

A LA MANO

30 de enero de 2013

Sr. Willie Rosario
Administrador Interino
Sistema de Retiro, Universidad de Puerto Rico
Avenida Muñoz Rivera 654
Edificio Plaza 654, Piso 16
Hato Rey, PR 00919

Estimado señor Rosario:

A su solicitud nos complace presentarle cuatro (4) copias de la valuación actuarial del Sistema de Retiro de la Universidad de Puerto Rico al 30 de junio de 2012. Favor notar que la misma se basa en el censo provisto y el borrador final de los estados financieros del Plan al 30 de junio de 2012, conforme nos indicara en su e-mail fechado el 22 de enero de 2013.

Si tiene alguna pregunta o duda, estamos a su completa disposición para aclarar las mismas.

Muy atentamente,



Hector D. Gaitan, FCA, ASA, EA, MAAA
Gerente & Actuario Consultor

Anejos

(4) copias
junio de 2012

buckconsultants

en español
en español

***University of Puerto Rico
Retirement System***

**Actuarial Valuation Report
as of
June 30, 2012**

en español
en español

January 30, 2013

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Puerto Rico Branch
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en español
en español

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January 30, 2013

Board of Trustees & Retirement Board
University of Puerto Rico
PO Box 21769
San Juan, Puerto Rico 00925

Re: University of Puerto Rico Retirement System / Actuarial Valuation as of June 30, 2012

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, 2012. This is the ninth 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.

On June 2012 the Governmental Accounting Standards Board (GASB), the entity responsible for accounting and financial reporting for state and local governments, adopted GASB Statements 67 and 68 including new standards for accounting and financial reporting for pensions (which replace the current GASB Statements 25 and 27). GASB Statements 67 and 68 will impact the asset and funding methods, the discount rate and calculation of pension expense, the balance sheet liability, among others, which will be significantly affected.

These new standards will transform the financial reporting of pension obligations and bring public pension financial reporting much closer to corporate pension accounting. The provisions of GASB Statements 67 and 68 are effective for fiscal years beginning after June 15, 2013 and June 15, 2014, respectively. *The numbers presented in this report do not reflect any changes to GASB 25 and 27 in its current design.*

Discussion of Valuation Results

The actuarial valuation as of June 30, 2012 indicates that an expected employer contribution of **\$79,010,481** (a rate of **15.8%** of payroll) is required to meet the employer normal cost and to amortize the Unfunded Actuarial Accrued Liability over 30 years from July 1, 2012. 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, 2012 and 2013.

	Year Ended <u>06/30/12</u>	Year Ended <u>06/30/13</u>
Projected Employer Costs	\$75,176,984	\$79,010,481
ARC (payroll) Rate	14.7%	15.8%
Annual Required Contribution (ARC)	\$72,186,223	To be Determined
Employer Cash Contribution	\$75,139,790	To be Determined
Annual Pension Costs (GASB 27)	\$70,336,195	To be Determined
Net Pension Obligation (NPO)	(\$63,891,980)	To be Determined

In the case of the Retirement System, the ARC (payroll) Rate increased from 14.7% to 15.8% and the Employer Cost increased from \$75,176,984 to \$79,010,481 due mostly to an Actuarial Value return lower than expected and a reduction in total payroll during the plan year.

The actuarial value of assets (whose role is to smooth out gains and losses over a five-year period) reflected only a yield of approximately 4.0% for the year ended June 30, 2012 (which is less than the expected return of 8.0%, and also less than the 4.8% return generated last year).

With regard to the ARC (payroll) Rate, even though the Projected Employer Cost increased only about \$3.8 million, the decrease in payroll from approximately \$511 million to \$499 million increased the ARC (payroll) Rate by more than 1.0%, from 14.7% to 15.8%.



Contents of the Report

The development of the Employer Cost and the Annual Required Contribution Rate (ARC) for the year ending on June 30, 2013 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's 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, 2012, based on the participant data and asset information provided by the System's Administrator, and the Retirement System's benefit provisions and actuarial assumptions and methods set forth herein. Furthermore, other than the expected impact of GASB Statements 67 and 68, it is our understanding that all known events or trends that may require a material increase in the System's 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: Sr. Willie Rosario

Summary of Valuation Results

TABLE I

	As of June 30, 2011	As of June 30, 2012
1. Number of Members		
a. Active Participants	11,398	11,148
b. Deferred Vested Participants	439	469
c. Retirees and Beneficiaries:	7,467	7,697
d. Total Participants	<u>19,304</u>	<u>19,314</u>
e. Non-Vested Participants Entitled to Refund of Own Contributions	7,815	7,881
2. Total Annual Rate of Covered Payroll	\$ 510,706,620	\$ 499,027,788
3. Active Participant Statistics		
a. Average Attained Age	48.18	48.47
b. Average Years of Service	16.72	16.90
c. Average Annual Salary	\$ 44,807	\$ 44,764
4. Expected Employee Contributions	\$ 32,330,406	\$ 31,468,589
5. Total Annual Retired Members Benefits	\$ 147,711,999	\$ 156,190,857
6. Annual Normal Cost	\$ 31,878,378	\$ 31,123,636
7. Unfunded Actuarial Liability		
a. Actuarial Accrued Liability	\$ 2,542,444,021	\$ 2,617,989,147
b. Actuarial Value of Assets	(1,041,628,000)	(1,039,441,000)
c. Unfunded Actuarial Accrued Liability	<u>\$ 1,500,816,021</u>	<u>\$ 1,578,548,147</u>
8. Assets		
a. Market Value of Assets	\$ 1,052,466,560	\$1,055,908,704
b. Actuarial Value of Assets	\$ 1,041,628,000	\$ 1,039,441,000
9. Projected Employer Cost	\$ 75,176,984	\$ 79,010,481
10. Annual Required Contribution (ARC) Rate ⁽¹⁾	14.7%	15.8%
11. Annual Pension Cost (GASB 27)	\$ 66,761,754	\$ 70,336,195

(1) ARC Rate for each fiscal year comes from actuarial valuation at start of that fiscal year (e.g., the June 30, 2012 Annual Required Contribution was established in the June 30, 2011 actuarial valuation).

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

	As of <u>June 30, 2011</u>	As of <u>June 30, 2012</u>
1. Number of Members		
a. Active Participants	11,398	11,148
b. Deferred Vested Participants	439	469
c. Retirees and Beneficiaries	<u>7,467</u>	<u>7,697</u>
d. Total Members	<u>19,304</u>	<u>19,314</u>
e. Non-Vested Participants Entitled to Refund of Own Contributions	7,815	7,881
2. Total Annual Earnings	\$ 510,706,620	\$ 499,027,788
3. Actuarial Accrued Liability		
a. Retirees and Beneficiaries	\$ 1,228,504,724	\$ 1,295,267,801
b. Terminated Participants ⁽¹⁾	39,105,229	40,248,087
c. Active Participants	<u>1,274,834,068</u>	<u>1,282,473,259</u>
d. Total	<u>\$ 2,542,444,021</u>	<u>\$ 2,617,989,147</u>
4. Actuarial Value of Assets	\$ 1,041,628,000	\$ 1,039,441,000
5. Unfunded Accrued Liability (Item 3.d. - Item 4.)	\$ 1,500,816,021	\$ 1,578,548,147
6. Amortization of Unfunded Accrued Liability ⁽²⁾	\$ 73,075,479	\$ 76,860,295
7. Annual Normal Cost	\$ 31,878,378	\$ 31,123,636
8. Administrative Expenses	\$ 2,553,533	\$ 2,495,139
9. Total (Gross) Contribution (Item 6. + Item 7. + Item 8.)	\$ 107,507,390	\$ 110,479,070
10. Expected Employee Contributions	\$ 32,330,406	\$ 31,468,589
11. Projected Employer Cost (Item 9. - Item 10.)	<u>\$ 75,176,984</u>	<u>\$ 79,010,481</u>
12. (ARC) Rate as a Percentage of Total Earnings ⁽³⁾ (Item 11. / Item 2.)	<u>14.7%</u>	<u>15.8%</u>

(1) Includes \$15,095,320 of accumulated contributions for non-vested participants at 06/30/11 and \$15,394,031 at 06/30/12.

(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, 2012 ARC Rate determines the Annual Required Contribution Amount for the fiscal year ending June 30, 2013).

	<u>As of June 30, 2011</u>	<u>As of June 30, 2012</u>
1. Annual Required Contribution (ARC) ⁽¹⁾		
a. ARC Rate ⁽¹⁾	13.0%	14.7%
b. Actual Payroll	\$ 526,819,627	\$ 491,062,740
c. Annual Required Contribution Item (a) * Item (b)	<u>\$ 68,486,552</u>	<u>\$ 72,186,223</u>
2. Annual Pension Cost and Net Pension Obligation (NPO)		
a. Annual Required Contribution (ARC)	\$ 68,486,552	\$ 72,186,223
b. Interest on NPO	(4,407,092)	(4,727,071)
c. Adjustment to ARC	<u>2,682,294</u>	<u>2,877,043</u>
d. Annual Pension Cost	\$ 66,761,754	\$ 70,336,195
e. Contributions made	(70,761,490)	(75,139,790)
f. Increase (decrease) in NPO	<u>(3,999,736)</u>	<u>(4,803,595)</u>
g. NPO (beginning of the year)	\$ (55,088,649)	\$ (59,088,385)
h. NPO (end of the year)	<u>\$ (59,088,385)</u>	<u>\$ (63,891,980)</u>

(1) ARC Rate for each fiscal year comes from actuarial valuation at start of that fiscal year (e.g., the June 30, 2011 ARC Rate determines the Annual Required Contribution Amount for the fiscal year ending June 30, 2012).

Accounting Disclosures (GASB 25/27)

TABLE III
(continued)

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
2012	14.7%	\$ 491,062,740	\$ 72,186,223	\$ 75,139,790	104.1%	(2,953,567)
2011	13.0%	526,819,627	68,486,552	70,761,490	103.3%	(2,274,938)
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	49,651,679	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, 2012 Required Contribution was established in the June 30, 2011 actuarial valuation).

Accounting Disclosures (GASB 25/27)

TABLE III
(continued)

4. Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial 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)
06/30/2012	\$ 1,039,441,000	\$ 2,617,989,147	\$ 1,578,548,147	39.7%	\$ 499,027,788	316.3%
06/30/2011	1,041,628,000	2,542,444,021	1,500,816,021	41.0%	510,706,620	293.9%
06/30/2010	1,028,918,000	2,436,913,244	1,407,995,244	42.2%	540,867,018	260.3%
06/30/2009	1,034,645,000	2,331,619,466	1,296,974,466	44.4%	570,122,184	227.5%
06/30/2008	1,024,987,000	2,223,219,684	1,198,232,684	46.1%	542,603,556	220.8%
06/30/2007	953,197,000	2,068,102,695	1,114,905,695	46.1%	513,486,180	217.1%
06/30/2006	869,211,000	1,930,131,983	1,060,920,983	45.0%	484,886,628	218.8%
06/30/2005	820,501,000	1,848,175,710	1,027,674,710	44.4%	460,956,060	222.9%
06/30/2004	803,498,000	1,748,529,453	945,031,453	46.0%	431,942,112	218.8%
06/30/2003	778,265,000	1,594,436,193	816,171,193	48.8%	405,855,271	201.1%
06/30/2002	640,406,669	1,546,249,360	905,842,691	41.4%	390,192,418	232.2%
06/30/2001	686,067,220	1,311,021,235	624,954,015	52.3%	363,995,029	171.7%
06/30/2000	753,863,676	1,212,559,037	458,695,361	62.2%	341,871,667	134.2%
06/30/1999	650,294,843	1,161,100,932	510,806,089	56.0%	333,153,432	153.3%
06/30/1998	586,095,318	1,037,281,510	451,186,192	56.5%	322,232,048	140.0%
06/30/1997	505,466,931	957,716,124	452,249,193	52.8%	305,498,420	148.0%
06/30/1996	427,435,099	912,242,254	484,807,155	46.9%	283,798,140	170.8%
06/30/1995	382,934,691	856,494,515	473,559,824	44.7%	261,466,451	181.1%
06/30/1994	N/A	N/A	N/A	N/A	N/A	N/A
06/30/1993	343,302,357	748,243,399	404,941,042	45.9%	221,986,837	182.4%
06/30/1992	N/A	N/A	N/A	N/A	N/A	N/A
06/30/1991	280,341,508	646,980,619	366,639,111	43.3%	209,377,144	175.1%

Accounting Disclosures (GASB 25/27)

TABLE III
(continued)

5. Three-Year Pension Cost Trend Information

Fiscal Year Ending	Annual Pension Cost (APC)	Employer Contribution	Percentage of APC Contributed	Net Pension Obligation (NPO)
06/30/2012	\$ 70,336,195	\$ 75,139,790	106.8%	\$ (63,891,980)
06/30/2011	66,761,754	70,761,490	106.0%	(59,088,385)
06/30/2010	62,275,417	71,176,599	114.3%	(55,088,649)

6. Additional Information

Valuation date: 06/30/2012

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:

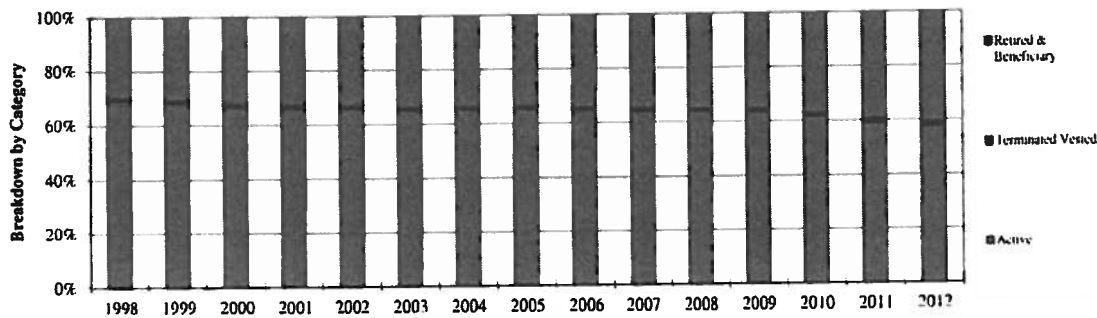
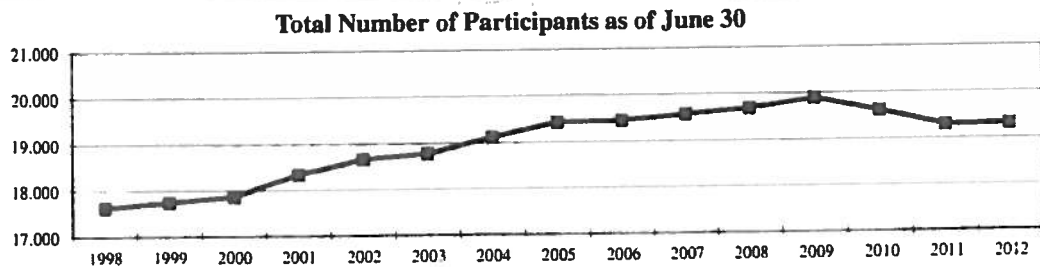
- Investment rate of return* 8.00%
- Projected salary increases* 5.00%
- Post-retirement benefit increases Other than the automatic increase of 3.00% every two (2) years applicable to salary cap of Certification 139, NO postretirement benefit increases are assumed. RP 2000 with projection.

Mortality Table

*Includes inflation at 3.50%

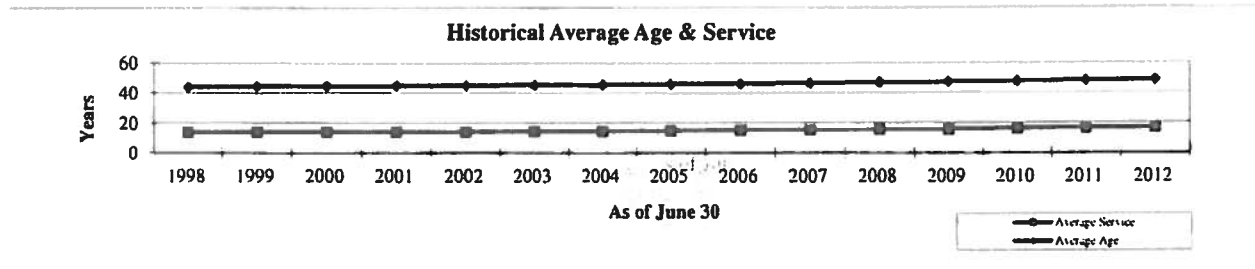
Summary of Participant Data

TABLE IV

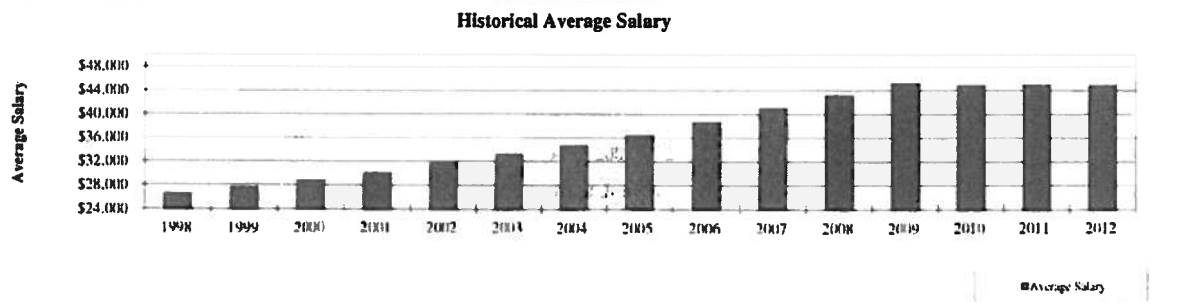


	<u>As of June 30, 2011</u>	<u>As of June 30, 2012</u>
1. Active Participants		
a. Actively employed		
i. Fully vested	8,162	8,101
ii. Non-vested	3,236	3,047
b. Sub-total	<u>11,398</u>	<u>11,148</u>
2. Terminated Vested Participants ⁽¹⁾	439	469
3. Retired Participants		
a. Non-disabled	6,258	6,504
b. Disabled	1,131	1,118
c. Beneficiaries	78	75
d. Sub-total	<u>7,467</u>	<u>7,697</u>
4. Total Participants	<u>19,304</u>	<u>19,314</u>

(1) Excludes 7,815 and 7,881 non-vested terminated employees as of June 30, 2011 and 2012 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	06/30/06	15.12	46.15
06/30/99	14.00	44.46	06/30/07	15.38	46.53
06/30/00	14.10	44.58	06/30/08	15.62	46.94
06/30/01	13.95	44.65	06/30/09	15.75	47.25
06/30/02	14.11	44.95	06/30/10	16.25	47.71
06/30/03	14.43	45.38	06/30/11	16.72	48.18
06/30/04	14.62	45.51	06/30/12	16.90	48.47
06/30/05	14.76	45.72			



Date	Average Salary Rate	Date	Average Salary Rate	Date	Average Salary Rate
06/30/98	\$26,449	06/30/03	\$33,150	06/30/08	\$43,105
06/30/99	\$27,593	06/30/04	\$34,600	06/30/09	\$45,162
06/30/00	\$28,709	06/30/05	\$36,362	06/30/10	\$44,792
06/30/01	\$30,000	06/30/06	\$38,514	06/30/11	\$44,807
06/30/02	\$31,702	06/30/07	\$40,915	06/30/12	\$44,764



**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 @ 06/30/11</u>	<u>Participant Count @ 06/30/12</u>
Cert #7	Cert #7	None	Coordinated	0	0
Cert #55	Cert #55	\$35,000	Coordinated	151	128
Cert #37	Cert #37	\$35,000	Coordinated	1,220	1,086
Cert #55	Cert #55	\$35,000	Supplemented	831	750
Cert #7	Cert #7	None	Supplemented	4	4
Cert #55	Cert #55	\$35,000	Supplemented	1,979	1,895
Cert #37	Cert #94	\$50,000	Coordinated	147	133
Cert #55	Cert #94	\$50,000	Supplemented	4,603	4,740
Cert #55	Cert #94	\$50,000	Coordinated	67	55
Cert #37	Cert #139 *	\$65,564	Coordinated	173	159
Cert #55	Cert #139 *	\$65,564	Coordinated	19	15
Cert #55	Cert #139 *	\$65,564	Supplemented	2,204	2,183
Total:				<u>11,398</u>	<u>11,148</u>

* Certification 139 increases by 3.00% every two years. The 2012 limit will be \$69,557.

Age-Service Distribution (all active participants)

TABLE VII

Attained Age	Completed Years of Service as of June 30, 2012										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	44	32	1	0	0	0	0	0	0	0	77
Avg. Pay	15,405	16,387	39,660	0	0	0	0	0	0	0	16,128
25 to 29	61	178	93	3	0	0	0	0	0	0	335
Avg. Pay	19,463	19,951	20,321	23,184	0	0	0	0	0	0	19,994
30 to 34	57	212	443	169	2	0	0	0	0	0	883
Avg. Pay	26,173	35,703	26,390	28,574	27,720	0	0	0	0	0	29,033
35 to 39	44	183	382	456	202	4	0	0	0	0	1,271
Avg. Pay	19,641	41,155	38,725	33,965	33,798	32,175	0	0	0	0	35,903
40 to 44	23	135	300	432	443	113	4	0	0	0	1,450
Avg. Pay	25,763	40,246	39,978	43,438	38,725	36,944	34,095	0	0	0	40,173
45 to 49	18	104	228	382	489	467	175	9	0	0	1,872
Avg. Pay	26,366	37,520	38,036	46,120	48,308	44,292	42,648	36,961	0	0	44,215
50 to 54	15	70	159	258	404	459	532	227	14	0	2,138
Avg. Pay	26,531	38,023	39,397	43,824	52,200	52,387	48,247	43,391	39,350	0	47,630
55 to 59	5	29	129	159	243	281	428	330	88	1	1,693
Avg. Pay	24,454	46,594	43,247	46,129	51,361	60,247	58,785	54,533	48,368	43,560	53,900
60 to 64	4	12	53	98	124	141	211	158	100	34	935
Avg. Pay	19,959	35,654	45,697	48,993	50,772	54,776	61,941	70,563	63,909	56,073	58,038
65 to 69	1	5	16	22	38	35	72	48	38	43	318
Avg. Pay	39,000	86,734	49,220	42,194	56,495	57,139	64,802	72,623	67,595	70,012	63,100
70 & up	0	1	10	11	7	19	39	25	17	47	176
Avg. Pay	0	76,452	53,338	47,762	61,282	59,505	57,706	63,043	76,429	75,769	64,669
Total	272	961	1,814	1,990	1,952	1,519	1,461	797	257	125	11,148
Avg. Pay	21,792	34,820	35,648	41,038	46,159	50,571	53,671	55,695	58,623	68,174	44,764

404 455
2,200 523

Market and Actuarial Value of Assets

TABLE VIII

	As of June 30, 2011		As of June 30, 2012	
		%		%
1. Market Value of Assets				
a. Cash and cash equivalents	\$30,607,754	2.8%	\$13,389,546	1.2%
b. Government securities	40,883,143	3.7%	\$0	0.0%
c. Corporate bonds and notes	62,059,393	5.7%	\$0	0.0%
d. Equities	162,865,116	14.8%	\$14,970,100	1.4%
e. Foreign stocks and bonds	123,630,377	11.3%	\$0	0.0%
f. Mutual funds	467,471,475	42.5%	\$916,498,911	83.7%
g. Property and equipment	3,629,824	0.3%	\$3,746,902	0.3%
h. Mortgages/loans to plan members	207,976,196	18.9%	\$146,794,903	13.4%
i. Other assets	0	0.0%	\$0	0.0%
j. Other investments	0	0.0%	0	0.0%
k. Market value of assets	\$1,099,123,278	100.0%	\$1,095,400,362	100.0%
l. Contribution receivable / receivables	58,340,510		47,810,187	
m. Other payable	(104,997,228)		(87,301,845)	
n. Market value of assets	\$1,052,466,560		\$1,055,908,704	
2. Reconciliation of Market Value of Assets				
a. Market Value as of June 30, 2011			\$1,052,466,560	
b. Income:				
Employer contribution	\$75,139,790			
Employee contributions	39,265,148			
Net appreciation (depreciation) in fair value of investments	23,854,981			
Interest and dividends	24,990,769			
Post Retirement Medical Plan Reimbursements	9,932,018			
			\$173,182,706	
c. Disbursements:				
Benefit payments	\$153,890,144			
Administrative Expenses	3,517,749			
Investment Expenses	2,400,651			
Post Retirement Medical Plan Benefit Payments	9,932,018			
			\$169,740,562	
d. Market Value as of June 30, 2012			\$1,055,908,704	

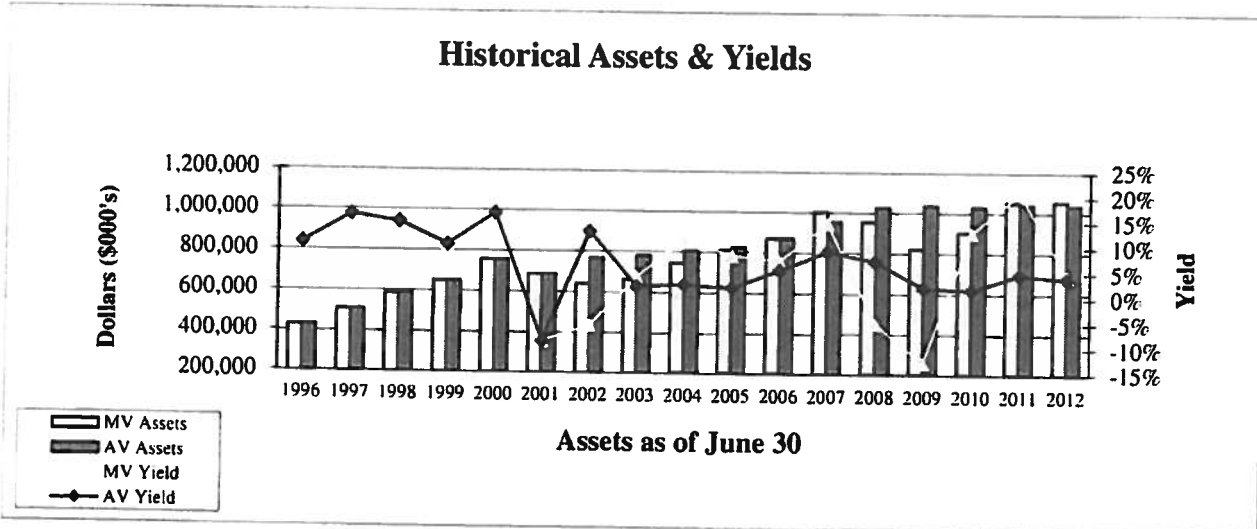
Market and Actuarial Value of Assets

TABLE VIII
(continued)

	(\$ Thousands) As of June 30, 2011	(\$ Thousands) As of June 30, 2012
3. Determination of Asset Gain / (Loss)		
a. Market value of assets at beginning of year	\$ 902,867	\$ 1,052,467
b. Employer contributions	70,761	75,140
c. Employee contributions	40,062	39,265
d. Administrative expenses	(3,070)	(3,518)
e. Benefit payments	(143,198)	(153,890)
f. Expected earnings (at 8.00%)	70,812	82,477
g. Expected Assets at end of year: (a) + (b) + (c) + (d) + (e) + (f) =	\$ 938,234	\$ 1,091,941
h. Actual market value of assets at end of year	\$ 1,052,467	\$ 1,055,909
i. Asset gain / (loss) for the year: (h) - (g)	\$ 114,233	\$ (36,032)
4. Actuarial Value of Assets		
a. Gains & (losses) for year ending June 30		
i. 2008	\$ (130,162) x 1/5 =	\$ (26,032) N/A
ii. 2009	(196,458) x 2/5 =	(78,583) x 1/5 = \$ (39,292)
iii. 2010	40,114 x 3/5 =	24,068 x 2/5 = 16,046
iv. 2011	114,233 x 4/5 =	91,386 x 3/5 = 68,540
v. 2012	(36,032)	N/A x 4/5 = (28,826)
vi. Total unrecognized gains/(losses)	\$ 10,839	\$ 16,468
b. Actuarial Value of Assets <i>Item 3(h) minus Item 4(a)(vi)</i>	\$ 1,041,628	\$ 1,039,441

Historical Asset Information

TABLE IX



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%
2011	1,052,467	1,041,628	143,198	3,070	70,761	40,062	20.9%	4.8%
2012	1,055,909	1,039,441	153,890	3,518	75,140	39,265	4.5%	4.0%

* 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, as per Certification 32.

3. Administrative Expenses

0.50% of total payroll of covered employees.

4. Salary Increases

5.00% per annum.

5. Decrements

- **Pre-Retirement Mortality**

RP-2000 Mortality Table, projected 7 years for annuitants and 15 years for non-annuitants using Scale AA. For purposes of benefits due to death in service, it is assumed that five percent (5.00%) of such deaths are service related. Representative (unprojected) values of the assumed annual rates of pre-retirement mortality among members in active service are as follows:

Age	Men	Women
20	0.021%	0.013%
25	0.029%	0.014%
30	0.039%	0.020%
35	0.068%	0.036%
40	0.088%	0.048%
45	0.107%	0.074%
50	0.133%	0.107%
55	0.184%	0.205%
60	0.321%	0.345%
64	0.487%	0.477%

- **Post-Retirement Healthy Mortality**
 RP-2000 Mortality Table, projected 7 years for annuitants and 15 years for non-annuitants using Scale AA.
- **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, 2012 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. No provision has been made to reflect the expected impact of GASB Nos. 67 and 68.

- 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 ½% 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 2012 maximum compensation is \$69,557.
- b) Those electing coverage under the above certification agree to pay 11.00% of compensation up to the applicable indexed maximum (see (a) above).

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.