

REPORT OF THE ACTUARY

On An Actuarial Valuation of the System
as of June 30, 1970

This report presents the results of an actuarial valuation of the Employees' Retirement System of the State of Rhode Island as of June 30, 1970.

The purpose of the valuation is to establish the liabilities and reserve requirements for the accrued and prospective pension credits under the prescribed benefit schedule. An actuarial balance sheet is prepared showing the accrued and prospective liabilities and the present and prospective assets to cover these liabilities.

A determination is made of the liabilities incurred for the several benefit obligations. The reserves required to meet these accrued liabilities for the lifetime of the members are established. The factors of mortality, turnover in employment and interest earnings are basic in these calculations. Other factors are prominent in actuarial procedure, such as rates of salary and their progression until retirement of the members, disability incidents and ages of retirement of the members.

Rates reflecting these basic factors were formulated in a previous survey and investigation of operating experience of the system. Because of the marked variance in basic

characteristics, separate rates are used for State employees and teacher-members. A further division was made between male and female members to give effect to the diverse physiological conditions and employment factors affecting the two sexes. Some variations from these established standards frequently occur in current operations. These are also considered by means of specific adjustments of the results of the valuation.

MEMBERSHIP STATISTICS

Statistics forming the basis of the valuation were compiled and tabulated. Detailed tables reflecting this data are presented in the appendix. A summary thereof is as follows:

	<u>State Employees</u>		<u>Teachers</u>	
<u>ACTIVE MEMBERS</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
Number	6,585	6,255	3,514	6,419
Percent of total	51.4%	48.7%	35.4%	64.6%
Annual salaries	\$47,384,053	\$33,604,126	\$30,866,049	\$54,160,909
Average salary	\$7,196	\$5,372	\$8,784	\$8,438
Average age	45.7	44.0	35.9	40.0
Average service	9.4	8.2	9.4	10.5

<u>RETIREMENTS</u>	<u>State Employees</u>		<u>Teachers</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
Number	1,027	798	264	1,357
Percent of total	56.3%	43.7%	16.3%	83.7%
Average age at June 30, 1970	71.6	71.4	71.0	72.4
Service retirements during year	124	102	32	157
Terminations	52	32	8	47
Average age of re-tirements during year	64.5	65.0	64.1	64.4

BASIS OF VALUATION

The benefit and contribution provisions forming the basis of this valuation are summarized in the appendix. The rate of interest used in the valuation was 4-1/2% per annum. The actuarial functions that were applied were those established in the previous actuarial surveys and investigations of the system with some modifications to reflect current operating trends and developments.

RESULTS OF VALUATION

A test of progress in the operation of any retirement system is the extent to which coverage is provided for the accrued liabilities for earned pension credits in comparison with the prior period. This assumes that the system is fully funded, that is, the cost of the accruing pension credits are financed

currently in full measure, and that the unfunded accrued liability is being systematically amortized. Pension liabilities represent discounted sums reflecting the interest factor, therefore the established liabilities for prior years accrue currently at interest at the assumed rate.

The law prescribes a partial method of funding the employer's share of the cost of the system. Contributions by the employer are to be the average annual requirements for benefits according to a 5-year projection of payments by the system. The rate per cent of contributions established in 1967 was 5.55% of payroll for State employees and 7.80% for teachers, with the latter cost being divided equally between the State and cities and towns. Partial funding results in a deferment of part of the incurred accruing cost, therefore the unfunded accrued liability has been and will continue to be in an upward trend for an indeterminate period.

A reexamination of the aforesaid rates is presently in progress. These rates will be established to take effect as of July 1, 1972.

The full accruing cost of financing current service on account of the members of the system, as a percentage of salary, is as follows:

State employees	8.5%
Teachers	<u>10.1%</u>
Composite rate	<u>9.2%</u>

VALUATION BALANCE SHEET

A Valuation Balance Sheet is presented in the following pages reflecting the financial condition of the system at June 30, 1970. From a strict technical standpoint, a retirement system is considered to be in a sound financial condition when its present assets are equal to the difference between (a) the total of all accrued and prospective liabilities, and (b) the present value of future contributions to be received by the system. A system attaining this status will have provided in full for all accrued pension credits in accordance with actuarial reserve requirements.

VALUATION BALANCE SHEET

JUNE 30, 1970

VALUATION BALANCE SHEET - JUNE 30, 1970
Statement of Assets, Liabilities and Reserves

A S S E T S

NET PRESENT ASSETS:

Cash	\$ 1,186,061.00
Investments (at amortized book value for bonds - cost for stocks)	128,955,192.00
Accrued Interest Receivable	1,414,750.00

DEFERRED ASSETS:

Present value of future service credits on account of service subsequent to July 1, 1970	
State employees - Members	\$11,136,187.00
State of Rhode Island	20,222,032.00
Teacher-Members - Members	12,187,631.00
State of Rhode Island	15,162,685.00
Cities and Towns	<u>15,162,685.00</u>
	73,871,229.00

UNFUNDED ACCRUED LIABILITY:

Due from employers for unfunded accrued pension credits -	
State of Rhode Island	\$91,276,000.00
Cities and Towns ^{1/}	<u>47,307,000.00</u>
	138,583,000.00

TOTAL ASSETS

\$344,010,226.00

^{1/} The State of Rhode Island and the cities and towns share equally in the financing of teachers' pensions.

VALUATION BALANCE SHEET - JUNE 30, 1970
Statement of Assets, Liabilities and Reserves

LIABILITIES AND RESERVES

CURRENT LIABILITIES:

Unclaimed Benefits	\$ 16,344.00
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FUTURE SERVICE LIABILITY:

State employees	\$31,358,219.00	
Teacher-members	<u>42,513,001.00</u>	73,871,220.00

RESERVE REQUIREMENTS:

RESERVE FOR MEMBER CONTRIBUTIONS -

<u>State Employees -</u>		
For service retirement and disability annuities	\$12,769,207.00	
For future refunds	<u>13,109,334.00</u>	25,878,541.00

<u>Teacher-Members -</u>		
For service retirement and disability annuities	\$21,009,149.00	
For future refunds	<u>10,122,873.00</u>	31,132,022.00

RESERVE FOR SURVIVOR BENEFITS 1,854,862.00

RESERVE FOR EMPLOYER CONTRIBUTIONS -

For service retirement and disability annuities on active members -

<u>State Employees -</u>		
Total requirements	\$57,446,206.00	
Employee contributions	<u>13,109,334.00</u>	44,336,872.00

<u>Teacher-Members -</u>		
Total requirements	\$99,774,888.00	
Employee contributions	<u>21,009,149.00</u>	78,765,739.00

RETIREMENT AND BENEFITS RESERVE -

State Employees	26,893,622.00
Teacher-Members	<u>59,261,004.00</u>

TOTAL LIABILITIES AND RESERVES

\$344,010,226.00

The following explanation of the several items comprising the Valuation Balance Sheet is given to facilitate an understanding of their function and meaning.

Present Assets comprise the assets on hand as shown by the financial reports prepared by the system.

Deferred Assets consist of the obligations of the members and the employers for service to be rendered subsequent to June 30, 1970. They represent actuarially determined amounts, giving effect to the factors of mortality, interest, turnover and others that enter into the computation of liabilities for annuities and benefits that accrue on account of future service.

Unfunded Accrued Liability constitutes the amounts accrued and unpaid on account of service rendered prior to the balance sheet date. This is an accrued obligation of the State and the cities and towns to be discharged in future years by increased financial allocations to the system.

Current Liabilities represent current accounts payable at the close of the year as shown by the financial statements prepared by the system.

Future Service Liability is an offset to Deferred Assets and represents the present value of the proportionate pension credits to be earned by the members during future service extending from the balance sheet date to the assumed ages of retirement.

Reserve for Members' Contributions consists of the total of members' contribution credits at the balance sheet date. Part of these credits is payable as a refund in future years to members withdrawing from service on account of resignation, dismissal or death. The remainder is to be applied to finance a portion of the annuities and benefits payable to members now in service who will ultimately qualify for retirement.

Reserve for Survivor Benefits represents the accumulation of contributions by the teacher-members and the cities and towns towards the survivor benefit provision specifically applicable to these members.

Reserve for Employer Contributions represents the amounts that must be provided to finance the employers' portion of the accrued pension credits for those employees now in service who will ultimately qualify for retirement and disability pensions.

Retirement and Benefits Reserve constitutes the amount reserved to pay out during the future lifetime of the pensioners presently on the pension roll the pensions granted and in force at the balance sheet date.

CERTIFICATION

The accompanying Valuation Balance Sheet exhibits all assets, accrued liabilities and reserves of the system as of June 30, 1970. Present assets were taken from the financial statements submitted by the accountant of the system.

In our opinion, this Valuation Balance Sheet correctly presents the condition of the Employees' Retirement System of the State of Rhode Island at June 30, 1970 after giving effect to all accrued liabilities and actuarial reserve requirements for the several annuities and benefits under the applicable law in effect at such date.

A. A. Weinberg

Actuary

November 10, 1970

FINANCIAL STATEMENTS

1. Financial Balance Sheet as of June 30, 1970
2. Statement of Revenues and Expenditures for the Fiscal Year Ended June 30, 1970
3. Statement of Cash Receipts and Disbursements for the Fiscal Year Ended June 30, 1970
4. Comparative Statement of Investment Receipts and Disbursements, Fiscal Years Ended June 30, 1970 and June 30, 1969
5. Statement of Net Investment Earnings for Fiscal Year Ended June 30, 1970

FINANCIAL BALANCE SHEET - JUNE 30, 1970

A S S E T S

Cash		
Accrued Interest Receivable	\$130,148,195.20	
Investments		
Less Unamortized Discounts and Premiums (Net)	<u>1,193,002.68</u>	
Net Investments		
Total Assets		

\$ 1,186,061.98
1,414,753.09

128,955,192.58
\$131,556,007.59

LIABILITIES AND RESERVES

<u>Current Liabilities</u>		
Unclaimed Benefits	\$ 16,344.98	

Members' Contribution Reserves

State Employees	\$25,878,541.80	
Teachers	31,132,022.78	
Teachers' Survivors	<u>1,854,862.90</u>	
Total Members' Reserves		58,865,427.48

General Reserves

State Employees	\$46,234,872.75	
Teachers	23,103,888.52	
Teachers' Survivors	3,317,260.18	
Certain State Employees	15,700.34	
Certain Teachers	<u>2,513.34</u>	
Total General Reserves		<u>72,674,235.13</u>
Total Liabilities and Reserves		<u>\$131,556,007.59</u>

STATEMENT OF REVENUES AND EXPENDITURES
FOR THE FISCAL YEAR ENDED JUNE 30, 1970

REVENUES

Member Contributions -

State Employees	\$ 4,055,487.48	
Teachers	5,589,082.68	
Teachers' Survivors	396,160.67	
Death Benefit Premiums -		
Retired Legislators	\$ 975.00	
Retired Employees	<u>534.98</u>	
		<u>1,509.98</u>
		\$10,042,240.81

General Fund Appropriations -

State Employees	\$ 4,373,924.07	
Teachers	2,709,828.00	
Certain State Employees	21,720.00	
Certain Teachers	<u>2,100.00</u>	
		<u>7,107,572.07</u>

Municipal Contributions -

Teachers	\$ 3,467,052.28	
Teachers' Survivors	<u>393,442.90</u>	
		3,860,495.18

Other Contributions -

Miscellaneous Refunds	\$ 3,604.78	
Unclaimed Benefits	8,420.46	
Miscellaneous Receipts	<u>60,744.83</u>	
		<u>72,770.07</u>

Investment Income -

Investment Earnings	\$ 6,174,498.80	
Gain on Sales	<u>169,845.38</u>	
		<u>6,344,344.18</u>

TOTAL REVENUES

\$27,427,422.31

EXPENDITURES

Pensions and Death Benefits -

State Employees	\$ 3,765,740.82	
Legislators	171,618.21	
Teachers	6,698,334.15	
Teachers' Survivors	40,149.00	
Certain State Employees	16,739.90	
Certain Teachers	1,840.00	\$10,694,422.08

Refunds of Contributions -

State Employees	\$ 945,201.02	
Teachers	958,145.41	
Teachers' Survivors	53,622.36	
Interest, Teachers' Survivors Contribution Refunds	1,862.68	
To Municipalities a/c Teachers	38,208.31	
To Municipalities a/c Teachers' Survivors	4,891.84	2,001,931.62

Unclaimed Benefits 6,183.47

Miscellaneous Refunds 672.77

Investment Expense -

Postage & Insurance on Purchases 18.97

TOTAL EXPENDITURES

EXCESS OF REVENUE OVER EXPENDITURES

\$12,703,228.91

\$14,724,193.40

STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS

FISCAL YEAR ENDED JUNE 30, 1970

Cash Balance, July 1, 1969

\$ 1,667,167.12

Receipts:

Investments Sold and Matured	\$52,848,593.56	
Investment Earnings	5,552,664.21	
Discounts on Purchases	364,731.60	
Gain on Sales	169,845.38	\$58,935,834.75

Member Contributions -

State Employees	\$ 4,055,487.48	
Teachers	5,589,082.68	
Teachers' Survivors	396,160.67	
Ins. Benefit Prem. Retired Employees	534.98	
Ins. Benefit Prem. Retired Legislators	975.00	10,042,240.81

General Fund Contributions -

State Employees	\$ 4,373,924.07	
Teachers	2,709,828.00	
Certain State Employees	21,720.00	
Certain Teachers	2,100.00	7,107,572.07

Municipal Contributions -

Teachers	\$ 3,467,052.28	
Teachers' Survivors	393,442.90	3,860,495.18

Other Contributions -

Unclaimed Benefits	8,420.46	
Miscellaneous Receipts	64,349.61	

TOTAL RECEIPTS

80,018,912.88

TOTAL AVAILABLE

\$81,686,080.00

Statement of Cash Receipts and Disbursements - continued

Disbursements -

Investments Purchased	\$67,691,378.06	
Accrued Interest on Purchases	79,206.05	
Premiums on Purchases	26,205.00	
Postage & Insurance on Purchases	18.97	\$67,796,808.08

Pension Benefits - Death Benefits - Death Retirement Allowances -

State Employees	\$ 3,765,740.82	
Teachers	6,698,334.15	
Legislators	171,618.21	
Teachers' Survivors	40,149.00	
Certain State Employees	16,739.90	
Certain Teachers	1,840.00	10,694,422.08

Refunds of Contributions -

State Employees	\$ 945,201.02	
Teachers	958,145.41	
Teachers' Survivors	53,622.36	
Interest, Teachers' Survivors Contribution Refunds	1,862.68	
Municipalities a/c Teachers	38,208.31	
Municipalities a/c Teachers' Survivors	4,891.84	2,001,931.62

Unclaimed Benefits 6,183.47

Miscellaneous Refunds 672.77

TOTAL DISBURSEMENTS

\$80,500,018.02

CASH BALANCE, JUNE 30, 1970

\$ 1,186,061.98

COMPARATIVE STATEMENT OF INVESTMENT EARNINGS
RECEIPTS AND DISBURSEMENTS
FISCAL YEARS ENDED JUNE 30, 1970 AND JUNE 30, 1969

	<u>1969-1970</u>	<u>1968-1969</u>
<u>RECEIPTS:</u>		
Interest & Dividends		
Discounts on Purchases	\$5,552,664.21	\$4,792,240.10
Gain on Sales	364,731.60	732,189.90
	169,845.38	1,143,931.16
<u>Gross Receipts</u>	<u>\$6,087,241.19</u>	<u>\$6,668,361.16</u>
<u>DISBURSEMENTS:</u>		
Accrued Interest on Purchases	\$ 79,206.05	\$ 75,527.68
Premiums on Purchases	26,205.00	53,013.00
Postage and Insurance on Purchases	18.97	153.06
<u>Total Disbursements</u>	<u>\$ 105,430.02</u>	<u>\$ 128,693.74</u>
<u>NET INVESTMENT RECEIPTS FOR THE YEAR</u>	<u>\$5,981,811.17</u>	<u>\$6,539,667.42</u>