

PUERTO RICO TEACHERS RETIREMENT SYSTEM

June 30, 2011 Actuarial Valuation Report

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February 7, 2012

Mr. Héctor M. Mayol-Kaufmann
Executive Director
Puerto Rico Teachers Retirement System
Capital Center Building
#235 Arterial Hostos Ave.
North Tower, 8th Floor
Hato Rey, PR 00919

Dear Mr. Mayol-Kaufmann:

This report presents the results of the actuarial valuation of the Puerto Rico Teachers Retirement System (PRTRS) as of June 30, 2011. Section I contains highlights of the valuation including a general discussion and comments on the various schedules included in the report. The subsequent Sections contain schedules summarizing the underlying calculations, asset information, participant data, plan benefits and actuarial assumptions and methods.

Purpose

The main purposes of this report are:

- to provide the Annual Required Contribution and Annual Pension Cost for the Fiscal Year ending June 30, 2012 based on relevant Statements of the Government Accounting Standards Board (GASB);
- to review the experience under the plan since the previous valuation;
- to present information pertaining to the operation of the plan for inclusion in financial statements; and
- to assess the relative funded position of the plan.

The use of this report for purposes other than those stated above may not be appropriate and should be reviewed with Milliman.

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The report was prepared solely to provide assistance to the Commonwealth of Puerto Rico Teachers Retirement System for a specific and limited purpose. It is a complex, technical analysis that assumes a high level of knowledge concerning PRTRS's operations, and uses PRTRS's data, which Milliman has not audited. Milliman and PRTRS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRTRS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report.

Data Reliance

In performing this analysis, we relied on the census data, asset information, and other information (both written and oral) provided by the System. We have not audited or verified the census data, asset information, or other information. To the extent that any of these are inaccurate or incomplete, the results of this valuation may likewise be inaccurate or incomplete.

We did not audit the data used in our analysis, but did review it for reasonableness and consistency and have not found material defects in the data. It is possible that material defects in the data would be uncovered by a detailed, systematic review and comparison of the data to search for data values that are questionable or for relationships that are materially inconsistent. Such a review was beyond the scope of our assignment.

Future Measurements

Future actuarial measurements may differ significantly from the current measurements presented in this report due to factors such as the following:

- Plan experience differing from the actuarial assumptions;
- Future changes in the actuarial assumptions;
- Increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as potential additional contribution requirements due to changes in the plan's funded status); and,
- Changes in the plan provisions or accounting standards.

Due to the limited scope of our assignment, we did not perform an analysis of the potential range of such measurements.

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Certification

We hereby certify that, to the best of our knowledge, this report is complete and accurate and all costs and liabilities were determined in conformance with generally accepted actuarial principles and practices which are consistent with the Actuarial Standards of Practice promulgated by the Actuarial Standards Board and the applicable Guides to Professional Conduct, amplifying Opinions, and supporting recommendations of the American Academy of Actuaries and are based on actuarial assumptions and methods adopted by the System. All of the actuarial assumptions were developed by Milliman in consultation with PRTRS. We believe that the actuarial assumptions and methods used in this actuarial valuation are reasonable for valuing the benefits provided under the plan.

Actuarial computations presented in this report are for purposes of fulfilling financial accounting requirements under the GASB Statements 25, 27, and 45. The calculations in the enclosed report have been made on a basis consistent with our understanding of the plan provisions described in Section VI of this report, and of the applicable GASB Statements. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Qualifications

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

We are members of the Society of Actuaries and meet the qualification standards of the American Academy of Actuaries to render this actuarial opinion.

Respectfully submitted,



By: Glenn D. Bowen, F.S.A.
Member American Academy of Actuaries



Katherine A. Warren, F.S.A.
Member American Academy of Actuaries

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION I – SUMMARY

A. Summary of Principal Results of June 30, 2011 Actuarial Valuation (*\$ amounts in thousands*)

	Basic System Pension Benefits only	System Administered Pension Benefits only	GASB 25 & 27 Accounting (Basic System and System Administered Pension Benefits)	GASB 45 Accounting (Other Postemployment Benefits)
Present Value of Benefits ¹	\$13,535,146	\$639,935	\$14,175,081	\$825,955
Actuarial Accrued Liability	10,843,860	604,749	11,448,609	706,069
Actuarial Value of Assets	<u>2,385,863</u>	<u>0</u>	<u>2,385,863</u>	<u>0</u>
Unfunded Actuarial Accrued Liability	8,457,997	604,749	9,062,746	706,069
Employer Normal Cost as a percent of payroll	158,010 11.97%	4,177 0.32%	162,187 12.28%	11,674 0.88%
Annual Required Contribution (ARC) as a percent of payroll	621,983 47.11%	37,351 2.83%	659,334 49.93%	41,069 3.11%
Annual Pension / OPEB Cost as a percent of payroll	N/A N/A	N/A N/A	673,891 51.04%	40,962 3.10%
Employer Contributions (<i>estimated</i>) as a percent of payroll	125,570 9.51%	50,016 3.79%	175,586 13.30%	33,802 2.56%
Portion of ARC not covered (<i>estimated</i>) as a percent of payroll	496,413 37.60%	(12,665) (0.96)%	483,748 36.64%	7,267 0.55%

¹ A discussion of the benefits included in the respective Present Value of Benefits begins on page 4 of this section.

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SECTION I – SUMMARY

	June 30, 2010 <u>Valuation</u>	June 30, 2011 <u>Valuation</u>
<i>GASB 25 & 27 Accounting (\$ amounts in thousands)</i>		
Present Value of Benefits ¹	\$10,978,061	\$14,175,081
Actuarial Accrued Liability	9,279,776	11,448,609
Actuarial Value of Assets	<u>2,221,977</u>	<u>2,385,863</u>
Unfunded Actuarial Accrued Liability	7,057,799	9,062,746
Employer Normal Cost	80,767	162,187
as a percent of payroll	5.89%	12.28%
Annual Required Contribution		
for upcoming fiscal year	528,170	659,334
as a percent of payroll	38.54%	49.93%
<i>GASB 45 Accounting (\$ amounts in thousands)</i>		
Present Value of Benefits ¹	\$817,898	\$825,955
Actuarial Accrued Liability	694,230	706,069
Actuarial Value of Assets	<u>0</u>	<u>0</u>
Unfunded Actuarial Accrued Liability	694,230	706,069
Employer Normal Cost	12,028	11,674
as a percent of payroll	0.88%	0.88%
Annual Required Contribution		
for upcoming fiscal year	39,925	41,069
as a percent of payroll	2.91%	3.11%

¹ A discussion of the benefits included in the respective Present Value of Benefits begins on page 4 of this section.

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SECTION I – SUMMARY

	June 30, 2010 <u>Valuation</u>	June 30, 2011 <u>Valuation</u>
<i>Participant Data</i>		
<u>Active Members</u>		
Number	44,679	43,402
Average Salary	\$30,671	\$30,423
Total Annual Salary	\$1,370,343,618	\$1,320,399,637
<u>Retirees</u>		
Number	28,799	30,431
Average Monthly Basic System Benefit	\$1,283	\$1,338
Average Monthly System Administered Benefit	\$76	\$69
<u>Disabled Members</u>		
Number	2,061	2,095
Average Monthly Basic System Benefit	\$430	\$448
Average Monthly System Administered Benefit	\$71	\$68
<u>Beneficiaries</u>		
Number	2,744	2,835
Average Monthly Basic System Benefit	\$368	\$379
Average Monthly System Administered Benefit	\$20	\$21
<u>Terminated Vested Members</u>		
Number	769	768
Average Monthly Basic System Benefit	\$815	\$749

Basic System Benefit and System Administered Benefit amounts shown above are for pension benefits, including minimum benefits and COLAs. Special Law "bonus" benefits are not reflected.

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION I – SUMMARY

B. General Discussion

Basic System Benefits

As summarized in Section VIII, the Puerto Rico Teachers Retirement System (PRTRS) provides benefits to members, or their beneficiaries, upon:

- Retirement
- Disability
- Vested withdrawal
- Death
- Nonvested withdrawal (return of contributions)
- Christmas bonus (\$150)

Annuity benefits are subject to a \$300 monthly minimum. The statutory funding requirement for these benefits for the 2011-2012 fiscal year totals 18.5% of payroll, comprising 9.0% member and 9.5% employer contributions. Statutory funding requirements in future years will increase under Law 114 (see page 6).

These benefits will be referred to as the “Basic System Benefits” throughout this report.

System Administered Benefits

Also summarized in Section VIII are benefits granted under a series of special laws that are administered by PRTRS, including:

- Additional minimum pension benefits
- Additional minimum death benefit
- Ad-hoc cost-of-living adjustments (COLAs)
- Medical insurance plan contribution
- Summer bonus
- Medication bonus
- Christmas bonus (\$450)

These benefits are funded on a pay-as-you-go basis from the General Fund of the Commonwealth of Puerto Rico and will be referred to as “System Administered Benefits” throughout this report. These benefits are not an obligation of the PRTRS assets.

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SECTION I – SUMMARY

System Experience since Prior Valuation

The approximate actual rate of return since the prior valuation was 23.37% for 2010-2011. This significant asset gain decreased the System's unfunded actuarial accrued liability, prior to the reflection of the new investment return assumption as discussed below.

Our analysis of System experience from June 30, 2010 to June 30, 2011 resulted in a liability gain of \$40 million for Basic System Benefits (e.g. – the June 30, 2010 liability of \$8.75 billion was expected to increase to \$9.09 billion as of June 30, 2011, and instead increased to \$9.05 billion prior to the change in the investment return assumption).

Major sources of gains and losses are as follows:

1. \$3 million loss on new entrants
2. \$18 million loss on roughly 114 "pop-up" retirees who were not in the June 30, 2010 census data
3. \$115 million loss on roughly 2,100 active members who retired since the prior valuation
4. \$120 million gain due to salary increases less than expected among active members
5. \$56 million gain from all other sources, including corrections in the accumulated member contributions with interest.

Further discussion is warranted on Item 3.

For Item 3, possible explanations for liability losses attributable to individual members include purchases of service (which are offset to some extent on the asset side by the member's purchase price), retirement incentives such as Law 70 (see below), and data clean-up that occurred during the benefit calculation process when the member retired.

Changes in Assumptions since Prior Valuation

This valuation reflects a decrease in the interest rate assumption for GASB 25 & 27 purposes from 8.0% per year to 6.4% per year. The 6.4% assumption reflects the asset allocation for the non-loan portion of the portfolio that was adopted by the Board during November 2011 as shown below and Milliman's capital market assumptions as of June 30, 2011. In addition, the assumption reflects that loans to members comprise

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SECTION I – SUMMARY

approximately 15% of the portfolio and, as provided by the System, have an approximate return of 8.8%.

Asset Class	Target Allocation
Domestic Equity	25%
International Equity	10%
Fixed Income	55%
Cash	10%

The decrease in the interest rate assumption increased the Actuarial Accrued Liability as of June 30, 2011 for Basic System Benefits by \$1.79 billion, from \$9.05 billion to \$10.84 billion, or by 19.8%. The increase in the ARC for Basic System Benefits was \$111 million or 21.7%.

For GASB 25 and 27 accounting, the decrease in the interest rate assumption increased the Actuarial Accrued Liability as of June 30, 2011 by \$1.87 billion, from \$9.58 billion to \$11.45 billion, or by 19.5%. The increase in the ARC was \$111 million or 20.3%.

Changes in Plan Provisions since Prior Valuation

During the 2010-2011 fiscal year, Law 114 was enacted which increased employer contributions from the prior 8.5% of compensation to 9.5% of compensation effective July 1, 2011. For the next four fiscal years effective July 1, employer contributions will increase annually by 1%. For the next five fiscal years, employer contributions will increase annually by 1.25%, reaching an employer contribution rate of 19.75% effective July 1, 2020.

In addition, Law 70 was enacted during the 2010-2011 fiscal year which provided an early retirement incentive. Under Section 4c of Law 70, active members with at least 30 years of service received a bonus equal to 6 months of salary upon retirement under Law 70. Under Section 4b of Law 70, active members who had at least 15 years of service, but less than 30 years of service, were able to retire immediately with an enhanced benefit ranging from 37.5% to 50% of salary. This enhanced benefit is paid by the General Fund until the member reaches the later of age 55 or the date the member would have completed 30 years of service had the member continued working. The System will pay the benefit after this time period. While the General Fund is paying

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SECTION I – SUMMARY

the pension benefit to the member or any surviving beneficiary, the General Fund will also pay a contribution equal to 8.5% of final salary to the System. Members who retired under this incentive are not eligible to receive the Medical Insurance Plan Contribution. This valuation reflects that 38 members retired under Section 4b of Law 70. Information on the number of Section 4c retirements was not provided by the System.

GASB Accounting Information

Accounting results under Governmental Accounting Standards Board Statement No. 25, “*Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans*” (GASB 25), Statement No. 27, “*Accounting for Pensions by State and Local Governmental Employers*” (GASB 27), and Governmental Accounting Standards Board Statement No. 45, “*Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions*” (GASB 45) are presented in two sections in this report as discussed below. In addition, as requested by PRTRS, we have separately determined the Annual Required Contribution based on GASB 25 and 27 rules for just the Basic System Benefits.

Basic System Benefits Information

We have performed a June 30, 2011 actuarial valuation of the Basic System Benefits and have prepared accounting results for them based on GASB 25 and 27 rules.

The FY 2011-2012 ARC for the Basic System Benefits only based on GASB 25 and 27 rules would be \$622.0 million, which equals 47.11% of payroll. The ARC represents the portion of the cost of PRTRS’ Basic System Benefits that employers should pay in order for PRTRS to be actuarially funded in accordance with GASB’s required minimum parameters.; i.e., the ARC has been reduced to reflect the fact that active members contribute 9% of pay to the system. The employer portion of the statutory funding requirement, which is 9.5% of payroll for the 2011-2012 fiscal year, is less than the ARC by 37.60% of payroll, or \$496.4 million.

As shown in Subsection D of Section IV, PRTRS has Unfunded Actuarial Accrued Liabilities (UAAL) of \$8.5 billion on behalf of Basic System Benefits, which should be amortized over a period not to exceed 30 years in accordance with GASB 25 and 27 rules. Based on the current statutory member and employer funding requirements, the

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UAAL is expected to grow indefinitely into the future instead of being amortized. Effectively, this means that the statutory member and employer contributions to PRTRS are not adequate to fund PRTRS' Basic System Benefits. ***Instead, PRTRS is being gradually defunded.***

GASB 25 and 27 Accounting Information

We have performed a June 30, 2011 actuarial valuation of the Basic System Benefits and the System Administered Benefits (excluding the Medical Insurance Plan Contribution) and have prepared accounting results under GASB 25 for the financial statements of the System and under GASB 27 for the Commonwealth of Puerto Rico's financial statements. No future ad-hoc COLAs are anticipated in these results.

The FY 2011-2012 ARC under GASB 25 and 27 is \$659.3 million, which equals 49.93% of payroll. This includes the Basic System Benefits and the System Administered Benefits (excluding the Medical Insurance Plan Contribution). The FY 2011-2012 APC under GASB 27 is \$673.9 million, which equals 51.04% of payroll.

As shown in Subsection B of Section V, the Unfunded Actuarial Accrued Liability on a GASB 25 and 27 basis is \$11.4 billion. Based on the current funding requirements, the UAAL is expected to grow indefinitely into the future. As discussed above, the statutory member and employer contributions to PRTRS are not adequate to fund PRTRS' Basic System Benefits. ***Instead, PRTRS is being gradually defunded.*** The System Administered Benefits are financed on a pay-as-you-go basis from the General Fund of the Commonwealth of Puerto Rico

GASB 45 Accounting Information

We have performed a June 30, 2011 actuarial valuation of the Medical Insurance Plan Contribution and have prepared accounting results for the Commonwealth of Puerto Rico's financial statements under GASB 45. (Note that the Medication Bonus has been included in the GASB 25 and 27 results as a Pension Benefit because members can receive the bonus without submitting documentation to substantiate medication expenses.)

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The FY 2011-2012 ARC for the Medical Insurance Plan Contribution under GASB 45 is \$41.1 million, which equals 3.11% of payroll. The FY 2011-2012 Annual OPEB Cost under GASB 45 is \$41.0 million, which equals 3.10% of payroll.

There are no member or employer contributions on behalf of the Medical Insurance Plan Contribution. This benefit is financed on a pay-as-you-go basis from the General Fund of the Commonwealth of Puerto Rico. Since this is an Other Postemployment Benefit that is not funded in advance, the ARC for this benefit has been calculated based on an assumed investment return rate of 4.0%, instead of the 6.4% rate used for the Pension Benefits. As shown in Subsection B of Section VI, the Unfunded Actuarial Accrued Liability on a GASB 45 basis for this benefit is \$706 million.

Solvency Test for Basic System Benefits

Subsection A of Section III determines the solvency percentage for each membership group for the Basic System Benefits. The Actuarial Value of Assets was allocated to each membership group by first allocating based on the accumulated member contributions with interest. The remaining assets were then assigned first to retirees, disabled members, and beneficiaries, second to terminated members with rights to a deferred pension, and then to active members. As shown in Subsection A of Section III, the overall solvency percentage is 22.0%. For retirees, disabled members, and beneficiaries, the solvency percentage is 15.5%. Vested terminated members with rights to deferred pensions and active members have solvency percentages of 46.5% and 29.0%, respectively. The solvency percentage for former members due a refund of accumulated member contributions with interest is always 100.0% under this test.

Note there were insufficient assets to cover all of the benefit obligations attributable to retirees, disabled members, and beneficiaries. Therefore, the assets allocated to vested terminated members with the right to a deferred pension, active members and former members due a refund of their contributions are *solely* attributable to the accumulated value of their own contributions; no employer contributions are available to fund their benefit obligations based on this allocation procedure.

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Cash Flow Projection for Basic System Benefits

PRTRS is a relatively mature retirement system with a significant retiree population. Based on the current statutory funding requirements, the annual benefit payments and administrative expenses paid by the system are significantly larger than the member and employer contributions made to the system. Thus investment income and current assets must be used to cover this negative cash flow. As a result, system assets can be expected to decline since the negative cash flow exceeds expected investment income. PRTRS' liabilities for the Basic System Benefits will continue to increase significantly over time. Thus the funded status can be expected to decline over time based on the actuarial assumptions used to prepare this actuarial valuation.

The table shown in Subsection B of Section III provides a simplified illustration of the expected negative net cash flows over the next 10 years. Annual payroll growth of 3.5% is assumed, as future members are assumed to replace current members who terminate or retire. (Note, we did not attempt to include in the expected benefit payments any benefit payments attributable to new members in preparing this table. Members who join PRTRS in the future will generate some cash outflow during the next 10 years due to refunds of their contributions, death and disability benefits, and immediate annuities due to service purchases, etc. We expect that these amounts will be relatively modest and they have not been included in the results shown. Doing so would increase the expected negative net cash flow.)

Based on this estimate of future contributions and benefit payments, the PRTRS assets will be exhausted by the 2021-2022 fiscal year, assuming an annual 6.4% investment return. It is doubtful that assets will be available to meet benefit payments even to that date in light of the significant assets allocated to private equity, plan member loans, accounts receivables, and capital assets.

While Law 114 increased employer contributions, we recommend that the statutory funding requirements be further increased in light of:

- **the expected negative net cash flows;**
- **the forecast exhaustion of plan assets by 2021-2022; and,**
- **the Annual Required Contribution based on GASB 25 and 27.**

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C. Discussion of Supporting Exhibits

System Assets

Section II summarizes the plan assets taken into account in the preparation of the GASB 27 Employer Accounting results for PRTRS.

Subsection A summarizes the Market Value of Assets as of June 30, 2011, including the additional amounts due to the contribution receivables, if any.

Subsection B summarizes the reconciliation of the Market Value of Assets from June 30, 2010 to June 30, 2011.

Subsection C summarizes the development of the Actuarial Value of Assets as of June 30, 2011. The Actuarial Value of Assets is equal to the Market Value of Assets.

Subsection D develops an estimated rate of return on plan assets for the previous plan year. The estimated rate of return from June 30, 2010 to June 30, 2011 was 23.37% on the Market Value of Assets.

Subsection E summarizes the historical estimated rate of return on plan assets on a market value basis.

The asset information used for the valuation was taken from financial statements provided by PRTRS as of June 30, 2011.

Management Information

Section III presents additional information that has been derived from the valuation process and is illustrative of the expected future decline in funded status that is projected based upon our analysis of the valuation results.

Subsection A shows the allocation of assets to the liability for Basic System Benefits by membership group and determines the solvency percentage for each group. Please see Subsection B of Section I for a description of this determination.

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION I – SUMMARY

Subsection B shows a projected cash flow for the current fiscal year and the next ten fiscal years for Basic System Benefits. Please see Subsection B of Section I for a description of this projection.

Basic System Benefits Information

Section IV summarizes the Actuarial Accrued Liability and the development of the Annual Required Contribution for just the Basic System Benefits under GASB 25 and 27 for the fiscal year ending June 30, 2012 (please see Subsection B of Section I for a description of the benefits included in this valuation).

Subsection A summarizes the development of the Present Value of Benefits as of June 30, 2011.

Subsection B summarizes the development of the Actuarial Accrued Liability as of June 30, 2011.

Subsection C summarizes the development of the Employer Normal Cost. The Employer Normal Cost is the total normal cost under the Entry Age Normal Actuarial Cost Method increased by expected administrative expenses paid from the fund and reduced by expected member contributions.

Subsection D summarizes the development of the amortization payment of the Unfunded Actuarial Accrued Liability. The amortization period used to calculate the ARC is a closed 30 years from June 30, 2007 (26 years remain as of June 30, 2011) with annual payments increasing each year by 3.5% to remain as a level percent of payroll.

Subsection E summarizes the development of the Annual Required Contribution (ARC). The ARC is the sum of the employer normal cost and the amortization payments, adjusted to mid-year to reflect that payments are made throughout the year.

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION I – SUMMARY

GASB 25 and 27 Accounting Information

Section V summarizes the Actuarial Accrued Liability and the development of the Annual Required Contribution and Annual Pension Cost under GASB 25 and 27 for the fiscal year ending June 30, 2012 (please see Subsection B of Section I for a description of the benefits included in these valuation results). Results are shown in total for GASB 25 and 27, with the Actuarial Accrued Liability and Employer Normal Cost presented for the underlying Basic System Benefits and for the underlying System Administered Benefits that are included in this valuation.

Subsection A summarizes the development of the Actuarial Accrued Liability as of June 30, 2011 and Employer Normal Cost as of December 31, 2011.

Subsection B summarizes the development of the amortization payment of the Unfunded Actuarial Accrued Liability. The amortization period used to calculate the ARC is a closed 30 years from June 30, 2007 (26 years remain as of June 30, 2011) with annual payments increasing each year by 3.5% to remain as a level percent of payroll.

Subsection C summarizes the development of the Annual Required Contribution (ARC). The ARC is the sum of the employer normal cost and the amortization payments, adjusted to mid-year to reflect that payments are made throughout the year.

Subsection D summarizes the development of the Net Pension Obligation (NPO) as of June 30, 2011. The NPO is defined as the cumulative difference between the Annual Pension Cost (APC) and the employer's contribution to the plan, including any pension liability (asset) at transition.

Subsection E summarizes the development of the APC for the fiscal year ending June 30, 2012. The APC is the amount recognized in the employer's financial statements as the cost of the pension plan and is determined in accordance with GASB Statement No. 27. The APC is equal to the ARC plus interest on the NPO, if any, as of June 30, 2011 less an amortization of this NPO.

Subsection F shows a seven-year history of the ARC, APC, and the percentage contributed. This schedule is required by GASB Statements No. 25 and 27. The FY 2011-2012 contribution percentage assumes that the employer contributions for Basic

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION I – SUMMARY

System Benefits will be at the statutory level of 9.5% of payroll and include anticipated early retirement incentive contributions and that employer contributions for the applicable System Administered Benefits will be the anticipated pay-as-you-go payments. Based on our understanding of prior valuations, the ARC and APC shown for the year ended June 30, 2006 do not include the liability for any System Administered Benefits. Consequently, the ratios of Actual Employer Contributions to ARCs and APCs shown in this exhibit for the fiscal year June 30, 2006 could be overestimated. For years prior to June 30, 2007, we have restated the actual employer contribution figures in the seven-year history to exclude the payments from the General Fund of the Commonwealth of Puerto Rico for the System Administered Benefits not included in GASB 25 and 27 (the Medical Insurance Plan Contribution and the Cultural Trip).

Subsection G shows a six-year history of the funding progress of the plan. This schedule is required by GASB Statements No. 25 and 27.

Schedule H summarizes information used to determine the Annual Required Contribution for the fiscal year ending June 30, 2012.

GASB 45 Accounting Information

Section VI summarizes the Actuarial Accrued Liability and the development of the Annual Required Contribution for the fiscal year ending June 30, 2012 for the Medical Insurance Plan Contribution.

Subsection A summarizes the development of the Actuarial Accrued Liability as of June 30, 2011 and Employer Normal Cost as of December 31, 2011.

Subsection B summarizes the development of the amortization payment of the Unfunded Actuarial Accrued liability. The amortization period used to calculate the ARC is a closed 30 years from June 30, 2007 (26 years remain as of June 30, 2011) with annual payments increasing each year by 3.5% to remain as a level percent of payroll.

Subsection C summarizes the development of the Annual Required Contribution (ARC). The ARC is the sum of the employer normal cost and the amortization payments, adjusted to mid-year to reflect that payments are made throughout the year.

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION I – SUMMARY

Subsection D summarizes the development of the Net OPEB Obligation (NOO) as of June 30, 2011. The NPO is defined as the cumulative difference between the Annual OPEB Cost (AOC) and the employer's contribution to the plan since the adoption of GASB 45.

Subsection E summarizes the development of the AOC for the fiscal year ending June 30, 2012. The AOC is the amount recognized in the employer's financial statements as the cost of other postemployment benefits and is determined in accordance with GASB Statement No. 45. The AOC is equal to the ARC plus interest on the NOO, if any, as of June 30, 2011 less an amortization of this NOO.

Subsection F shows a five-year history of the ARC, AOC, and the percentage contributed. This schedule is required by GASB Statements No. 45. The FY 2011-2012 contribution percentage assumes that employer contributions for the Medical Insurance Plan Contribution will be the anticipated pay-as-you-go payments.

Subsection G shows a five-year history of the funding progress of the plan. This schedule is required by GASB Statements No. 45.

Schedule H summarizes information used to determine the Annual Required Contribution for the fiscal year ending June 30, 2012.

Census Data

Section VII summarizes the census data provided by the System and utilized in the preparation of the actuarial valuation. Subsection A provides a reconciliation of the current year participant counts from the prior valuation. Subsection B presents a profile of active participants, summarized by gender and age and service groups. Subsections C, D, E, and F show the number and average benefit of the terminated vested participants, retirees, disabled members, and beneficiaries, respectively. Special data adjustments are discussed in Section IX.

Summary of Principal Plan Provisions

Section VIII summarizes the principal plan provisions as of the valuation date and denotes any changes from the previous valuation.

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION I – SUMMARY

Actuarial Assumptions and Methods

Sections IX and X summarize the actuarial assumptions and methods that were utilized in the preparation of this actuarial valuation and denote any changes from the previous valuation.

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION II - SYSTEM ASSETS

A. Market Value of Assets as of June 30, 2011

1. Assets	
Cash	\$ 171,608,000
Corporate and Government Bonds	591,769,000
Stocks	1,211,084,000
Private Equity Investments	25,630,000
Total Loans to Plan Members	406,664,000
Accounts Receivable	51,185,000
Capital Assets	22,204,000
Other Assets	<u>472,000</u>
Total	\$ 2,480,616,000
2. Total Liabilities	\$ 94,753,000
3. Market Value of Assets as of June 30, 2011: (1) - (2)	\$ 2,385,863,000

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION II - SYSTEM ASSETS

B. Reconciliation of Market Value of Assets from June 30, 2010 to June 30, 2011

1. Market Value of Assets as of June 30, 2010	\$	2,221,977,000
2. Additions		
a. Contributions		
Member Contributions	\$	123,297,000
Employer Contributions		112,071,000
Transfers In		828,000
Special		<u>47,753,000</u>
Total Contributions	\$	283,949,000
b. Investment Income		
Interest Income	\$	57,008,000
Dividends Income		6,915,000
Net Appreciation of Investments		421,923,000
Other Income		968,000
Investment Related Expenses		<u>(4,682,000)</u>
Net Investment Income	\$	482,132,000
Total Additions	\$	766,081,000
3. Decreases		
Refund of Member Contributions	\$	8,465,000
Annuities and Death Benefits		513,874,000
Special Benefits		48,286,000
Administrative Expenses		<u>31,570,000</u>
Total	\$	602,195,000
4. Net Increase (Decrease) in Market Value of Assets	\$	163,886,000
5. Market Value of Assets as of June 30, 2011	\$	2,385,863,000

C. Development of Actuarial Value of Assets as of June 30, 2011

The Actuarial Value of Assets as of June 30, 2011 is equal to the Market Value of Assets as of June 30, 2011 of \$2,385,863,000.

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION II - SYSTEM ASSETS

D. Estimated Annual Rate of Return for year ending June 30, 2011

	<u>Market Value</u>
1. Value of Assets as of June 30, 2010	\$ 2,221,977,000
2. Total Contributions	283,949,000
3. Benefit Payments and Expenses	602,195,000
4. Value of Assets as of June 30, 2011	2,385,863,000
5. Non-Investment Increment: (2) - (3)	(318,246,000)
6. Investment Increment: (4) - (1) - (5)	482,132,000
7. Time Weighted Value: (1) +.5 * (5)	2,062,854,000
8. Estimated Annual Rate of Return: (6) / (7)	23.37%

E. Estimated Historical Rates of Return

<u>Plan Year Ending</u>	<u>Market Value</u>
June 30, 2011	23.37%
June 30, 2010	15.89%
June 30, 2009	-16.38%
June 30, 2008	-6.45%
June 30, 2007	17.50%
5-year Compounded Annual Return	5.62%

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION III - MANAGEMENT INFORMATION

A. Allocation of Assets for Basic System Benefits to Membership Group

Membership Group	Actuarial Accrued Liability	Allocated Assets *	Solvency Percentage
1. Retirees, Disabled Members, and Beneficiaries	\$5,856,368,575	\$ 905,842,039	15.5%
2. Vested Terminated Members	54,306,151	25,257,727	46.5%
3. Active Members	4,899,354,558	1,420,932,285	29.0%
4. Former Members due a refund of contributions	<u>33,830,949</u>	<u>33,830,949</u>	<u>100.0%</u>
5. Total	\$10,843,860,233	\$ 2,385,863,000	22.0%

* Allocated assets are determined by first assigning the accumulated member contributions with interest to each membership category. Remaining assets are then allocated first to retirees, disabled members, and beneficiaries, second to vested terminated members, and the rest to active members.

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION III - MANAGEMENT INFORMATION

B. Projected Cash Flows for Basic System Benefits (Simplified Illustration)

<u>Plan Year Ending</u>	<u>Estimated Payroll</u>	<u>Estimated Member and Employer Contributions</u>	<u>Estimated Benefit Payments and Administrative Expenses</u>	<u>Net Cash Flow</u>	<u>Estimated Net Plan Assets at Year-End</u>
06/30/2012	1,320,400,000	244,406,000	559,267,000	(314,861,000)	2,213,778,000
06/30/2013	1,366,614,000	266,622,000	578,615,000	(311,993,000)	2,033,638,000
06/30/2014	1,414,445,000	290,093,000	600,096,000	(310,003,000)	1,844,021,000
06/30/2015	1,463,951,000	314,881,000	623,828,000	(308,947,000)	1,643,359,000
06/30/2016	1,515,189,000	341,046,000	649,905,000	(308,859,000)	1,429,944,000
06/30/2017	1,568,221,000	372,576,000	677,869,000	(305,293,000)	1,206,550,000
06/30/2018	1,623,108,000	405,895,000	707,833,000	(301,938,000)	972,319,000
06/30/2019	1,679,917,000	441,096,000	740,187,000	(299,091,000)	726,034,000
06/30/2020	1,738,714,000	478,260,000	777,003,000	(298,743,000)	464,346,000
06/30/2021	1,799,569,000	517,479,000	817,742,000	(300,263,000)	184,341,000
06/30/2022	1,862,554,000	535,553,000	860,240,000	(324,687,000)	(138,777,000)

Notes:

- Estimated Plan Assets at Year-End assumes that the investment return assumption of 6.4% is met.
- Estimated Payroll is assumed to grow 3.5% annually.
- Member Contributions were estimated to be 9% of Estimated Payroll each year.
- Employer Contributions were estimated to be 9.5% of Estimated Payroll for FYE 2012, increasing to 19.75% of Estimated Payroll for FYE 2021 and later in accordance with Law 114. Employer contributions also include expected Law 70 employer contributions.
- The Estimated Benefit Payments do not include amounts expected to be made to future participants, such as:
 - refund of contributions to terminated nonvested participants,
 - disability benefits,
 - death benefits,
 - retirement benefits due to service purchase,
 and thus are slightly understated.
- Administrative Expenses are assumed to grow 2.5% annually.

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION IV - BASIC SYSTEM BENEFITS INFORMATION

A. Development of Present Value of Benefits as of June 30, 2011

1. Projected Benefits Payable to Retirees and Beneficiaries		
Retirees	\$	5,635,782,507
Disabled Members		107,380,981
Beneficiaries		<u>113,205,087</u>
Total	\$	5,856,368,575
2. Projected Benefits for Vested Terminated Members		54,306,151
3. Projected Benefits for Active Members		
Retirement	\$	7,424,218,573
Disability		67,056,216
Pre Retirement Death		76,165,026
Return of Members' Contributions		13,770,501
Vested Withdrawal		<u>9,430,219</u>
Total	\$	7,590,640,535
4. Return of Contributions due to former Members	\$	33,830,949
5. Total Present Value of Benefits: (1) + (2) + (3) + (4)	\$	13,535,146,210

The above liabilities are for Basic System Benefits. See Section I for more information.

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION IV - BASIC SYSTEM BENEFITS INFORMATION

B. Development of Actuarial Accrued Liability as of June 30, 2011

1. Total Present Value of Benefits	\$ 13,535,146,210
2. Present Value of Future Total Normal Cost	
Retirement	\$ 2,550,374,427
Disability	32,506,897
Pre Retirement Death	39,730,912
Return of Members' Contributions	62,136,391
Vested Withdrawal	<u>6,537,350</u>
Total	\$ 2,691,285,977
3. Present Value of Future Active Member Contributions	\$ 1,313,805,860
4. Present Value of Future Employer Normal Cost: (2) - (3)	\$ 1,377,480,117
5. Actuarial Accrued Liability: (1) - (2)	\$ 10,843,860,233

The above liabilities are for Basic System Benefits. See Section I for more information.

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION IV - BASIC SYSTEM BENEFITS INFORMATION

C. Development of Employer Normal Cost Payable as of December 31, 2011

1. Total Normal Cost as of December 31, 2011	
Retirement	\$ 231,439,899
Disability	2,933,493
Pre Retirement Death	3,786,194
Return of Members' Contributions	5,675,016
Vested Withdrawal	<u>583,299</u>
Total	\$ 244,417,901
2. Expected Member Contributions	\$ 116,584,620
3. Load for Administrative Expenses:	\$ 30,177,000
4. Total Employer Normal Cost as of December 31, 2011: (1) - (2) + (3)	\$ 158,010,281

The above liabilities are for Basic System Benefits. See Section I for more information.

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION IV - BASIC SYSTEM BENEFITS INFORMATION

D. Development of Unfunded Actuarial Accrued Liability and Amortization Payment Payable as of December 31, 2011

1. Actuarial Accrued Liability as of June 30, 2011	\$	10,843,860,233
2. Actuarial Value of Assets as of June 30, 2011	\$	2,385,863,000
3. Unfunded Actuarial Accrued Liability as of June 30, 2011: (1) - (2)	\$	8,457,997,233
4. Amortization Period in years		26
5. Amortization Factor at beginning of year *		18.8038
6. Amortization Amount Payable as of December 31, 2011: [(3) / (5)] * (1.064 ^ 0.5)	\$	463,973,022

* Amortization calculated as a level percent of pay increasing 3.5% per year.

E. Development of Annual Required Contribution

1. Total Employer Normal Cost as of December 31, 2011	\$	158,010,281
2. Amortization Payment as of December 31, 2011	\$	463,973,022
3. Annual Required Contribution*: (1) + (2)	\$	621,983,303

* Assumes payments made throughout the year.

The above liabilities are for Basic System Benefits. See Section I for more information.

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION V - GASB 25 AND 27 ACCOUNTING INFORMATION

A. Benefit Obligations

	<u>Basic System Benefits</u>	<u>System Administered Benefits</u>	<u>Total</u>
1. Projected Benefits as of June 30, 2011 Payable to:			
Retirees	\$ 5,635,782,507	\$ 447,299,958	\$ 6,083,082,465
Disabled Members	107,380,981	25,960,456	133,341,437
Beneficiaries	113,205,087	10,743,731	123,948,818
Vested Terminated Members	54,306,151	3,904,218	58,210,369
Return of Contributions due to former Members	33,830,949	0	33,830,949
Active Members	<u>7,590,640,535</u>	<u>152,026,643</u>	<u>7,742,667,178</u>
Total	\$ 13,535,146,210	\$ 639,935,006	\$ 14,175,081,216
2. Present Value of Future Normal Cost	\$ 2,691,285,977	\$ 35,186,128	\$ 2,726,472,105
3. Actuarial Accrued Liability as of June 30, 2011:			
(1) - (2)	\$ 10,843,860,233	\$ 604,748,878	\$ 11,448,609,111
4. Total Employer Normal Cost			
as of December 31, 2011	\$ 158,010,281	\$ 4,176,866	\$ 162,187,147

The above liabilities are for Basic System Benefits and selected System Administered Benefits. See Section I for more information.

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION V - GASB 25 AND 27 ACCOUNTING INFORMATION

**B. Development of Unfunded Actuarial Accrued Liability and Amortization
Payment Payable as of December 31, 2011**

1. Actuarial Accrued Liability as of June 30, 2011	\$ 11,448,609,111
2. Actuarial Value of Assets as of June 30, 2011	\$ 2,385,863,000
3. Unfunded Actuarial Accrued Liability as of June 30, 2011: (1) - (2)	\$ 9,062,746,111
4. Amortization Period in years	26
5. Amortization Factor at beginning of year *	18.8038
6. Amortization Amount Payable as of December 31, 2011: [(3) / (5)] * (1.064 ^ 0.5)	\$ 497,147,207

* Amortization calculated as a level percent of pay increasing 3.5% per year.

C. Development of Annual Required Contribution

1. Total Employer Normal Cost as of December 31, 2011	\$ 162,187,147
2. Amortization Payment as of December 31, 2011	\$ 497,147,207
3. Annual Required Contribution*: (1) + (2)	\$ 659,334,354

* Assumes payments made throughout the year.

The above liabilities are for Basic System Benefits and selected System Administered Benefits. See Section I for more information.

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION V - GASB 25 AND 27 ACCOUNTING INFORMATION

D. Development of Net Pension Obligation as of June 30, 2011

1. Net Pension Obligation as of June 30, 2010	\$	1,574,140,116
2. Annual Pension Cost for Fiscal Year 2010 - 2011	\$	550,399,492
3. Fiscal Year 2010 - 2011 Employer Contribution	\$	161,628,000
4. Net Pension Obligation as of June 30, 2011: (1) + (2) - (3)	\$	1,962,911,608

E. Development of Fiscal Year 2011 - 2012 Annual Pension Cost

1. Annual Required Contribution	\$	659,334,354
2. Interest on Net Pension Obligation as of June 30, 2011	\$	125,626,343
3. Adjustment to the Annual Required Contribution	\$	111,069,994
4. Fiscal Year 2011 - 2012 Annual Pension Cost: (1) + (2) - (3)	\$	673,890,703

The above liabilities are for Basic System Benefits and selected System Administered Benefits. See Section I for more information.

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION V - GASB 25 AND 27 ACCOUNTING INFORMATION

F. Schedule of Employer Contributions

<u>Year Ended June 30</u>	<u>Actual Employer Contribution</u>	<u>Annual Required Contribution</u>	<u>Percent Contributed</u>	<u>Annual Pension Cost</u>	<u>Percent Contributed</u>
2012	\$175,586,000	\$659,334,354	26.63%*	\$673,890,703	26.06%*
2011**	161,628,000	528,169,741	30.60	550,399,492	29.37
2010	166,384,000	477,213,279	34.87	496,338,311	33.52
2009	172,841,000	393,871,256	43.88	410,504,146	42.10
2008	159,101,000	341,495,050	46.59	355,742,842	44.72
2007	147,597,000	341,159,718	43.26	351,814,817	41.95
2006	150,215,000	220,820,946	68.03	221,449,560	67.83

* Percentage contributed for the year ended June 30, 2012 assumes the actual employer contribution is 9.5% of expected payroll for the Basic System Benefits plus the expected pay-as-you-go amounts for the selected System Administered Benefits and the expected Law 70 early retirement incentive contributions.

** For the fiscal year ending June 30, 2011, the Actual Employer Contribution for Basic System Benefits was \$112,071,000 and for System Administered Benefits was \$49,557,000. The Annual Required Contribution for Basic System Benefits was \$492,008,800 and for System Administered Benefits was \$36,160,941.

Please refer to page 13 for a discussion of the benefits not reflected in the above amounts for the years ending on June 30, 2006, which may impair the comparison of prior valuation amounts.

The above liabilities are for Basic System Benefits and selected System Administered Benefits. See Section I for more information.

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION V - GASB 25 AND 27 ACCOUNTING INFORMATION

G. Schedule of Funding Progress

	(a)	(b)	(c)=(b)-(a)	(d)=(a)/(b)	(e)	(f)=(c)/(e)
Actuarial Valuation <u>Date</u>	Actuarial Value of <u>Assets</u>	Accrued <u>Liability</u>	Unfunded <u>Liability</u>	Funded <u>Ratio</u>	Annual <u>Salary</u>	Unfunded Liability as a % of Annual <u>Salary</u>
06/30/2011	\$2,385,863,000	\$11,448,609,111	\$9,062,746,111	20.8%	\$1,320,399,637	686.4%
06/30/2010	2,221,977,000	9,279,775,973	7,057,798,973	23.9%	1,370,343,618	515.0%
06/30/2009	2,157,593,000	8,721,514,811	6,563,921,811	24.7%	1,418,304,104	462.8%
06/30/2008		Not Determined			Not Determined	
06/30/2007	3,162,720,000	7,755,817,493	4,593,097,493	40.8%	1,369,770,012	335.3%
06/30/2006		Not Determined			Not Determined	

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION V - GASB 25 AND 27 ACCOUNTING INFORMATION

H. Additional Information

The following information was used to determine the Annual Required Contribution for the fiscal year ending June 30, 2012. The ARC is for the Basic System Benefits and selected System Administered Benefits. See Section I for more information.

Valuation Date:	June 30, 2011
Actuarial Cost Method:	Entry Age Normal
Amortization method:	30 years closed, level percent of payroll
Remaining Amortization Period:	26 years
Asset valuation method:	Market Value of Assets
Assumptions:	
Investment rate of return	6.4%
Projected Salary Increases	3.5% general wage inflation plus a service based merit increase
Inflation	2.5%
Cost of Living Adjustments	None assumed

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION VI - GASB 45 ACCOUNTING INFORMATION

A. Benefit Obligations

1. Projected Benefits as of June 30, 2011 Payable to:		
Retirees	\$	403,386,156
Disabled Members		21,379,295
Beneficiaries		3,199,570
Vested Terminated Members		8,722,687
Active Members		<u>389,266,884</u>
Total	\$	825,954,592
2. Present Value of Future Normal Cost	\$	119,885,627
3. Actuarial Accrued Liability as of June 30, 2011:		
(1) - (2)	\$	706,068,965
4. Total Employer Normal Cost as of December 31, 2011	\$	11,673,925

The above liabilities are for the Medical Insurance Plan Contribution portion of the System Administered Benefits. See Section I for more information.

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION VI - GASB 45 ACCOUNTING INFORMATION

**B. Development of Unfunded Actuarial Accrued Liability and Amortization
Payment Payable as of December 31, 2011**

1. Actuarial Accrued Liability as of June 30, 2011	\$	706,068,965
2. Actuarial Value of Assets as of June 30, 2011	\$	0
3. Unfunded Actuarial Accrued Liability as of June 30, 2011: (1) - (2)	\$	706,068,965
4. Amortization Period in years		26
5. Amortization Factor at beginning of year *		24.4960
6. Amortization Amount Payable as of December 31, 2011: [(3) / (5)] * (1.04 ^ 0.5)	\$	29,394,672

* Amortization calculated as a level percent of pay increasing 3.5% per year.

C. Development of Annual Required Contribution

1. Total Employer Normal Cost as of December 31, 2011	\$	11,673,925
2. Amortization Payment as of December 31, 2011	\$	29,394,672
3. Annual Required Contribution*: (1) + (2)	\$	41,068,597

* Assumes payments made throughout the year.

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION VI - GASB 45 ACCOUNTING INFORMATION

D. Development of Net OPEB Obligation as of June 30, 2011

1. Net OPEB Obligation as of June 30, 2010	\$	35,114,940
2. Annual OPEB Cost for Fiscal Year 2010 - 2011	\$	39,890,823
3. Fiscal Year 2010 - 2011 Employer Contribution	\$	31,558,000
4. Net OPEB Obligation as of June 30, 2011: (1) + (2) - (3)	\$	43,447,763

E. Development of Fiscal Year 2011 - 2012 Annual OPEB Cost

1. Annual Required Contribution	\$	41,068,597
2. Interest on Net OPEB Obligation as of June 30, 2011	\$	1,737,911
3. Adjustment to the Annual Required Contribution	\$	1,844,614
4. Fiscal Year 2011 - 2012 Annual OPEB Cost: (1) + (2) - (3)	\$	40,961,894

The above liabilities are for the Medical Insurance Plan Contribution portion of the System Administered Benefits. See Section I for more information.

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION VI - GASB 45 ACCOUNTING INFORMATION

F. Schedule of Employer Contributions

<u>Year Ended June 30</u>	<u>Actual Employer Contribution</u>	<u>Annual Required Contribution</u>	<u>Percent Contributed</u>	<u>Annual OPEB Cost</u>	<u>Percent Contributed</u>
2012	\$33,802,000	\$41,068,597	82.31%*	\$40,961,894	82.52%*
2011	31,558,000	39,925,237	79.04	39,890,823	79.11
2010	28,427,000	42,487,047	66.91	42,495,262	66.89
2009	27,823,000	38,015,446	73.19	38,033,499	73.15
2008	26,000,000	36,836,179	70.58	36,836,179	70.58

* Percentage contributed for the year ended June 30, 2012 assumes the actual employer contribution is the expected pay-as-you-go amounts for the Medical Insurance Plan Contribution.

The above liabilities are for the Medical Insurance Plan Contribution portion of the System Administered Benefits. See Section I for more information.

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION VI - GASB 45 ACCOUNTING INFORMATION

G. Schedule of Funding Progress

	(a)	(b)	(c)=(b)-(a)	(d)=(a)/(b)	(e)	(f)=(c)/(e)
Actuarial Valuation <u>Date</u>	Actuarial Value of <u>Assets</u>	Accrued <u>Liability</u>	Unfunded <u>Liability</u>	Funded <u>Ratio</u>	Annual <u>Salary</u>	Unfunded Liability as a % of Annual <u>Salary</u>
06/30/2011	\$0	\$706,068,965	\$706,068,965	0.0%	\$1,320,399,637	53.5%
06/30/2010	\$0	694,229,882	694,229,882	0.0%	1,370,343,618	50.7%
06/30/2009	\$0	750,381,890	750,381,890	0.0%	1,418,304,104	52.9%
06/30/2008		Not Determined			Not Determined	
06/30/2007	\$0	652,156,713	652,156,713	0.0%	1,369,770,012	47.6%

The above liabilities are for the Medical Insurance Plan Contribution portion of the System Administered Benefits. See Section I for more information.

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION VI - GASB 45 ACCOUNTING INFORMATION

H. Additional Information

The following information was used to determine the Annual Required Contribution for the fiscal year ending June 30, 2012. The ARC is for the Medical Insurance Plan Contribution portion of the System Administered Benefits. See Section I for more information.

Valuation Date:	June 30, 2011
Actuarial Cost Method:	Entry Age Normal
Amortization method:	30 years closed, level percent of payroll
Remaining Amortization Period:	26 years
Asset valuation method:	Market Value of Assets
Assumptions:	
Investment rate of return	4.0%
Projected Salary Increases	3.5% general wage inflation plus a service based merit increase
Inflation	2.5%
Cost of Living Adjustments	None assumed

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION VII – CENSUS DATA

A. Reconciliation with Prior Valuation

	<u>Active</u>	Terminated <u>Vested</u>	Retirees, Disabled Members, and <u>Beneficiaries</u>	<u>Total</u>
Members as of June 30, 2010	44,679	769	33,604	79,052
Changes				
Terminated Vested	(266)	272	(6)	0
Retired & Disabled	(2,077)	(108)	2,185	0
Death	(70)	(30)	(699)	(799)
Disappeared	(1,121)	0	(54)	(1,175)
Return/Transfer of Contributions	(252)	(56)	(2)	(310)
Return to Active	516	(79)	(3)	434
New	1,993	0	336	2,329
Members as of June 30, 2011	43,402 ¹	768	35,361	79,531

¹ Includes 121 members on leave of absence without pay who are assumed not to earn additional benefits.

The liability for the Return of Contributions due to former Members was provided by the System and equals the accumulated contributions with interest as of June 30, 2011 for former participants who terminated employment by June 30, 2011 with less than ten years of service and have not received a return of contributions as of June 30, 2011.

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION VII – CENSUS DATA

B. Summary of Active Members as of June 30, 2011

Number of Male Participants by Age and Service Groups

Age	Years of Credited Service										Total	
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40&Up		
0-24	39	12	-	-	-	-	-	-	-	-	-	51
25-29	177	314	63	-	-	-	-	-	-	-	-	554
30-34	82	241	579	90	-	-	-	-	-	-	-	992
35-39	53	111	392	500	58	-	-	-	-	-	-	1,114
40-44	34	85	240	324	449	72	1	-	-	-	-	1,205
45-49	29	70	166	237	375	670	93	-	-	-	-	1,640
50-54	19	56	151	168	235	510	563	68	-	-	-	1,770
55-59	6	29	88	110	170	220	268	112	16	-	-	1,019
60-64	6	9	26	45	51	82	95	24	9	8	-	355
65-69	2	1	9	7	17	21	22	6	6	3	-	94
70&Up	-	2	4	4	5	5	11	2	1	6	-	40
Total	447	930	1,718	1,485	1,360	1,580	1,053	212	32	17	-	8,834

Average Compensation of Male Participants by Age and Service Groups

Age	Years of Credited Service										Average	
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40&Up		
0-24	21,438	20,283	-	-	-	-	-	-	-	-	-	21,166
25-29	21,520	21,218	23,075	-	-	-	-	-	-	-	-	21,526
30-34	21,327	20,790	25,860	30,463	-	-	-	-	-	-	-	24,671
35-39	22,493	21,822	27,141	32,225	34,206	-	-	-	-	-	-	29,040
40-44	21,962	21,816	27,096	32,440	34,019	34,360	32,460	-	-	-	-	31,034
45-49	24,759	21,700	26,672	31,952	33,751	34,787	35,460	-	-	-	-	32,621
50-54	26,003	23,282	27,499	31,230	33,452	34,765	35,493	36,571	-	-	-	33,479
55-59	28,008	22,598	26,829	31,078	33,239	34,007	34,397	36,014	39,101	-	-	32,986
60-64	25,658	21,643	27,312	30,932	33,356	33,635	34,621	34,392	37,240	37,790	-	32,850
65-69	22,050	23,160	27,156	30,584	32,772	33,701	34,078	33,058	39,064	36,872	-	32,805
70&Up	-	26,790	19,062	33,150	31,145	34,656	34,427	33,120	32,148	36,400	-	32,173
Average	22,172	21,444	26,508	31,879	33,706	34,577	35,089	35,899	38,354	37,137	-	30,521

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION VII – CENSUS DATA

B. Summary of Active Members as of June 30, 2011

Number of Female Participants by Age and Service Groups

Age	Years of Credited Service										Total	
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40&Up		
0-24	207	67	-	-	-	-	-	-	-	-	-	274
25-29	656	1,350	312	-	-	-	-	-	-	-	-	2,318
30-34	334	931	2,060	391	-	-	-	-	-	-	-	3,716
35-39	206	542	1,406	1,922	174	-	-	-	-	-	-	4,250
40-44	131	389	949	1,466	1,725	321	1	-	-	-	-	4,982
45-49	98	278	765	1,125	1,554	2,845	446	4	-	-	-	7,115
50-54	57	153	476	696	938	1,721	2,126	415	1	-	-	6,583
55-59	21	68	246	429	570	832	890	494	54	1	-	3,605
60-64	5	24	77	140	248	314	304	86	44	23	-	1,265
65-69	2	6	19	46	47	82	87	23	10	29	-	351
70&Up	3	1	3	13	12	16	24	13	6	18	-	109
Total	1,720	3,809	6,313	6,228	5,268	6,131	3,878	1,035	115	71	-	34,568

Average Compensation of Female Participants by Age and Service Groups

Age	Years of Credited Service										Average	
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40&Up		
0-24	21,212	20,933	-	-	-	-	-	-	-	-	-	21,144
25-29	21,585	21,304	22,772	-	-	-	-	-	-	-	-	21,581
30-34	21,676	21,425	25,618	31,250	-	-	-	-	-	-	-	24,806
35-39	22,015	21,525	26,365	32,057	33,642	-	-	-	-	-	-	28,409
40-44	21,996	21,849	26,454	32,029	33,835	35,112	32,460	-	-	-	-	30,732
45-49	21,891	22,209	26,936	31,789	33,450	34,593	35,562	32,595	-	-	-	32,478
50-54	22,251	22,230	26,696	31,538	33,427	34,535	35,095	35,886	32,460	-	-	33,367
55-59	28,310	21,983	26,996	31,468	33,252	34,251	35,084	35,693	37,906	32,760	-	33,458
60-64	22,608	23,131	26,518	31,078	32,809	33,859	34,612	36,173	37,749	39,304	-	33,223
65-69	35,064	20,720	27,465	31,100	32,514	34,327	34,574	37,003	38,998	37,095	-	33,660
70&Up	21,000	22,500	29,652	31,565	32,960	33,895	33,585	35,178	38,200	40,305	-	34,318
Average	21,780	21,541	26,083	31,823	33,517	34,514	35,087	35,821	37,909	38,563	-	30,397

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION VII – CENSUS DATA

B. Summary of Active Members as of June 30, 2011

Number of All Active Participants by Age and Service Groups

Age	Years of Credited Service										Total
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40&Up	
0-24	246	79	-	-	-	-	-	-	-	-	325
25-29	833	1,664	375	-	-	-	-	-	-	-	2,872
30-34	416	1,172	2,639	481	-	-	-	-	-	-	4,708
35-39	259	653	1,798	2,422	232	-	-	-	-	-	5,364
40-44	165	474	1,189	1,790	2,174	393	2	-	-	-	6,187
45-49	127	348	931	1,362	1,929	3,515	539	4	-	-	8,755
50-54	76	209	627	864	1,173	2,231	2,689	483	1	-	8,353
55-59	27	97	334	539	740	1,052	1,158	606	70	1	4,624
60-64	11	33	103	185	299	396	399	110	53	31	1,620
65-69	4	7	28	53	64	103	109	29	16	32	445
70&Up	3	3	7	17	17	21	35	15	7	24	149
Total	2,167	4,739	8,031	7,713	6,628	7,711	4,931	1,247	147	88	43,402

Average Compensation of All Active Participants by Age and Service Groups

Age	Years of Credited Service										Average
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40&Up	
0-24	21,248	20,834	-	-	-	-	-	-	-	-	21,147
25-29	21,571	21,288	22,823	-	-	-	-	-	-	-	21,571
30-34	21,607	21,295	25,671	31,103	-	-	-	-	-	-	24,778
35-39	22,113	21,575	26,534	32,091	33,783	-	-	-	-	-	28,540
40-44	21,989	21,843	26,584	32,103	33,873	34,974	32,460	-	-	-	30,791
45-49	22,546	22,107	26,889	31,817	33,508	34,630	35,544	32,595	-	-	32,504
50-54	23,189	22,512	26,889	31,478	33,432	34,587	35,178	35,982	32,460	-	33,390
55-59	28,243	22,167	26,952	31,389	33,249	34,200	34,925	35,752	38,179	32,760	33,354
60-64	24,272	22,725	26,719	31,043	32,902	33,813	34,614	35,785	37,662	38,913	33,142
65-69	28,557	21,069	27,365	31,031	32,582	34,200	34,474	36,186	39,022	37,074	33,479
70&Up	21,000	25,360	23,601	31,938	32,426	34,076	33,850	34,904	37,335	39,328	33,742
Average	21,861	21,522	26,174	31,833	33,556	34,527	35,087	35,834	38,005	38,288	30,423

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION VII – CENSUS DATA

C. Summary of Terminated Vested Members as of June 30, 2011

<u>Age</u>	<u>Male</u>		<u>Female</u>		<u>Total</u>	
	<u>Count</u>	<u>Average Annual Pension Basic System Benefit</u>	<u>Count</u>	<u>Average Annual Pension Basic System Benefit</u>	<u>Count</u>	<u>Average Annual Pension Basic System Benefit</u>
Under 35	0	0	5	5,263	5	5,263
35-39	6	6,110	32	6,553	38	6,483
40-44	26	6,894	98	7,067	124	7,031
45-49	45	8,633	143	8,373	188	8,435
50-54	60	9,701	111	9,900	171	9,830
55-59	43	10,335	110	10,081	153	10,152
60-64	17	9,866	44	11,087	61	10,747
65 & Over	<u>11</u>	<u>7,349</u>	<u>17</u>	<u>11,741</u>	<u>28</u>	<u>10,016</u>
All Ages	208	9,036	560	8,966	768	8,985

The Average Annual Pension amounts above are as of June 30, 2011. The \$400 minimum monthly benefit is not reflected.

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION VII – CENSUS DATA

D. Summary of Retirees as of June 30, 2011

<u>Age</u>	<u>Males</u> <u>Average Annual Pension</u>			<u>Females</u> <u>Average Annual Pension</u>			<u>Total</u> <u>Average Annual Pension</u>		
	<u>Count</u>	<u>Basic System Benefit</u>	<u>Total Benefit</u>	<u>Count</u>	<u>Basic System Benefit</u>	<u>Total Benefit</u>	<u>Count</u>	<u>Basic System Benefit</u>	<u>Total Benefit</u>
Under 45	2	20,869	20,869	11	14,747	14,750	13	15,689	15,692
45-49	4	24,436	24,436	13	16,549	16,652	17	18,404	18,483
50-54	95	25,506	25,525	417	23,877	23,902	512	24,179	24,203
55-59	956	24,227	24,239	4,212	23,428	23,449	5,168	23,576	23,595
60-64	1,453	19,829	20,156	5,476	18,968	19,363	6,929	19,148	19,530
65-69	1,315	16,944	17,698	4,174	15,821	16,582	5,489	16,090	16,850
70-74	982	14,259	15,433	3,212	12,694	13,913	4,194	13,061	14,269
75-79	915	11,002	12,742	2,565	10,549	12,139	3,480	10,668	12,297
80-84	634	9,700	11,609	1,853	9,078	10,785	2,487	9,237	10,995
85-89	290	9,160	10,851	1,188	8,446	10,023	1,478	8,586	10,186
90-94	85	8,306	9,680	421	7,901	9,314	506	7,969	9,375
95-99	16	7,470	8,485	110	7,395	8,698	126	7,405	8,671
100 & Over	<u>3</u>	<u>7,005</u>	<u>8,541</u>	<u>29</u>	<u>7,696</u>	<u>8,880</u>	<u>32</u>	<u>7,631</u>	<u>8,849</u>
All Ages	6,750	16,376	17,274	23,681	15,961	16,774	30,431	16,053	16,885

The Average Annual Pension amounts above are as of June 30, 2011. In addition, 858 retirees are currently paying annual additional contributions of \$2,577,475 (via a reduced monthly benefit which is not reflected above). The 38 Law 70 retirees have monthly employer contributions as of June 30, 2011 totaling \$11,003 and the amounts above do not reflect the deferral of the Basic System Benefit for these retirees.

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION VII – CENSUS DATA

E. Summary of Disabled Members as of June 30, 2011

<u>Age</u>	<u>Males</u> <u>Average Annual Pension</u>			<u>Females</u> <u>Average Annual Pension</u>			<u>Total</u> <u>Average Annual Pension</u>		
	<u>Count</u>	<u>Basic System Benefit</u>	<u>Total Benefit</u>	<u>Count</u>	<u>Basic System Benefit</u>	<u>Total Benefit</u>	<u>Count</u>	<u>Basic System Benefit</u>	<u>Total Benefit</u>
Under 40	1	4,800	4,800	8	4,690	5,040	9	4,702	5,013
40-44	5	6,049	6,586	16	5,947	6,386	21	5,971	6,433
45-49	17	7,122	7,399	53	7,430	7,590	70	7,355	7,544
50-54	34	6,884	7,268	135	7,483	7,903	169	7,363	7,775
55-59	56	6,852	7,405	252	6,926	7,499	308	6,913	7,482
60-64	60	5,537	6,356	252	5,686	6,483	312	5,658	6,459
65-69	46	4,851	5,819	230	4,768	5,735	276	4,782	5,749
70-74	28	5,041	6,076	242	4,537	5,536	270	4,589	5,592
75-79	37	4,402	5,335	222	4,377	5,355	259	4,380	5,352
80-84	42	4,328	5,346	184	4,291	5,288	226	4,298	5,298
85-89	15	4,484	5,398	102	4,485	5,448	117	4,485	5,441
90-94	6	4,347	5,306	34	4,379	5,327	40	4,375	5,324
95-99	2	4,725	5,736	13	4,159	5,165	15	4,234	5,241
100 & Over	<u>1</u>	<u>11,883</u>	<u>11,883</u>	<u>2</u>	<u>4,585</u>	<u>5,701</u>	<u>3</u>	<u>7,017</u>	<u>7,762</u>
All Ages	350	5,514	6,293	1,745	5,353	6,173	2,095	5,380	6,193

The Average Annual Pension amounts above are as of June 30, 2011.

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION VII – CENSUS DATA

F. Summary of Beneficiaries as of June 30, 2011

<u>Age</u>	<u>Males</u> <u>Average Annual Pension</u>			<u>Females</u> <u>Average Annual Pension</u>			<u>Total</u> <u>Average Annual Pension</u>		
	<u>Count</u>	<u>Basic System Benefit</u>	<u>Total Benefit</u>	<u>Count</u>	<u>Basic System Benefit</u>	<u>Total Benefit</u>	<u>Count</u>	<u>Basic System Benefit</u>	<u>Total Benefit</u>
Under 30	33	4,884	5,140	47	4,683	4,902	80	4,766	5,000
30-34	3	1,717	1,808	1	6,455	6,794	4	2,902	3,054
35-39	4	3,931	4,118	3	3,244	3,524	7	3,637	3,864
40-44	9	3,879	4,136	21	3,461	3,618	30	3,586	3,773
45-49	15	3,991	4,286	28	4,219	4,411	43	4,140	4,367
50-54	32	4,286	4,519	33	4,766	5,050	65	4,530	4,789
55-59	51	4,768	4,988	70	5,919	6,249	121	5,434	5,717
60-64	89	5,573	5,845	137	5,835	6,097	226	5,732	5,998
65-69	113	5,130	5,390	189	5,402	5,675	302	5,301	5,568
70-74	178	4,956	5,205	283	4,989	5,255	461	4,976	5,236
75-79	173	4,180	4,437	314	4,425	4,706	487	4,338	4,610
80-84	197	4,107	4,375	280	4,025	4,278	477	4,059	4,318
85-89	152	3,929	4,171	191	3,868	4,071	343	3,895	4,116
90 & Over	<u>90</u>	<u>3,609</u>	<u>3,852</u>	<u>99</u>	<u>3,505</u>	<u>3,682</u>	<u>189</u>	<u>3,554</u>	<u>3,673</u>
All Ages	1,139	4,450	4,704	1,696	4,619	4,873	2,835	4,551	4,805

The Average Annual Pension amounts above are as of June 30, 2011.

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION VIII – SUMMARY OF PRINCIPAL PLAN PROVISIONS AS OF JUNE 30, 2011

This summary of plan provisions is intended only to describe the essential features of the plan for valuation purposes. All eligibility requirements and benefit amounts shall be determined in strict accordance with the plan document itself.

1. Type of Plan

The System is a contributory, defined benefit plan.

2. Effective Date

The Plan was established in 1951. Act 91 of March 29, 2004 superseded Act 218 of May 6, 1951. The plan was last amended under Act 38, approved April 24, 2007.

3. Eligibility for Membership

Members of the Teacher's Retirement System of Puerto Rico include teachers hired by the Department of Education, retired teachers, licensed teachers working in private schools or other educational organizations who elect to become members, employees of the System hired before March 29, 2004 who elected to become members, and employees of the System hired on or after March 29, 2004 (Act 91, Section 15).

4. Definitions

- a. Fiscal Year: A Fiscal Year is a 12-month period beginning on July 1 and ending on June 30.
- b. Fund: The Teacher's Annuities and Pensions Fund of Puerto Rico (Act 91, Section 2).
- c. General Fund: The General Expenses Budget of the Government of the Commonwealth of Puerto Rico.
- d. Creditable Service: A year of service for each fiscal year a teacher or an employee is a Member of the Retirement System and required contributions were made (Act 91, Section 27) plus purchased service, if any (Act 91, Sections 21 and 22).

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION VIII – SUMMARY OF PRINCIPAL PLAN PROVISIONS AS OF JUNE 30, 2011

- e. Compensation: The gross cash compensation, excluding bonuses and overtime, upon which contributions by a Member to the Fund are based (Act 91, Section 2).
 - f. Average Compensation: The average of the 36 highest months of compensation that the participant has received for Creditable Service (Act 91, Section 2).
 - g. Average Non-occupational Disability Compensation: The average of the 60 highest months of compensation that the participant has received. (Act 91, Sections 29 and 31).
 - h. Average Occupational Disability Compensation: The average of the 60 highest months of compensation that the participant has received. If less than 60 months of creditable service, the average of the monthly compensation that the participant has received. (Act 91, Section 29).
 - i. Fees or Contributions: The amount deducted from the compensation of a Member or directly paid to the System (Act 91, Section 2).
 - j. Accumulated Fees or Contributions: The sum of all amounts deducted from the compensation of a Member or directly paid to the System without interest (Act 91, Section 2).
5. Retirement Benefits
- a. Retirement because of age

Eligibility: Age 60 with 10 years of Creditable Service (Act 91, Section 28).

Benefit: Members who retire because of age shall be entitled to a lifetime monthly income equal to 1.8% of Average Compensation multiplied by years of Creditable Service (Act 91, Section 40). In no event will the benefit determined be less than the Minimum Benefit.

Additional Contributions required: None.

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION VIII – SUMMARY OF PRINCIPAL PLAN PROVISIONS AS OF JUNE 30, 2011

b. Retirement because of age and years of service

Eligibility: Age 47 with 25 years of Creditable Service (Act 91, Section 40).

Benefit: Members who retire because of age and years of service shall be entitled to a lifetime monthly income based on age and years of Creditable Service as shown below (Act 91, Section 40). In no event will the benefit determined below be less than the Minimum Benefit.

Attained Age	Years of Creditable Service	Lifetime Monthly Income
55	30	75% of Average Compensation
50	30	75% of Average Compensation
Under 50	30	65% of Average Compensation
50	25 but less than 30	1.8% of Average Compensation multiplied by years of Creditable Service
47 but less than 50	25 but less than 30	95% of 1.8% of Average Compensation multiplied by years of Creditable Service

Additional Contributions required: If a member retires at age 55 or older with at least 30 years of Creditable Service, no additional contributions are required. Members who have not attained age 55 and 30 years of Creditable Service at retirement must contribute to the Fund 9% of the Average Compensation on a monthly basis for a minimum period of 5 years after retiring because of age and years of service (Act 91, Section 40). Current administrative practice requires contributions until attainment of both age 55 and the date when 30 years of Creditable Service would have been completed if employment had continued.

6. Termination Benefits

a. Lump Sum Withdrawal

Eligibility: A Member is eligible upon termination of service.

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION VIII – SUMMARY OF PRINCIPAL PLAN PROVISIONS AS OF JUNE 30, 2011

Benefit: The benefit equals a refund of Accumulated Fees, plus interest accumulated at 2.0% per annum for a period no longer than 6 months following separation of service (Act 91, Section 19).

b. Deferred Retirement

Eligibility: A Member is eligible upon termination of service prior to age 60 and after 10 years of Creditable Service, provided the member has not taken a lump sum withdrawal.

Benefit: The benefit, commencing at age 60, is equal to 1.8% of Average Compensation multiplied by years of Creditable Service at date of termination (Act 91, Section 40). In no event will the benefit determined be less than the Minimum Benefit.

7. Death Benefits

a. Pre-retirement Death Benefit

Eligibility: Any current non-retired member is eligible.

Benefit: The benefit is as follows:

- (i) While in active service, the benefit equals a refund of Accumulated Fees, plus interest accumulated at 2.0% per annum until the date of death; plus an amount equal to one year of Compensation in effect at the time of death (Act 91, Section 34).
- (ii) While not in active service, the benefit equals a refund of Accumulated Fees, plus interest accumulated at 2.0% per annum up to separation of service (Act 91, Sections 2 and 33).

b. Post-retirement Death Benefit

Eligibility: Any retiree or disabled member receiving a monthly benefit.

Benefit: The benefit is as follows:

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION VIII – SUMMARY OF PRINCIPAL PLAN PROVISIONS AS OF JUNE 30, 2011

- (i) For those married at the time of death, the lifetime annual income to a widow or widower is equal to 50% of the Retirement Benefit at time of death, payable for life (Act 91, Section 35).
- (ii) For those with children at the time of death, the total lifetime annual income to all children is equal to 50% of the Retirement Benefit at time of death. The benefit is payable while the children are under age 6 or are currently enrolled in a regular public or private school or college program until the age of 22, and it is payable for life while they are disabled (Act 91, Section 35).
- (iii) The benefit, when there is no relation as stated above, is equal to the remaining balance of Accumulated Fees with interest (interest is determined as of the date of retirement if retired directly from active service or as of separation of service otherwise) after the deduction of lifetime annual income paid and is payable to a beneficiary or to the Member's estate. In no case shall the benefit be less than \$1,000. The General Fund pays the difference, up to \$500, between (1) the Accumulated Fees with interest less the lifetime annual income paid and (2) \$1,000. The System pays for the rest. (Act 91, Section 35 and Act 272)

8. Disability Benefits

a. Non-occupational Disability

Eligibility: All members are eligible for Non-occupational Disability upon 5 years of Creditable Service and the occurrence of disability (Act 91, Section 31).

Benefit: 1.8% of Average Non-occupational Disability Compensation multiplied by years of Creditable Service (Act 91, Section 29). In no event will the benefit determined be less than the Minimum Benefit.

b. Occupational Disability

Eligibility: All members disabled while in the course and as a consequence of their work. (Act 91, Section 31).

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION VIII – SUMMARY OF PRINCIPAL PLAN PROVISIONS **AS OF JUNE 30, 2011**

Benefit: 1.8% of Average Occupational Disability Compensation multiplied by years of Creditable Service (Act 91, Section 29). In no event will the benefit determined be less than the Minimum Benefit.

9. Minimum Benefits

- a. Past Ad hoc Increases: The legislature, from time to time, increases pensions for certain retirees as described in Act 124 approved on June 8, 1973 and Act 47 approved on June 1, 1984. The benefits are paid 50% by the General Fund and 50% by the System.
- b. Current Minimum Benefit: The minimum monthly lifetime income for members who retire or become disabled is \$400 per month effective July 1, 2007 (\$300 per month up to June 30, 2007). The General Fund will pay for the \$100 per month increase in the minimum benefit (Act 91, Section 25 and Act 38 of 2007, Section 3).

10. Cost-of-Living Adjustments (COLA) to Pension Benefits: The legislature, from time to time, increases pensions by 3% for retired and disabled members. Beneficiaries are not entitled to COLAs granted after the retiree's death. The first increase was granted by Act 62 of 1992. Subsequent 3% increases have been granted every third year since 1992, with the latest 3% increase established on April 24, 2007 and effective July 1, 2007 (retroactive to January 1, 2007) for retired and disabled members that were receiving a monthly benefit on or before January 1, 2004 (Act 38). In addition, effective July 1, 2008, any retired or disabled member that was receiving a monthly annuity on or before January 1, 2004 less than \$1,250 per month received an increase of up to 3% without exceeding the limit of \$1,250 per month (Act 38). All COLAs are paid by the General Fund (various Acts).

11. Medical Insurance Plan Contribution: A payment of up to \$100 per month to the eligible medical insurance plan selected by the retiree, disabled member, or beneficiary. The amount is prorated if there are multiple beneficiaries. This benefit is paid by the General Fund (Act 483).

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION VIII – SUMMARY OF PRINCIPAL PLAN PROVISIONS AS OF JUNE 30, 2011

12. Special “Bonus” Benefits:

- a. Christmas Bonus: An annual bonus of \$600 for each retiree and disabled member paid in December. The System pays \$150 per retiree and disabled member and the balance is paid by the General Fund (Act 144).
- b. Summer Bonus: An annual bonus of \$100 for each retiree, beneficiary, and disabled member paid in July. The amount is prorated if there are multiple beneficiaries. This benefit is paid by the General Fund (Act 38 in 2001).
- c. Medication Bonus: An annual bonus of \$100 for each retiree, beneficiary, and disabled member to cover health costs paid in July. Evidence of coverage is not required. The amount is prorated if there are multiple beneficiaries. This benefit is paid by the General Fund (Act 162).

13. Forms of Payment

The basic pension benefits described in the above sections are payable in the form of a cash refund annuity. Optional benefits are provided upon a member's death to the surviving beneficiaries as described in 7.b.

14. Contributions

Member Contributions: Contributions by Members are 9% of Compensation (Act 91, Section 16). Before January 27, 2000, member contributions were 7% of Compensation.

Employer Contributions: Contributions by the Commonwealth of Puerto Rico and private school employers, as applicable, are 9.5% of Compensation for the fiscal year beginning July 1, 2011. For the next four fiscal years effective July 1, employer contributions will increase annually by 1%. For the next five fiscal years, employer contributions will increase annually by 1.25%, reaching an employer contribution rate of 19.75% effective July 1, 2020. (Act 91, Section 47 as amended by Law 114 of 2010) Prior to July 1, 2011, employer contributions were 8.5% of Compensation.

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION VIII – SUMMARY OF PRINCIPAL PLAN PROVISIONS **AS OF JUNE 30, 2011**

15. Service Purchase: Active members with eligible service from prior employment may elect to purchase service in PRTRS. The cost of the purchase is calculated by applying the PRTRS statutory member and employer contribution rates to the member's salary during the years of service at the former employer. The amount due to member contributions is accumulated at 2% per year until the time of service purchase. If the service purchase is a time purchase and not an intergovernmental service transfer, the amount due to employer contributions is accumulated at 2% per year until the time of service purchase. Any amount not covered by asset transfers from the member's prior pension fund is payable by the member (Act 91, Sections 20, 21, 22, and 23).
16. Law 70 Retirement Incentive: During the 2010-2011 fiscal year, Law 70 provided for an early retirement incentive. Active members who had at least 15 years of service, but less than 30 years of service, were able to retire immediately with an enhanced benefit ranging from 37.5% to 50% of salary. This enhanced benefit is paid by the General Fund until the member reaches the later of age 55 or the date the member would have completed 30 years of service had the member continued working. The System will pay the benefit after this time period. While the General Fund is paying the pension benefit to the member or any surviving beneficiary, the General Fund will also pay a contribution equal to 8.5% of final salary to the System. Members who retired under this incentive are not eligible to receive the Medical Insurance Plan Contribution.
17. Changes in Plan Provisions since Prior Valuation

Employer contributions were increased as provided under Law 114 (see item 14 above). In addition, an early retirement incentive occurred as provided under Law 70 (see item 16 above).

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION IX – SUMMARY OF ACTUARIAL ASSUMPTIONS AS OF JUNE 30, 2011

Interest: 6.40% per annum, net of investment expenses, for GASB 25 and 27. (8.00% prior to June 30, 2011)
4.00% per annum for GASB 45.

Compensation Increases: Compensation increases vary by years of creditable service as shown below. The rates below include the assumption for general wage inflation of 3.5%.

Years of Creditable Service	Annual Rate
0-5	5.70%
6	5.50
7	5.30
8	5.10
9	4.90
10	4.80
11	4.70
12	4.60
13	4.50
14	4.30
15	4.20
16	4.10
17-19	4.00
20	3.90
21	3.80
22	3.75
23	3.70
24-27	3.65
28	3.60
29 & Over	3.50

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION IX – SUMMARY OF ACTUARIAL ASSUMPTIONS AS OF JUNE 30, 2011

Termination: Withdrawal rates vary by gender and years of creditable service. The withdrawal rates are shown below.

Years of Creditable Service	Male	Female
0	12.00%	15.00%
1	9.00	8.00
2	6.00	5.00
3	3.00	3.00
4	3.00	2.75
5	2.50	2.50
6	2.50	2.25
7	2.00	2.00
8	1.50	1.50
9	1.00	0.50
10+	0.10	0.05

Retirement: Rates of retirement vary by age and years of creditable service. The rates shown below apply when an active member is eligible for retirement (e.g. age 47 with at least 25 years of creditable service or age 60 with at least 10 years of creditable service).

Age	Less than 30 years of Creditable Service	30 or more years of Creditable Service
47-49	0.5%	20.0
50-54	2.0	25.0
55-59	5.0	30.0
60-61	10.0	25.0
62-64	12.0	25.0
65-79	15.0	25.0
80	100.0	100.0

Current terminated vested members were assumed to retire (i) at age 55, or attained age if later, if the member had at least 30 years of service or (ii) at age 60, or attained age if later, otherwise.

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION IX – SUMMARY OF ACTUARIAL ASSUMPTIONS AS OF JUNE 30, 2011

Service Purchases: Members over age 50 who are not eligible for retirement are assumed to elect to purchase enough service to retire immediately at the rates shown in the table below.

Age	Annual Rate
50-54	0.5%
55-59	1.0
60-64	2.0
65-79	8.0

In addition, 50% of active members retiring prior to attaining 30 years of creditable service are assumed to purchase enough years of service upon retirement to attain 30 years of creditable service.

Disability: Unisex rates which vary by age and years of creditable service are assumed. Illustrative rates are shown below.

Age	Less than 5 years of Creditable Service	5 or more years of Creditable Service
25	0.008%	0.013%
30	0.008	0.013
35	0.008	0.013
40	0.009	0.014
45	0.020	0.031
50	0.068	0.105
55	0.133	0.204
60 & Over	0.000	0.000

Members who become disabled after at least 30 years of service are assumed to receive the retirement for age and years of service benefit instead of the disability benefit.

Pre-retirement Mortality: RP-2000 Employee Mortality Rates for males and females, projected on a generational basis using Scale AA. As a generational table, it reflects mortality improvements both before and after the measurement date.

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION IX – SUMMARY OF ACTUARIAL ASSUMPTIONS AS OF JUNE 30, 2011

Post-retirement Healthy Mortality: Rates which vary by gender are assumed for healthy retirees and beneficiaries based on a study of plan’s experience from 2004 to 2007. The rates are projected on a generational basis starting in 2005 using Scale AA. As a generational table, it reflects mortality improvements both before and after the measurement date. Illustrative rates are shown below.

Age	Males	Females
50	0.23%	0.19%
55	0.40	0.31
60	0.71	0.56
65	1.10	0.81
70	1.69	1.17
75	2.94	1.93
80	5.20	3.36
85	9.16	5.77
90	15.61	9.90
95	23.04	15.86
100	30.16	23.55

Post-retirement Disabled Mortality: Rates which vary by gender are assumed for disabled retirees based on a study of plan’s experience from 2004 to 2007. No provision was made for future mortality improvement for disabled retirees. Illustrative rates are shown below.

Age	Males	Females
40	1.74%	0.77%
45	1.74	0.77
50	2.23	1.19
55	2.73	1.70
60	3.23	2.24
65	3.86	2.88
70	4.81	3.87
75	6.31	5.37
80	8.41	7.43
85	10.89	10.30
90	14.10	14.39
95	20.57	19.99
100	26.50	24.40

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION IX – SUMMARY OF ACTUARIAL ASSUMPTIONS AS OF JUNE 30, 2011

Marriage: 65% of current active and terminated members are assumed to be married at retirement with males 3 years older than females.

Form of Payment: Future retired members are assumed to receive a joint and 50% survivor annuity if married and a modified cash refund (approximated by a single life annuity with 3 years certain) if not married.

Spousal information was not provided for current retired and disabled members. A 65% marriage assumption was applied to all current retirees and disabled members retroactively to the date of retirement or disability. The spouse's date of birth was imputed based on an assumed age difference of 3 years with males older than females. A 3-year certain period, retroactive to date of retirement or disability, is applied to approximate the cost of a modified cash refund for retirees without a surviving spouse.

No future dependent children were assumed to become beneficiaries.

Members who terminate employment with at least 10 years of service are assumed to elect to receive a deferred pension benefit in lieu of a refund of contributions.

Medical Insurance Plan Contribution: 85% of future and current retirees and disableds and 10% of future and current beneficiaries were assumed to receive a monthly medical insurance continuation benefit of \$100 per month.

Administrative Expenses: Average of past two year's expense is added to the normal cost. For 2011, this amount is \$30,177,000.

Special Data Adjustments: The following adjustments were made to the census data received from the System.

The entry age for active members was assumed to be the age as of June 30, 2011 less the provided years of creditable service.

If not provided by the System, benefits for new and continuing retired and terminated vested participants were estimated based on the years of credited service and earnings history available from prior valuations.

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION IX – SUMMARY OF ACTUARIAL ASSUMPTIONS AS OF JUNE 30, 2011

Refer to the Form of Payment assumption above for a description of spousal data imputation for current retired and disabled members.

If not provided by the System, the portion of the annual benefit payable to current beneficiaries attributable to past COLA adjustments was assumed to be 5% (and thus paid by the General Fund of the Commonwealth of Puerto Rico instead of the System).

Benefits for current beneficiaries who are under age 22 as of the valuation date were assumed to cease at age 22. Benefits for current beneficiaries who are age 22 or older as of the valuation data were assumed to be payable for life. In addition, the current level of benefit was assumed to remain constant.

Benefits not valued: The minimum post-retirement death benefit of \$1,000 for retirees without surviving beneficiaries is not explicitly valued. The additional liability associated with this benefit is expected to be de minimus.

Changes in actuarial assumptions since the prior valuation: The interest rate assumption for GASB 25 & 27 was decreased from 8.0% to 6.4%

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION X – SUMMARY OF ACTUARIAL METHODS AS OF JUNE 30, 2011

The ultimate cost of a pension plan is the excess of actual benefits and administrative expenses paid over actual net investment return on plan assets during the plan's existence until the last payment has been made to the last participant. The plan's "actuarial cost method" determines the expected incidence of actuarial costs by allocating portions of the ultimate cost to each plan year. The cost method is thus a budgeting tool to help to ensure that the plan will be adequately and systematically funded and accounted for. There are several commonly-used cost methods which differ in how much of the ultimate cost is assigned to each prior and future year. Therefore, the pattern of annual contributions and accounting expense varies with the choice of cost method. Annual contributions and accounting expense are also affected by the "asset valuation method" (as well as the plan provisions, actuarial assumptions, and actual plan demographic and investment experience each year).

Actuarial Cost Method

The plan's actuarial cost method is the entry age normal method. Under this method, a projected benefit is determined at each active participant's assumed retirement age assuming future compensation increases. The plan's normal cost is the sum of each active participant's annual cost for the current year of service determined such that, if it were calculated as a level percentage of his compensation each year, it would accumulate at the valuation interest rate over his total prior and future years of service to his assumed retirement date into an amount sufficient to fund his projected benefit. The plan's accrued liability is the sum of (a) the accumulation of each active participant's normal costs attributable to all prior years of service plus (b) the present value of each inactive participant's future benefits.

For the medical insurance plan contribution and the special bonus benefits administered by PRTRS and paid by the General Fund of the Commonwealth of Puerto Rico, the actuarial cost method is also the entry age normal method but the normal cost is determined as a level dollar amount instead of a level percentage of compensation. Under this variation, the normal cost is the sum of each active participant's annual cost for the current year of service determined such that, if it were calculated as a level amount each year, it would accumulate at the valuation interest rate over his total prior and future years of service to his assumed retirement date into an amount sufficient to fund his projected benefit.

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PUERTO RICO TEACHERS RETIREMENT SYSTEM

SECTION X – SUMMARY OF ACTUARIAL METHODS AS OF JUNE 30, 2011

Asset Valuation Method

The Actuarial Value of Assets is equal to the Market Value of Assets.

Changes in actuarial methods since the prior valuation: None.

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