



*University of Puerto Rico
Retirement System*

**Actuarial Valuation Report
as of
June 30, 2010**

March 16, 2011

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March 16, 2011

Board of Trustees & Retirement Board
University of Puerto Rico
Avenida Muñoz Rivera 654
Edificio Plaza 654, 16th Floor
Hato Rey, Puerto Rico 00919

Re: University of Puerto Rico Retirement System / Actuarial Valuation as of June 30, 2010

Dear Board Members:

This report presents the results of the actuarial valuation of the University of Puerto Rico Retirement System (the “**Retirement System**” or the “**System**”) as of June 30, 2010. This is the seventh actuarial valuation prepared by Buck Consultants, LLC (“**Buck Consultants**” or “**Buck**”). The purpose of this report is to:

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

Amendments and Other Changes Affecting the Financial Status of the System

There were no amendments or changes to the benefit provisions employed by the Retirement System that affected its financial status for the year ending on the valuation date. All methods and assumptions employed to develop the results presented herein remain unchanged from the previous valuation. A summary of the assumptions and methods and the System benefit provisions reflected in the valuation are presented in tables X and XI respectively.

Discussion of Valuation Results

The actuarial valuation as of June 30, 2010 indicates that an expected employer contribution of **\$70,416,493** (a rate of **13.0%** of payroll) is required to meet the employer normal cost and to amortize the Unfunded Actuarial Accrued Liability over 30 years from July 1, 2010. The following table presents the Employer Costs, Annual Required Contribution (ARC) Rates and amounts, the

employer cash contributions effected, the Annual Pension Costs under GASB 27, and the Net Pension Obligation (NPO) for the years ending June 30 2010 and 2011.

	Year Ended <u>06/30/10</u>	Year Ended <u>06/30/11</u>
Projected Employer Costs	\$64,886,256	\$70,416,493
ARC (payroll) Rate	11.4%	13.0%
Annual Required Contribution (ARC)	\$63,721,523	To be Determined
Employer Cash Contribution	\$71,176,599	To be Determined
Annual Pension Costs (GASB 27)	\$62,275,417	To be Determined
Net Pension Obligation (NPO)	(\$55,088,649)	To be Determined

In the case of the Retirement System, the ARC (payroll) Rate increased from 11.4% to 13.0% and the Employer Cost increased from \$64,886,256 to \$70,416,493 due mostly to an Actuarial Value return lower than expected and a total payroll reduction during the plan year.

Please note that, although the estimated *Market Value* return for the plan year rose to 13%, the estimated *Actuarial Value* return was 1.8%, which is lower than the expected return of 8%. In this respect, also note that the average estimated Actuarial Value return based on historical data beginning on 1996, has been lower than 8% since June 30, 2005. We recommend that asset performance be carefully monitored by the Board and the University to make sure the 8% investment return assumption is justified in the future.

Contents of the Report

The development of the Employer Cost and the Annual Required Contribution Rate (ARC) for the year ending on June 30, 2011 is presented in Table II. The development of the Annual Required Contribution amount and the accounting disclosures required by GASB Statement 25, as well as the determination of the Annual Pension Cost requested by GASB Statement 27 is presented in Table III. A three-year pension cost trend information is also included on Table III.

Tables IV through VII provide a summary of the participant population, including a breakdown by status (active, retired, deferred vested) and a variety of useful information such as historical average age, service, and salary, a distribution of active participants by Certification number as well as an age-service distribution of active participants with average pay in each respective age-service bracket.

Tables VIII and IX include a breakdown of the System's assets by investment category, a reconciliation of the market value of assets from beginning to the end of the fiscal year, the

development of the Actuarial Value of Assets, and the historical asset yields from 1996 to the valuation date.

Finally, table X sets forth all the actuarial assumptions and methods that were used to perform the valuation, and table XI sets forth the System provisions that have been used in determining the liabilities presented in this report.

Certification

To the best of my knowledge, this report fairly and accurately presents the liabilities of the System as of June 30, 2010, based on the participant data and asset information provided by the System's Administrator, and the Retirement System benefit provisions and actuarial assumptions and methods set forth herein. Furthermore, it is our understanding that 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, FCA, ASA, MAAA
Office Manager & Consulting Actuary

cc: José A. Lázaro

Summary of Valuation Results

TABLE I

	As of June 30, 2009	As of June 30, 2010
1. Number of Members		
a. Active Participants	12,624	12,075
b. Deferred Vested Participants	381	395
c. Retirees and Beneficiaries:	6,892	7,150
d. Total Participants	<u>19,897</u>	<u>19,620</u>
e. Non-Vested Participants Entitled to Refund of Own Contributions	7,386	7,669
2. Total Annual Rate of Covered Payroll	\$ 570,122,184	\$ 540,867,018
3. Active Participant Statistics		
a. Average Attained Age	47.25	47.71
b. Average Years of Service	15.75	16.25
c. Average Annual Salary	\$ 45,162	\$ 44,792
4. Expected Employee Contributions	\$ 35,847,123	\$ 34,327,309
5. Total Annual Retired Members Benefits	\$ 125,675,270	\$ 135,957,262
6. Annual Normal Cost	\$ 34,712,435	\$ 33,483,477
7. Unfunded Actuarial Liability		
a. Actuarial Accrued Liability	\$ 2,331,619,466	\$ 2,436,913,244
b. Actuarial Value of Assets	<u>(1,034,645,000)</u>	<u>(1,028,918,000)</u>
c. Unfunded Actuarial Accrued Liability	\$ 1,296,974,466	\$ 1,407,995,244
8. Assets		
a. Market Value of Assets	\$ 821,867,314	\$902,866,599
b. Actuarial Value of Assets	\$ 1,034,645,000	\$ 1,028,918,000
9. Projected Employer Cost	\$ 64,866,256	\$ 70,416,493
10. Annual Required Contribution (ARC) Rate ⁽¹⁾	11.4%	13.0%
11. Annual Pension Cost (GASB 27)	\$ 62,929,059	\$ 62,275,417

(1) ARC Rate for each fiscal year comes from actuarial valuation at start of that fiscal year (e.g., the June 30, 2010 Annual Required Contribution was established in the June 30, 2009 actuarial valuation).

Employer Cost / Annual Required Contribution (ARC) Rate
TABLE II

	As of June 30, 2009	As of June 30, 2010
1. Number of Members		
a. Active Participants	12,624	12,075
b. Deferred Vested Participants	381	395
c. Retirees and Beneficiaries	6,892	7,150
d. Total Members	<u>19,897</u>	<u>19,620</u>
e. Non-Vested Participants Entitled to Refund of Own Contributions	7,386	7,669
2. Total Annual Earnings	\$ 570,122,184	\$ 540,867,018
3. Actuarial Accrued Liability		
a. Retirees and Beneficiaries	\$ 1,029,882,808	\$ 1,118,937,427
b. Terminated Participants ⁽¹⁾	31,665,152	33,859,695
c. Active Participants	1,270,071,506	1,284,116,122
d. Total	<u>\$ 2,331,619,466</u>	<u>\$ 2,436,913,244</u>
4. Actuarial Value of Assets	\$ 1,034,645,000	\$ 1,028,918,000
5. Unfunded Accrued Liability (Item 3.d. - Item 4.)	\$ 1,296,974,466	\$ 1,407,995,244
6. Amortization of Unfunded Accrued Liability ⁽²⁾	\$ 63,150,333	\$ 68,555,990
7. Annual Normal Cost	\$ 34,712,435	\$ 33,483,477
8. Administrative Expenses	\$ 2,850,611	\$ 2,704,335
9. Total (Gross) Contribution (Item 6. + Item 7. + Item 8.)	\$ 100,713,379	\$ 104,743,802
10. Expected Employee Contributions	\$ 35,847,123	\$ 34,327,309
11. Projected Employer Cost (Item 9. - Item 10.)	<u>\$ 64,866,256</u>	<u>\$ 70,416,493</u>
12. (ARC) Rate as a Percentage of Total Earnings ⁽³⁾ (Item 11. / Item 2.)	<u>11.4%</u>	<u>13.0%</u>

(1) Includes \$11,595,603 of accumulated contributions for non-vested participants at 06/30/09 and \$14,121,540 at 06/30/10.

(2) Amortization changed to Level Percentage of Payroll effective with the June 30, 2005 actuarial valuation with an open amortization period of 30 years.

(3) ARC Rate for each fiscal year comes from actuarial valuation at start of that fiscal year (e.g., the June 30, 2010 ARC Rate determines the Annual Required Contribution Amount for the fiscal year ending June 30, 2011).

	<u>As of June 30, 2009</u>	<u>As of June 30, 2010</u>
1. Annual Required Contribution (ARC) ⁽¹⁾		
a. ARC Rate ⁽¹⁾	11.1%	11.4%
b. Actual Payroll	\$ 577,227,102	\$ 558,960,726
c. Annual Required Contribution Item (a) * Item (b)	<u>\$ 64,072,208</u>	<u>\$ 63,721,523</u>
2. Annual Pension Cost and Net Pension Obligation (NPO)		
a. Annual Required Contribution (ARC)	\$ 64,072,208	\$ 63,721,523
b. Interest on NPO	(2,920,901)	(3,694,997)
c. Adjustment to ARC	<u>1,777,752</u>	<u>2,248,891</u>
d. Annual Pension Cost	<u>\$ 62,929,059</u>	<u>\$ 62,275,417</u>
e. Contributions made	<u>(72,605,262)</u>	<u>(71,176,599)</u>
f. Increase (decrease) in NPO	(9,676,203)	(8,901,182)
g. NPO (beginning of the year)	<u>\$ (36,511,264)</u>	<u>\$ (46,187,467)</u>
h. NPO (end of the year)	<u>\$ (46,187,467)</u>	<u>\$ (55,088,649)</u>

(1) ARC Rate for each fiscal year comes from actuarial valuation at start of that fiscal year (e.g., the June 30, 2009 ARC Rate determines the Annual Required Contribution Amount for the fiscal year ending June 30, 2010).

3. Schedule of Employer Contributions

Year Ended June 30	Required Contribution as a Percentage of Payroll for Year Ended ⁽¹⁾	Actual Payroll	Annual Required Contribution (ARC)	Employer Contribution Made	Percentage Contributed	(Excess)/ Deficiency
2010	11.4%	\$ 558,960,726	\$ 63,721,523	\$ 71,176,599	111.7%	(7,455,076)
2009	11.1%	577,227,102	64,072,208	72,605,262	113.3%	(8,533,054)
2008	10.9%	543,538,453	59,245,691	81,553,088	137.7%	(22,307,397)
2007	11.1%	518,236,607	57,524,263	78,310,774	136.1%	(20,786,511)
2006	11.3%	490,262,657	55,399,680	73,658,083	133.0%	(18,258,403)
2005	18.4%	460,174,370	84,672,084	69,291,395	81.8%	15,380,689
2004	16.2%	433,607,194	70,244,365	61,376,007	87.4%	8,868,358
2003	16.1%	407,357,391	65,584,540	57,551,270	87.8%	8,033,270
2002	14.0%	387,508,328	54,251,166	52,326,004	96.5%	1,925,162
2001	11.0%	376,992,691	41,469,196	54,040,933	130.3%	(12,571,737)
2000	12.6%	348,397,129	43,898,038	49,651,679	113.1%	(5,753,641)
1999	11.7%	330,179,269	38,630,974	53,041,795	137.3%	(14,410,821)
1998	12.3%	327,884,351	40,329,775	48,856,041	121.1%	(8,526,266)
1997	14.0%	311,025,104	43,543,515	46,600,524	107.0%	(3,057,009)
1996	14.6%	280,144,023	40,901,027	41,516,818	101.5%	(615,791)
1995	14.8%	261,613,882	38,718,855	36,479,385	94.2%	2,239,470
1994	14.8%	245,096,878	36,274,338	34,145,484	94.1%	2,128,854
1993	14.3%	232,505,968	33,248,353	32,399,088	97.4%	849,265
1992	14.3%	231,818,990	33,150,116	29,581,402	89.2%	3,568,714
1991	14.3%	213,752,919	30,566,667	25,828,085	84.5%	4,738,582

(1) ARC Rate for each fiscal year comes from actuarial valuation at start of that fiscal year (e.g., the June 30, 2010 Required Contribution was established in the June 30, 2009 actuarial valuation).

4. Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability - Entry Age (AAL) (b)	Unfunded AAL (not < 0) (UAAL) (b) - (a)	Funded Ratio (a)/(b)	Covered Payroll (c)	UAAL as % of Covered Payroll [(b) - (a)]/(c)
6/30/2010	\$ 1,028,918,000	\$ 2,436,913,244	\$ 1,407,995,244	42.2%	\$ 540,867,018	260.3%
6/30/2009	1,034,645,000	2,331,619,466	1,296,974,466	44.4%	570,122,184	227.5%
6/30/2008	1,024,987,000	2,223,219,684	1,198,232,684	46.1%	542,603,556	220.8%
6/30/2007	953,197,000	2,068,102,695	1,114,905,695	46.1%	513,486,180	217.1%
6/30/2006	869,211,000	1,930,131,983	1,060,920,983	45.0%	484,886,628	218.8%
6/30/2005	820,501,000	1,848,175,710	1,027,674,710	44.4%	460,956,060	222.9%
6/30/2004	803,498,000	1,748,529,453	945,031,453	46.0%	431,942,112	218.8%
6/30/2003	778,265,000	1,594,436,193	816,171,193	48.8%	405,855,271	201.1%
6/30/2002	640,406,669	1,546,249,360	905,842,691	41.4%	390,192,418	232.2%
6/30/2001	686,067,220	1,311,021,235	624,954,015	52.3%	363,995,029	171.7%
6/30/2000	753,863,676	1,212,559,037	458,695,361	62.2%	341,871,667	134.2%
6/30/1999	650,294,843	1,161,100,932	510,806,089	56.0%	333,153,432	153.3%
6/30/1998	586,095,318	1,037,281,510	451,186,192	56.5%	322,232,048	140.0%
6/30/1997	505,466,931	957,716,124	452,249,193	52.8%	305,498,420	148.0%
6/30/1996	427,435,099	912,242,254	484,807,155	46.9%	283,798,140	170.8%
6/30/1995	382,934,691	856,494,515	473,559,824	44.7%	261,466,451	181.1%
6/30/1994	N/A	N/A	N/A	N/A	N/A	N/A
6/30/1993	343,302,357	748,243,399	404,941,042	45.9%	221,986,837	182.4%
6/30/1992	N/A	N/A	N/A	N/A	N/A	N/A
6/30/1991	280,341,508	646,980,619	366,639,111	43.3%	209,377,144	175.1%

5. Three-Year Pension Cost Trend Information

Fiscal Year Ending	Annual Pension Cost (APC)	Employer Contribution	Percentage of APC Contributed	Net Pension Obligation (NPO)
06/30/10	\$ 62,275,417	\$ 71,176,599	114.3%	\$ (55,088,649)
06/30/09	62,929,059	72,605,262	115.4%	(46,187,467)
06/30/08	58,814,476	81,553,088	138.7%	(36,511,264)

6. Additional Information

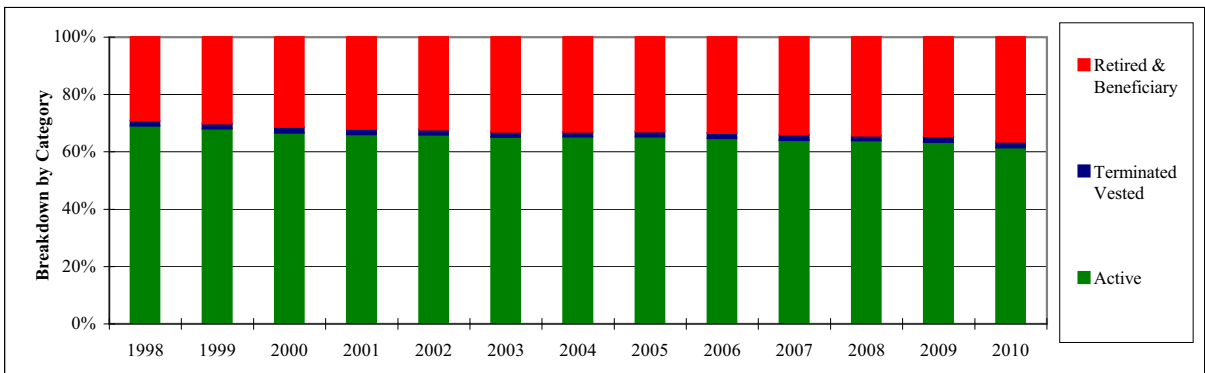
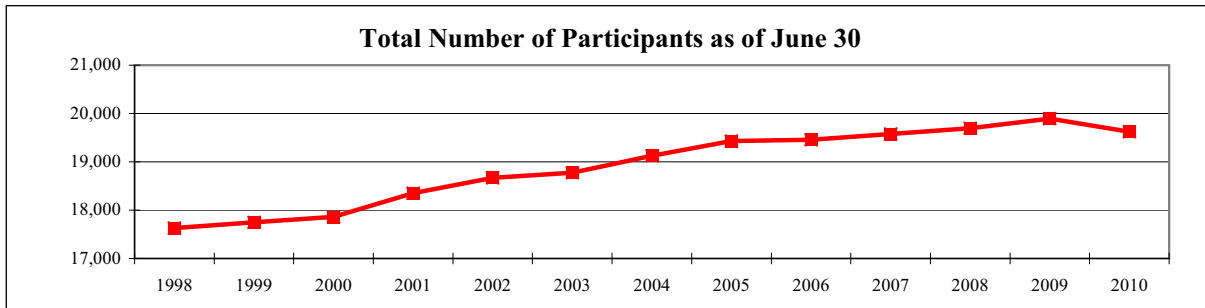
Valuation date: 06/30/2010
 Actuarial cost method: Entry Age Normal (Traditional)
 Amortization method: Level Percentage of Payroll
 Remaining amortization period: 30-year constant (open basis)
 Asset valuation method: Market Value adjusted to reflect investment gains and losses over a five (5) year period. See Tables VIII and X for a more detailed explanation of Actuarial Value of Assets methodology.

Actuarial assumptions:
 Investment rate of return* 8.00%
 Projected salary increases* 5.00%
 Post-retirement benefit increases Other than the automatic increase of 3.00% every two (2) years applicable to salary cap of Certification 139, NO postretirement benefit increases are assumed.
 Mortality Table 1994 Group Annuity Mortality

*Includes inflation at 3.50%

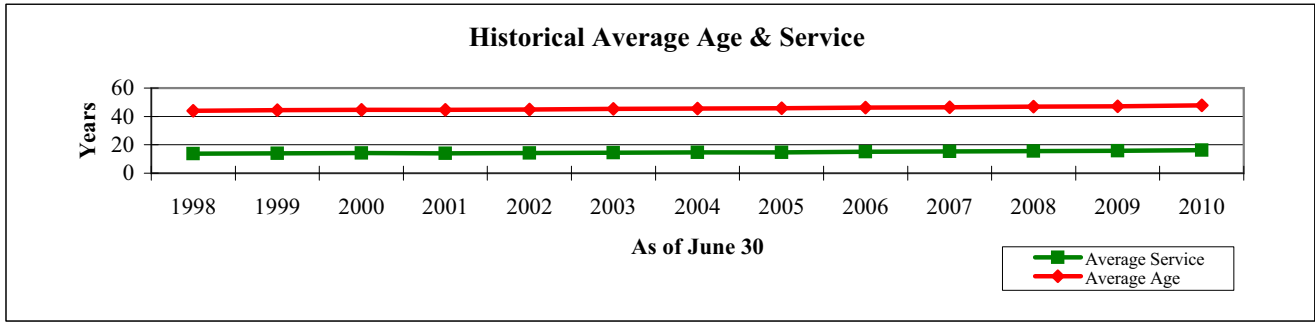
Summary of Participant Data

TABLE IV

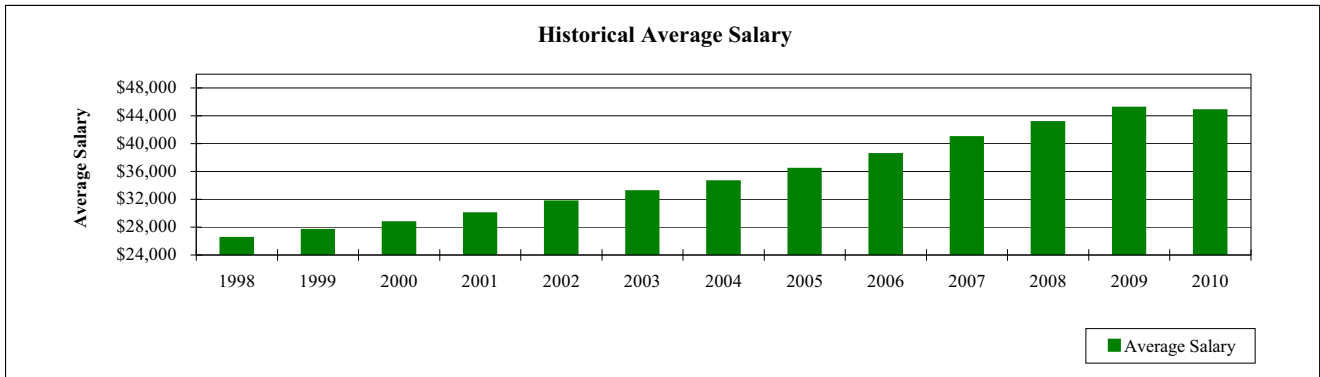


	As of June 30, 2009	As of June 30, 2010
1. Active Participants		
a. Actively employed		
i. Fully vested	8,250	8,276
ii. Non-vested	4,374	3,799
b. Sub-total	<u>12,624</u>	<u>12,075</u>
2. Terminated Vested Participants ⁽¹⁾	381	395
3. Retired Participants		
a. Non-disabled	5,672	5,940
b. Disabled	1,146	1,135
c. Beneficiaries	74	75
d. Sub-total	<u>6,892</u>	<u>7,150</u>
4. Total Participants	<u>19,897</u>	<u>19,620</u>

(1) Excludes 7,386 and 7,669 non-vested terminated employees as of June 30, 2009 and 2010 respectively who are entitled to a refund of their own contributions.



Date	Average Service Earned	Average Attained Age	Date	Average Service Earned	Average Attained Age
06/30/98	13.80	44.00	06/30/05	14.76	45.72
06/30/99	14.00	44.46	06/30/06	15.12	46.15
06/30/00	14.10	44.58	06/30/07	15.38	46.53
06/30/01	13.95	44.65	06/30/08	15.62	46.94
06/30/02	14.11	44.95	06/30/09	15.75	47.25
06/30/03	14.43	45.38	06/30/10	16.25	47.71
06/30/04	14.62	45.51			



Date	Average Salary Rate	Date	Average Salary Rate
06/30/98	\$26,449	06/30/05	\$36,362
06/30/99	\$27,593	06/30/06	\$38,514
06/30/00	\$28,709	06/30/07	\$40,915
06/30/01	\$30,000	06/30/08	\$43,105
06/30/02	\$31,702	06/30/09	\$45,162
06/30/03	\$33,150	06/30/10	\$44,792
06/30/04	\$34,600		

**DISTRIBUTION OF ACTIVE PARTICIPANTS
BY PENSION ELEGIBILITY, CONTRIBUTORY MAXIMUM, AND PLAN TYPE**

<u>Pension Eligibility Certification</u>	<u>Contributory Maximum Certification</u>	<u>Employee Contribution Wage Base</u>	<u>Plan Type</u>	<u>Participant Count @ 06/30/09</u>	<u>Participant Count @ 06/30/10</u>
Cert #7	Cert #7	None	Coordinated	3	2
Cert #55	Cert #55	\$35,000	Coordinated	225	181
Cert #37	Cert #37	\$35,000	Coordinated	1460	1347
Cert #55	Cert #55	\$35,000	Supplemented	1049	942
Cert #7	Cert #7	None	Supplemented	5	5
Cert #55	Cert #55	\$35,000	Supplemented	2163	2067
Cert #37	Cert #94	\$50,000	Coordinated	165	160
Cert #55	Cert #94	\$50,000	Supplemented	4885	4800
Cert #55	Cert #94	\$50,000	Coordinated	104	85
Cert #37	Cert #139 *	\$65,564	Coordinated	216	198
Cert #55	Cert #139 *	\$65,564	Coordinated	39	27
Cert #55	Cert #139 *	\$65,564	Supplemented	<u>2310</u>	<u>2261</u>
Total:				<u>12,624</u>	<u>12,075</u>

* Certification 139 increases by 3.00% every two years. The 2011 limit will be \$67,531.

Age-Service Distribution (all active participants)

TABLE VII

Attained Age	Completed Years of Service as of June 30, 2010										Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	
Under 25	11	45	1	0	0	0	0	0	0	0	57
Avg.Pay	16,809	16,214	19,320	0	0	0	0	0	0	0	16,383
25 to 29	41	312	146	3	0	0	0	0	0	0	502
Avg.Pay	26,630	20,782	24,117	26,600	0	0	0	0	0	0	22,264
30 to 34	36	364	506	182	3	0	0	0	0	0	1,091
Avg.Pay	34,229	34,162	28,116	30,150	33,480	0	0	0	0	0	30,689
35 to 39	26	280	420	541	138	1	0	0	0	0	1,406
Avg.Pay	39,907	40,676	39,632	34,612	34,303	31,920	0	0	0	0	37,385
40 to 44	22	186	386	486	398	152	4	0	0	0	1,634
Avg.Pay	36,041	34,905	42,393	45,163	40,057	40,464	44,430	0	0	0	41,536
45 to 49	10	154	267	428	435	557	192	7	0	0	2,050
Avg.Pay	37,837	37,877	37,645	45,718	50,216	44,652	41,975	38,031	0	0	44,327
50 to 54	4	97	178	267	341	464	607	285	10	0	2,253
Avg.Pay	16,092	41,355	40,478	46,525	53,318	56,509	48,594	42,478	40,296	0	48,873
55 to 59	6	57	127	203	206	275	430	321	114	9	1,748
Avg.Pay	49,018	45,624	43,420	48,050	53,119	55,197	59,665	54,713	49,691	40,853	53,510
60 to 64	0	24	57	78	87	149	201	148	99	33	876
Avg.Pay	0	50,673	43,860	47,892	51,614	59,330	61,423	69,050	61,831	54,859	58,538
65 to 69	1	6	16	20	26	49	63	40	36	45	302
Avg.Pay	76,452	98,032	45,993	52,053	53,371	55,767	58,284	70,488	77,738	71,825	63,192
70 & up	0	3	10	6	5	24	30	24	18	36	156
Avg. Pay	0	34,500	45,700	56,500	51,022	52,188	65,843	61,507	76,569	75,718	63,863
Total	157	1,528	2,114	2,214	1,639	1,671	1,527	825	277	123	12,075
Avg.Pay	32,820	33,955	36,537	42,051	47,516	51,034	53,296	53,879	59,082	66,146	44,792

Market and Actuarial Value of Assets

TABLE VIII

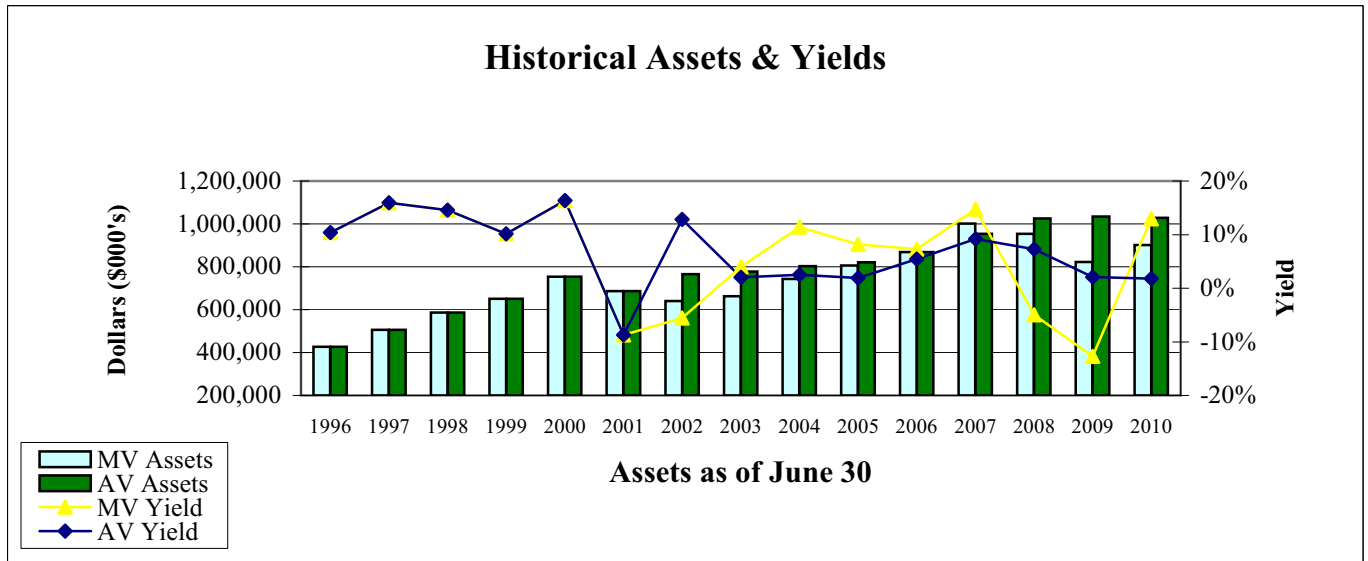
	As of		As of	
	June 30, 2009		June 30, 2010	
1. Market Value of Assets		%		%
a. Cash and cash equivalents	\$49,227,601	5.8%	\$28,908,806	3.1%
b. Government securities	66,927,081	7.8%	36,800,626	4.0%
c. Corporate bonds and notes	101,644,799	11.9%	70,475,228	7.5%
d. Equities	167,558,545	19.6%	120,303,661	12.9%
e. Foreign stocks and bonds	92,167,262	10.8%	100,175,050	10.7%
f. Mutual funds	142,703,397	16.7%	383,984,148	41.2%
g. Property and equipment	1,262,975	0.2%	2,691,662	0.3%
h. Mortgages/loans to plan members	234,686,612	27.4%	189,392,193	20.3%
i. Other assets	0	0.0%	0	0.0%
j. Other investments	0	0.0%	0	0.0%
k. Market value of assets	\$856,178,272	100.0%	\$932,731,374	100.0%
l. Contribution receivable / receivables	23,111,460		32,105,588	
m. Other payable	(57,422,418)		(61,970,363)	
n. Market value of assets	<u>\$821,867,314</u>		<u>\$902,866,599</u>	
 2. Reconciliation of Market Value of Assets				
a. Market Value as of June 30, 2009			\$821,867,314	
b. Income:				
Employer contribution	\$71,176,599			
Employee contributions	41,738,178			
Net appreciation (depreciation)				
in fair value of investments	84,156,599			
Interest and dividends	23,111,826			
Post Retirement Medical Plan Reimbursements	<u>7,976,121</u>			
			\$228,159,323	
c. Disbursements:				
Benefit payments	\$133,112,591			
Administrative Expenses	3,709,054			
Investment Expenses	2,362,272			
Post Retirement Medical Plan Benefit Payments	<u>7,976,121</u>			
			\$147,160,038	
d. Market Value as of June 30, 2010			<u>\$902,866,599</u>	

Market and Actuarial Value of Assets

TABLE VIII

(continued)

	(\$ Thousands) As of <u>June 30, 2009</u>	(\$ Thousands) As of <u>June 30, 2010</u>
3. Determination of Asset Gain / (Loss)		
a. Market value of assets at beginning of year	\$ 954,307	\$ 821,867
b. Employer contributions	72,605	71,177
c. Employee contributions	43,831	41,738
d. Administrative expenses	(3,935)	(3,709)
e. Benefit payments	(124,353)	(133,113)
f. Expected earnings (at 8.00%)	75,870	64,793
g. Expected Assets at end of year: (a) + (b) + (c) + (d) + (e) + (f) =	\$ 1,018,325	\$ 862,753
h. Actual market value of assets at end of year	\$ 821,867	\$ 902,867
i. Asset gain / (loss) for the year: (h) - (g)	\$ (196,458)	\$ 40,114
4. Actuarial Value of Assets		
a. Gains & (losses) for year ending June 30		
i. 2006	\$ (5,554) x 1/5 =	\$ (1,111) N/A
ii. 2007	58,990 x 2/5 =	23,596 x 1/5 = \$ 11,798
iii. 2008	(130,162) x 3/5 =	(78,097) x 2/5 = (52,065)
iv. 2009	(196,458) x 4/5 =	(157,166) x 3/5 = (117,875)
v. 2010	40,114	N/A x 4/5 = 32,091
vi. Total unrecognized gains/(losses)	<u>\$ (212,778)</u>	<u>\$ (126,051)</u>
b. Actuarial Value of Assets <i>Item 3(h) minus Item 4(a)(vi)</i>	\$ 1,034,645	\$ 1,028,918



Plan Year	Market Value as of June 30*	Actuarial Value as of June 30*	Benefit Payments	Admin. Expenses	Employer Contributions	Employee Contributions	** MV Yield	** AV Yield
1996	\$ 427,435	\$ 427,435	\$ 51,611	\$ 1,487	\$ 41,516	\$ 15,857	10.4%	10.4%
1997	505,467	505,467	53,914	1,582	46,600	18,025	15.9%	15.9%
1998	586,095	586,095	58,507	1,763	48,856	18,010	14.6%	14.6%
1999	650,295	650,295	64,269	6,245	53,042	21,992	10.1%	10.1%
2000	754,280	754,280	72,043	2,215	49,652	22,384	16.4%	16.4%
2001	686,067	686,067	78,613	2,178	54,041	24,383	-8.7%	-8.7%
2002	639,813	765,329	84,455	2,105	52,326	25,894	-5.6%	12.8%
2003	662,518	778,265	89,313	2,420	57,551	31,437	4.0%	2.1%
2004	743,761	803,498	94,188	2,675	61,376	40,993	11.4%	2.5%
2005	806,229	820,501	100,459	3,781	69,291	36,464	8.2%	1.9%
2006	869,349	869,211	105,090	3,263	73,658	38,710	7.3%	5.4%
2007	1,002,117	953,197	110,831	3,443	78,311	40,030	14.8%	9.2%
2008	954,307	1,024,987	118,779	3,640	81,553	42,965	-5.0%	7.3%
2009	821,867	1,034,645	124,353	3,935	72,605	43,831	-12.7%	2.1%
2010	902,867	1,028,918	133,113	3,709	71,177	41,738	13.0%	1.8%

* Including contribution receivable.

** Yield calculated assuming middle of the year income / outflow.

FOR THE DETERMINATION OF CONTRIBUTION AMOUNTS

1. Actuarial Cost Method

- The Entry Age Normal Cost (traditional) method was used. Under this method the actuarial present value of all plan benefits at the entry age is summed and divided by the present value of future salaries. This ratio is multiplied by all future salaries from the valuation date forward to arrive at the present value of future normal costs and hence the entry age accrued liability and normal costs.

2. Interest Rates (Investment Earnings and Discount Rate)

8.00% per annum, net of investment expenses.

3. Administrative Expenses

0.50% of total payroll of covered employees.

4. Salary Increases

5.00% per annum.

5. Decrements

- **Pre-Retirement Mortality**

1994 Group Annuity Mortality. For purposes of benefits due to death in service, it is assumed that five percent (5.00%) of such deaths are service related. Representative values of the assumed annual rates of pre-retirement mortality among members in active service are as follows:

Age	Men	Women
20	0.051%	0.028%
25	0.066%	0.029%
30	0.080%	0.035%
35	0.085%	0.048%
40	0.107%	0.071%
45	0.158%	0.097%
50	0.258%	0.143%
55	0.442%	0.229%
60	0.798%	0.444%
64	1.294%	0.762%

- **Post-Retirement Healthy Mortality**
1994 Group Annuity Mortality Table.
- **Post-Retirement Disabled Mortality**
100% of disabled life mortality rates from Social Security Actuarial Study No. 75.
- **Disability**
Representative values of the assumed annual rates of disability among male and female members in active service are as follows (65% of the projected disabilities are assumed to be due to occupational causes):

Age	Males	Females
20	0.071%	0.035%
25	0.085%	0.049%
30	0.111%	0.085%
35	0.151%	0.134%
40	0.218%	0.200%
45	0.331%	0.298%
50	0.544%	0.469%
55	0.941%	0.762%
60	1.360%	0.930%

- **Permanent Withdrawal from Active Status**
Representative values of the assumed annual rates of withdrawal among members in active service are as follows:

Age	Rate
20	8.00%
25	7.80%
30	7.30%
35	6.40%
40	5.20%
45	4.20%
50	3.00%
55	1.90%
60	0.00%

- **Retirement**

In accordance with the following schedule:

Age at Hire	Retirement age
20 - 24	55 (58*)
25 - 29	Age at hire + 30 But not greater than 58
30 - 34	58
35 - 39	58
40 - 44	58
45 - 48	58
49 & Over	Hire age + 10
* If less than 20 years of service by July 1, 1979, did not elect Certification 55 and did not elect full supplementation	

6. Percent Married

80% of participants are presumed married for purposes of spousal benefits.

7. Assets

The actuarial value of assets is determined by adjusting the market value of assets to reflect investment gains and losses (the difference between the actual investment return and the expected investment return) during each of the last five (5) years at the rate of 20.00% per year. Expected investment return is calculated from the prior market value of assets, including receivable contributions, and weighted expected transactions.

8. Valuation Group

All employees active or on leave of absence, inactive participants with deferred benefits or entitled to return of their own contributions, retirees and beneficiaries are included in the valuation.

9. Benefit Increases (Pre and Post Retirement)

Other than the expected increase in the salary limitation of Certification 139, no postretirement benefit increase is assumed. Increases are granted from time to time and the annual required contribution is adjusted accordingly.

FOR DETERMINATION OF GASB ACCOUNTING INFORMATION

The determination of the GASB Nos. 25 and 27 accounting information has been made on the basis of the same assumptions and methods used for the determination of the funding amounts. Our actuarial valuation as of June 30, 2010 is based on the benefit provisions of the University of Puerto Rico Retirement System as of the valuation date, which are summarized in this section.

- 1. Provisions applicable to those members who had completed 20 years of services by July 1, 1979:**
- a) Service retirement annuity payable:
- i) After 30 years of service; or
 - ii) At age 58 after 10 years of service; or
 - iii) At age 55 after 25 years of service.
- b) Amount of service retirement annuity:
- i) Before age 65 – member with at least 30 years of service: 75% of average compensation if age 55 at beginning date; 65% if under age 55. If member completed 30 years of service before July 1973, annuity is increased by 2% of average compensation for each year of service beyond 30 and before July 1973, but to not more than 85% of average compensation.
 - ii) Before age 65 – member with less than 30 years of service: 1.50% of average compensation per year of service for member with 20 or fewer years. Percentage increased by 0.05% for each year in excess of 20 years up to a maximum of 1.95% of average compensation per year of service. Amount reduced by ½% for each month member is under age 58 at time annuity begins.
 - iii) After age 65 – if member elected full supplementation annuity is the same as before age 65. Otherwise, annuity is reduced at age 65 by ½% of first \$350 of average compensation for each year of service up to 30 years.
 - iv) Minimum annuity: \$250 per month.
 - v) Average compensation means the average for the highest-paid 36 months of service without limit on compensation.
 - vi) Employee contributions:
 - Complete supplementation: 7.00% of compensation.
 - Coordinated: 4.00% of compensation up to \$4,200 plus 6.50% of compensation in excess of \$4,200.

2. Provisions applicable to all members who were affected under Certification 37 and who had not completed 20 years of service by July 1, 1979 plus those members who entered the system on or after July 1, 1978 and who did not elect Certification 55 or 94 and did not elect full supplementation under Certification 54:

- a) Service retirement annuity payable:
 - i) After 30 years of service; or
 - ii) At age 58 after 10 years of service; or
 - iii) At age 55 after 25 years of service.

- b) Amount of service retirement annuity:
 - i) Before age 65 – member with at least 30 years of service: 75% of average compensation. Amount reduced by ½% for each month member is under age 58 at time annuity begins.
 - ii) Before age 65 – member with less than 30 years of service: 1.50% of average compensation per year of service for member with 20 or fewer years. Percentage increased by 0.05% for each year in excess of 20 years up to a maximum of 1.95% of average compensation per year of service. Amount reduced by ½% for each month member is under age 58 at time annuity begins.
 - iii) After age 65 – Benefit is coordinated. Annuity is reduced by ½% of average compensation not in excess of the Social Security wage base in effect at retirement for each year of service up to 30 years. If member was under age 58 at beginning date, the coordination adjustment is made before application of ½% reduction per month under 58.
 - iv) Minimum annuity: \$250 per month.
 - v) Average compensation means the average for the highest-paid 36 months of service, excluding that portion of compensation in any year which is in excess of \$35,000.
 - vi) Employee contributions for coordinated benefit: 5.00% of compensation up to maximum salary of \$35,000.

- 3. Provision applicable to all members who were affected by Certification 37 and who had not completed 20 years of service by July 1, 1979 as well as those members who entered the system on or after July 1, 1978 and later elected Certification 55 or those who elected full supplementation under Certification 54 (but not Certification 94):**
- a) Service retirement annuity payable:
- i) After 30 years of service; or
 - ii) At age 58 after 10 years of service; or
 - iii) At age 55 after 25 years of service.
- b) Amount of service retirement annuity:
- i) Before age 65 – member with at least 30 years of service: 75% of average compensation. Amount reduced by 1/3% for each month member is under age 55 at time annuity begins.
 - ii) Before age 65 – member with less than 30 years of service: 1.50% of average compensation per year of service for member with 20 or fewer years. Percentage increased by 0.05% for each year in excess of 20 years up to a maximum of 1.95% of average compensation per year of service.
 - iii) After age 65 – if member elected full supplementation, annuity is the same as before age 65. Otherwise, annuity is reduced by 1/2% of average compensation at time of retirement multiplied by years of service up to 30 years.
 - iv) Minimum annuity: \$250 per month.
 - v) Average compensation means the average for the highest-paid 36 months of service, excluding that portion of compensation in any year which is in excess of \$35,000.
 - vi) Employee contributions:
 - Complete supplementation: 7.00% of compensation up to compensation limit of \$35,000.
 - Coordinated: 4.00% up to \$4,200 of compensation plus 6.50% of the excess up to the compensation limit of \$35,000.

4. For those entering between January 1, 1990 and June 30, 1998 who did not elect Certification 94:

- a) Service retirement annuity payable:
 - i) After 30 years of service; or
 - ii) At age 58 after 10 years of service; or
 - iii) At age 55 after 25 years of service.
- b) Amount of service retirement annuity:
 - i) Before age 65 – member with at least 30 years of service: 75% of average compensation. Amount reduced by 1/3% for each month member is under age 55 at time annuity begins.
 - ii) Before age 65 – member with less than 30 years of service: 1.50% of average compensation per year of service for member with 20 or fewer years. Percentage increased by 0.05% for each year in excess of 20 years up to a maximum of 1.95% of average compensation per year of service.
 - iii) After age 65 – All completely supplemented.
 - iv) Minimum annuity: \$250 per month.
 - v) Average compensation means the average for the highest-paid 36 months of service, excluding that portion of compensation in any year which is in excess of \$35,000.
 - vi) Employee contributions:
 - All completely supplemented: 8.00% of compensation up to compensation limit of \$35,000.

5. Certification 94:

- a) Increase compensation up to \$50,000.
- b) Those electing coverage under the above certification agree to pay 9.00% of compensation up to \$50,000.

6. Certification 139:

- a) Increase compensation up to a \$60,000 maximum. The \$60,000 cap is increased by 3.00% every two years. The 2010 maximum compensation is \$67,531.
- b) Those electing coverage under the above certification agree to pay 11.00% of compensation up to \$60,000.

7. Disability Benefits

- a) A disability retirement annuity is payable upon:
 - i) Disability due to occupational causes, regardless of service, or
 - ii) Disability due to non-occupational causes after 10 years of service. If member is also eligible for a service retirement annuity, benefit payable is the higher of the two.
- b) Amount of disability retirement annuity:
 - i) Before age 65 – If service connected, 50% of rate of salary at retirement. If not service connected, 30% of average compensation plus additional 1.00% for each year of service over 10 (subject to a maximum of 50%).
 - ii) After age 65 – Reduced to amount payable by the applicable retirement benefit formula above. However, if post 65 retirement benefit plus Primary Social Security benefit is less than pre 65 disability benefit, then post 65 benefit is adjusted (increased) by the amount necessary to match pre 65 disability benefit.
 - iii) Minimum annuity: \$250 per month.

8. Vested Benefits

A member whose employment terminates after ten (10) years of service, and who does not withdraw his contributions, receives a retirement annuity payable beginning at age 60 based on the applicable retirement formula above.

9. Non-vested Termination Benefits

If termination of employment occurs prior to completing ten (10) years of service, member is entitled only to a refund of his / her own contributions. Refund of a member's own contributions can also be obtained after attainment of ten (10) years of service but in that event the vested benefit is forfeited.

10. Pre-retirement Death Benefits

- a) A pre-retirement death benefit is payable upon:
- i) A service-connected death, or
 - ii) A non-service connected death.
- b) Amount of pre-retirement death benefit:
- i) The widow of a deceased member whose death is service-connected receives an annuity of 50% of final salary, plus \$10 per month for each child under age 18 (21 if at school) or disabled. If no annuity is paid to widow, \$20 per month per eligible child. Widow receives annuity until death or remarriage. Maximum family benefit is 75% of final salary.

If there is no surviving widow or eligible children, a lump sum amount equal to the member's contributions plus one year's final salary (subject to applicable salary cap), but not less than \$6,000, will be payable to the employee's designated beneficiary.
 - ii) Should the member's death be non-service connected then a lump sum amount is paid which is equal to the member's contributions plus one year's final salary (subject to applicable salary cap) , but not less than \$6,000.

11. Post-retirement Death Benefits

Member contributions are refunded to the extent that they exceed retirement payments already made, unless a reversionary annuity was elected. Minimum payment is \$600. In addition, 50% of retirement annuity is payable to the surviving spouse until death, remarriage, or until the spouse begins to receive Social Security benefits. Minimum annuity, \$75 per month; maximum annuity, \$150 per month.

12. Reversionary Annuity

Member may elect to receive a reduced annuity in order to provide a lifetime benefit after death to a spouse or relative. The benefit to the spouse or relative may be as low as \$25 per month or as high as 100% of the member's reduced annuity. This option is not permitted if member retires on a disability annuity.

13. Christmas Bonus

A \$400 annual bonus is given to all retired participants.