

Actuarial Report

II

REPORT ON AN ACTUARIAL VALUATION
OF THE
MUNICIPAL EMPLOYEES' RETIREMENT SYSTEM
AS OF JUNE 30, 1974

In accordance with established policy, an annual actuarial valuation of the system was completed as of June 30, 1974. The purpose of such a valuation is to establish the financial status of the system from a technical standpoint reflecting actuarial requirements. By such valuation, the current progress of the system is measured and determined. In an actuarial valuation, effect is given to the accrued liabilities and accruing costs under the prescribed benefit schedule. The results of this valuation are presented in this report.

In the valuation process, an analysis is made of the changes in the active membership among the several participating municipalities. In this analysis, account is taken of the additions to membership during the year under review and the basic characteristics thereof, the separations from service resulting from resignations, deaths and retirements, and other pertinent factors of lesser significance. The experience of the system among members on retirement is studied and evaluated. In the report on the valuation, the actuary attempts to point up the factors and conditions that are basic in the valuation procedure and discusses other problems of special concern in the operations of the system.

Part 1. ACTUARIAL ASSUMPTIONS

1. Mortality expectancy: The 1951 Group Annuity Table (modified)

2. Interest rate: 5% per annum

3. Turnover factors: Assumed annual rates of withdrawal from all causes -

Age	Rate per 1,000
20	182
25	167
30	121
35	92
40	63
45	48
50	22
55	10
60 and over	Mortality only

4. Future salary increments: Assumed average rate for the long term - 4% per year

5. Average age at retirement: 64 years

6. Disability rates: Class (1) rates of disablement from the Society of Actuaries 1952 Inter-company study were used. It was assumed that 12½% of all disablements would occur in line of duty

7. Marital status: 85% of employees in service were assumed to be married with the average of the wives 4 years younger than the employees; 75% of the employees retiring on pension were assumed to be married

8. Administrative expense: None

Part 2. VALUATION OF PENSION ROLL

The pension roll at the close of the year and a valuation thereof was as follows:

	Male	Female
Number on pension roll	583	177
Proportion of total	76.7%	23.3%
Annual payments	\$1,203,568	\$321,887
Average annual payment	\$2,064	\$1,819
Average age	66.2	65.0
Actuarial reserve requirements	\$12,396,872	\$3,582,363

The actuarial reserve requirements on pensioners as established at June 30, 1974 amounted to \$15,979,235. This compares with the balance in the "Retirement Reserve" at that date of \$17,643,679. Thus, adequate coverage exists for the matured pension liabilities. This result is evidence of relative financial stability according to the actuarial criteria used in this valuation.

OBLIGATIONS OF MUNICIPALITIES

In subscribing to membership in the system for their employees, the cities and towns and the several special governmental units participating in the system have assumed pension obligations which are composed of (a) the accrued liabilities for service

rendered by the employees prior to the effective dates of participation referred to as "prior service"; and (b) the accruing cost for future service commonly designated as normal cost or the current year's liabilities.

Prior service. The liability for pension credit in the case of each municipality covering service by their employees prior to the date of participation was computed at the time participation was applied for. A prior service contribution rate was fixed as a percentage of payroll, as required by law, at a rate deemed sufficient to amortize the total accrued liability over a period of 25 years from the effective dates of participation. The period of 25 years for amortization purposes was fixed in order that, on the average, the prior service or accrued liability could be fully amortized by the time the employees in service at the date of participation became separated from service by death, resignation or retirement.

Current service. Normal cost was calculated upon the basis of total membership giving full effect to the particular age, service and salary characteristics of the employees. As required, this rate was determined as a percentage of payroll. The rate is to be applied by each municipality to the current payroll budget covering the employees participating in the system. The amount of contributions for such service, additional to the annual amortization payment on account of the accrued liability, was thus established.

Unfunded accrued liability. Prior service cost and normal cost contribution rates are presented on pages 15 and 16 of this report. The following statement shows the unfunded accrued liability at June 30, 1974 for the several participating municipalities and special governmental units. This liability in the case of each participating entity represents the amount of its unpaid indebtedness to the system on account of prior service and for subsequent deficiencies in cost requirements. Part of these deficiencies has come about as the result of variations between the established contribution rates for such service reflecting actuarial assumptions and the operating experience of each participating municipality. A part thereof may be attributed to liberalizing changes in the benefit schedule occurring since the dates when the initial rates were established.

Part 3. ANALYSIS OF BASIC FACTORS

The techniques and procedures involved in an actuarial valuation are briefly described. Such a valuation is basically a statistical analysis of data reflecting the mortality and service experience on the active and retired membership. The data includes (1) the additions to membership, (2) the incidence of separations from service due to resignation or dismissal without right to a retirement annuity, (3) the members who will survive at retirement and qualify for retirement, (4) the members whose service may terminate due to death, (5) the members who may become disabled before attaining retirement age, and (6) the mortality among retired members and beneficiaries.

All of the foregoing factors enter into the calculations of costs and liabilities. They are all considered in the formulation of contribution rate schedules that are designed for the purpose of accumulating reserves to meet the ultimate pension and benefit payouts to those employees and beneficiaries who qualify for benefits.

Since the financial effect of these factors on the system varies with the ages of the members, exposure tables are prepared for the factors of new entrants, deaths and separations from service. Separate tables are prepared for male and female members in order to give effect to the special characteristics affecting female employees.

The ratio of actual terminations to the number of members exposed to termination for each of the several causes, at the various ages, results in rates of termination or probabilities. These rates are generally leveled out to eliminate any marked variances between ages which may occur in cases where the data is limited in scope or fragmentary.

Thus, the actuary can test the rates as developed in the actuarial valuation by applying prior rates to the exposures developed in the current valuation. By comparing the expected deaths and terminations under the aforesaid procedure with actual terminations for each of the several causes during the period covered by the actuarial valuation, the accuracy of the newly established termination or separation rates may be validated and confirmed.

Such a valuation, therefore, provides the basis for making appropriate assumptions with respect to the following factors for use in actuarial valuations and cost determinations.

1. New entrants. Incoming members form a part of the exposure study and constitute a basic element in the formulation of rates of separation from service. This factor has a direct effect on the financing of the system particularly if the underlying trend is toward advanced ages at entry into service which means higher costs.

2. Rates of separation from service. These rates are used to forecast the number of active members who will withdraw from service without right to benefits and receive a refund of the employee contribution credits.

3. Deaths among members. Rates of death among the active members are subject to measurement for the purpose of forecasting the probable number of separations due to this cause thus releasing liabilities for accumulated pension credits and establishing liabilities for survivors' annuities.

4. Service retirement. These rates are established at the ages at which employees may be expected to become superannuated and retire on a service retirement annuity beginning at or above the prescribed minimum ages of retirement.

5. Disability incidents. The number of active members who may become disabled and qualify for disability retirement and the ages at which these incidents may occur are established. Rates of the probability of disability are formulated to measure this factor for cost and liability purposes.

6. Deaths among beneficiaries. Mortality rates among service retirements and the beneficiaries of active and retired members are formulated for the purpose of calculating the liabilities and costs that may be incurred on account of this item.

7. Salary scale. Since the retirement annuities are predicated upon a final average salary base, namely, the average earnings for the 3 highest consecutive years of service within the last 10 years of service, a salary scale showing rates of earnings progression to assumed ages of retirement is prepared and is applied in the calculation of costs and liabilities. Thus, the full liability may be established on the annuities to be paid subject to such decrements that will give effect to releases resulting from separations and deaths occurring prior to retirement.

8. Rates of earnings on the system's assets. An interest factor is basic in actuarial procedure. The reserve liabilities, if fully covered by assets which reflect the actuarial reserve principle, would be expected to earn a certain rate of income. Under the law, this rate must be fixed by the Board of Trustees on the basis of the average effective rate of earnings for the long term. By the long term is meant the average productive life of the active members plus the assumed average life while on retirement. The total period comprising the long term may be as much as 40 years.

9. General. While all of the foregoing factors are prominent in cost calculations, the last two factors are particularly important in the periodic actuarial valuations and cost studies. The current trend with respect to these factors must be currently analyzed and evaluated. Adjustments

are generally made in the results of current actuarial valuations to give effect to marked variations from the basic assumptions. This applies particularly in the case of the earnings progression rates since these are frequently influenced by the employer's current personnel policies or major economic changes.

The decrement factors reflecting separations from service and mortality are adjusted in the preparation of the tabular standards in order to eliminate marked variations between ages or to give effect to economic trends or other factors that may possibly influence the operations of the system during the ensuing years.

Part 4. MEMBERSHIP STATISTICS

Code Refer- ence	City or Town	Number of Active Members	Number of Pensioners		Total Membership
			Male	Female	
1	Barrington	122	22	6	150
2	Bristol	94	11	3	108
3	Burrillville	77	--	--	77
7	Cranston	543	80	62	685
9	East Greenwich	114	3	3	120
10	East Providence	305	55	18	378
14	Hopkinton	14	4	--	18
15	Jamestown	45	4	1	50
16	Johnston	210	4	1	215
21	Newport	297	48	10	355
23	North Kingstown	251	21	6	278
24	North Providence	186	24	5	215
25	North Smithfield	65	7	2	74
26	Pawtucket	700	148	33	881
30	Scituate	70	15	1	86
31	Smithfield	73	7	2	82
32	South Kingstown	126	4	4	134
33	Tiverton	82	12	2	96
34	Warren	67	13	1	81
39	Woonsocket	318	68	16	402
<u>SPECIAL UNITS</u>					
50	East Greenwich Fire District	9	--	--	9
51	Cranston Housing Authority	12	--	--	12
52	East Providence Housing Authority	12	--	--	12
53	Pawtucket Housing Authority	<u>35</u>	<u>9</u>	<u>--</u>	<u>44</u>
Totals carried forward		<u>3,827</u>	<u>559</u>	<u>176</u>	<u>4,562</u>

Code Reference	City or Town	Number of Active Members	Number of Pensioners		Total Membership
			Male	Female	
	Brought forward	3,827	559	176	4,562
54	East Greenwich Policemen	19	5	--	24
55	North Kingstown Policemen and Firemen	75	7	--	82
56	Cumberland Housing Authority	3	--	--	3
57	Lincoln Housing Authority	5	--	--	5
58	North Providence Policemen	46	4	--	50
59	Bristol Housing Authority	4	--	--	4
60	Barrington Policemen and Firemen	59	4	--	63
61	Smithfield Policemen and Firemen	39	2	--	41
62	Warren Policemen	15	1	--	16
63	South Kingstown Policemen and Firemen	33	--	1	34
64	North Smithfield Policemen	4	--	--	4
65	Burrillville Housing Authority	2	--	--	2
66	North Providence Housing Authority	3	--	--	3
67	East Smithfield Water District	3	--	--	3
68	Greenville Water District	4	--	--	4
	Totals	4,141	582	177	4,900

Part 5. UNFUNDED ACCRUED LIABILITY AT JUNE 30, 1974

Code	Municipality	Year of Entry	Rate of Pension 6/30/74	Unfunded Accrued Liability
<u>General Employees</u>				
1	Barrington	1957	2%	\$ 196,307
2	Bristol	1957	2	102,004
3	Burrillville	1968	1-2/3	230,877
7	Cranston	1963	2	1,722,108
9	East Greenwich	1957	2	130,722
10	East Providence	1961	1-2/3	631,168
14	Hopkinton	1969	1-2/3	112,721
15	Jamestown	1964	2	130,833
16	Johnston	1968	2	390,718
21	Newport	1966	1-2/3	1,031,123
23	North Kingstown	1957	2	272,888
24	North Providence	1961	2	321,892
25	North Smithfield	1964	2	150,710
26	Pawtucket	1962	2	2,484,101
30	Scituate	1967	2	352,133
31	Smithfield	1959	2	85,071
32	South Kingstown	1957	2	51,722
33	Tiverton	1964	1-2/3	272,863
34	Warren	1957	1-2/3	152,721
39	Woonsocket	1962	1-2/3	1,296,007
<u>Special Authorities</u>				
51	Cranston Housing Authority	1968	2	41,363
52	East Providence Housing Authority	1968	2	38,187
53	Pawtucket Housing Authority	1968	1-2/3	247,993
56	Cumberland Housing Authority	1969	1-2/3	9,163
57	Lincoln Housing Authority	1969	1-2/3	9,722
59	Bristol Housing Authority	1970	2	8,503
65	Burrillville Housing Authority	1972	2	9,114
66	North Providence Housing Authority	1973	2	592
67	East Smithfield Water District	1973	2	14,833
68	Greenville Water District	1973	2	16,864
Total carried forward				\$10,515,023

<u>Code</u>	<u>Municipality</u>	<u>Year of Entry</u>	<u>Rate of Pension 6/30/74</u>	<u>Unfunded Accrued Liability</u>
	Brought forward			\$10,515,023
	<u>Policemen & Firemen</u>			
50	East Greenwich Fire District	1967	2%	36,888
		1968	2	52,721
54	East Greenwich Policemen			
55	North Kingstown Policemen and Firemen	1968	2	234,872
		1969	2	84,193
58	North Providence Policemen			
60	Barrington Policemen & Firemen	1970	2	96,933
		1970	2	37,112
62	Warren Policemen			
63	South Kingstown Policemen & Firemen	1971	2	75,812
61	Smithfield Policemen & Firemen	1972	2	90,670
64	North Smithfield Policemen & Firemen	1972	2	30,183
	<u>Total</u>			<u>\$11,254,407</u>

Part 6. RATES OF CONTRIBUTION OF PARTICIPATING MUNICIPALITIES

<u>Code</u>	<u>City or Town</u>	<u>Year of Member-ship</u>	<u>Rate of Pension</u>	<u>Per cent of Payroll for Employer's Contributions June 30, 1974</u>		
				<u>Normal Cost</u>	<u>Accrued Liability</u>	<u>Total</u>
<u>General Employees</u>						
1	Barrington	1957	2%	10.70%	1.40%	12.10%
2	Bristol	1957	2	11.50	1.30	12.80
3	Burrillville	1968	1-2/3	8.36	--	8.36
7	Cranston	1963	2	8.02	6.19	14.21
9	East Greenwich	1957	2	10.80	1.50	12.30
10	East Providence	1961	1-2/3	6.35	5.88	12.23
14	Hopkinton	1969	1-2/3	8.60	8.20	16.80
15	Jamestown	1964	2	8.84	4.19	13.03
16	Johnston	1968	2	8.16	3.83	11.99
21	Newport	1966	1-2/3	6.78	5.77	12.55
23	North Kingstown	1957	2	8.90	1.20	10.10
24	North Providence	1961	2	6.67	4.68	11.35
25	North Smithfield	1964	2	8.65	4.41	13.06
26	Pawtucket	1962	2	6.12	5.67	11.79
30	Scituate	1967	2	8.93	8.55	17.48
31	Smithfield	1959	2	8.70	1.00	9.70
32	South Kingstown	1957	2	9.00	0.40	9.40
33	Tiverton	1964	1-2/3	6.88	6.08	12.96
34	Warren	1957	1-2/3	7.17	5.66	12.83
39	Woonsocket	1962	1-2/3	5.03	7.90	12.93
<u>Housing Authorities</u>						
51	Cranston	1968	2	8.42	1.52	9.94
52	East Providence	1968	2	8.11	1.41	9.52
53	Pawtucket	1968	1-2/3	8.70	8.30	17.00
56	Cumberland	1969	1-2/3	4.20	1.10	5.30
57	Lincoln	1969	1-2/3	4.70	1.20	5.90
59	Bristol	1970	2	8.40	1.30	9.70
65	Burrillville	1972	2	6.30	2.50	8.80
66	North Providence	1973	2	5.80	0.20	6.00
<u>Water Districts</u>						
67	East Smithfield	1973	2	12.20	6.60	18.80
68	Greenville	1973	2	10.50	5.10	15.60

<u>Code</u>	<u>City or Town</u>	<u>Year of Membership</u>	<u>Rate of Pension Credit</u>	<u>Total Employer's Contributions</u>
	<u>Policemen & Firemen</u>			
50	East Greenwich Fire District	1967	2%	14.00%
54	East Greenwich Policemen	1968	2	14.00
55	North Kingstown Policemen & Firemen	1968	2	14.00
58	North Providence Policemen	1968	2	14.00
60	Barrington Policemen & Firemen	1970	2	14.00
62	Warren Policemen	1970	2	14.00
63	South Kingstown Policemen & Firemen	1971	2	14.00
61	Smithfield Policemen & Firemen	1972	2	14.00
64	North Smithfield Policemen & Firemen	1972	2	14.00

The aforesaid rates are applicable to the budgeted payroll for each year for the employees participating in the system. In this way, sufficient revenues may be provided currently to meet the system's annual requirements. These requirements consist of the accruing cost for current service, referred to as the "Normal Cost", plus the annual amortization payment on the "Unfunded Accrued Liability".

Part 7. RESERVE ACCOUNTS

Certain reserve accounts are maintained by the system for the purpose of recording the pension credits established for active members and pensioners, respectively. These reserves are created by contributions by the members and by the participating cities and towns, and the special governmental units.

Maintaining these reserve accounts makes it possible to evaluate closely the current progress of the system in the accumulation of assets to meet the accrued and accruing liabilities for the benefit payouts that will ultimately become due in the case of members who qualify for retirement and other benefits.

A negative balance exists in the "Employers' Contribution Reserve" for several cities and towns. This has come about principally by the retirement of aged employees shortly after the commencement of participation in the system in the applicable city or town. Eventually, with additional revenues that will result from continued operations of the system, these negative balances should be removed. In the course of time a credit balance should be established for all participating cities and towns representing the reserves required to meet the liabilities of the membership. These reserves will consist of the pension credits earned by the members during their previous service.

Part 8. RE-EVALUATION OF THE RATES OF CONTRIBUTION OF CITIES AND TOWNS

A periodic review is made of the rates of contribution for the cities and towns who have been participants in the Municipal Employees' Retirement System for a reasonably long period of years. This review applies to cities and towns having at least 10 years of membership in the System. As more participating units attain this status, a check will be made of their operating experience to establish the adequacy of the applicable contribution rates. An adjustment or revision of these rates will be recommended, if necessary.

Participating cities subject to review. The following cities and towns participating in the System have been subject to this review during the year covered by this report.

<u>Name of City or Town</u>	<u>Date of Participation</u>	<u>Number of Members</u>	
		<u>Employees</u>	<u>Pensioners</u>
Cranston	1963	543	142
East Providence	1961	305	73
North Providence	1961	186	29
Pawtucket	1962	700	181
Woonsocket	1962	318	84

Of the foregoing 5 cities and towns, Cranston, Pawtucket and North Providence have a 2% rate of retirement annuity. The City of Woonsocket maintains a 1-2/3% rate. East Providence has adopted the 2% plan effective July 1, 1974.

The additional cities to be considered next year in this review who will have been participants in the System for at least 10 years, are the following:

<u>Name of City or Town</u>	<u>Dates of Participation</u>
Jamestown	1964
North Smithfield	1964
Tiverton	1964

Basic factors. Pension obligations are of long term character, maturing many years after the obligations were initiated. These obligations, therefore, must be evaluated on a long term basis. Transitory factors or short term fluctuations cannot be considered in an evaluation of their cost aspects. For this reason, a revaluation or reexamination of contribution rates was made for those cities and towns that have been participants for at least 10 years. This period of time, by coincidence, approximates two-fifths of the period prescribed by law for the amortization of the initial accrued liability.

A period of 10 years is regarded as a reasonable period to allow for any unusual or abnormal changes in basic factors. These factors include mortality among active and retired members, turnover rate, ages at retirement, salary trends and others that are pertinent in a determination of actuarial costs and liabilities. As participating units acquire more operating experience in the System, a review of their contribution rates will be undertaken and adjustments thereof will be proposed, as required.

Results of Re-evaluation. The valuation discloses the cost of financing the currently accruing pension obligation designated as the "normal cost", and the requirements for the amortization of the accrued liability. Each of these items is expressed as a percentage of payroll.

Amortization of Accrued Liabilities. The suggestion has been made that a longer period of amortization be provided for the accrued liabilities than the remaining period of 25 years from the initial dates of participation of the cities and towns in the retirement system. There is merit to this suggestion. A number of substantive amendments have been made during the last several years in the law governing the Municipal Employees' Retirement System. These new amendments have substantially increased current costs and accrued liabilities. While it is desirable that the accrued liabilities be liquidated without too long a delay in order to establish a full funded financial condition for the retirement system with respect to all participating cities and towns, this condition may still be maintained according to recognized standards by apportioning the existing unfunded accrued liabilities over a longer term as has been proposed.

Accordingly, in the calculation of the rates of contribution hereinabove set forth, a 25-year period of amortization, dating from July 1, 1974, was used and a 5% interest rate

assumption was applied. This rate of interest may be considered a reasonable investment return expectancy for the long term under the prescribed investment authority, and the progressive investment management policies maintained by the Retirement Board.

Name of Participating City or Town	Rate of Pension	Percent of Payroll Effective 7/1/75		
		Normal Cost	Accrued Liability	Total Annual Cost
Cranston	2%	8.59%	3.52%	12.11%
East Providence	2	10.70	2.01	12.71
North Providence	2	7.81	1.87	9.68
Pawtucket	2	6.59	4.26	10.85
Woonsocket	1-2/3	7.02	3.71	10.73

The determination of these costs was based upon the provisions of the law in force at June 30, 1974.

Recommendation. The foregoing rates, expressed as a percentage of employees' payroll, are hereby recommended to the Retirement Board of the Employees' Retirement System of the State of Rhode Island as the rates of contribution to be certified to the applicable cities and towns of the State to become effective on July 1, 1975.

It should be noted that for the most part little change occurred in the total rate of contribution for the cities and towns. While some reduction in the total rate was

realized as the result of an extension of the period of time for the amortization of the unfunded accrued liabilities, this reduction was substantially offset by increases in accrued liabilities and cost due principally to the following factors: (1) improvements in the benefit schedule, the full effect of which had not been previously expressed in the current rates as evidenced by actual operating experience over the years; (2) salary increments during recent years at materially higher rates than were applied in cost determinations to give effect to the 3-year final average salary concept governing the computation of the retirement annuity; (3) improved mortality among active members and pensioners; and (4) a lower turnover in employment.

The recommended rates realistically reflect the employer's share of the cost of the retirement system under the established benefit schedule after giving effect to past operating experience, current pension standards and the prevailing conditions affecting the membership.

Part 9. FUTURE PENSION AND BENEFIT PAYOUTS

For the purpose of emphasizing the importance of adequate funding of pension obligations on a systematic basis, in accordance with the accruing aspects of pension cost, a projection of these payouts is presented in this report. Such a projection serves to focus attention on the full meaning of the pension obligations in terms that can be more readily understood by the officials having the responsibility of formulating budgets and more particularly by members of the legislative bodies.

The following projection is presented to illustrate the persistent upward trend in pension and benefit payouts for a number of years:

<u>Years</u>	<u>Estimate of future benefit and pension payouts (in millions)</u>
1974	\$1.7
1975	2.1
1980	3.9
1985	6.1
1990	8.8

The foregoing projection will be reviewed and reexamined each year, for each annual report, upon the basis of operating results.

Part 10. FINANCING THE PENSION OBLIGATION

The cost of retirement benefits in any year is represented by the value of the pension credits earned by the active members during the year. These yearly pension credits form a proportionate part of the ultimate retirement benefits which would become due and payable to the members as they qualify for retirement by fulfilling the prescribed conditions as to age or service, or both.

Pension and benefit payments during any year, therefore, are derived from a combination or accumulation of earned pension credits covering a number of productive years which represent the total periods of service rendered by the annuitants. It is the accumulation of these pension credits during the service of the members which constitutes the reserve requirements for financing the pension payments to the qualifying members when the obligations mature. This current accumulation of pension credits represents the real cost of the benefits for any fiscal period.

The foregoing illustrates the accrual or reserve principle that governs a retirement system. Actuarial criteria reflect the accrual concept. It underlies all retirement fund operations. Even if a retirement law does not specifically spell out the methods of financing the pension credits, the accrual principle would be implicit in its basic provisions. Rates of

contribution are formulated with the view of accumulating adequate reserves for the earned pension credits to meet the ultimate payouts for the retirement and other benefits. Current revenues from these rates are substantially in excess of the current expenditures for benefits. This excess represents the reserve for meeting the future pension and benefit payments.

It is this reserve which is created by the application of these contribution rates that seems to be a source of temptation to officials of government, particularly those having to do with the formulation of budgets. This has brought about, in some instances, the withholding of revenues from the retirement system by means of arbitrary reductions in appropriations below the actual requirements for the accruing pension credits. Pressures also arise from time to time for the application or diversion of some or all of the accumulated reserves for other governmental purposes.

In its true concept, pension cost is a current operating expense of government. It is an obligation which cannot logically be deferred. It has a direct and immediate relationship to the entire fiscal operations of government. There is no short cut method or formula for financing this cost. A retirement plan is considered to be a legitimate employee welfare program of governmental concern. The

principle that government should bear a measure of responsibility for employees whose productivity has become impaired due to old age or disability is now generally accepted. Since this is the case, government should face up to its responsibility in this area. It should be willing to meet the cost of pensions on the most practical and economical basis. The only real method is the one that reflects the accruing or current budgeting concept.

Actuarial funding methods. Several actuarial cost methods are currently recognized for the computation of pension costs and liabilities. In the case of a fixed benefit formula such as that in effect for the Municipal Employees' Retirement System, two specific methods are commonly used, namely, the "Accrued Benefit Method" and "Projected Benefit Method".

The accrued benefit method is otherwise referred to as the "Unit credit", "step-rate" or "single premium" method. It involves the determination of each year's earned pension credit as a present value figure as of the attained ages of the members. Obviously, as the ages of the employees advance, the yearly pension credit costs are increased but the increases in aggregate costs may be somewhat curtailed or may partially be offset by other compensating factors in the complexion of the membership occasioned by separations or deaths.

The "projected benefit method", frequently referred to as the "entry-age normal-cost" or "aggregate level cost", provides for the projection of the benefits to be earned by the employees and the contributions to be made to finance these benefits. This is the method employed in the financing of the Municipal Employees' Retirement System. Supplemental liabilities are provided for accrued pension credits previously earned by the members and unfunded. The cost of ancillary benefits such as for disability or death may be financed on a one-year term premium basis considering the basic character of such benefits.

Part 11. CONCLUSION

The results reported herein reflect satisfactory progress during the year in the operations of the system. Some adjustments were made in the accrued liabilities to give effect to salary increases above the assumed projected rates. Management and administrative policies of the Retirement Board reflect constructive methods of procedure with the principal objective of effectuating fully the basic objectives and purposes of the retirement system.

The results achieved by the Retirement Board in the investment of the system's reserves reflect prudent management and an excellent record of performance. The policies in force are designed to maximize, in accord with high standards of quality within the established investment limitations. Also the efforts of the Board are continuously directed towards improvement in administrative practices in order that a full measure of service may be provided the participating municipalities and the employee membership in the operations of the System.

A. A. Weinberg

Actuary

Financial Statements III

Comparative Financial Balance Sheet

June 30

<u>Assets</u>	<u>1974</u>	<u>1973</u>
Cash	\$ 152,203	\$ 172,008
Accrued Interest Receivable	317,082	234,254
Investments (At (At amortized Book Value for Bonds and cost for Stocks	<u>25,703,149</u>	<u>21,485,809</u>
Total Assets	<u>\$ 26,172,434</u>	<u>\$ 21,892,071</u>
 <u>Liabilities & Reserves</u>		
<u>Current Liabilities</u>		
Unclaimed Benefits	\$ 11,110	\$ 11,110
<u>Reserves - General Employees</u>		
Members Contribution	6,729,320	5,883,086
Employers Accumulation	547,625	378,473
Retirement	<u>16,282,119</u>	<u>13,637,640</u>
Total Reserves -General Employees	23,559,064	19,899,199
<u>Reserves - Policemen & Firemen</u>		
Members Contribution	1,043,383	883,331
Employers Accumulation	207,316	232,328
Retirement	<u>1,351,561</u>	<u>866,103</u>
Total Reserve-Policemen & Firemen	<u>\$ 2,602,260</u>	<u>\$ 1,981,762</u>
Total Liabilities & Reserves	<u>\$ 26,172,434</u>	<u>\$ 21,892,071</u>

Analysis of Revenue & Expenditures
Fiscal Year Ended - June 30, 1974

REVENUES	State Employees		Teachers		Total
	Amount	%	Amount	%	
Members Contributions	\$ 1,434,136	25.0	\$ 220,654	28.7	\$ 1,654,790
Employers Contributions	3,002,714	52.4	412,023	53.6	3,414,737
Investment Earnings	1,279,644	22.3	135,199	17.6	1,414,843
Other	17,204	.3	567	.1	17,771
Total Revenues	\$ 5,733,698	100.0	\$ 768,353	100.0	\$ 6,502,051
<u>EXPENDITURES</u>					
Monthly Pensions	1,384,262	24.2	64,000	8.3	1,448,262
Survivor Benefits			13,680	1.7	13,680
Death Retirement Allowances	211,898	3.7	30,000	3.9	241,898
Refunds of Contributions	410,702	7.2	38,832	5.1	449,534
Other	67,045	1.1	1,270	.2	68,315
Total Expenditures	2,073,907	36.2	147,782	19.2	2,221,689
Excess Revenues over Expenditures to Reserves	\$ 3,659,791	63.8	\$ 620,571	80.8	\$ 4,280,362

Distribution of Excess

General Employees

Members Contribution Reserve	\$ 846,234
Employees Accumulated Reserve	169,153
Retirement Reserve	2,644,779

Police and Firemen

Member Contribution Reserve	160,052
Employers Accumulated Reserve	(25,012)
Retirement Reserve	485,458

Total Distribution \$ 4,280,362

ANALYSIS OF INVESTMENT INCOME

FISCAL YEAR ENDED - JUNE 30, 1974

Investment Income - Interest		\$ 764,493
Add:		
Accrued Interest June 30, 1974	\$ 317,082	
Accrued Interest July 1, 1973	<u>234,254</u>	
	82,828	
Discounts Amortized	<u>80,999</u>	
Total Additions		<u>163,827</u>
Total		\$ 928,320
Less:		
Accrued Interest Purchased	\$ 1,616	
Premiums Amortized	<u>3,300</u>	
Total Deductions		<u>4,916</u>
Net Interest Earned		\$ 923,404
Dividends		<u>435,930</u>
Total Earned on Investments		\$ 1,359,334
Capital Gain		<u>55,423</u>
Total Investment Income		\$ 1,414,757

Reserve Accounts-Allocation of Fund Balances
June 30, 1974

General Employees	Code	Members	Employees	Retirement
		Reserves	Reserves	Reserves
Barrington	01	220,401.67	110,311.69	967,936.44
Bristol	02	100,014.03	270,583.18	352,086.71
Burrillville	03	100,240.88	71,113.33	37,433.90
Cranston	07	1,036,381.49	210,466.46	2,804,648.46
East Greenwich	09	135,513.04	180,580.73	261,973.91
East Providence	10	790,842.89	518,543.86	1,696,101.87
Hopkinton	14	0,957.25	13,809.43	43,270.84
Jamestown	15	60,977.68	93,125.61	76,507.34
Johnston	16	172,004.62	210,501.02	180,238.71
Newport	21	605,243.43	295,210.05	1,672,767.09
North Kingstown	23	206,936.01	244,573.01	669,830.08
North Providence	24	166,665.28	100,674.94	513,976.25
North Smithfield	25	115,804.96	126,735.48	192,031.97
Pawtucket	26	1,229,728.18	1,324,809.47	3,411,297.14
Scituate	30	88,546.88	18,715.51	250,800.42
Smithfield	31	140,157.77	153,000.97	346,164.81
South Kingstown	32	197,674.75	295,770.68	208,290.70
Tiverton	33	150,605.15	75,605.06	212,638.00
Warren	34	119,804.07	56,482.81	331,203.65
Woonsocket	39	621,550.57	176,838.66	1,764,004.00
Cranston Housing Authority	51	17,883.08	37,222.21	8,425.05
East Prov.Housing Authority	52	18,589.77	31,788.53	7,910.10
Pawtucket Housing Authority	53	62,292.24	66,246.31	151,755.98
Cumberland Housing Authority	56	6,404.00	5,829.49	1,576.24
Lincoln Housing Authority	57	10,554.07	2,456.55	2,451.57
Bristol Housing Authority	59	8,528.83	12,207.67	2,152.56
Burrillville Housing Authority	65	1,579.67	1,841.55	175.13
No.Providence Housing Authority	66	1,748.91	1,851.35	99.03
East Smithfield Water District	67	762.90	2,393.01	4,197.15
Greenville Water District	68	1,405.71	2,386.76	113.18
Totals		6,729,319.86	547,625.42	16,282,118.46

Average Balance-Distribution of Earnings
Fiscal Year Ended-June 30,1974

General Employees	Code	Total all			Distribution of Earnings
		Reserves	Average	%	
Barrington	01	2,549,271.09	1,279,635.55	5.49	77,660.96
Bristol	02	1,478,961.87	739,480.93	3.17	44,847.68
Burrillville	03	346,517.10	173,258.55	.74	10,469.18
Cranston	07	6,563,459.13	3,281,729.57	14.08	199,197.29
East Greenwich	09	1,030,135.62	515,067.81	2.21	31,266.05
East Providence	10	5,486,092.19	2,743,046.10	11.77	166,516.48
Hopkinton	14	65,653.00	32,826.50	.14	1,980.65
Jamestown	15	409,281.05	204,640.52	.88	12,449.83
Johnston	16	985,348.18	492,674.09	2.11	29,851.30
Newport	21	3,620,648.59	1,810,224.30	7.76	109,784.87
North Kingstown	23	2,166,157.77	1,083,078.88	4.65	65,786.04
North Providence	24	1,042,964.31	521,482.15	2.24	31,690.48
North Smithfield	25	754,976.28	377,488.14	1.62	22,919.00
Pawtucket	26	5,933,712.13	2,966,856.07	12.72	179,956.64
Scituate	30	568,650.25	284,325.12	1.22	17,259.99
Smithfield	31	1,152,325.74	576,162.87	2.47	34,944.41
South Kingstown	32	1,616,253.58	808,126.79	3.47	49,091.94
Tiverton	33	757,319.86	378,659.93	1.62	22,919.01
Warren	34	847,546.52	423,773.26	1.92	27,163.27
Woonsocket	39	3,948,259.22	1,974,129.61	8.47	119,829.62
Cranston Housing Authority	51	106,957.07	53,478.54	.23	3,253.93
East Prov.Housing Authority	52	99,406.40	49,703.20	.21	2,970.98
Pawtucket Housing Authority	53	480,024.11	240,012.07	1.03	14,571.96
Cumberland Housing Authority	56	23,581.26	11,790.63	.05	707.28
Lincoln Housing Authority	57	34,231.40	17,165.70	.07	990.33
Bristol Housing Authority	59	36,408.42	18,204.21	.08	1,131.80
Burrillville Housing Authority	65	4,487.53	2,243.76	.01	141.48
No.Providence Housing Auth.	66	3,600.26	1,800.13	.007	99.03
E.Smithfield Water District	67	2,495.40	1,247.70	.005	70.74
Greenville Water District	68	3,792.47	1,896.24	.008	113.18
Total		42,178,617.83	21,089,308.92	90.45	1,279,644.50

Policemen & Firemen

East Greenwich Fire District	50	32,014.25	55,800.47	14,258.54
East Greenwich Police	54	63,995.26	83,862.36	193,261.25
North Kingstown Police & Fire	55	276,144.22	14,609.45	454,936.30
North Providence Police & Fire	58	137,866.44	16,190.41	237,537.89
Barrington Police & Fire	60	261,225.53	141,383.69	205,144.76
Smithfield Police & Fire	61	107,687.77	10,157.25	122,272.09
Warren Police	62	68,575.40	24,324.01	74,272.70
South Kingstown Police & Fire	63	91,144.06	72,513.00	48,538.15
North Smithfield Police & Fire	64	4,730.00	7,894.88	930.64
Totals		1,043,383.03	207,315.48	1,351,561.42

Police & Firemen

East Greenwich Fire District	50	172,296.86	86,148.43	.37	5,234.59
East Greenwich Policemen	54	315,225.46	157,612.73	.68	9,620.32
No.Kingston Police & Fire	55	1,287,583.41	643,791.71	2.76	39,047.20
No.Providence Police & Fire	58	620,411.11	310,205.56	1.33	18,816.22
Barrington Police & Fire	60	1,028,529.31	514,264.65	2.21	31,266.05
Smithfield Police & Fire	61	359,075.44	179,537.72	.77	10,893.60
Warren Policemen	62	202,610.40	146,800.75	.63	8,912.95
So.Kingstown Police & Firemen	63	352,612.76	176,206.38	.76	10,752.12
No. Smithfield Firemen	64	19,559.41	9,779.70	.04	565.90
Police & Fire Total		4,448,913.25	2,224,456.63	9.55	135,108.95
Grand Total		46,627,531.08	23,313,765.55	100.0	1,414,753.45