cost of future benefit payments. It can also be viewed, roughly, as the value of benefits accrued for service prior to the valuation date.

Overall Actuarial Basis

We believe that our assumptions, taken as a whole, are reasonable. To the extent that actual experience is better or worse than assumed, gains or losses will develop, with appropriate decreases or increases in future costs.

Missing Data

It was also necessary to make certain "non-actuarial" assumptions where data was missing or incomplete. In all cases, we assumed such individuals had the same characteristics as other participants, taking into account the known characteristics (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.

VI. RESULTS OF VALUATION

State Employees

The costs for State Employees as of June 30, 1978, developed as follows:

<u>Item</u>	<u>Amount</u>	<u>% of Payroll</u>
(1) Participating payroll	\$190,451,300	--
(2) Employer normal cost	10,487,200	5.5%
(3) Unfunded actuarial liability	260,856,700	--
(4) Amortization of unfunded actuarial liability over 30 years from July 1, 1978	18,757,200	9.8
(5) Total annual cost if paid July 1, 1978 -- (2) + (4)	29,244,400	15.4
(6) Total annual cost if paid monthly = (5) plus ½ year interest	30,194,800	15.9

The calculations as completed assume that the employer contribution will be paid into the retirement fund at the beginning of each year, and will start to earn interest from that date. In fact, the money is deposited monthly. Thus about half a year's interest is lost, and the contribution must be increased to reflect this. Line 6, above, includes this adjustment.

The funding statute calls for the State to contribute the full normal cost plus 70 per cent of the 30-year amortization of the unfunded actuarial liability for the 1979-80 fiscal year, and also calls for an increase in the employee contribution rate of 0.5 per cent of pay as of July 1, 1979. Based on this requirement, the 1979-80 employer contribution for State Employees should be 12.3 per cent of payroll.

The "full cost" of the System's benefits (line 6) is 15.9 per cent of payroll which compares to 15.1 per cent for the previous year. Taking into account the scheduled increase in the employee contribution rate, this figure would be 15.4 per cent for 1979-80. The increase in

cost is due primarily to actuarial losses from salary increases in excess of the assumed rates and the fact that last year's statutory contribution represented only a portion of the "full cost" for that year.

Teachers

The costs for Teachers as of June 30, 1978, developed as follows:

<u>Item</u>	<u>Amount</u>	<u>% of Payroll</u>
(1) Participating payroll	\$176,022,900	--
(2) Employer normal cost	8,202,100	4.7%
(3) Unfunded actuarial liability	374,329,200	--
(4) Amortization of unfunded actuarial liability over 30 years from July 1, 1978	26,916,600	15.3
(5) Total annual cost if paid July 1, 1978 -- (2) + (4)	35,118,700	20.0
(6) Total annual cost if paid January, 1979 = (5) plus ½ year interest	36,260,100	20.6

The calculations as completed assume that the employer contribution will be paid into the retirement fund at the beginning of each year, and will start to earn interest from that date. In fact, the money is deposited in January. Thus about half a year's interest is lost, and the contribution must be increased to reflect this. Line 6, above, includes this adjustment.

Applying the funding statute to the Teachers' costs and adjusting for the change in employee contribution rate (0.5 per cent of pay increase as of July 1, 1979), gives a contribution requirement for fiscal 1979-80 of 15.4 per cent. Half of this (7.7%) is payable by the State and half by the municipalities.

The "full cost" is 20.6 per cent of payroll which compares to 20.1 per cent for the previous year. Taking into account the scheduled increase in the employee contribution rate, this figure would be 20.1

per cent for 1979-80. Reasons for the increase in cost are similar to those given for State employees.

Teachers Survivors

Because we do not have data on dependents of teachers, it is difficult to do a detailed analysis of the Teacher Survivor program. However, we have attempted to estimate the actuarial position based on "high cost" assumptions. For example, we assumed 25 per cent of teachers would be unmarried at death in active service, 10 per cent would be married but childless, and 65 per cent would be married with children (two children, one born when the wife was age 23 and the other at age 32). On this rough basis, the assets appear to be sufficient to fully cover the actuarial liabilities. The normal cost is estimated to be between \$110 and \$125 per person -- well within the \$192 combined annual employer - employee contribution (each pays 1 per cent of the first \$9,600 of salary).

Based on this analysis, we believe the present contribution is adequate to support the plan of benefits.

Value of Vested Benefits

In private pension plans, it is customary for the actuary to provide the "value of vested benefits". This figure is used by accountants in preparing financial statements, both as a disclosure item and as a factor in determining the pension expense charge, in accordance with Opinion No. 8 of the Accounting Principles Board of the American Institute of Certified Public Accountants, "Accounting for the Cost of Pension Plans". While we recognize that the State is not covered by this Opinion, a brief discussion of this subject may be helpful.

The "value of vested benefits" represents the single premium value under the plan's investment income and mortality 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, vested former employees, and active participants with at least ten years of service. For active employees with less than ten years of service, only the accumulated employee contributions are included, since that is all such employees would receive if they had no further employment.

For the Employee's Retirement System, the value of vested benefits as of June 30, 1978 is as follows:

	<u>State Employees</u>	<u>Teachers</u>
Active members	\$226,313,100	\$208,316,600
Retired members	<u>141,583,700</u>	<u>184,288,200</u>
Total value of vested benefits	\$367,896,800	\$392,604,800
Assets	<u>168,524,700</u>	<u>135,249,800</u>
Unfunded value of vested benefits	<u>\$199,372,100</u>	<u>\$257,355,000</u>

Overall Status of System

Legislation during 1978 further strengthened the System's commitment toward fulfilling its pension obligations. The present funding law requires that the full normal cost plus an increasing percentage of the actuarial liability payment be contributed each year as follows:

<u>Fiscal year beginning July 1</u>	<u>Normal cost plus x percent of 30-year amortization of unfunded actuarial liability</u>
1979	70%
1980	80
1981	90
1982 and later	100

This formula comes closer to meeting the actual cost than that under the previous law, both in terms of increasing the transition percentages and reducing the transition period. Under the prior formula, the full cost would not have been contributed until July 1, 1985. The present formula provides for full cost contributions beginning July 1, 1982. The accelerated funding will also result in a lower ultimate cost to the System as underpayments during the transition period, which must be funded over future years, will be less than under the former funding patterns.

It is our feeling that, through this legislation, the State has taken a major step in securing the benefits promised to the System's present and future retirees and beneficiaries.

MARTIN E. SEGAL COMPANY
INCORPORATED

607 BOYLSTON STREET - BOSTON, MASS. 02116 - (617) 262-0550

December 18, 1978

EMPLOYEES' RETIREMENT SYSTEM OF THE STATE OF RHODE ISLAND

CERTIFICATE OF ACTUARIAL VALUATION

ATLANTA
CHICAGO
CLEVELAND
DALLAS
DENVER
HARTFORD
HOUSTON
LOS ANGELES
NEW ORLEANS
NEW YORK
PHOENIX
SAN FRANCISCO
WASHINGTON, D. C.
TORONTO

This is to certify that we have prepared an actuarial valuation of the plan as of June 30, 1978.

The certificate contains the following attached exhibits:

EXHIBIT I - Actuarial Cost for Year Beginning July 1, 1978

- A. State Employees
- B. Teachers

EXHIBIT II - Actuarial Assumptions and Funding Method

EXHIBIT III - 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 the assumptions used in the aggregate (a) are reasonably related to the experience of the plan and to reasonable expectations and (b) represent my best estimate of anticipated experience under the plan.

MARTIN E. SEGAL COMPANY

Sherman B. Lieberman
By: Sherman B. Lieberman, F.S.A.

EXHIBIT I

ACTUARIAL COST FOR YEAR BEGINNING JULY 1, 1978

A. STATE EMPLOYEES

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

- a. 15,543 active participants (including 4,599 fully vested) with total annual salaries of \$190,451,300
- b. 4,017 pensioners (including 159 beneficiaries of deceased pensioners and active employees)

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

1. Total normal cost	\$ 20,009,800
2. Projected employee contributions	9,522,600
3. Employer normal cost	10,487,200
4. Actuarial liability - total	429,381,400
Active employees	\$287,797,700
Pensioners (including beneficiaries of deceased pensioners and active employees)	141,583,700
5. Assets	168,524,700
6. Unfunded actuarial liability	260,856,700

Liability for accrued vested benefits: \$367,896,800

Note: Included are 140 active employees unknown as to age, service, or both. Status of beneficiaries was unclear. No data was provided on terminated vested employees, if any.

EXHIBIT I

ACTUARIAL COST FOR YEAR BEGINNING JULY 1, 1978

B. TEACHERS

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

- a. 10,850 active participants (including 4,324 fully vested) with total annual salaries of \$176,022,900
- b. 2,684 pensioners (including 64 beneficiaries of deceased pensioners and active employees)

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

1. Total normal cost	\$ 18,763,500
2. Projected employee contributions	10,561,400
3. Employer normal cost	8,202,100
4. Actuarial liability - total	509,579,000
Active employees	\$325,290,800
Pensioners (including beneficiaries of deceased pensioners and active employees)	184,288,200
5. Assets	135,249,800
6. Unfunded actuarial liability	374,329,200

Liability for accrued vested benefits: \$392,604,800

Note: Included are 76 active employees unknown as to age, service, or both. Status of beneficiaries was unclear. No data was provided on terminated vested employees, if any.

EXHIBIT II
ACTUARIAL ASSUMPTIONS AND FUNDING METHOD

Mortality rates -- 1971 Group Annuity Mortality Table

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

Termination rates before retirement:

<u>State Employees (Rate %)</u>				
<u>Age</u>	<u>Death*</u>	<u>Disability</u>	<u>Withdrawal</u>	<u>Total*</u>
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	--	1.13
55	.85	1.01	--	1.86
60	1.31	--	--	1.31

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

<u>Teachers (Rate %)</u>				
<u>Age</u>	<u>Death*</u>	<u>Disability</u>	<u>Withdrawal</u>	<u>Total*</u>
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	--	1.13
55	.85	1.01	--	1.86
60	1.31	--	--	1.31

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

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

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

Salary scale:

<u>Age</u>	<u>Present salary as a percent of salary at 65</u>	<u>Annual increase (Rate %)</u>
20	17.45	4.84
25	22.07	4.75
30	27.76	4.59
35	34.62	4.39
40	42.68	4.08
45	51.76	3.72
50	61.77	3.45
55	72.98	3.33
60	86.08	3.16

Includes allowance for inflation of 3% per year

Unknown characteristics of employees: Same as those exhibited by employees with known characteristics. Unknown salary is assumed to be \$10,000 for State Employees and \$15,000 for Teachers.

Retirement age -- State Employees: 64, or completion of service requirement if later. Teachers: 63, or completion of service requirement if later.

Post-retirement increases -- 3% per annum, based on original benefit

Percent married -- Social Security awards during 1972

Net investment return -- 6½%

Valuation of assets -- At amortized book value for bonds and at cost for stocks.

Funding method -- Entry age normal cost.

EXHIBIT III
SUMMARY OF PLAN PROVISIONS

Service pension

	General Employees			Correctional Officers	Legislators		
	60	55	None	50	55	None	
Age requirement:	60	55	None	50	55	None	
Service requirement:	10 yrs.	30 yrs.	35 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 2.4% for each additional year of service to a maximum of 80%. 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 per year of service. Legislators receive \$300 per year of service to a maximum of \$6,000. Retirement is mandatory at age 70 except for elected officials. For correctional officers, mandatory retirement is at age 55 or completion of 20 years of service if later.

Early retirement

Age requirement: None
 Service requirement: 30 years
 Amount: Regular pension accrued, reduced by 6% for each year of age less than 55.

Disability

Non-occupational:

Age requirement: None
 Service requirement: 7 years
 Amount: Regular pension based on service accrued and final average salary at disability (but not less than 26.5%), payable immediately.

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.

Pre-retirement death benefits

Lump sum benefit:

Age requirement: None
 Service requirement: None
 Amount: (a) \$400 per year of service to a maximum of \$8,000 and with a minimum of \$2,000.
 (b) Refund of employee contributions.

Spouse's benefit (applicable only if elected by employee):

Age requirement: 60 or 50 Legislators: none
 Service requirement: 10 yrs. or 20 yrs. 8 years

Amount: Benefit employee would have received had he retired the day before he died and elected the joint and survivor option.

Occupational death benefit:

Age requirement: None
 Service requirement: None
 Amount: (a) 50% of salary to spouse or children under age 18, less workmen's compensation.
 (b) Refund of employee contributions.

Post-retirement death benefit

Lump sum benefit:

(a) 100% of employee contributions, less benefits paid.
 (b) Pre-retirement death benefit, reduced 25% per year of retirement, but not less than \$2,000.

Employee contribution rate:

Date	State Employees	Teachers	Legislators
Prior to 7/1/79	5 %	6 %	30%
7/1/79 - 6/30/80	5½	6½	30
7/1/80 - 6/30/81	6	7	30
7/1/81 and later	6½	7½	30

Available options:

Joint and survivor with 50% or 100% continued to the beneficiary after the death of the employee.

Post-retirement cost-of-living increases:

3% of original amount, not compounded, to pensioners and beneficiaries. No cost-of-living increases to legislators.

Investments

SUMMARY OF INVESTMENTS

<u>OPERATIONS:</u>	(July 1, 1977 - June 30, 1978)	
Total Investments - July 1, 1977		\$ 275,837,754
<u>Add:</u>		
Purchases During the Year		411,335,333
		<hr/>
		\$ 687,173,087
<u>Deduct:</u>		
Redemptions & Sales During the Year		372,272,119
		<hr/>
		\$ 314,900,968
		<hr/> <hr/>

<u>INVESTMENT ACCOUNT:</u>	(By Type of Security)		
<u>Type</u>	<u>Cost or Par</u>	<u>Proportion of Total</u>	
U.S. Government	\$ 48,299,000	15.34	%
Federal Land Banks	2,000,000	00.64	
Government National Mortgage	10,035,661	03.19	
Federal National Mortgage	2,085,000	00.66	
International Bank for Reconstruction	2,200,000	00.70	
Certificates of Deposit	11,337,778	03.60	
Commercial Paper	39,122,263	12.42	
Federal Home Loan	300,000	00.09	
Railroad Bonds	436,000	00.13	
Public Utility Bonds	81,896,000	26.01	
Industrial Bonds	42,881,267	13.62	
Preferred Stocks	738,821	00.24	
Common Stocks	68,212,613	21.66	
Bank Stocks	4,606,565	01.46	
Federal Int. Credit Bank	750,000	00.24	
	<hr/>		
	\$ 314,900,968	100.00	%
	<hr/> <hr/>	<hr/> <hr/>	

INVESTMENTS OWNED

<u>Description</u>	<u>Rate of Interest</u>	<u>Maturity</u>	<u>Carrying Value</u>
<u>UNITED STATES OF AMERICA</u>			
Treasury Bonds	6	11/15/78	\$ 1,000,000
Treasury Bonds	7-7/8	5/15/79	1,000,000
Treasury Bonds	6-1/4	8/15/79	4,109,000
Treasury Bonds	6-7/8	8/15/79	2,500,000
Treasury Bonds	6-7/8	5/15/80	1,400,000
Treasury Bonds	6-3/4	8/15/80	4,920,000
Treasury Bonds	7-5/8	8/15/81	1,000,000
Treasury Bonds	7-3/4	11/15/81	2,500,000
Treasury Bonds	6-3/8	2/15/82	2,170,000
Treasury Bonds	8-1/8	8/15/82	2,000,000
Treasury Bonds	7-7/8	11/15/82	2,000,000
Treasury Bonds	8	2/15/83	400,000
Treasury Bonds	7	11/15/83	3,550,000
Treasury Bonds	7-1/4	2/15/84	700,000
Treasury Bonds	7-7/8	5/15/86	2,500,000
Treasury Bonds	8	8/15/86	1,600,000
Treasury Bonds	7-5/8	11/15/87	2,150,000
Treasury Bonds	7-1/4	8/15/92	2,550,000
Treasury Bonds	6-3/4	2/15/93	200,000
Treasury Bonds	6-7/8	8/15/93	850,000
Treasury Bonds	7-7/8	2/15/00	2,500,000
Treasury Bonds	8-3/8	8/15/00	3,000,000
Treasury Bonds	8	8/15/01	1,000,000
Treasury Bonds	8-1/4	5/15/05	<u>2,700,000</u>
Total United States of America			\$ 48,299,000
			<hr/> <hr/>

INVESTMENTS OWNED

<u>Description</u>	<u>Rate of Interest</u>	<u>Maturity</u>	<u>Carrying Value</u>
<u>THE TWELVE FEDERAL LAND BANKS</u>			
Cons. Federal Farm Loan	8.15 %	4/20/82	\$ 2,000,000
<u>GOVERNMENT NATIONAL MORTGAGE ASSOCIATION</u>			
Note Pool # 5158	7-1/4 %	1/15/04	412,505.45
Note Pool # 4877	7-3/4	5/15/04	439,221.89
Note Pool # 3807	7-3/4	6/15/04	795,903.43
Note Pool # 6633	7-1/4	5/15/05	872,319.38
Note Pool # 7298	7-3/4	5/15/05	822,928.94
Note Pool # 8005	8-1/2	2/15/06	1,720,097.73
Note Pool # 12180	7-1/2	4/15/06	845,115.65
Note Pool # 12168	7-1/2	6/15/06	1,847,208.37
Note Pool # 12978	8	9/15/06	436,951.66
Note Pool # 13268	8	11/15/06	925,277.70
Note Pool # 15089	8	1/15/07	218,131.07
Total Government National Mortgage Association			\$10,035,661.27

FEDERAL NATIONAL MORTGAGE ASSOCIATION

Note	5.35 %	4/01/79	\$ 100,000
Note	5.40	6/23/80	340,000
Note	5.25	4/01/81	445,000
Note	5.20	1/19/82	200,000
Note	7.95	7/10/86	1,000,000
Total Federal National Mortgage Association			\$ 2,085,000

FEDERAL HOME LOAN

Note	7.65	5/26/87	\$ 300,000.00
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FEDERAL INTERMEDIATE CREDIT CORP.

Note	6.4	7/03/78	\$ 750,000
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<u>Description</u>	<u>Rate of Interest</u>	<u>Maturity</u>	<u>Carrying Value</u>
<u>INTERNATIONAL BANK FOR RECONSTRUCTIONS AND DEVELOPMENT</u>			
Bonds	4-1/4 %	1/15/79	\$ 100,000
Bonds	7	5/01/82	500,000
Bonds	5-3/8	4/01/92	600,000
Bonds	7-3/4	8/01/87	1,000,000
Total International Bank for Reconstruction and Development			\$ 2,200,000

CERTIFICATES OF DEPOSIT

Citizens Trust Co.	7.0	7/31/78	\$ 1,000,000
Citizens Trust Co.	7.0	8/07/78	1,000,000
Marquette Credit Union	6-3/4	8/29/78	100,000
R.I. Hospital Trust	7-3/8	8/31/78	3,000,000
R.I. Hospital Trust			(12,222)
Industrial National Bank	7.4	9/12/78	2,750,000
Citizens Trust Co.	7-1/4	9/15/78	500,000
Columbus National Bank	7.15	9/18/78	1,000,000
Citizens Trust Co.	7.45	9/29/78	1,500,000
Peoples' Savings Bank	8.0	10/31/78	500,000
Total Certificates of Deposit			\$ 11,337,778

COMMERCIAL PAPER

First National Corp.	7.25	7/03/78	\$ 993,756.94
Merrill Lynch	6.75	7/12/78	982,812.50
Gimble Bros.	7.25	7/17/78	2,500,000.00
Equitable Life	7.4	7/18/78	2,000,000.00
Agco	7.2	7/24/78	987,600.00
Fruehauf Finance	7.0	7/27/78	2,000,000.00
Illinois Central	7-1/8	7/31/78	1,937,458.33
American Credit Corp.	7-1/8	8/07/78	2,000,000.00
Clark Equipment	6.95	8/10/78	1,000,000.00
Industrial National Bank	7.25	8/15/78	2,000,000.00
Merrill Lynch	7-1/8	9/18/78	972,291.67
Englehard Minerals	7.0	9/18/78	972,777.78
First Charter Finance	7.2	9/18/78	1,500,000.00
First Charter Finance	7.55	9/20/78	2,438,131.94
First Charter Finance	7.55	9/29/78	1,948,827.78
J.P. Stevens	7.5	9/29/78	1,000,000.00
J.P. Stevens	7.5	9/29/78	2,000,000.00
Texas Eastern Transm.	7.7	10/10/78	2,000,000.00
Texas Eastern Transm.	7.7	10/31/78	1,500,000.00
Merrill Lynch	7.8	10/31/78	970,316.67
Mack Finance	8.125	11/15/78	1,450,572.92
Merrill Lynch	7.8	11/15/78	967,716.67
Fruehauf Corp.	8.05	11/30/78	2,000,000.00
Fruehauf Corp.	8.0	11/30/78	1,000,000.00
Electric Storage Battery	8.125	12/18/78	2,000,000.00
Total Commercial Paper			\$ 39,122,263.20

<u>Description</u>	<u>Rate of Interest</u>	<u>Maturity</u>	<u>Carrying Value</u>
<u>RAILROADS</u>			
Alabama Great Southern Railroad: Equipment Trust	5-1/2 %	8/01/79-80	\$ 198,000
Atchison, Topeka & Santa Fe Railway:		7/01/95	100,000
General Mortgage	4		
Atlantic Coast Line Railway: Bonds	5-5/8	8/15/79	129,000
Chesapeake & Ohio Railway Co.: Refunding and Improvement Mortgage, Series E	3-1/2	8/01/96	<u>9,000</u>
Total Railroads			<u>\$ 436,000</u>

PUBLIC UTILITIES

Alabama Power Co.: First Mortgage	4-7/8 %	5/01/89	\$ 195,000
First Mortgage	4-7/8	9/01/95	100,000
Alabama Power Co.	8-7/8	8/01/03	1,000,000
American Tel. & Tel. Co.: Debentures	4-3/8	4/01/85	175,000
Debentures	4-3/8	2/01/94	250,000
Debentures	5-1/2	1/01/97	250,000
Debentures	4-3/4	6/01/98	100,000
Debentures	5-1/8	4/01/01	200,000
American Tel. & Tel.	8.8	5/15/05	2,000,000
American Tel. & Tel.	8-5/8	2/01/07	2,000,000
Appalachian Elec. Power Co.: First Mortgage	7-1/2	12/01/98	500,000
First Mortgage	4-5/8	3/01/87	25,000
First Mortgage	4	5/01/88	100,000
Arkansas Power & Light	8	6/01/03	1,000,000
Baltimore Gas & Electric	4-7/8	6/01/80	89,000
Baltimore Gas & Electric	7-5/8	9/01/01	1,000,000
Bell Telephone Co. of Pa.: Debentures	4-3/4	5/01/01	200,000
Blackstone Valley Electric Co.	6-1/2	6/01/97	100,000
Brockton Edison	8-3/8	9/01/03	500,000
Carolina Power & Light Co.	5-1/8	4/01/96	250,000
Central Illinois Light Co.	4	7/01/88	100,000
Central Main Power Co.: First and General Mtg.	3-3/8	4/01/85	50,000
First and General Mtg.	4-7/8	5/01/87	48,000
Central Power & Light Co.	4-3/4	4/01/89	25,000
Chesapeake Potomac Tel.	8-5/8	4/01/09	500,000
Chesapeake Potomac Tel.	7-1/4	5/01/09	500,000
Chesapeake Potomac Tel.	8-3/4	3/01/10	500,000
Cincinnati Gas & Electric	4-1/8	5/01/87	250,000

<u>Description</u>	<u>Rate of Interest</u>	<u>Maturity</u>	<u>Carrying Value</u>
<u>PUBLIC UTILITIES - Continued</u>			
Columbia Gas System, Inc.: Debentures	3-5/8 %	9/01/80	\$ 150,000
Debentures	4-7/8	10/01/90	150,000
Commonwealth Edison: Sinking Fund Debentures	4-1/4	3/01/87	50,000
Sinking Fund Debentures	3-3/4	3/01/88	50,000
Sinking Fund Debentures	6-1/4	2/01/98	850,000
Sinking Fund Debentures	6-3/4	7/01/98	400,000
Sinking Fund Debentures	6-3/8	10/01/98	500,000
Sinking Fund Debentures	8	10/15/03	1,000,000
Connecticut Light & Power Co.: First Refunding Mortgage	4-7/8	2/01/90	100,000
Connecticut Light	8-7/8	10/01/00	500,000
Consolidated Edison Co.: First Refunding Mortgage	4-5/8	12/01/93	300,000
First Refunding Mortgage	4-1/4	10/01/86	300,000
First Refunding Mortgage	5	10/01/87	225,000
First Refunding Mortgage	4	6/01/88	100,000
Consolidated Natural Gas Co.: Debentures	4-7/8	6/01/82	84,000
Debentures	4-3/8	8/01/83	200,000
Debentures	5	2/01/85	133,000
debentures	9	7/01/95	474,000
Consumers Power Co.: First Mortgage	4-5/8	8/01/91	250,000
First Mortgage	4-5/8	8/01/89	250,000
First Mortgage	7-1/2	11/01/01	500,000
Dayton Power & Light Co.: Dayton Power & Light Co.	3-1/4	2/01/82	100,000
Dayton Power & Light Co.	8-1/4	10/01/99	500,000
First Mortgage	8	11/01/03	1,000,000
Delaware Power & Light Co.	3-7/8	6/01/88	250,000
Delmarva Power	7	11/01/98	250,000
Detroit Edison Co.: Gen. Ref. Mortgage	3-1/4	5/15/80	100,000
Duke Power Co.: First Refunding Mortgage	4-1/2	2/01/92	100,000
Duke Power	8-1/2	3/01/00	1,000,000
Duke Power	8-3/8	10/01/06	1,000,000
Duquesne Light Co.	3-1/8	7/01/84	60,000
Duquesne Light Co.	7-1/4	1/01/03	1,000,000
Florida Power & Light Co.: First Mortgage	4-5/8	3/01/95	100,000
Florida Power Corp.	7-3/8	6/01/02	1,000,000
First Mortgage	4-3/4	10/01/90	91,000
First Mortgage	4-7/8	11/01/95	250,000
First Mortgage	7	12/01/98	250,000
Florida Power	7-5/8	1/10/01	250,000
General Telephone Co. of California: First Mortgage	4-1/2	9/01/86	50,000
First Mortgage	5	6/01/87	50,000
First Mortgage	5	12/01/95	100,000
Debentures	5-3/4	3/01/92	200,000

<u>Description</u>	<u>Rate of Interest</u>	<u>Maturity</u>	<u>Carrying Value</u>
<u>PUBLIC UTILITIES - Continued</u>			
Debentures	7-1/8 %	12/01/98	\$ 500,000
General Telephone of Ohio	10-1/4	12/01/04	1,000,000
Georgia Power	7-3/8	3/01/01	500,000
Gulf State Utilities Co.:			
First Mortgage	5-1/4	12/01/89	100,000
First Mortgage	4-7/8	7/01/90	200,000
Gulf State	7-7/8	12/01/00	500,000
Hartford Electric	9-1/4	5/01/00	500,000
Hartford Electric	7-5/8	12/01/01	500,000
Houston Lighting & Power:			
First Mortgage	4-3/4	11/01/87	25,000
First Mortgage	4-7/8	8/01/89	75,000
Idaho Power Co.	5	5/15/89	250,000
Illinois Bell Telephone Co.:			
First Mortgage	3-1/8	4/01/84	53,000
First Mortgage	4-1/4	3/01/88	100,000
First Mortgage	4-3/8	3/01/94	100,000
First Mortgage	6	7/01/98	250,000
First Mortgage	8	6/01/05	500,000
Indiana & Michigan Electric Co.:			
Sinking Fund Debentures	5-1/8	6/01/86	100,000
First Mortgage	4-3/4	11/01/88	50,000
Iowa Electric	7-7/8	12/01/00	500,000
Iowa Power & Light Co.	4-5/8	1/01/91	200,000
Kansas City Power	7-1/8	2/01/99	500,000
Kansas Gas & Electric Co.	4-5/8	1/01/91	250,000
Kentucky Utilities Co.	9-1/8	4/01/04	1,400,000
Long Island Lighting Co.:			
First Mortgage	3-5/8	11/01/85	50,000
Louisiana Power & Light	5	4/01/90	200,000
Louisiana Power & Light	7-1/2	11/01/02	500,000
Madison Gas & Electric	9-3/4	5/01/04	1,000,000
Metropolitan Edison	6-7/8	10/01/92	295,000
Michigan Bell Telephone Co.:			
Debentures	6-3/8	2/01/05	500,000
Debentures	4-5/8	8/01/96	175,000
Michigan Bell Telephone	8-5/8	2/01/10	500,000
Minnesota Power & Light Co.	4-4/3	3/01/87	50,000
Mountain State T. & T.	8	10/01/09	1,000,000
Narragansett Electric Co.:			
First Mortgage	3-1/2	3/01/86	200,000
New Bedford Gas	8-1/8	12/01/95	472,000
New England Power	4	6/01/88	200,000
New England Power	7-5/8	7/01/02	1,000,000
New England Power	8-5/8	8/01/03	1,000,000
New England Tel. & Tel.	8	11/15/03	500,000
New England Tel. & Tel.	7-3/8	10/15/07	700,000
New Jersey Bell Telephone Co.	4-7/8	11/01/00	100,000
New Jersey Power & Light Co.	5	10/01/90	100,000
New Orleans Public Service	5	6/01/91	200,000
New York State Electric & Gas Corp.	4-5/8	5/01/91	200,000

<u>Description</u>	<u>Rate of Interest</u>	<u>Maturity</u>	<u>Carrying Value</u>
<u>PUBLIC UTILITIES - Continued</u>			
New York Telephone Co.:			
Refunding Mortgage	3	10/15/89	\$ 110,000
Refunding Mortgage	4-1/8	7/01/93	125,000
Refunding Mortgage	4-7/8	1/01/06	250,000
Refunding Mortgage	7-1/2	3/01/09	500,000
Niagara Mohawk Power Co.:			
General Mortgage	3-7/8	6/01/88	300,000
General Mortgage	4-3/4	4/01/90	200,000
Northern Illinois Gas Co.	5	6/01/84	151,000
Northern Illinois Gas Co.	8	7/01/98	1,000,000
Northern Natural Gas:			
Debentures	7-1/4	5/01/88	300,000
Northern States Power Co.:			
First Mortgage	4	7/01/88	100,000
First Mortgage	6-3/4	5/01/98	500,000
Northwest Bell	7	1/01/09	500,000
Northwestern Bell Tel.	6-1/4	1/01/07	500,000
Northwestern Bell Tel.	8-1/8	3/15/17	500,000
Ohio Edison Co.:			
First Mortgage	4-3/4	6/01/91	100,000
Ohio Power Co.:	6-5/8	10/01/79	500,000
First Mortgage	4-7/8	11/01/87	100,000
Oklahoma Gas & Electric Co.:			
First Mortgage	3-7/8	6/01/88	200,000
First Mortgage	5-1/8	1/01/97	250,000
Pacific Gas & Electric Co.:			
First & Ref. Mortgage	4-1/2	12/01/86	50,000
First & Ref. Mortgage	3-3/8	12/01/88	50,000
First & Ref. Mortgage	4-1/2	6/01/93	200,000
First & Ref. Mortgage	4-5/8	6/01/97	150,000
First & Ref. Mortgage	5-3/8	6/01/98	250,000
Pacific Power & Light Co.	5	10/01/95	100,000
Pacific Tel. & Tel. Co.:			
Debentures	4-3/8	8/15/88	300,000
Debentures	8-3/8	2/01/17	25,000
Debentures	3-5/8	8/15/91	50,000
Debentures	4-5/8	5/01/00	215,000
Pennsylvania Electric Co.:	7-7/8	12/01/01	1,000,000
First Mortgage	3-1/8	3/01/84	100,000
Pennsylvania Power	8-1/4	12/01/06	600,000
Peoples Gas Light & Coke Co.	4-5/8	5/01/86	182,000
Philadelphia Electric Co.:			
First Mortgage	5	10/01/89	100,000
First Mortgage	3-1/8	4/01/85	80,000
Potomac Electric Power Co.	8-3/8	1/15/09	1,500,000
Public Service Co. of Colorado:			
First Mortgage	4-3/8	5/01/87	100,000
First Mortgage	4-1/2	10/01/91	200,000
Public Service Ind.	7-5/8	1/01/01	1,000,000
Public Service Co. of New Hampshire	3-1/4	11/01/84	96,000
Public Service Electric & Gas Co.:			
Debentures	5-3/4	6/01/91	200,000

Description	Rate of Interest	Maturity	Carrying Value
<u>PUBLIC UTILITIES - Continued</u>			
First Ref. Mortgage	4-3/4 %	9/01/95	\$ 250,000
First Ref. Mortgage	4-5/8	8/01/88	65,000
First Ref. Mortgage	5-1/8	6/01/89	200,000
Southern Bell Tel. & Tel.	8-1/4	4/15/16	2,000,000
Southern Bell Tel. & Tel.	8-1/8	5/01/17	1,700,000
Southern California Edison Co.:			
Southern California Edison	7-1/4	7/01/84	1,000,000
First Mortgage	8-1/8	10/15/94	700,000
First Ref. Mortgage	4-3/8	9/01/85	100,000
First Ref. Mortgage	5-1/4	5/15/91	250,000
First Ref. Mortgage	6-3/8	2/15/93	400,000
South Central Bell Tel.	8-1/2	11/01/01	500,000
Southern New England Tel.	8-1/8	5/01/08	500,000
Southwestern Bell Tel. Co.:			
Southwestern Bell:	8-3/4	8/01/07	1,000,000
Debentures	6-3/4	6/01/08	250,000
Southwest Bell Telephone	8-1/4	9/01/05	750,000
Southwest Bell Telephone	6-7/8	2/01/11	500,000
Southern Bell Tel. & Tel.	8	2/15/14	2,000,000
Southwestern Bell Tel.	8-1/4	3/01/14	2,000,000
Southwestern Bell Tel.	9-1/4	1/15/15	2,000,000
Southwestern Public Service Co.	3.35	2/01/81	50,000
Tampa Electric Co.	4-1/4	7/01/88	150,000
Tennessee Gas Transmission Co.:			
First Mortgage Pipeline	5-1/4	11/01/79	78,000
Tennessee Valley Authority	8-1/4	10/15/94	500,000
Tennessee Valley Authority	7-3/4	7/01/98	1,000,000
Tennessee Valley Authority	7.7	10/01/98	3,000,000
Union Electric Co. of Missouri:			
First Mortgage	4-3/8	3/01/88	100,000
First Mortgage	7-3/8	5/01/99	500,000
The Union Light, Heat, & Power Co.	5	7/01/89	200,000
Utah Power & Light Co.	4-7/8	9/01/90	100,000
Virginia Electric & Power Co.:			
First Ref. Mortgage	3-7/8	6/01/88	200,000
First Ref. Mortgage	4-5/8	9/01/90	150,000
Virginia Electric	7-3/8	3/01/01	500,000
Washington Gas & Light Co.	4-7/8	5/01/86	100,000
West Penn Power Co.:			
First Mortgage	2-7/8	3/01/79	100,000
First Mortgage	4-7/8	12/01/95	275,000
West Penn Power	9-5/8	6/01/00	500,000
Western Union Telegraph Co.	5-1/4	2/01/87	250,000
West Texas Utilities	7-1/4	1/01/99	250,000
Wisconsin Power & Light Co.	8	7/01/01	1,000,000
Wisconsin Public Service Corp.	3-1/4	10/01/84	100,000

Description	Rate of Interest	Maturity	Carrying Value
<u>PUBLIC UTILITIES - Continued</u>			
Wisconsin Telephone Co.:	7-1/4		
Debentures	5-1/2	5/15/99	\$ 500,000
		7/01/92	25,000
Total Public Utilities			\$ 81,896,000
<u>BANKS</u>			
R.I. Hospital Trust	8		
Chase Manhattan Bank	4-7/8	8/31/84	\$ 3,500,000
Citicorp.	5.7	5/01/93	500,000
J.P. Morgan & Co.	8.0	6/30/00	1,500,000
Philadelphia National Bank	5-1/2	3/15/86	2,000,000
Columbus National Bank	8.5	3/01/92	200,000
		2/23/87	300,000
Total Banks			\$ 8,000,000
<u>INDUSTRIAL AND MISCELLANEOUS</u>			
American Car & Foundry Co.:			
Equipment Trust	5-1/2 %		
American Brands, Inc.	8-1/8	4/15/82	\$ 67,000
American Can Co.:		3/01/85	1,000,000
Debentures	3-3/4	4/01/88	200,000
Debentures	4-3/4	7/15/90	100,000
American Cyanamid Co.	8-3/8	3/15/06	2,500,000
American Tobacco Co.	5-7/8	7/01/92	250,000
Avco Corp.	7-1/2	11/30/93	250,000
Baxter Laboratories	4-3/8	11/01/91	250,000
Beneficial Finance Co.:			
Debentures	4-3/4	5/15/93	100,000
Citicorp	8.45	2/15/07	500,000
Bethlehem Steel Consolidated Mortgage Sinking Fund, Series K			
Debentures	5.4	1/01/79	100,000
Bethlehem Steel Corp.	8.45	1/15/92	350,000
Burroughs Corp.	4-3/8	3/01/05	600,000
Commercial Credit Corp.:		7/01/83	172,000
Debentures	4-7/8	9/15/87	150,000
Continental Oil Co.	3	11/01/84	95,000
Dow Chemical Co.	7-3/4	7/15/99	500,000
Dow Chemical Co.	8-7/8	5/01/00	849,000
Dow Chemical Co.	8-1/2	1/15/06	2,500,000
Dupont E.I. DeNemours	8-4/5	11/15/04	2,000,000
Exxon Corp.	6.0	11/01/97	1,000,000
Family Finance Corp.	5	10/15/81	200,000
Food Machine Chemical	4-1/4	7/15/92	250,000
Ford Motor Co.	7.85	3/01/88	250,000
Ford Motor Co.	8-1/8	1/15/90	487,000

<u>Description</u>	<u>Rate of Interest</u>	<u>Maturity</u>	<u>Carrying Value</u>
General Motors Acceptance Corp.:			
Debentures	4	3/01/79	\$ 200,000
Debentures	4-7/8	12/01/87	750,000
General Motors Acceptance	7-1/4	6/02/80	250,000
General Motors Acceptance	4-5/8	9/01/82	100,000
General Motors Acceptance	7.3	7/15/85	500,000
General Motors Acceptance	4.5	11/01/85	2,040,000
General Motors Acceptance	7-1/8	9/01/92	500,000
General Motors Acceptance	8-1/8	10/15/96	1,000,000
General Motors Acceptance	8-1/4	11/15/06	400,000
Gulf Oil Corp.	5.35	6/15/91	250,000
Halliburton Co.	8-1/4	11/15/81	2,000,000
Household Finance Corp.:			
Household Finance	7-1/4	1/01/90	200,000
Debentures	4-7/8	9/15/93	150,000
Debentures	5	7/01/82	250,000
Industrial Equipment Trust	6-3/4	5/15/83	83,000
International Harvester Co.	4-5/8	11/01/79	350,000
Lakehead Pipeline Co.	7-1/8	4/15/93	400,000
Liggett & Myers Tobacco Co.	6	5/01/92	500,000
MacMillan L.T.D.	6-1/2	7/15/92	500,000
Mobile Oil Co.	8.5	6/15/01	173,200
Monsanto Chemical Co.	8-3/4	5/15/08	1,000,000
Montgomery Ward & Co.	4-7/8	8/01/90	250,000
Nabisco	7-3/4	5/01/01	500,000
Northwest Bancorporation	4-3/4	10/15/90	250,000
Pan American Airlines	5-1/4	2/15/89	200,000
Pittsburg Plate Glass	9	6/15/95	500,000
Scott Paper Co.	8-7/8	6/01/00	808,000
Sears, Roebuck Acceptance Corp.:			
Debentures	5	7/15/82	50,000
Debentures	4-3/4	8/01/83	722,000
Sohio B.P. Trans.:	8-5/8	2/01/83	300,000
Standard Oil of California	5-3/4	8/01/92	1,250,000
Standard Oil of Indiana	4-1/2	10/01/93	192,000
Texaco, Inc.	3-5/8	5/01/83	300,000
Trailer Train Co.	7-1/8	12/01/82	66,667
Trans. World Airlines	4	3/01/92	200,000
Western Electric	8-3/8	10/01/95	965,000
Xerox Corp.	8.2	11/01/82	2,000,000
Xerox Corp.	6	11/01/95	11,400
Total Industrial and Miscellaneous			\$ 32,881,267

COMMON STOCKSBANKS AND HOLDING COMPANIES

	<u>Number of Shares</u>	<u>Cost</u>
Bank of America	25,000	210,475.21
B.T. New York Corp.	7,000	301,812.52
Chase Manhattan	17,000	543,992.25
Chemical Bank New York Trust	6,000	210,886.22
Citicorp	20,000	603,786.44
Conill Corporation	13,000	106,685.89
First National Bank - Boston	15,196	355,743.33
Industrial National Bank	66,285	431,281.75
J.P. Morgan	12,000	164,956.82
R.I. Hospital Trust National	49,784	722,466.03
State Street Bank & Trust	5,670	113,635.00
Western Bancorporation	22,900	696,242.18
old Stone Bank	8,000	104,291.00

CHEMICAL & DRUGS

American Cyanamid	35,000	972,539.88
American Home	44,000	1,015,629.50
Becton Dickinson	15,000	610,610.24
Bristol Myers	39,000	1,289,800.42
Dow Chemical Corp.	50,000	1,255,900.24
E.I. Dupont DeNemours	5,000	591,040.41
Monsanto Co.	15,999	690,827.60
Pfizer (Chas.) Co.	34,000	1,002,291.98
G.D. Searle & Co.	30,000	717,250.33
Union Carbide	29,000	1,281,771.25
Warner Lambert	24,000	957,970.62

CONSTRUCTION MATERIAL & EQUIPMENT

Caterpillar Tractor	31,000	1,268,714.00
Deere Corp.	50,000	1,264,884.86
Johns Manville	11,000	275,175.72
U.S. Gypsum Co.	34,000	1,030,315.10
Weyerhaeuser Corp.	29,000	621,246.16

ELECTRONICS

Burroughs Corporation	6,000	548,040.80
Emerson Electric Corp.	30,000	1,018,103.79
General Electric Co.	24,000	992,590.23
Honeywell Inc.	7,000	557,559.67
International Bus. M.	11,549	2,011,919.44
International Tel. & Tel.	26,000	764,842.49

<u>ELECTRONICS - Continued</u>	Number of Shares	Cost
Radio Corp. of America	19,000	480,115.75
Texas Instruments	6,000	267,726.29
Westinghouse Electric	16,000	381,141.42

<u>FOOD</u>		
Campbell Soup Co.	14,000	320,455.28
Corn Products Co.	23,000	811,511.30
General Foods	38,500	1,164,504.10
Squibb, Beech-Nut, Inc.	23,000	655,023.81

<u>INSURANCE</u>		
Aetna Life	10,000	218,587.40
Chubb Corporation	18,000	445,360.02
Connecticut General Life	26,250	704,348.58
Franklin Life Insurance Co.	15,000	385,833.31
I N A Corporation	11,000	443,223.15
Liberty Nat'l Life	22,666	498,305.06
Transamerica Corp.	26,000	311,722.56
US Fidelity	18,810	335,678.70

<u>RAILROADS</u>		
Missouri Pacific Corp.	25,000	1,135,434.52

<u>MISCELLANEOUS</u>		
American Hospital Supply	9,000	155,520.21
Avon Products	4,000	228,000.00
A.T. Cross Corp.	10,000	281,791.15
Ford Motor Corp.	20,000	911,682.82
Foxboro Co.	27,000	498,650.07
Friendly Ice Cream Corp.	15,000	395,204.29
General Motors Corp.	22,100	1,309,206.64
Gillette Co.	20,000	641,178.69
Minnesota Mining	14,000	701,147.83
Owens Corning	20,000	427,679.65
Schlumberger	10,000	694,088.19
Standard Brands	44,000	1,084,222.63
Xerox	22,000	1,504,827.51

<u>PETROLEUM</u>		
Atlantic Richfield Co.	34,690	1,416,391.42
Continental Oil Corp. of Delaware	18,000	534,465.64
Exxon Corporation	37,000	1,396,666.94
Gulf Oil Corp.	32,000	860,965.45
Mobil Oil	10,924	513,271.38
Phillips Petroleum Co.	38,000	633,136.40
Standard Oil of Calif.	28,000	807,005.15

PETROLEUM - Continued

	Number of Shares	Cost
Standard Oil of Ind.	29,200	857,249.58
Texaco, Inc.	37,000	1,135,194.70

PAPER AND PAPER PRODUCTS

Crown Zellerbach Corp.	12,000	
International Paper Co.	7,000	357,787.79
Kimberly Clark Corp.	31,000	238,993.05
Scott Paper Co.	36,000	1,146,479.63
		751,776.24

PHOTOGRAPHIC PRODUCTS

Eastman Kodak Co.	14,000	675,218.04
Polaroid Corp.	6,000	408,051.65

RETAIL STORES

Federated Stores	25,000	954,461.22
Sears, Roebuck & Co.	35,000	913,529.54

PUBLIC UTILITIES

Allegheny Power	26,000	596,211.74
American Electric	23,200	694,040.91
American Tel. & Tel.	29,492	1,659,670.07
Arizona Public Service	27,000	645,956.71
Central & Southwest	64,000	1,162,328.00
Consumers Power Co.	19,000	584,647.57
Florida Power & Light	27,000	927,935.93
Florida Power Corp.	32,000	1,091,004.32
General Public Utility	24,000	609,974.42
Gulf State	22,000	458,359.43
Iowa Electric	20,000	387,012.34
Middle So. Utilities, Inc.	17,000	306,334.40
New England Electric System	30,000	738,750.00
Niagara Mohawk Power	58,000	1,007,267.79
Northeast Utilities	20,000	290,941.45
Ohio Edison	22,000	535,134.57
Panhandle E. Pipeline	34,000	1,230,160.31
Southern Company	34,000	791,172.09
Texas Gas Transmission	19,000	624,729.68
Texas Utilities Co.	38,000	898,985.58
Union Electric Co.	27,000	509,211.43
Virginia Electric	35,000	771,255.66

Total Common Stocks

\$ 72,819,178.52

<u>PREFERRED STOCKS</u>	<u>Number of Shares</u>	<u>Cost</u>
Champion International	6,000	175,456.15
I T E L Corp.	10,000	150,000.00
Units Corp. Securities	4,000	100,040.00
Woolworth, F.W.	6,000	<u>313,325.31</u>
Total Preferred Stocks		<u><u>738,821.46</u></u>