

REPORT ON AN ACTUARIAL VALUATION OF THE ASSETS
AND LIABILITIES OF THE EMPLOYEES RETIREMENT SYSTEM
OF THE STATE OF RHODE ISLAND AS OF JUNE 30, 1957

This report presents the results of an actuarial valuation of the assets and liabilities of the Employees Retirement System of the State of Rhode Island as of June 30, 1957.

Basis of valuation

The benefit and contribution provisions of the plan of operation governing the system forming the basis of this valuation are summarized in the appendix.

The valuation was made according to the 1937 Standard Annuity Mortality Table and 3% interest.

Membership

	- State Employees -	
	Male	Female
Number of members	4,819	3,309
Proportion of total	59.3%	40.7%
Annual salaries	\$19,096,968.00	\$10,923,439.00
Average age	46.8	42.2
Average total service	8.3	7.4

	- Teacher-members -	
	Male	Female
Number of members	1,536	3,990
Proportion of total	27.8%	72.2%
Annual salaries	\$7,741,941.00	\$19,500,498.00
Average age	41.0	44.8
Average total service	11.3	15.0

Beneficiaries

State Employees - Male

	<u>Number</u>	<u>Annual Payments</u>	<u>Reserve Requirements</u>
Retirement annuities -			
Maximum rate	134	\$170,622	\$1,508,859
Option 1	25	30,958	228,978
Option 2	15	21,479	296,022
Option 3	8	17,030	203,913
Actuarial equivalent	1	1,349	17,090
Disability annuities -			
Ordinary disability	9	10,603	131,453
Ordinary disability -			
Option 1	1	644	8,156
Accidental disability	5	2,088	29,574
Totals	198	\$254,773	\$2,424,045

(continued)

Beneficiaries - (Continued)

State Employees - Female

	<u>Number</u>	<u>Annual Payments</u>	<u>Reserve Requirements</u>
Retirement annuities -			
Maximum rate	93	\$107,994	\$1,185,643
Option 1	13	15,258	141,646
Actuarial equivalent	2	5,530	88,335
Disability annuities -			
Ordinary disability	6	3,401	51,371
Ordinary disability - Option 1	1	645	8,696
Accidental disability	2	2,524	33,229
Beneficiary annuities	<u>5</u>	<u>5,955</u>	<u>66,339</u>
Totals	<u>122</u>	<u>\$141,307</u>	<u>\$1,575,259</u>

Teachers - Male

	<u>Number</u>	<u>Annual Payments</u>	<u>Reserve Requirements</u>
Retirement annuities -			
Maximum rate	52	\$139,787	\$1,345,442
Option 2	8	14,338	209,108
Option 3	9	21,198	271,459
Actuarial equivalent	4	8,711	119,163
Disability annuities -			
Ordinary disability	<u>5</u>	<u>7,874</u>	<u>109,961</u>
Totals	<u>78</u>	<u>\$191,908</u>	<u>\$2,055,133</u>

(continued)

Beneficiaries - (Continued)

Teachers - Female

	<u>Number</u>	<u>Annual Payments</u>	<u>Reserve Requirements</u>
Retirement annuities -			
Maximum rate	412	\$ 985,998	\$11,094,227
Option 1	5	11,680	123,557
Option 2	2	2,741	42,819
Option 3	1	1,627	21,781
Actuarial equivalent	3	8,018	125,532
Disability annuities -			
Ordinary disability	26	38,397	600,042
Accidental disability	<u>1</u>	<u>2,667</u>	<u>60,334</u>
Totals	<u>450</u>	<u>\$1,051,128</u>	<u>\$12,068,292</u>

Summary of beneficiaries

	<u>Number</u>	<u>Annual Payments</u>	<u>Reserve Requirements</u>
State Employees -			
Male	198	\$ 254,773	\$ 2,424,045
Female	122	141,307	1,575,259
Teachers -			
Male	78	191,908	2,055,133
Female	<u>450</u>	<u>1,051,128</u>	<u>12,068,292</u>
Totals	<u>848</u>	<u>\$1,639,116</u>	<u>\$18,122,729</u>

Results of valuation - Unfunded liability \$48,645,898.00

Total liabilities at June 30, 1957, amounted to \$98,567,284.00, of which the sum of \$67,370,377.00, had accrued at June 30, 1957. The assets available to meet these liabilities, after providing for future refunds, totalled \$18,724,479.00. The accrued unfunded obligation, therefore, was \$48,645,898.00. This constitutes a deferred obligation of the State of Rhode Island and the cities and towns, to be discharged by future contributions under the prescribed method of financing.

Reserves for annuities and benefits - \$18,122,729.00

The reserve liabilities on account of persons in receipt of pensions and benefits constitute the amounts required to pay out these pensions and benefits during the remainder of the lifetime of the beneficiaries.

Accrued liability on active members - \$49,247,648.00

This liability consists of the earned pension credits of the State employees and teachers prior to July 1, 1936 and July 1, 1949, respectively, and earned pension credits for service rendered by the members between those dates and June 30, 1957.

Future service liability - \$31,196,907.00

This liability represents the value of the benefits to be earned by the present members during service subsequent to June 30, 1957. Effect has been given to the probable separations from service of certain members during future years due to death or resignation.

Other benefits

The experience of the system for a number of years indicates that a much smaller number of claims for death and disability benefits has been incurred than in the case with other governmental agencies. Disability claims will probably increase in future years, especially in the case of teacher-members although a reverse trend may be expected in connection with death incidents.

Valuation balance sheet

The accompanying Valuation Balance Sheet presents the financial condition of the system from a technical standpoint at June 30, 1957, taking into account all accrued and prospective liabilities for benefit payments to be made subsequent to that date.

VALUATION BALANCE SHEET - JUNE 30, 1957

A S S E T S

PRESENT ASSETS

Net present assets	\$26,248,656.00	
Less, releases of member contributions on account of refunds and death benefits	<u>7,524,177.00</u>	\$18,724,479.00

DEFERRED ASSETS

Obligation of the members and the employer for retirement and disability annuities covering service of members for the remainder of their active working lifetime subsequent to June 30, 1957 -

State Employees -		
Members	\$ 5,585,912.00	
State	<u>8,480,773.00</u>	14,066,685.00
Teachers -		
Members	\$ 4,946,180.00	
State	6,092,021.00	
Cities and towns	<u>6,092,021.00</u>	17,130,222.00

DEFERRED OBLIGATION OF THE STATE OF RHODE ISLAND AND CITIES AND TOWNS

Accrued Unfunded Liability - Present value of annuities and benefits in force, and accrued liabilities for retirement annuities and disability annuities on account of service prior to July 1, 1957, after credit for available present assets		<u>48,645,898.00</u>
Total Assets		<u>\$98,567,284.00</u>

VALUATION BALANCE SHEET - JUNE 30, 1957

L I A B I L I T I E S

ACCRUED LIABILITIES

Reserve requirements
for annuities and
benefits in force -

State Employees	\$ 3,999,304.00	
Teachers	<u>14,123,425.00</u>	\$18,122,729.00

Present value of accrued
requirements for retire-
ment annuities, disability
annuities and death bene-
fits at June 30, 1957 -

State Employees -

Male	\$11,289,695.00	
Female	<u>5,245,790.00</u>	16,535,485.00

Teachers -

Male	\$ 6,389,174.00	
Female	<u>26,322,989.00</u>	32,712,163.00

PROSPECTIVE LIABILITIES

Present value of retirement
annuities and disability
annuities on account of
service to be rendered
after June 30, 1957 -

State Employees	\$14,066,685.00	
Teachers	<u>17,130,222.00</u>	<u>31,196,907.00</u>

Total Liabilities \$98,567,284.00

The valuation discloses that the unfunded accrued liability of the system increased during the year from \$41,967,246.85 to \$48,645,898.00. This increase was due principally to the partial reserve method of financing the system.

To a minor extent it may be attributed to a substantial increase in salary rates of the members, particularly State employees, effective July 1, 1957. While the effective date is after the date of valuation, this change was taken into account. Although the salary scale applied in previous valuations provided for systematic increases in salaries, the relatively large increase that occurred on July 1, 1957 necessitated a revision of the salary scale to conform to a new set of conditions.

Under the method of financing prescribed for the system, the unfunded accrued liability will continue to increase for a number of years. This increase can be mitigated by an upward adjustment in contribution rates on the part of the State and the cities and towns, as well as the members of the system. The necessity for such adjustment is indicated by the operating experience of the past years and by a computed projection of expected payments by the system for the ensuing ten years.

To illustrate the financial status of the system at this time on a current basis, a comparison is made of total present assets with the amount of current and matured obligations. The latter item is represented by the contribution credit accounts of the

members, and the amount required to pay out the annuities and benefits entered upon and in force:

Members' Contribution Credits -

State Employees	
Teachers	\$ 7,822,868.69
	5,923,327.27

Present value of annuities and benefits entered upon and in force -

State Employees	3,999,304.00
Teachers	<u>14,123,425.00</u>

Total current and matured obligations	\$31,868,924.96
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Total present assets	<u>26,248,656.57</u>
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Excess of current liabilities over present assets	\$ 5,620,268.39
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The deficiency in present assets to meet the current liabilities, consisting of members' accumulated contributions and the actuarial value of annuities in force increased during the year from \$3,787,008.27 to \$5,620,268.39. This makes for an unsatisfactory financial condition from a technical standpoint. It can be corrected only by increased contributions by the members or by the State, or both.

Increases in contribution rates is recommended

The present method of financing requires a periodic reexamination of the rates of contribution based upon the operating experience of the system and probable future payments reflecting projected

computed estimates. Cost calculations disclose that the following increases in contribution rates will be necessary.

On account of State employees	1/2 of 1% of payroll
On account of teacher members	2% of payroll

In the case of State employees, it is recommended that the increase be assumed entirely by the State. For teacher members, however, the increase in rate should be imposed on both the teachers and the employers, and divided equally between them. Thus, the teachers would contribute an additional 1% of salary, and the State and cities and towns, as employers, would contribute an additional 1%. Pension cost in the case of the teachers is considerably higher than for State employees due principally to greater longevity and an increase in rate to the teachers is warranted.

An adjustment in contributions by the members will require legislative action since the rate of contribution by members is specifically prescribed by Chapter 18. An increase in contributions by the employers may be authorized by the retirement board.

It is recommended that the changes in rate be made effective as of the beginning of the next fiscal year, namely, July 1, 1958.

Statistics illustrating the upward trend in membership and annuitants, and in pension and death benefit payments, during the last 10 years are as follows:

<u>June 30th</u>	<u>Members</u>		<u>Annuitants</u>	
	<u>State</u>		<u>State</u>	
	<u>Employees</u>	<u>Teachers</u> ^{1/}	<u>Employees</u>	<u>Teachers</u> ^{1/}
1948	4446	-	139	-
1949	4700	-	155	-
1950	5688	4287	162	137
1951	5805	4464	178	198
1952	6410	4558	188	243
1953	6538	4681	213	307
1954	7039	4745	239	374
1955	7259	4823	255	417
1956	7692	5168	290	459
1957	8128	5526	320	528

^{1/} Teachers became members on July 1, 1949

<u>Year Ended</u> <u>June 30th</u>	<u>Pension and Death Benefit Payments</u>	
	<u>State</u>	
	<u>Employees</u>	<u>Teachers</u>
1948	\$116,200.00	-
1949	149,000.00	-
1950	193,700.00	\$ 251,200.00
1951	198,500.00	365,400.00
1952	254,300.00	465,500.00
1953	301,200.00	620,200.00
1954	324,700.00	788,600.00
1955	362,600.00	923,700.00
1956	467,600.00	1,096,000.00
1957	491,900.00	1,281,300.00

Investment policy

A broader distribution of investments has occurred during recent years resulting not only in greater diversification of investment but also in considerably larger income. A more enlightened policy has been established, within conservative limitations.

It has been noted that funds are being diverted in increasing amounts to corporate securities and high grade common stocks of banks and mutual funds. This reflects a realistic approach to an important basic problem in the operation of the retirement system and is in accord with the underlying trend in the investment operations of retirement systems.

Conclusion

The adjustments in rates of contribution discussed herein, and recommended to the retirement board in a previous report, are necessary for the maintenance of a condition of financial stability for the system and to insure its continued progress. It is hoped that these adjustments will promptly be made.

Respectfully submitted,



A. A. Weinberg
Actuary

Employees Retirement System of the
State of Ohio

Summary of Benefit and Contribution Provisions

As of June 30, 1970

A P P E N D I X A

Summary of Benefit and Contribution Provisions

Employees Retirement System of the
State of Rhode Island

SUMMARY OF BENEFIT AND CONTRIBUTION PROVISIONS

In force June 30, 1957

B E N E F I T S

Service retirement allowance

Retirement is optional with a member upon attainment of the age of 60 years, provided he has at least 10 years of credited service. Any member completing 30 years of service may retire under age 60 on a reduced allowance which is the actuarial equivalent of the amount payable at age 60.

In the case of a member withdrawing from service prior to the attainment of age 60, the right to a retirement benefit vests in the member if his service credit is 10 years or more. The retirement allowance will become available to the member upon attainment of age 60, provided he has not taken a refund of his contributions.

Retirement of a member is compulsory on the first day of the calendar month next following that in which he attained age 70, unless the member requests permission to continue in service, in which case the retirement board may permit his continuation in service beyond such age for periods of one year.

The service retirement allowance is equal to $1-2/3\%$ of average compensation, $\frac{1}{5}$ multiplied by the number of years of total service, not to exceed 45 years, subject to a maximum of 75% of the rate of compensation at the date of retirement.

$\frac{1}{5}$ Average compensation means the average annual compensation earnable by a member during the five consecutive years within his total service when such average was the highest.

Options

A member, upon or after attainment of age 60, and the completion of 10 years of service, has certain specific options whereby he may receive a lesser amount of service retirement allowance for himself in order to provide, on an actuarial equivalent basis, an annuity for a designated beneficiary to become payable upon his death, whether death occurs while in service or thereafter while on retirement.

Non-occupational disability benefit

This benefit is available to any member having at least 10 years of credited service. The benefit is equal to 90% of the amount of the service retirement allowance covering the period of total credited service of the member.

A member qualifying for this benefit but not having completed 15 years of service, is entitled to receive the benefit prescribed for 15 years of service. If the member first entered service after the age of 45 years, his benefit is limited to 90% of the rate of service retirement allowance for which he would qualify if he remained in service until the age of 60 years and retired at such age.

Occupational disability benefit

A member becoming disabled as the direct result of the performance of duty, is entitled to a benefit equal to 66-2/3% of his rate of compensation at the date of becoming eligible for this benefit.

Non-occupational death benefit

Upon death of a member while in service, from any cause other than occupational disability, his designated beneficiary or the estate of the member is entitled to receive a refund of his accumulated contributions, without interest, together with

an amount provided from State contributions equal to \$200.00 for each year of total service of the member. The payment from State contributions is subject to a minimum amount of \$500.00 and a maximum of \$5,000.00.

If the period of service of the member has been less than one year, the minimum benefit of \$500.00 is reduced by the difference between the amount of accumulated contributions that the member would have had at the end of one year of service had he continued to render service, and the amount of accumulated contributions actually credited at the date of death.

Members of the General Assembly may continue coverage under this benefit after withdrawal from the General Assembly by making an annual contribution of \$15.00.

Occupational death benefit

Upon death of a member due to occupational causes, his accumulated contributions, including interest, are payable to such person as the member shall have designated, or if no such designation shall have been made or if the beneficiary is not alive, payment is to be made to the estate of the member.

In addition to the above payment, the surviving widow is entitled to a benefit equal to 50% of the member's salary at date of death. If no widow survives, or upon death of the widow, or if the widow remarries before any child of the member has attained age 18, the 50% benefit is payable to the surviving child or children, until their attainment of age 18, or prior death. If there be no widow or minor child or children, the benefit is payable to a dependent father or mother for life.

Death benefit after retirement

Upon death of a retired member who did not elect any of the optional provisions of the Act, his beneficiary is entitled to a refund of the excess, if any, of the total member contributions at date of retirement, without interest, over the total retirement benefits paid to him. The minimum payment in such a case is an amount equal to five monthly installments of the retirement allowance, or the sum of \$300.00, whichever is the greater.

Refunds

A member, upon withdrawal from the State service, may receive a refund of his contributions to the System equal to the full amount of his contributions, plus interest on the amounts contributed by the member prior to July 1, 1947. No interest is payable on refunds representing amounts contributed by a member after July 1, 1947.

C O N T R I B U T I O N S

By members

Members of the system are required to contribute at the rate of 5% of salary, which rate is uniform for all employees, both male and female.

By the State of Rhode Island

The State of Rhode Island is obligated to make regular contributions to meet the cost of the various benefits after applying the amounts contributed by the members. These contributions are made by means of regular annual appropriations.

The contributions by the State for any fiscal year are to consist of an amount equal to the computed average annual expenditures for the various purposes of the system, for the period of ten years next succeeding the fiscal year in question, after applying against these expenditures the amounts to be contributed by the members. A uniform rate is to be maintained under this method of determination for a period of ten years from July 1, 1947.

EXTENSION TO SCHOOL TEACHERS - MODIFICATIONS

Effective July 1, 1949, the system was extended to include teachers of the State schools and teachers of the several cities and towns of the State of Rhode Island.

All provisions of the system relating to State employees apply with equal force to such teachers. Prior service credit is extended to teachers covering the period prior to July 1, 1949.

Contributions for leaves of absence during any year may be made for the purpose of receiving pension credit under stated conditions. Credit for teaching service in any of the public schools of the United States, outside of this State, and in any private school or institution not operated for profit is allowed, not exceeding a total of 10 years, upon payment of certain contributions. Such credit is available, however, only if the outside service was rendered more than 10 years before retirement.

The minimum service retirement allowance in the case of a teacher having rendered at least 35 years of service is \$1,000.00 per year. The minimum was increased in 1952 under a formula which provided an additional amount of not less than \$200.00 per year.

Any teacher having at least 20 years of credited service is assured of a minimum ordinary disability allowance (non-occupational) of \$800.00 per year. This amount was increased in 1952 under a formula which provided an additional payment of not less than \$200.00 per year.

All teachers are required to make contributions at a uniform rate of 5% of salary, regardless of age or sex. The cities and towns share with the State, on an equal basis, the remainder of the cost of financing the benefits payable to teachers of the cities and towns, after applying the amounts contributed by the teachers.