The Judiciary Retirement System of the Government of Puerto Rico and its Instrumentalities

Actuarial Valuation Report
as of
June 30, 2001

October 29, 2002

BUCK CONSULTANTS®
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October 29, 2002

Board of Trustees
The Judiciary Retirement System of the Government of Puerto Rico and its Instrumentalities
Ave. Ponce de León #437
Hato Rey, Puerto Rico 00910

June 30, 2001 Actuarial Valuation

Dear Board Members:

Actuarial valuations of the Judiciary Retirement System of Puerto Rico (also the "**Retirement System**" or the "**System**") are prepared on an annual basis:

- To determine the employer contribution required to fund the Retirement System on a sound actuarial basis,
- To provide a summary of the funded status of the System, and
- To present the financial statement disclosure information according to GASB 25 and 27.

The annual actuarial valuation of the Judiciary Retirement System of Puerto Rico, prepared as of June 30, 2001, has been completed. This report presents the results of the actuarial valuation and the contributions payable by the employer to the Retirement System. This is the first actuarial report performed by Buck Consultants, Inc.

Discussion of Valuation Results

The actuarial valuation as of June 30, 2001 indicates that a total employer contribution rate of 29.57% of payroll is required to meet the employer normal cost and to amortize the unfunded actuarial liability over 25 years from July 1, 2001 as a level percentage of payroll. Based on a total payroll of $26,700,000 as of June 30, 2001, the estimated required actuarial contribution payable by the Government of Puerto Rico would be $7,895,190.

The actual contributions to the Retirement System are set by legislation of the Government of Puerto Rico. It is our understanding that the current employer contribution rate is 20.00% of salary. Therefore, we estimate an additional contribution of 9.57% of pay (approximately $2.6 million per year) is recommended for the sound financing of the System. This contribution deficit will continue to deteriorate the financial status of the Retirement System. We recommend consideration of a gradual increase in employer contributions and/or evaluation of Plan benefits in order to help improve the long-term funding of the System.

(1) **Funded Status of Retirement System**

Below we present a comparison of the funding ratio of the System as of June 30, 2001 and 2000. The information as of June 30, 2000 is based on the actuarial report prepared by the System's prior actuary. The market value of assets as of June 30, 2001 was obtained from the System's audited statements (dated October 4, 2001).

Funding Ratio Comparison

	June 30, 2001	June 30, 2000
Actuarial Accrued Liability	$162,186,168	$135,800,000
Market Value of Assets	$70,083,000	$82,808,000
Unfunded Actuarial Accrued Liability	$92,103,168	$52,992,000
Funding Ratio	**43.2%**	**61.0%**

The funding ratio has decreased over 17% due mostly to the one-year benefit accumulation and the decrease in assets. The asset return for the year ending on the valuation date was approximately (13.48%) compared to an assumed return of 8.5%. The lower than anticipated return resulted in an asset loss of approximately $18 million.

Accounting Disclosures (GASB 25/27)

The accounting information required under GASB Statements Nos. 25 and 27 for the fiscal year ending June 30, 2002 is presented in the attached Table I. To the best of our understanding and knowledge, the development of the GASB information follows the methodology used by the prior actuary. Information in the schedules before 2001 is derived from the June 30, 2001 financial statements of the Retirement System. We note the reported contributions paid in the 2001 financial statements appear to include employee contributions. It is our understanding that only employer contributions should be included. As discussed, the Annual Required Contribution (ARC) for the year ending June 30, 2001 (based on the June 30, 2000 actuarial valuation) is not available.

In order to finalize the Schedule of Employer Contributions, the contributions paid for the year ending June 30, 2002 are needed.

Actuarial Assumptions and Methods, and System Provisions

The valuation is based on certain actuarial assumptions and methods, including an annual interest rate of 8.5% and salary and total payroll increases of 5.0% per year. To the best of our knowledge, the valuation is based on the same assumptions and methods utilized in the previous valuation by the prior actuary. However, we did attempt to contact the prior actuary to discuss and compare the consistency of our numbers against those presented (or to our understanding, omitted) in the previous actuarial report.

Due to time and other financial constraints we were unable to pursue any further comparison of our results with those of the prior actuary. In this connection, at the System's request, we would continue those analyses and comparisons of our numbers versus those of the prior actuary.

Based on our discussions, we understand that the most recent review of the actual experience of the System was performed nearly ten years ago. We suggest the Board consider undertaking an experience study to evaluate the current assumptions and make modifications, if necessary. A summary of the assumptions and methods used in the valuation are outlined in the **Assumptions and Methods** section of the report (Table II).

To our knowledge, there have been no changes in the benefits provided by the Retirement System since the prior valuation. The **Plan Provisions** sections of the report (Table III) summarize the Retirement System benefits.

Valuation Data

We have prepared the valuation using the System's members data and the financial data provided by the Retirement System. Below we provide a summary of the member data used in the actuarial valuation. The information for the June 30, 2000 valuation is based on the prior actuary's report.

	June 30, 2001 Valuation	June 30, 2000 Valuation
Actives number	359	346
Actives - annual payroll	$26,700,000	$25,703,600
Retirees number	224	215
Retirees - annual benefits	$7,887,742	$7,503,504
Beneficiaries number	57	54
Beneficiaries - annual benefits	$742,676	722,987
Deferred vested number	31	N/A
Deferred vested – annual benefits	$809,006	N/A
Total inactives number	312	269
Total inactives annual benefits	$8,630,418*	$8,226,491

* Excluding benefits of deferred vested employees.

Board of Trustees
The Judiciary Retirement System of the
Government of Puerto Rico and its Instrumentalities
October 29, 2002

Certification

This actuarial valuation and/or cost determination was prepared and completed by us or under our direct supervision and we acknowledge responsibility for the results. To the best of our knowledge, the results are complete and accurate and, in our opinion, the techniques and assumptions used are reasonable. There is no benefit or expense to be provided by the Retirement System and/or paid from the System's assets for which liabilities or current costs have not been established or otherwise taken into account in the valuation. To the best of our ability, all known events or trends that may require a material increase in System costs or required contribution rates have been taken into account in the valuation.

Respectfully submitted,

Héctor D. Gaitán

Héctor D. Gaitán, FCA, ASA, MAAA
Office Manager & Consulting Actuary

José I. Fernández

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Principal, Consulting Actuary

		For Fiscal Year Ended 06/30/02	
1. Number of Plan Members as of 6/30:		2001	
a. Retirees and beneficiaries receiving benefits		281	
b. Terminated plan members entitled to but not yet receiving benefits		31	
c. Active plan members		359	
d. Total		671	

2. Development of Annual Required Contribution (ARC):			
a. Valuation date		6/30/01	
b. Employer normal cost:			NC+UNL / Payroll = 2,406,509 + 5487660 / 26,700,000 = 7894169 / 26,700,000 = 29.56%
i. Total normal cost (end of year)	$	4,635,469	
ii. Expected employee contributions		(2,228,960)	⇒ Porque usan el expected si ya hay un valor Real de Contribuciones
iii. Employer normal cost [1]	$	2,406,509	
c. Amortization of UAAL:			
i. Actuarial accrued liability (AAL)	$	162,186,168	
ii. Actuarial value of assets		(70,083,000)	
iii. Unfunded AAL (UAAL)	$	92,103,168	
iv. Amortization of UAAL		5,487,660	¿Periodo de Amortización cuanto es?
d. Amortization of NPO (beginning of year) [1]:		(1,002,461)	
e. **ARC** (Item 2.b.iii. + Item 2.c.iv. + Item 2.d.)	$	6,891,708	

3. Annual Pension Cost and Net Pension Obligation (NPO):			
a. ARC	$	6,891,708	
b. Interest on NPO		(1,430,125)	= (16,825,000)*(.085)
c. Adjustment to ARC		1,002,461	
d. **Annual Pension Cost**	$	6,464,044	% Payroll = 6464044 / 26,700,000 = 24.20
e. Contributions made ← Estamos pensando le añade los Intereses Contributivos?		N/A	⇒ Falta los Aportaciones Patronales e Individuales
f. Increase (decrease) in NPO		N/A	
g. NPO (beginning of year) [1]		(16,825,000)	
h. **NPO (end of year)**		N/A	

(1) Net Pension Obligation (NPO) as of June 30, 2000 from prior actuary's valuation report as of that date. NPO as of June 30, 2001 is not available.

Tomar median total de Annual pension cost / Payroll % aparece ____

4. Schedule of Employer Contributions

Year Ended June 30	Annual Required Contribution	Contribution Made	Percentage Contributed	(Excess)/ Deficiency
2002	$ 6,891,708	N/A	N/A	N/A
2000	9,216,000	7,300,000	79%	(1,916,000)
1999	4,500,000	7,900,000	176%	3,400,000

5. Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets **(a)**	Actuarial Accrued Liability - Unit Credit (AAL) **(b)**	Unfunded AAL (not < 0) (UAAL) **(b) - (a)**	Funded Ratio **(a)/(b)**	Covered Payroll **(c)**	UAAL as % of Covered Payroll **[(b) - (a)]/(c)**
6/30/01	$70,083,000	$ 162,186,168	$92,103,168	43%	$26,700,000	345%
6/30/00	82,808,000	135,800,000	52,992,000	61%	25,700,000	206%
6/30/99	73,900,000	118,200,000	44,300,000	63%	26,300,000	168%

6. Additional Information

Valuation date:	June 30, 2001
Actuarial cost method:	Projected unit credit
Amortization method:	Level percent of pay
Remaining amortization period:	25 years
Asset valuation method:	Market value
Actuarial assumptions:	
Investment rate of return*	8.50% per annum
Projected salary increases*	5.00% per annum
Cost-of-living adjustments	3% every three years
*Includes inflation at	3.50% per annum

Annual Required Contribution for the year ended June 30, 2001 is not available.
Information prior to June 30, 2001 is from June 30, 2001 Audited Financial Statements.

1. **Actuarial Cost Method**

   Projected Unit Credit, with straight proration based on service to event.

2. **Interest Rate**

   8.50% per annum.

3. **Salary Increases**

   5.00% per annum.

4. **Decrements**

   - **Pre-Retirement Mortality**

     1983 Group Annuity Mortality Table set forward two (2) years. It was further assumed that 50% of deaths are occupational and 50% non-occupational.

   - **Post-Retirement Mortality**

     1983 Group Annuity Mortality Table set forward two (2) years.

   - **Post-Retirement Disability Mortality**

     Same as regular Post-Retirement Mortality.

   - **Permanent Withdrawal from Active Status**

     Medium Turnover Table commensurate with anticipated experience. Representative values of the assumed annual rates of withdrawal (per 1,000 members) in active service are set forth in the following table:

Age	Male	Female
15	94.0	94.0
20	71.5	71.5
25	50.0	50.0
30	39.0	39.0
35	32.0	32.0
40	26.5	26.5
45	18.0	18.0
50	8.0	8.0
55	3.0	3.0
60	0.0	0.0

- **Retirement**

Graded scale of retirement ages commensurate with anticipated experience. The percentage of employees retiring at any given age is presented below:

Age	Percent Retiring
50	4%
51	4
52	4
53	4
54	4
55	10
56	10
57	10
58	10
59	10
60	25
61	10
62	10
63	10
64	10
65	10
66	10
67	10
68	10
69	10
70	100

- **Disability**

65% of Third Railroad Retirement Table. Disabilities are ALL deemed occupational. Representative values of the assumed annual rates of disability (per 1,000 members) in active service are set forth in the following table:

Age	Male	Female
25	1.560	2.340
30	1.560	2.340
35	1.658	2.487
40	1.911	2.867
45	2.568	3.855
50	4.635	6.955
55	8.853	13.280
60	17.940	26.910

(continued)

5. **Cost of Living Adjustment**

   3% every third year.

6. **Proportion of Participants with Spouses**

   80% of participants assumed to be married, with wives assumed to be four (4) years younger than their husbands.

7. **Term as Judge**

   Supreme Court judges are assumed to serve with unlimited terms. All other judges are assumed to have a fixed term of duration.

Plan Provisions as of July 1, 2001

Effective Date:

January 1, 1954. Most recent amendment adopted April 28, 1996.

Eligibility:

All persons holding a position as Justice of the Supreme Court, Judge of the Superior Court or the District Court, or Municipal Judges of the Commonwealth of Puerto Rico.

Definitions:

(a) **Salary**: Annual compensation received by a judge for his services in that capacity.

(b) **Highest Earnings**: the highest annual salary received as a judge.

(c) **Credited Service**: the years and months (where fractional months are counted as full months of service) of plan participation, beginning of Date Credit Begins and ending on date of separation from service. All intervening periods of resignation or expiration of the appointed or elective term are excluded. Periods for which no contributions have been made or for which contributions were refunded are also excluded. However, credit will be granted for refund periods if the participant returns any refunded Accumulated Contributions to the Plan.

(d) **Actuarial Equivalent**: the amount of pension payable at a commencement date other than normal retirement or payable to a survivor which may be funded by the total contributions accrued toward a pension payable at normal retirement of the participant. The equivalence is calculated based on annuity and mortality tables adopted by the Board of Trustees and based on actual experience of the System with the recommendations of the actuary.

(e) **Interest Credit**: the annual rate of 2½%, or any other rate recommended by the Board of Trustees, based on the experience of the System.

(f) **Accumulated Contributions**: the sum of all participant contributions, credited and compounded with Interest Credit.

(g) **Date Credit Begins**: (i) for participants with **eight or more** years of Credited Service as a judge, Credit Begins on the earlier of the day of appointment as a judge or the day first employed by the Government of Puerto Rico, or (ii) for participants with **less than eight years** of Credited Service as a judge, Credit begins on the day of appointment as a judge.

Normal Retirement Pension:

(a) Participants Eligible. All participants on the date coinciding with the attainment of:

(i) **Benefit (1).** Age 60 and 10 years of Credited Service; serving as a judge with a fixed term of duration.

(ii) **Benefit (2).** Age 60 and 10 year of Credited Service; serving as a judge without a fixed term of duration.

(iii) **Benefit (3).**

(A) 30 years of Credited Service before age 60, 8 of which were in service as a judge, or

(B) Age and Credited Service according to the following table with the last 8 years in service as a judge:

Age	Credited Service
62	20
61	21
60	22
59	23
58	24
57	25
56	26
55	27

(b) **Pension Benefit.** Corresponding to eligibility above:

(i) **Benefit (1).** 25% of Highest Earnings, plus 5% of Highest Earnings times Credited Service in excess of 10 years, to a maximum of 75% of Highest Earnings.

(ii) **Benefit (2).**

(A) **If served as a judge for 8 years (not necessarily consecutive).** 50% of Highest Earnings, plus 5% of Highest Earnings for each year of Credited Service in excess of 10 years, to a maximum of 100% of Highest Earnings.

(B) **If served as a judge for less than 8 years.** 25% of Highest Earnings, plus 5% of Highest Earnings for each year of Credited Service in excess of 10 years, to a maximum of 75% of Highest Earnings.

(iii) **Benefit (3).** 75 % of Final Average Earnings.

Early Retirement Pension:

(a) **Participants Eligible.** All participants on the date coinciding with the attainment of:

(i) **Benefit (1).** 20 years of Credited Service before age 60; serving as a judge with a fixed term of duration.

(ii) **Benefit (2).** 20 years of Credited Service before age 60; serving as a judge without a fixed term of duration.

(iii) **Benefit (3).**

(A) 30 years of Credited Service before age 60, 8 of which were in service as a judge.

(B) 20 years of Credited Service with the last 8 years in service as a judge.

(b) **Pension Benefit.** Corresponding to eligibility above:

(i) **Benefit (1).** Accrued Normal Retirement Benefit, based on Highest Earnings and Credited Service at early retirement, actuarially reduced for each year payment commences before age 60.

(ii) **Benefit (2).** Accrued Normal Retirement Benefit, based on final Salary and Credited Service at early retirement, with no reduction for early commencement of payment.

(iii) **Benefit (3).** Accrued Normal Retirement Benefit, based on Highest Earnings at early retirement, adjusted as follows, according to eligibility:

(A) No reduction for early commencement of payment.

(B) Actuarially reduced for each year payment commences before the earliest age at which unreduced benefit is first payable, in accordance with eligibility for Benefit (3) – item (a)(iii) – of the Normal Retirement Pension section above.

Postponed Retirement Pension:

(a) **Participants Eligible.** Participants may remain in service until age 70.

(b) **Pension Benefit.** The benefits described under the Normal Retirement Pension section above, based on Highest Earnings and Credited Service at postponed retirement date. Payment commences on postponed retirement date.

Any participant not fulfilling eligibility requirements for a pension at separation from service receives a full refund of all Accumulated Contributions.

Vested Pension:

(a) **Participants Eligible.** All participants who terminate employment after completing 10 or more years of Credited Service.

(b) **Pension Benefit.** Accrued Normal Retirement Benefit to termination date. Payments commence upon attainment of age 60.

No benefit is payable if the participant receives a refund of Accumulated Contributions.

Disability Pension:

(a) **Occupational Disability.**

(i) **Participants Eligible.** Any participant certified as incapable or unable to discharge duties as judge by two physicians appointed by the Plan Administrator and receiving compensation under the Workmen's Accident Compensation Act.

(ii) **Disability Benefit.** 50% of final Salary at date of separation from service, reduced by any payments received from the State Insurance Fund under the Workmen's Accident Compensation Act.

(b) **Nonoccupational Disability.**

(i) **Participants Eligible.** Any participant certified as permanently and totally disabled by two physicians appointed by Plan Administrator, and who has attained 10 years of Credited Service but has not yet attained age 60.

Disability Benefit. 30% of Highest Earnings at date of disability, plus 1% of Highest Earnings times Credited Service in excess of 10 years, to a maximum of 50% of Highest Earnings at date of disability.

Note: If participant engages in employment, both types of disability pension shall be reduced by the amount by which the disability pension plus employment income exceeds Salary at the date of disability.

Pre-retirement Death Benefit:

(a) **Occupational.**

(i) **Beneficiaries Eligible.** The spouse and children, or designated beneficiary of a participant who dies from an employment-related cause under the Workmen's Accident Compensation Act.

(ii) **Spouse's Benefit.** 50% of participant's final Salary at date of death, payable as an annuity until death or remarriage.

(iii) **Children's Benefit.** An annuity for each child of $10 per month ($20 if full orphan) payable to child's age 18 or until completion of studies.

Maximum Family Benefit: 75% of participant's final Salary at date of death.

(iv) **If no spouse nor children.** Benefit payable to designated beneficiary equal to a refund of Accumulated Contributions, plus a lump sum benefit of 100% of final Salary at date of death.

(b) **Nonoccupational.**

(i) **Beneficiaries Eligible.** Beneficiaries of any participant who is:

(A) **Benefit (1).** Ineligible for survivor benefit under section (ii)(B) below.

(B) **Benefit (2).** Married or with children under age 21, and has reached attainment of age 60 and 22 years of Credited Service.

(ii) **Benefits.** Corresponding to eligibility above:

(A) **Benefit (1).** Benefit payable to designated beneficiary equal to a refund of Accumulated Contributions, plus a lump sum benefit of 100% of final Salary at date of death.

(B) **Benefit (2).** Benefit equal to 60% of the pension that would have been payable had the participant retired on the date of death.

Post-Retirement Death Benefits:

(a) **Beneficiaries Eligible.** Designated beneficiary of a single participant with no minor children or a participant receiving a life annuity as the normal form of payment.

(b) **Benefit.** Refund of Accumulated Contributions at retirement in excess of total pension payments received prior to date of death to designated beneficiary, with a minimum benefit of $500.

Employee Contributions:

All participants are required to make contributions to the Plan equal to 8.00% of Salary throughout active service.

Employer Contributions:

The amounts contributed by the Government which, when combined with participant contributions, interest and other income to the System, are adequate to meet the benefit and administrative costs of the System. Currently employer contributions are equal 20.00% of Salary.

Forms of Payment:

(a) Normal Form. 60% joint and survivor annuity, payable to spouse and children under age 21; life annuity if single.

(b) Optional Forms. Reversionary annuity.

Indexation:

Effective January 1, 1999 (and every third year thereafter, subject to approval by the Legislature), all annuities in pay status for at least 3 years (Bill No. 177).

Christmas Gift:

All pensioners and beneficiaries are entitled to a Christmas Gift of $300 per family group, payable in December of each year (Bill No. 109).