



DRAFT

Employees' Retirement System
of the Government of Puerto Rico
and its Instrumentalities

Actuarial Valuation as of
June 30, 1970

Prepared by
Woodward and Fondiller
Consulting Actuaries

June 1971

WOODWARD AND FONDILLER

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CONSULTING ACTUARIES
INSURANCE ADVISERS · SYSTEMS ANALYSTS · INSURANCE AUDITORS

DRAFT

June 29, 1971

Board of Trustees
Employees' Retirement System of the
Government of Puerto Rico and its
Instrumentalities
San Juan, Puerto Rico

Gentlemen:

We are pleased to submit herewith our actuarial valuation of the assets and liabilities of the system as of June 30, 1970, and our determination of the appropriate contribution to be made by the Government for the orderly and systematic funding of those liabilities.

Section 776 of Chapter 33 of the Laws requires that the results of such a valuation be included in the annual report submitted by the Board to the Governor and the Legislature.

Our basic finding is that, while the present level of contributions is more than adequate to meet current benefit payments, it will not build up sufficient reserves to meet the rising costs of the future.

For fiscal year 1969-70, employer contributions amounted to about 6.4% of payroll. In accordance with the funding principles set forth herein, we calculate that an overall contribution rate of 15.5% of payroll is needed: 7.7% as a normal cost to cover liabilities currently being created, 7.5% to amortize the unfunded accrued liability over 40 years from June 30, 1970, and 0.2% to cover administration expenses. The total can be reduced somewhat -- to 14.2% -- if a minimum schedule of level funding is adopted, that is, if the unfunded accrued liability is not amortized but kept at its present level by means of interest payments only.

June 29, 1971

It is clear, therefore, that from a long-range standpoint the system is being inadequately financed. Although there is no immediate danger that it will be unable to meet its obligations, it will eventually have to increase its rate of contributions. The longer that it is postponed, the greater will be the required increase.

Contributions to the system are not uniformly apportioned: for the general government, the contribution rate is 7.00%; for corporations, 6.75% and for municipalities, 6.04%. The normal cost component of each rate is the same, 4.63%. A past service cost of 2.47% is assigned to the general government, 2.12% to corporations, and 1.32% to municipalities. Municipalities are also assessed 0.09% for administration, a factor excluded from the rates assigned to the general government and to corporations. Among the corporations, three (Aqueduct and Sewage Authority, Metropolitan Bus Authority, and Prison Industries Corporations) pay only the normal rate of 4.63%. The reason given for the lower rate is that these bodies have already liquidated their past service costs.

The question of whether or to what extent any one agency has met its past service costs is a complex one. A precise determination would require a detailed actuarial investigation of the age, service, and salary characteristics of its employees and of its history with respect to contributions, retirements, and employment patterns. Moreover, even if a particular agency can be said to have met these costs by some date, each subsequent liberalization of benefits creates new past service liabilities. We recommend, therefore, that further consideration be given to the question of how past service costs are to be apportioned among the different government bodies.

The normal cost of 4.63% that is included in the contribution rate paid by all bodies is the amount recommended in the last previous valuation made as of June 30, 1965. Since then the law has gone through substantial liberalizations permitting retirements at earlier ages and at higher amounts. Although these liberalizations have greatly increased costs, the normal cost payment has remained unchanged. Small increases have been made in the payment that was then recommended for the amortization of the past service liability, but they are seriously inadequate. Failure to meet increasing costs as they occur, of course, creates further unfunded liabilities. It is urged, therefore, that a fresh look be taken at the actuarial situation and steps initiated to put the system on a sound basis.

Employees' Retirement System of the
Government of Puerto Rico and its
Instrumentalities

- 3 -

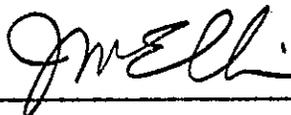
June 29, 1971

Our actuarial valuation was made by Mr. Edward Greene, Associate,
Society of Actuaries, in accordance with accepted actuarial principles,
on the basis of statistical and financial data furnished to the manager
of our Puerto Rico office, Mr. Eduardo A. Santiago.

Respectfully yours,

WOODWARD AND FONDILLER

by:



Jack M. Elkin
Associate, Society of Actuaries

1. Employee and Pensioner Data

The valuation was based on 72,761 active members, 2,303 vested members with a right to a deferred pension, and 9,430 pensioners and surviving widows and children of deceased pensioners. The total annual payroll for active employees was \$303.4 million and the total annual benefit roll, over \$13 million.

The active members were divided as follows: central government, 55,721; corporations, 11,180; municipalities, 5,860. Actually there were considerable gaps in the data supplied. Data was unavailable for 3% of the central government employees and only partially complete for an additional 19%. In the case of municipalities, since there is no central record file for them comparable to the Electronic Data Center, we had to project from a sample of 600 employees. As for the corporations, except for the number of employees and their total compensation, no information at all was available.

Information supplied us was deficient, also, in that the files of the Electronic Data Center do not show whether a general government employee had any corporation or municipality service before entering general government service. A tedious sample study had to be undertaken in order to provide some basis for estimating an appropriate adjustment to be made in the cost figures.

We recommend that the Government consider the feasibility of establishing a consolidated file of all employees covered by the retirement system, with each employee's record showing all the service that will be credited toward benefits, and with the records being maintained by the retirement system, as is the case with the Teachers, University, and Water Resources Authority systems. At the present time, it is necessary to make constant reference to the files of the Personnel Office. The records of that office, of course, have their own functions in connection with the requirements of government administration apart from the requirements of

the retirement system. It may be inefficient to attempt to make the Personnel Office records fulfill both sets of requirements, but perhaps they can serve as a foundation on the basis of which the retirement system records can be established.

A breakdown of the active members and pensioners and a summary of their major characteristics are shown below:

Active employees

	General Employees*				Police- men	Firemen	
	Coordinated Plan		Supplemental Plan			Coor- dinated Plan	Supple- mental Plan
	Male	Female	Male	Female			
Number	16,955	23,009	3,228	4,635	6,930	839	125
Average age	39.3	36.2	50.7	47.2	36.0	34.9	46.7
Average service	8.5	8.1	15.1	13.9	9.4	7.5	15.8
Average salary	\$4,357	\$3,131	\$5,167	\$3,137	\$4,996	\$3,499	\$3,747

Pensioners

	General Employees		Policemen	Firemen
	Male	Female		
Number	4,199	3,633	1,179	87
Average age	68	64	58	60
Average monthly amount	\$134	\$88	\$160	\$99

*Numbers partially estimated by distributing 7,869 General Employees for whom data as to sex was unavailable.

More detailed information, in the form of distributions by age, service, and benefit amounts, is contained in Tables 1-26.

2. Financial Data

Total assets as of June 30, 1970, stood at \$189.7 million. A distribution of these assets is shown in Table 27. Investment earnings of the fund during the year were at the rate of 4.6%, just over the $4\frac{1}{2}\%$ rate assumed in the valuation. Administration expenses, which amounted to \$623,200, were 0.2% of payroll.

The growth of the fund over the past three years is illustrated in the following figures:

<u>Fiscal year</u>	<u>Employer contributions</u>	<u>Employee contributions</u>	<u>Benefit payments</u>	<u>Assets at end of year</u>
1968	\$12,984,903	\$ 8,829,077	\$ 9,474,721	\$143,334,800
1969	13,711,130	11,048,284	11,713,422	163,917,079
1970	19,453,820	13,044,596	13,514,230	189,697,060

3. Actuarial Assumptions

While the actual cost of the retirement plan will be determined ultimately by the actual rates at which employees terminate, die, become disabled, and retire, their salary progression, the investment earnings of the fund, administration expenses, and several other factors, an advance estimate of that cost requires the adoption of a set of actuarial assumptions. Without making a detailed analysis of the experience since the previous valuation, we have been able, on the basis of the statistical data supplied us, to arrive at a set of assumptions that we believe are reasonable for the purpose.

The mortality rates used in the actuarial valuation have a significant effect on the calculated cost of the benefit program in that they involved a forecast of the length of time a retired employee will receive his pension, of the number of employees and pensioners in the various age brackets who will give rise to survivor benefits, and the length of time these survivor benefits will be paid. For this purpose, we have used the Group Annuity Table for 1951, which we have found from our experience with similar groups provides a satisfactory basis for predicting longevity.

Along with rates of death, it is necessary to assume a set of rates governing retirement for disability. We believe the assumption we are making will reasonably reproduce the kind of experience that can be expected in this area.

Attrition is a composite of mortality, disability, and withdrawals for a variety of personal reasons. These withdrawals, of course, are relatively high at the younger ages and relatively low or non-existent in the years when the employee is beginning to look forward to his retirement benefit. In any event, they are important to an estimate of costs, since the withdrawal of an employee before he has

become eligible for a benefit means that the employer contributions the fund has received for him become available for the payment of benefits to those who do remain in active employment until they attain eligibility. The withdrawal rates we have used are combined with mortality and disability rates to give total termination rates.

Because benefits are related to an employee's earnings in his final years of service, allowance has to be made in an actuarial cost calculation for his probable salary progression. We have therefore introduced a salary scale which, in effect, relates the salary at a given age to the estimated salary at any later age as of which a benefit may become payable. The scale we use is based on the spread of average salaries by age as we found it in the employee data supplied us. It therefore reflects the kind of salary progression the average employer may experience under present wage levels. No effort has been made to anticipate and allow for increasing general wage levels. If such increases occur, contributions at a given percentage of payroll will, of course, increase the dollar income to the fund. Costs, however, will increase relatively more rapidly than contributions, but our approach is that these higher costs should be reflected in actuarial valuations only as increases in salary levels actually take place.

As to the age at which the average employee will retire, we have assumed that it will be several years after his earliest eligibility age. The relatively short time that has elapsed since the most recent changes in the retirement plan, changes that are bound to influence the age at retirement, does not yet provide a firm statistical basis for prediction, and for purposes of a long-range view we have had to rely on experience for a judgment in this area.

Extensive data available from the experience of the Social Security Administration provided a sound basis for estimating the proportion of employees at various ages who will leave a spouse as well

as the average age of the spouse. This information enters into the calculation of the cost of the death benefit component of the program.

Since benefit payments will ultimately have to be met not only by current contributions but also by earnings of invested reserves, an estimate must be made of the rate of earnings. We have assumed an annual rate of $4\frac{1}{2}\%$. The fund is currently earning more, but bearing in mind that interest rates in the past have often, and for long periods, been lower, we believe that our assumption is prudent for long-range purposes. If earnings in actual experience are substantially higher, it is likely that there will also be an increase in wage levels for which we are not making a provision. The higher income not allowed for in our valuation will then help to meet the higher cost.

The detailed actuarial assumptions used are as follows:

Mortality rates -- Group Annuity Table for 1951

Disability rates --

<u>Age</u>	<u>Rate (%)</u>
37	0.1
42	.1
47	.2
52	.6
57	1.1
62	3.2

Termination rates, all causes --

<u>Age</u>	<u>Rate (%)</u>	
	<u>General Employees</u>	<u>Policemen and Firemen</u>
22	5.5	5.5
27	5.3	5.3
32	5.1	5.1
37	4.7	4.6
42	4.2	3.0
47	3.7	1.6
52	2.7	1.3
57	2.4	2.4
62	5.1	5.1

Salary scale --

<u>Age</u>	<u>Salary as percent of salary at 65</u>	
	<u>General Employees</u> <u>Male</u>	<u>General Employees</u> <u>Female, Policemen, Firemen</u>
22	61.6	68.4
27	65.7	74.4
32	70.0	80.5
37	74.5	86.3
42	79.3	91.2
47	84.5	94.7
52	89.9	97.0
57	95.3	98.7
62	99.2	100.0

Retirement age --

<u>Entry Age</u>	<u>Assumed retirement age</u>	
	<u>General Employees</u>	<u>Policemen, Firemen</u>
20	58	52
25	58	52
30	60	57
35	62	60
40	62	60
45	62	60
50	62	62
55	65	62
60	65	--

Marital status at death -- Proportion married and average age of wife based on statistics of Social Security Administration.

Interest rate -- $4\frac{1}{2}\%$.

4. Funding Method

The level of pension payments has been growing and will continue to grow because the number of persons entering the pension rolls, will, for some time, continue to exceed the number leaving and also because the salary base for the determination of their benefits will grow. In addition, the level of death payments and of pensions to surviving widows and children will continue to increase.

For the time being, contributions are still substantially higher than benefit payments and reserves are still growing. In time, however, if the present rate of contribution is maintained, the situation will be reversed; outgo will exceed income and the reserves will begin a steady depletion.

A Government authority can meet increasing payments by continually increasing its appropriations. Preferably, however, it can build up adequate reserves while benefit levels are relatively low so that, when they are relatively high, payments can be met without the necessity for prohibitively large appropriations from Government funds. It is the purpose of a funding or budgeting procedure to build up these reserves in a systematic and orderly fashion.

The funding method that has been used in this valuation to determine the actuarial cost of the system to the Government is known as the Entry Age Normal Cost method.

Under this method, there is first calculated a normal cost for each active employee. This is the level contribution needed each year during his working lifetime so as to accumulate the funds necessary to provide such benefits as may have to be paid -- on his

withdrawal, his death, or his retirement. The sum of all such required contributions, expressed as a percentage of the total annual payroll, is the normal cost of the program. It may be thought of as the amount required each year to cover the liabilities incurred with respect to service credits accrued in that year. In all of this, it should be noted, we are referring to the cost to be borne by the Government as an addition to the employee contribution.

If full normal costs, with appropriate adjustments for actuarial experience and for changes in the benefit plan, had been met every year since the earliest date for which service accrued, there would now be an accumulated fund which, together with normal costs to be contributed in the future, would be large enough to pay all benefits falling due in the future. In other words, the fund would be equal in value to the excess of the benefits to be paid over the normal contributions to be received, this excess being known as the accrued liability. The fund, however, does not match the liability. This is because credit is given for service before the system was established and also because past contributions have been less than the actuarially required amount. The program must therefore deal with what is known as an unfunded accrued liability, i.e., the amount by which the assets fall short of the accrued liability.

The unfunded accrued liability may be looked on as a debt the pension plan owes to its future beneficiaries. As an ongoing system, not concerned with its eventual termination, it can maintain the debt in perpetuity, preventing it from growing larger by simply paying interest on it. Thus, as a minimum funding policy, the Government should consider appropriating each year the normal cost (including administration expenses) plus interest on the unfunded accrued liability.

The Government can, of course, go further. It can decide to amortize the unfunded accrued liability over some period of time, such as 20, 30 or 40 years. Such a policy would naturally require larger than minimum appropriations during the amortization period. Thereafter, only the normal cost will be required and contributions can be decreased accordingly.

A policy of amortization has the effect, among other things, of building up reserves which can help meet the unanticipated increases in pension liabilities likely to result from general increases in salary levels.

5. Actuarial Cost

On the basis of the actuarial assumptions and funding procedures described earlier, we determined the employer normal cost to be 7.7% of payroll, or, on the basis of the June 30, 1970, payroll, \$23,458,700. To this must be added 0.2% of payroll for administration.

The unfunded accrued liability as of that date was \$420,479,000 as follows:

Accrued liability, total		\$610,176,100
Active members	\$463,749,500	
Inactive Members	32,146,600	
Pensioners	114,280,000	
Assets		189,697,100
Unfunded accrued liability		420,479,000

The annual cost of dealing with the unfunded accrued liability depends on whether it is to be maintained at the same level or amortized, and, if the latter, over what period. Thus:

<u>Treatment of unfunded accrued liability</u>	<u>Required annual payment</u>	
	<u>Amount</u>	<u>Percent of payroll</u>
Frozen by meeting interest payments only	\$18,921,600	6.2%
Amortized in 40 years	22,850,200	7.5
Amortized in 30 years	25,813,900	8.5
Amortized in 20 years	32,324,800	10.7

If a 40-year amortization schedule is adopted, the total cost is 15.5% as follows:

	<u>Amount</u>	<u>Percent of payroll</u>
Normal cost	\$23,458,700	7.7%
Payment to amortize accrued liability in 40 years	22,850,200	7.5
Administration expenses	623,200	0.2
Total	\$46,732,100	15.5%*

If the past service costs of the three corporations not now paying toward them continue to be absorbed by the rest of covered agencies, then the required payment to amortize these costs is increased from 7.5% to 7.9% of the payroll of the agencies paying the costs.

Although benefit payments are still below the present level of contributions, an actuarial valuation must make allowance for the continuing growth of the system. Even if there is no increase in general salary levels and no further liberalizations in benefits, the annual amount of benefit payments can be expected to be 3 or 4 times as high 10 years from now as at present and still continue increasing for many years thereafter.

*Total does not agree with sum of individual items because of rounding.

Table 1

Number and Average Salaries of Employees in Active Service as of June 30, 1970,
by Age and by Years of Service

General Employees - Coordinated Plan - Male

Age	Total	Years of service										
		0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 and over			
Total	Number Average salary	4,573* \$3,799	4,206 \$4,512	2,846 \$4,631	1,520 \$4,774	615 \$4,935	210 \$4,835	28 \$5,526	6			
Under 20	12 2,395	-	-	-	-	-	-	-	-	-	-	-
20 - 24	865 2,867	57 3,299	-	-	-	-	-	-	-	-	-	-
25 - 29	2,031 3,687	741 3,715	-	-	-	-	-	-	-	-	-	-
30 - 34	2,155 4,581	1,028 4,740	352 4,185	12 3,675	-	-	-	-	-	-	-	-
35 - 39	2,269 4,934	858 4,996	709 5,280	132 4,799	5 5,070	-	-	-	-	-	-	-
40 - 44	2,131 5,048	611 5,127	711 5,262	301 5,206	67 5,741	5 6,533	-	-	-	-	-	-
45 - 49	1,934 4,675	428 4,524	459 4,428	478 5,503	193 5,426	50 5,429	1 5,700	-	-	-	-	-
50 - 54	1,389 4,189	266 4,038	300 3,886	353 4,295	177 4,820	68 5,105	5 8,616	-	-	-	-	-
55 - 59	898 3,619	158 3,413	217 3,342	181 3,684	136 4,261	59 3,966	14 5,064	4 5,775	-	-	-	-
60 - 64	296 3,384	53 3,408	93 3,067	59 3,112	31 3,729	25 4,772	8 4,382	2	-	-	-	-
65 and over	24 3,499	6 2,634	5 2,638	4 3,687	6 4,907	3 3,600	-	-	-	-	-	-

* Note: Excludes 6,961 employees for whom data as to sex and date of birth is unavailable.

Table 2

Number and Average Salaries of Employees in Active Service as of June 30, 1970,
by Age and by Years of Service

General Employees - Coordinated Plan - Female

Age	Total	Years of service										35 and over
		0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 and over			
Total	18,999 \$3,131	7,197* \$3,034	5,320 \$3,246	3,175 \$3,152	2,146 \$2,995	859 \$3,338	263 \$3,385	30 \$4,275	9 \$5,395			
Under 20	35 2,673	-	-	-	-	-	-	-	-	-	-	-
20 - 24	2,626 2,885	2,449 2,880	177 2,962	-	-	-	-	-	-	-	-	-
25 - 29	3,736 3,407	2,041 3,462	1,650 3,341	45 3,303	-	-	-	-	-	-	-	-
30 - 34	2,750 3,493	809 3,153	1,183 3,707	724 3,522	34 3,570	-	-	-	-	-	-	-
35 - 39	2,564 3,370	670 2,901	713 3,512	800 3,515	363 3,606	18 3,925	-	-	-	-	-	-
40 - 44	2,585 3,092	611 2,626	686 2,917	555 3,244	513 3,437	200 3,720	20 4,077	-	-	-	-	-
45 - 49	2,387 2,839	348 2,602	538 2,624	567 2,655	547 2,894	284 3,577	101 3,486	2 2,440	-	-	-	-
50 - 54	1,492 2,675	165 2,719	261 2,475	337 2,473	428 2,485	193 3,142	91 3,431	12 4,480	5 5,415			
55 - 59	647 2,515	59 2,361	94 2,545	106 2,417	205 2,247	128 2,708	38 2,836	14 4,369	3 5,460			
60 - 64	158 2,448	8 2,930	13 2,775	40 2,467	50 2,123	32 2,347	13 2,816	1 5,640	1 5,100			
65 and over	19 3,083	2 5,850	5 2,491	1 1,820	6 3,530	4 2,151	-	1 2,820	-			

*Note: Excludes 6,961 employees for whom data as to sex and date of birth is unavailable.

Table 3
 Number and Average Salaries of Employees in Active Service as of June 30, 1970,
 by Age and by Years of Service

General Employees - Full Supplementation Plan - Male

Age	Total	Years of service										35 and over	
		0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 and over				
Total ..	Number Average salary	382* \$4,630	510 \$5,290	557 \$5,039	493 \$5,496	443 \$4,741	301 \$4,864	109 \$6,505	61 \$8,217				
20 - 24	27 2,794	24 2,795	3 2,790	-	-	-	-	-	-	-	-	-	-
25 - 29	97 3,972	59 3,918	26 4,292	12 3,545	-	-	-	-	-	-	-	-	-
30 - 34	133 4,870	44 4,823	69 5,278	20 3,564	-	-	-	-	-	-	-	-	-
35 - 39	183 5,623	49 5,770	62 6,168	61 4,913	9 4,770	2 10,574	-	-	-	-	-	-	-
40 - 44	263 6,152	55 5,051	71 7,084	86 6,284	35 5,978	13 5,471	3 5,480	-	-	-	-	-	-
45 - 49	414 5,603	55 4,006	74 5,686	104 5,692	89 6,635	70 5,237	20 5,661	2 8,130	-	-	-	-	-
50 - 54	511 5,339	43 5,121	82 4,424	78 4,829	126 5,807	100 5,886	65 5,100	13 6,914	4 6,829	-	-	-	-
55 - 59	630 4,753	38 3,887	60 4,736	99 4,481	111 4,508	131 4,008	122 4,909	51 6,680	18 8,541	-	-	-	-
60 - 64	524 4,733	11 7,437	57 4,046	79 4,160	104 4,812	113 4,061	85 4,411	40 5,660	35 7,958	-	-	-	-
65 and over	74 6,481	4 6,932	6 4,995	18 6,217	19 7,075	14 4,930	6 4,850	3 11,936	4 10,410	-	-	-	-

* Note: Excludes 908 employees for whom data as to sex and date of birth is unavailable.

Table 4

Number and Average Salaries of Employees in Active Service as of June 30, 1970,
by Age and by Years of Service

General Employees - Full Supplementation Plan - Female

Age	Total	Years of service										35 and over	
		0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 and over				
Total ..	Number Average salary	710* \$2,770	704 \$3,065	700 \$2,933	949 \$2,794	535 \$3,495	347 \$3,913	116 \$5,020	38 \$5,746				
Under 20	2	1,650	-	-	-	-	-	-	-	-	-	-	-
20 - 24	83	2,896	4	-	-	-	-	-	-	-	-	-	-
25 - 29	188	3,079	78	3	-	-	-	-	-	-	-	-	-
30 - 34	217	2,620	82	50	1	-	-	-	-	-	-	-	-
35 - 39	355	2,613	89	96	51	2	-	-	-	-	-	-	-
40 - 44	558	2,681	132	116	125	47	8	-	-	-	-	-	-
45 - 49	818	2,250	147	176	200	130	67	3	-	-	-	-	-
50 - 54	839	3,375	84	184	242	127	102	42	1	-	-	-	-
55 - 59	706	3,260	59	55	219	152	125	48	21	-	-	-	-
60 - 64	322	3,080	28	20	107	75	43	22	15	-	-	-	-
65 and over	11	-	1	-	4	2	2	1	1	-	-	-	-
	3,974	4,320	4,320	3,764	3,764	2,808	2,808	6,600	6,600	3,540	3,540	3,540	3,540

* Note: Excludes 908 employees for whom data as to sex and date of birth is unavailable.

Table 5
 Number and Average Salaries of Employees in Active Service as of June 30, 1970,
 by Age and by Years of Service

Policemen

Age	Total	Years of service											
		0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 and over				
Total ..	Number Average salary	3,712 \$4,465	1,219 \$4,912	1,229 \$5,261	188 \$5,440	332 \$5,521	158 \$5,649	82 \$6,708	10 \$8,388				
20 - 24	370	368	2	-	-	-	-	-	-	-	-	-	-
25 - 29	4,350	4,349	344	1	-	-	-	-	-	-	-	-	-
30 - 34	1,063	718	4,810	5,100	3	-	-	-	-	-	-	-	-
35 - 39	4,887	244	4,888	5,197	5,200	-	-	-	-	-	-	-	-
40 - 44	793	93	229	459	12	-	-	-	-	-	-	-	-
45 - 49	5,094	4,695	4,942	5,242	5,470	-	-	-	-	-	-	-	-
50 - 54	435	5	80	247	62	40	1	-	-	-	-	-	-
55 - 59	5,317	4,764	5,050	5,301	5,613	5,551	5,640	-	-	-	-	-	-
60 - 64	351	2	24	117	57	144	6	1	-	-	-	-	-
Unknown	5,433	4,800	5,265	5,306	5,527	5,565	4,791	5,280	-	-	-	-	-
	320	-	20	90	38	94	65	13	-	-	-	-	-
	5,517	-	5,271	5,287	5,102	5,561	5,839	6,780	-	-	-	-	-
	218	1	11	34	14	44	62	50	2	-	-	-	-
	5,853	5,040	5,815	5,538	5,220	5,300	5,620	6,949	8,220	-	-	-	-
	68	-	5	1	2	10	24	18	8	-	-	-	-
	5,974	-	5,736	5,520	5,700	5,382	5,425	6,067	8,430	-	-	-	-
	2,281	2,281	-	-	-	-	-	-	-	-	-	-	-

Table 6
 Number and Average Salaries of Employees in Active Service as of June 30, 1970,
 by Age and by Years of Service
 Firemen - Coordinated Plan

Age	Total	Years of Service					
		0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29
Total	839 \$3,499	590 \$3,328	103 \$3,618	63 \$3,571	62 \$3,745	17 \$3,645	4 \$3,792
20 - 24	50 3,312	49 3,312	1 3,300	-	-	-	-
25 - 29	105 3,367	85 3,339	20 3,487	-	-	-	-
30 - 34	97 3,470	48 3,321	39 3,629	10 3,571	-	-	-
35 - 39	79 3,596	23 3,345	26 3,725	22 3,723	8 3,554	-	-
40 - 44	43 3,640	1 3,300	10 3,692	16 3,482	13 3,780	3 3,824	-
45 - 49	47 3,569	2 3,300	2 3,450	14 3,445	24 3,643	2 3,780	3 3,676
50 - 54	25 3,511	-	5 3,485	1 3,444	13 3,470	6 3,632	-
55 - 59	5 5,213	-	-	-	2 7,722	3 3,540	-
60 - 64	6 3,544	-	-	-	2 3,300	3 3,508	1 4,140
Unknown	382	382	-	-	-	-	-

Table 7

Number and Average Salaries of Employees in Active Service as of June 30, 1970,
by Age and by Years of Service

Firemen - Full Supplementation Plan

Age	Total	Years of service						
		0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	
Total	125 \$3,747	26 \$3,413	11 \$3,553	15 \$3,824	26 \$3,707	35 \$3,634	12 \$4,722	
20 - 24	6 3,300	-	-	-	-	-	-	
25 - 29	7 3,480	4 3,375	3 3,620	-	-	-	-	
30 - 34	10 3,588	5 3,432	4 3,645	1 4,140	-	-	-	
35 - 39	6 3,584	1 3,600	1 3,300	1 3,444	3 3,720	-	-	
40 - 44	9 3,533	-	1 3,300	6 3,490	1 3,600	1 3,960	-	
45 - 49	20 3,961	-	1 3,444	2 3,516	9 4,127	6 4,064	2 3,612	
50 - 54	23 3,538	1 3,960	1 3,600	2 3,489	10 3,428	6 3,588	3 3,680	
55 - 59	27 3,683	-	-	3 4,940	3 3,400	16 3,479	5 3,751	
60 - 64	7 5,384	-	-	-	-	5 3,610	2 9,820	
65 and over	1 3,588	-	-	-	-	1 3,588	-	
Unknown	9 -	9 -	-	-	-	-	-	

Table 8

Number of Employees in Active Service
as of June 30, 1970, by Salary

Annual Salary	General Employees			Policemen	Firemen
	Total*	Male	Female		
Total	47,827	16,860	23,098	6,930	964
Under \$1,000	1,808	403	1,081	14	
\$1,000 - 1,999 ...	5,756	222	4,557	27	14
2,000 - 2,999 ...	18,239	6,072	8,513	8	11
3,000 - 3,999 ...	9,001	4,255	3,730	3	905
4,000 - 4,999 ...	5,091	1,516	2,697	4,468	17
5,000 - 5,999 ...	2,509	939	1,293	2,096	10
6,000 - 6,999 ...	1,682	821	632	194	4
7,000 - 7,999 ...	946	621	210	81	-
8,000 - 8,999 ...	401	261	102	22	1
9,000 - 9,999 ...	698	528	94	3	-
10,000 - 10,999 ...	525	379	70	12	-
11,000 - 11,999 ...	138	124	14	-	-
12,000 - 12,999 ...	371	213	25	1	1
13,000 - 13,999 ...	103	87	16	1	-
14,000 - 14,999 ...	221	185	36	-	1
15,000 - 15,999 ...	163	110	15	-	-
16,000 - 16,999 ...	52	48	4	-	-
17,000 - 17,999 ...	87	44	5	-	-
18,000 - 18,999 ...	28	25	3	-	-
19,000 - 19,999 ...	4	4	-	-	-
20,000 - 20,999 ...	3	2	1	-	-
34,000 - 34,999 ...	1	1	-	-	-

*Includes 7,869 employees for whom data as to sex is unavailable

Table 9

Vested Employees as of June 30, 1970,
by Sex and by Age

Age as of June 30, 1971	General Employees			Policemen	Firemen
	Total	Male	Female		
Total	2,303	1,137	1,166	93	18
25 - 29	7	3	4	-	-
30 - 34	133	43	90	3	-
35 - 39	328	128	200	13	-
40 - 44	437	211	226	17	4
45 - 49	444	236	208	15	4
50 - 54	346	162	184	22	5
55 - 59	252	138	114	10	2
Unknown	356	216	140	13	3

Table 10

Vested Employees as of June 30, 1970,
by Sex and by Service on Date of Separation

Years of service	General Employees			Policemen	Firemen
	Total	Male	Female		
Total	2,303	1,137	1,166	93	18
10 - 14	1,497	739	758	37	13
15 - 19	536	255	281	28	4
20 - 24	203	105	98	19	1
25 - 29	43	20	23	5	-
30 - 34	13	8	5	2	-
35 and over	11	10	1	2	-

Table 11

Pensions in Force on June 30, 1970,
by Type and by Age

General Employees - Male

Age on June 30, 1970	Total	Type of pension		
		Age-Service	Disability	Unknown
Total	4,199	2,957	1,110	132
25 - 29	2	-	2	-
30 - 34	5	-	5	-
35 - 39	25	-	25	-
40 - 44	64	-	64	-
45 - 49	115	-	115	-
50 - 54	165	6	149	10
55 - 59	337	97	216	24
60 - 64	642	376	233	33
65 - 69	1,073	871	166	36
70 - 74	760	694	65	1
75 - 79	539	496	42	1
80 - 84	300	278	22	-
85 - 89	109	107	2	-
90 - 94	26	23	3	-
95 - 99	4	4	-	-
Unknown	33	5	1	27

P.R. Employees

Table 12

Pensions in Force on June 30, 1970,
by Type and by Monthly Amount

General Employees - Male

Monthly amount	Total	Type of pension		
		Age-Service	Disability	Unknown
Total	4,199	2,957	1,110	132
Under \$100	2,045	1,401	595	49
\$100 - 149	1,129	722	381	26
150 - 199	375	294	68	13
200 - 249	211	172	27	12
250 - 299	130	112	13	5
300 - 349	66	54	6	6
350 - 399	59	47	7	5
400 - 449	40	31	3	6
450 - 499	38	32	2	4
500 - 599	46	39	5	2
600 - 699	26	22	2	2
700 - 799	22	21	-	1
800 - 899	8	6	1	1
900 - 999	4	4	-	-

P.R. Employees

Table 13

Pensions Awarded in Year Ended June 30, 1970,
by Type and by Age

General Employees - Male

Age on June 30, 1970	Total	Type of pension		
		Age-Service	Disability	Unknown
Total	278	146	35	97
35 - 39	2	-	2	-
40 - 44	1	-	1	-
45 - 49	9	-	9	-
50 - 54	12	2	5	5
55 - 59	61	28	9	24
60 - 64	83	53	7	23
65 - 69	91	62	2	27
75 - 79	1	1	-	-
Unknown	18	-	-	18

P.R. Employees

Table 14

Pensions Awarded in Year Ended June 30, 1970,
by Type and by Monthly Amount

General Employees - Male

Monthly amount	Total	Type of pension		
		Age-Service	Disability	Unknown
Total	278	146	35	97
Under \$100	99	55	10	34
\$100 - 149	67	28	19	20
150 - 199	20	6	4	10
200 - 249	18	5	2	11
250 - 299	12	10	-	2
300 - 349	6	4	-	2
350 - 399	9	6	-	3
400 - 449	13	7	-	6
450 - 499	7	4	-	3
500 - 599	12	10	-	2
600 - 699	5	3	-	2
700 - 799	7	6	-	1
800 - 899	2	1	-	1
900 - 999	1	1	-	-

P.R. Employees

Table 15

Pensions in Force on June 30, 1970,
by Type and by Age

General Employees - Female

Age on June 30, 1970	Total	Type of pension		
		Age-Service	Disability	Unknown
Total	3,633	2,084	1,450	99
25 - 29	1	-	1	-
30 - 34	1	-	1	-
35 - 39	27	-	27	-
40 - 44	84	-	84	-
45 - 49	164	-	164	-
50 - 54	278	5	257	16
55 - 59	489	83	387	19
60 - 64	735	394	315	26
65 - 69	823	646	159	18
70 - 74	545	510	34	1
75 - 79	296	286	10	-
80 - 84	122	117	5	-
85 - 89	35	33	2	-
90 - 94	9	7	2	-
95 - 99	2	1	1	-
Unknown	22	2	1	19

P.R. Employees

Table 16

Pensions in Force on June 30, 1970,
by Type and by Monthly Amount

General Employees - Female

Monthly amount	Total	Type of pension		
		Age-Service	Disability	Unknown
Total	3,633	2,084	1,450	99
Under \$100	2,605	1,458	1,087	60
\$100 - 149	686	390	280	16
150 - 199	175	116	51	8
200 - 249	91	61	26	4
250 - 299	36	25	3	8
300 - 349	17	13	2	2
350 - 399	12	10	1	1
400 - 449	5	5	-	-
450 - 499	4	4	-	-
500 - 599	2	2	-	-

P.R. Employees

Table 17

Pensions Awarded in Year Ended June 30, 1970,
by Type and by Age

General Employees - Female

Age on June 30, 1970	Total	Type of pension		
		Age-Service	Disability	Unknown
Total	219	109	46	64
35 - 39	3	-	3	-
40 - 44	6	-	6	-
45 - 49	7	-	7	-
50 - 54	20	2	9	9
55 - 59	55	27	15	13
60 - 64	69	45	5	19
65 - 69	50	35	1	14
Unknown	9	-	-	9

P.R. Employees

Table 18

Pensions Awarded in Year Ended June 30, 1970,
by Type and by Monthly Amount

General Employees - Female

Monthly amount	Total	Type of pension		
		Age-Service	Disability	Unknown
Total	219	109	46	64
Under \$100	141	64	40	37
\$100 - 149	34	21	3	10
150 - 199	10	5	-	5
200 - 249	11	6	2	3
250 - 299	12	5	1	6
300 - 349	5	3	-	2
350 - 399	3	2	-	1
400 - 449	2	2	-	-
500 - 549	1	1	-	-

P. R. Employees

Table 19

Pensions in Force on June 30, 1970,
by Type and by Monthly Amount

Policemen

Monthly amount	Total	Type of pension		
		Age-Service	Disability	Unknown
Total	1,179	277	891	11
Under \$100	244	4	240	-
\$100 - 149	415	111	303	1
150 - 199	233	56	171	6
200 - 249	156	56	99	1
250 - 299	43	24	18	1
300 - 349	32	12	20	-
350 - 399	28	5	21	2
400 - 449	17	3	14	-
450 - 499	2	2	-	-
500 - 599	7	4	3	-
600 - 699	1	-	1	-
700 - 799	1	-	1	-

P.R. Employees

Table 20

Pensions in Force on June 30, 1970,
by Type and by Age

Policemen

Age on June 30, 1970	Total	Type of pension		
		Age-Service	Disability	Unknown
Total	1,179	277	891	11
25 - 29	10	-	10	-
30 - 34	31	-	31	-
35 - 39	51	-	51	-
40 - 44	58	-	58	-
45 - 49	120	-	120	-
50 - 54	164	5	159	-
55 - 59	221	28	190	3
60 - 64	176	68	107	1
65 - 69	151	78	71	2
70 - 74	69	42	27	-
75 - 79	66	36	30	-
80 - 84	18	8	10	-
85 - 89	27	9	18	-
90 - 94	8	2	6	-
95 - 99	2	-	2	-
Unknown	7	1	1	5

P. R. Employees

Table 21

Pensions Awarded in Year Ended June 30, 1970,
by Type and by Age

Policemen

Age on June 30, 1970	Total	Type of pension	
		Age-Service	Disability
Total	65*	10	54
25 - 29	4	-	4
30 - 34	13	-	13
35 - 39	11	-	11
40 - 44	6	-	6
45 - 49	5	-	5
50 - 54	7	-	7
55 - 59	9	3	6
60 - 64	10*	7	2

*Includes 1 of unknown type

P.R. Employees

Table 22

Pensions Awarded in Year Ended June 30, 1970,
by Type and by Monthly Amount

Policemen

Monthly amount	Total	Type of pension	
		Age-Service	Disability
Total	65*	10	54
Under \$100	1	-	1
\$100 - 149	5	2	3
150 - 199	6	1	5
200 - 249	34*	2	31
250 - 299	3	1	2
350 - 399	4	2	2
400 - 449	9	1	8
450 - 499	1	1	-
600 - 699	1	-	1
700 - 799	1	-	1

*Includes 1 of unknown type

P.R. Employees

Table 23

Pensions in Force on June 30, 1970,
by Type and by Age

Firemen

Age on June 30, 1970	Total	Type of pension	
		Age-Service	Disability
Total	87	40	47
25 - 29	1	-	1
35 - 39	2	-	2
40 - 44	6	-	6
45 - 49	8	-	8
50 - 54	4	-	4
55 - 59	9	-	9
60 - 64	22	10	12
65 - 69	17	14	3
70 - 74	12	10	2
75 - 79	5	5	-
Unknown	1	1	-

P.R. Employees

Table 24

Pensions in Force on June 30, 1970,
by Type and by Monthly Amount

Firemen

Monthly amount	Total	Type of pension	
		Age-Service	Disability
Total	87	40	47
Under \$100	50	26	24
\$100 - 149	28	11	17
150 - 199	4	1	3
200 - 249	3	1	2
250 - 299	1	-	1
400 - 449	1	1	-

P.R. Employees

Table 25

Surviving Spouse Pensions in Force on June 30, 1970,
by Age and by Sex of Employee

Age on June 30, 1970	Total	General Employees		Policemen	Firemen
		Male	Female		
Total	280	55	7	216	2
25 - 29	2	1	-	1	-
30 - 34	6	3	-	3	-
35 - 39	10	7	1	1	1
40 - 44	12	7	-	5	-
45 - 49	11	5	1	5	-
50 - 54	17	4	-	13	-
55 - 59	26	11	2	12	1
60 - 64	26	8	1	17	-
65 - 69	21	6	-	15	-
70 - 74	27	3	1	23	-
75 - 79	12	-	1	11	-
80 and over ...	5	-	-	5	-
Unknown	105	-	-	105	-

P.R. Employees

Table 26

Surviving Spouse Pensions in Force on June 30, 1970,
by Monthly Amount and by Sex of Employee

Monthly amount	Total	General Employees		Policemen	Firemen
		Male	Female		
Total	280	55	7	216	2
Under \$100	181	11	1	169	-
\$100 - 149	42	18	2	21	1
150 - 199	23	9	1	12	1
200 - 249	10	3	-	7	-
250 - 299	6	3	-	3	-
300 - 349	6	5	-	1	-
350 - 399	6	2	3	1	-
400 - 449	2	1	-	1	-
500 - 599	1	1	-	-	-
600 - 699	1	1	-	-	-
700 - 799	1	1	-	-	-
900 - 999	1	-	-	1	-

P.R. Employees

Table 27

Assets as of June 30, 1970

Cash		\$3,270,136
Accounts receivable		1,167,774
Investments:		
Federal Treasury Notes	\$1,239,000	
Bonds	16,863,000	
Stock	10,957,874	
Certificates of deposit	<u>25,166,000</u>	54,225,874
Loans:		
Mortgages		129,630,132
Cultural		1,268,484
Miscellaneous		<u>134,660</u>
Total assets		\$189,697,060

P.R. Employees

EMPLOYEES' RETIREMENT SYSTEM OF THE GOVERNMENT OF PUERTO RICO
AND ITS INSTRUMENTALITIES

Summary of Benefit Provisions

Service retirement annuity -- Payable at (a) age 55 after 30 years of service, or (b) age 58 after 10 years of service. Reduced annuity payable at (a) age 55 after 25 years of service, or (b) age 52 after 30 years of service.

Special provision for policemen and firemen -- Payable at age 50 after 25 years of service.

Special provision for mayors of municipalities -- Payable at age 50 after 8 years as mayor.

Compulsory retirement -- At age 65, except extensions to age 68 may be approved. For policemen and firemen, age 62, except that officers may be extended to 65. Retirement not compulsory for mayors or elected officials.

Deferred retirement annuity -- Member separated after 10 years of service is vested in a deferred annuity beginning at age 58 or at age 55 if he has 30 years of service. Reduced pension payable at age 55 with at least 25 years of service or at age 52, with 30 years of service. A policeman or fireman with 25 years of service is vested in a deferred annuity beginning at age 50. Vested right is forfeited if contributions are refunded.

Disability retirement annuity -- Payable on (a) disability due to occupational causes, regardless of service, or (b) disability due to non-occupational causes after 10 years of service. Member also eligible for service retirement annuity receives higher of two annuities.

Amount of service or deferred retirement annuity

Before age 65; member with less than 30 years of service -- $1\frac{1}{2}\%$ of average salary for each of first 20 years of service plus 2% for each year of service in excess of 20. Amount actuarially reduced if member is under age 58 at time annuity begins.

Government

Before age 65; member with 30 years of service -- 2% of average salary for each year of service. Amount reduced by 5% for each year or fraction of year member is under age 55 at time annuity begins.

After age 65; member under Full Supplementation Plan -- Same as before age 65.

After age 65; member under Coordinated Plan -- Percentages applicable before age 65 reduced by $\frac{1}{2}\%$ with respect to salary up to \$6,600.*

Full Supplementation Plan covers (1) general employees who (a) retired before July 1, 1968, (b) separated before such date with right to deferred retirement annuity, or (c) elected to pay higher contribution rate; (2) firemen who (a) retired before October 2, 1968, or (b) elected to pay higher contribution rate; (3) policemen; and (4) mayors of municipalities. Coordinated Plan covers all other employees. Member may enter Supplementation Plan at any time by paying extra contribution retroactively to July 1, 1968 (general employee) or October 2, 1968 (fireman) at $2\frac{1}{2}\%$ interest.

Maximum annuity is 85% of average salary.

If annuity, before reduction for early retirement, is less than \$1,500, it is increased by \$180, but not above \$1,500. The \$180 increase is proportionately reduced in the case of a deferred annuity based on less than 25 years of service.

Minimum annuity, after reduction for early retirement, is \$780, \$1,020, or \$1,200, depending on amount before application of minimum. Effective July 1, 1972, minimum will be \$1,200 in all cases. For employee in active service on June 30, 1960, or separated as of that date with right to deferred pension, minimum is foregoing or 30% of average salary, whichever is greater.

Special provision for mayors -- 5% of highest salary for each year of service as mayor up to 10, plus $1\frac{1}{2}\%$ for each year of government service not included in foregoing up to 20, plus 2% for each additional year of government service.

Amount of disability retirement annuity

A. Non-occupational

Before age 65 -- 30% of average salary plus 1% for each year of service in excess of 10 to a maximum of 50%.

After age 65 -- Same as for service retirement.*

Government

B. Occupational

Before age 65 -- 50% of final salary (100% for policemen, firemen, National Guardsmen and others in hazardous occupations whose disability resulted, under certain restricted conditions, from a service-connected accident).

After age 65 -- Same as for service retirement.*

No reduction for disability compensation from State Insurance Fund.

Reversionary annuity -- Member may elect to receive his retirement annuity in a reduced amount in order to provide a reversionary annuity for a dependent. Reversionary annuity may be as low as \$240 and as high as the member's reduced annuity. Member must be in good health at retirement and live at least 30 days after retirement.

Pre-retirement death benefit

A. Non-occupational -- Refund of member contributions with $2\frac{1}{2}\%$ interest plus lump-sum payment equal to 1 year's final salary.

B. Occupational -- Widow receives, until death or remarriage, an annuity equal to 50% of member's final salary plus \$120 for each child under age 18 (age 25 if at school). If no annuity is payable to widow, each child receives annuity of \$240. Maximum family annuity is 75% of final salary. In absence of widow or child, non-occupational benefit is payable. No reduction for disability compensation from State Insurance Fund.

Post-retirement death benefit -- Member contributions with $2\frac{1}{2}\%$ interest are refunded to the extent that they exceed retirement payments already made, unless reversionary annuity is payable. Minimum payment is \$200.

In addition, 60% of retirement annuity is payable to surviving spouse (if not remarried) or children (under 18, under 25 and at school, or disabled) of an employee who retired without Social Security coverage (that is, a general employee who retired before 1956, or a fireman who retired before October 2, 1968, or a policeman). In case of policeman, minimum survivor annuity is \$720.

Withdrawal benefit -- Refund of member contributions with $2\frac{1}{2}\%$ interest.

Government

Member contribution rates

General employees, Coordinated Plan -- $3\frac{1}{2}\%$ of monthly salary to \$550; 6% of excess.

General employees, Full Supplementation Plan -- 6% of salary.

Firemen, Coordinated Plan -- $4\frac{1}{2}\%$ of monthly salary up to \$550; 7% of excess.

Firemen, Full Supplementation Plan -- 7% of salary.

Policemen -- 7% of salary.

Mayors of municipalities -- 7% of salary.

Average salary -- Average salary for 5 years of service in which salary was highest.

Final salary -- Annual rate of salary at termination of service.

*Annuity, when added to Social Security primary benefit, may not be less than annuity before age 65.